

JPL D-26280

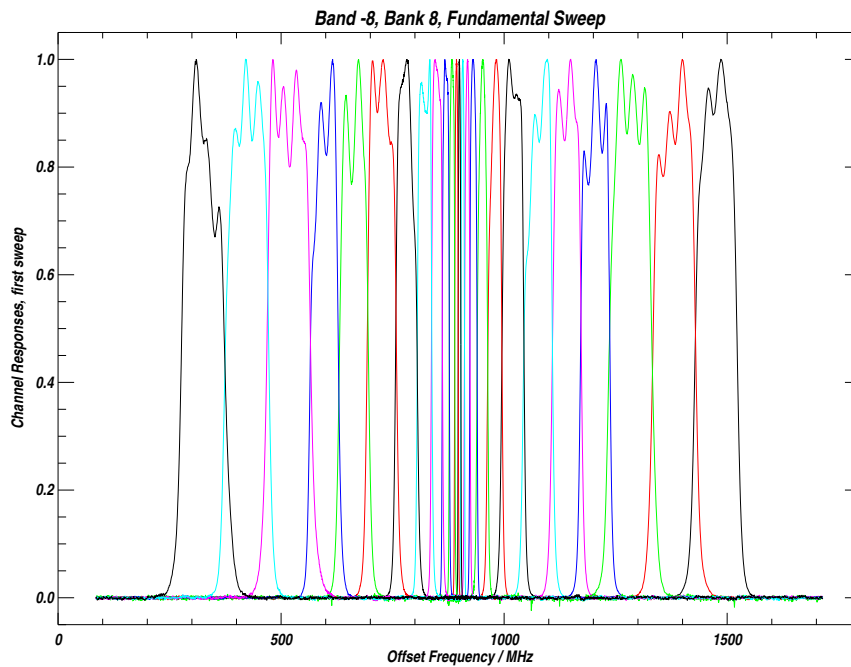
Earth Observing System (EOS)  
Microwave Limb Sounder (MLS)

# EOS MLS

## Instrument Calibration Report

### Volume 3

High Resolution Spectral Sweep Data



**Robert F. Jarnot, Richard E. Cofield, Herbert M. Pickett,  
Paul C. Stek**

10 January 2005  
Jet Propulsion Laboratory  
California Institute of Technology  
Pasadena, CA 91109-8099

The research was carried out at the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration (80NM0018D004).

©2025. California Institute of Technology. Government sponsorship acknowledged.

### Release Record

Version	Date	Comments
draft	12 Feb 2003	Start of working/draft version
	30 Mar 2004	Initial release for review
	27 Nov 2007	Add B33 filter plots, flag the filter position error (page 1)
Public	11 Feb 2025	URS wording added to cover

# Contents

<b>H GHz High Resolution Spectral Sweep Data</b>	<b>1</b>
H.1 Data files . . . . .	1
<b>I THz High Resolution Spectral Sweep Data</b>	<b>453</b>

[See List of Figures for index to plots.](#)

# List of Figures

H.1	<a href="#">R1A, FB01, composite plot</a>	2
H.2	R1A, FB01, Channels 1 to 4	3
H.3	R1A, FB01, Channels 5 to 8	4
H.4	R1A, FB01, Channels 9 to 12	5
H.5	R1A, FB01, Channels 13 to 16	6
H.6	R1A, FB01, Channels 17 to 20	7
H.7	R1A, FB01, Channels 21 to 24	8
H.8	R1A, FB01, Channel 25	9
H.9	<a href="#">R1A, FB08, composite plot</a>	10
H.10	R1A, FB08, Channels 1 to 4	11
H.11	R1A, FB08, Channels 5 to 8	12
H.12	R1A, FB08, Channels 9 to 12	13
H.13	R1A, FB08, Channels 13 to 16	14
H.14	R1A, FB08, Channels 17 to 20	15
H.15	R1A, FB08, Channels 21 to 24	16
H.16	R1A, FB08, Channel 25	17
H.17	<a href="#">R1A, B32 Wide Filters</a>	18
H.18	<a href="#">R1B, FB12, composite plot</a>	19
H.19	R1B, FB12, Channels 1 to 4	20
H.20	R1B, FB12, Channels 5 to 8	21
H.21	R1B, FB12, Channels 9 to 12	22
H.22	R1B, FB12, Channels 13 to 16	23
H.23	R1B, FB12, Channels 17 to 20	24
H.24	R1B, FB12, Channels 21 to 24	25
H.25	R1B, FB12, Channel 25	26
H.26	<a href="#">R1B, B34 Wide Filters</a>	27
H.27	<a href="#">R2, B2, FB02, composite plot, lower sideband</a>	28
H.28	R2, B2, FB02, Channels 1 to 4	29
H.29	R2, B2, FB02, Channels 5 to 8	30
H.30	R2, B2, FB02, Channels 9 to 12	31
H.31	R2, B2, FB02, Channels 13 to 16	32
H.32	R2, B2, FB02, Channels 17 to 20	33
H.33	R2, B2, FB02, Channels 21 to 24	34
H.34	R2, B2, FB02, Channel 25	35
H.35	<a href="#">R2, B2, FB03, composite plot, lower sideband</a>	36
H.36	R2, B2, FB03, Channels 1 to 4	37

H.37	R2, B2, FB03, Channels 5 to 8 . . . . .	38
H.38	R2, B2, FB03, Channels 9 to 12 . . . . .	39
H.39	R2, B2, FB03, Channels 13 to 16 . . . . .	40
H.40	R2, B2, FB03, Channels 17 to 20 . . . . .	41
H.41	R2, B2, FB03, Channels 21 to 24 . . . . .	42
H.42	R2, B2, FB03, Channel 25 . . . . .	43
H.43	<a href="#">R2, B2, FB02, composite plot, upper sideband</a> . . . . .	44
H.44	R2, B2, FB02, Channels 1 to 4 . . . . .	45
H.45	R2, B2, FB02, Channels 5 to 8 . . . . .	46
H.46	R2, B2, FB02, Channels 9 to 12 . . . . .	47
H.47	R2, B2, FB02, Channels 13 to 6 . . . . .	48
H.48	R2, B2, FB02, Channels 17 to 20 . . . . .	49
H.49	R2, B2, FB02, Channels 21 to 24 . . . . .	50
H.50	R2, B2, FB02, Channel 25 . . . . .	51
H.51	<a href="#">R2, B2, FB03, composite plot, upper sideband</a> . . . . .	52
H.52	R2, B2, FB03, Channels 1 to 4 . . . . .	53
H.53	R2, B2, FB03, Channels 5 to 8 . . . . .	54
H.54	R2, B2, FB03, Channels 9 to 12 . . . . .	55
H.55	R2, B2, FB03, Channels 13 to 16 . . . . .	56
H.56	R2, B2, FB03, Channels 17 to 20 . . . . .	57
H.57	R2, B2, FB03, Channels 21 to 24 . . . . .	58
H.58	R2, B2, FB03, Channel 25 . . . . .	59
H.59	<a href="#">R2, B3, FB03, composite plot, lower sideband</a> . . . . .	60
H.60	R2, B3, FB03, Channels 1 to 4 . . . . .	61
H.61	R2, B3, FB03, Channels 5 to 8 . . . . .	62
H.62	R2, B3, FB03, Channels 9 to 12 . . . . .	63
H.63	R2, B3, FB03, Channels 13 to 6 . . . . .	64
H.64	R2, B3, FB03, Channels 17 to 20 . . . . .	65
H.65	R2, B3, FB03, Channels 21 to 24 . . . . .	66
H.66	R2, B3, FB03, Channel 25 . . . . .	67
H.67	<a href="#">R2, B3, FB03, composite plot, upper sideband</a> . . . . .	68
H.68	R2, B3, FB03, Channels 1 to 4 . . . . .	69
H.69	R2, B3, FB03, Channels 5 to 8 . . . . .	70
H.70	R2, B3, FB03, Channels 9 to 12 . . . . .	71
H.71	R2, B3, FB03, Channels 13 to 16 . . . . .	72
H.72	R2, B3, FB03, Channels 17 to 20 . . . . .	73
H.73	R2, B3, FB03, Channels 21 to 24 . . . . .	74
H.74	R2, B3, FB03, Channel 25 . . . . .	75
H.75	<a href="#">R2, B4, FB04, composite plot, lower sideband</a> . . . . .	76
H.76	R2, B4, FB04, Channels 1 to 4 . . . . .	77
H.77	R2, B4, FB04, Channels 5 to 8 . . . . .	78
H.78	R2, B4, FB04, Channels 9 to 12 . . . . .	79
H.79	R2, B4, FB04, Channels 13 to 16 . . . . .	80
H.80	R2, B4, FB04, Channels 17 to 20 . . . . .	81
H.81	R2, B4, FB04, Channels 21 to 24 . . . . .	82
H.82	R2, B4, FB04, Channel 25 . . . . .	83

H.83	R2, B4, FB08, composite plot, lower sideband	84
H.84	R2, B4, FB08, Channels 1 to 4	85
H.85	R2, B4, FB08, Channels 5 to 5	86
H.86	R2, B4, FB08, Channels 9 to 12	87
H.87	R2, B4, FB08, Channels 13 to 16	88
H.88	R2, B4, FB08, Channels 17 to 20	89
H.89	R2, B4, FB08, Channels 21 to 24	90
H.90	R2, B4, FB08, Channel 25	91
H.91	R2, B4, FB04, composite plot, upper sideband	92
H.92	R2, B4, FB04, Channels 1 to 4	93
H.93	R2, B4, FB04, Channels 5 to 8	94
H.94	R2, B4, FB04, Channels 9 to 12	95
H.95	R2, B4, FB04, Channels 13 to 16	96
H.96	R2, B4, FB04, Channels 17 to 20	97
H.97	R2, B4, FB04, Channels 21 to 24	98
H.98	R2, B4, FB04, Channel 25	99
H.99	R2, B4, FB08, composite plot, upper sideband	100
H.100	R2, B4, FB08, Channels 1 to 4	101
H.101	R2, B4, FB08, Channels 5 to 8	102
H.102	R2, B4, FB08, Channels 9 to 12	103
H.103	R2, B4, FB08, Channels 13 to 16	104
H.104	R2, B4, FB08, Channels 17 to 20	105
H.105	R2, B4, FB08, Channels 21 to 24	106
H.106	R2, B4, FB08, Channel 25	107
H.107	R2, B5, FB05, composite plot, lower sideband	108
H.108	R2, B5, FB05, Channels 1 to 4	109
H.109	R2, B5, FB05, Channels 5 to 8	110
H.110	R2, B5, FB05, Channels 9 to 12	111
H.111	R2, B5, FB05, Channels 13 to 16	112
H.112	R2, B5, FB05, Channels 17 to 20	113
H.113	R2, B5, FB05, Channels 21 to 24	114
H.114	R2, B5, FB05, Channel 25	115
H.115	R2, B5, FB03, composite plot, lower sideband	116
H.116	R2, B5, FB03, Channels 1 to 4	117
H.117	R2, B5, FB03, Channels 5 to 8	118
H.118	R2, B5, FB03, Channels 9 to 12	119
H.119	R2, B5, FB03, Channels 13 to 16	120
H.120	R2, B5, FB03, Channels 17 to 20	121
H.121	R2, B5, FB03, Channels 21 to 24	122
H.122	R2, B5, FB03, Channel 25	123
H.123	R2, B5, FB05, composite plot, upper sideband	124
H.124	R2, B5, FB05, Channels 1 to 4	125
H.125	R2, B5, FB05, Channels 5 to 8	126
H.126	R2, B5, FB05, Channels 9 to 12	127
H.127	R2, B5, FB05, Channels 13 to 16	128
H.128	R2, B5, FB05, Channels 17 to 20	129

H.129	R2, B5, FB05, Channels 21 to 24	130
H.130	R2, B5, FB05, Channel 25	131
H.131	<a href="#">R2, B5, FB03, composite plot, upper sideband</a>	132
H.132	R2, B5, FB03, Channels 1 to 4	133
H.133	R2, B5, FB03, Channels 5 to 8	134
H.134	R2, B5, FB03, Channels 9 to 12	135
H.135	R2, B5, FB03, Channels 13 to 16	136
H.136	R2, B5, FB03, Channels 17 to 20	137
H.137	R2, B5, FB03, Channels 21 to 24	138
H.138	R2, B5, FB03, Channel 25	139
H.139	<a href="#">R2, B6, FB06, composite plot, lower sideband</a>	140
H.140	R2, B6, FB06, Channels 1 to 4	141
H.141	R2, B6, FB06, Channels 5 to 8	142
H.142	R2, B6, FB06, Channels 9 to 12	143
H.143	R2, B6, FB06, Channels 13 to 16	144
H.144	R2, B6, FB06, Channels 17 to 20	145
H.145	R2, B6, FB06, Channels 21 to 24	146
H.146	R2, B6, FB06, Channel 25	147
H.147	<a href="#">R2, B6, FB03, composite plot, lower sideband</a>	148
H.148	R2, B6, FB03, Channels 1 to 4	149
H.149	R2, B6, FB03, Channels 5 to 8	150
H.150	R2, B6, FB03, Channels 9 to 12	151
H.151	R2, B6, FB03, Channels 13 to 16	152
H.152	R2, B6, FB03, Channels 17 to 20	153
H.153	R2, B6, FB03, Channels 21 to 24	154
H.154	R2, B6, FB03, Channel 25	155
H.155	<a href="#">R2, B6, FB06, composite plot, upper sideband</a>	156
H.156	R2, B6, FB06, Channels 1 to 4	157
H.157	R2, B6, FB06, Channels 5 to 8	158
H.158	R2, B6, FB06, Channels 9 to 12	159
H.159	R2, B6, FB06, Channels 13 to 16	160
H.160	R2, B6, FB06, Channels 17 to 20	161
H.161	R2, B6, FB06, Channels 21 to 24	162
H.162	R2, B6, FB06, Channel 25	163
H.163	<a href="#">R2, B6, FB03, composite plot, upper sideband</a>	164
H.164	R2, B6, FB03, Channels 1 to 4	165
H.165	R2, B6, FB03, Channels 5 to 8	166
H.166	R2, B6, FB03, Channels 9 to 12	167
H.167	R2, B6, FB03, Channels 13 to 16	168
H.168	R2, B6, FB03, Channels 17 to 20	169
H.169	R2, B6, FB03, Channels 21 to 24	170
H.170	R2, B6, FB03, Channel 25	171
H.171	<a href="#">R2, MB27, composite plot, lower sideband</a>	172
H.172	R2, MB27, Channels 1 to 4	173
H.173	R2, MB27, Channels 5 to 8	174
H.174	R2, MB27, Channels 9 to 11	175

H.175	R2, MB27, composite plot, upper sideband	176
H.176	R2, MB27, Channels 1 to 4	177
H.177	R2, MB27, Channels 5 to 8	178
H.178	R2, MB27, Channels 9 to 11	179
H.179	R3, B7, FB07, composite plot, lower sideband	180
H.180	R3, B7, FB07, Channels 1 to 4	181
H.181	R3, B7, FB07, Channels 5 to 8	182
H.182	R3, B7, FB07, Channels 9 to 12	183
H.183	R3, B7, FB07, Channels 13 to 16	184
H.184	R3, B7, FB07, Channels 17 to 20	185
H.185	R3, B7, FB07, Channels 21 to 24	186
H.186	R3, B7, FB07, Channel 25	187
H.187	R3, B7, FB08, composite plot, lower sideband	188
H.188	R3, B7, FB08, Channels 1 to 4	189
H.189	R3, B7, FB08, Channels 5 to 8	190
H.190	R3, B7, FB08, Channels 9 to 12	191
H.191	R3, B7, FB08, Channels 13 to 16	192
H.192	R3, B7, FB08, Channels 17 to 20	193
H.193	R3, B7, FB08, Channels 21 to 24	194
H.194	R3, B7, FB08, Channel 25	195
H.195	R3, B7, FB07, composite plot, upper sideband	196
H.196	R3, B7, FB07, Channels 1 to 4	197
H.197	R3, B7, FB07, Channels 5 to 8	198
H.198	R3, B7, FB07, Channels 9 to 12	199
H.199	R3, B7, FB07, Channels 13 to 16	200
H.200	R3, B7, FB07, Channels 17 to 20	201
H.201	R3, B7, FB07, Channels 21 to 24	202
H.202	R3, B7, FB07, Channel 25	203
H.203	R3, B7, FB08, composite plot, upper sideband	204
H.204	R3, B7, FB08, Channels 1 to 4	205
H.205	R3, B7, FB08, Channels 5 to 8	206
H.206	R3, B7, FB08, Channels 9 to 12	207
H.207	R3, B7, FB08, Channels 13 to 16	208
H.208	R3, B7, FB08, Channels 17 to 20	209
H.209	R3, B7, FB08, Channels 21 to 24	210
H.210	R3, B7, FB08, Channel 25	211
H.211	R3, B8, FB08, composite plot, lower sideband	212
H.212	R3, B8, FB08, Channels 1 to 4	213
H.213	R3, B8, FB08, Channels 5 to 8	214
H.214	R3, B8, FB08, Channels 9 to 12	215
H.215	R3, B8, FB08, Channels 13 to 16	216
H.216	R3, B8, FB08, Channels 17 to 20	217
H.217	R3, B8, FB08, Channels 21 to 24	218
H.218	R3, B8, FB08, Channel 25	219
H.219	R3, B8, FB03, composite plot, lower sideband	220
H.220	R3, B8, FB03, Channels 1 to 4	221



H.221	R3, B8, FB03, Channels 5 to 8	222
H.222	R3, B8, FB03, Channels 9 to 12	223
H.223	R3, B8, FB03, Channels 13 to 16	224
H.224	R3, B8, FB03, Channels 17 to 20	225
H.225	R3, B8, FB03, Channels 21 to 24	226
H.226	R3, B8, FB03, Channel 25	227
H.227	<a href="#">R3, B8, FB08, composite plot, upper sideband</a>	228
H.228	R3, B8, FB08, Channels 1 to 4	229
H.229	R3, B8, FB08, Channels 5 to 8	230
H.230	R3, B8, FB08, Channels 9 to 12	231
H.231	R3, B8, FB08, Channels 13 to 16	232
H.232	R3, B8, FB08, Channels 17 to 20	233
H.233	R3, B8, FB08, Channels 21 to 24	234
H.234	R3, B8, FB08, Channel 25	235
H.235	<a href="#">R3, B8, FB03, composite plot, upper sideband</a>	236
H.236	R3, B8, FB03, Channels 1 to 4	237
H.237	R3, B8, FB03, Channels 5 to 8	238
H.238	R3, B8, FB03, Channels 9 to 12	239
H.239	R3, B8, FB03, Channels 13 to 16	240
H.240	R3, B8, FB03, Channels 17 to 20	241
H.241	R3, B8, FB03, Channels 21 to 24	242
H.242	R3, B8, FB03, Channel 25	243
H.243	<a href="#">R3, B9, FB09, composite plot, lower sideband</a>	244
H.244	R3, B9, FB09, Channels 1 to 4	245
H.245	R3, B9, FB09, Channels 5 to 8	246
H.246	R3, B9, FB09, Channels 9 to 12	247
H.247	R3, B9, FB09, Channels 13 to 16	248
H.248	R3, B9, FB09, Channels 17 to 20	249
H.249	R3, B9, FB09, Channels 21 to 24	250
H.250	R3, B9, FB09, Channel 25	251
H.251	<a href="#">R3, B9, FB03, composite plot, lower sideband</a>	252
H.252	R3, B9, FB03, Channels 1 to 4	253
H.253	R3, B9, FB03, Channels 5 to 8	254
H.254	R3, B9, FB03, Channels 9 to 12	255
H.255	R3, B9, FB03, Channels 13 to 16	256
H.256	R3, B9, FB03, Channels 17 to 20	257
H.257	R3, B9, FB03, Channels 21 to 24	258
H.258	R3, B9, FB03, Channel 25	259
H.259	<a href="#">R3, B9, FB09, composite plot, upper sideband</a>	260
H.260	R3, B9, FB09, Channels 1 to 4	261
H.261	R3, B9, FB09, Channels 5 to 8	262
H.262	R3, B9, FB09, Channels 9 to 12	263
H.263	R3, B9, FB09, Channels 13 to 16	264
H.264	R3, B9, FB09, Channels 17 to 20	265
H.265	R3, B9, FB09, Channels 21 to 24	266
H.266	R3, B9, FB09, Channel 25	267

H.267	R3, B9, FB03, composite plot, upper sideband	268
H.268	R3, B9, FB03, Channels 1 to 4	269
H.269	R3, B9, FB03, Channels 5 to 8	270
H.270	R3, B9, FB03, Channels 9 to 12	271
H.271	R3, B9, FB03, Channels 13 to 16	272
H.272	R3, B9, FB03, Channels 17 to 20	273
H.273	R3, B9, FB03, Channels 21 to 24	274
H.274	R3, B9, FB03, Channel 25	275
H.275	R4, B10, FB10, composite plot, lower sideband	276
H.276	R4, B10, FB10, Channels 1 to 4	277
H.277	R4, B10, FB10, Channels 5 to 8	278
H.278	R4, B10, FB10, Channels 9 to 12	279
H.279	R4, B10, FB10, Channels 13 to 16	280
H.280	R4, B10, FB10, Channels 17 to 20	281
H.281	R4, B10, FB10, Channels 21 to 24	282
H.282	R4, B10, FB10, Channel 25	283
H.283	R4, B10, FB12, composite plot, lower sideband	284
H.284	R4, B10, FB12, Channels 1 to 4	285
H.285	R4, B10, FB12, Channels 5 to 8	286
H.286	R4, B10, FB12, Channels 9 to 12	287
H.287	R4, B10, FB12, Channels 13 to 16	288
H.288	R4, B10, FB12, Channels 17 to 20	289
H.289	R4, B10, FB12, Channels 21 to 24	290
H.290	R4, B10, FB12, Channel 25	291
H.291	R4, B10, FB10, composite plot, upper sideband	292
H.292	R4, B10, FB10, Channels 1 to 4	293
H.293	R4, B10, FB10, Channels 5 to 8	294
H.294	R4, B10, FB10, Channels 9 to 12	295
H.295	R4, B10, FB10, Channels 13 to 16	296
H.296	R4, B10, FB10, Channels 17 to 20	297
H.297	R4, B10, FB10, Channels 21 to 24	298
H.298	R4, B10, FB10, Channel 25	299
H.299	R4, B10, FB12, composite plot, upper sideband	300
H.300	R4, B10, FB12, Channels 1 to 4	301
H.301	R4, B10, FB12, Channels 5 to 8	302
H.302	R4, B10, FB12, Channels 9 to 12	303
H.303	R4, B10, FB12, Channels 13 to 16	304
H.304	R4, B10, FB12, Channels 17 to 20	305
H.305	R4, B10, FB12, Channels 21 to 24	306
H.306	R4, B10, FB12, Channel 25	307
H.307	R4, B11, FB11, composite plot, lower sideband	308
H.308	R4, B11, FB11, Channels 1 to 4	309
H.309	R4, B11, FB11, Channels 5 to 8	310
H.310	R4, B11, FB11, Channels 9 to 12	311
H.311	R4, B11, FB11, Channels 13 to 16	312
H.312	R4, B11, FB11, Channels 17 to 20	313

H.313	R4, B11, FB11, Channels 21 to 24	314
H.314	R4, B11, FB11, Channel 25	315
H.315	<a href="#">R4, B11, FB12, composite plot, lower sideband</a>	316
H.316	R4, B11, FB12, Channels 1 to 4	317
H.317	R4, B11, FB12, Channels 5 to 8	318
H.318	R4, B11, FB12, Channels 9 to 12	319
H.319	R4, B11, FB12, Channels 13 to 16	320
H.320	R4, B11, FB12, Channels 17 to 20	321
H.321	R4, B11, FB12, Channels 21 to 24	322
H.322	R4, B11, FB12, Channel 25	323
H.323	<a href="#">R4, B11, FB11, composite plot, upper sideband</a>	324
H.324	R4, B11, FB11, Channels 1 to 4	325
H.325	R4, B11, FB11, Channels 5 to 8	326
H.326	R4, B11, FB11, Channels 9 to 12	327
H.327	R4, B11, FB11, Channels 13 to 16	328
H.328	R4, B11, FB11, Channels 17 to 20	329
H.329	R4, B11, FB11, Channels 21 to 24	330
H.330	R4, B11, FB11, Channel 25	331
H.331	<a href="#">R4, B11, FB12, composite plot, upper sideband</a>	332
H.332	R4, B11, FB12, Channels 1 to 4	333
H.333	R4, B11, FB12, Channels 5 to 8	334
H.334	R4, B11, FB12, Channels 9 to 12	335
H.335	R4, B11, FB12, Channels 13 to 16	336
H.336	R4, B11, FB12, Channels 17 to 20	337
H.337	R4, B11, FB12, Channels 21 to 24	338
H.338	R4, B11, FB12, Channel 25	339
H.339	<a href="#">R4, B12, FB12, composite plot, lower sideband</a>	340
H.340	R4, B12, FB12, Channels 1 to 4	341
H.341	R4, B12, FB12, Channels 5 to 8	342
H.342	R4, B12, FB12, Channels 9 to 12	343
H.343	R4, B12, FB12, Channels 13 to 16	344
H.344	R4, B12, FB12, Channels 17 to 20	345
H.345	R4, B12, FB12, Channels 21 to 24	346
H.346	R4, B12, FB12, Channel 25	347
H.347	<a href="#">R4, B12, FB12, composite plot, upper sideband</a>	348
H.348	R4, B12, FB12, Channels 1 to 4	349
H.349	R4, B12, FB12, Channels 5 to 8	350
H.350	R4, B12, FB12, Channels 9 to 12	351
H.351	R4, B12, FB12, Channels 13 to 16	352
H.352	R4, B12, FB12, Channels 17 to 20	353
H.353	R4, B12, FB12, Channels 21 to 24	354
H.354	R4, B12, FB12, Channel 25	355
H.355	<a href="#">R4, B13, FB13, composite plot, lower sideband</a>	356
H.356	R4, B13, FB13, Channels 1 to 4	357
H.357	R4, B13, FB13, Channels 5 to 8	358
H.358	R4, B13, FB13, Channels 9 to 12	359

H.359	R4, B13, FB13, Channels 13 to 16	360
H.360	R4, B13, FB13, Channels 17 to 20	361
H.361	R4, B13, FB13, Channels 21 to 24	362
H.362	R4, B13, FB13, Channel 25	363
H.363	<a href="#">R4, B13, FB08, composite plot, lower sideband</a>	364
H.364	R4, B13, FB08, Channels 1 to 4	365
H.365	R4, B13, FB08, Channels 5 to 8	366
H.366	R4, B13, FB08, Channels 9 to 12	367
H.367	R4, B13, FB08, Channels 13 to 16	368
H.368	R4, B13, FB08, Channels 17 to 20	369
H.369	R4, B13, FB08, Channels 21 to 24	370
H.370	R4, B13, FB08, Channel 25	371
H.371	<a href="#">R4, B13, FB13, composite plot, upper sideband</a>	372
H.372	R4, B13, FB13, Channels 1 to 4	373
H.373	R4, B13, FB13, Channels 5 to 8	374
H.374	R4, B13, FB13, Channels 9 to 12	375
H.375	R4, B13, FB13, Channels 13 to 16	376
H.376	R4, B13, FB13, Channels 17 to 20	377
H.377	R4, B13, FB13, Channels 21 to 24	378
H.378	R4, B13, FB13, Channel 25	379
H.379	<a href="#">R4, B13, FB08, composite plot, upper sideband</a>	380
H.380	R4, B13, FB08, Channels 1 to 4	381
H.381	R4, B13, FB08, Channels 5 to 8	382
H.382	R4, B13, FB08, Channels 9 to 12	383
H.383	R4, B13, FB08, Channels 13 to 16	384
H.384	R4, B13, FB08, Channels 17 to 20	385
H.385	R4, B13, FB08, Channels 21 to 24	386
H.386	R4, B13, FB08, Channel 25	387
H.387	<a href="#">R4, B14, FB14, composite plot, lower sideband</a>	388
H.388	R4, B14, FB14, Channels 1 to 4	389
H.389	R4, B14, FB14, Channels 5 to 8	390
H.390	R4, B14, FB14, Channels 9 to 12	391
H.391	R4, B14, FB14, Channels 13 to 16	392
H.392	R4, B14, FB14, Channels 17 to 20	393
H.393	R4, B14, FB14, Channels 21 to 24	394
H.394	R4, B14, FB14, Channel 25	395
H.395	<a href="#">R4, B14, FB12, composite plot, lower sideband</a>	396
H.396	R4, B14, FB12, Channels 1 to 4	397
H.397	R4, B14, FB12, Channels 5 to 8	398
H.398	R4, B14, FB12, Channels 9 to 12	399
H.399	R4, B14, FB12, Channels 13 to 16	400
H.400	R4, B14, FB12, Channels 17 to 20	401
H.401	R4, B14, FB12, Channels 21 to 24	402
H.402	R4, B14, FB12, Channel 25	403
H.403	<a href="#">R4, B14, FB14, composite plot, upper sideband</a>	404
H.404	R4, B14, FB14, Channels 1 to 4	405

H.405	R4, B14, FB14, Channels 5 to 8 . . . . .	406
H.406	R4, B14, FB14, Channels 9 to 12 . . . . .	407
H.407	R4, B14, FB14, Channels 13 to 16 . . . . .	408
H.408	R4, B14, FB14, Channels 17 to 20 . . . . .	409
H.409	R4, B14, FB14, Channels 21 to 24 . . . . .	410
H.410	R4, B14, FB14, Channel 25 . . . . .	411
H.411	<a href="#">R4, B14, FB12, composite plot, lower sideband</a> . . . . .	412
H.412	R4, B14, FB12, Channels 1 to 4 . . . . .	413
H.413	R4, B14, FB12, Channels 5 to 8 . . . . .	414
H.414	R4, B14, FB12, Channels 9 to 12 . . . . .	415
H.415	R4, B14, FB12, Channels 13 to 16 . . . . .	416
H.416	R4, B14, FB12, Channels 17 to 20 . . . . .	417
H.417	R4, B14, FB12, Channels 21 to 24 . . . . .	418
H.418	R4, B14, FB12, Channel 25 . . . . .	419
H.419	<a href="#">R4, MB28, composite plot, lower sideband</a> . . . . .	420
H.420	R4, MB28, Channels 1 to 4 . . . . .	421
H.421	R4, MB28, Channels 5 to 8 . . . . .	422
H.422	R4, MB28, Channels 9 to 11 . . . . .	423
H.423	<a href="#">R4, MB28, composite plot, upper sideband</a> . . . . .	424
H.424	R4, MB28, Channels 1 to 4 . . . . .	425
H.425	R4, MB28, Channels 5 to 8 . . . . .	426
H.426	R4, MB28, Channels 9 to 11 . . . . .	427
H.427	<a href="#">R4, MB29, composite plot, lower sideband</a> . . . . .	428
H.428	R4, MB29, Channels 1 to 4 . . . . .	429
H.429	R4, MB29, Channels 5 to 8 . . . . .	430
H.430	R4, MB29, Channels 9 to 11 . . . . .	431
H.431	<a href="#">R4, MB29, composite plot, upper sideband</a> . . . . .	432
H.432	R4, MB29, Channels 1 to 4 . . . . .	433
H.433	R4, MB29, Channels 5 to 8 . . . . .	434
H.434	R4, MB29, Channels 9 to 11 . . . . .	435
H.435	<a href="#">R4, MB30, composite plot, lower sideband</a> . . . . .	436
H.436	R4, MB30, Channels 1 to 4 . . . . .	437
H.437	R4, MB30, Channels 5 to 8 . . . . .	438
H.438	R4, MB30, Channels 9 to 11 . . . . .	439
H.439	<a href="#">R4, MB30, composite plot, upper sideband</a> . . . . .	440
H.440	R4, MB30, Channels 1 to 4 . . . . .	441
H.441	R4, MB30, Channels 5 to 8 . . . . .	442
H.442	R4, MB30, Channels 9 to 11 . . . . .	443
H.443	<a href="#">R4, MB31, composite plot, lower sideband</a> . . . . .	444
H.444	R4, MB31, Channels 1 to 4 . . . . .	445
H.445	R4, MB31, Channels 5 to 8 . . . . .	446
H.446	R4, MB31, Channels 9 to 11 . . . . .	447
H.447	<a href="#">R4, MB31, composite plot, upper sideband</a> . . . . .	448
H.448	R4, MB31, Channels 1 to 4 . . . . .	449
H.449	R4, MB31, Channels 5 to 8 . . . . .	450
H.450	R4, MB31, Channels 9 to 11 . . . . .	451

I.1	<a href="#">R5, B15, FB15, composite plot</a>	454
I.2	R5, B15, FB15, Channels 1 to 4	455
I.3	R5, B15, FB15, Channels 5 to 8	456
I.4	R5, B15, FB15, Channels 9 to 12	457
I.5	R5, B15, FB15, Channels 13 to 16	458
I.6	R5, B15, FB15, Channels 17 to 20	459
I.7	R5, B15, FB15, Channels 21 to 24	460
I.8	R5, B15, FB15, Channel 25	461
I.9	<a href="#">R5, B16, FB16, composite plot</a>	462
I.10	R5, B16, FB16, Channels 1 to 4	463
I.11	R5, B16, FB16, Channels 5 to 8	464
I.12	R5, B16, FB16, Channels 9 to 12	465
I.13	R5, B16, FB16, Channels 13 to 16	466
I.14	R5, B16, FB16, Channels 17 to 20	467
I.15	R5, B16, FB16, Channels 21 to 24	468
I.16	R5, B16, FB16, Channel 25	469
I.17	<a href="#">R5, B17, FB17, composite plot</a>	470
I.18	R5, B17, FB17, Channels 1 to 4	471
I.19	R5, B17, FB17, Channels 5 to 8	472
I.20	R5, B17, FB17, Channels 9 to 12	473
I.21	R5, B17, FB17, Channels 13 to 16	474
I.22	R5, B17, FB17, Channels 17 to 20	475
I.23	R5, B17, FB17, Channels 21 to 24	476
I.24	R5, B17, FB17, Channel 25	477
I.25	<a href="#">R5, B18, FB18, composite plot</a>	478
I.26	R5, B18, FB18, Channels 1 to 4	479
I.27	R5, B18, FB18, Channels 5 to 8	480
I.28	R5, B18, FB18, Channels 9 to 12	481
I.29	R5, B18, FB18, Channels 13 to 16	482
I.30	R5, B18, FB18, Channels 17 to 20	483
I.31	R5, B18, FB18, Channels 21 to 24	484
I.32	R5, B18, FB18, Channel 25	485
I.33	<a href="#">R5, B19, FB19, composite plot</a>	486
I.34	R5, B19, FB19, Channels 1 to 4	487
I.35	R5, B19, FB19, Channels 5 to 8	488
I.36	R5, B19, FB19, Channels 9 to 12	489
I.37	R5, B19, FB19, Channels 13 to 16	490
I.38	R5, B19, FB19, Channels 17 to 20	491
I.39	R5, B19, FB19, Channels 21 to 24	492
I.40	R5, B19, FB19, Channel 25	493
I.41	<a href="#">R5, B20, FB12, composite plot</a>	494
I.42	R5, B20, FB12, Channels 1 to 4	495
I.43	R5, B20, FB12, Channels 5 to 8	496
I.44	R5, B20, FB12, Channels 9 to 12	497
I.45	R5, B20, FB12, Channels 13 to 16	498
I.46	R5, B20, FB12, Channels 17 to 20	499

I.47	R5, B20, FB12, Channels 21 to 24 . . . . .	500
I.48	R5, B20, FB12, Channel 25 . . . . .	501
I.49	<a href="#">R5, B20, FB15, composite plot</a> . . . . .	502
I.50	R5, B20, FB15, Channels 1 to 4 . . . . .	503
I.51	R5, B20, FB15, Channels 5 to 8 . . . . .	504
I.52	R5, B20, FB15, Channels 9 to 12 . . . . .	505
I.53	R5, B20, FB15, Channels 13 to 16 . . . . .	506
I.54	R5, B20, FB15, Channels 17 to 20 . . . . .	507
I.55	R5, B20, FB15, Channels 21 to 24 . . . . .	508
I.56	R5, B20, FB15, Channel 25 . . . . .	509

## Appendix H

# GHz High Resolution Spectral Sweep Data

This volume of the EOS MLS Calibration Report graphically presents the complete high-resolution sweep data discussed in Chapter 3 of Volume 1. The GHz data are for all combinations of signals paths through the IF Switch Network, and were taken using a fundamental sweeper with the signals injected through the Space Port of the Radiometer Assembly. Since no suitable fundamental source currently exists for performing similar sweeps over the signal range covered by the THz module, the THz data presented here are for IF sweeps of the filterbank spectrometers used in THz data acquisition.

### H.1 Data files

Level 2 software ingests the data presented graphically below in the form of ASCII data files. There is one data file for every filter channel, with separate files for every IF Switch path that can be selected for a given channel. The format and location of these data files are discussed in Chapter 3 of Volume 1 of this report.



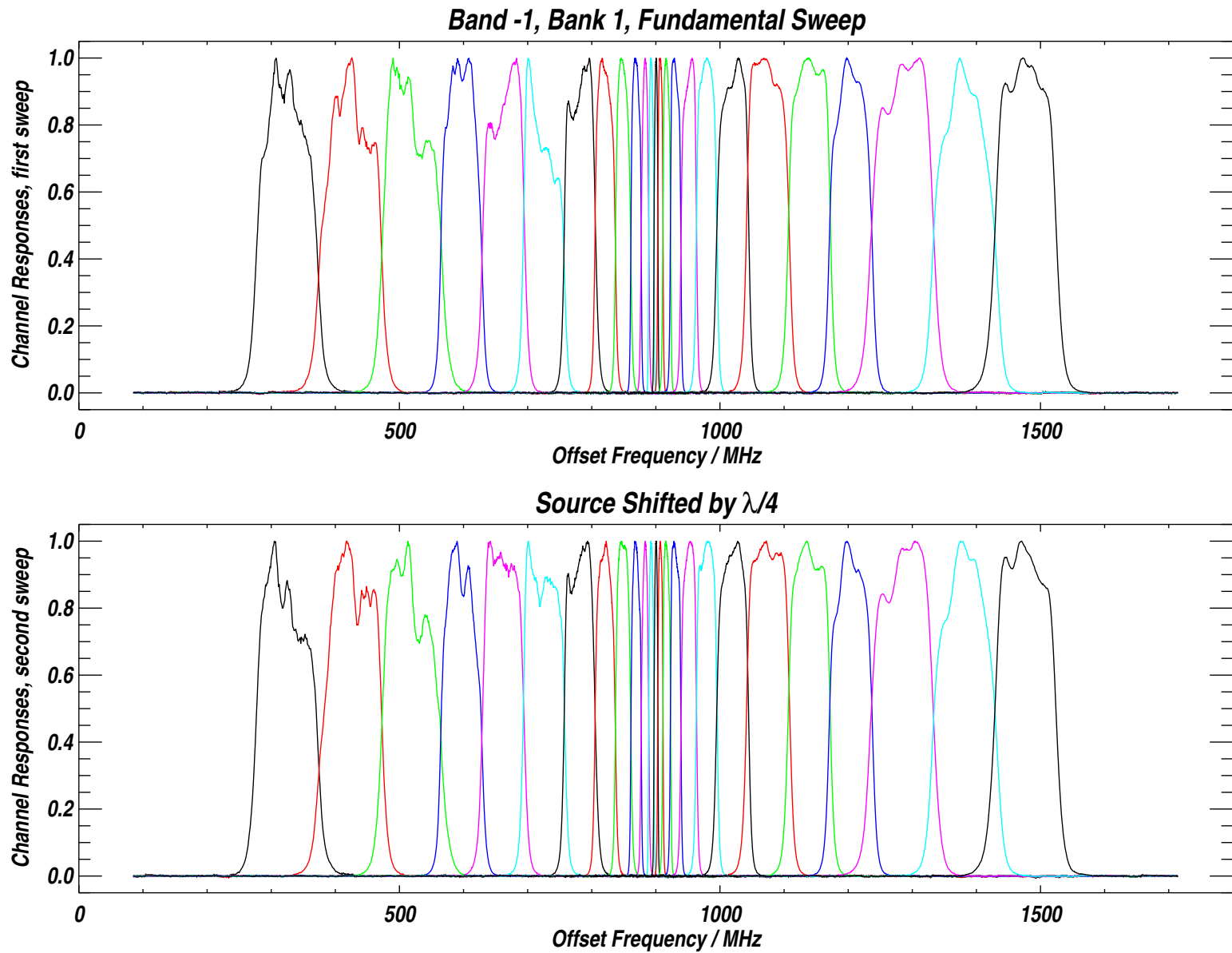


Figure H.1: Front-end sweep data for Band 1 taken via Filterbank 1. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

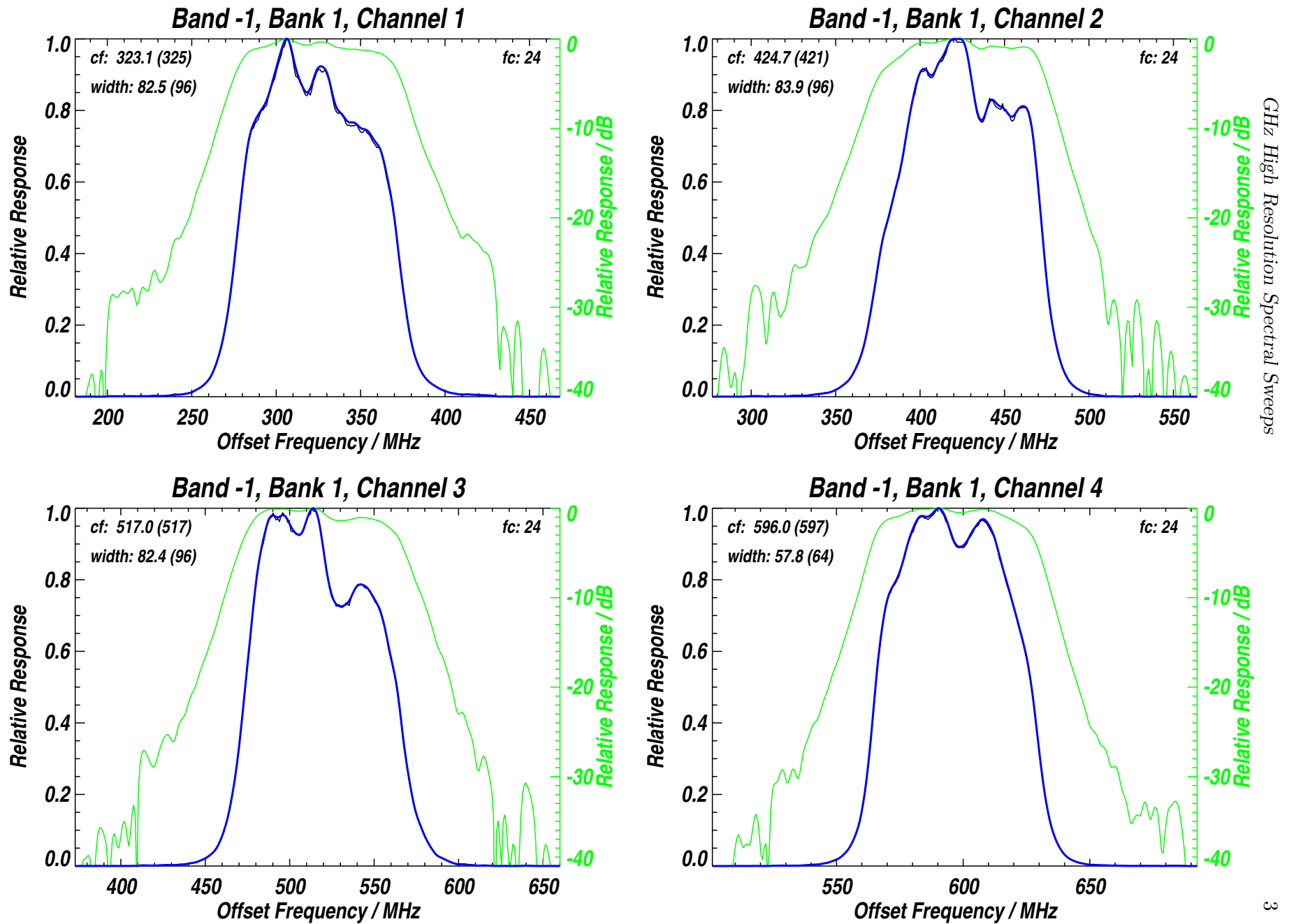


Figure H.2: Front-end sweep data for Band 1 taken via Filterbank 1, channels 1 to 4. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

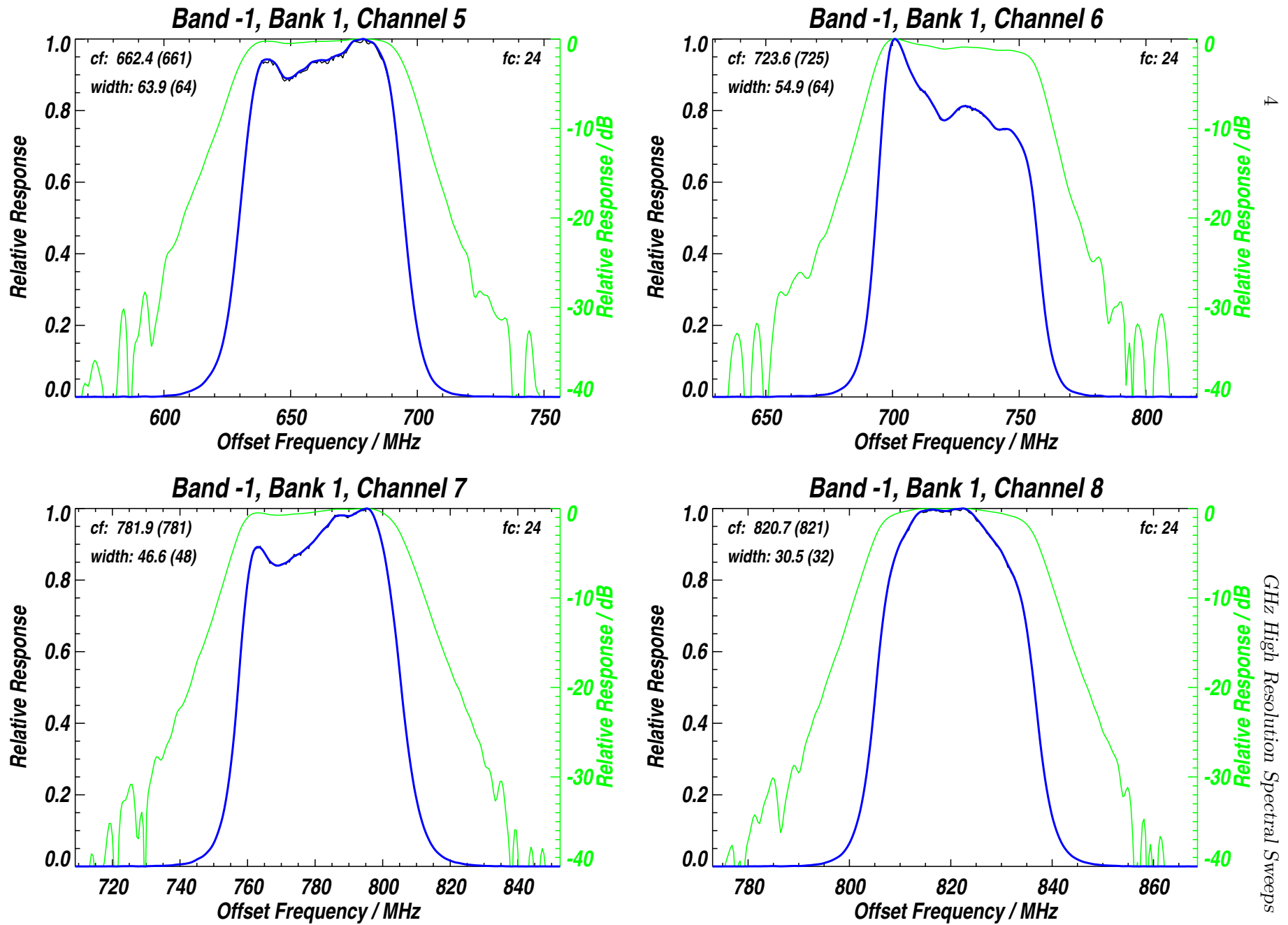
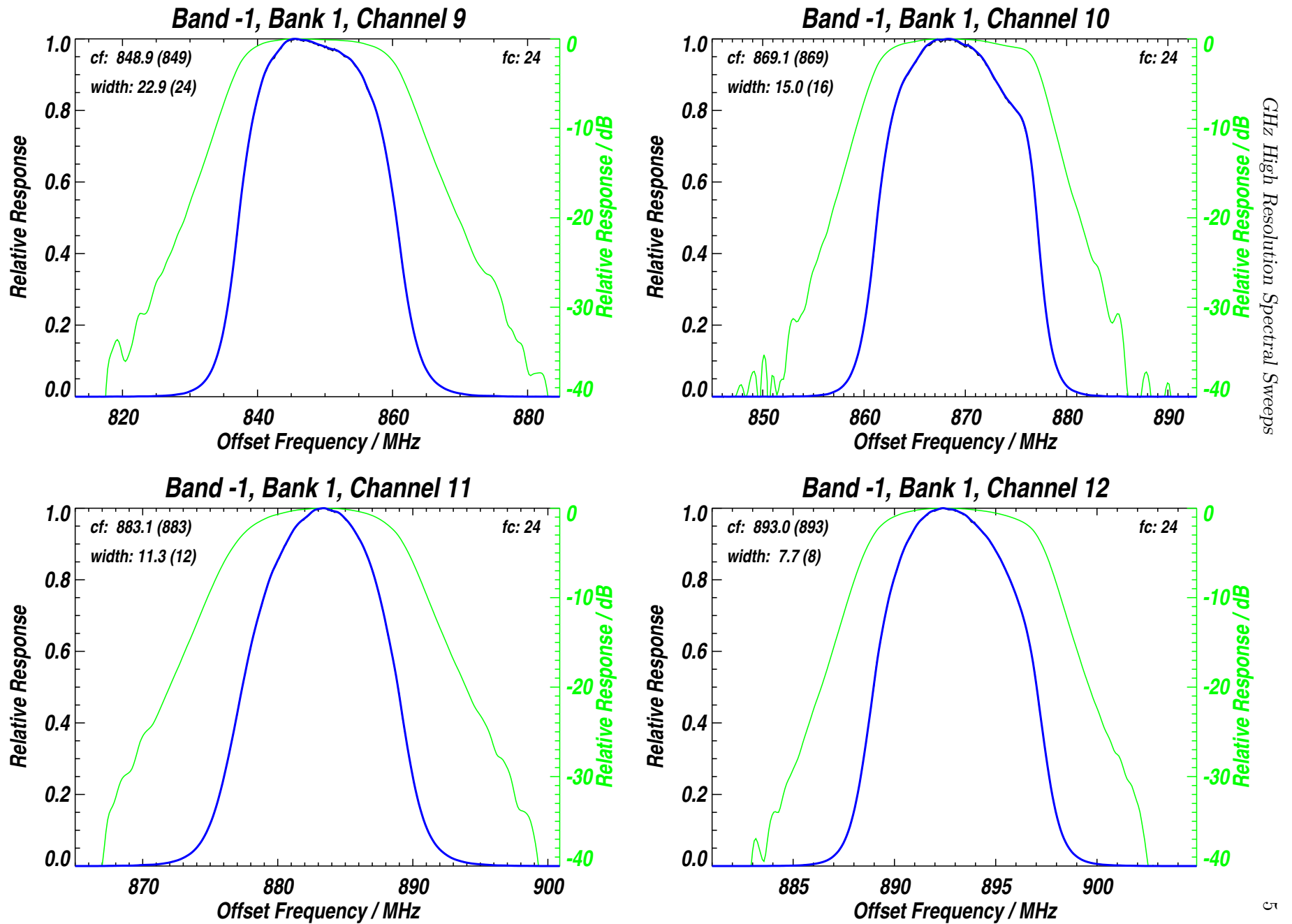


Figure H.3: Front-end sweep data for Band 1 taken via Filterbank 1, channels 5 to 8. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.



GHz High Resolution Spectral Sweeps

Figure H.4: Front-end sweep data for Band 1 taken via Filterbank 1, channels 9 to 12. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

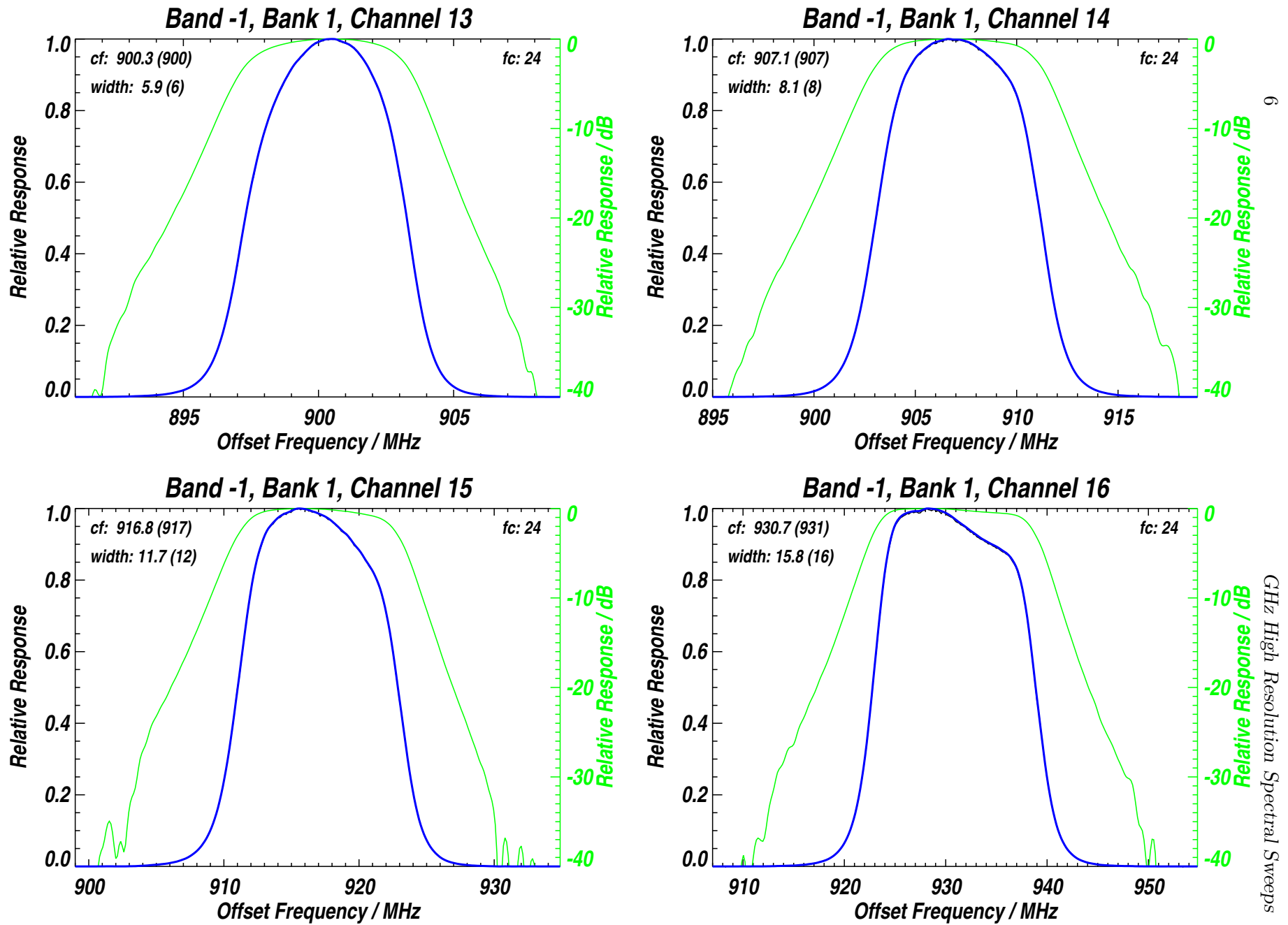


Figure H.5: Front-end sweep data for Band 1 taken via Filterbank 1, channels 13 to 16. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

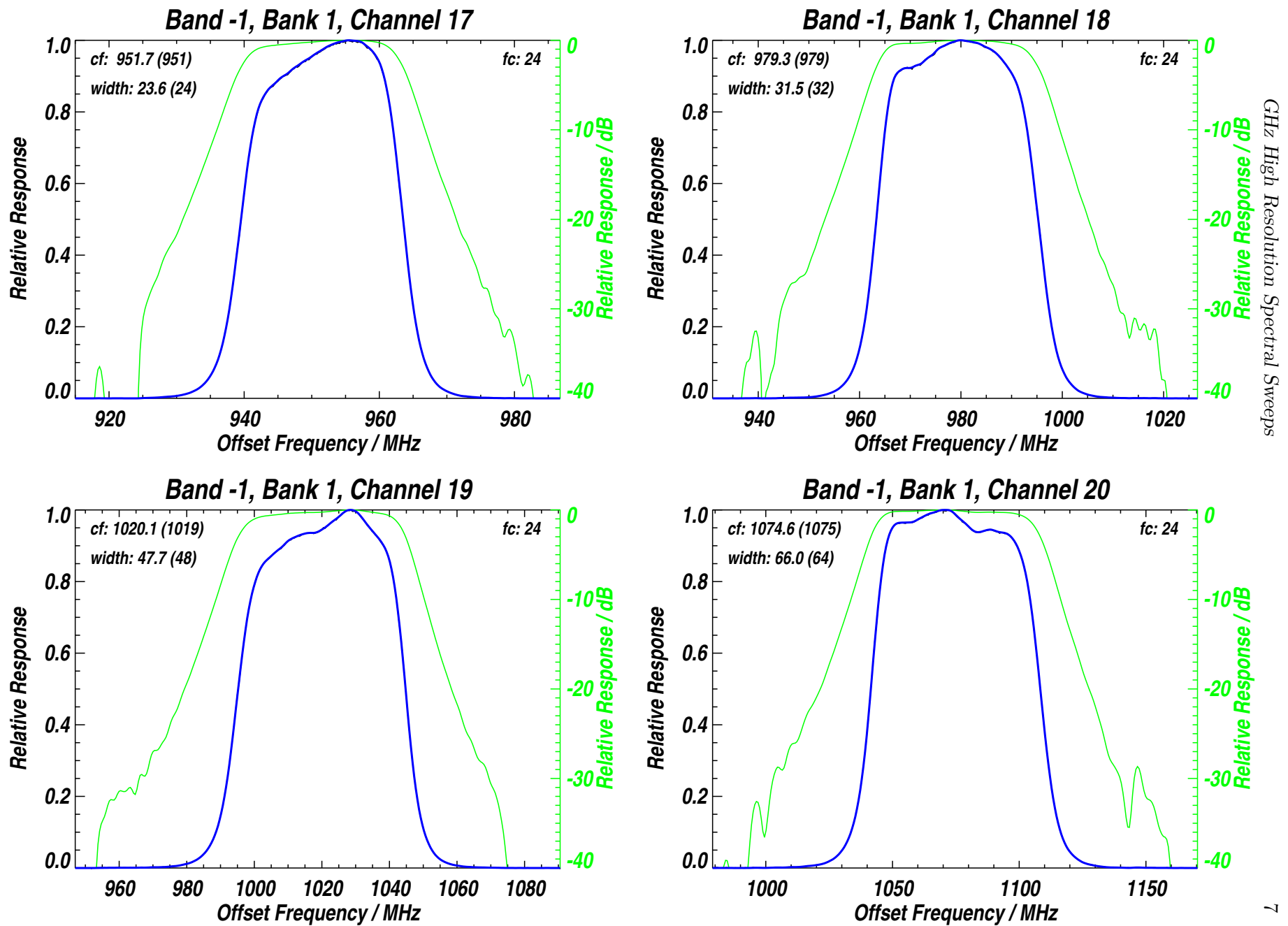


Figure H.6: Front-end sweep data for Band 1 taken via Filterbank 1, channels 17 to 20. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

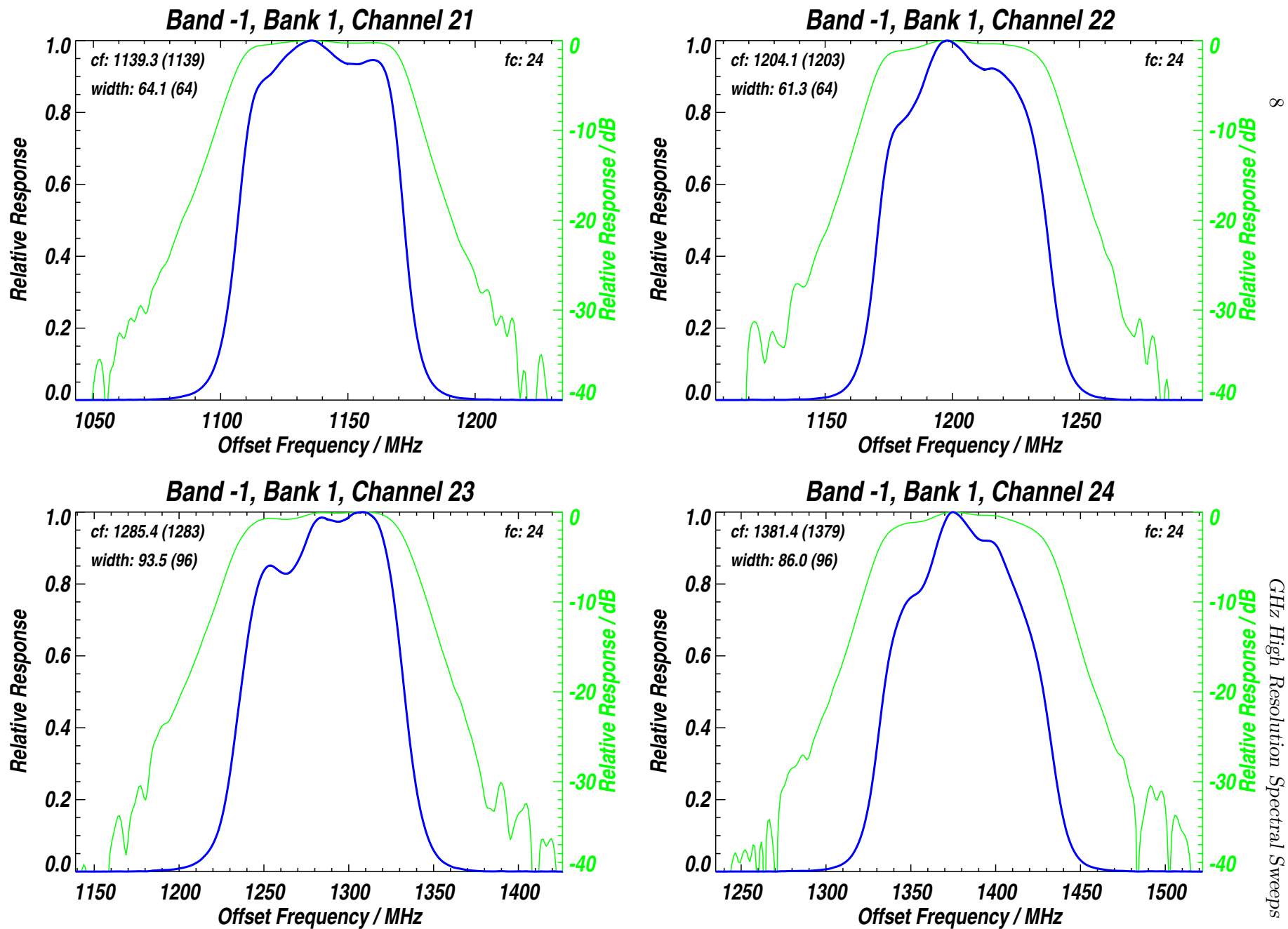
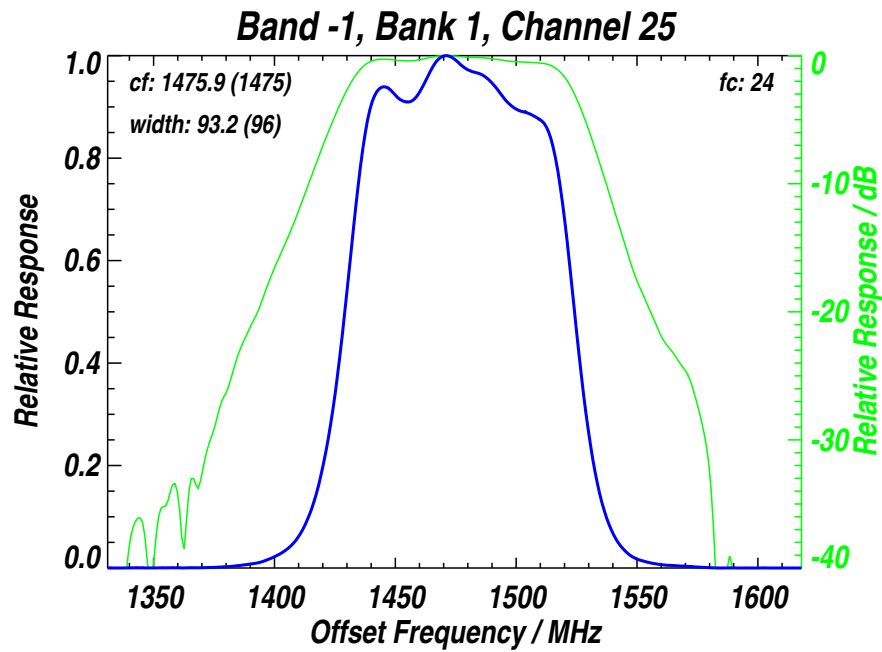


Figure H.7: Front-end sweep data for Band 1 taken via Filterbank 1, channels 21 to 24. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.



**Band 1 (lsb)**  
**Bank 1**  
**Origin = 117.853333328 GHz**

Figure H.8: Front-end sweep data for Band 1 taken via Filterbank 1, channel 25. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.



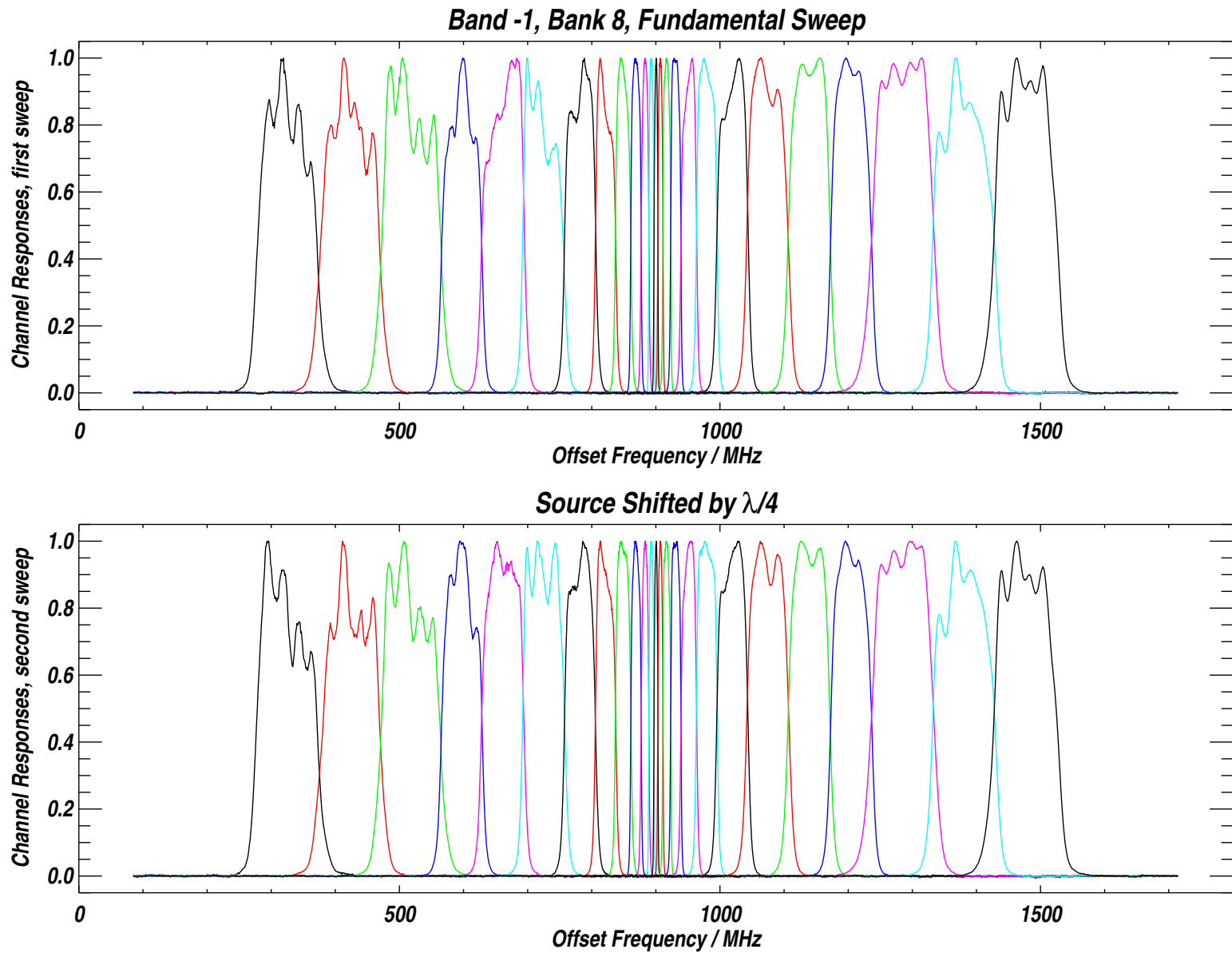


Figure H.9: Front-end sweep data for Band 1 taken via Filterbank 8. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

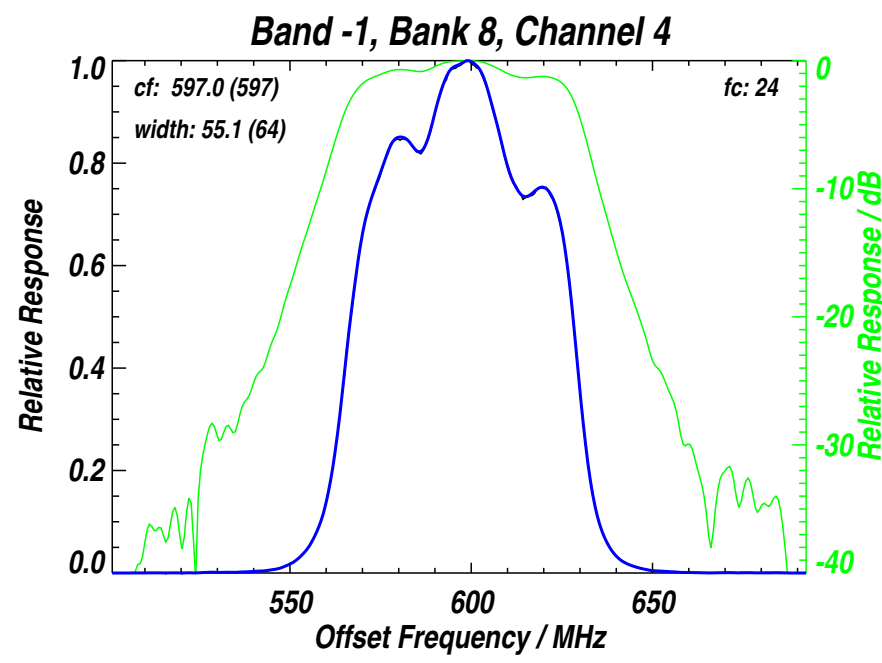
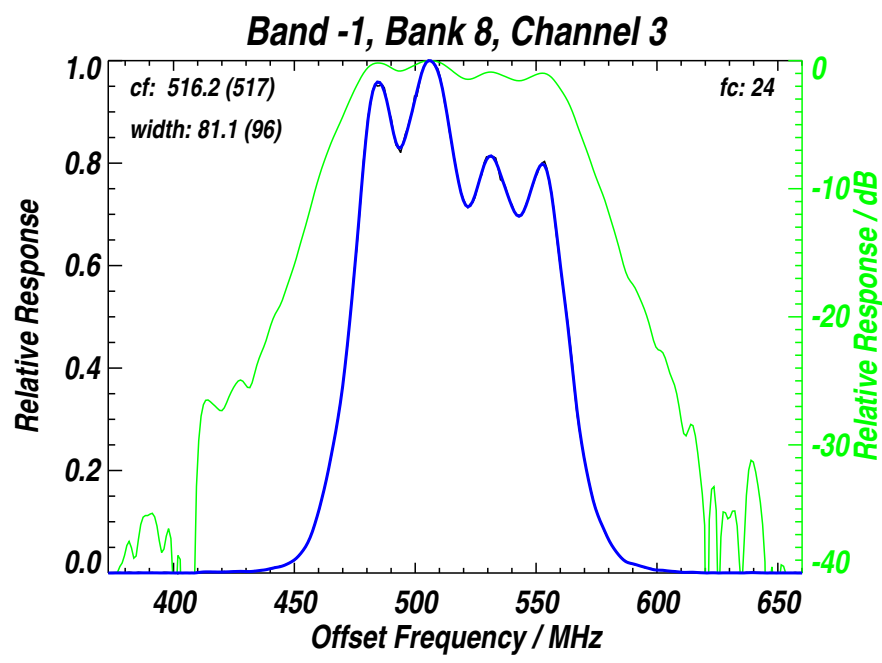
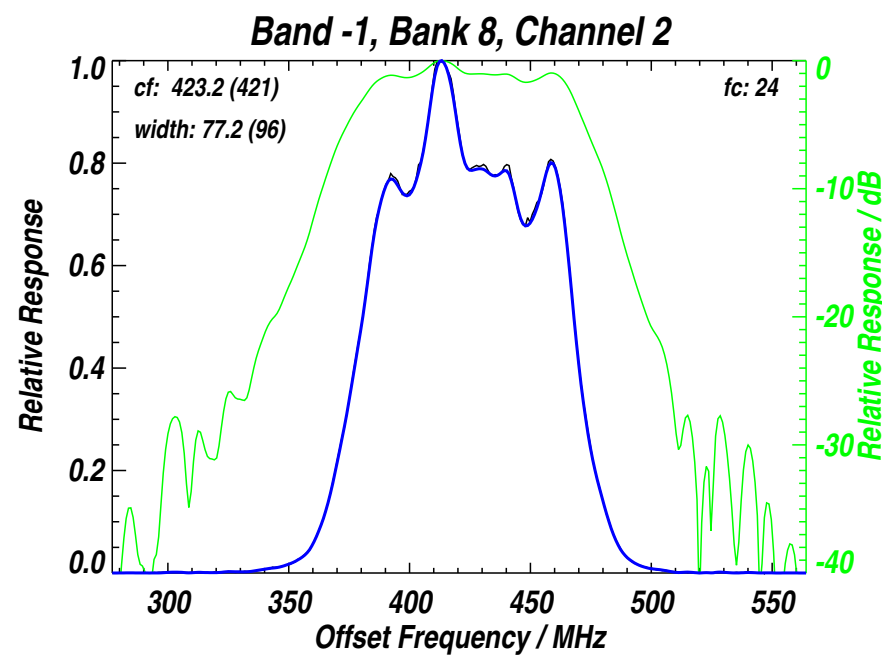
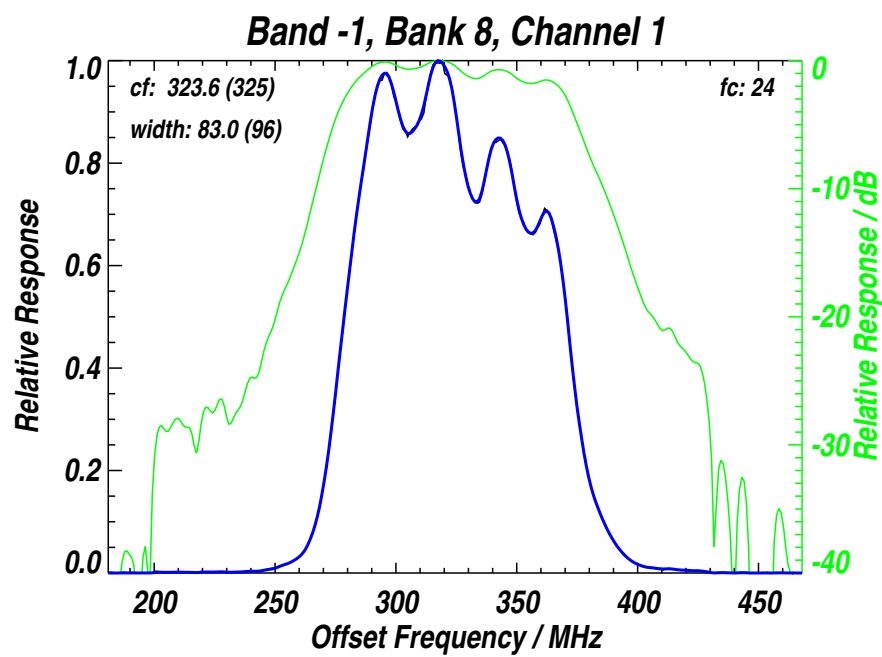


Figure H.10: Front-end sweep data for Band 1 taken via Filterbank 8, channels 1 to 4. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

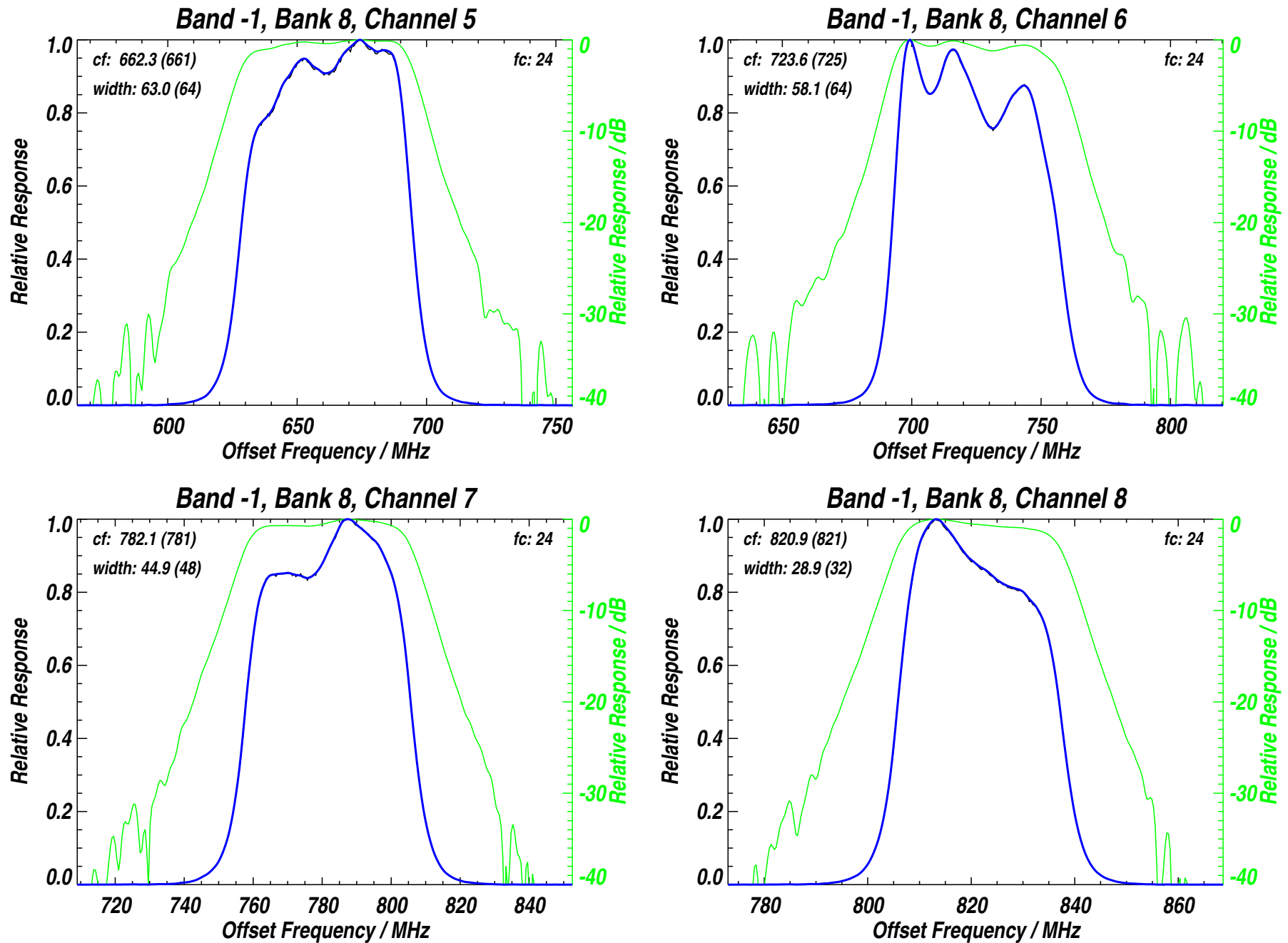


Figure H.11: Front-end sweep data for Band 1 taken via Filterbank 8, channels 5 to 8. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

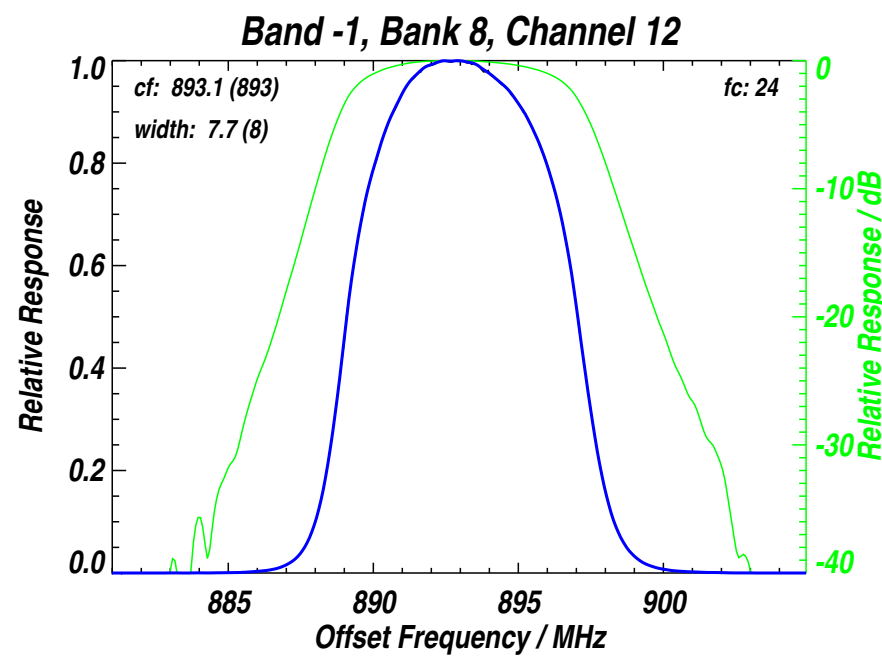
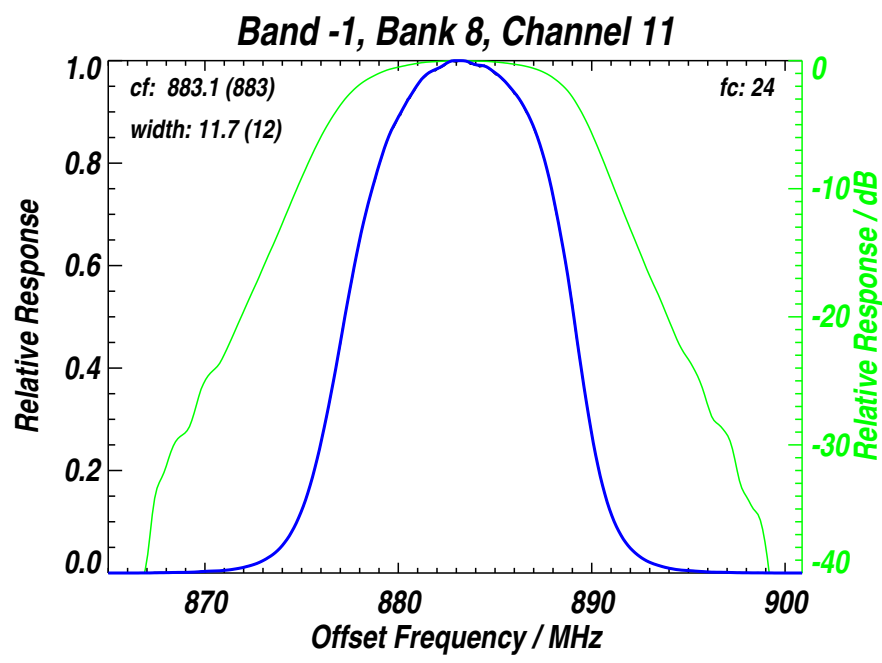
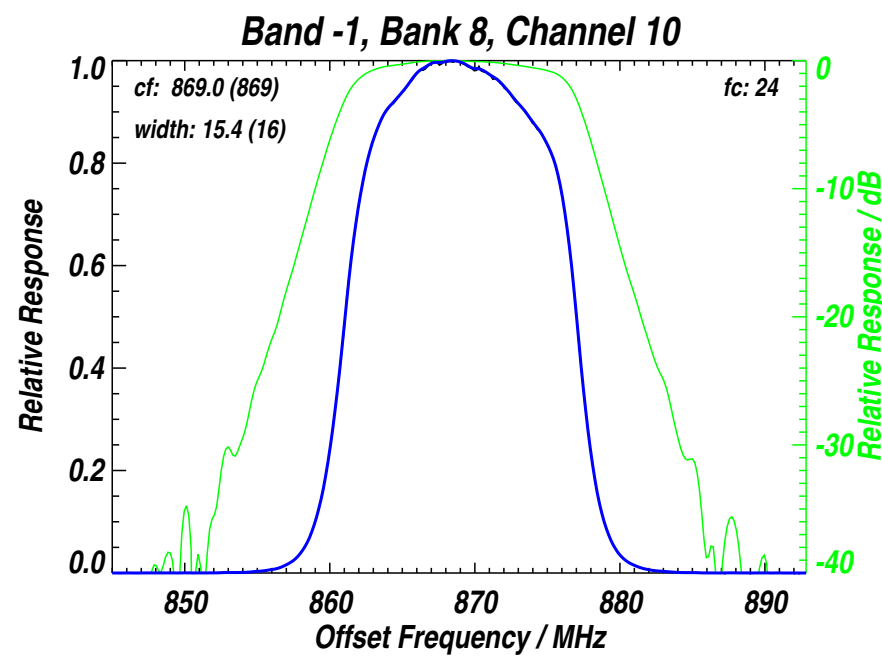
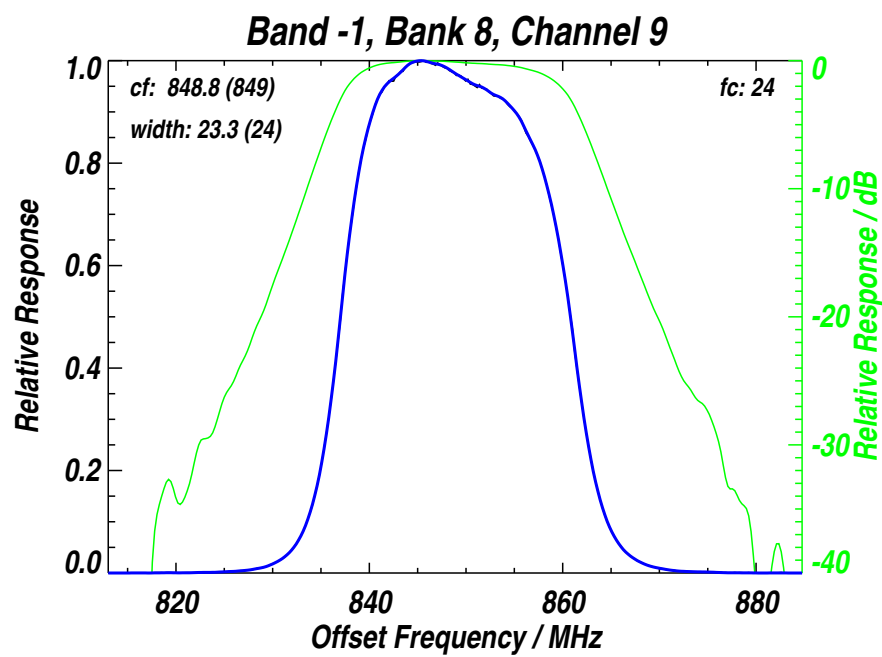


Figure H.12: Front-end sweep data for Band 1 taken via Filterbank 8, channels 9 to 12. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

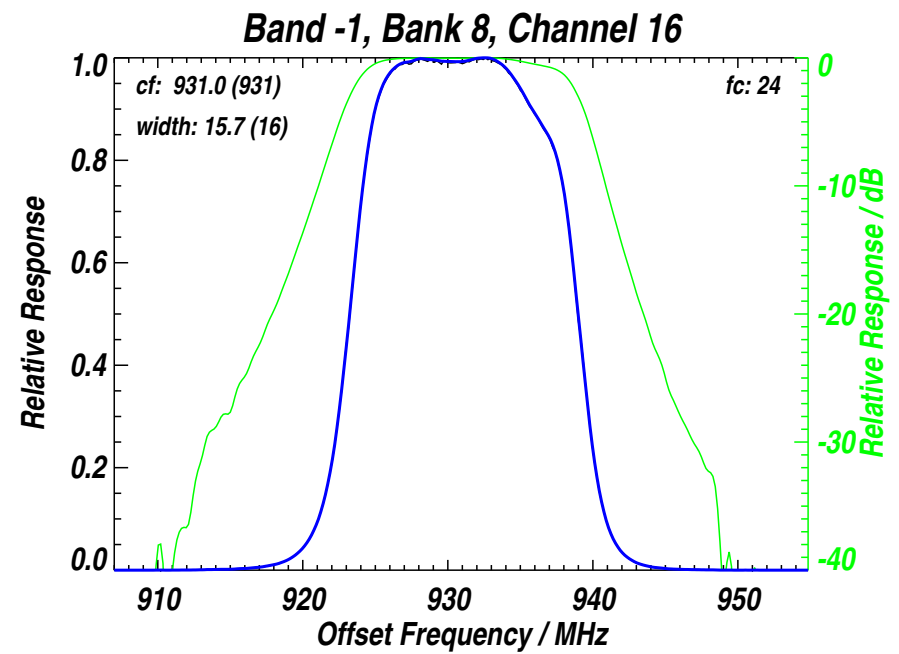
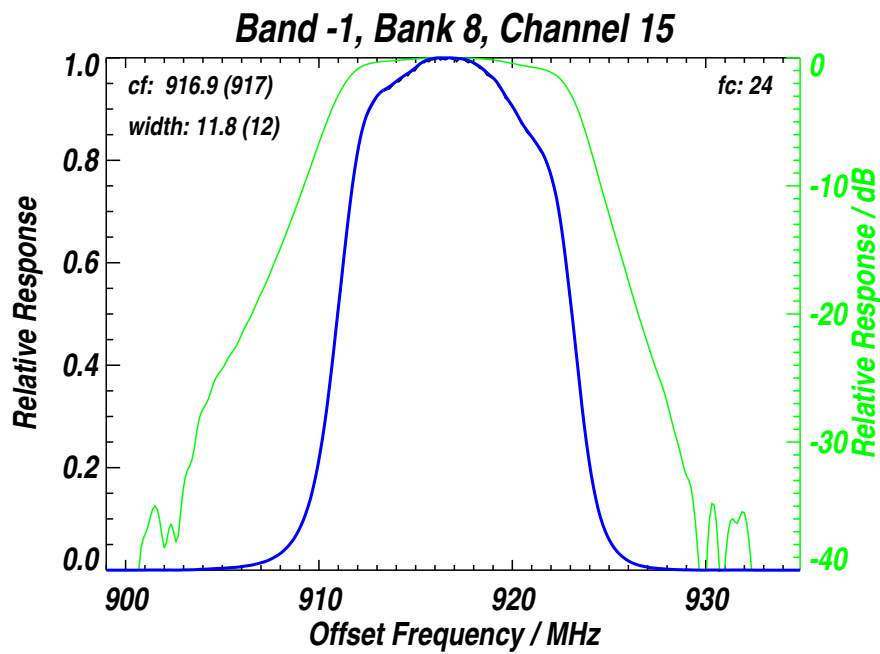
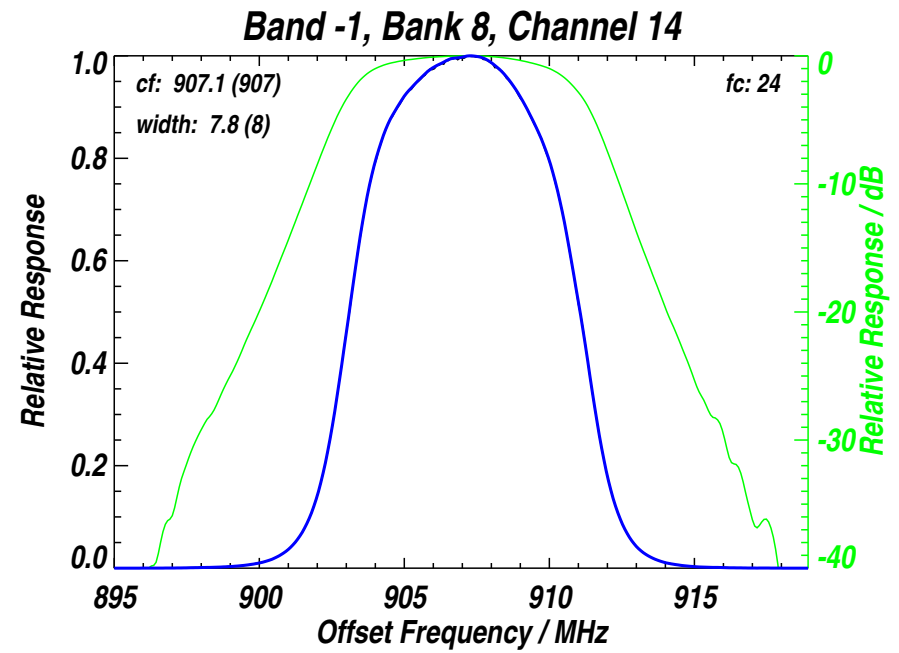
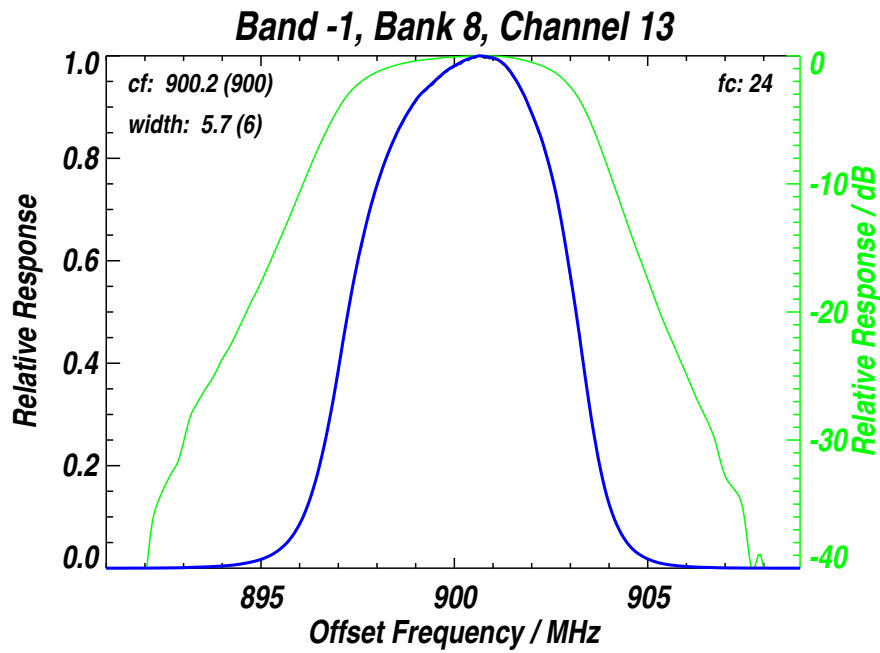


Figure H.13: Front-end sweep data for Band 1 taken via Filterbank 8, channels 13 to 16. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

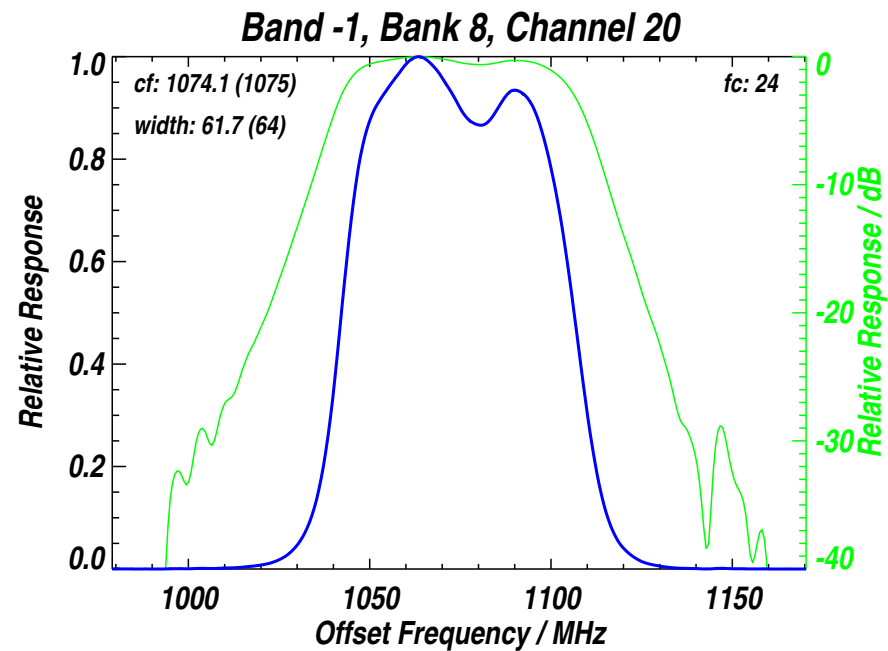
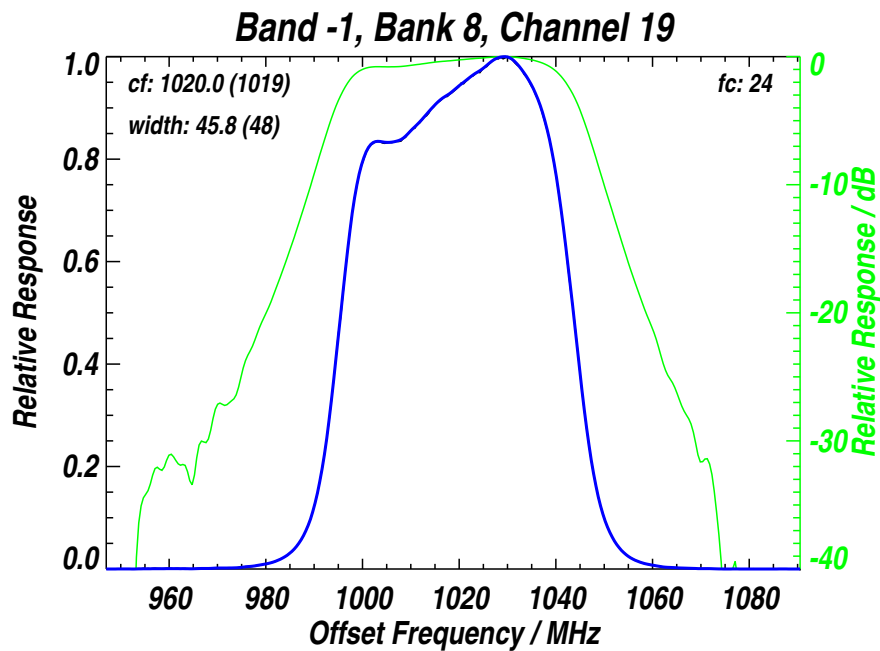
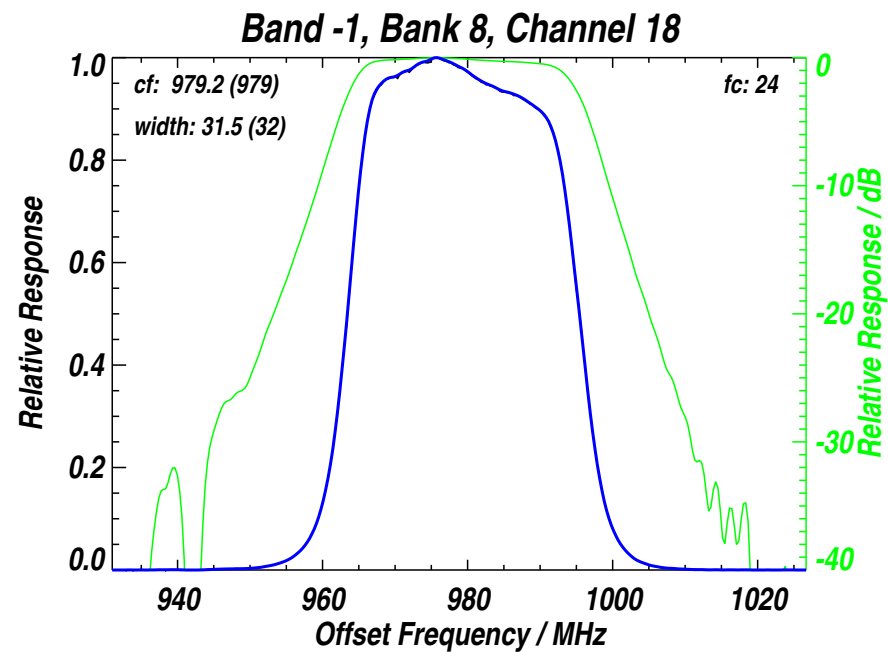
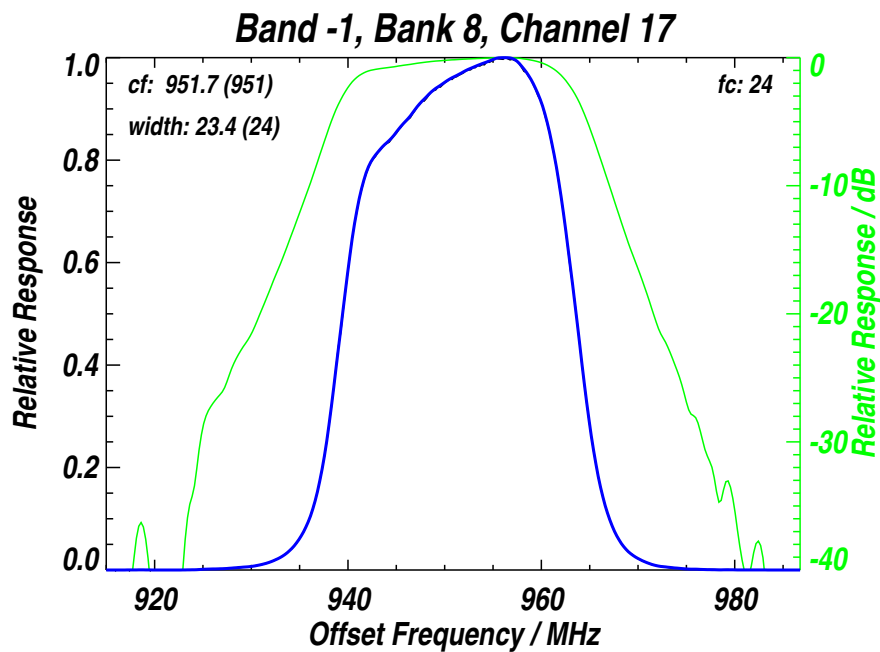


Figure H.14: Front-end sweep data for Band 1 taken via Filterbank 8, channels 17 to 20. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.

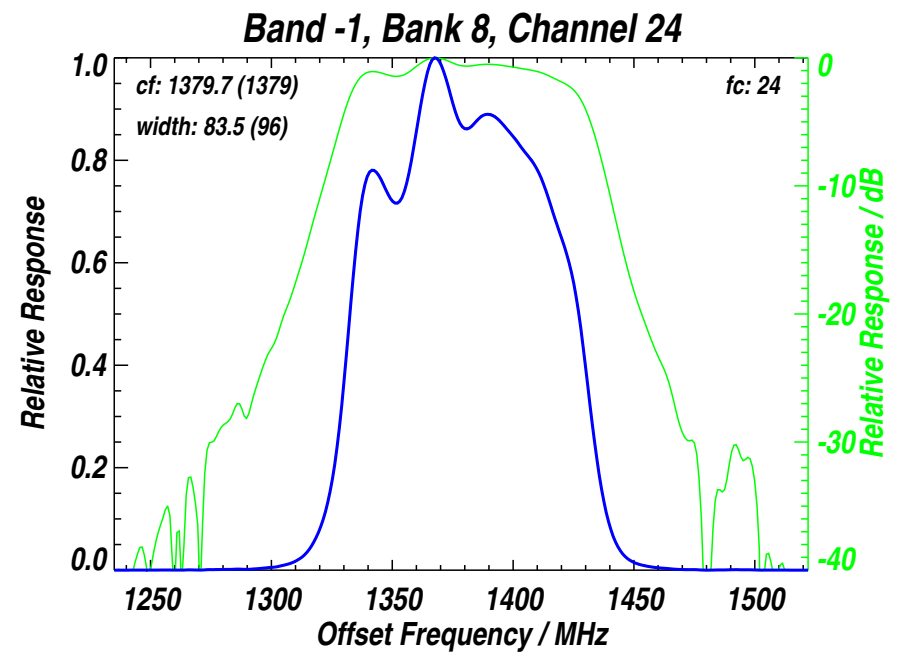
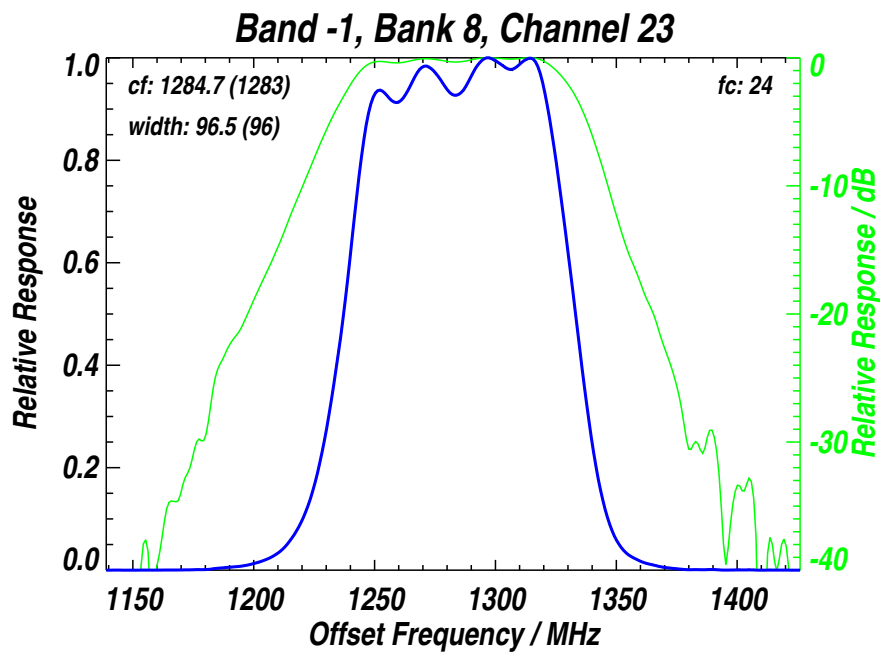
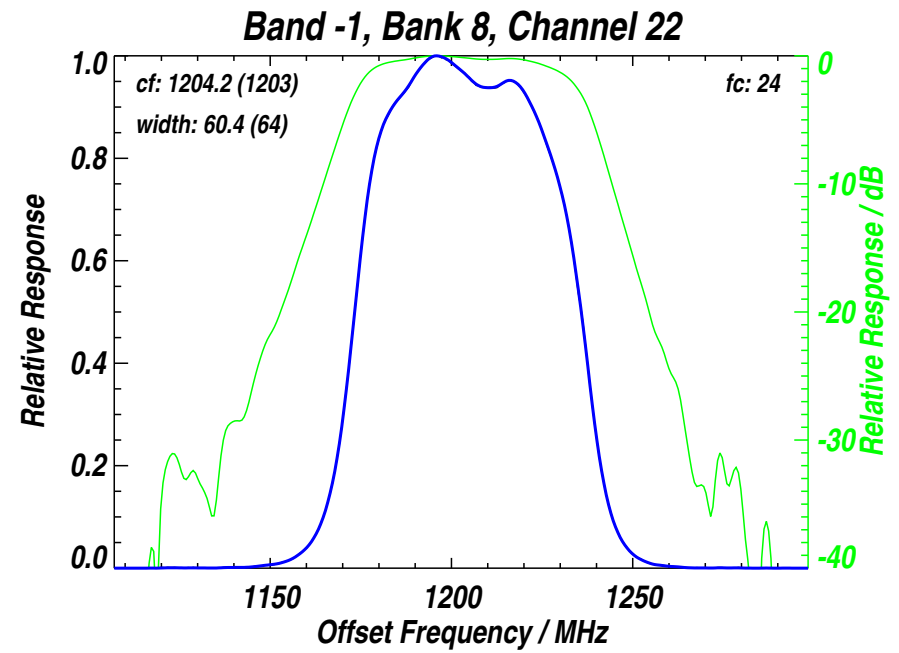
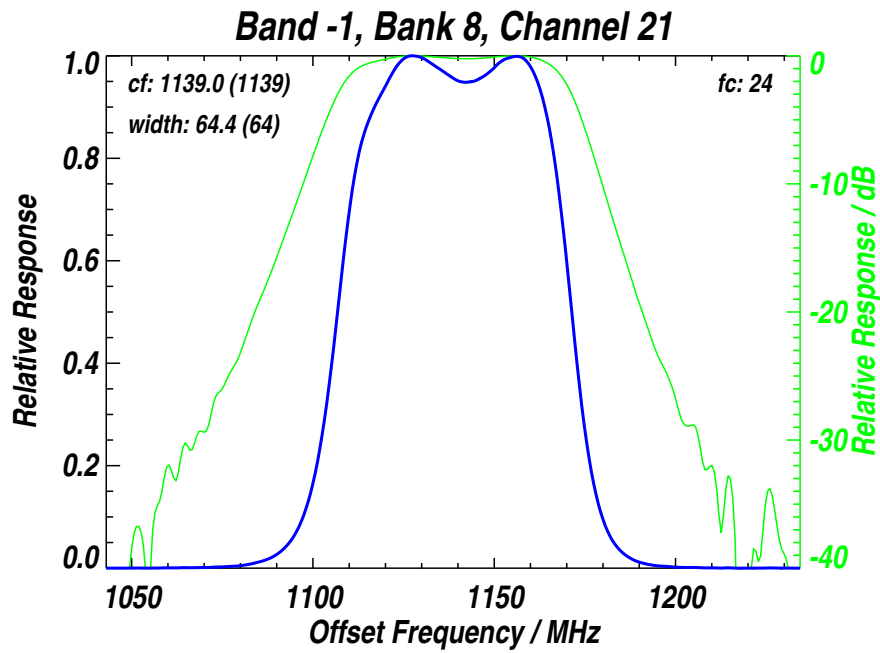
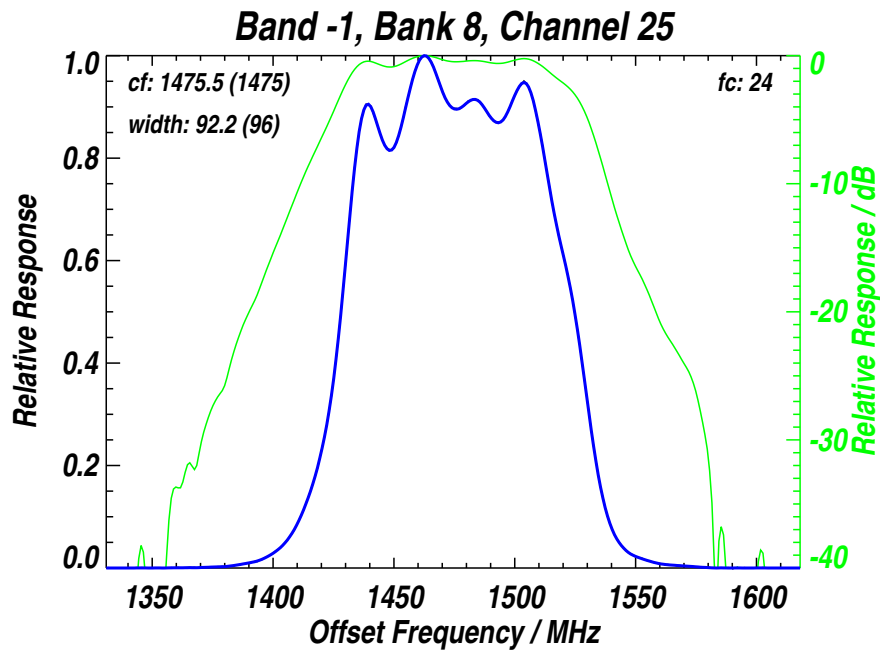


Figure H.15: Front-end sweep data for Band 1 taken via Filterbank 8, channels 21 to 24. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.



**Band 1 (lsb)**  
**Bank 8**  
**Origin = 117.853333328 GHz**

Figure H.16: Front-end sweep data for Band 1 taken via Filterbank 8, channel 25. For this measurement the sweep was performed twice, with the source moved towards the instrument by  $\frac{\lambda}{4}$  (of the band center frequency). See text for additional details.



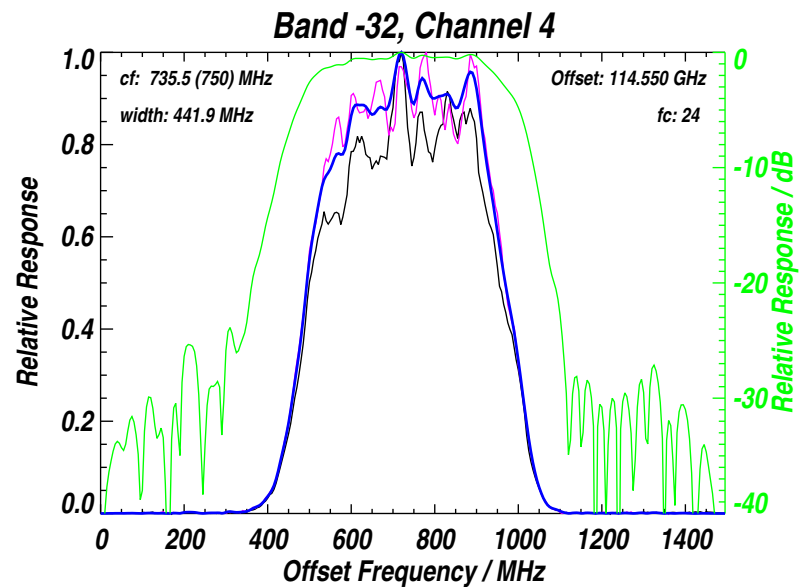
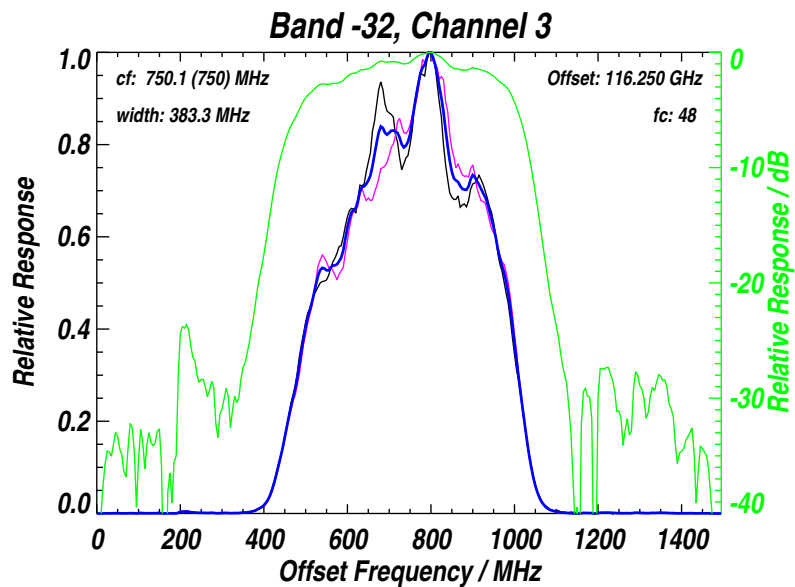
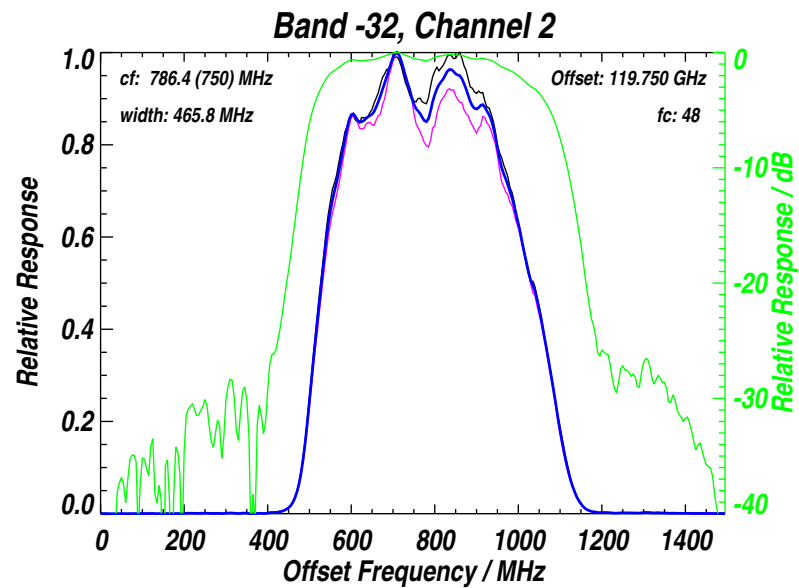
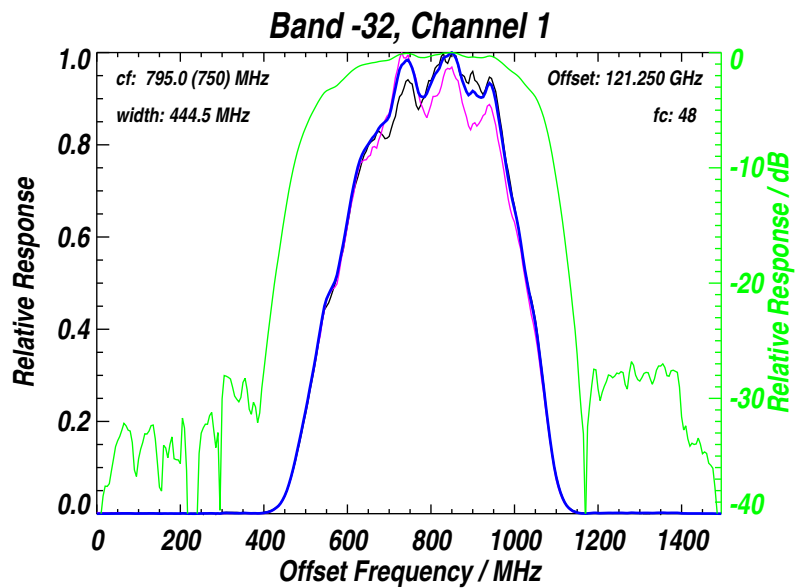


Figure H.17: Lower sideband front-end sweep data for Band 32 (R1A Wide Filters). The black and cyan lines are data from sweeps with nominal and  $\frac{\lambda}{4}$  shifted source. The bold blue is the data from both sweeps, combined and filtered. See text for additional details.

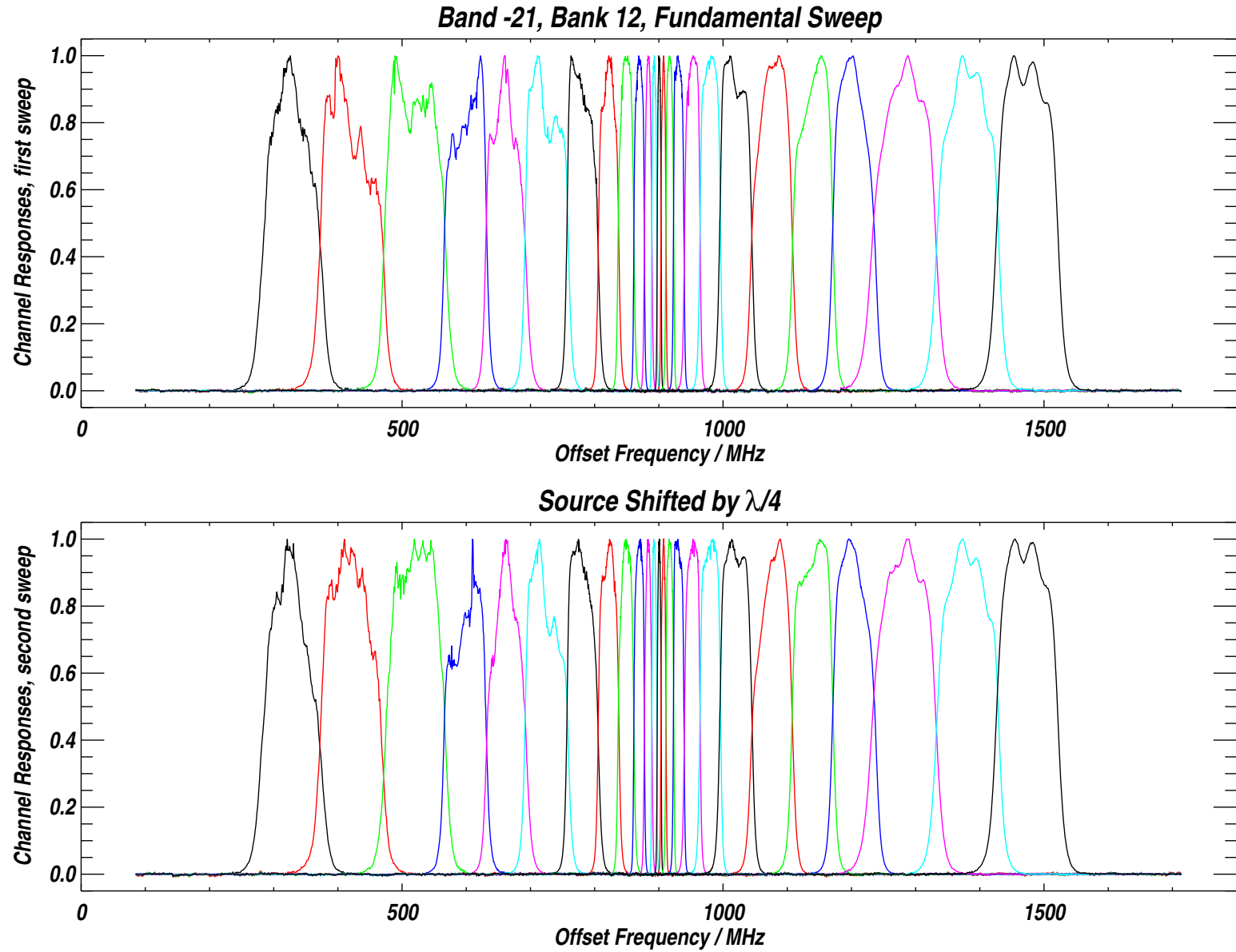


Figure H.18: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12. See text for additional details.

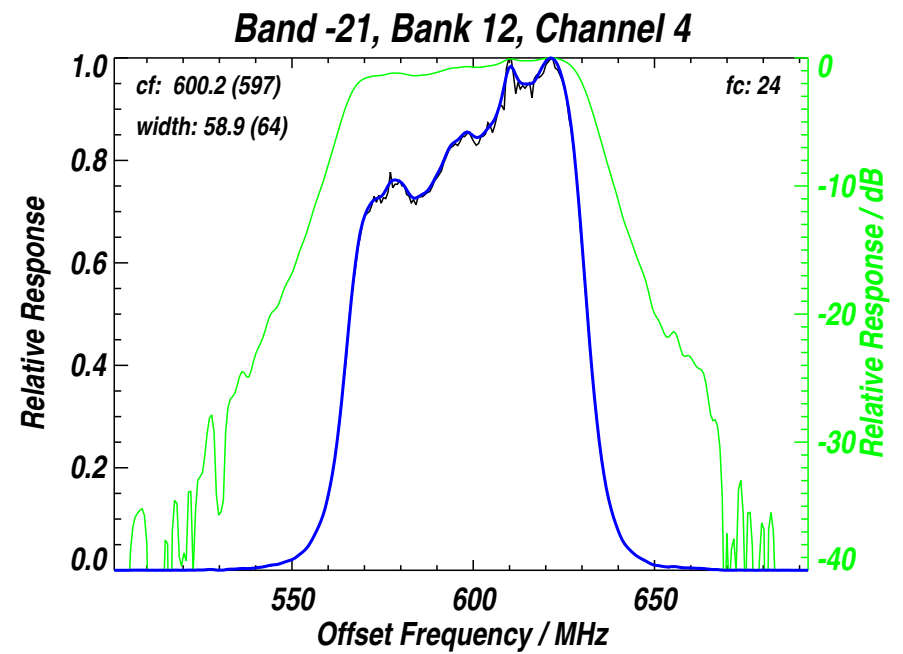
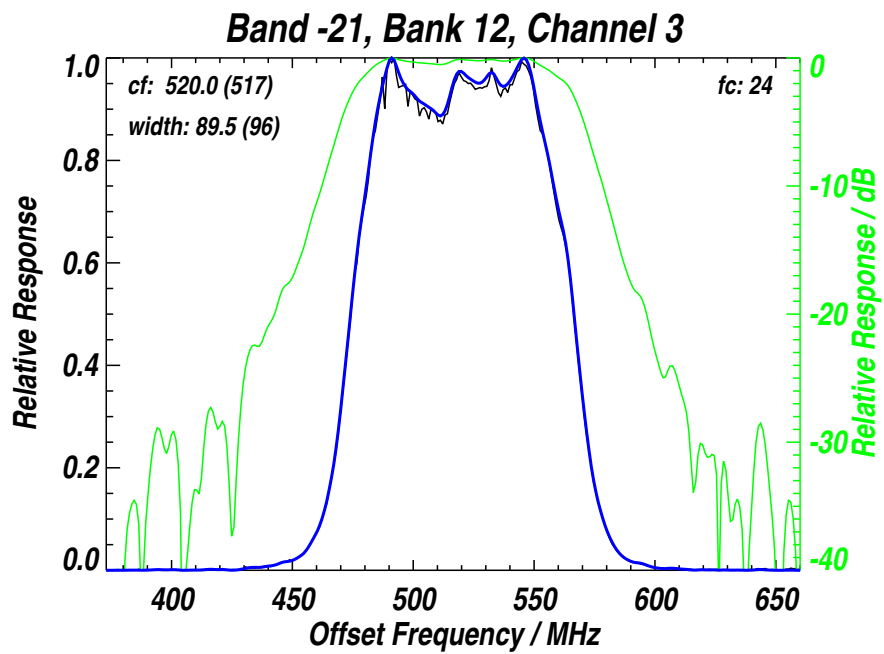
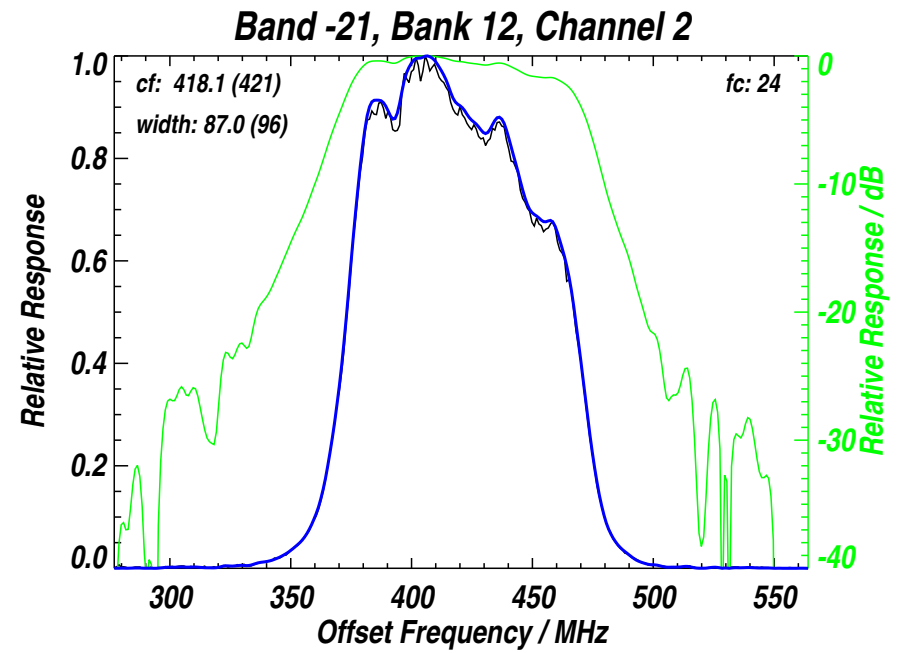
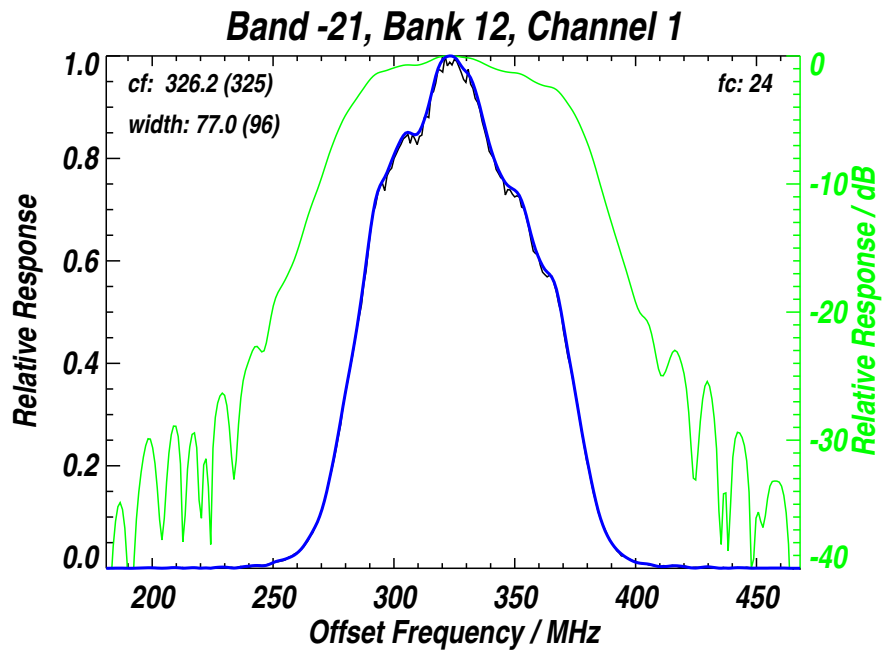


Figure H.19: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channels 1 to 4. See text for additional details.

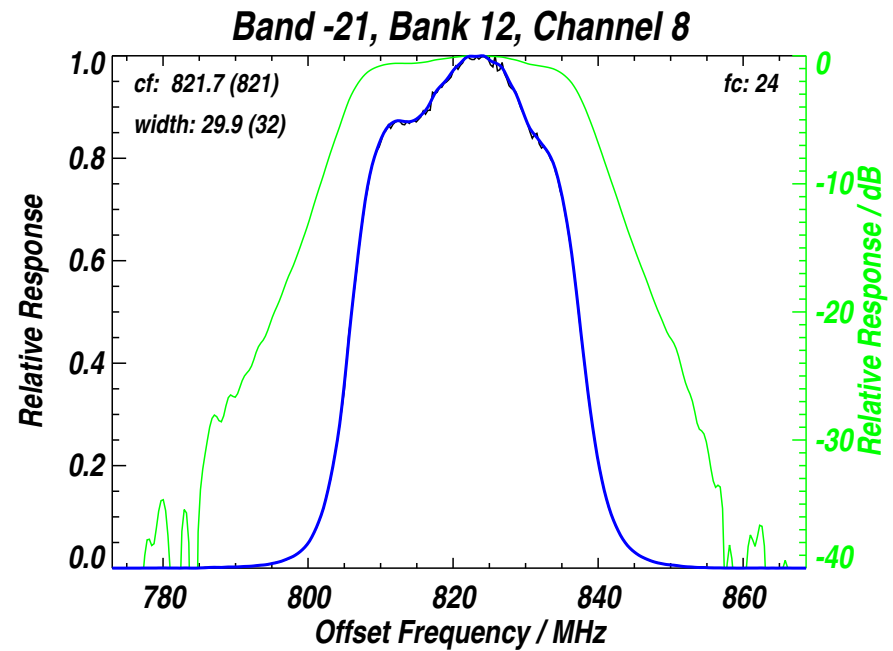
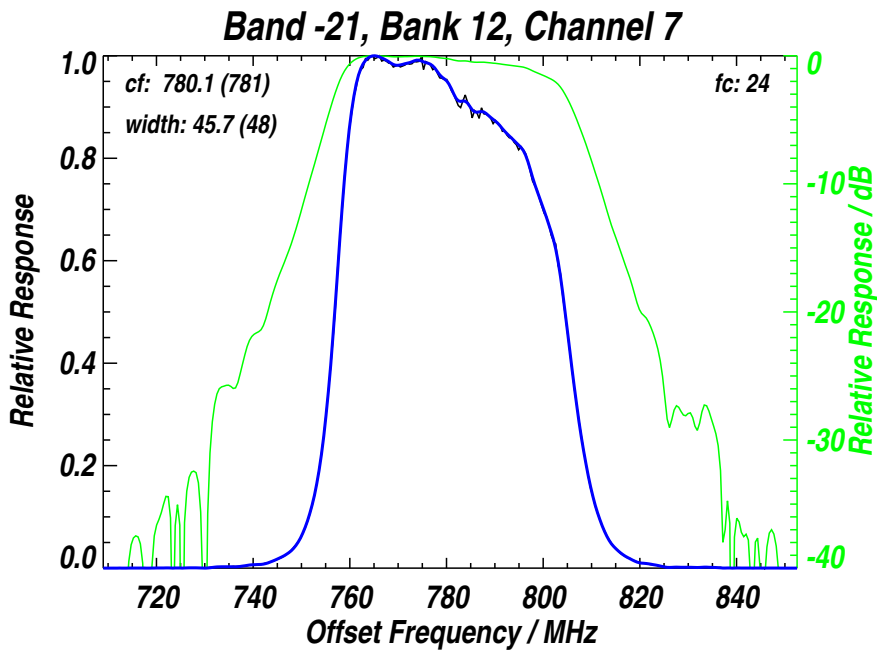
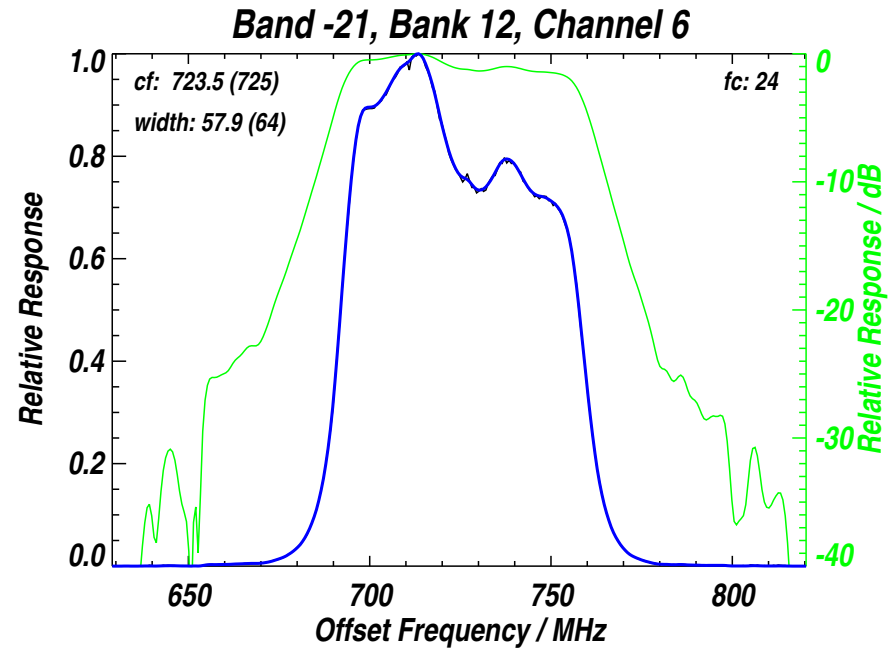
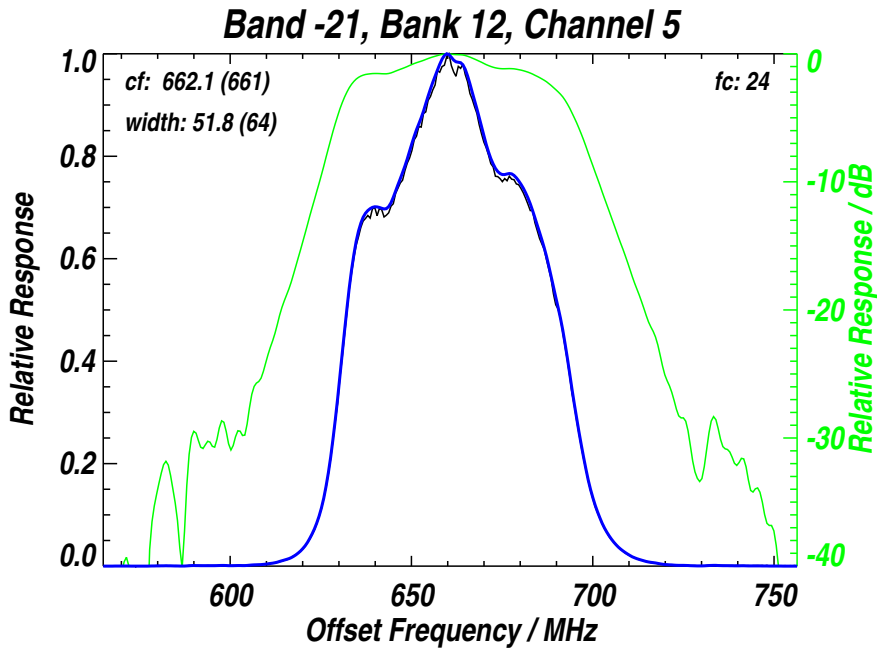


Figure H.20: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channels 5 to 8. See text for additional details.

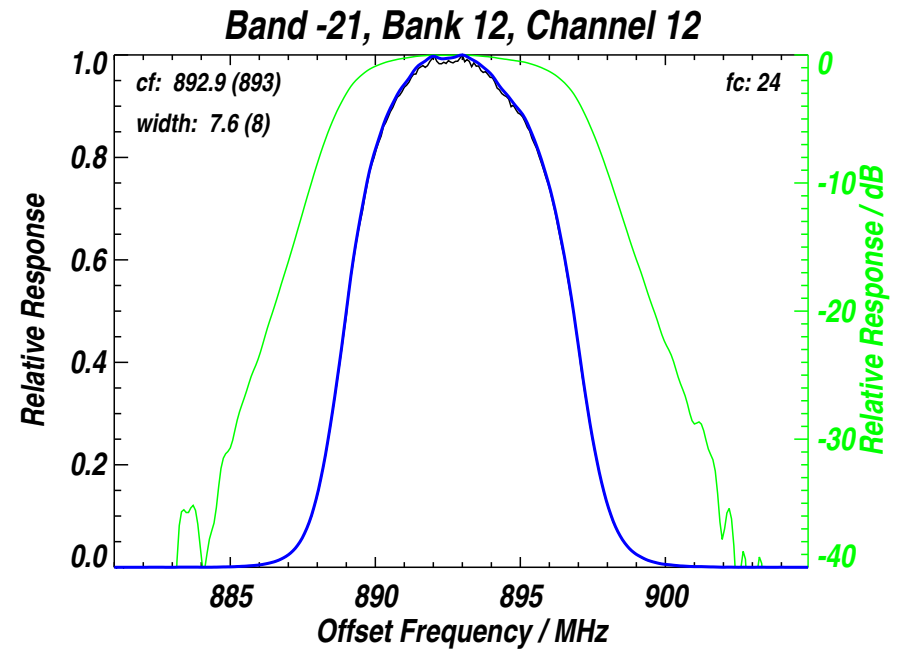
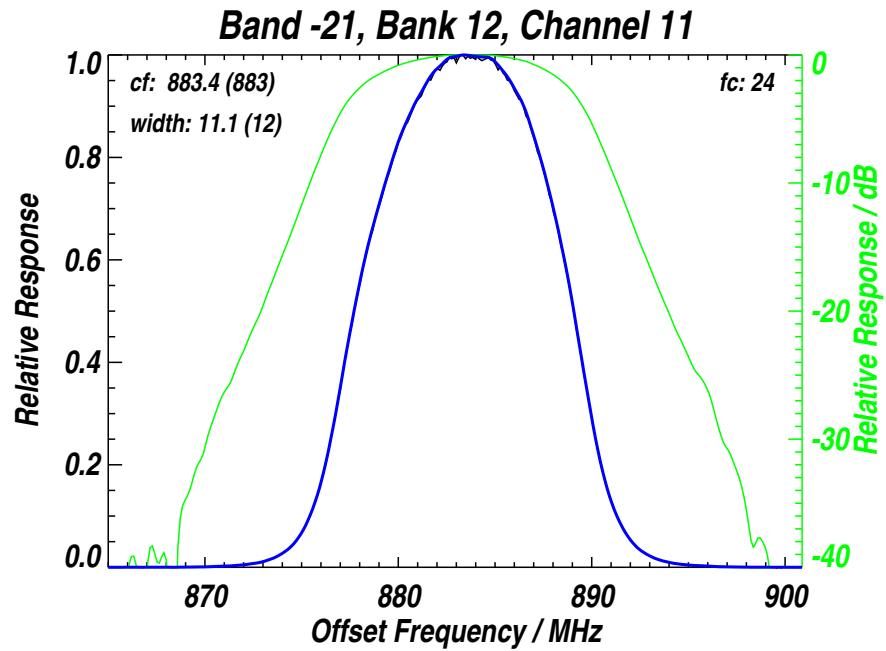
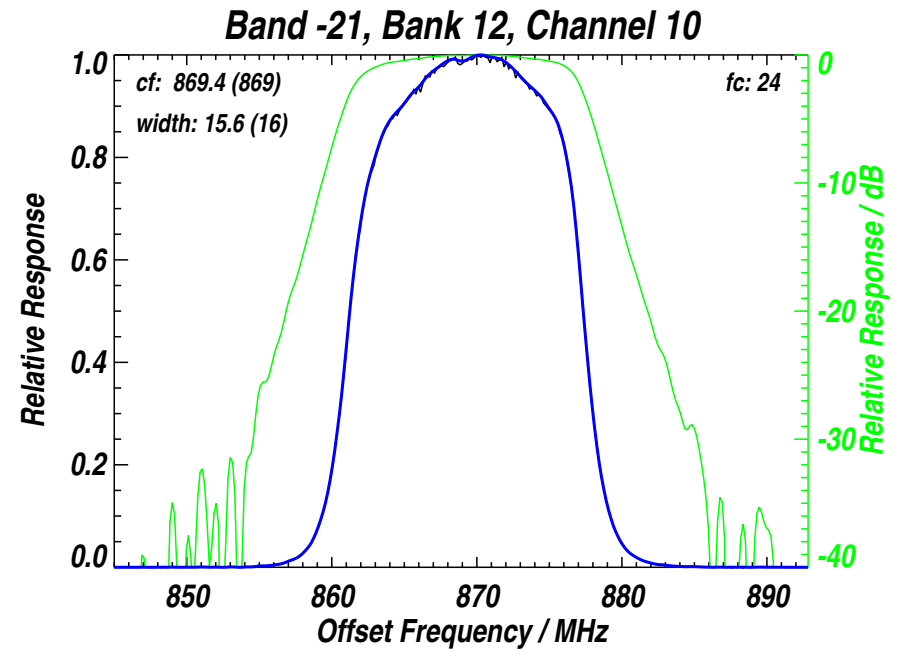
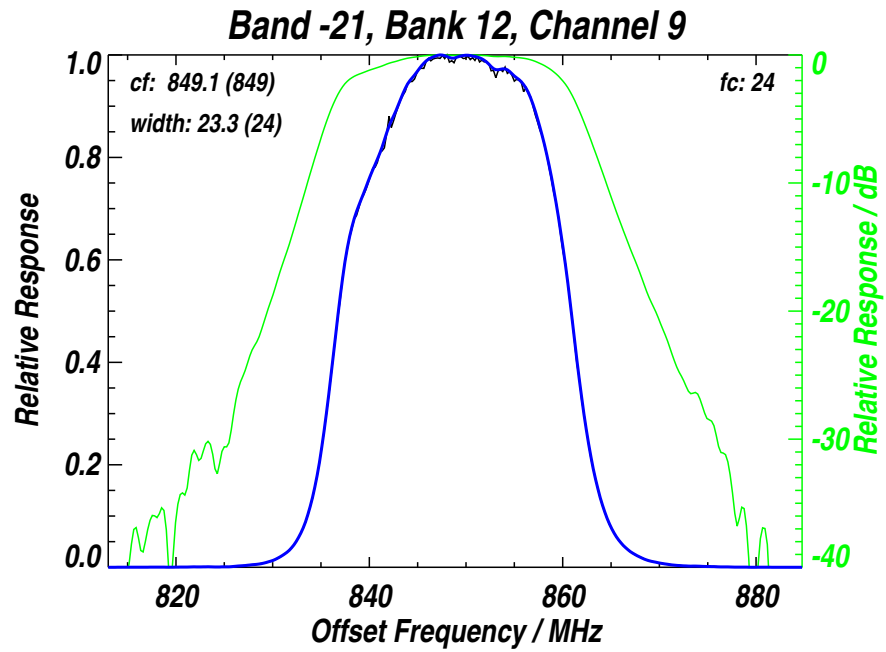


Figure H.21: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channels 9 to 12. See text for additional details.

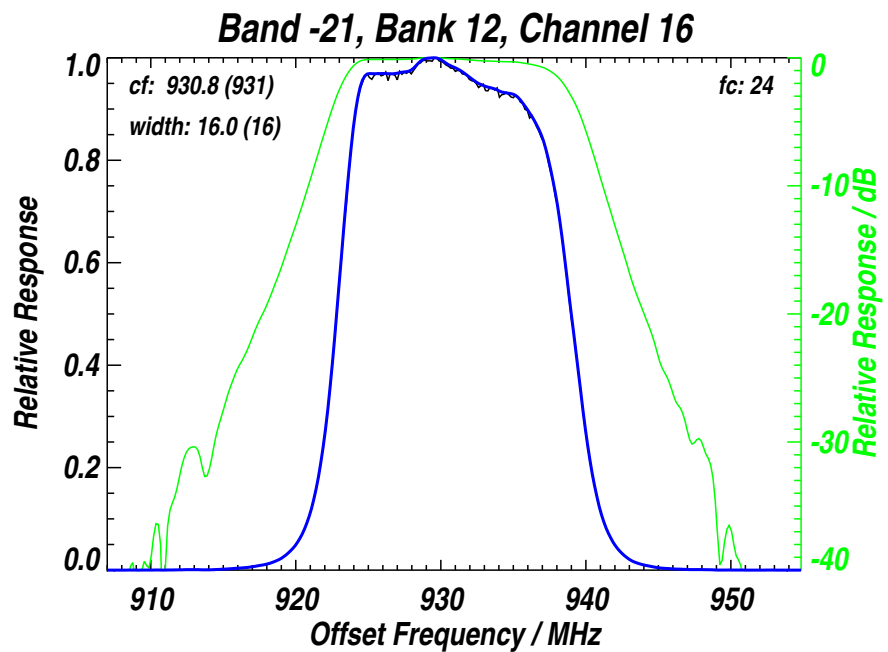
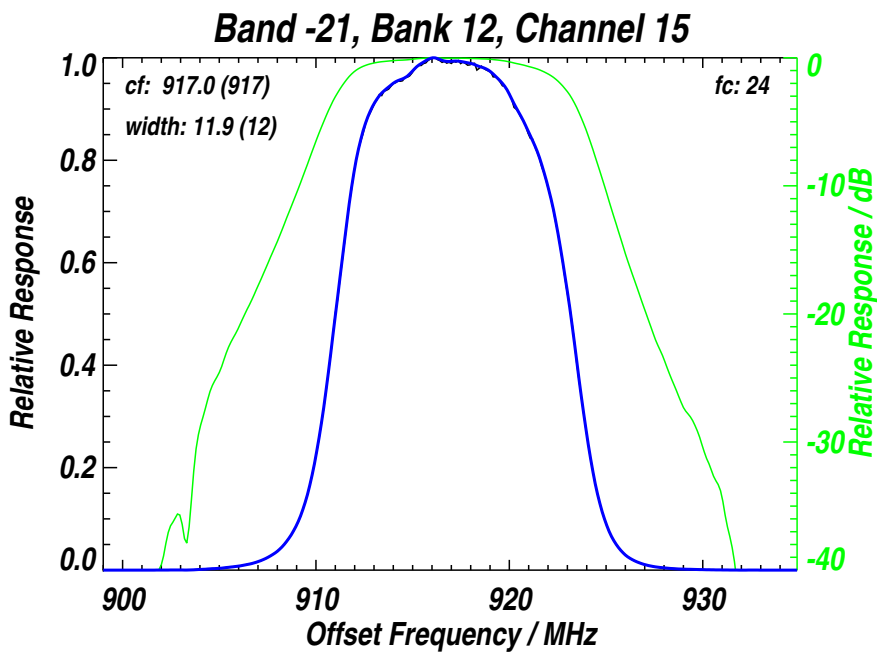
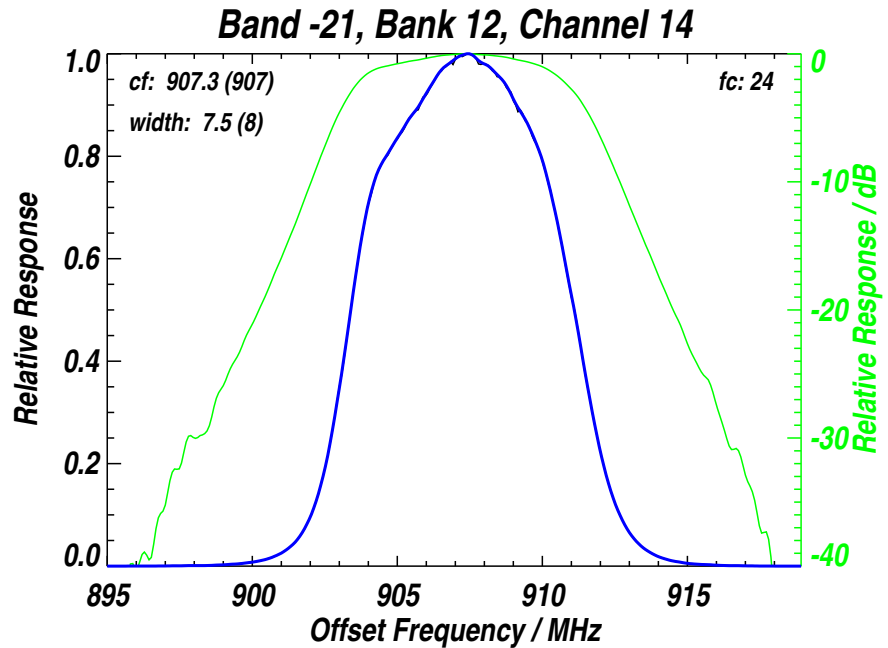
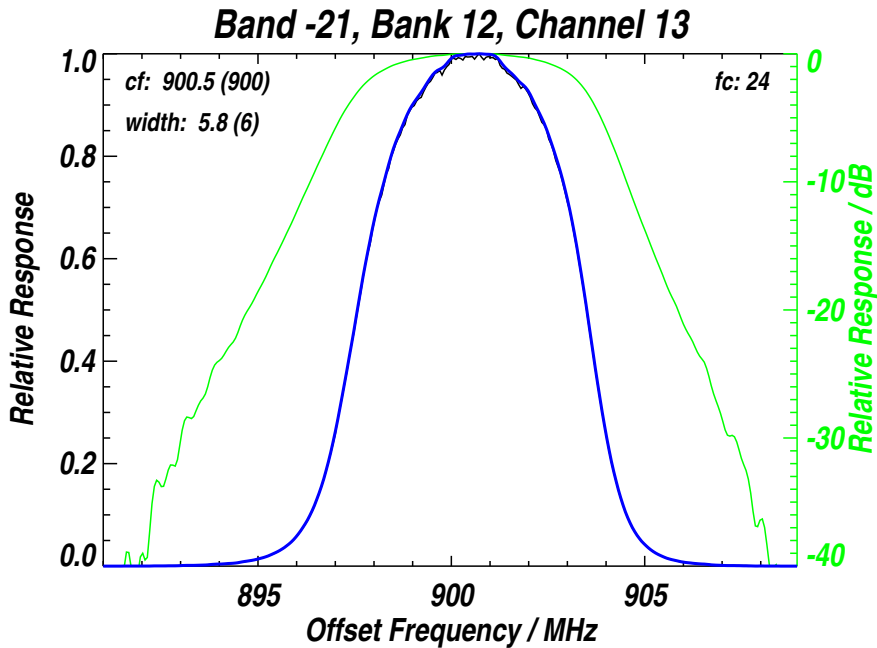


Figure H.22: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channels 13 to 16. See text for additional details.

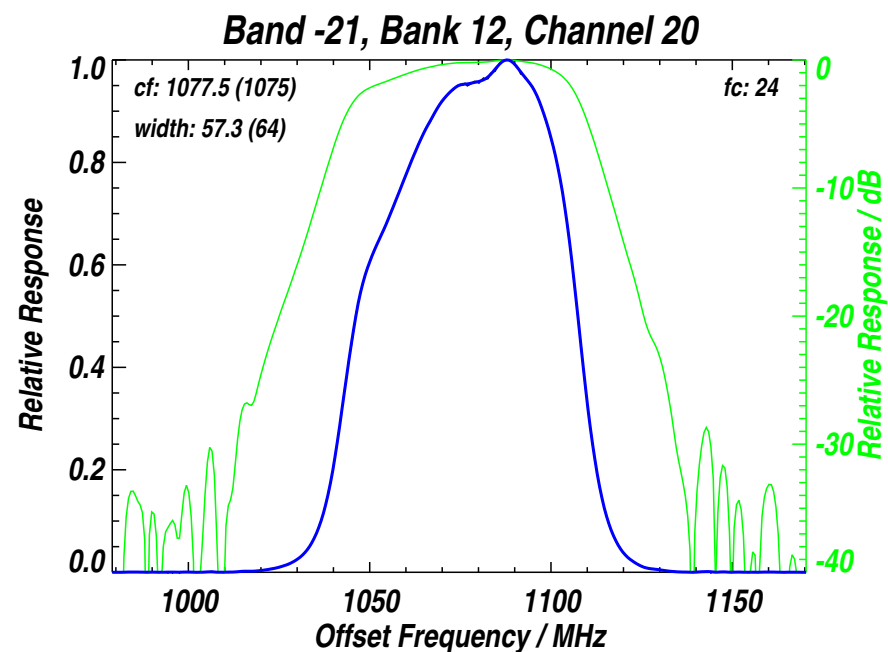
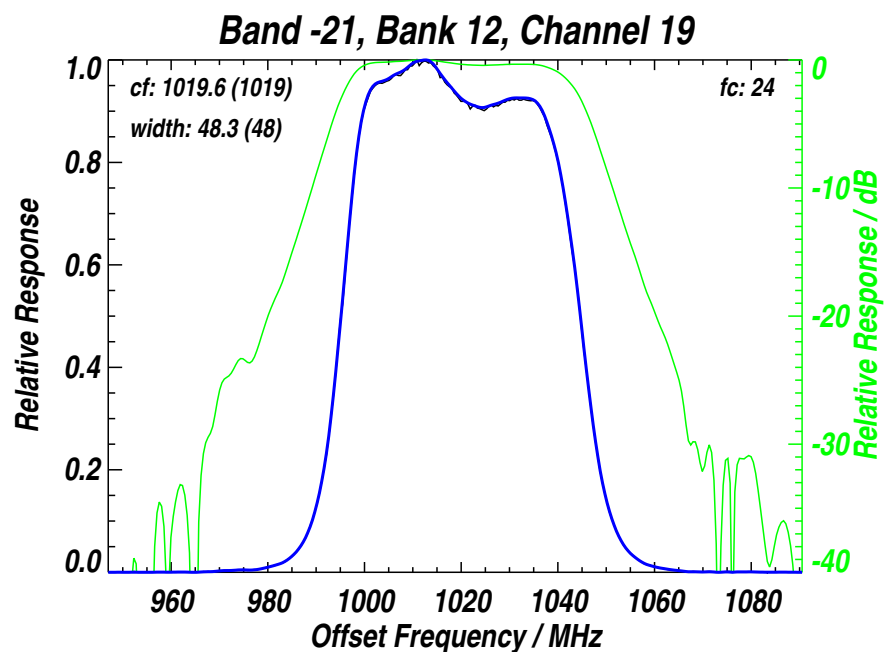
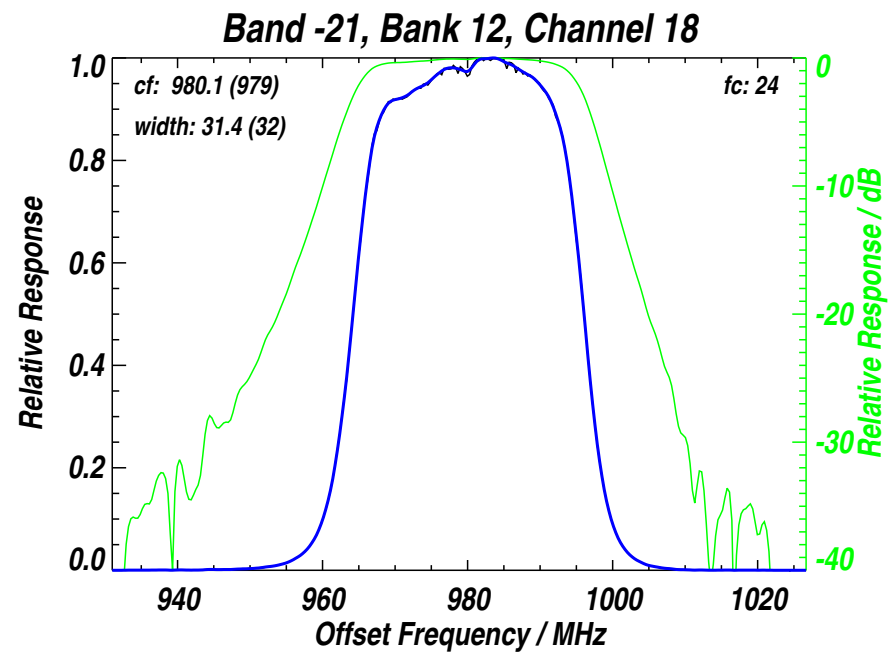
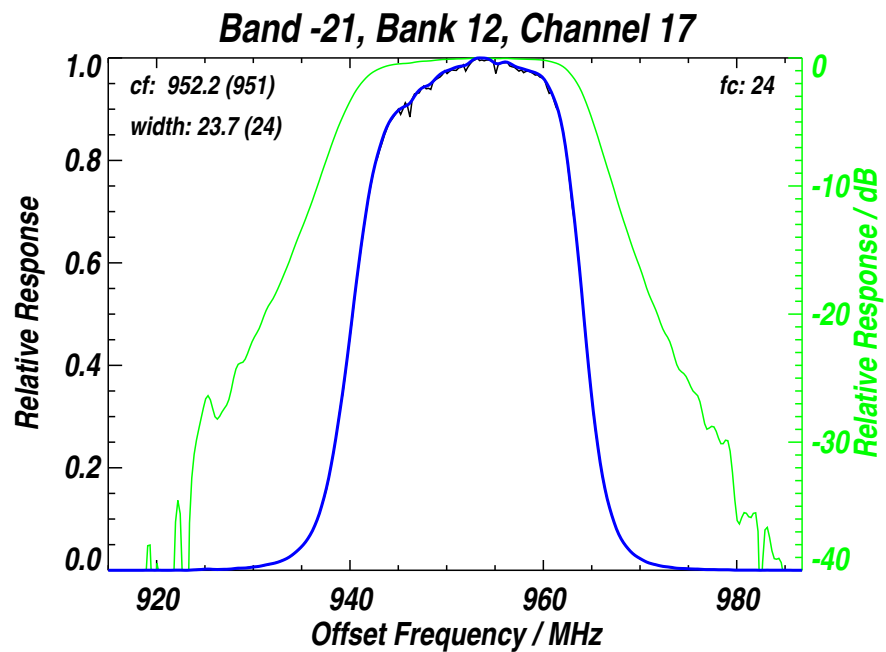


Figure H.23: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channels 17 to 20. See text for additional details.

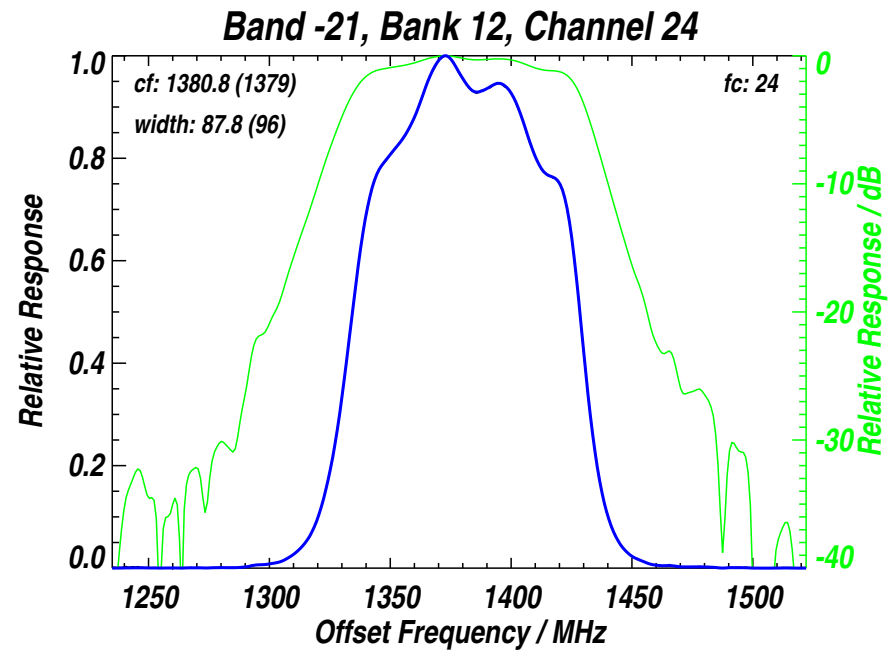
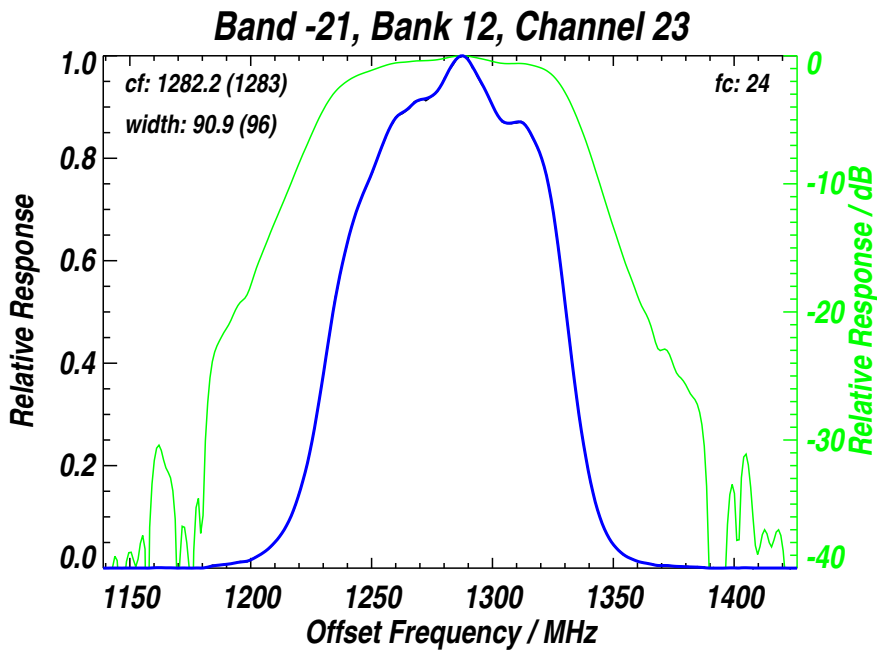
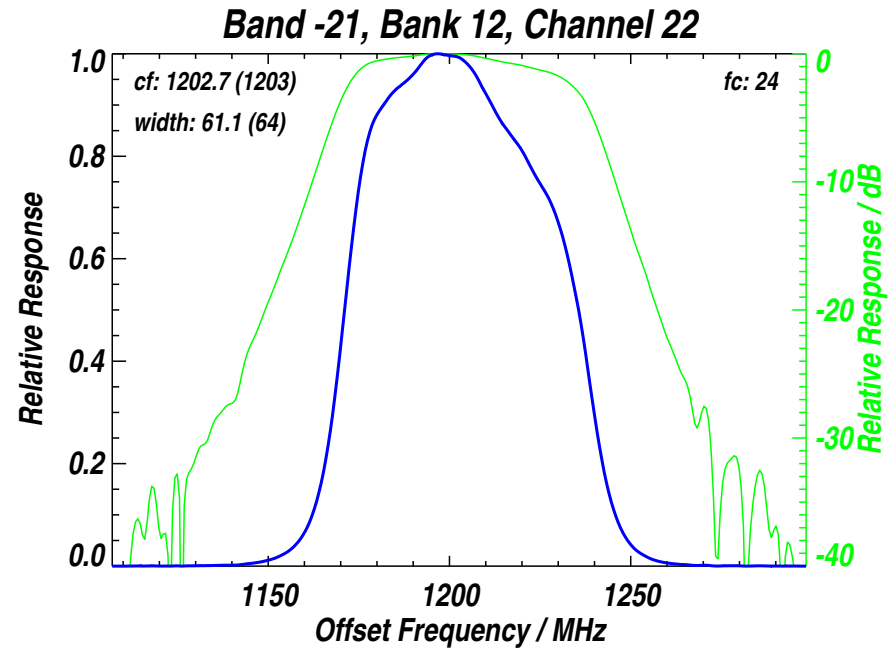
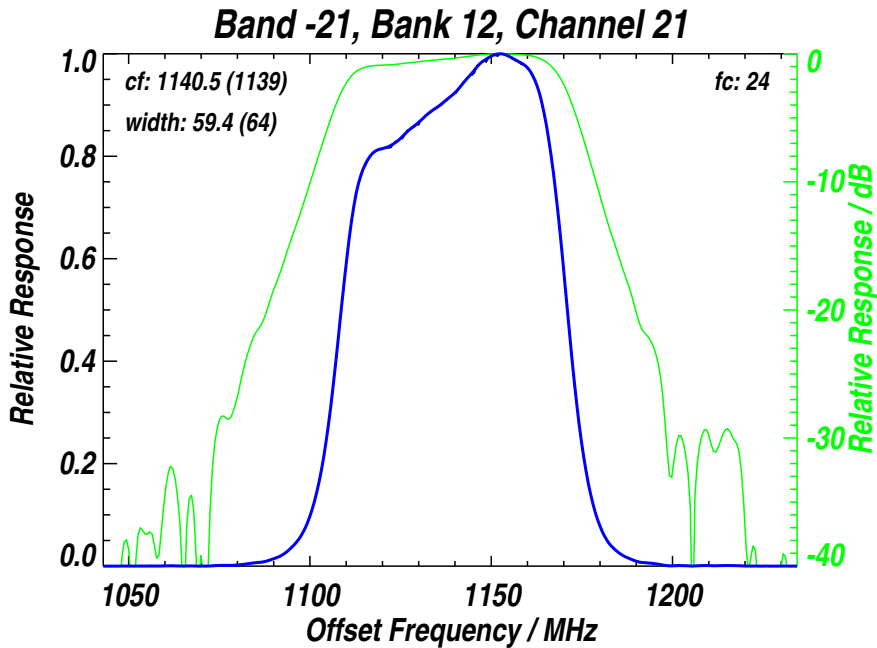
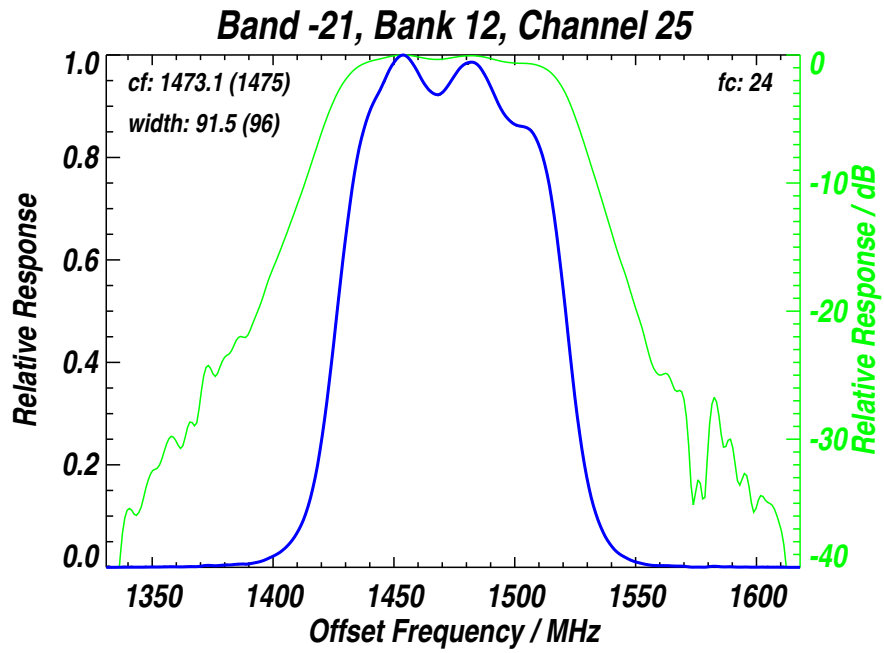


Figure H.24: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channels 21 to 24. See text for additional details.





**Band 21 (lsb)**  
**Bank 12**  
**Origin = 117.853333328 GHz**

Figure H.25: Lower sideband front-end sweep data for Band 21 taken via Filterbank 12, channel 25. See text for additional details.

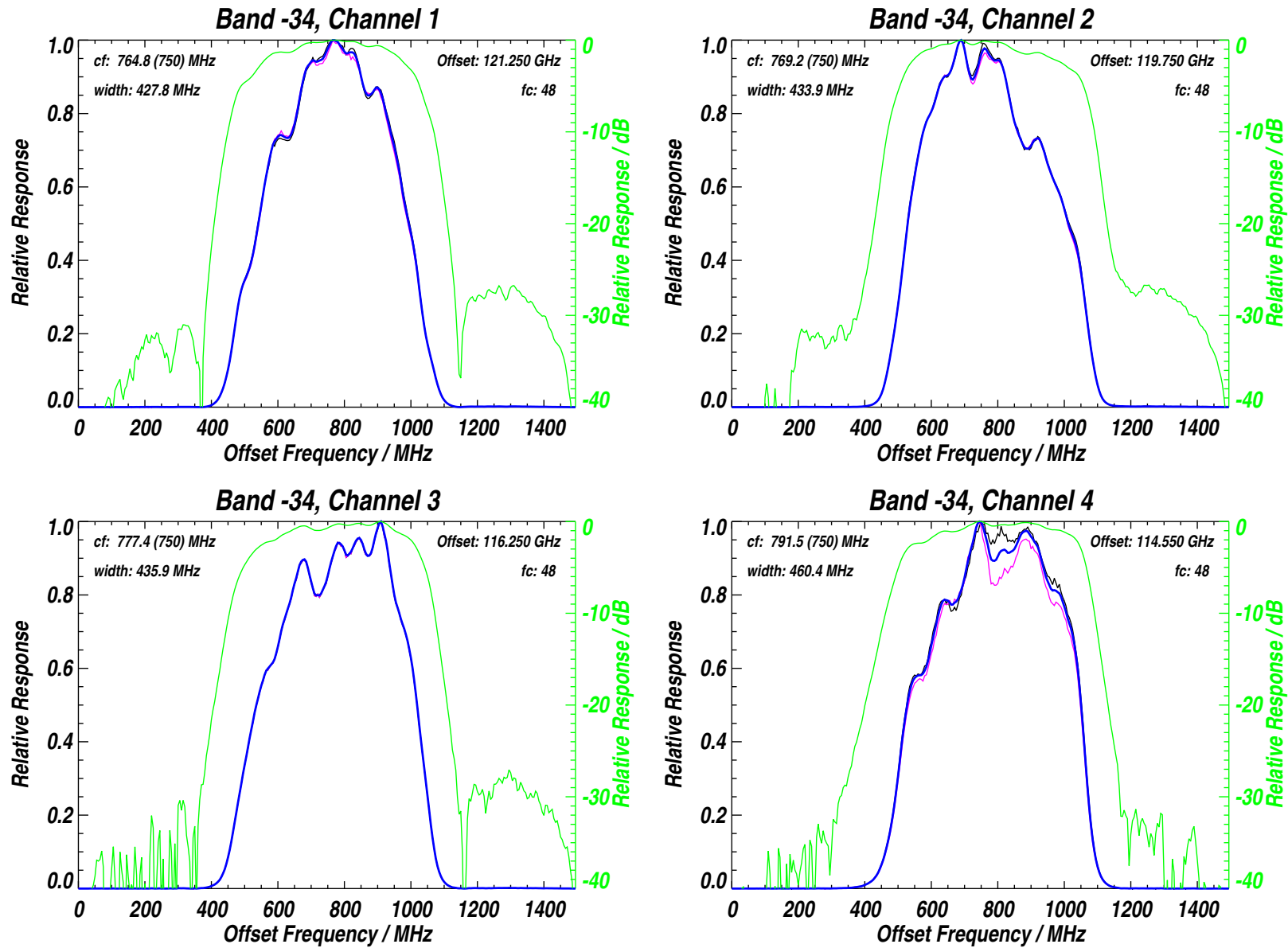


Figure H.26: Lower sideband front-end sweep data for Band 34 (R1B Wide Filters). The black and cyan lines are data from sweeps with nominal and  $\frac{\lambda}{4}$  shifted source. The bold blue is the data from both sweeps, combined and filtered. See text for additional details.

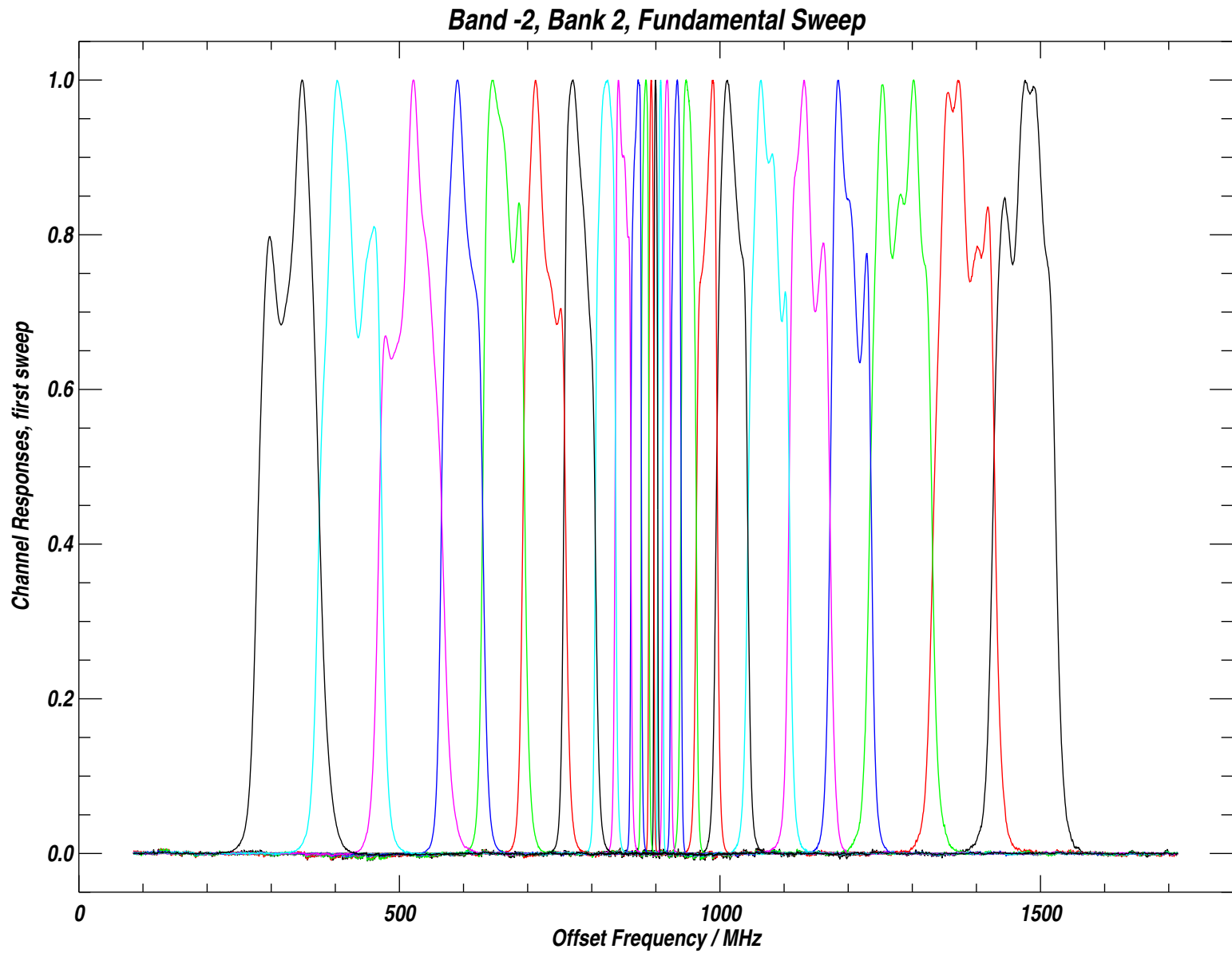


Figure H.27: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2. See text for additional details.

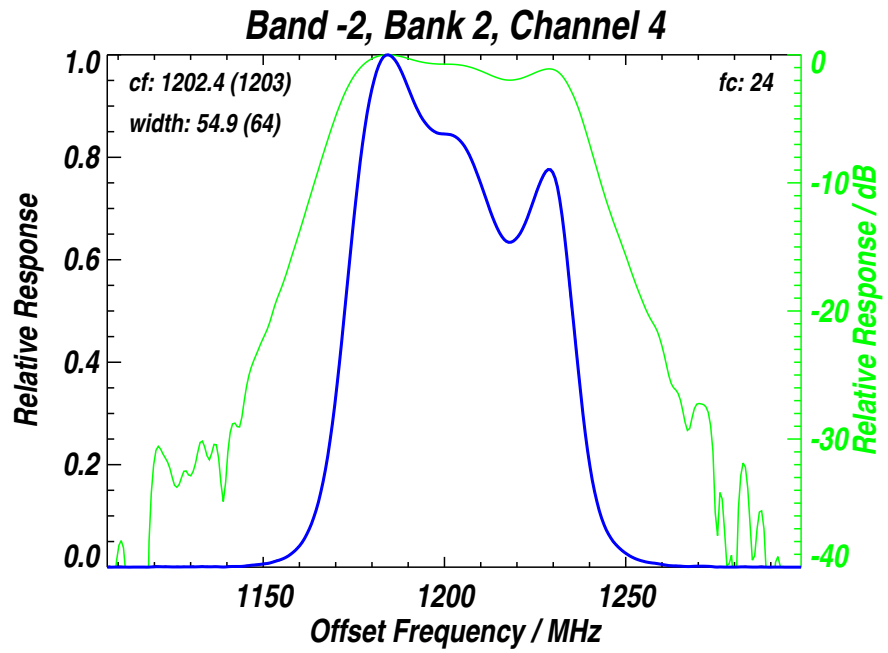
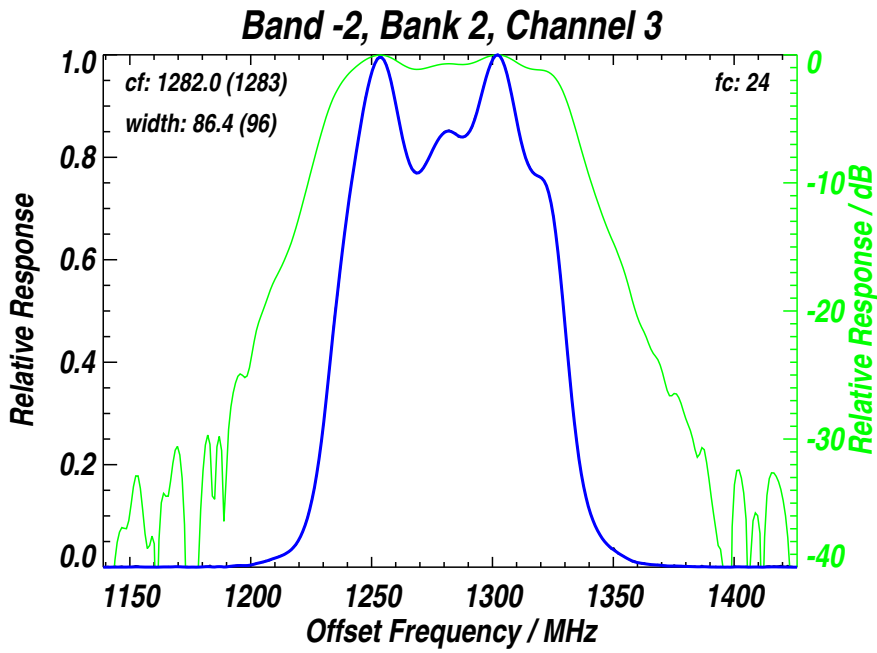
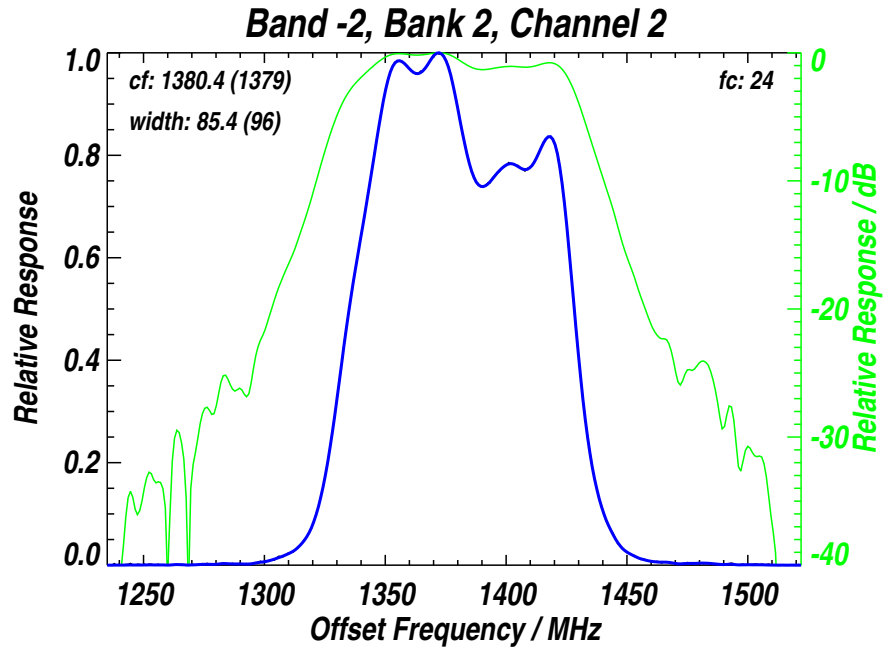
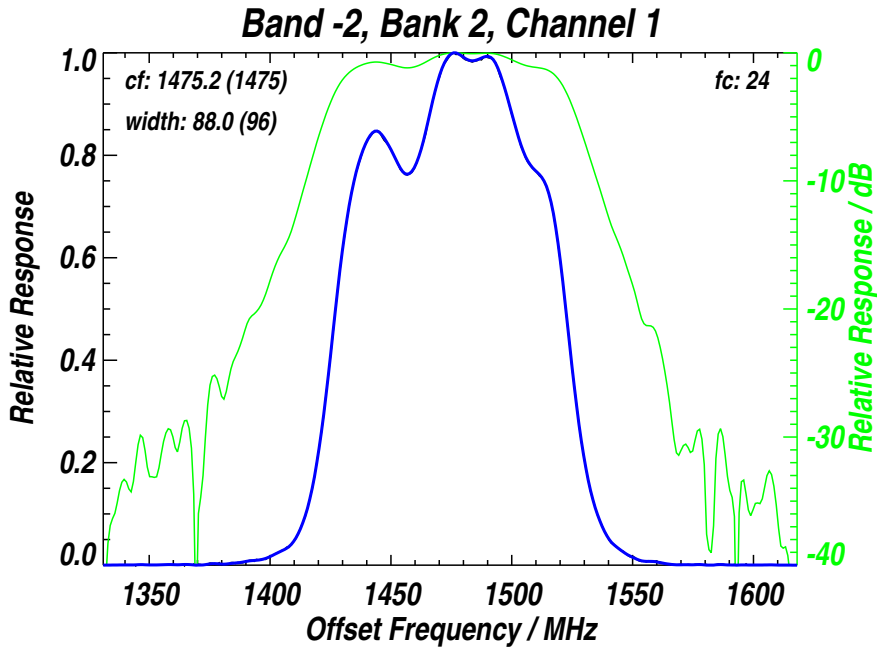


Figure H.28: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 1 to 4. See text for additional details.

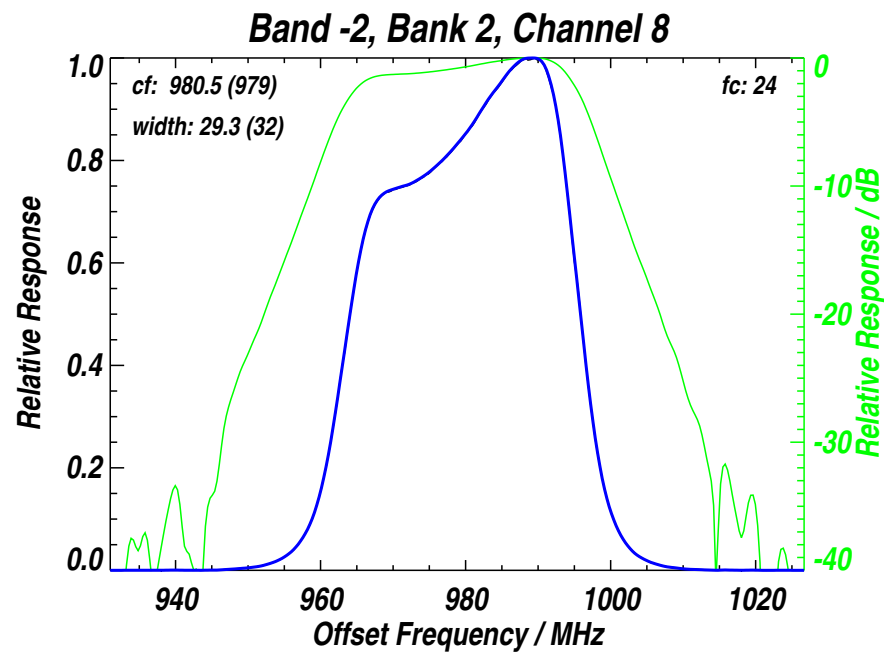
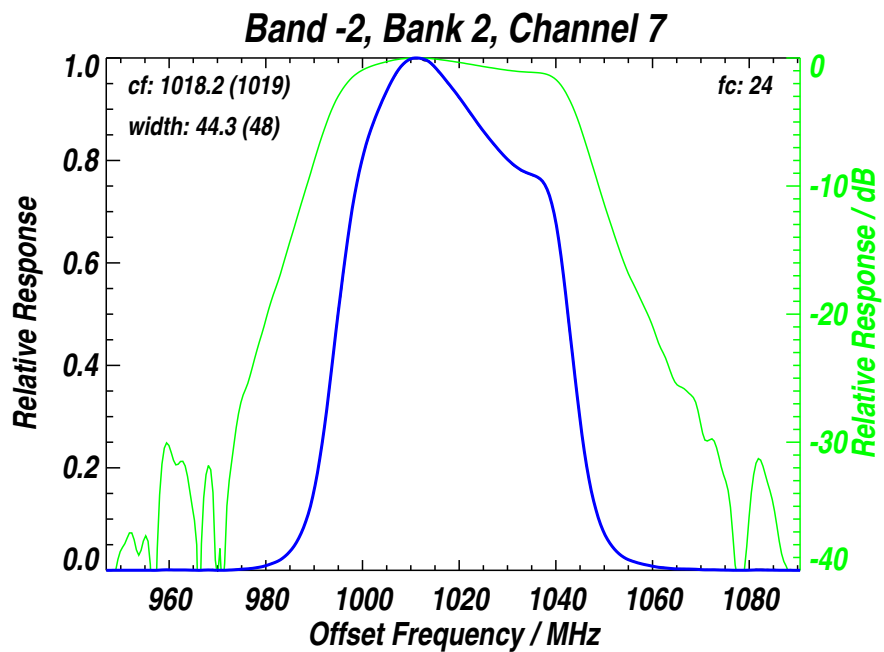
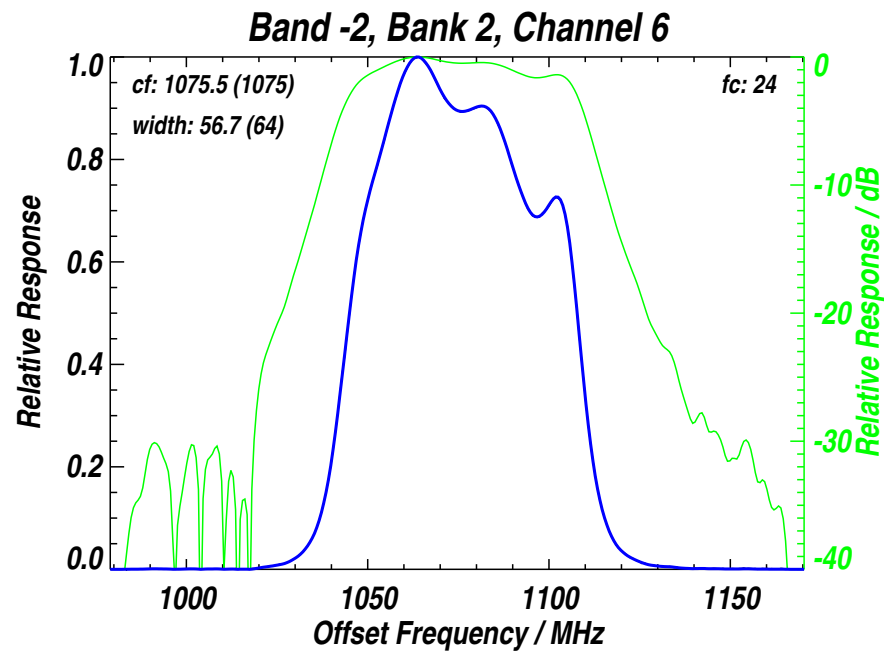
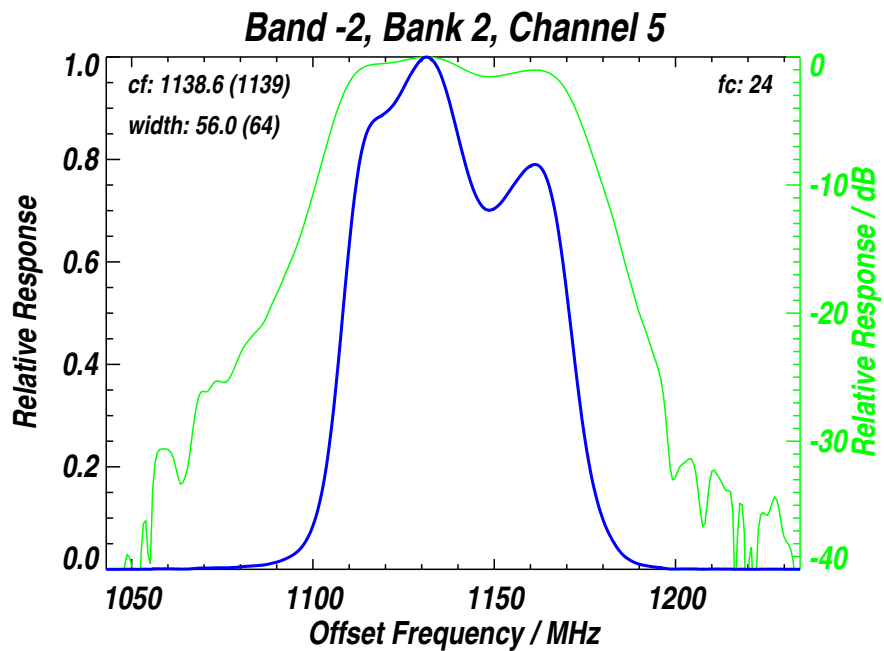


Figure H.29: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 5 to 8. See text for additional details.

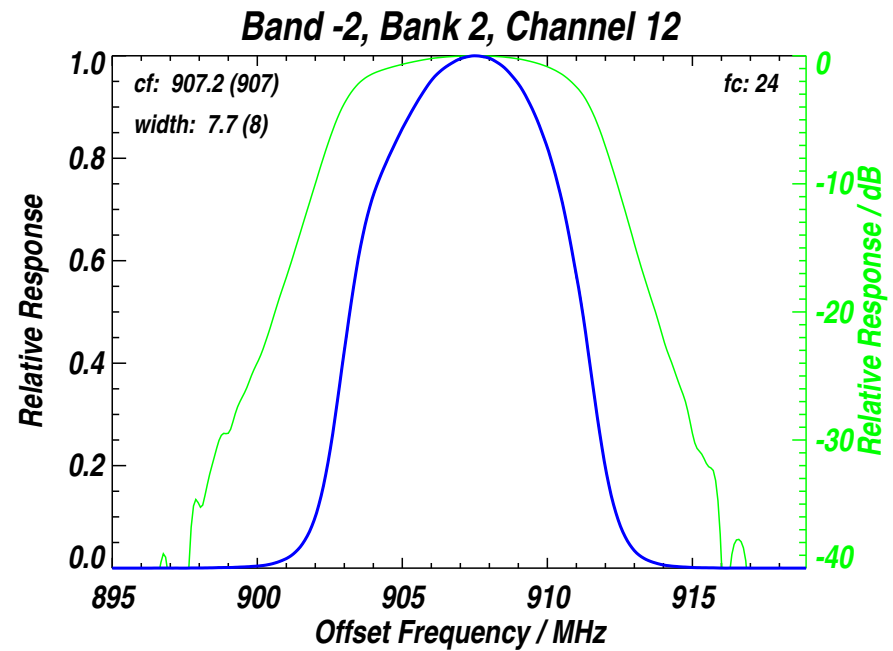
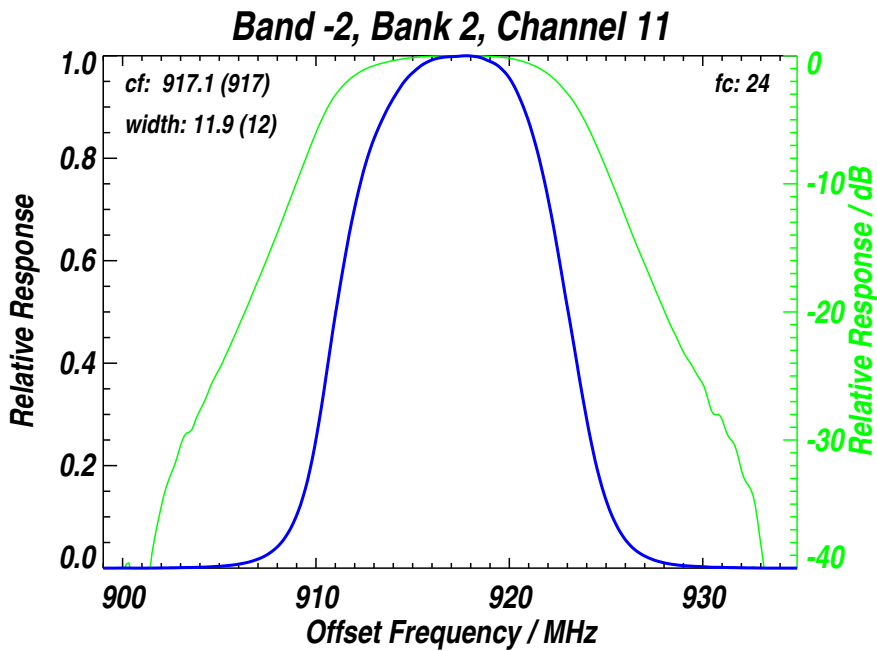
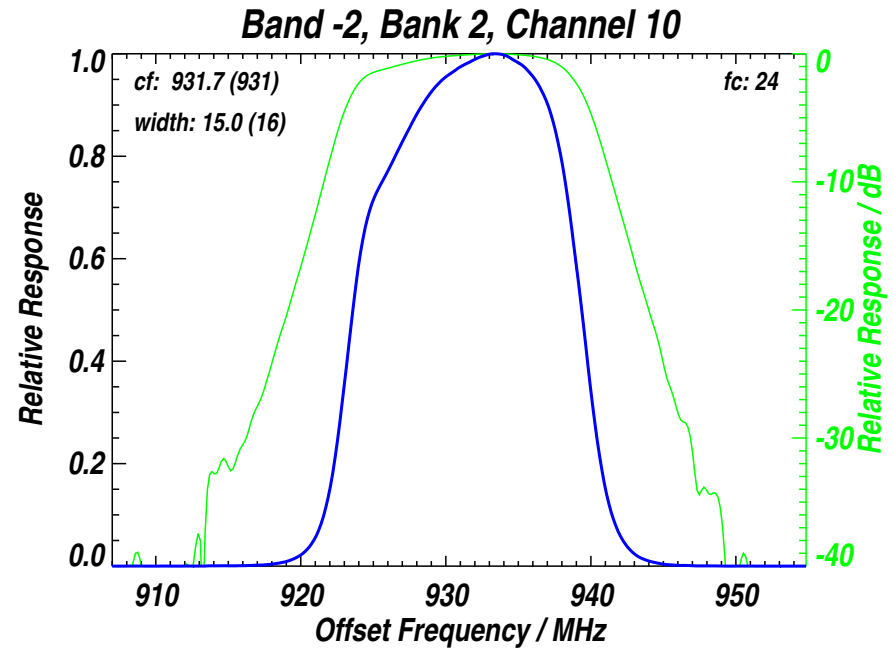
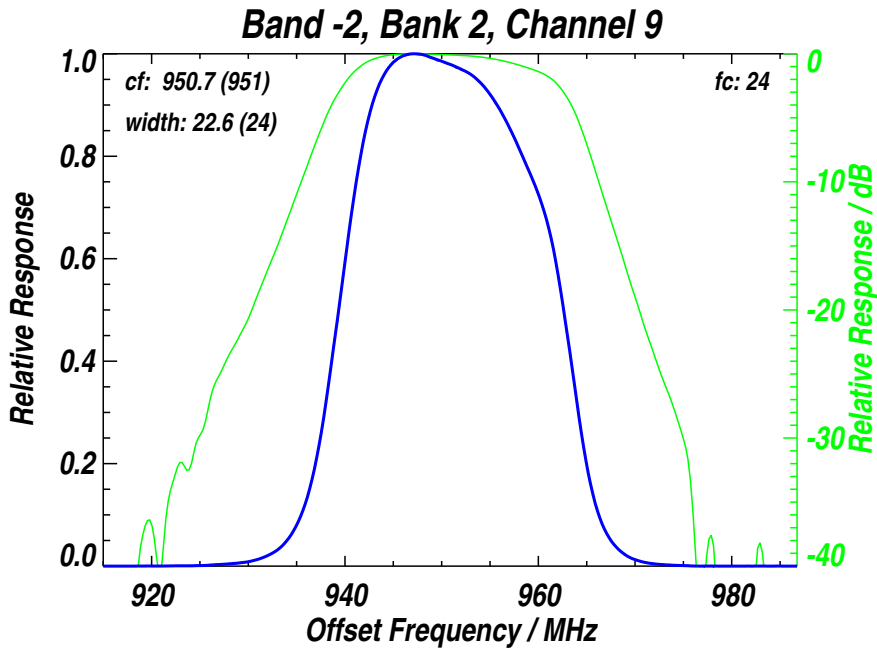


Figure H.30: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 9 to 12. See text for additional details.

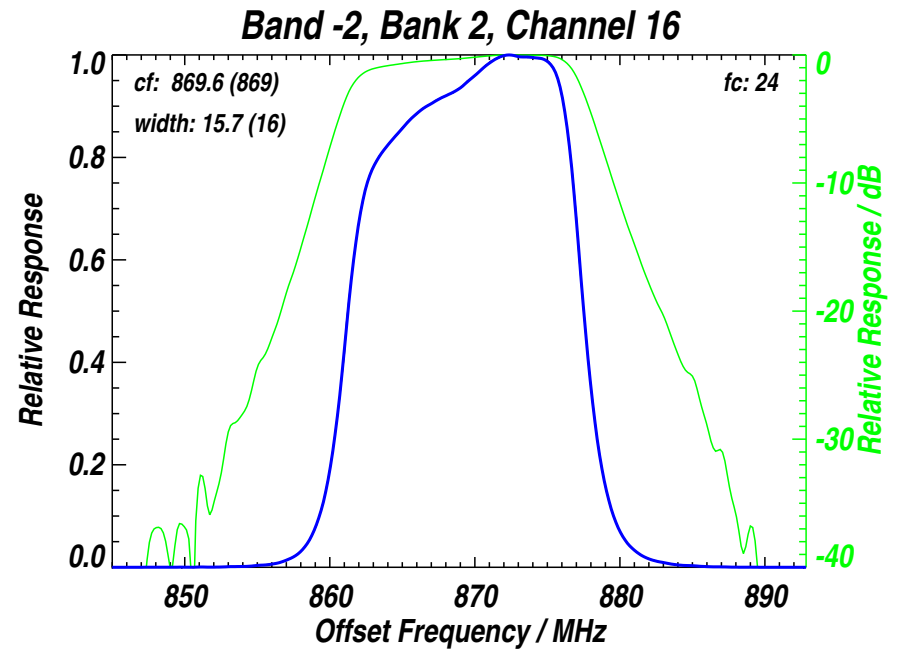
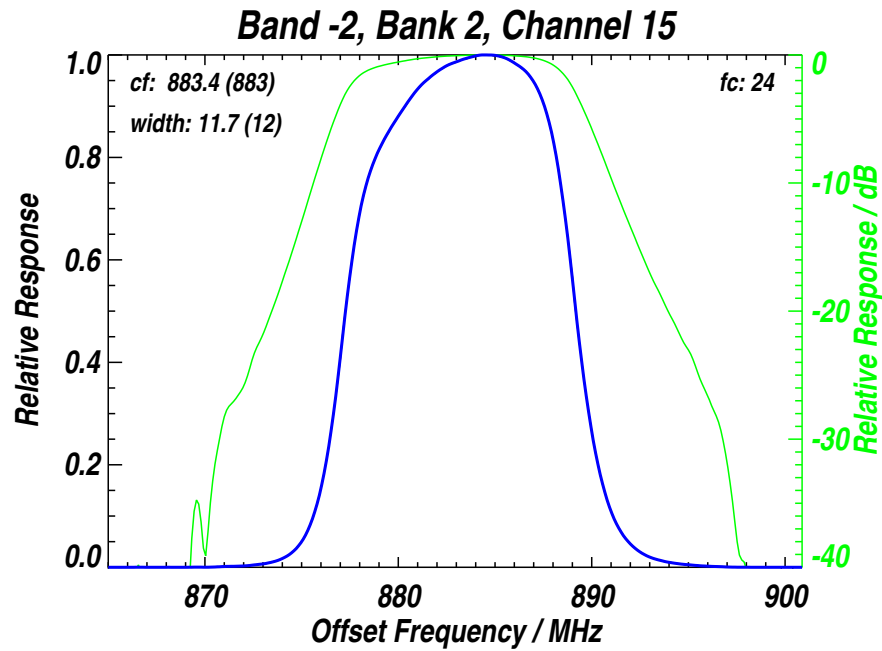
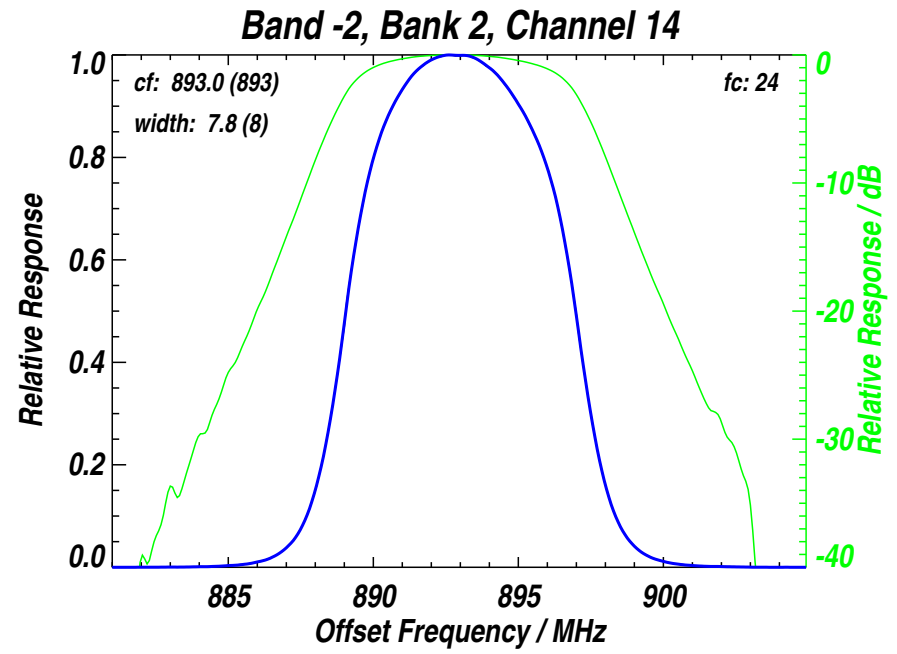
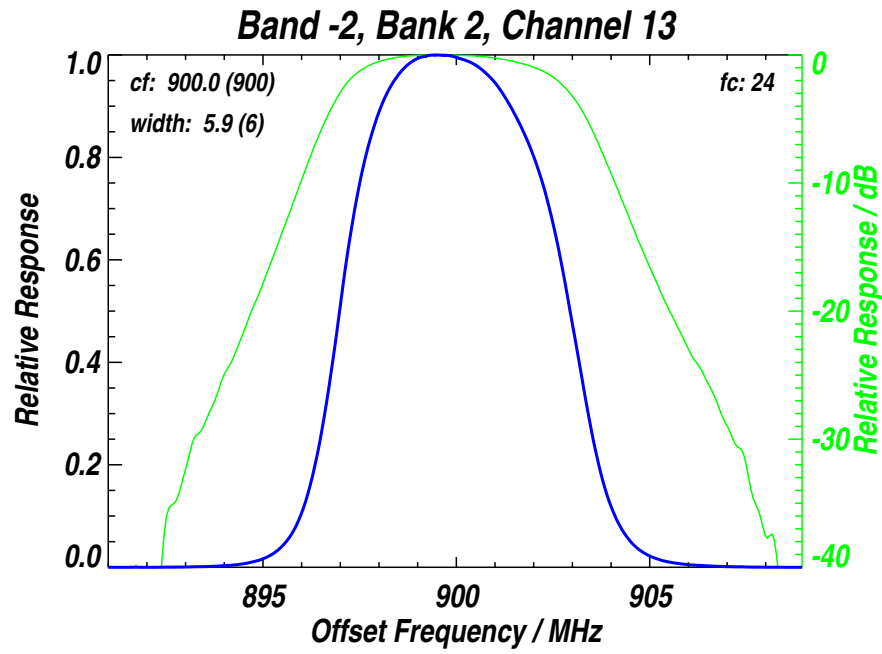


Figure H.31: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 13 to 16. See text for additional details.

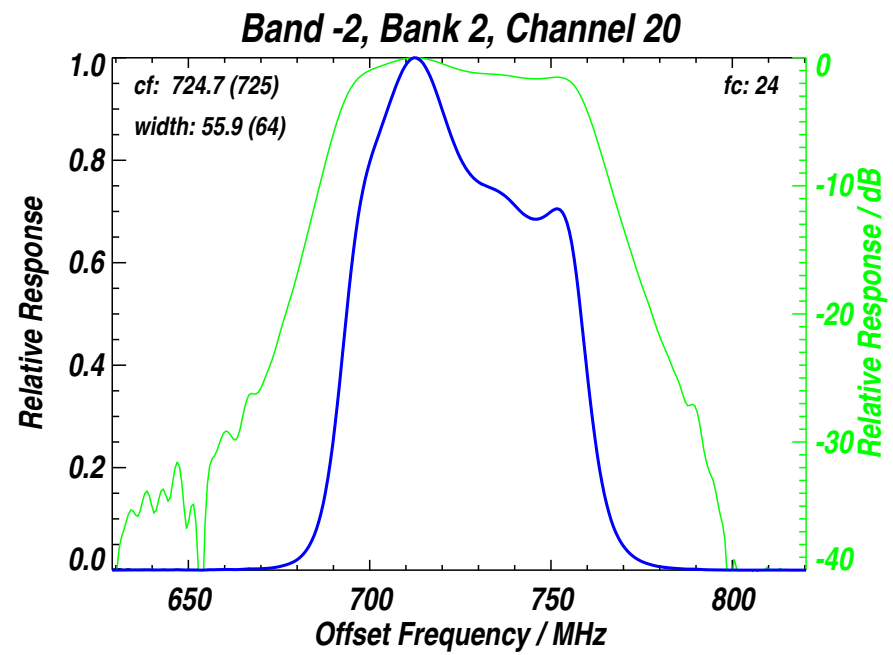
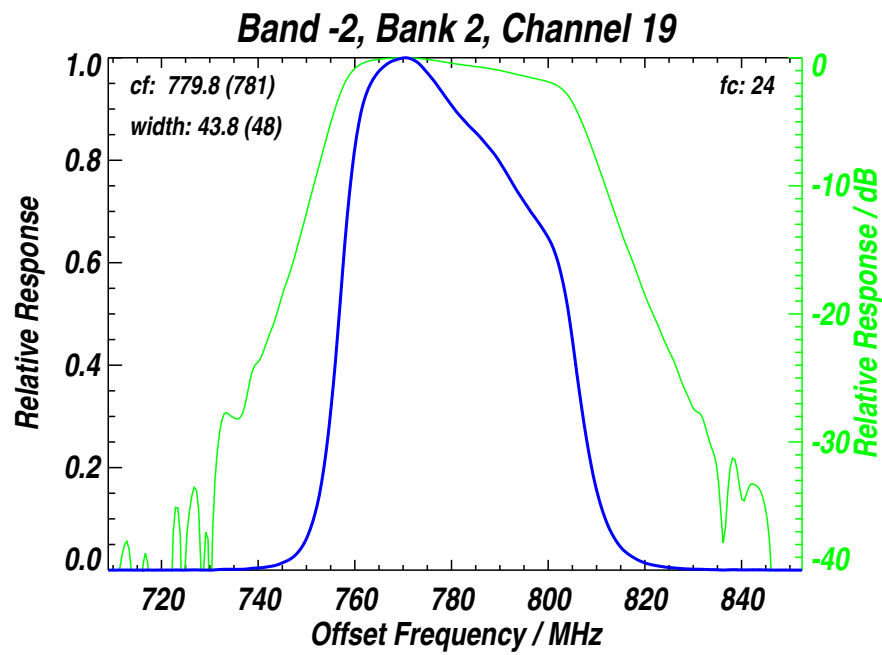
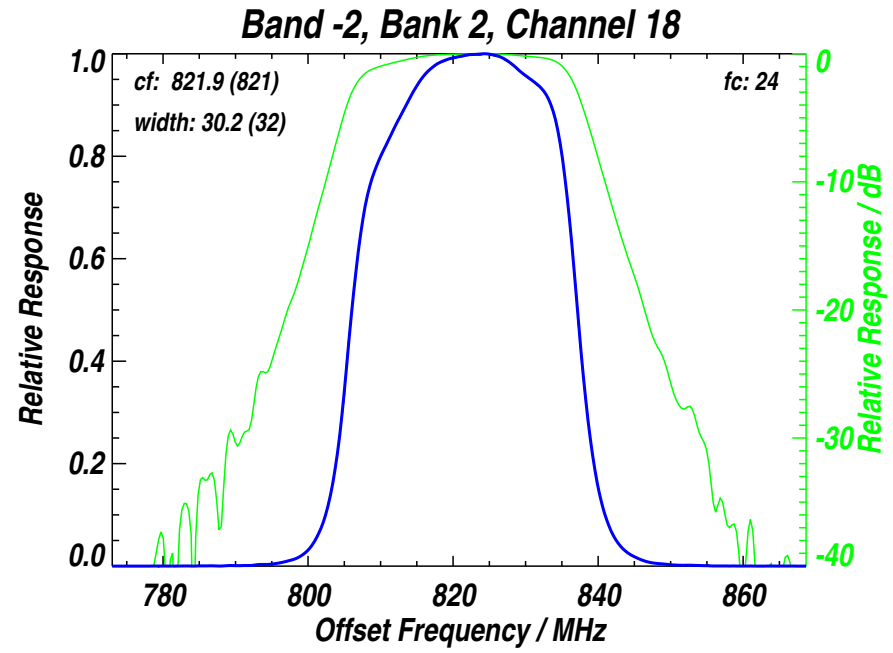
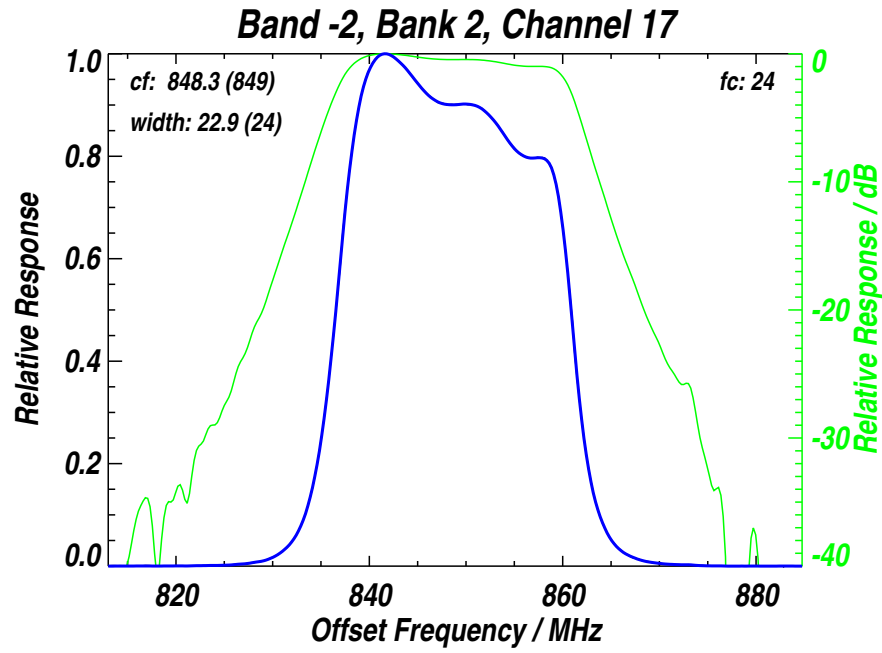


Figure H.32: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 17 to 20. See text for additional details.



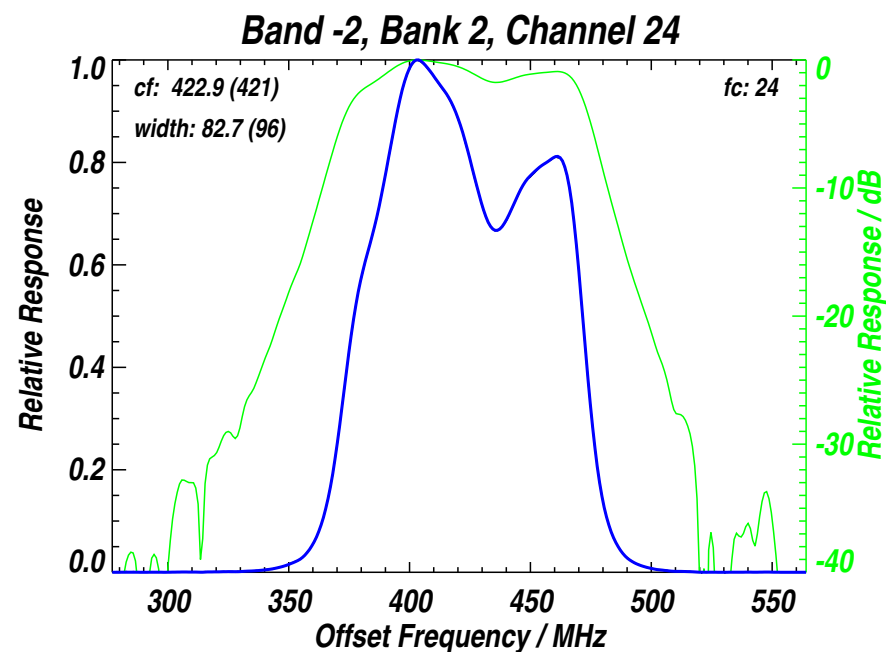
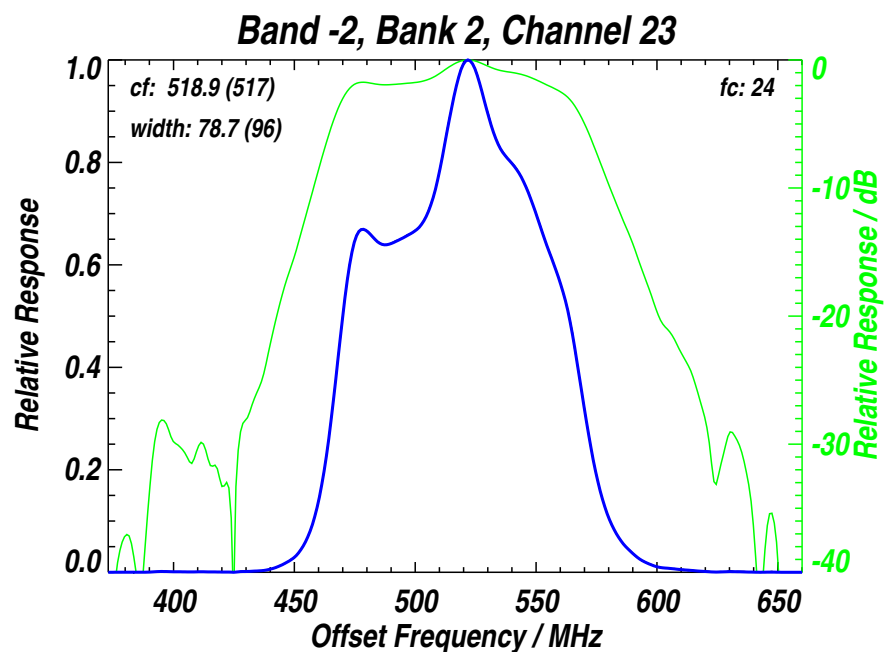
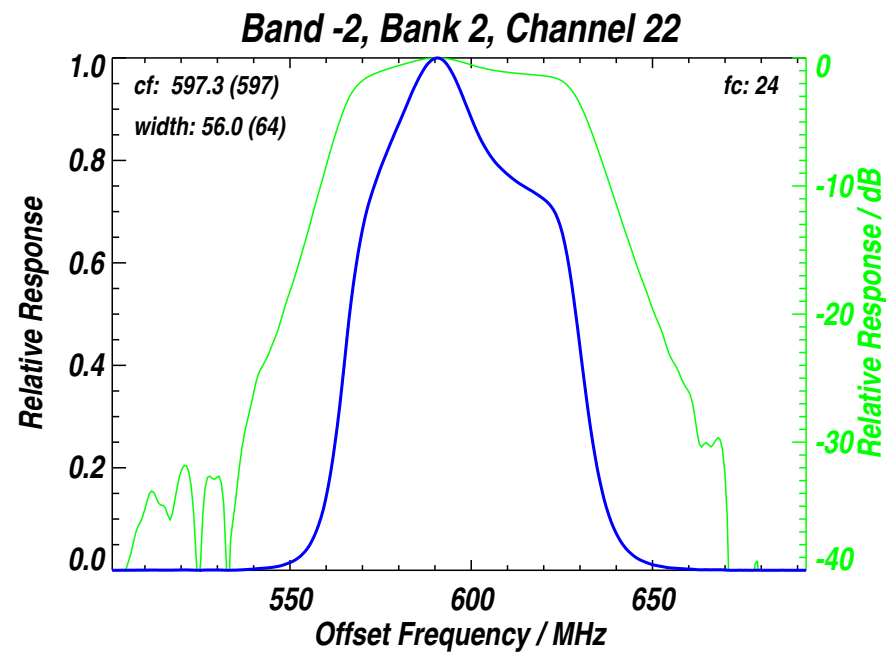
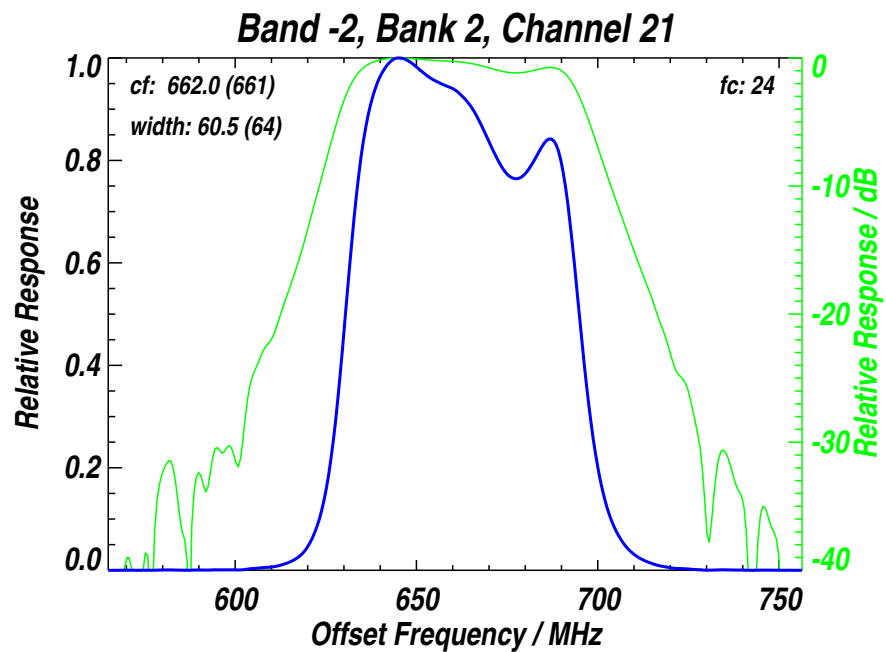
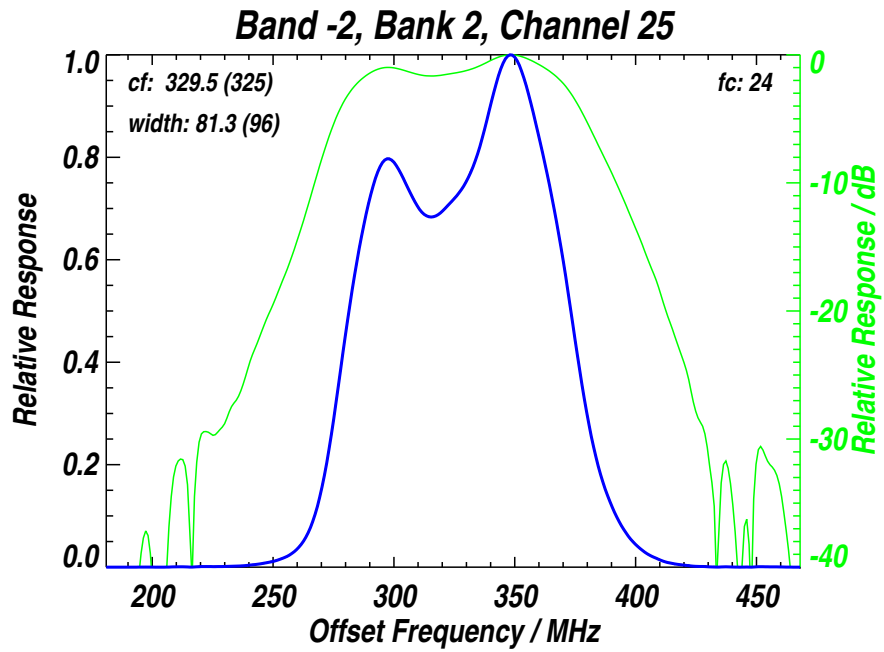


Figure H.33: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 21 to 24. See text for additional details.



**Band 2 (lsb)**  
**Bank 2**  
**Origin = 182.414285712 GHz**

Figure H.34: Lower sideband front-end sweep data for Band 2 taken via Filterbank 2, channel 25. See text for additional details.

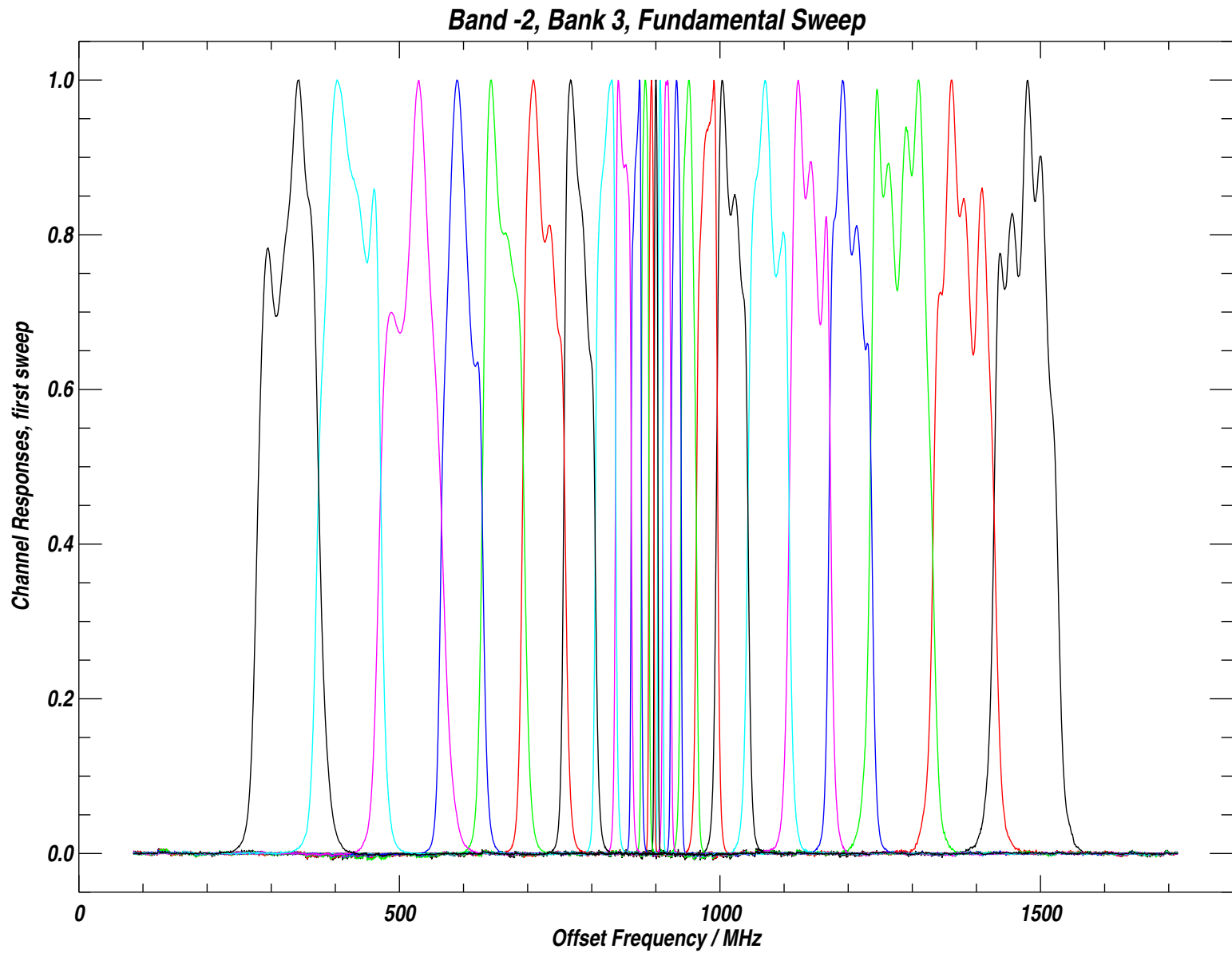


Figure H.35: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3. See text for additional details.

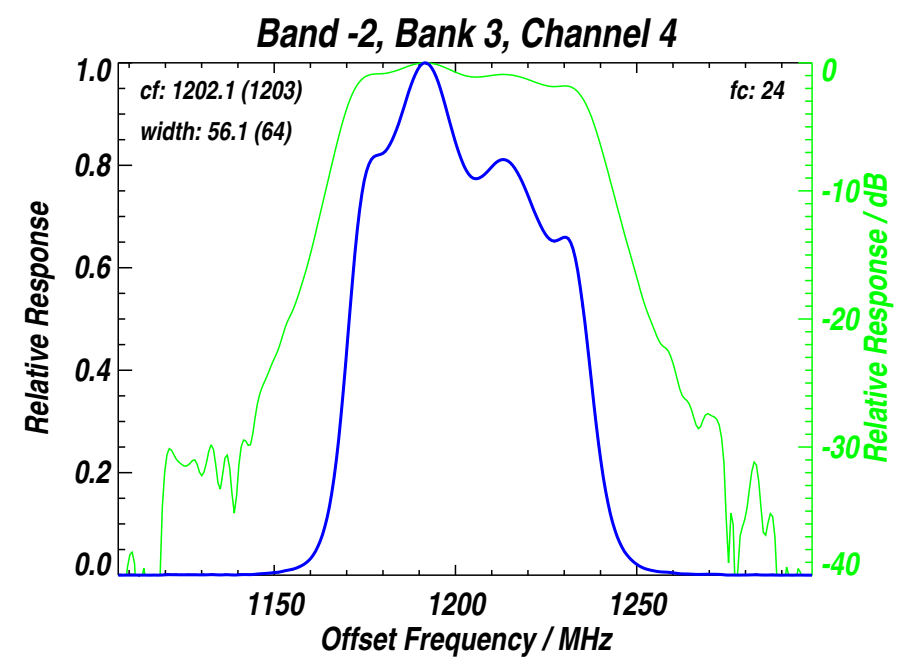
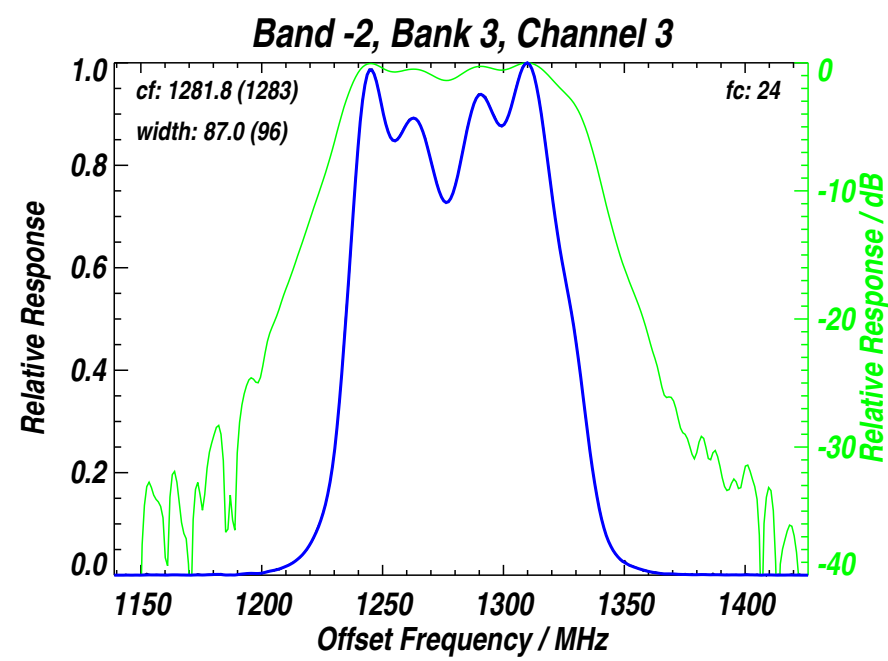
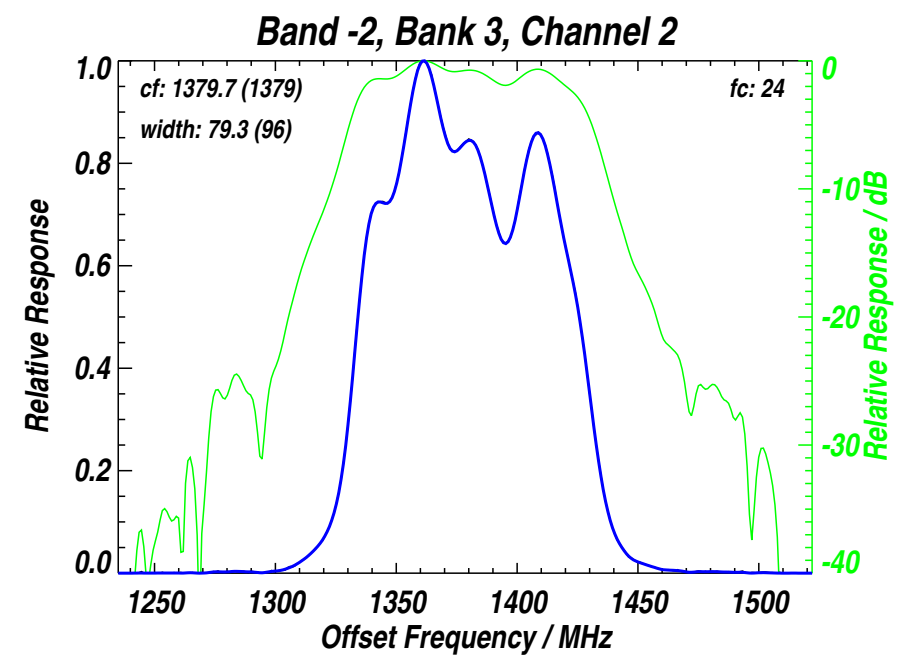
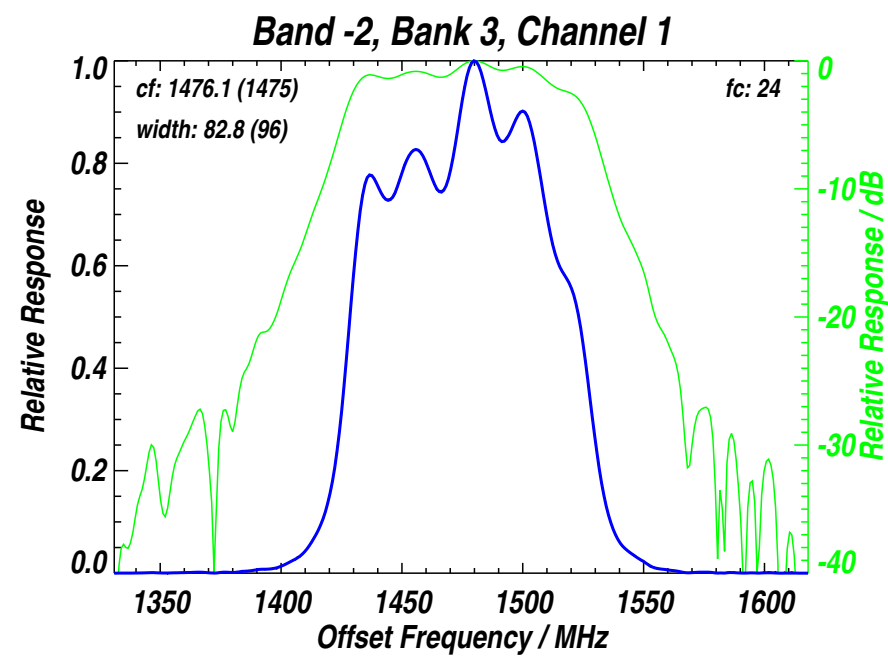


Figure H.36: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 1 to 4. See text for additional details.

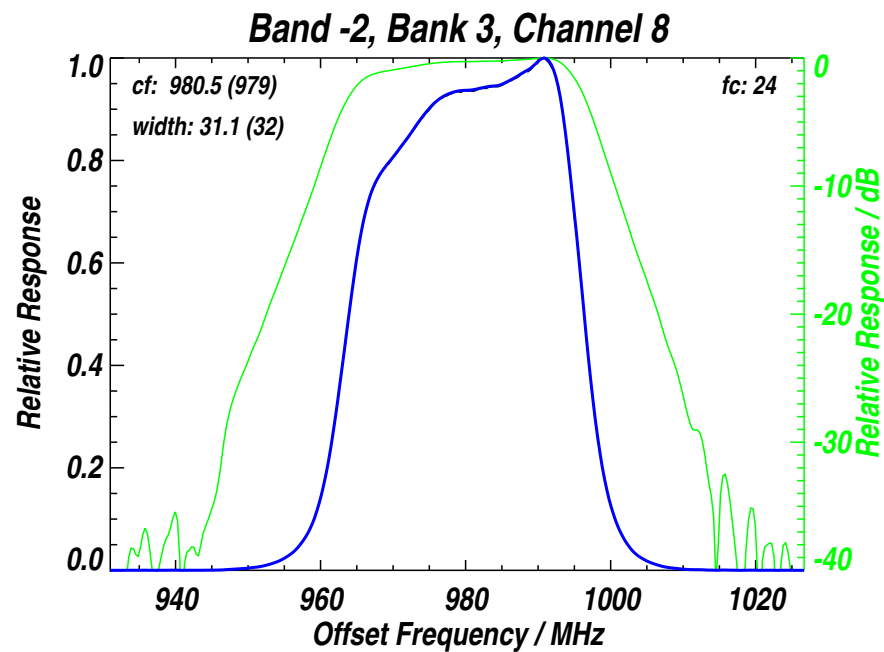
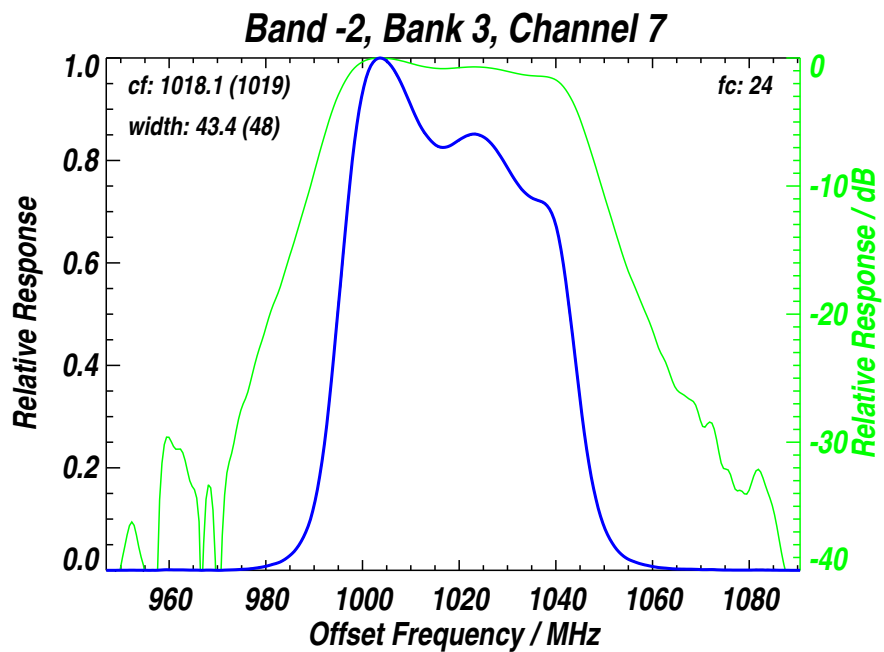
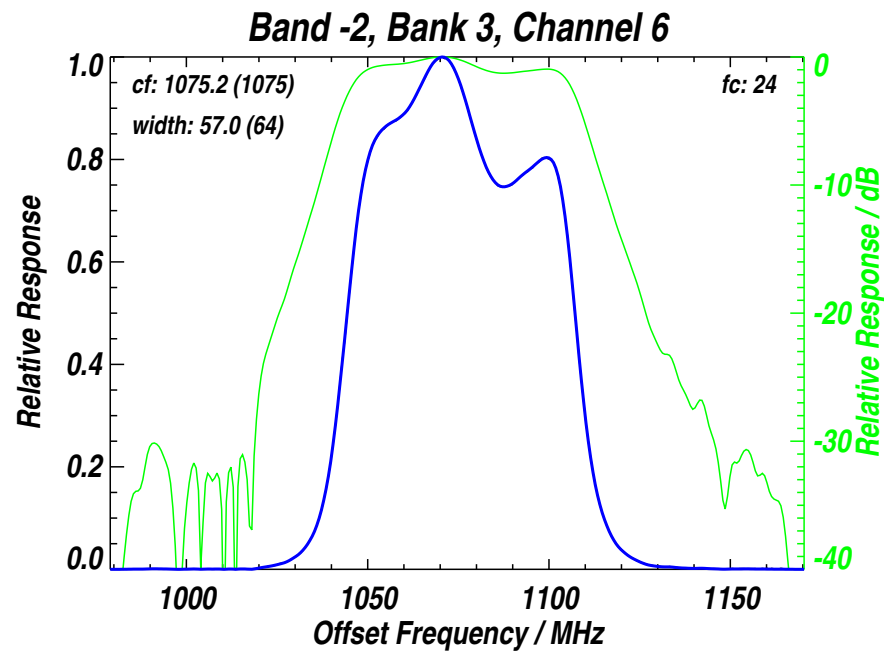
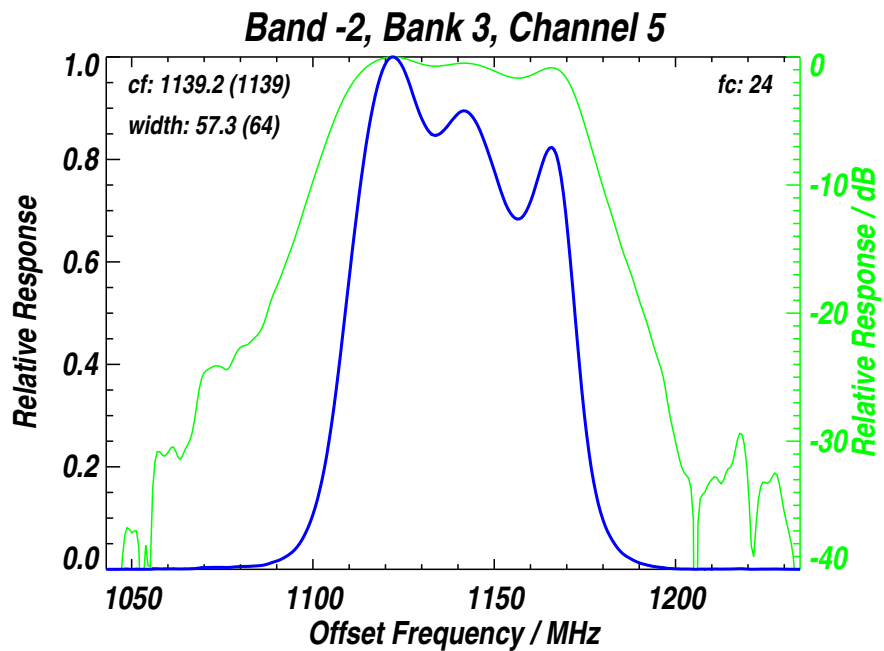


Figure H.37: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 5 to 8. See text for additional details.

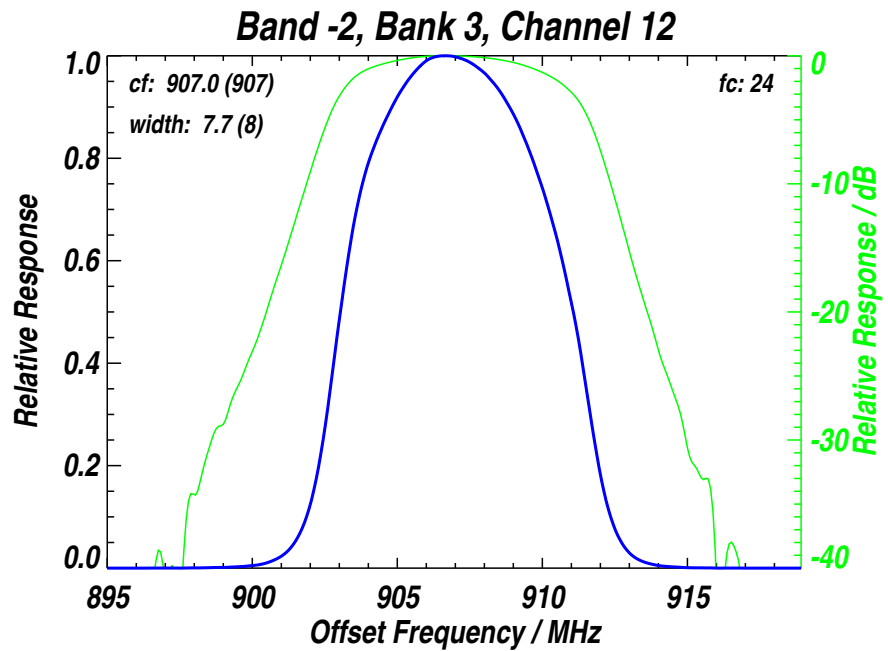
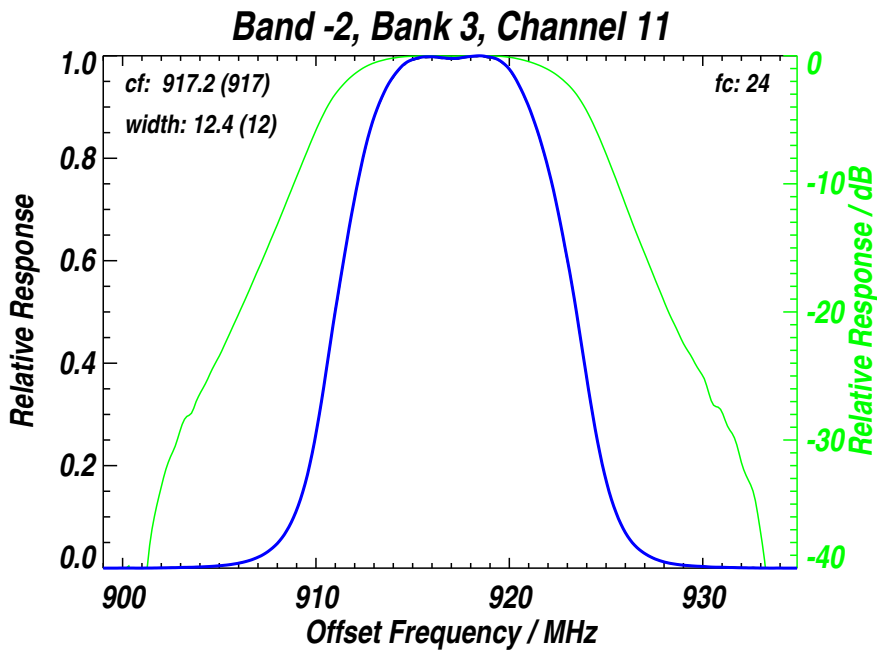
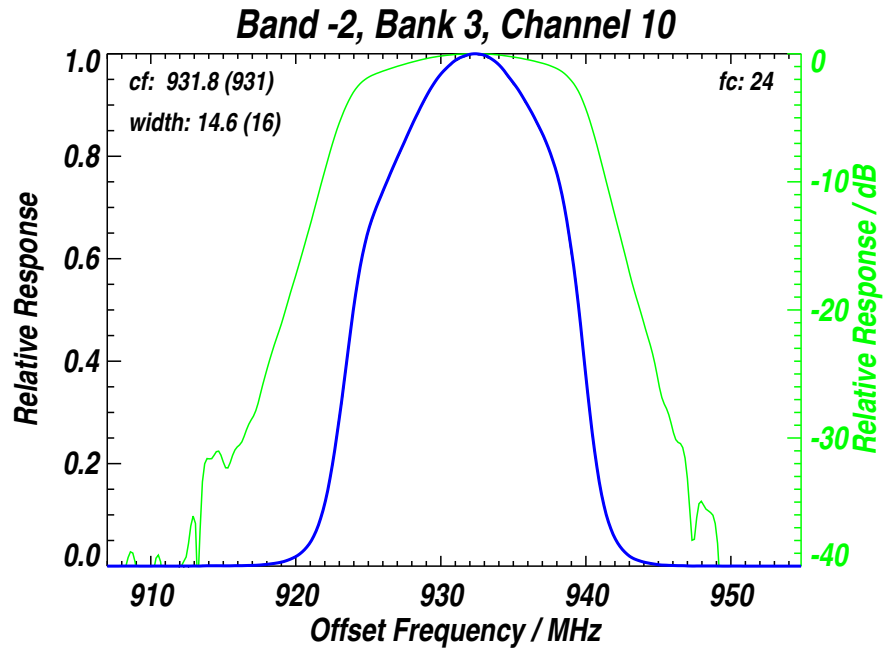
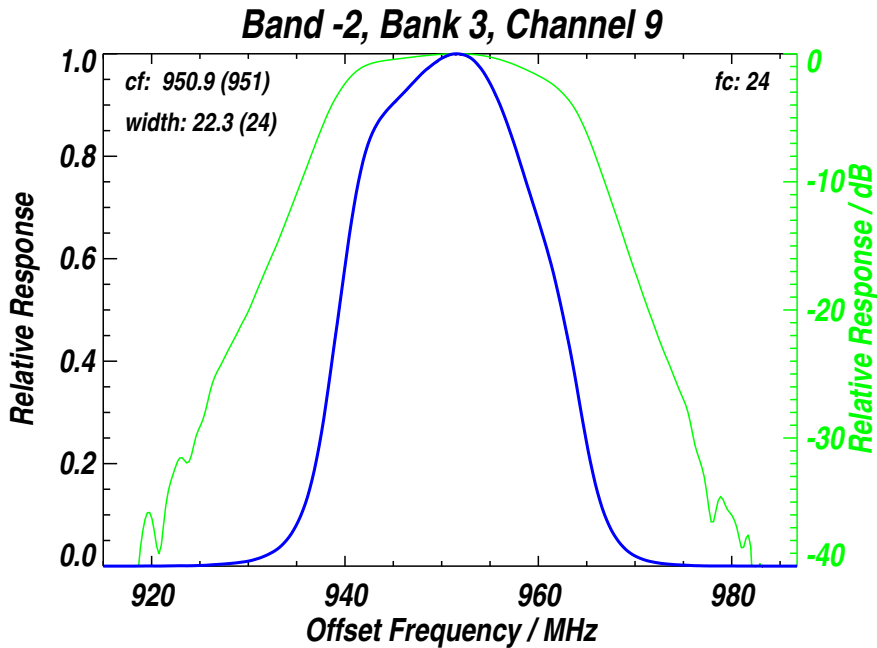


Figure H.38: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 9 to 12. See text for additional details.

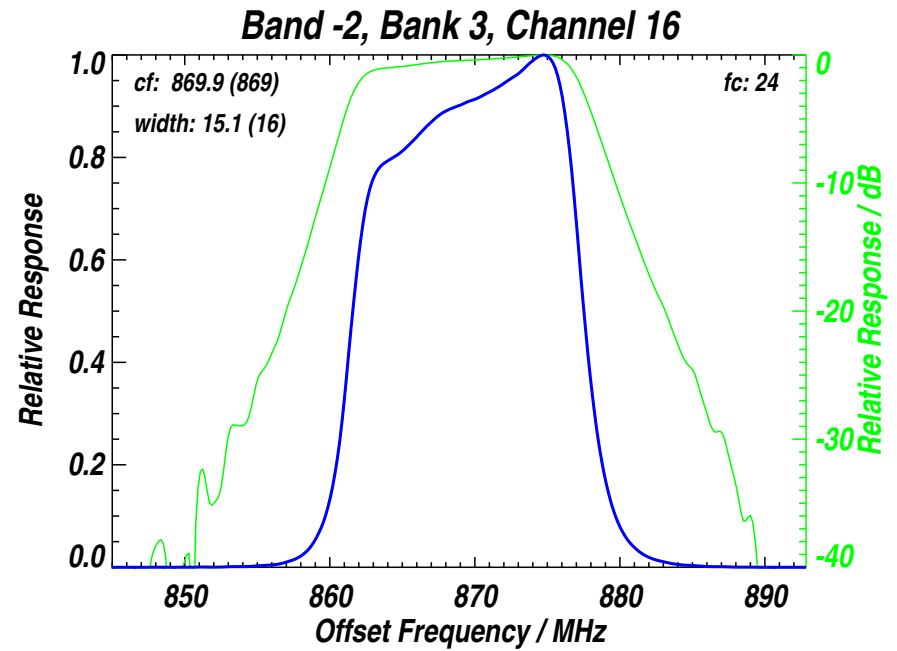
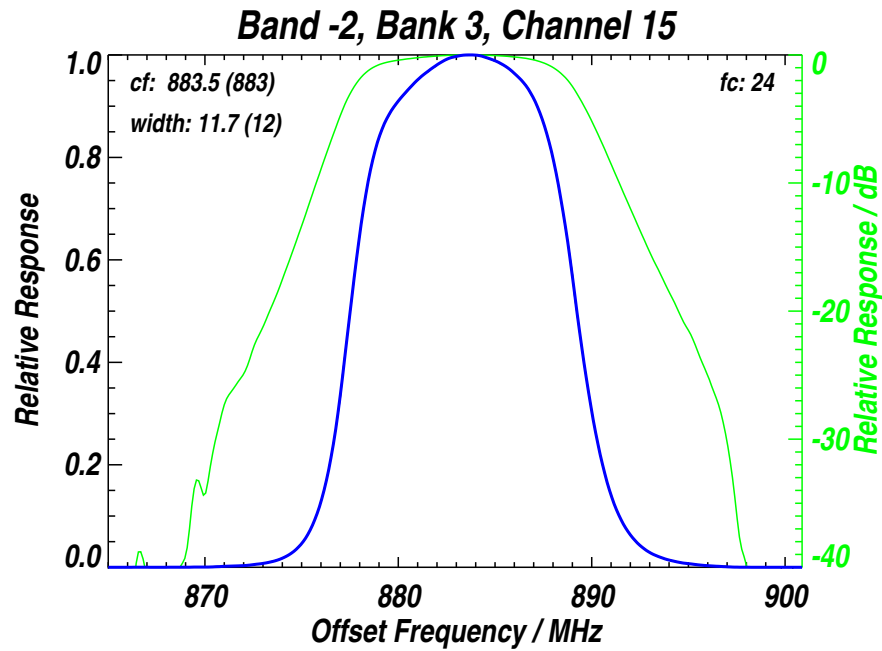
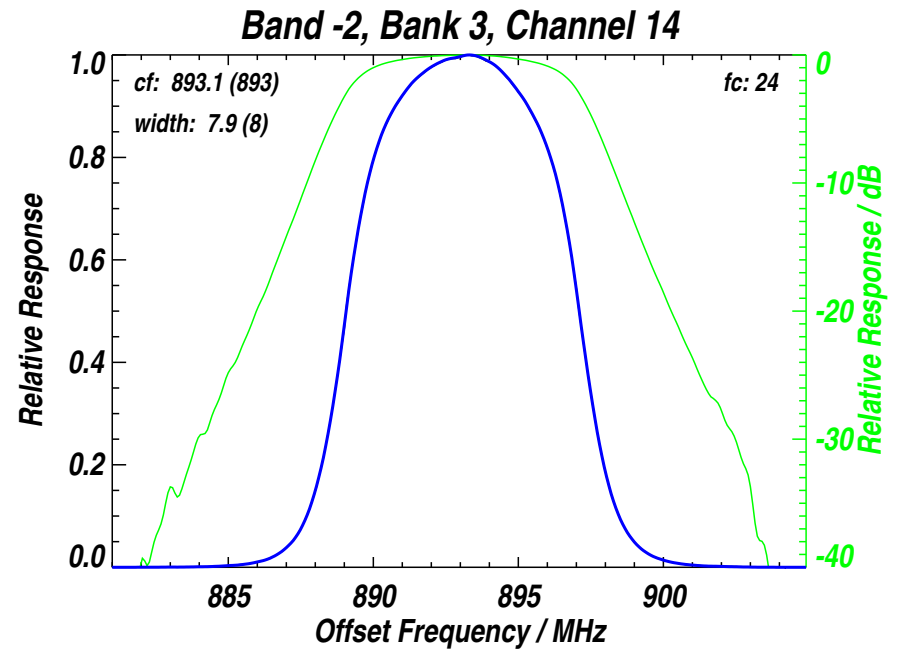
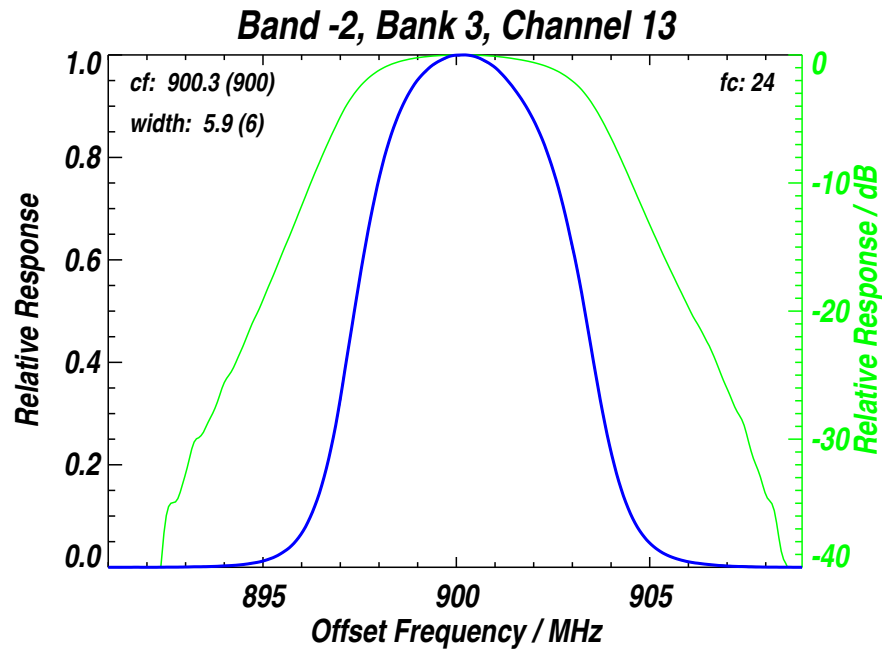


Figure H.39: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 13 to 16. See text for additional details.

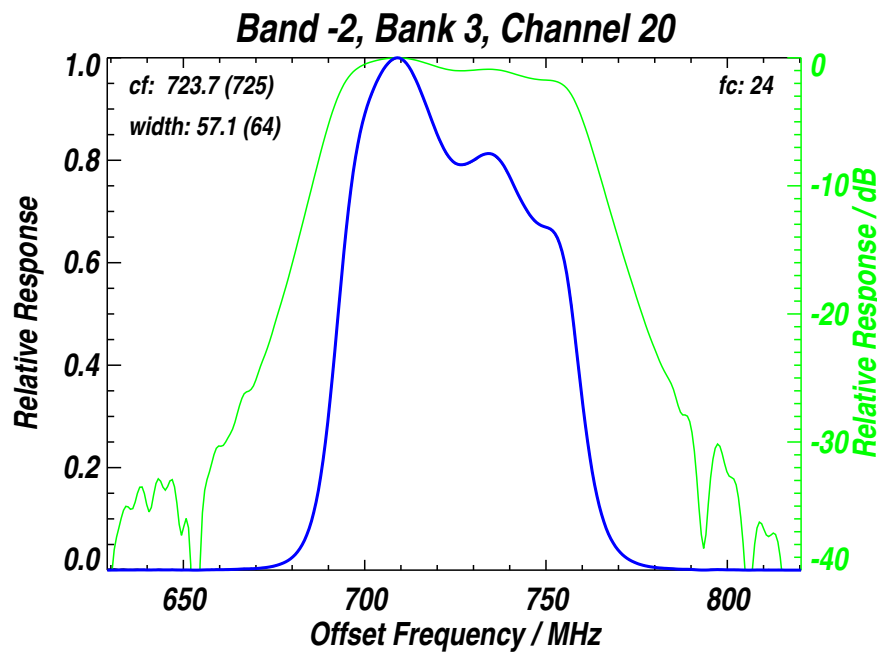
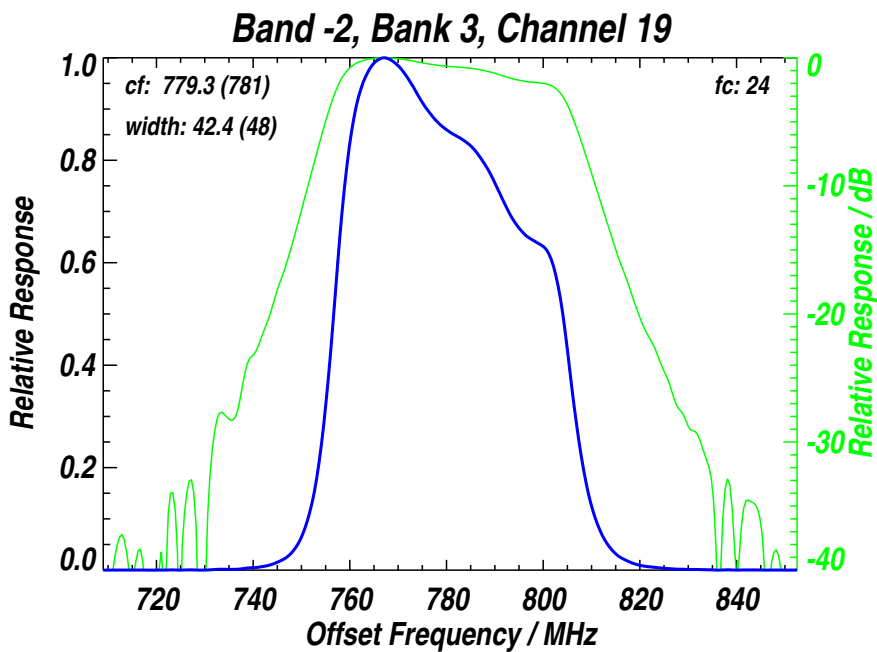
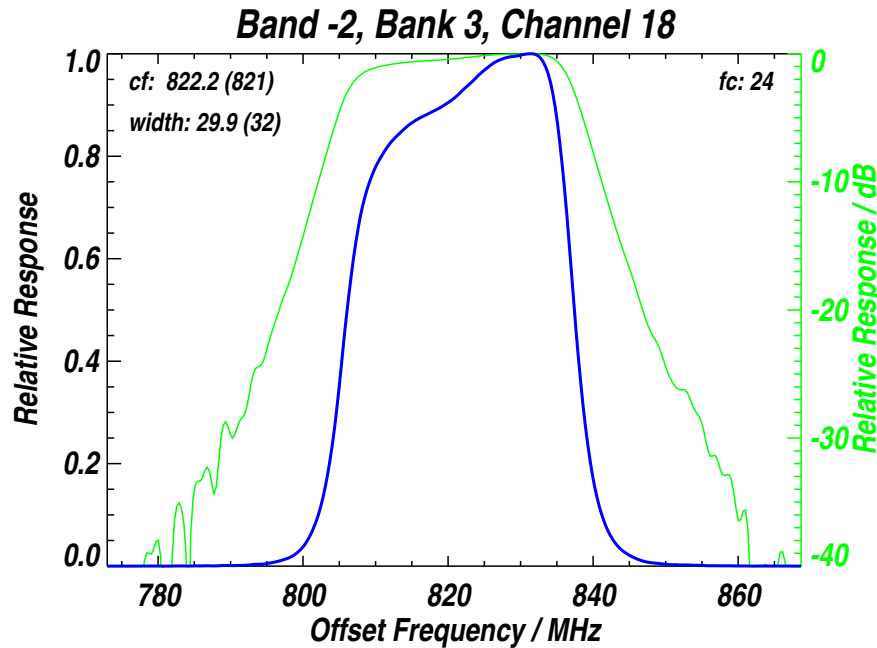
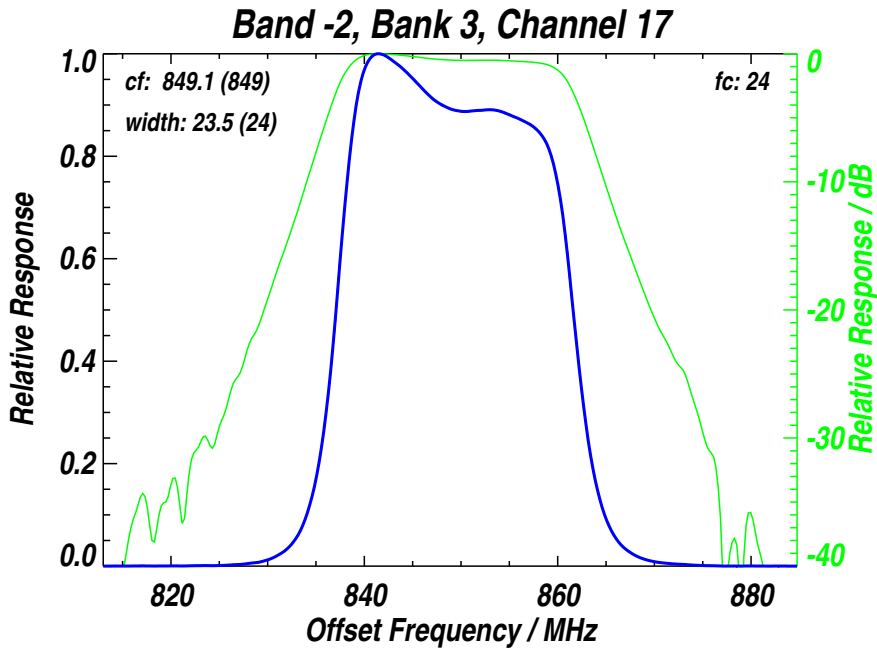


Figure H.40: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 17 to 20. See text for additional details.



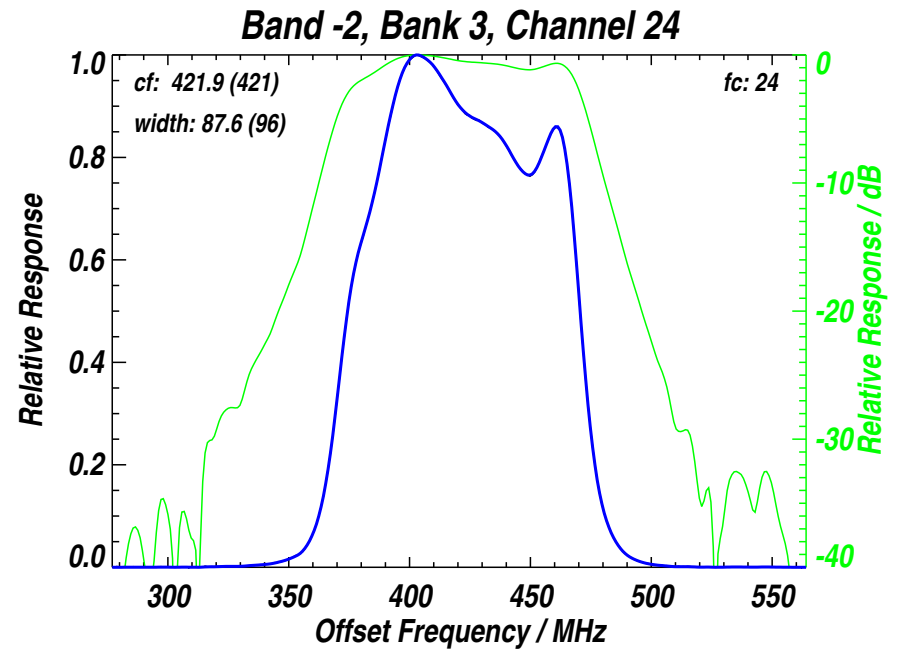
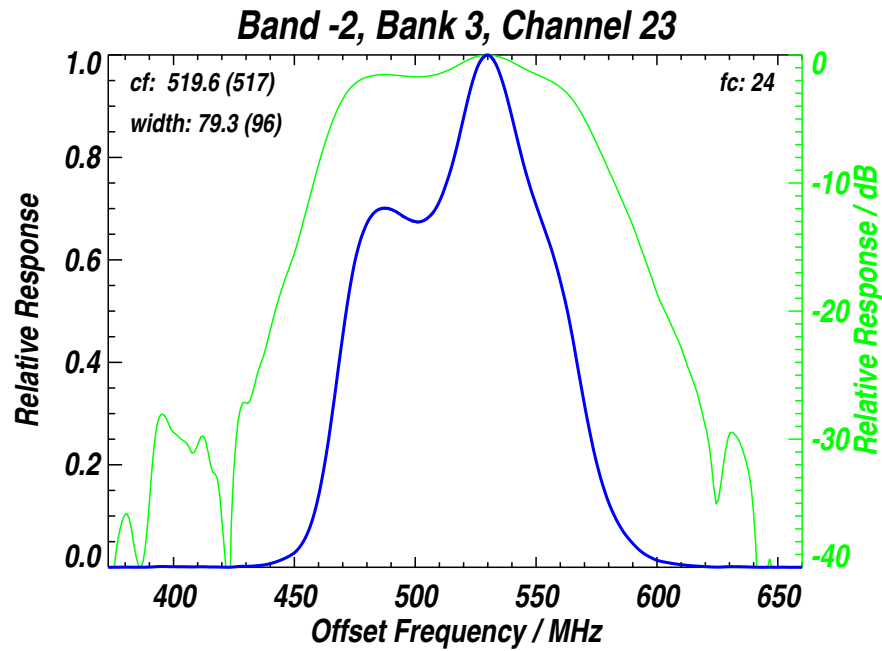
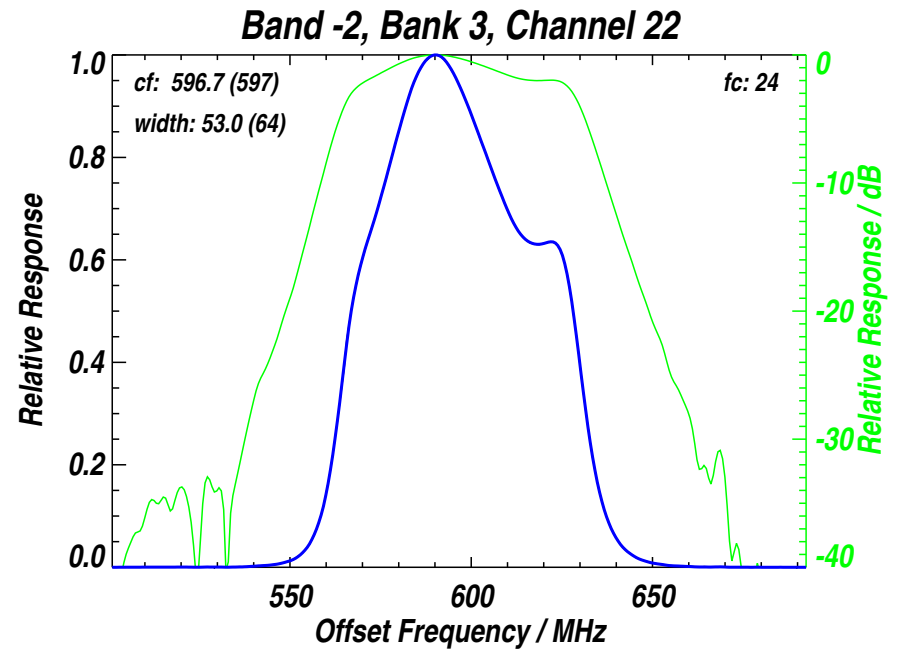
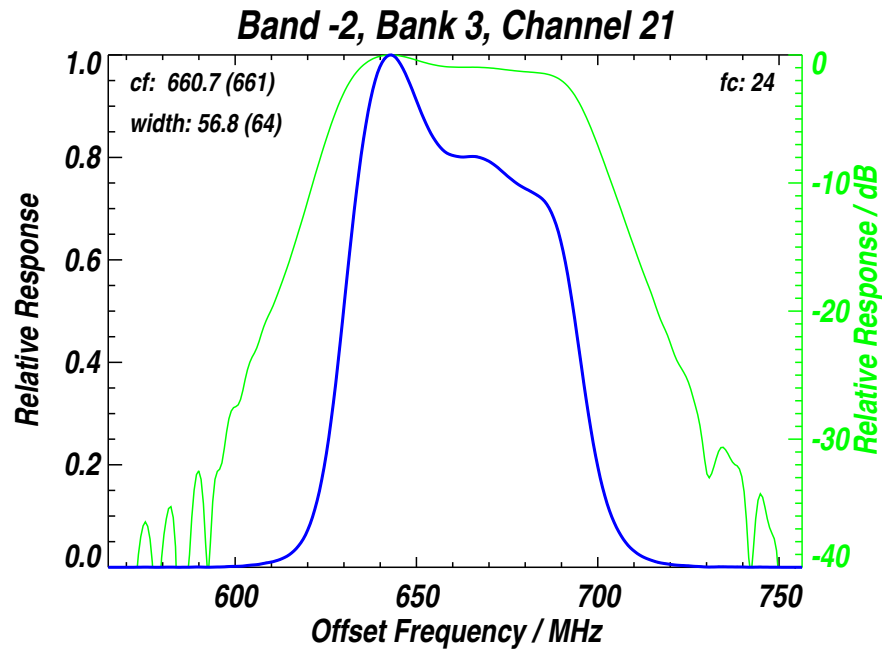
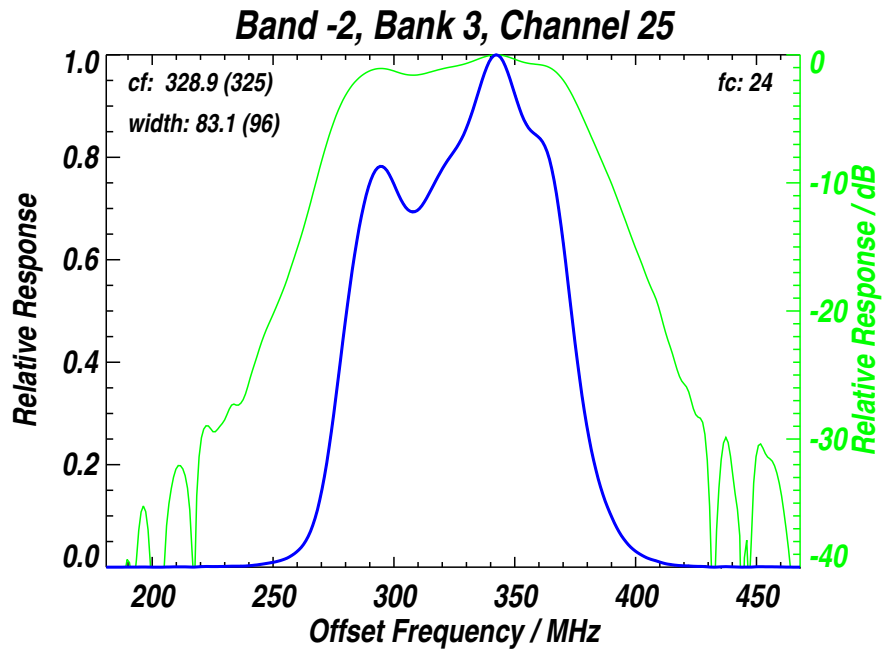


Figure H.41: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 2 (lsb)**  
**Bank 3**  
**Origin = 182.414285712 GHz**

Figure H.42: Lower sideband front-end sweep data for Band 2 taken via Filterbank 3, channel 25. See text for additional details.

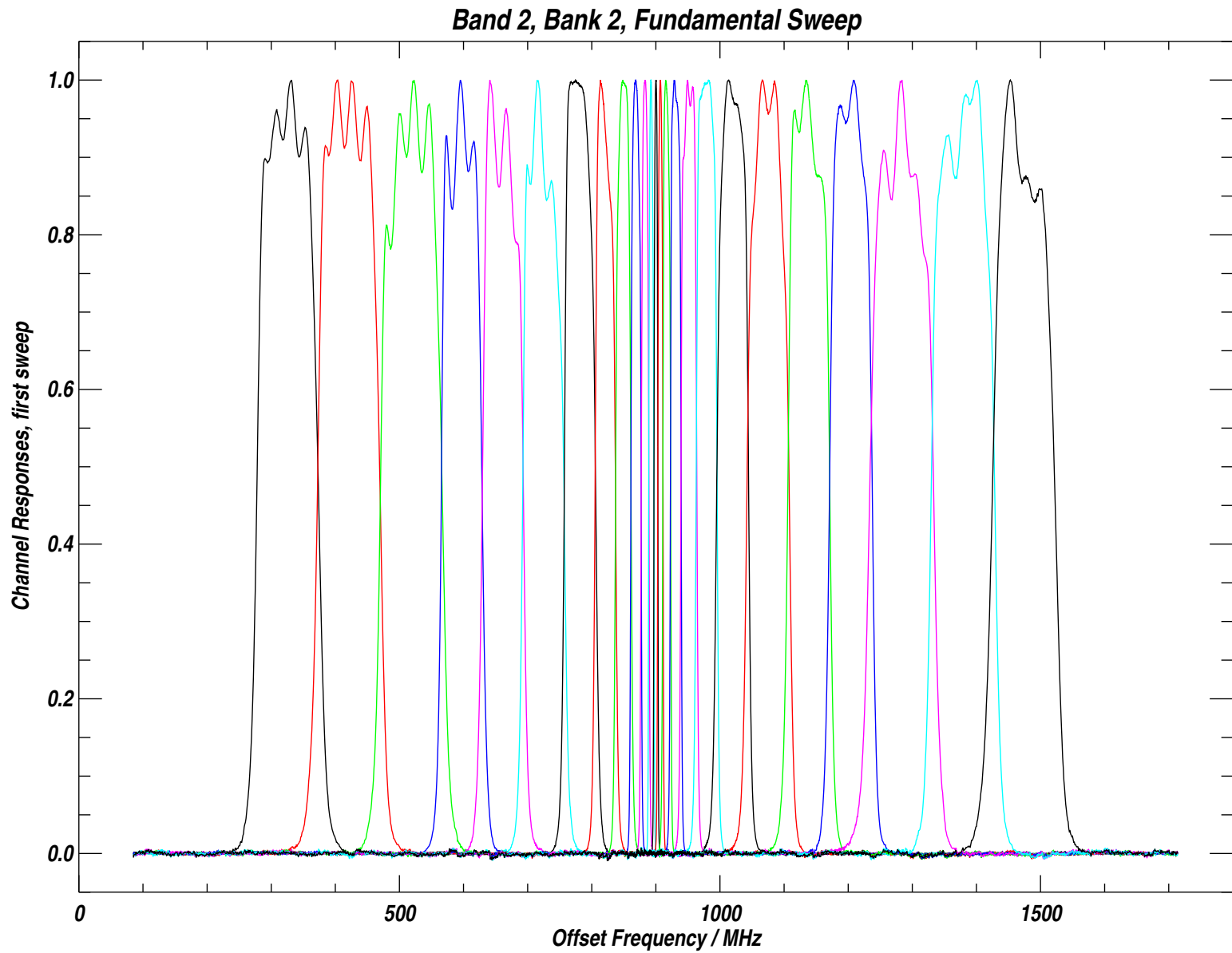


Figure H.43: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2. See text for additional details.

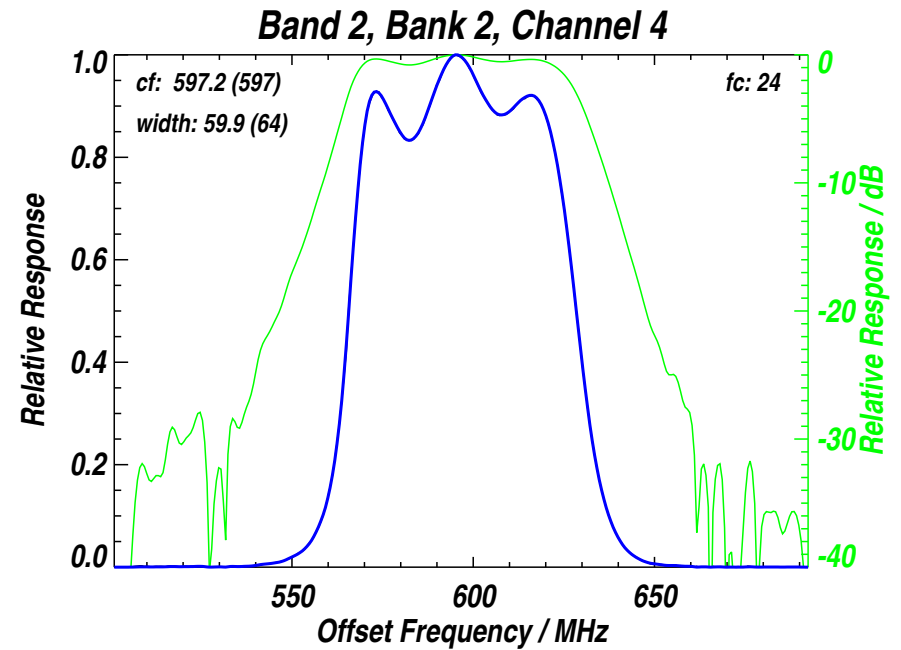
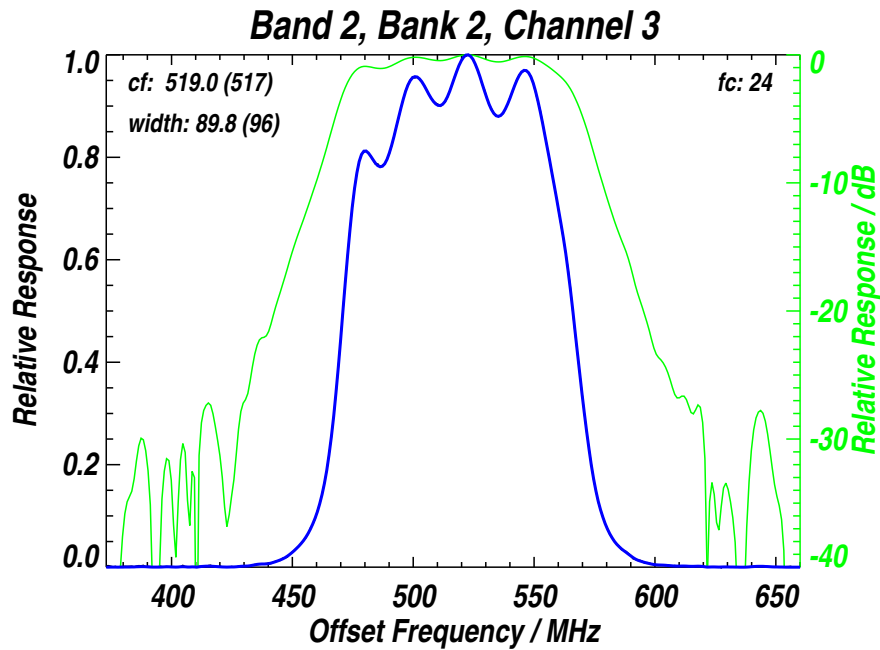
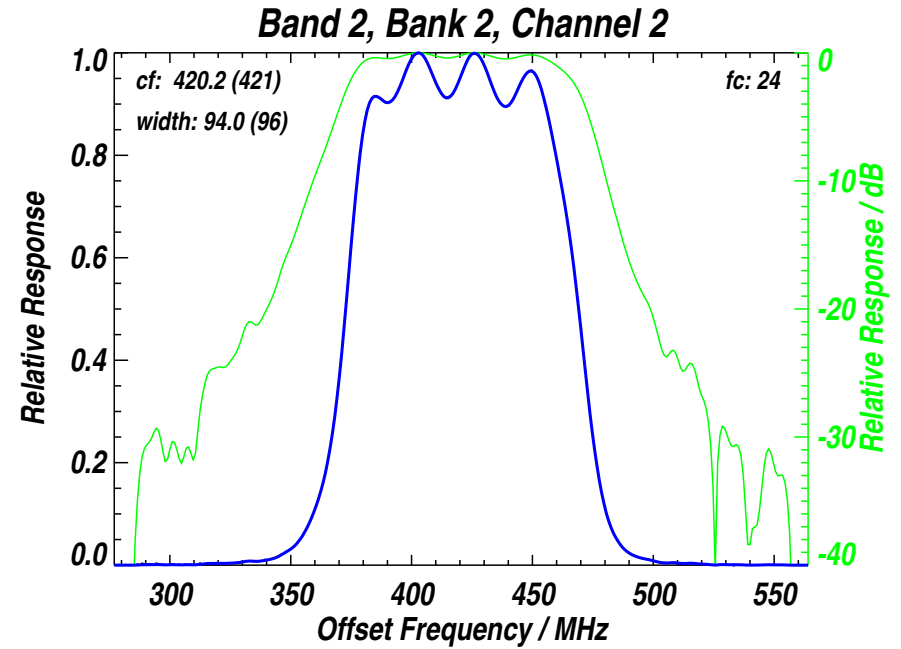
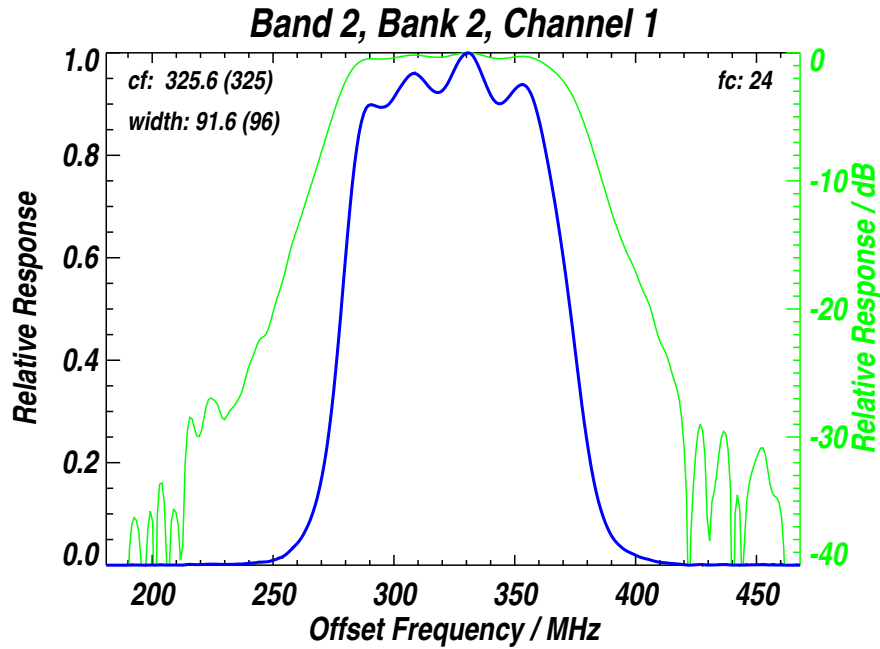


Figure H.44: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 1 to 4. See text for additional details.

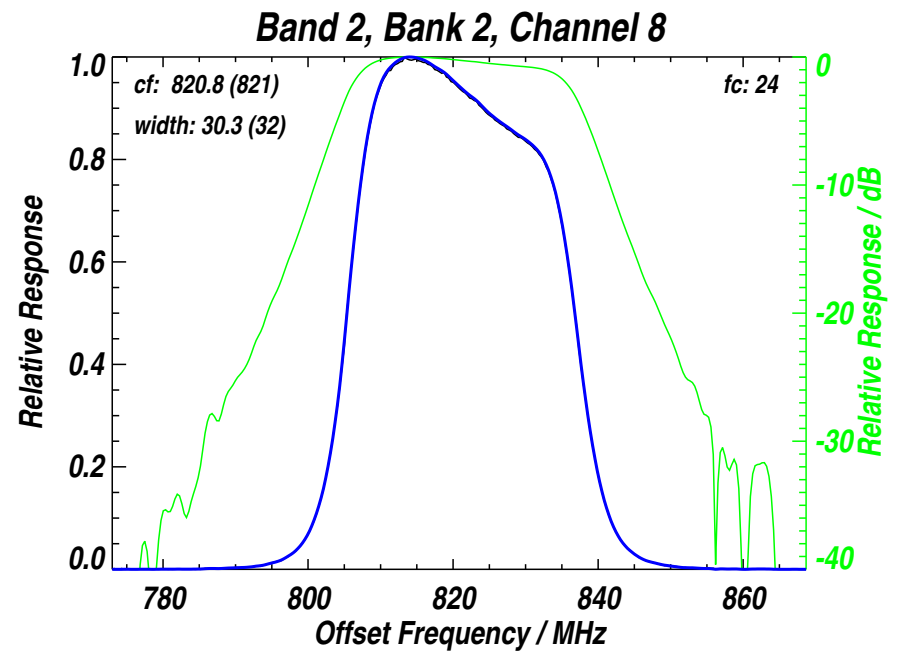
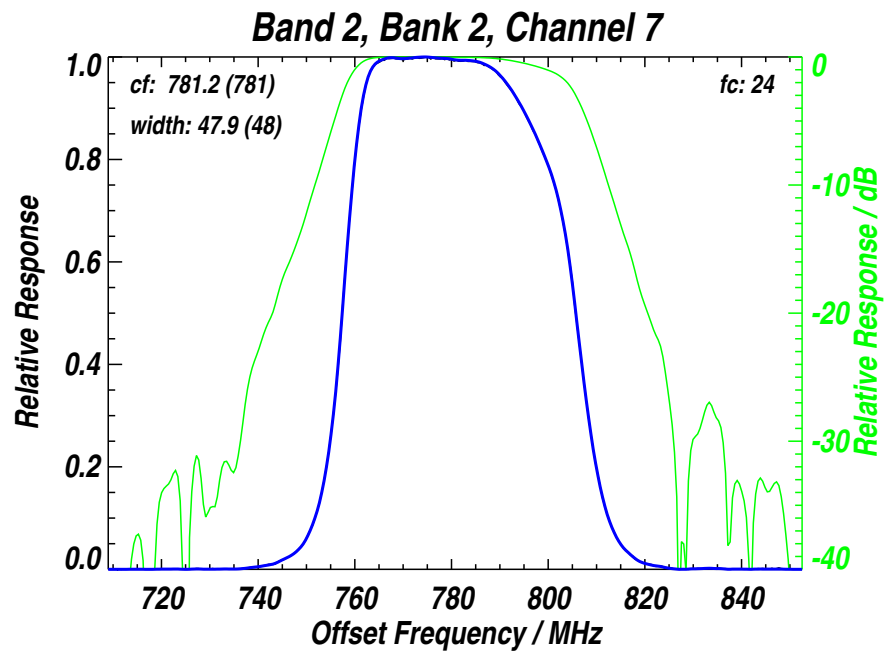
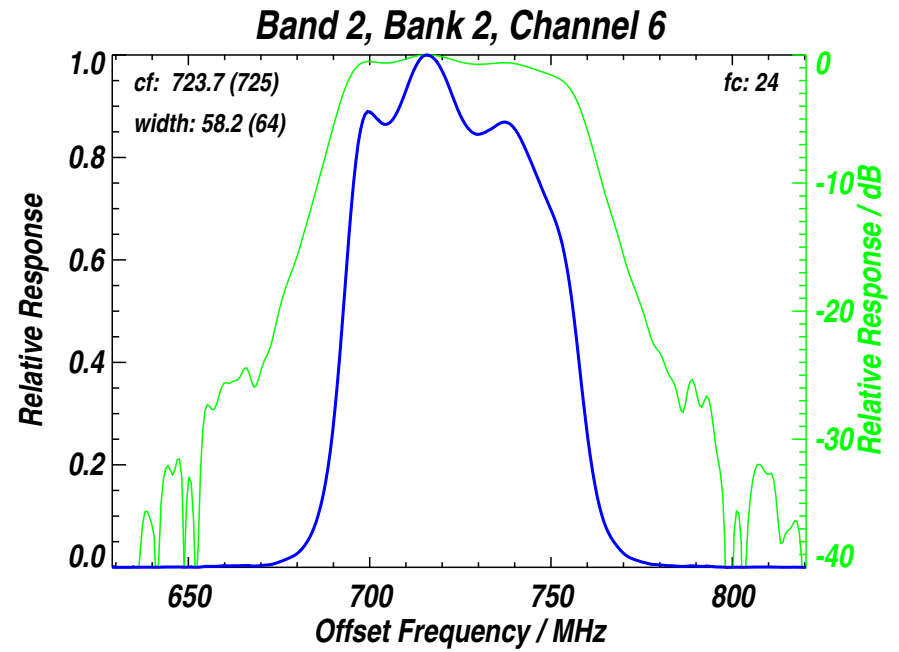
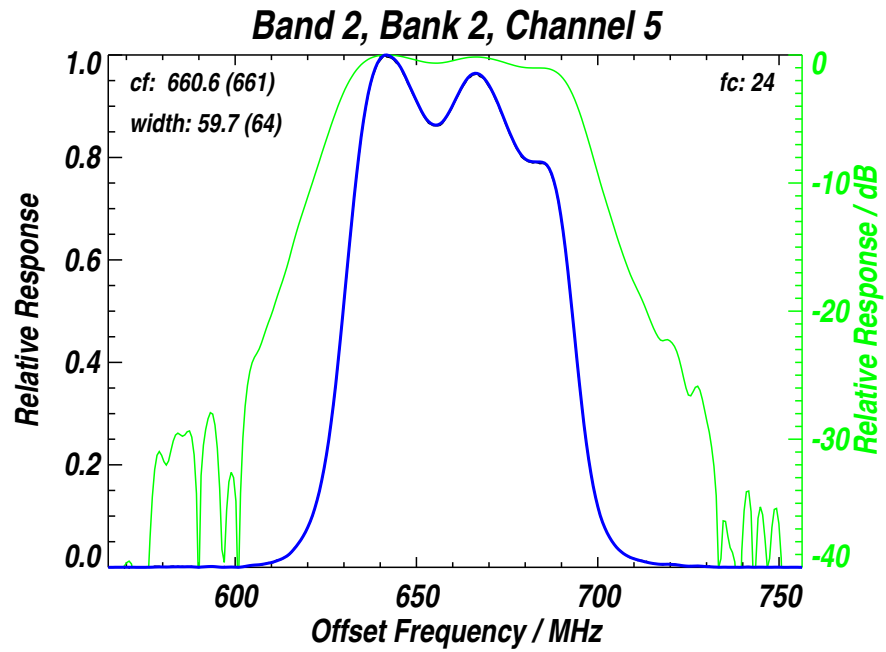


Figure H.45: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 5 to 8. See text for additional details.

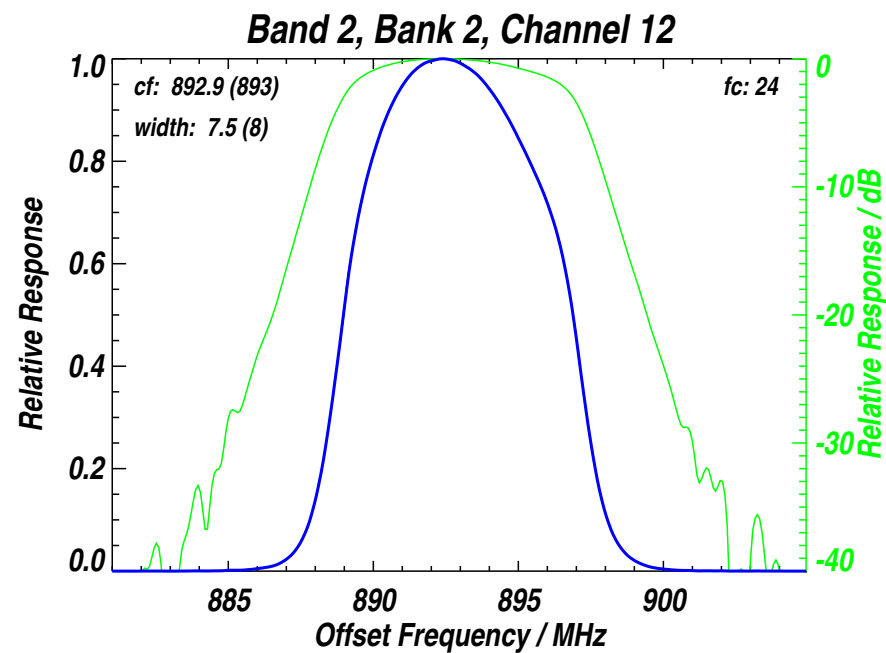
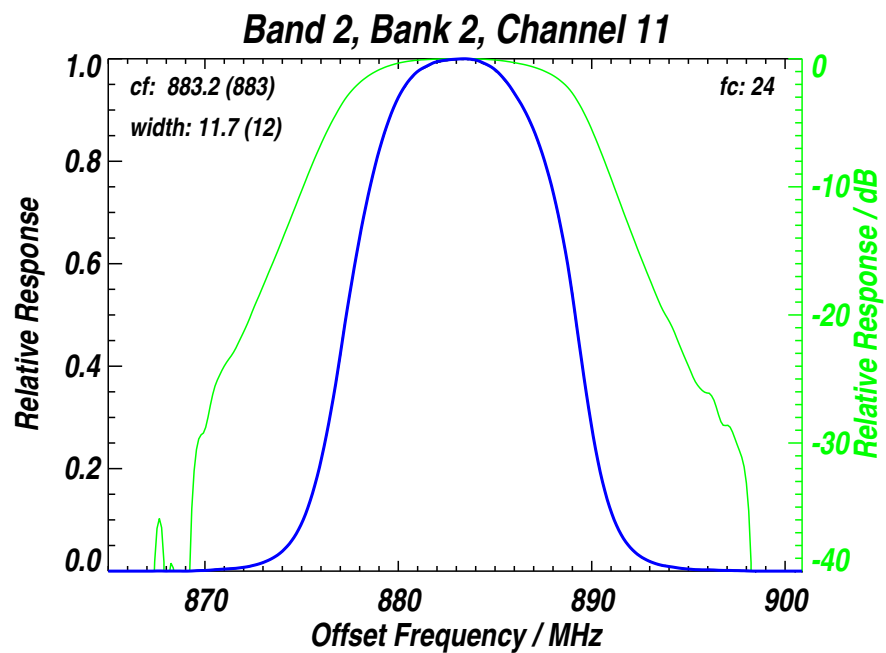
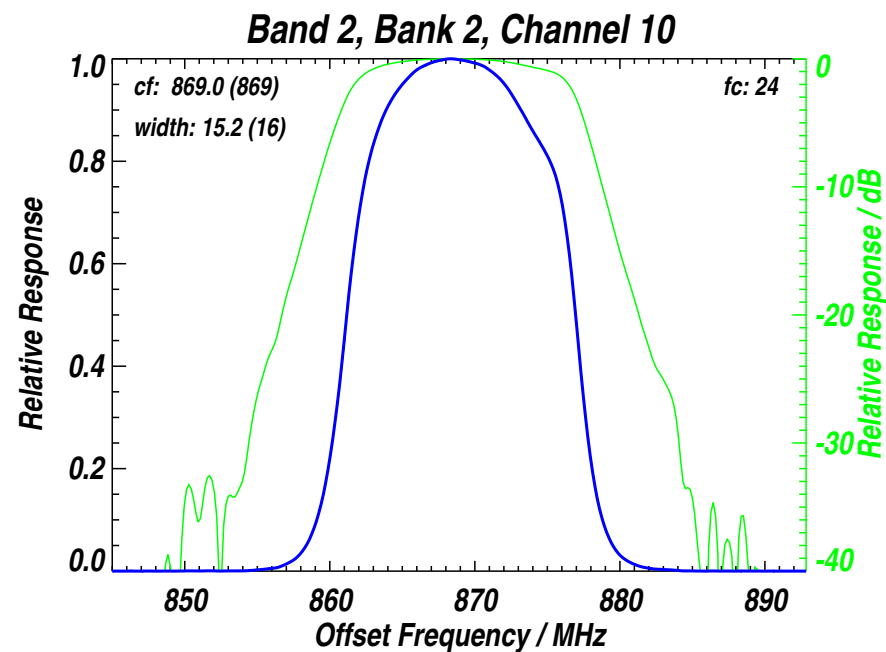
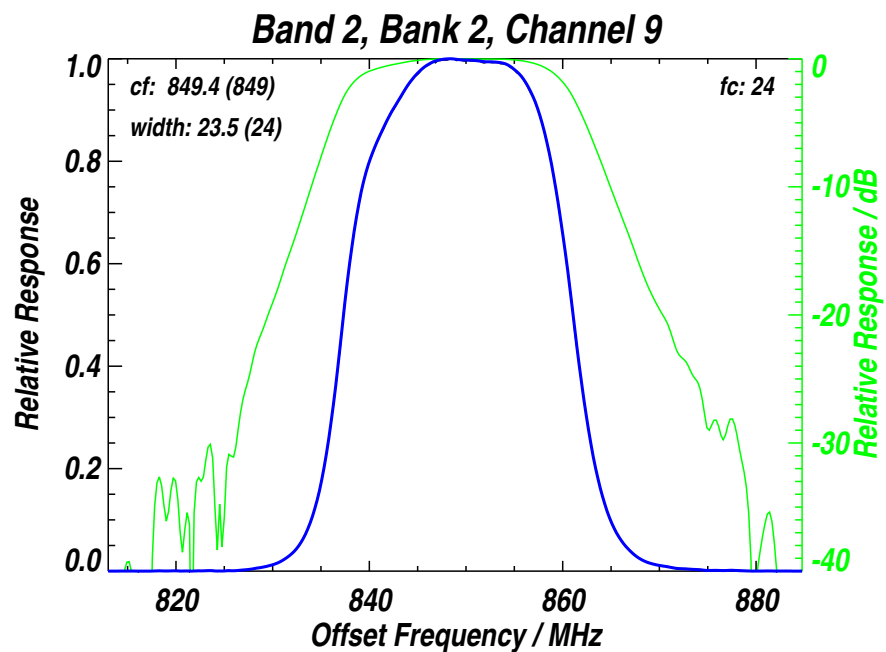


Figure H.46: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 9 to 12. See text for additional details.

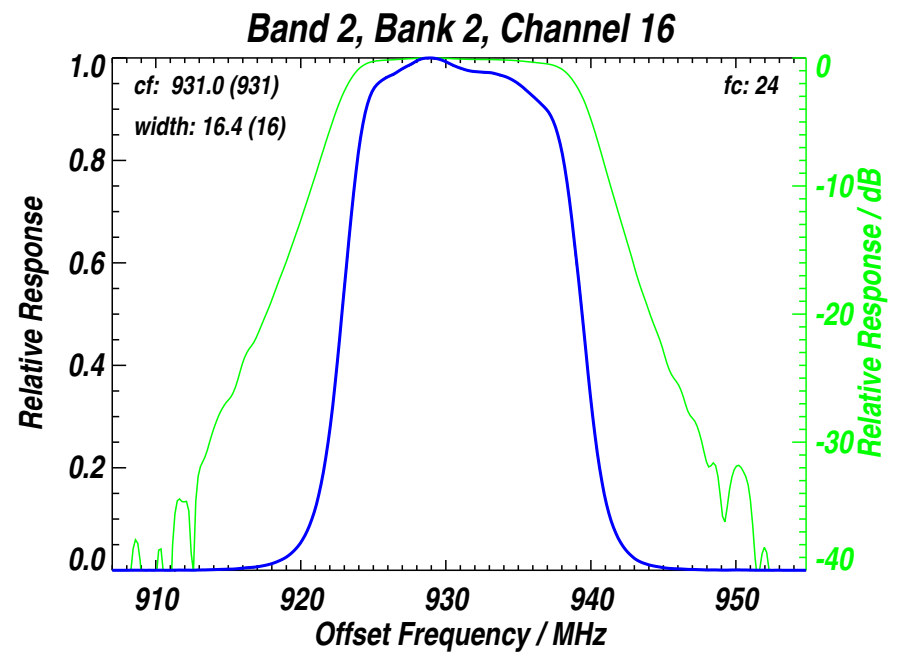
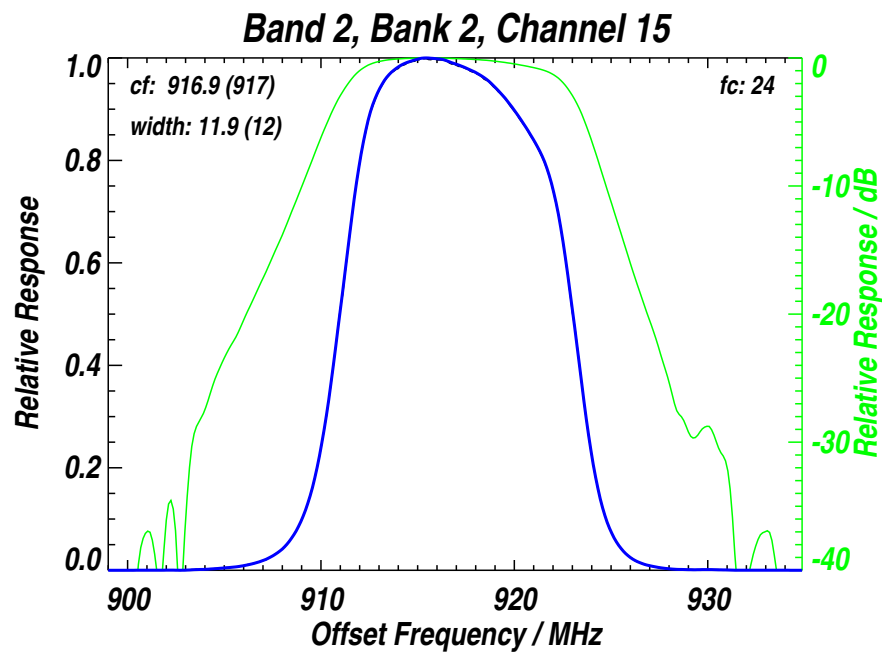
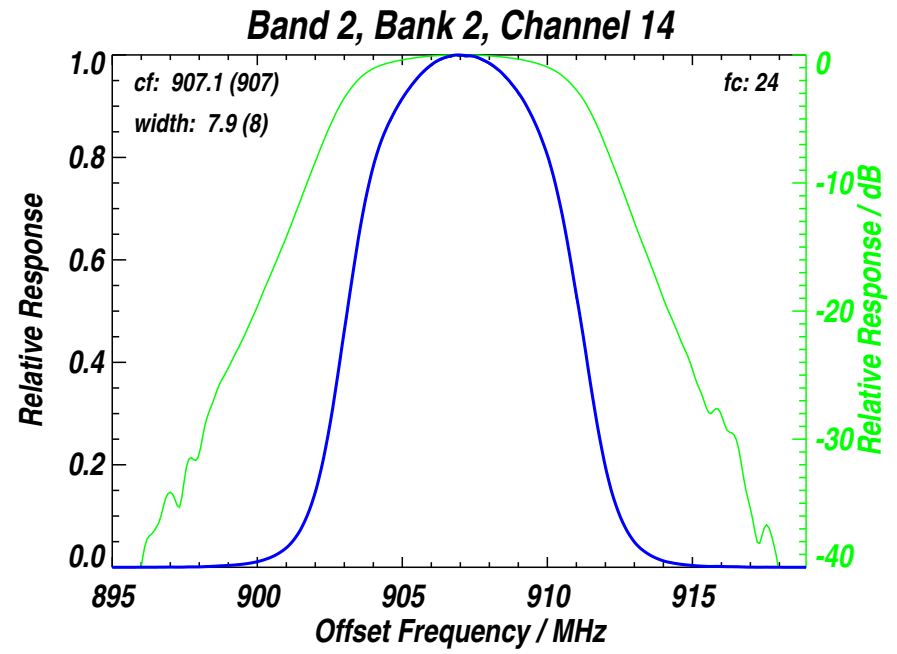
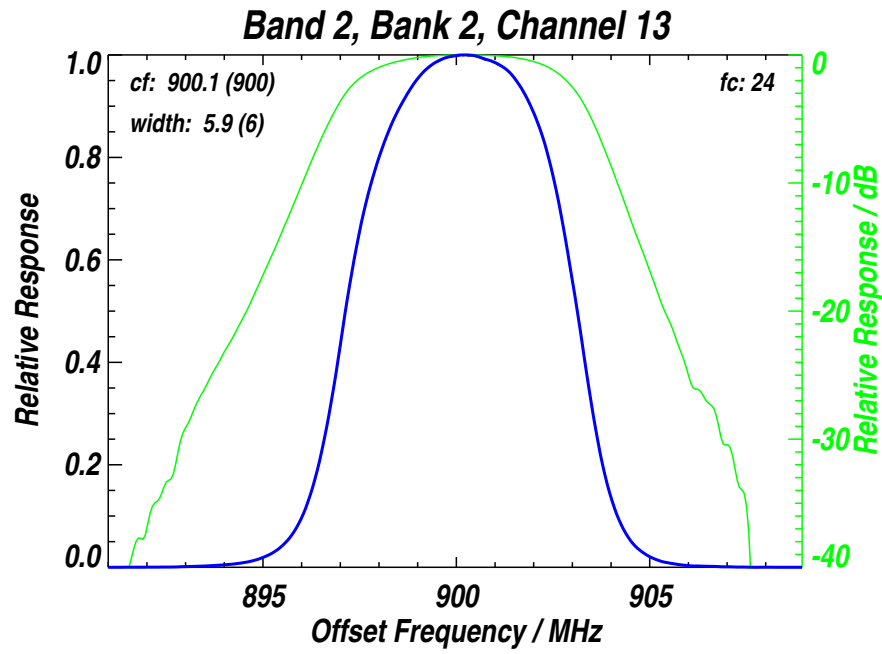


Figure H.47: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 13 to 16. See text for additional details.

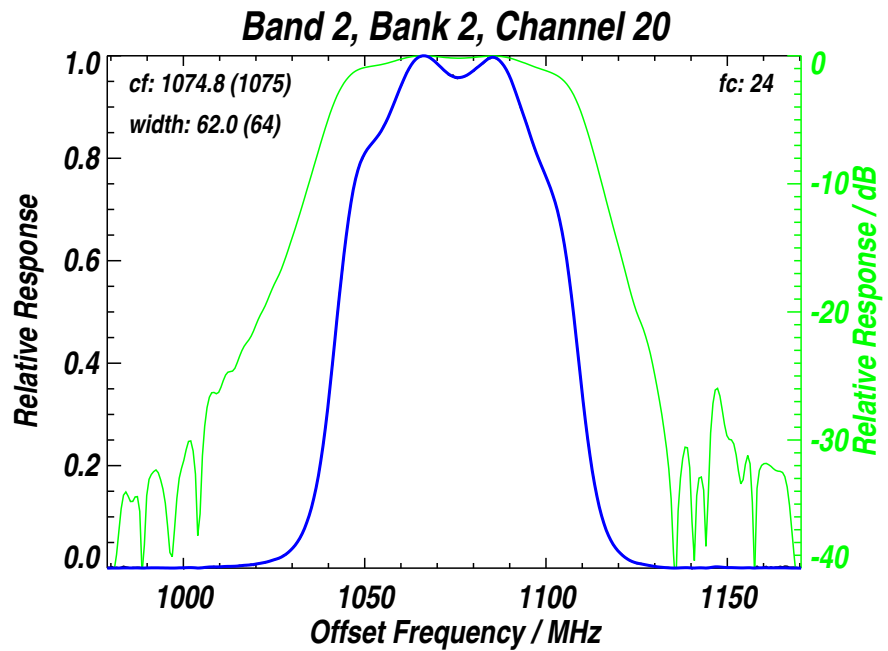
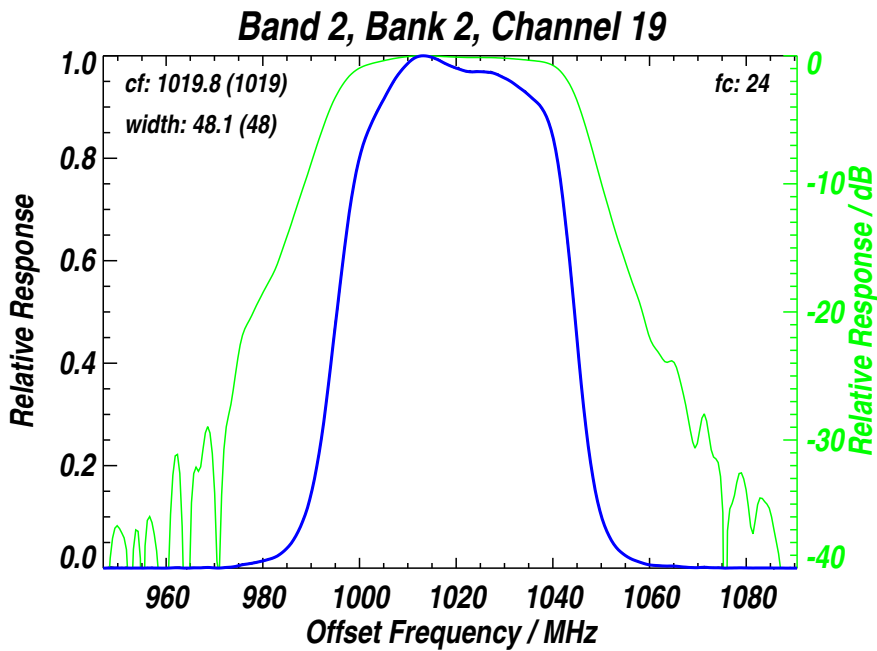
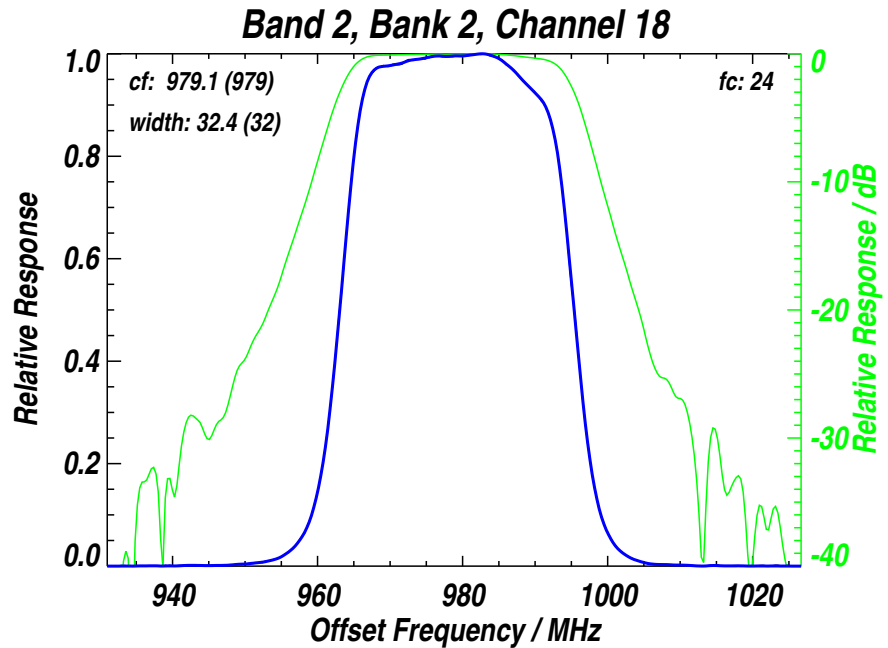
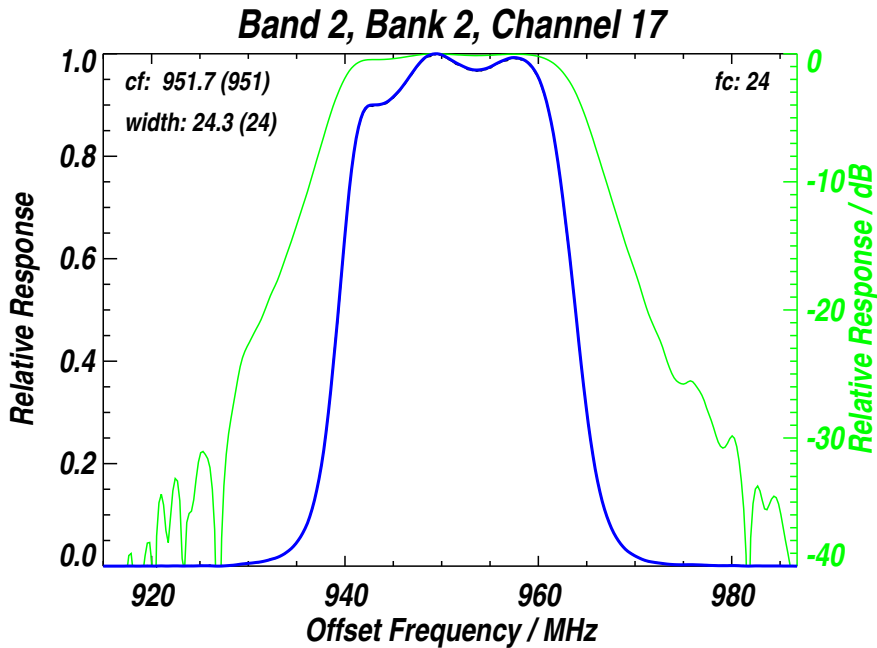


Figure H.48: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 17 to 20. See text for additional details.



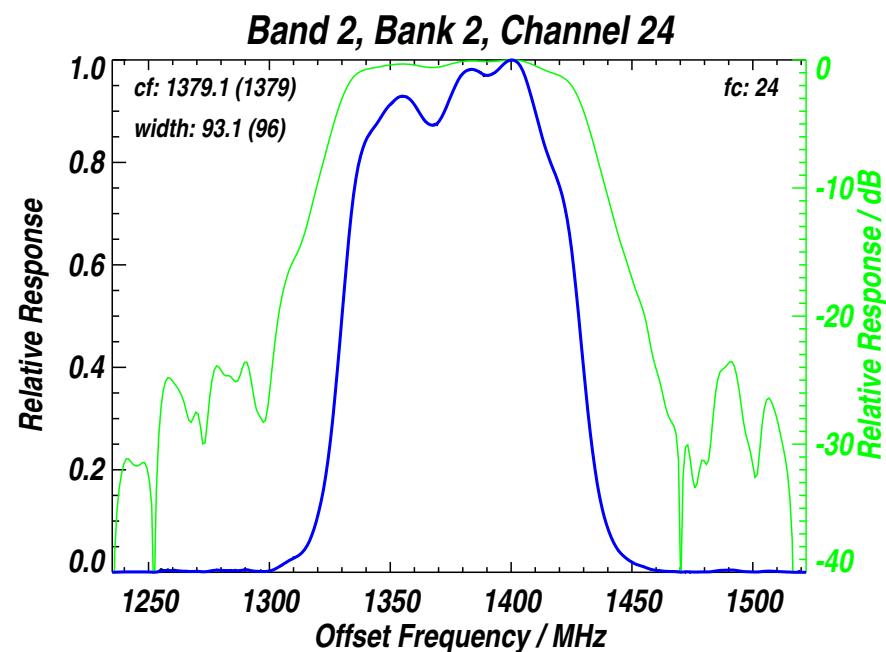
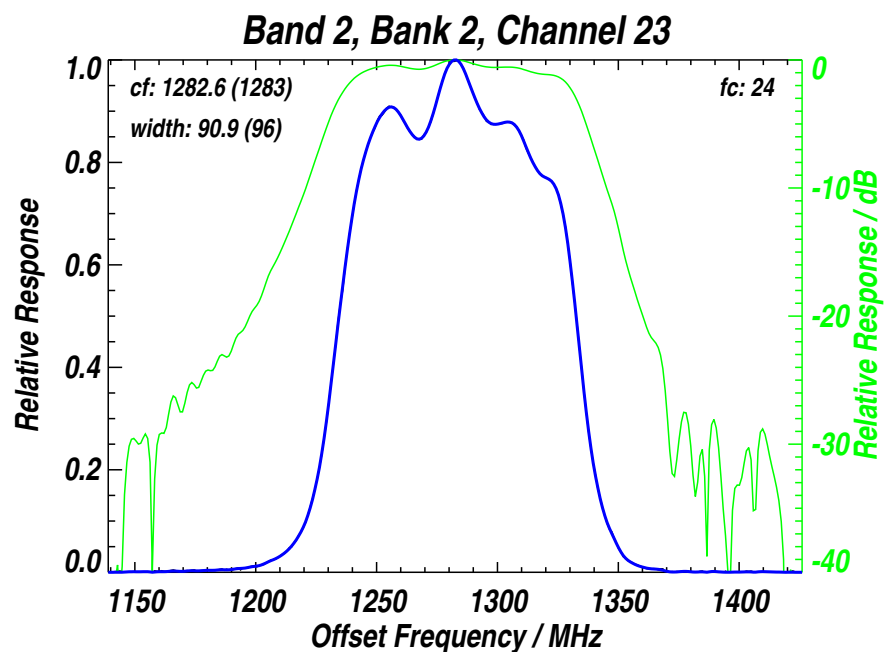
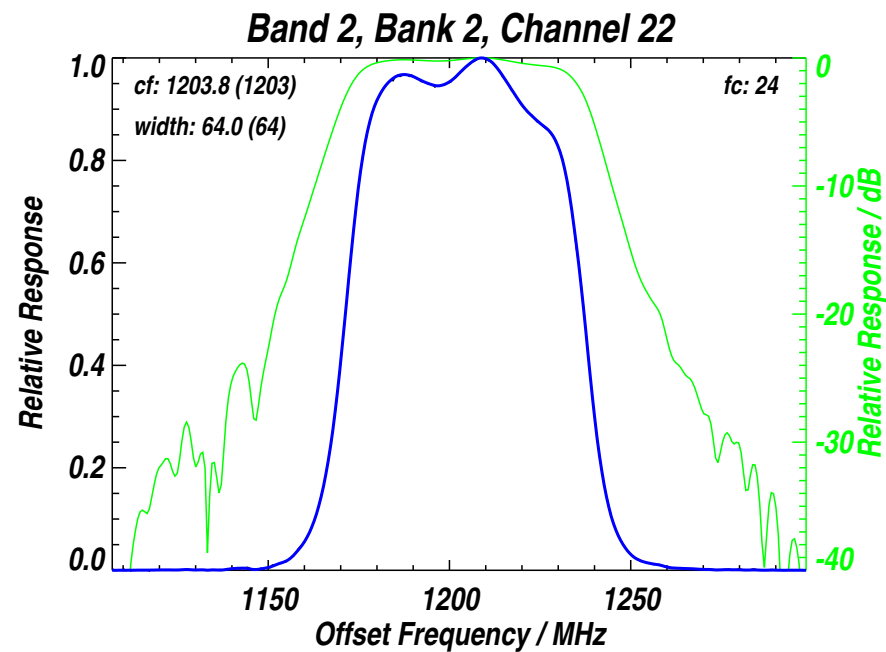
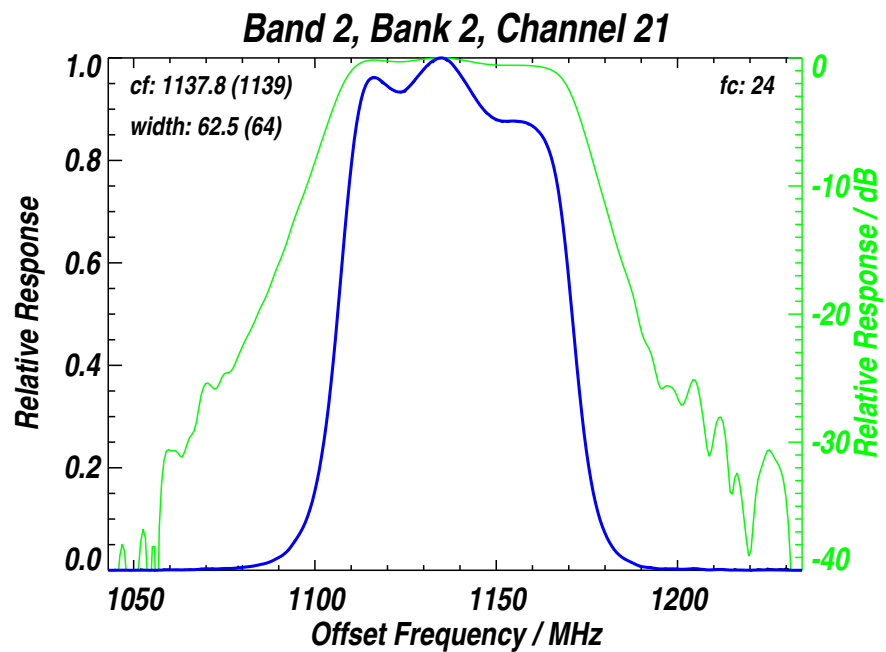
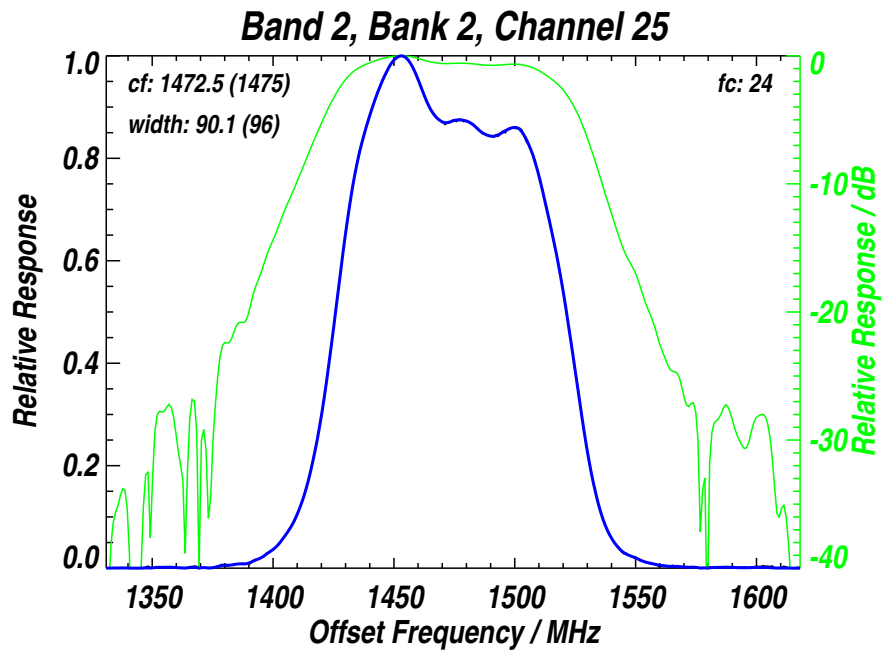


Figure H.49: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channels 21 to 24. See text for additional details.



**Band 2 (usb)**  
**Bank 2**  
**Origin = 199.585714284 GHz**

Figure H.50: Upper sideband front-end sweep data for Band 2 taken via Filterbank 2, channel 25. See text for additional details.

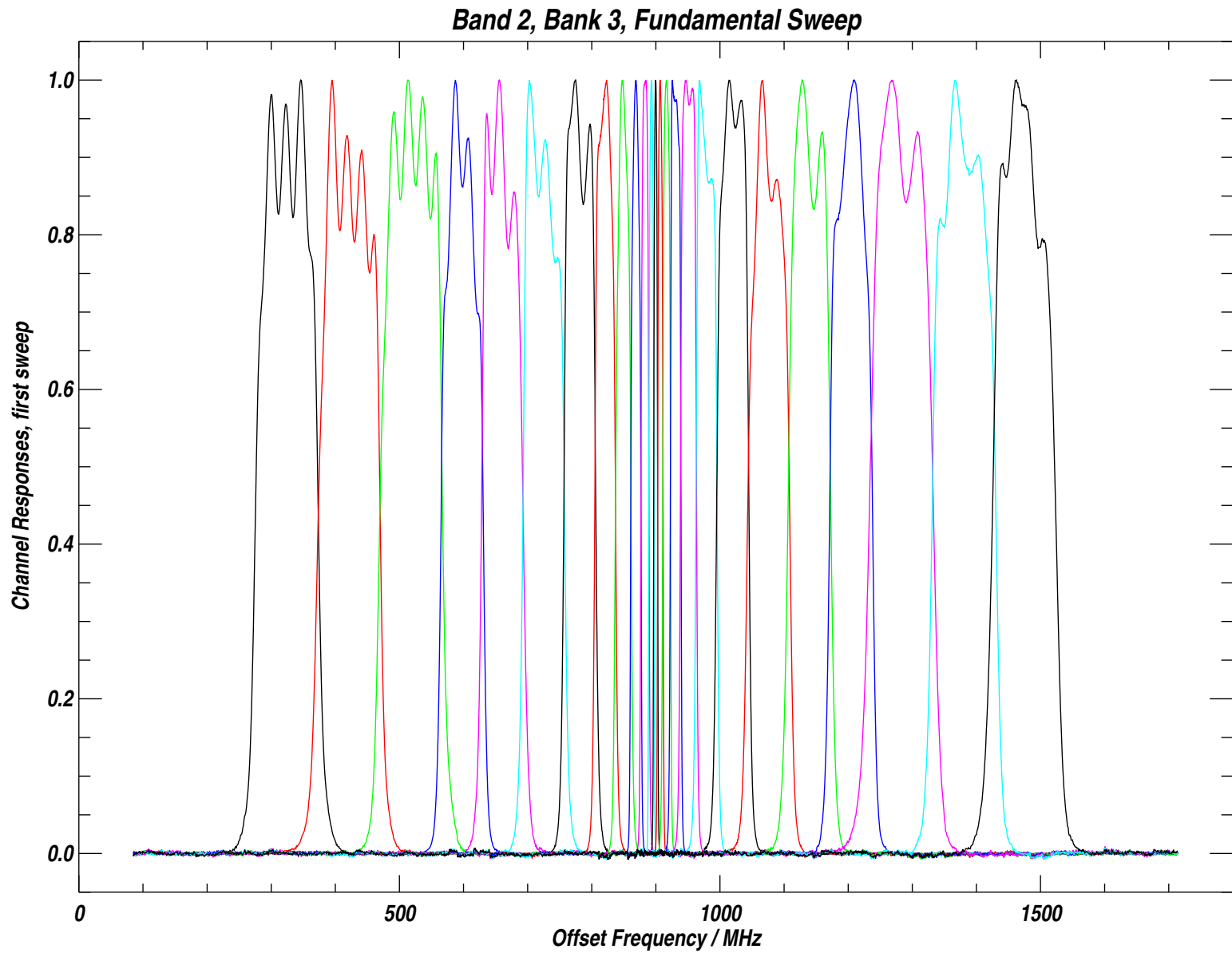


Figure H.51: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3. See text for additional details.

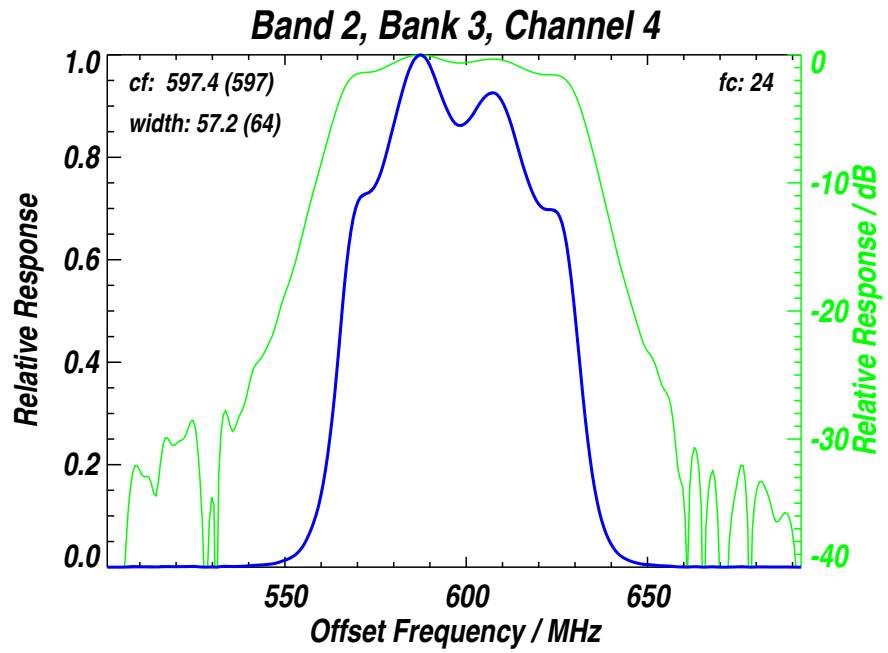
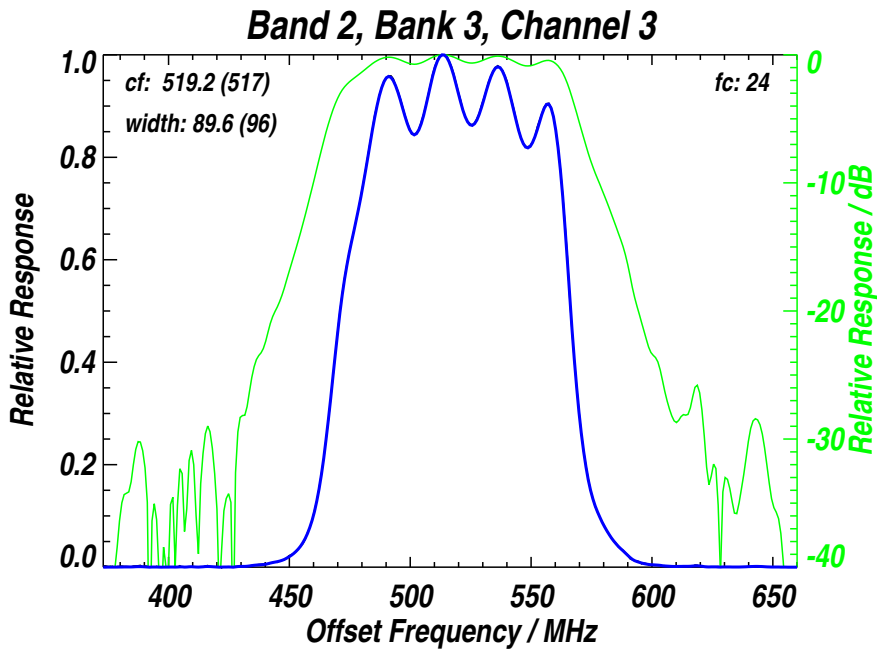
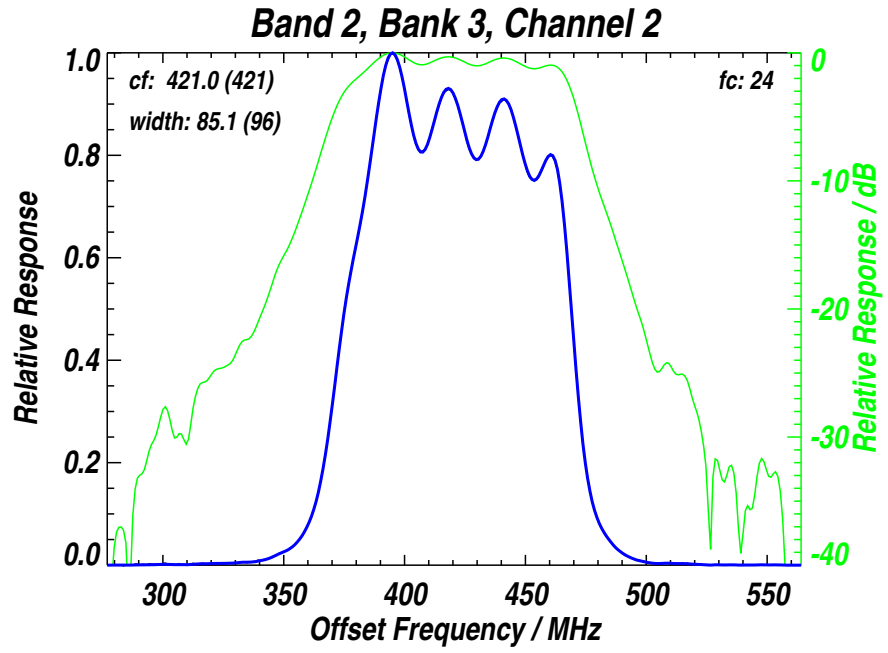
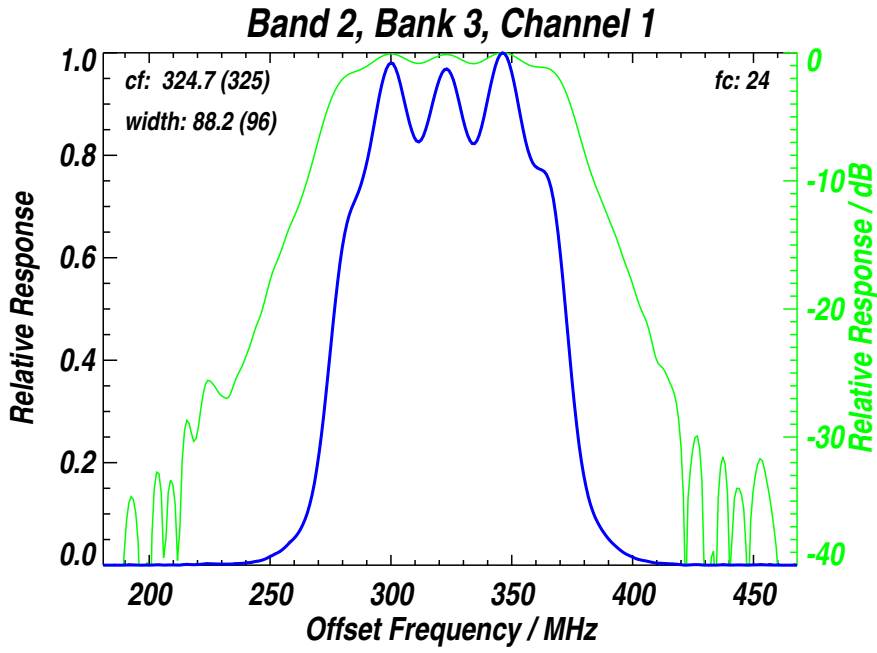


Figure H.52: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 1 to 4. See text for additional details.

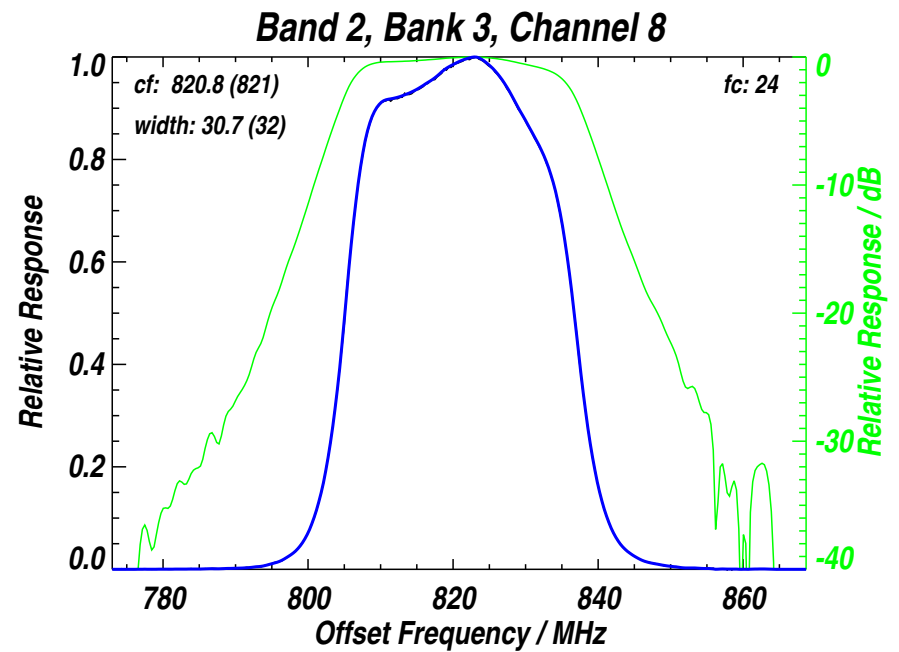
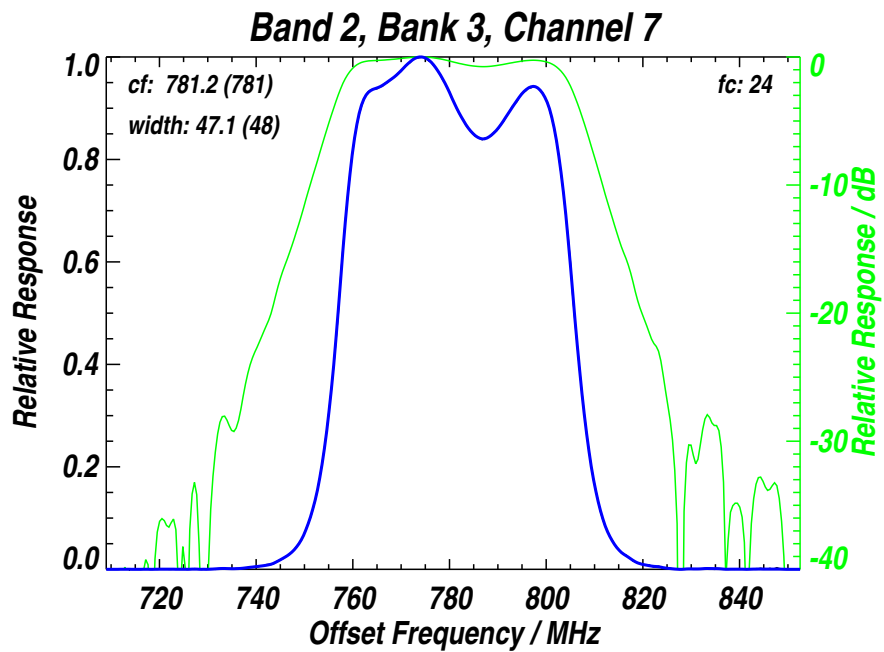
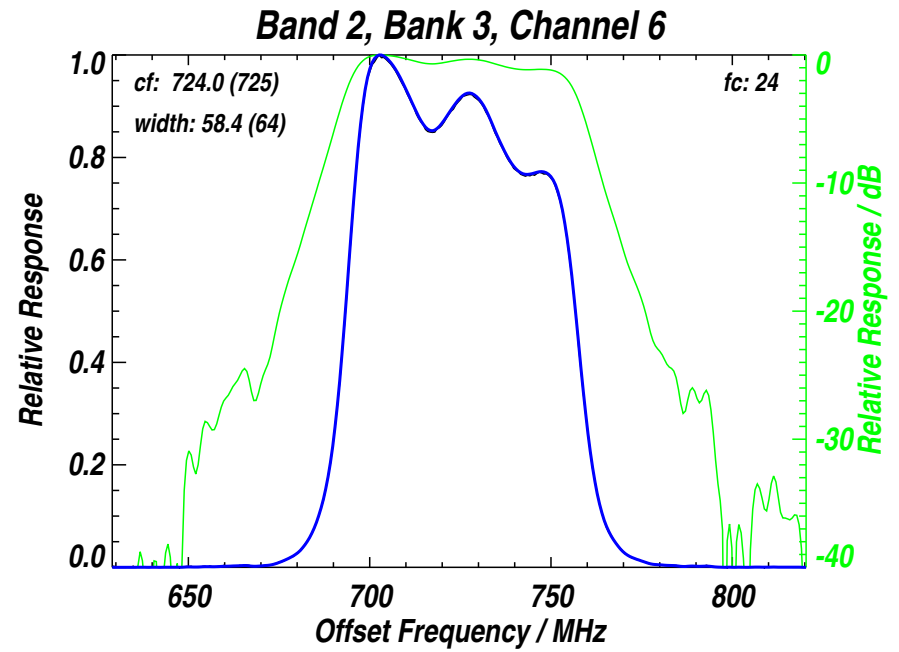
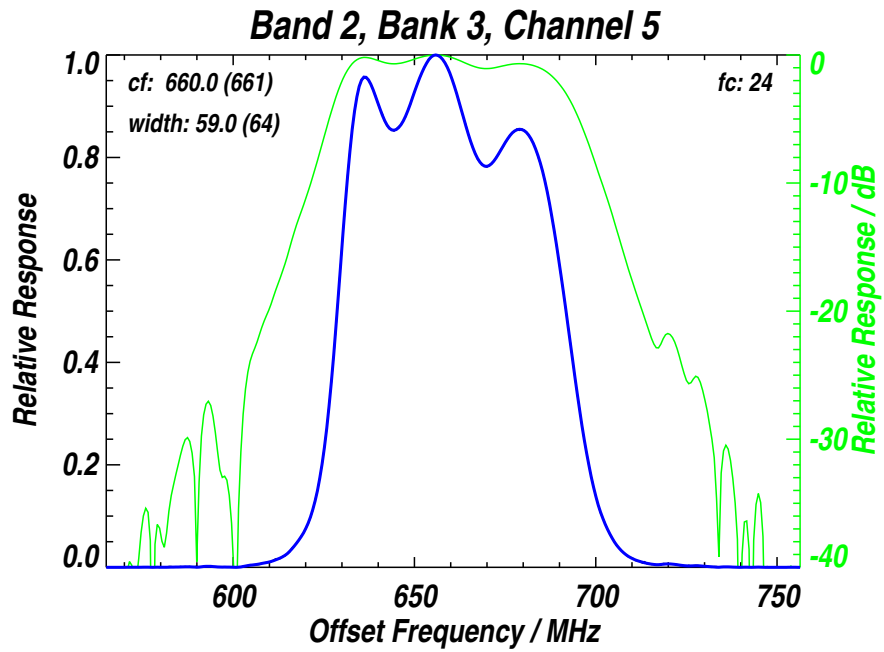


Figure H.53: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 5 to 8. See text for additional details.

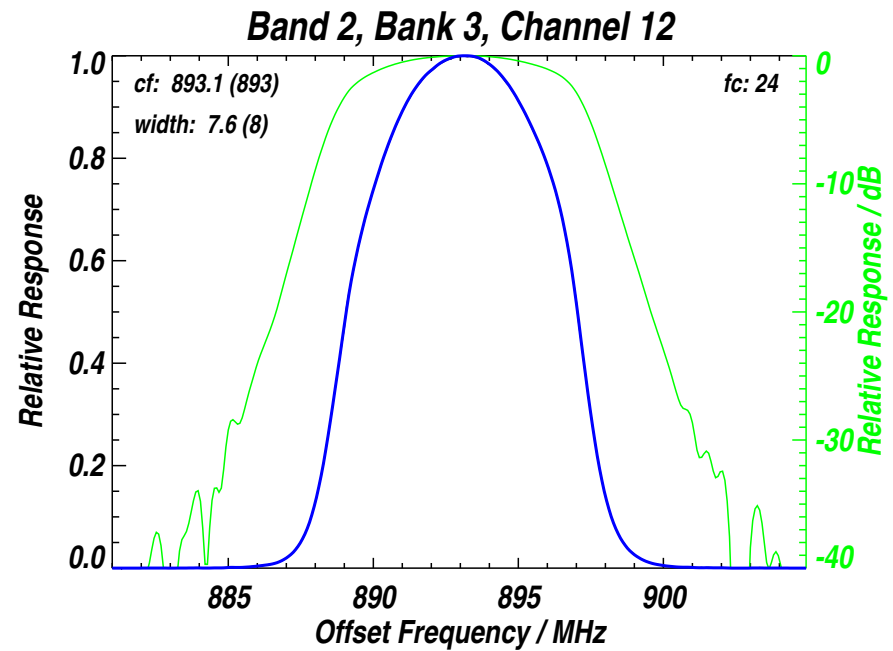
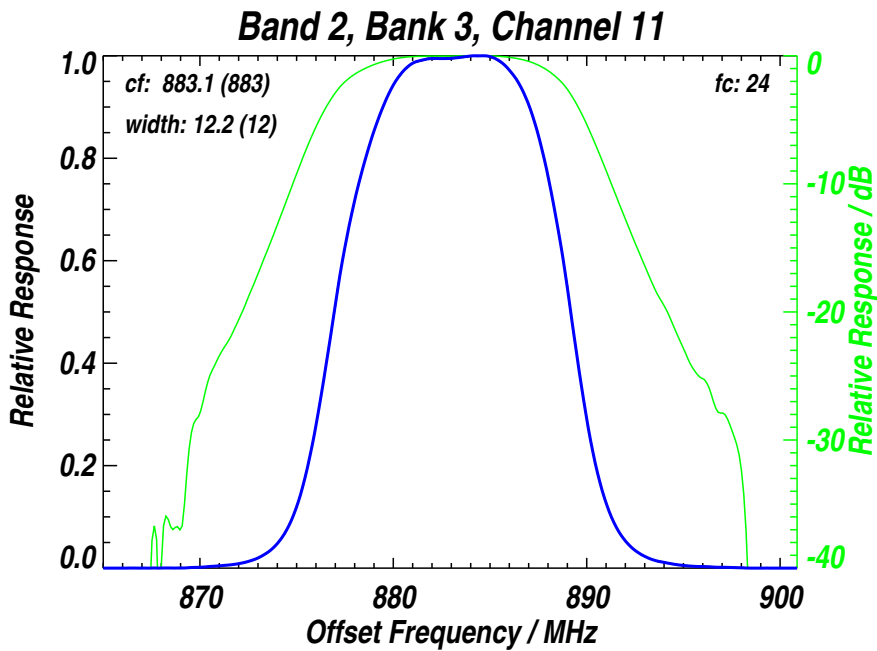
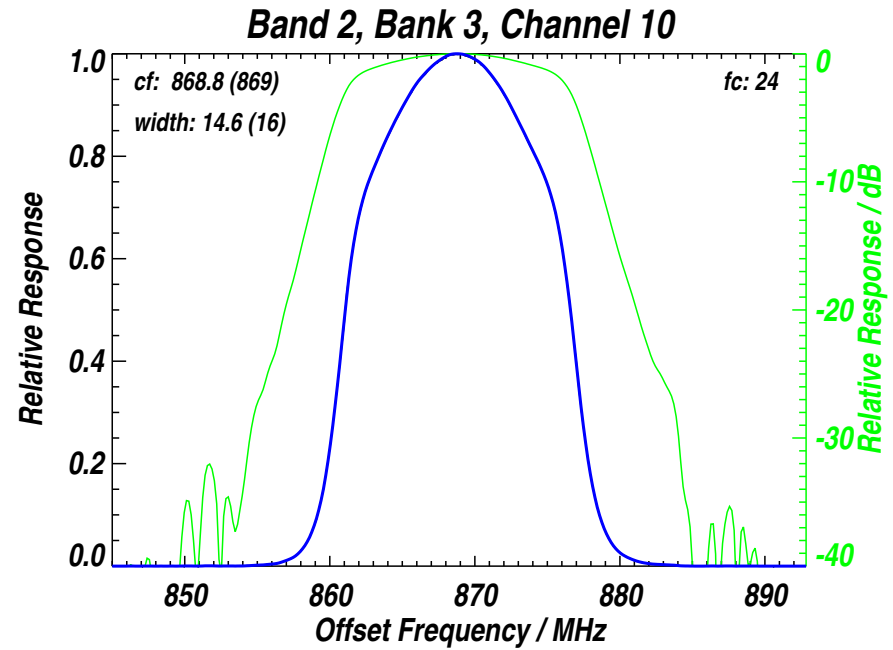
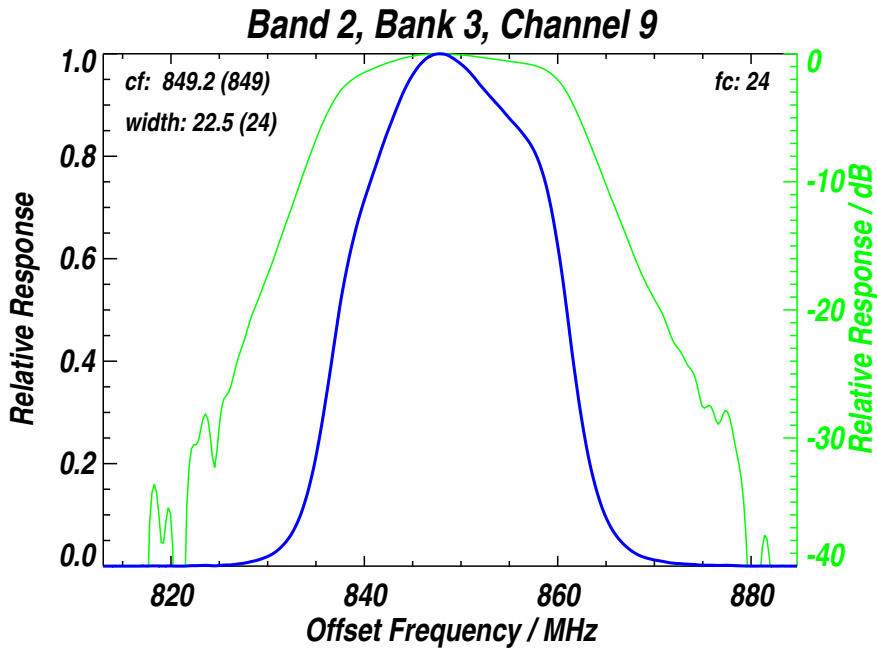


Figure H.54: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 9 to 12. See text for additional details.

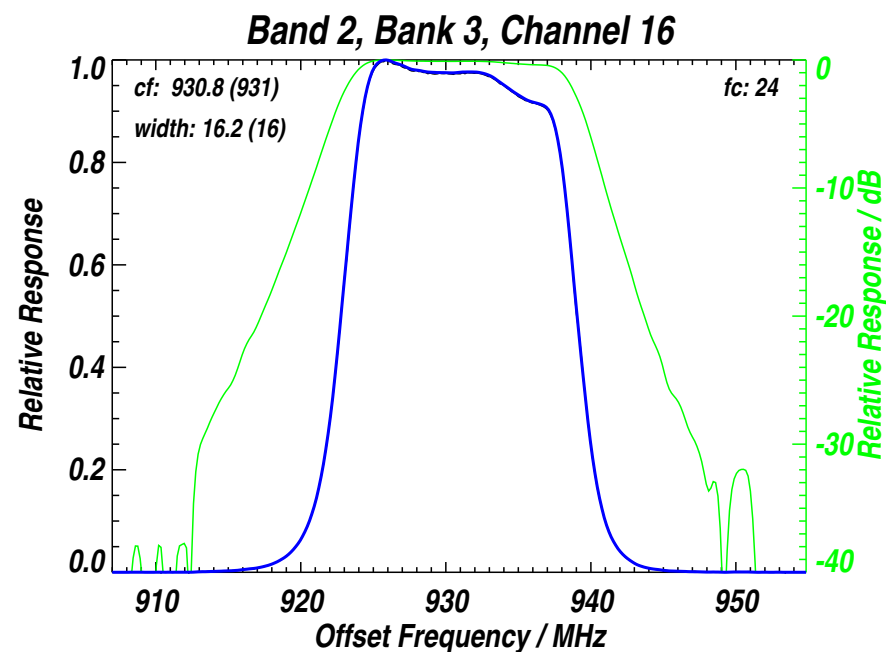
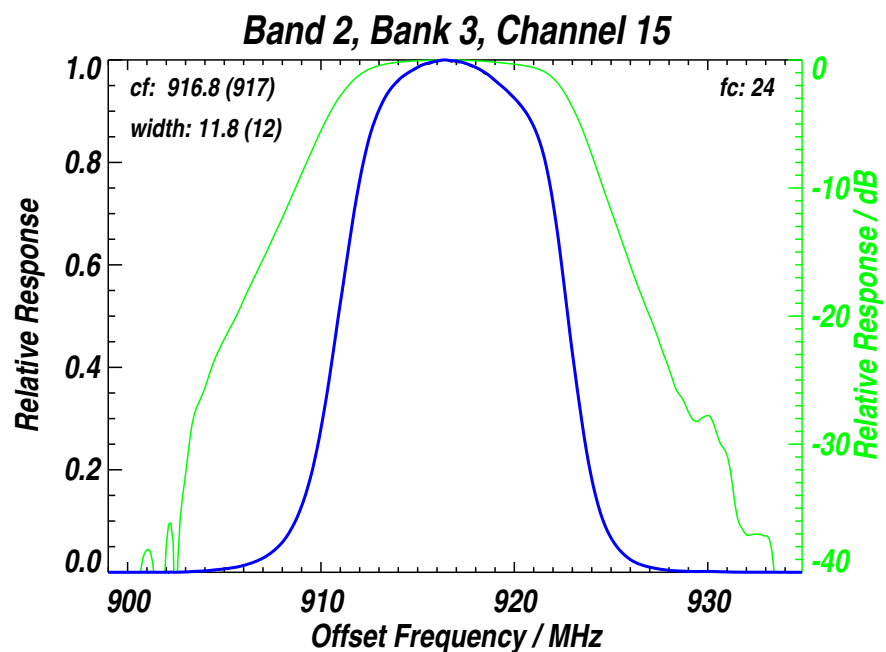
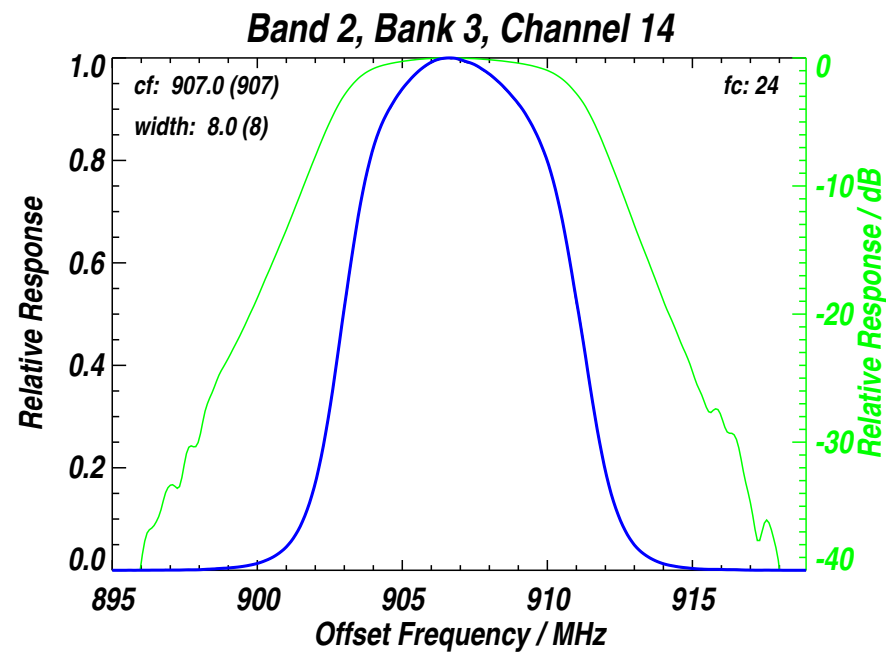
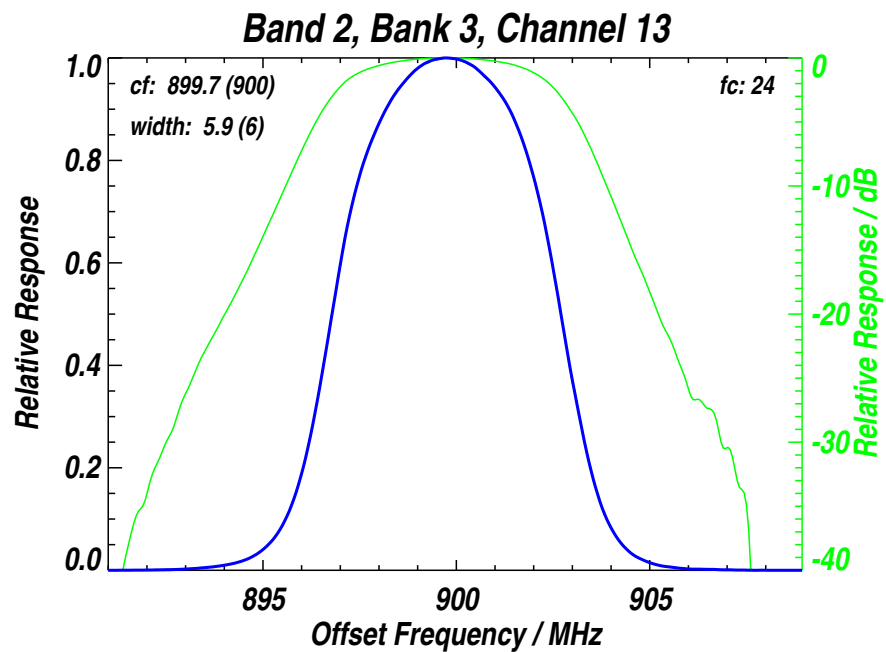


Figure H.55: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 13 to 16. See text for additional details.

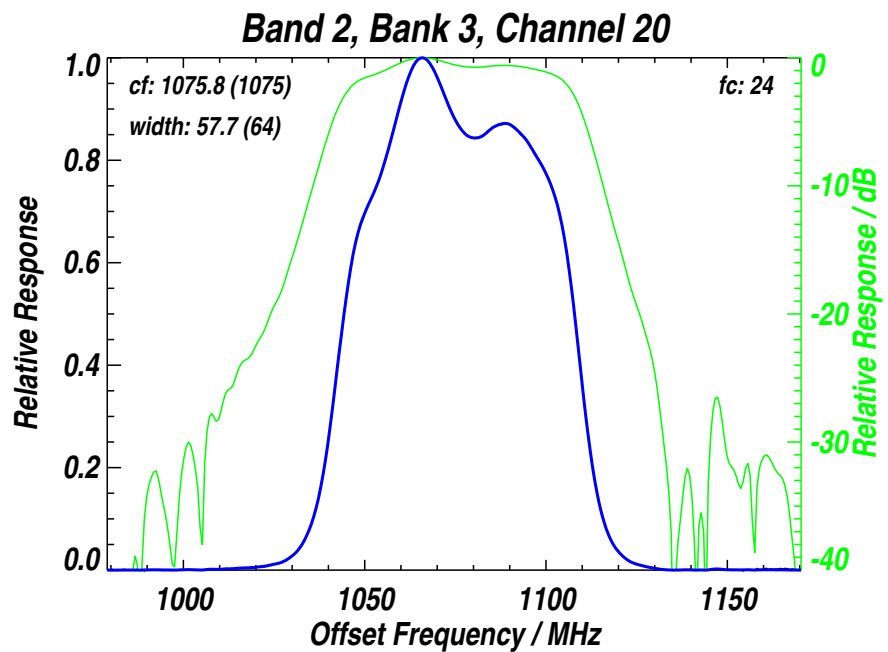
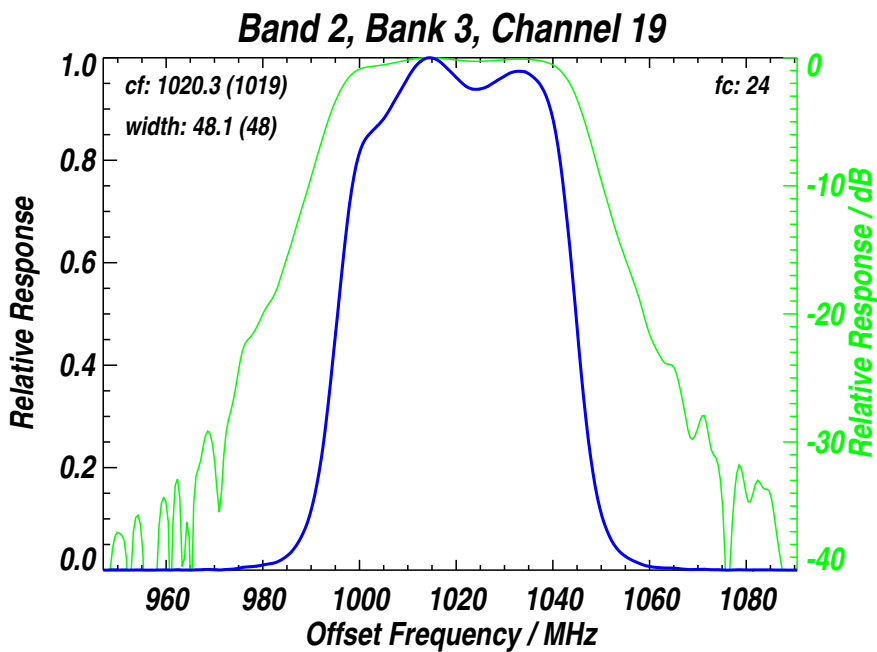
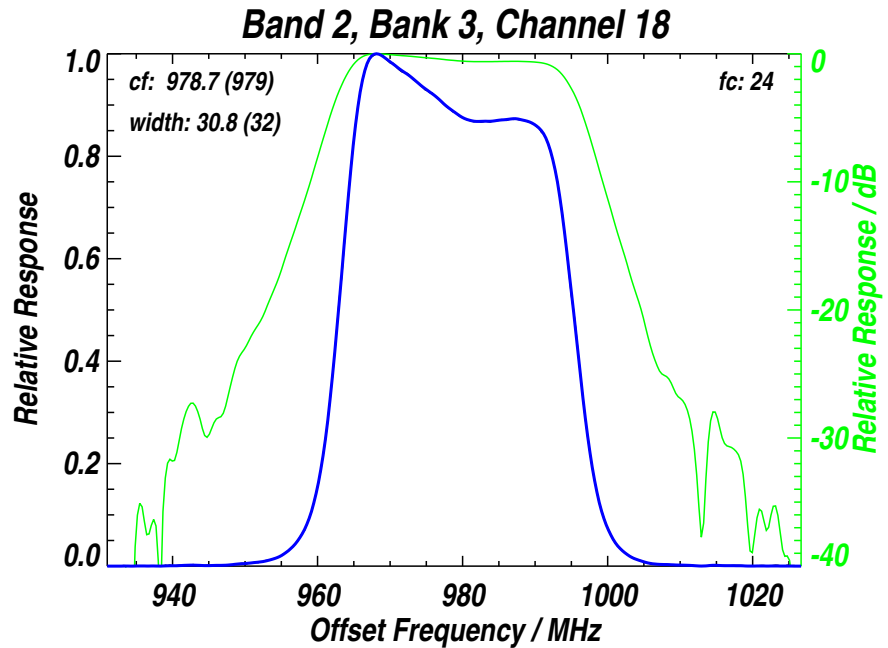
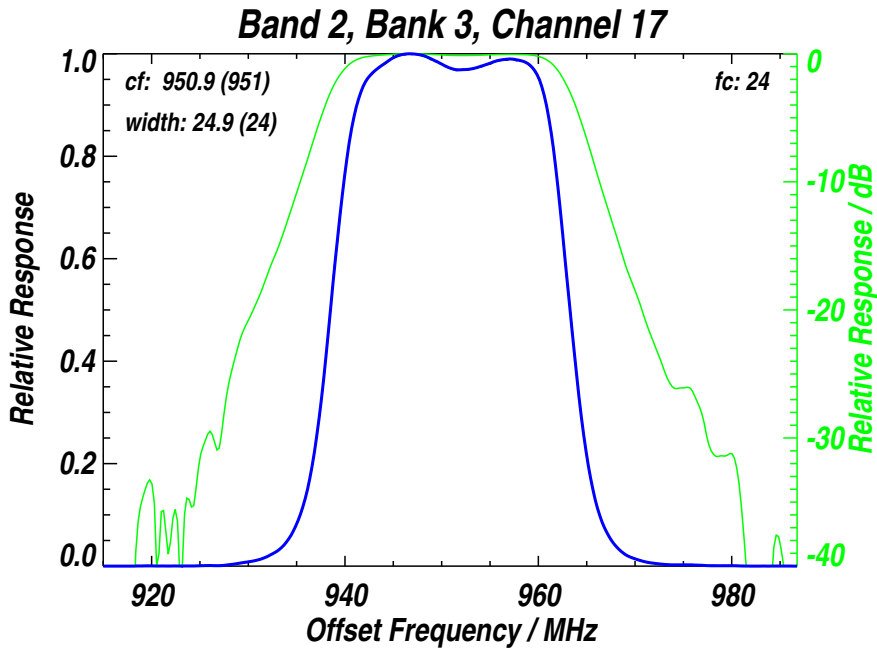


Figure H.56: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 17 to 20. See text for additional details.



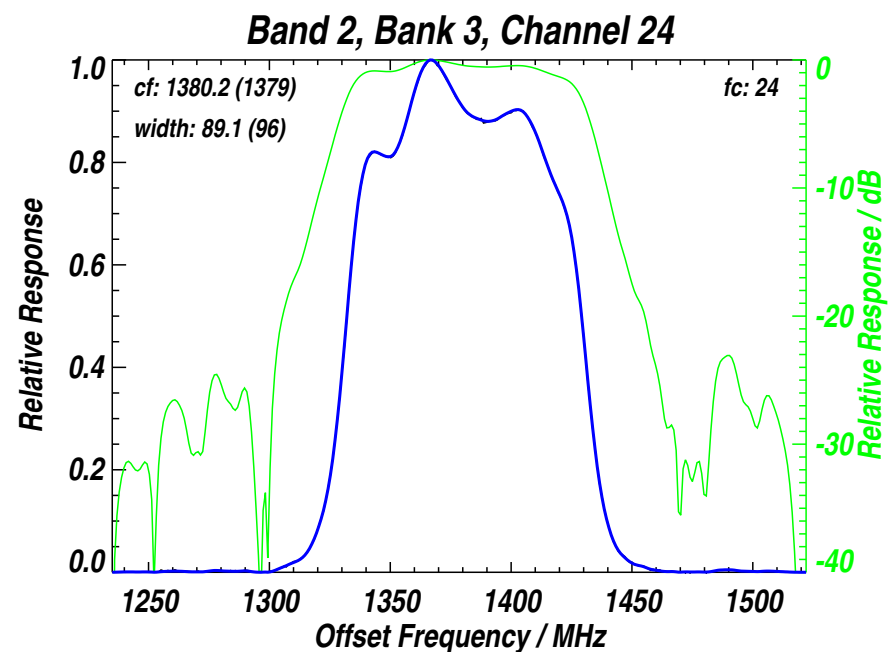
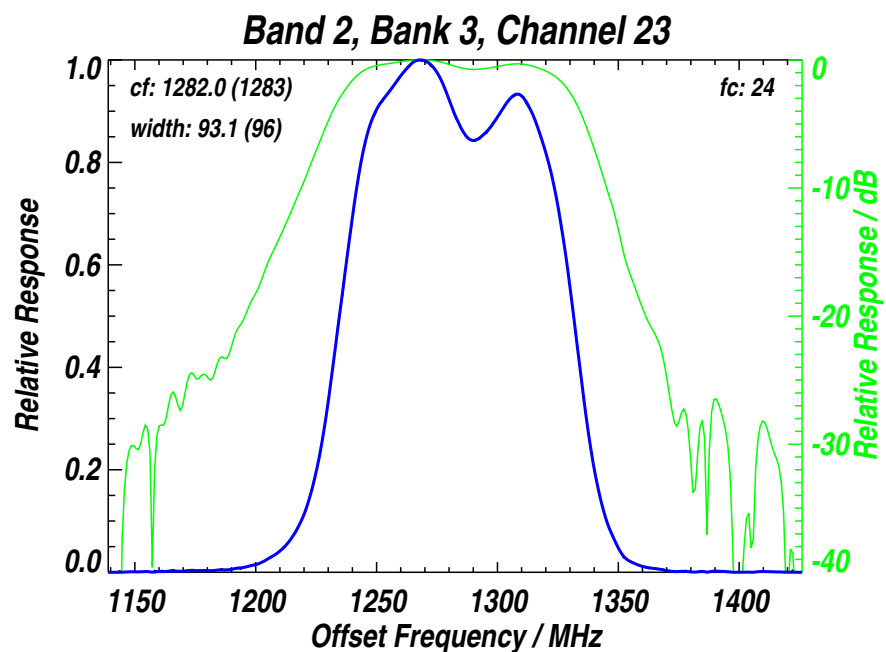
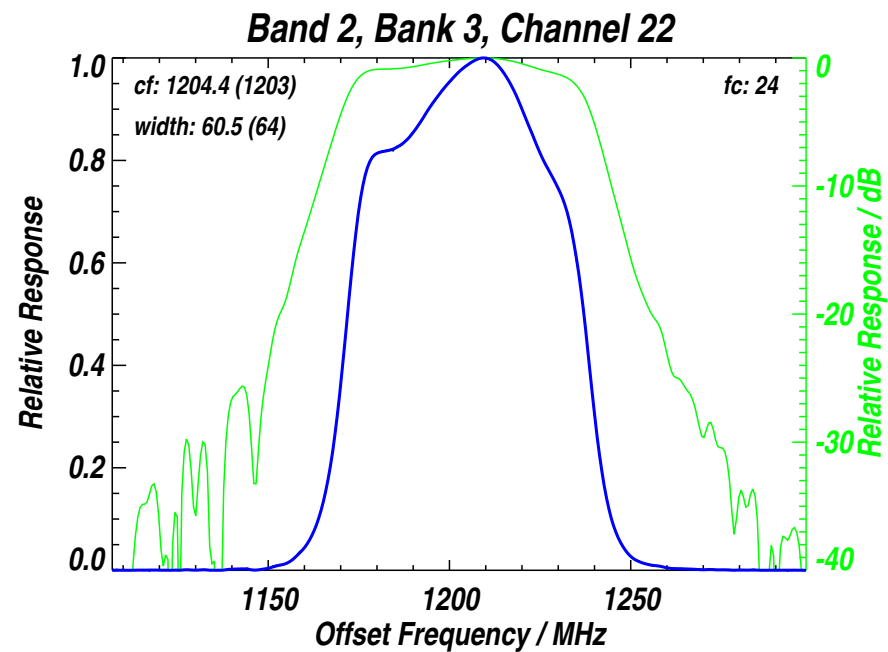
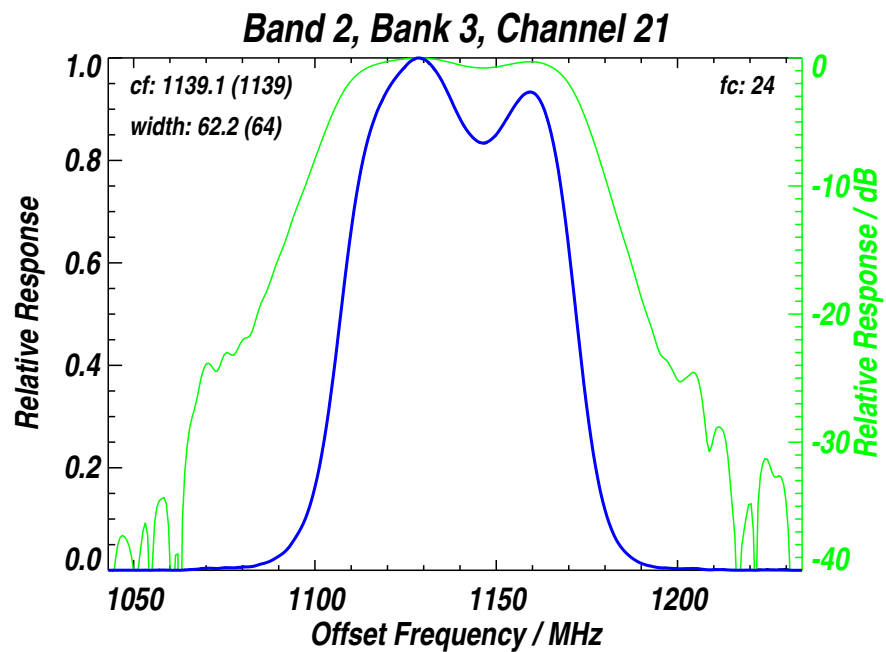
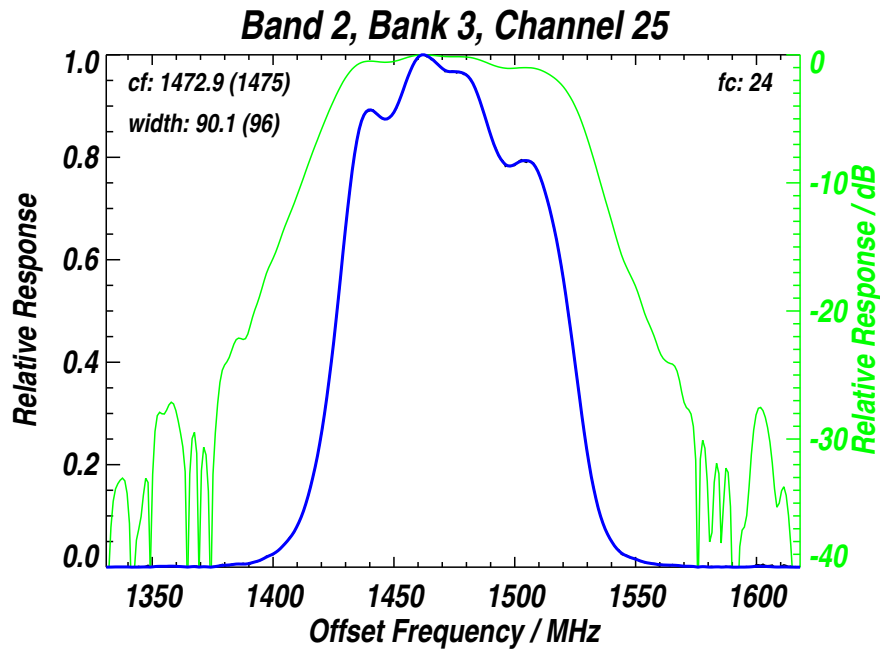


Figure H.57: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 2 (usb)**  
**Bank 3**  
**Origin = 199.585714284 GHz**

Figure H.58: Upper sideband front-end sweep data for Band 2 taken via Filterbank 3, channel 25. See text for additional details.

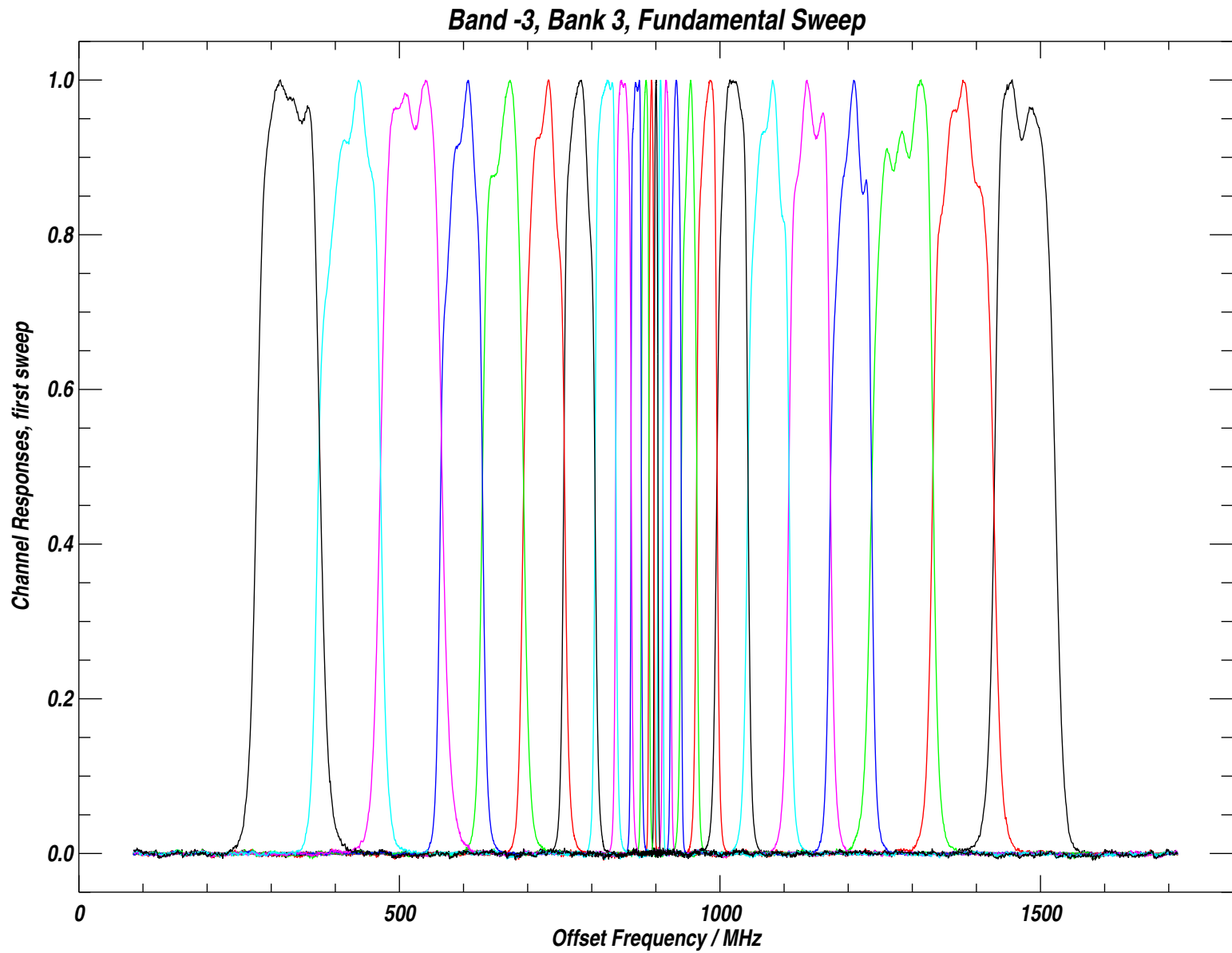


Figure H.59: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3. See text for additional details.

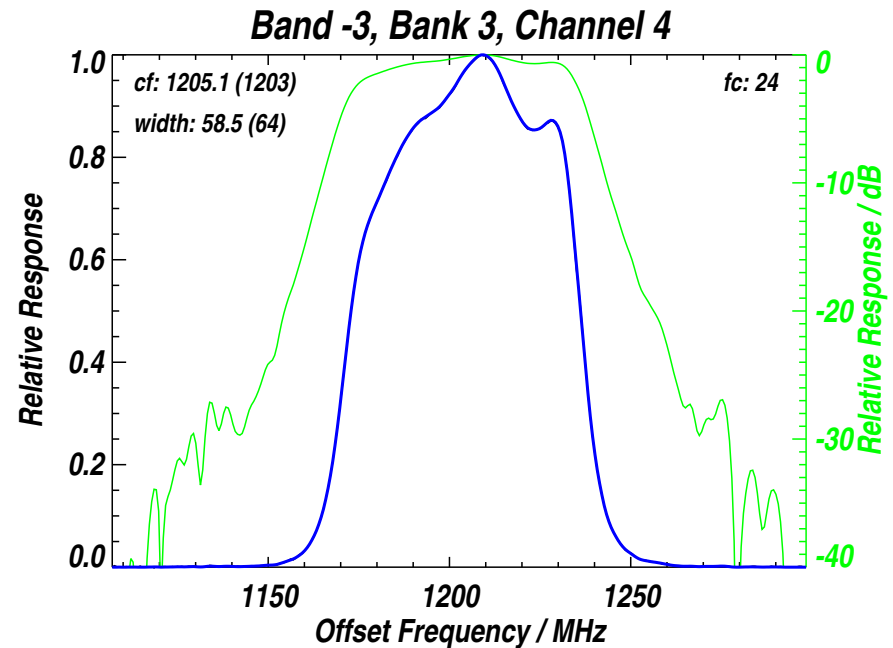
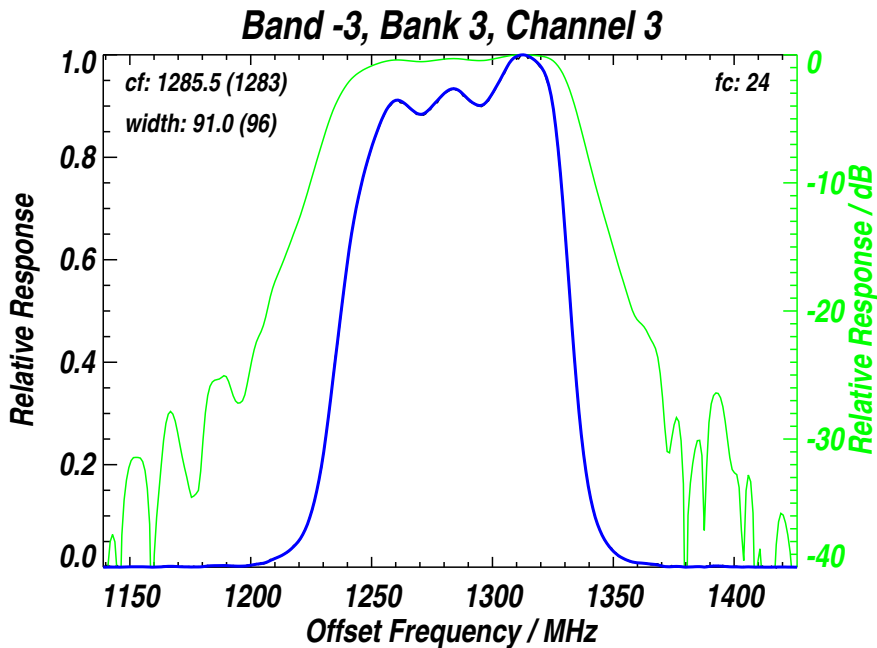
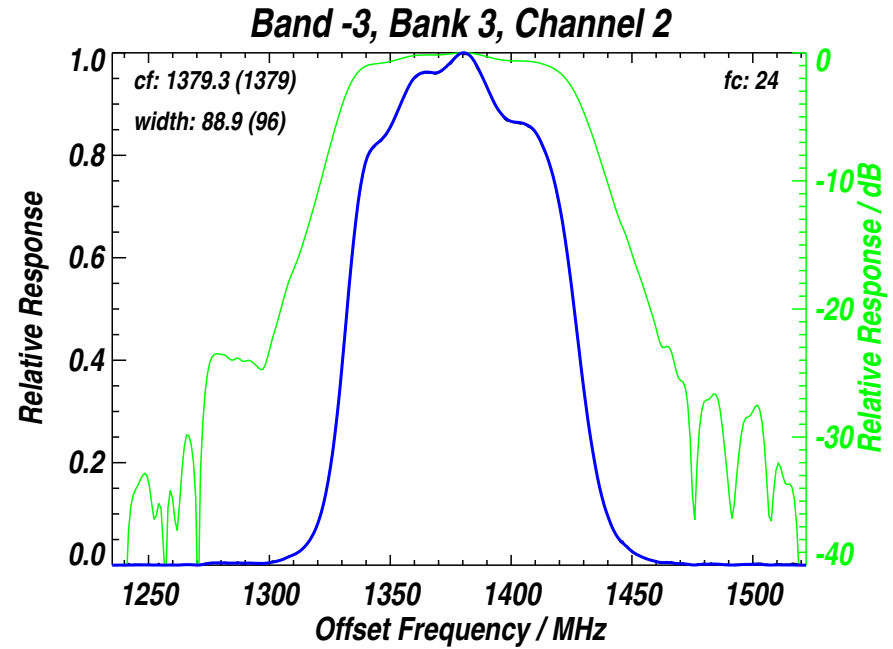
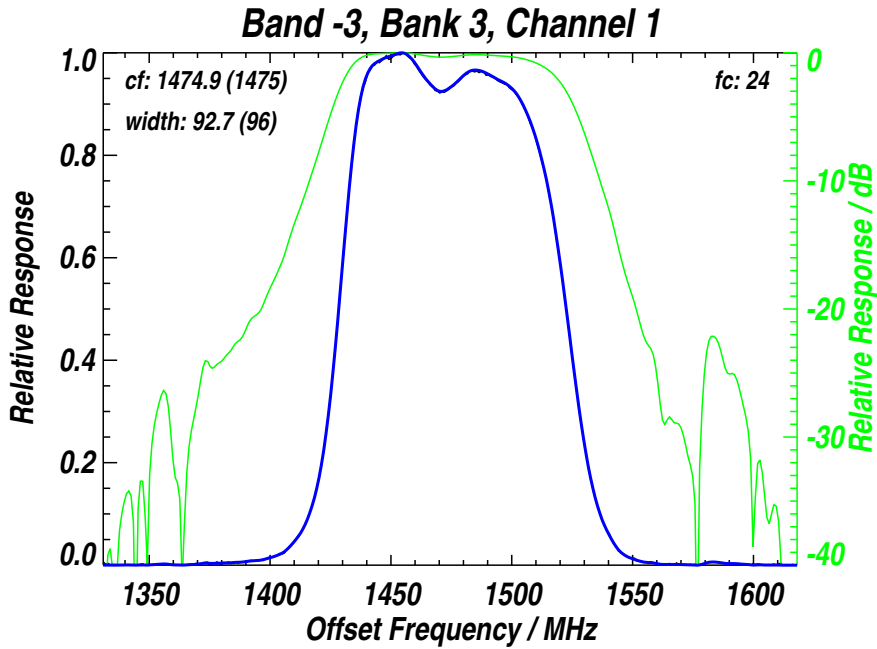


Figure H.60: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 1 to 4. See text for additional details.

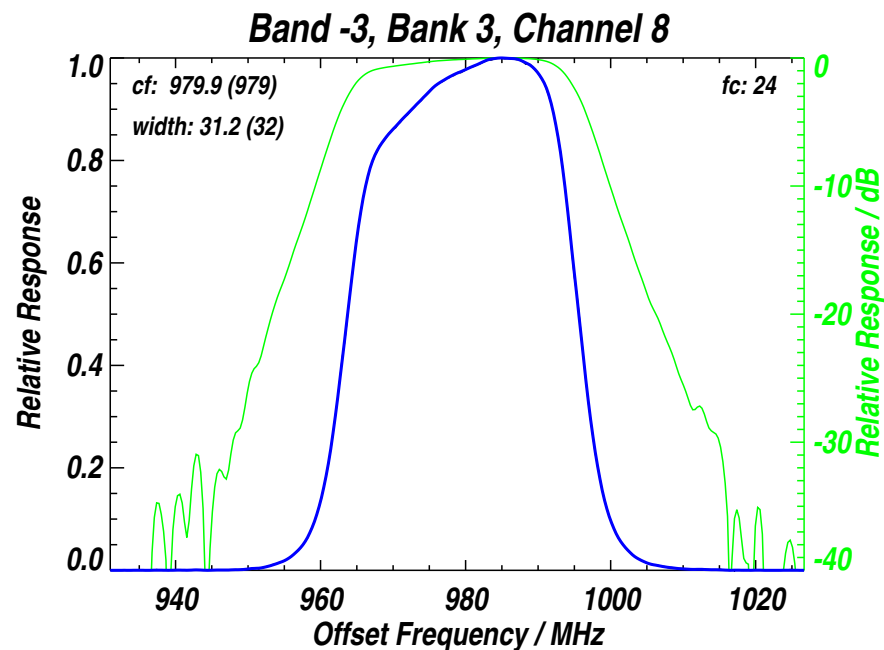
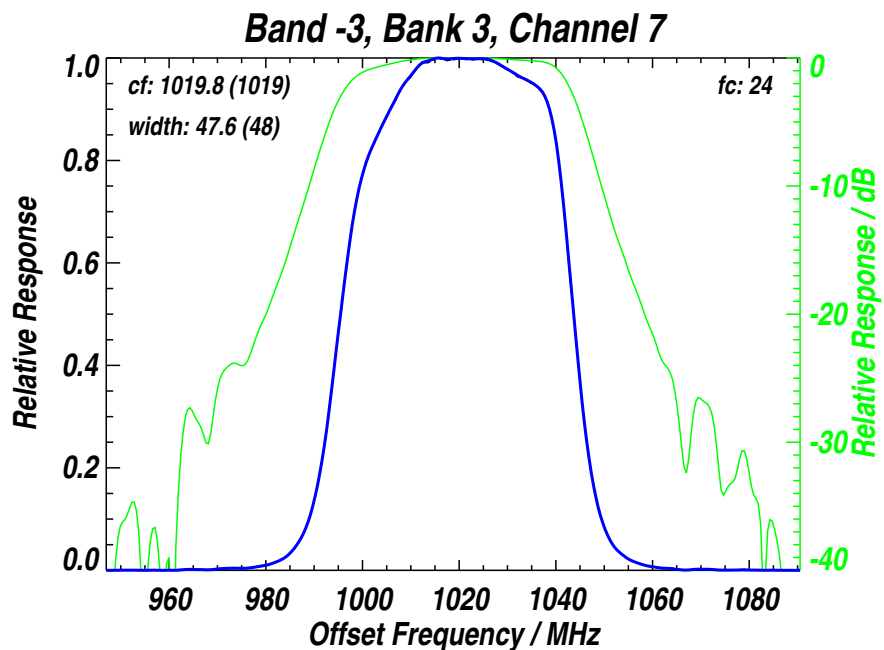
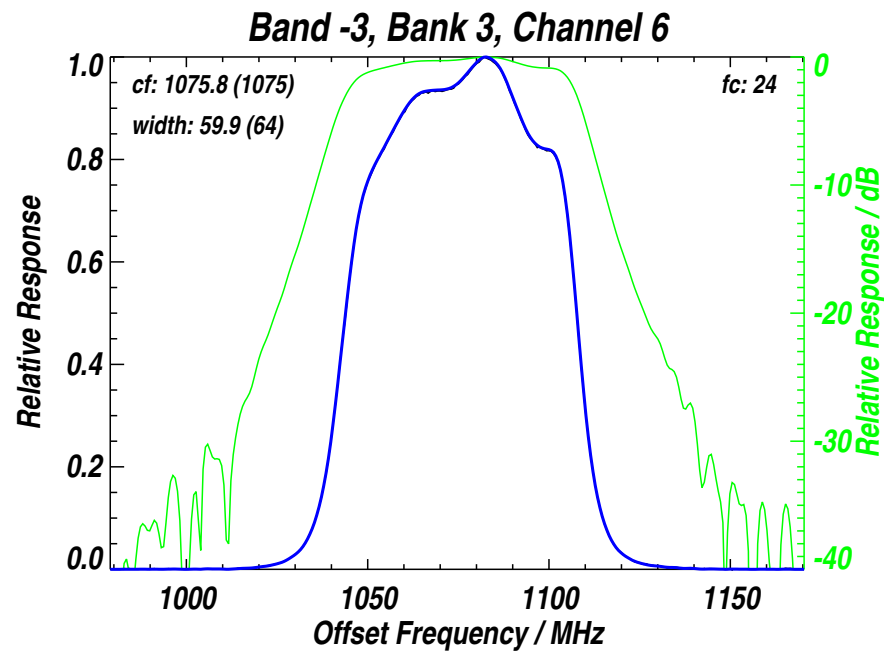
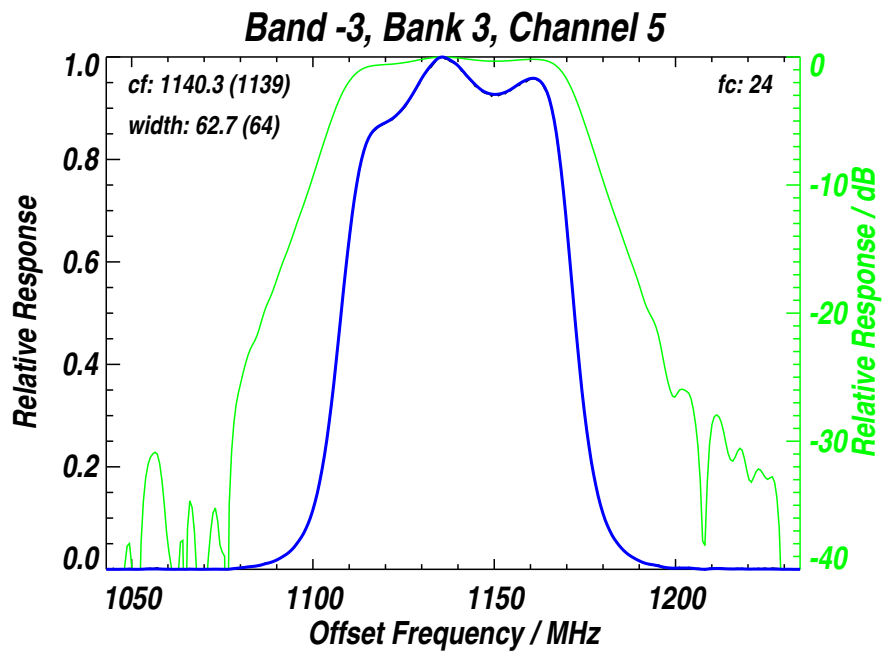


Figure H.61: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 5 to 8. See text for additional details.

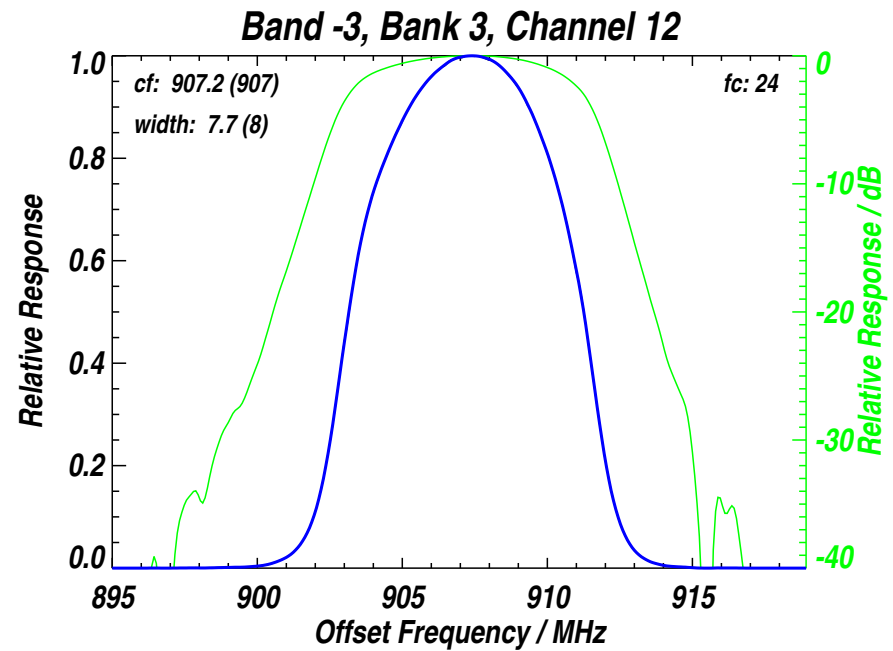
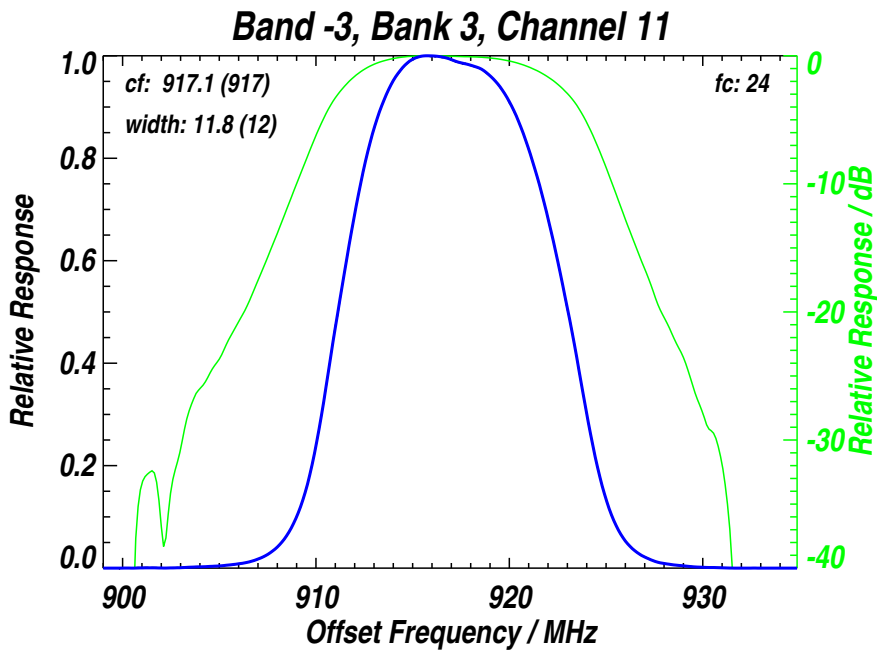
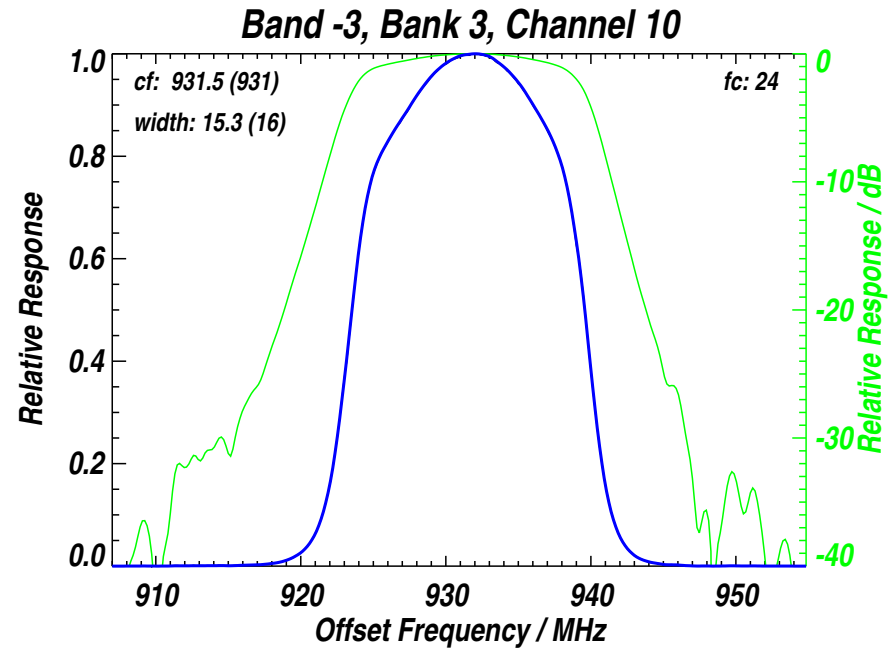
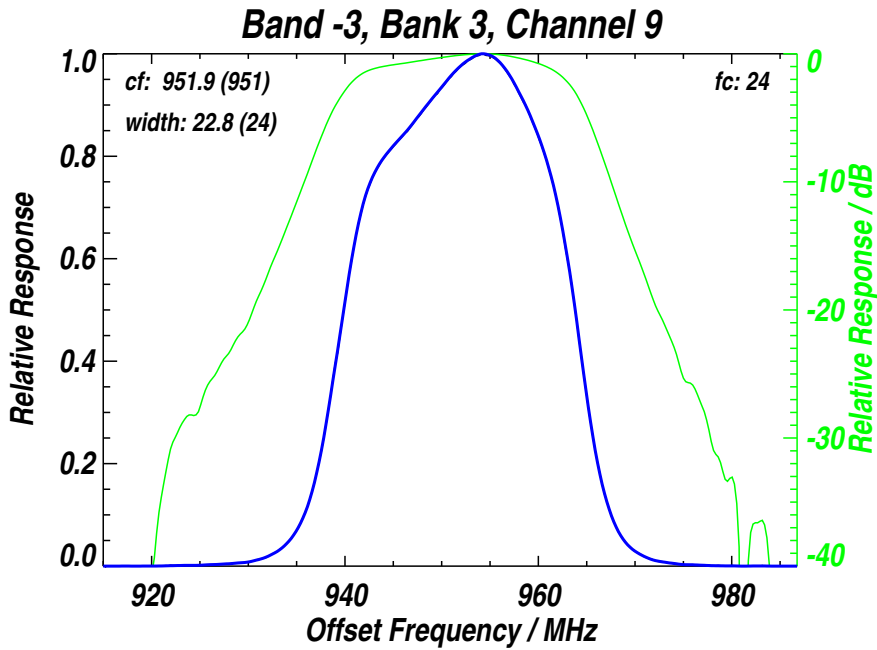


Figure H.62: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 9 to 12. See text for additional details.

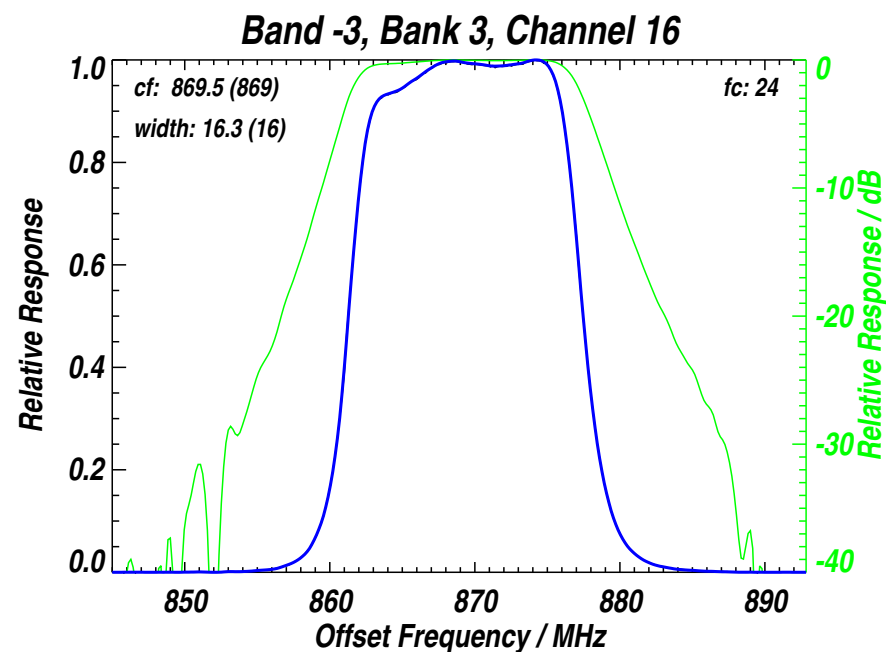
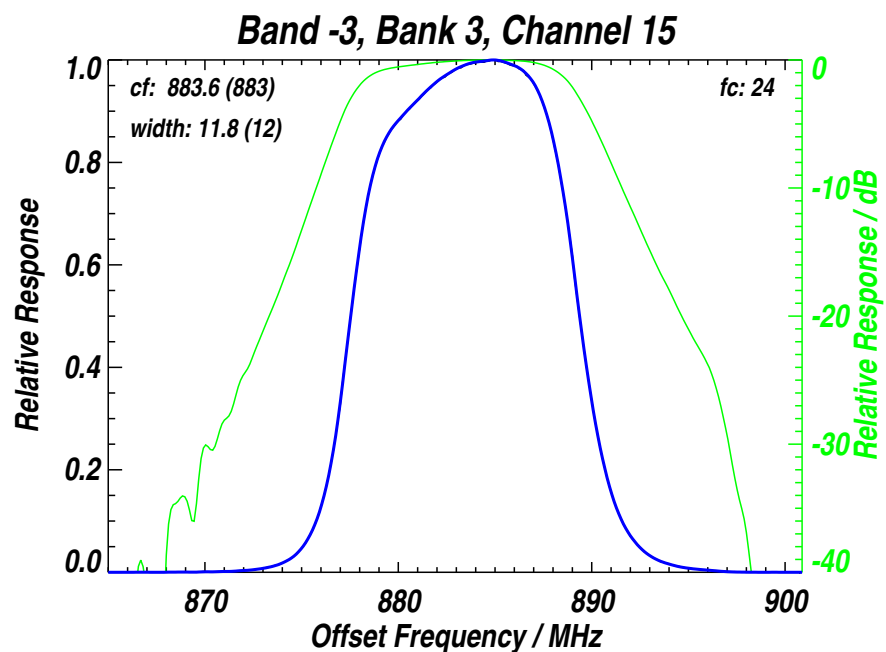
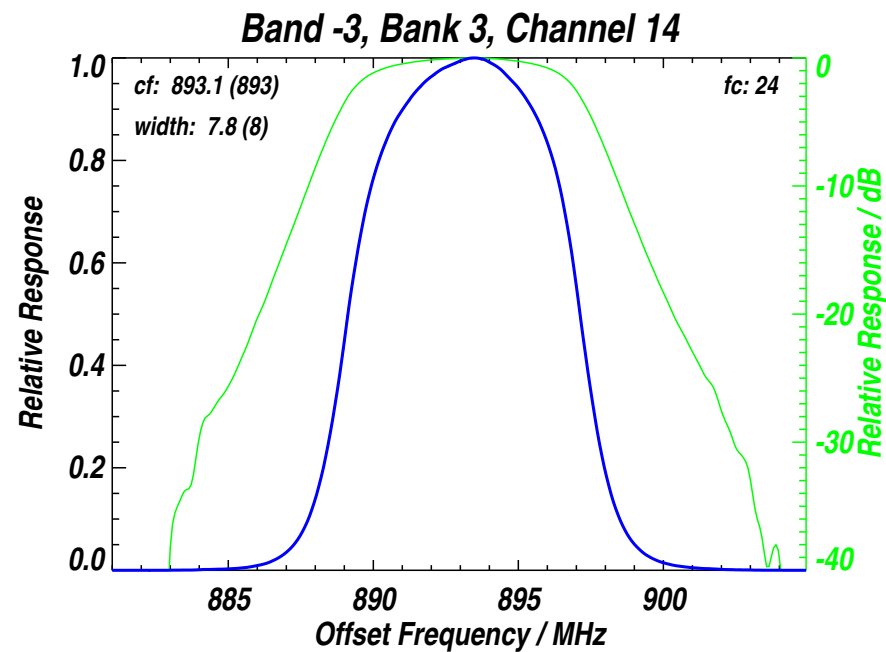
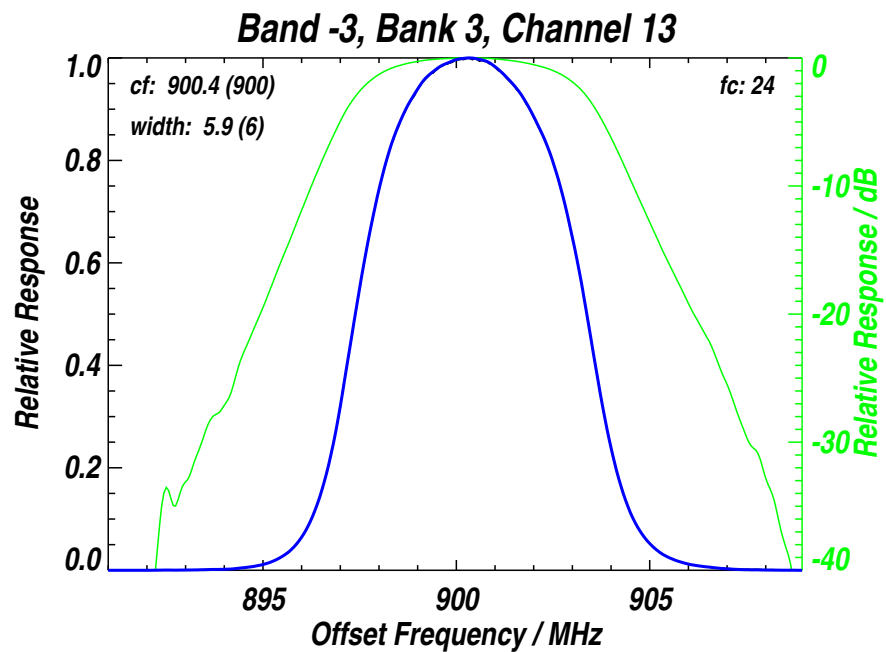


Figure H.63: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 13 to 16. See text for additional details.

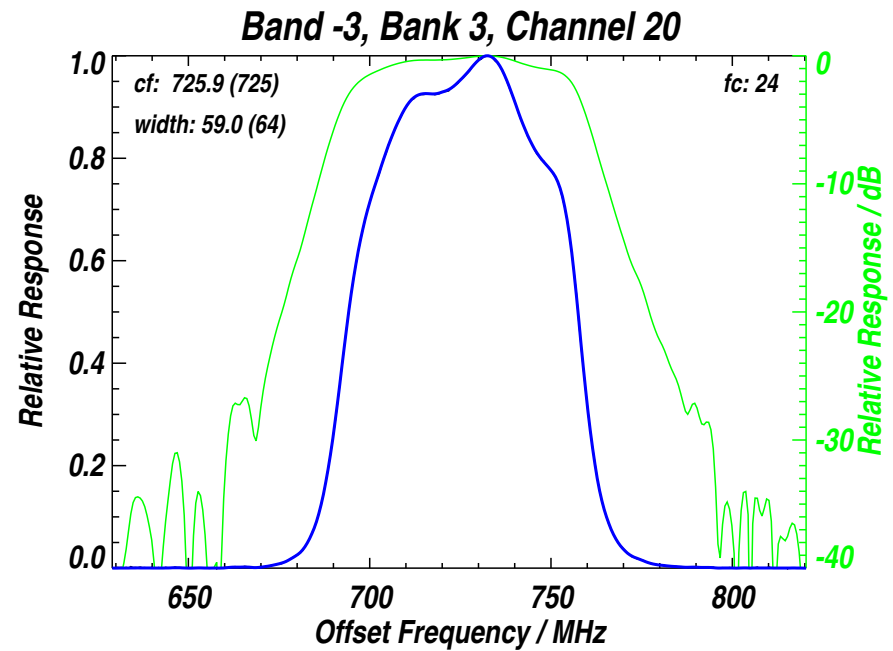
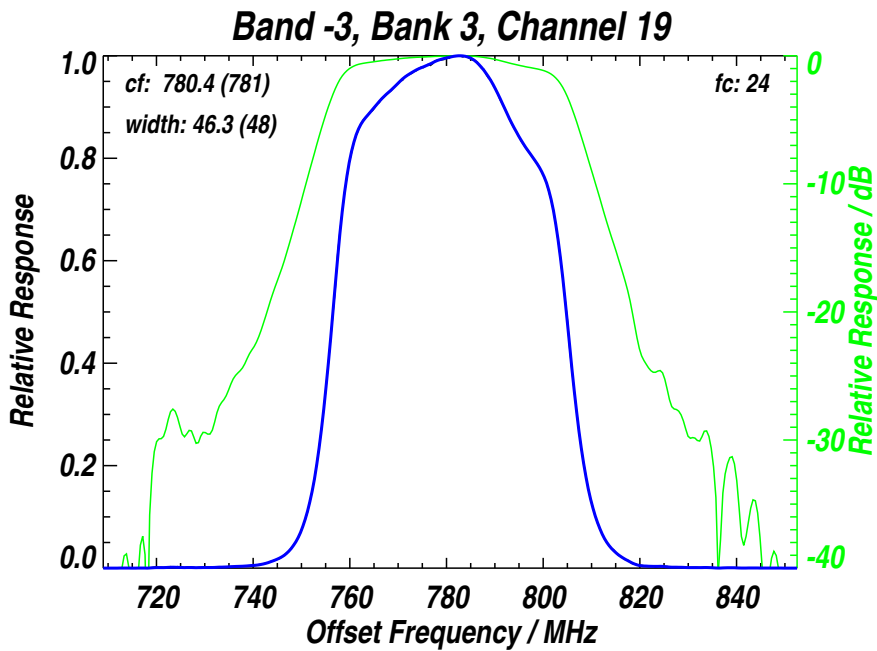
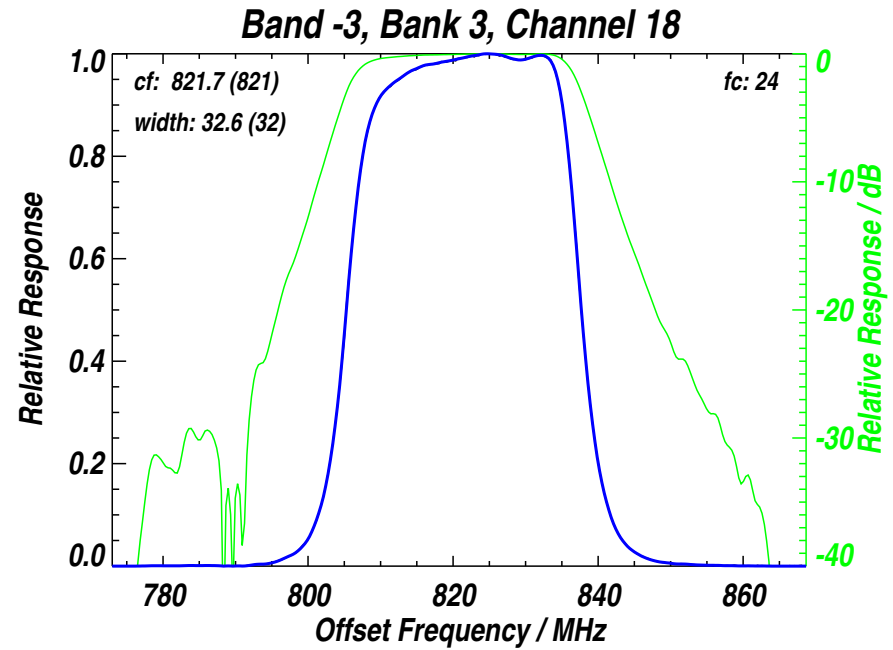
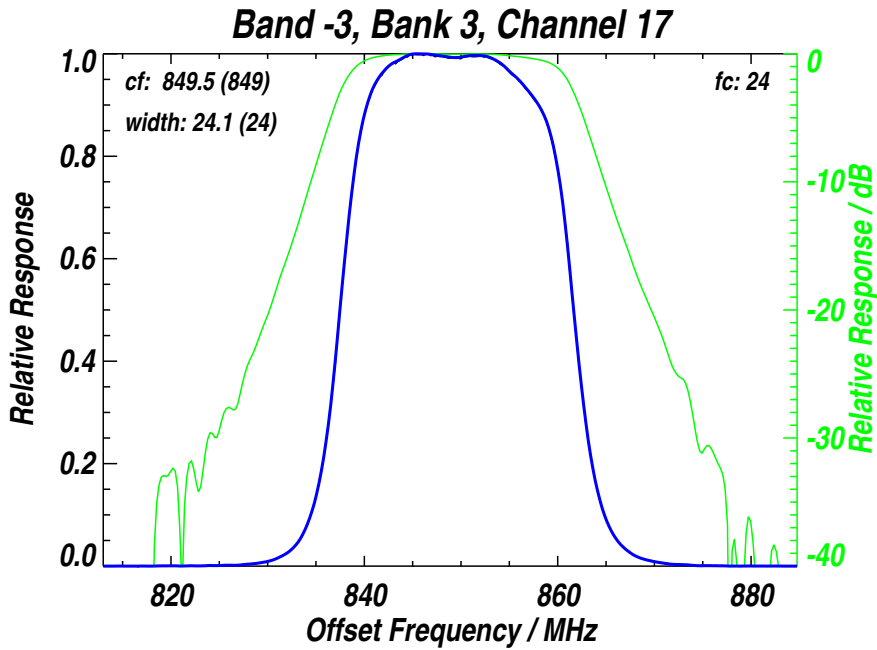


Figure H.64: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 17 to 20. See text for additional details.



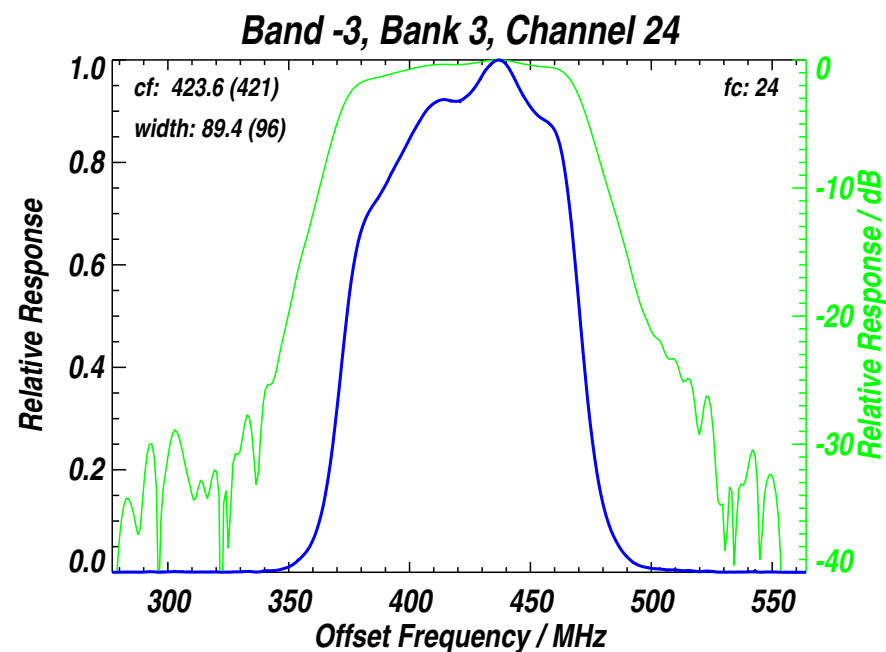
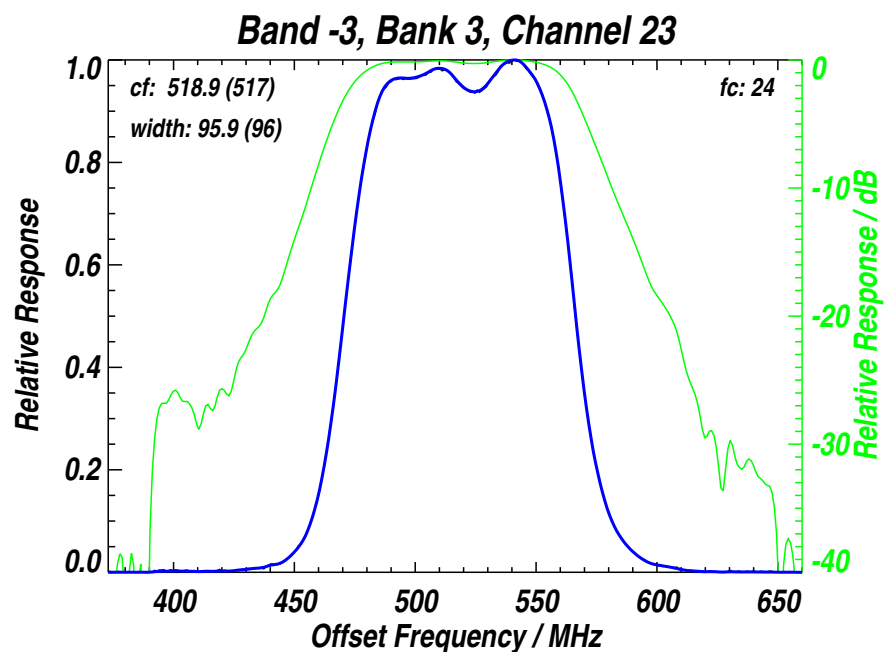
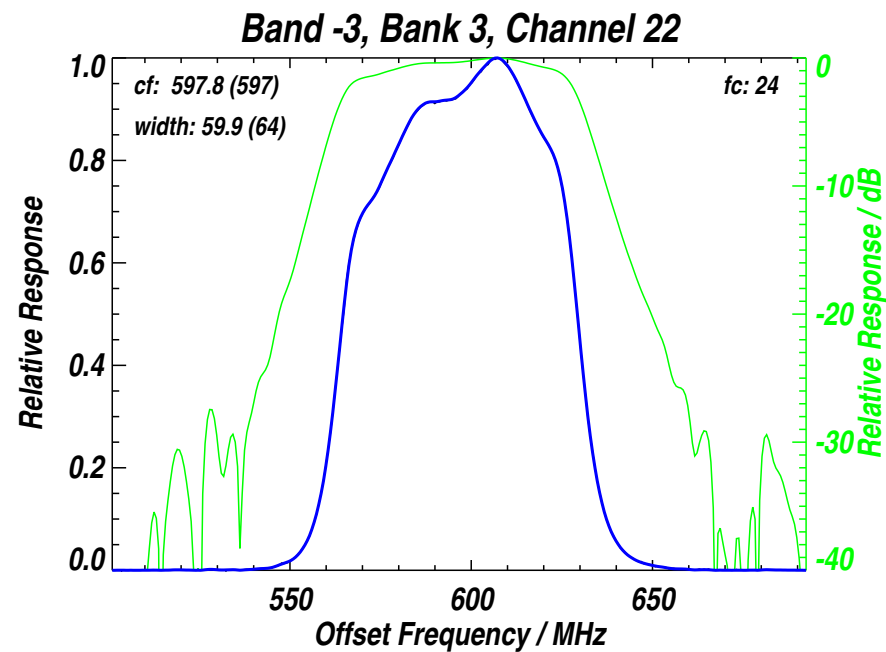
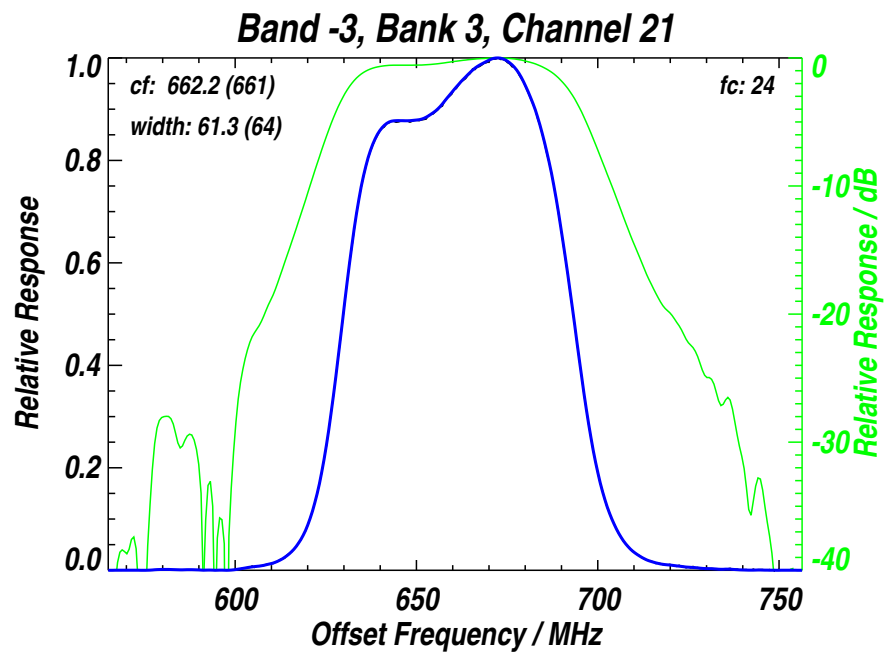
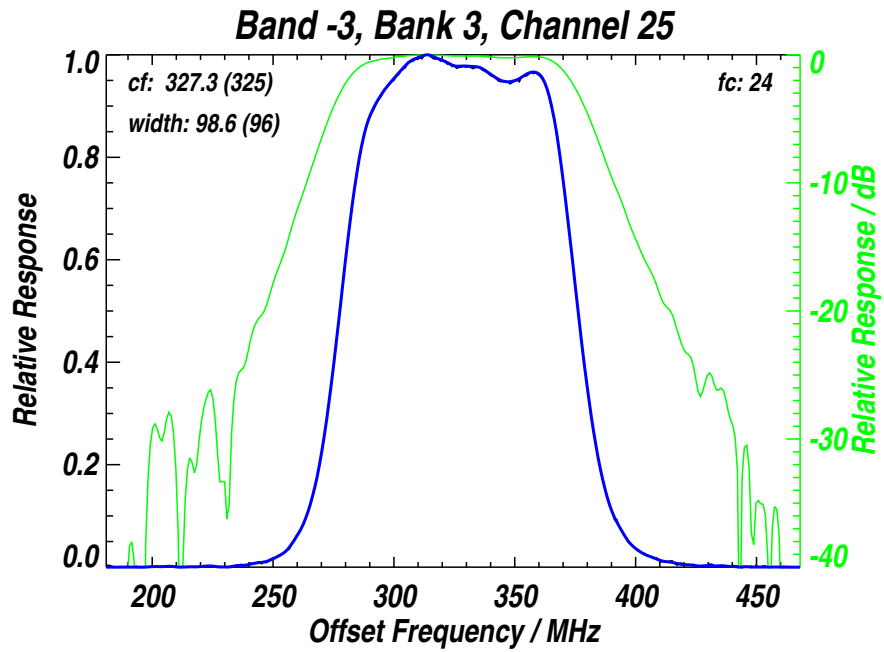


Figure H.65: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 3 (lsb)**  
**Bank 3**  
**Origin = 181.920000000 GHz**

Figure H.66: Lower sideband front-end sweep data for Band 3 taken via Filterbank 3, channel 25. See text for additional details.

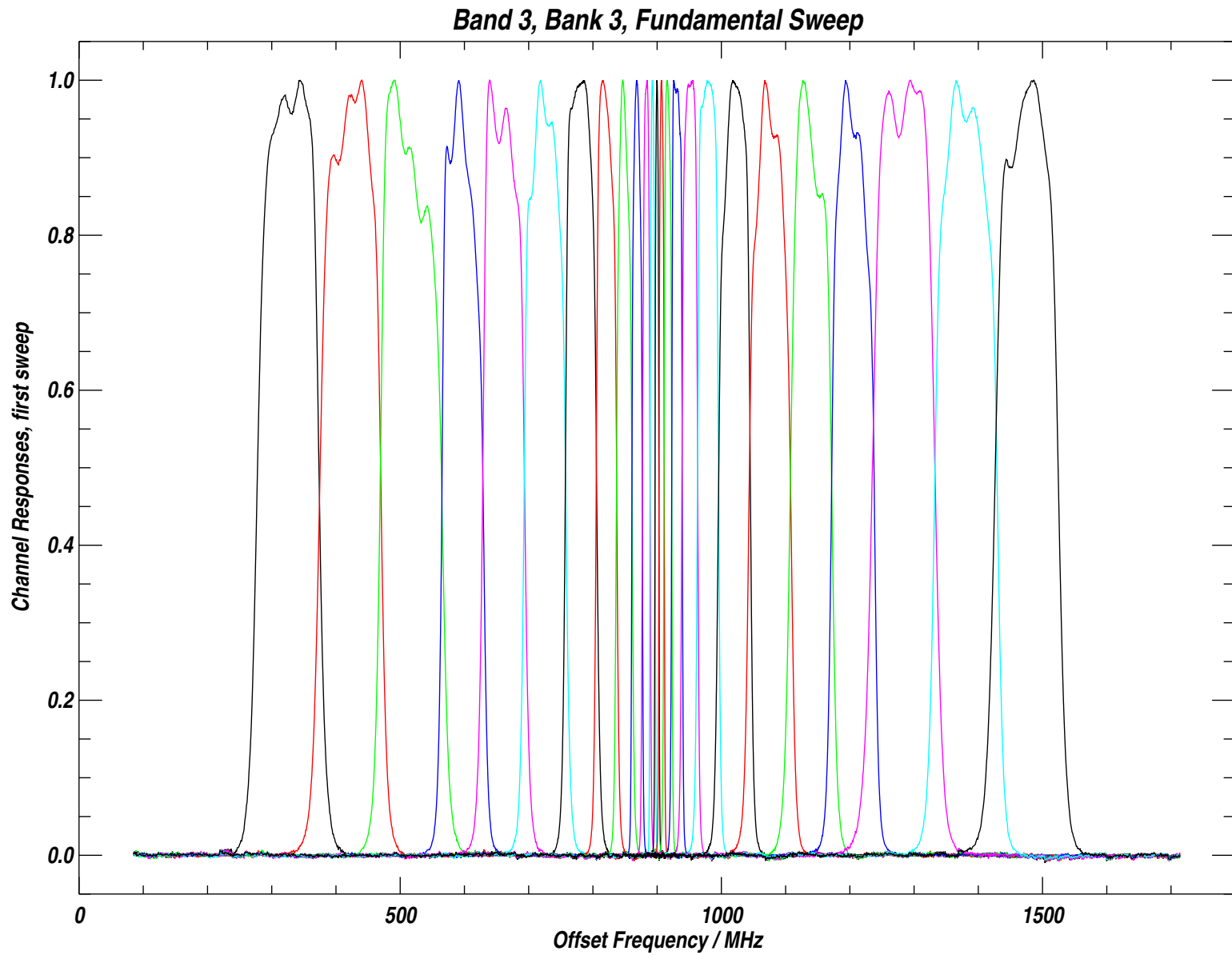


Figure H.67: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3. See text for additional details.

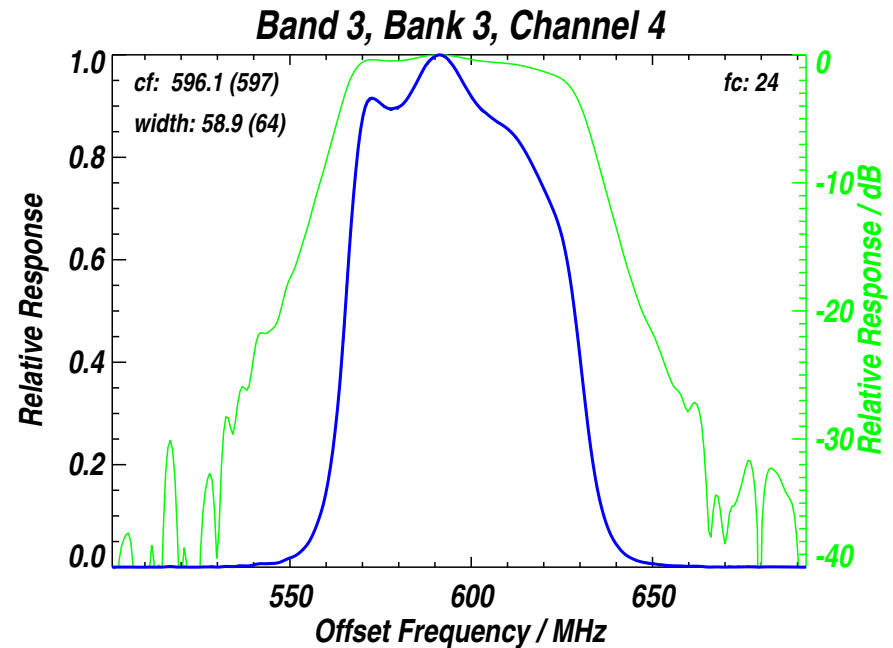
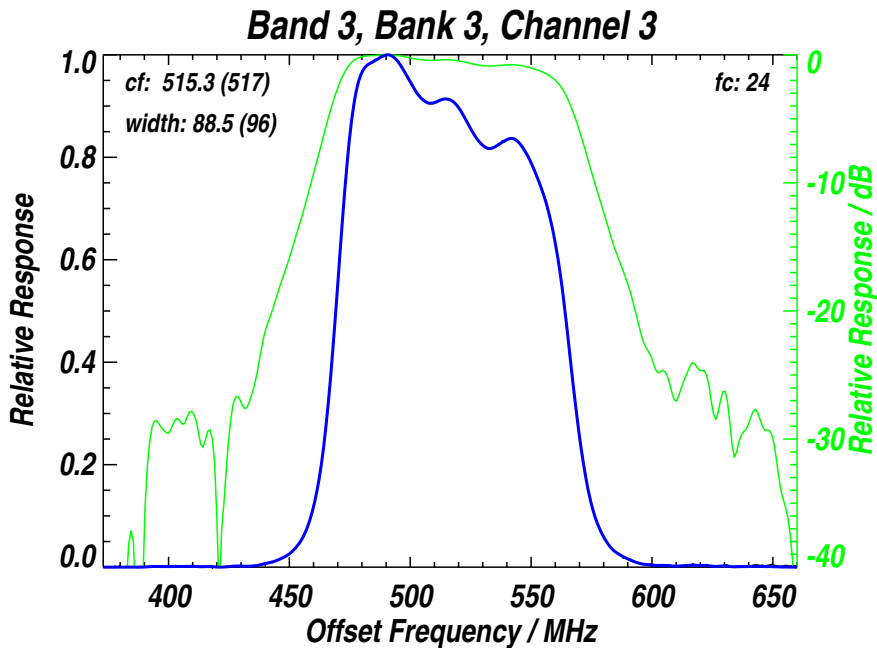
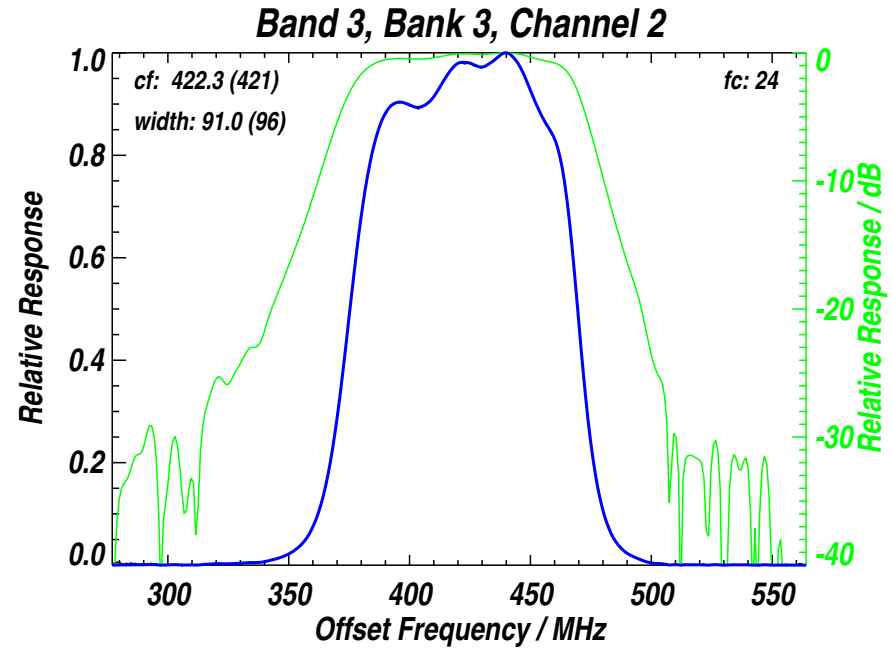
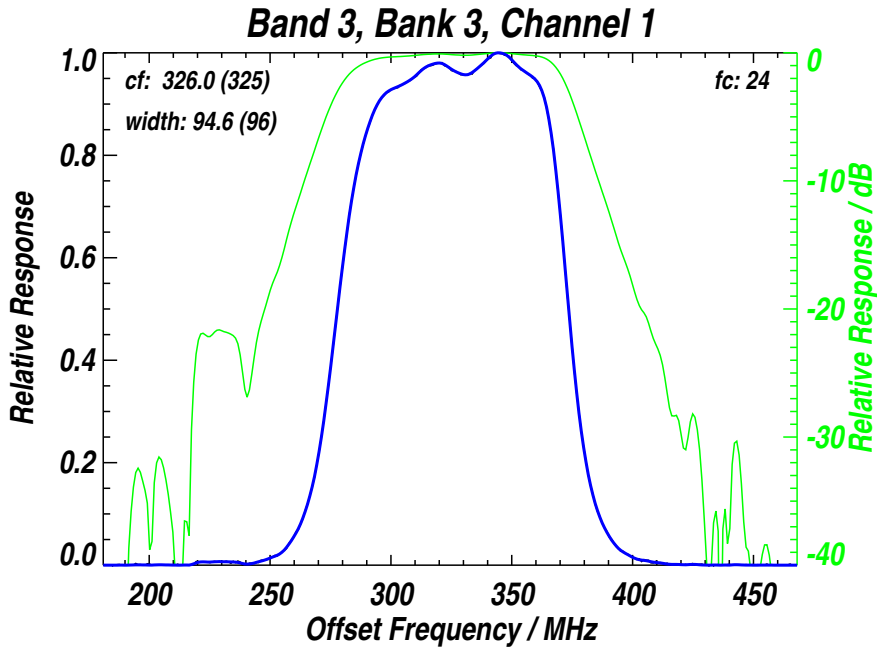


Figure H.68: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 1 to 4. See text for additional details.

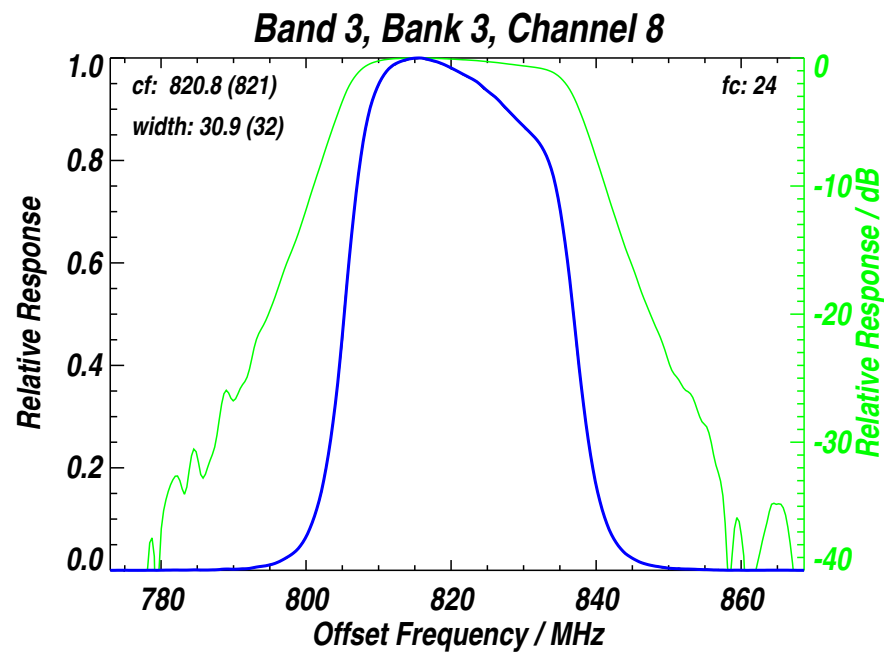
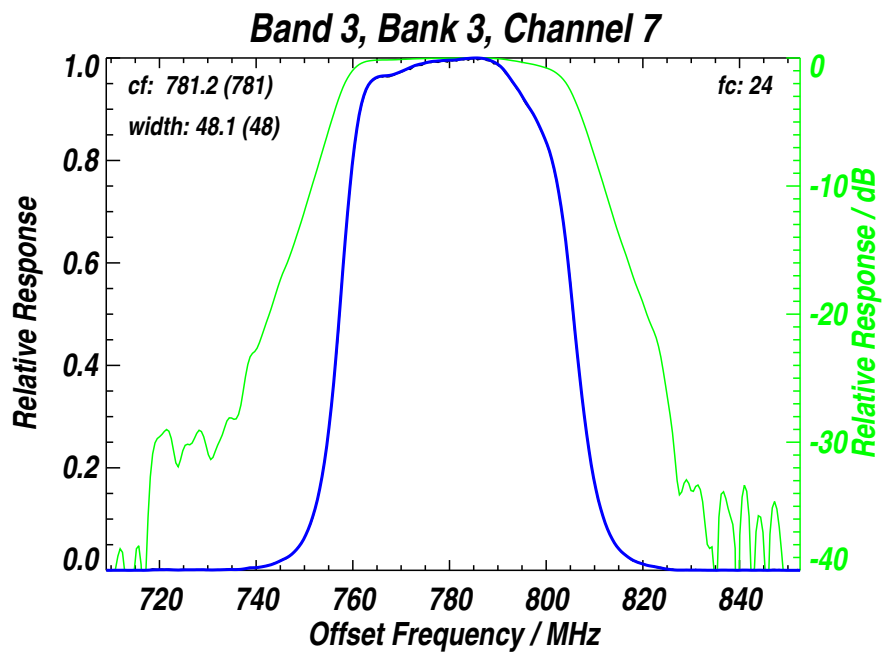
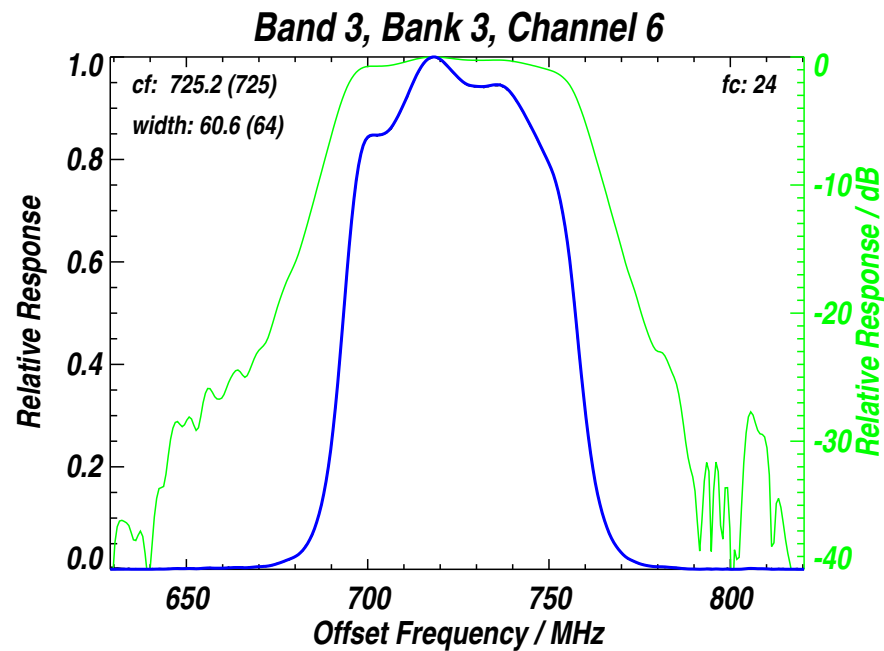
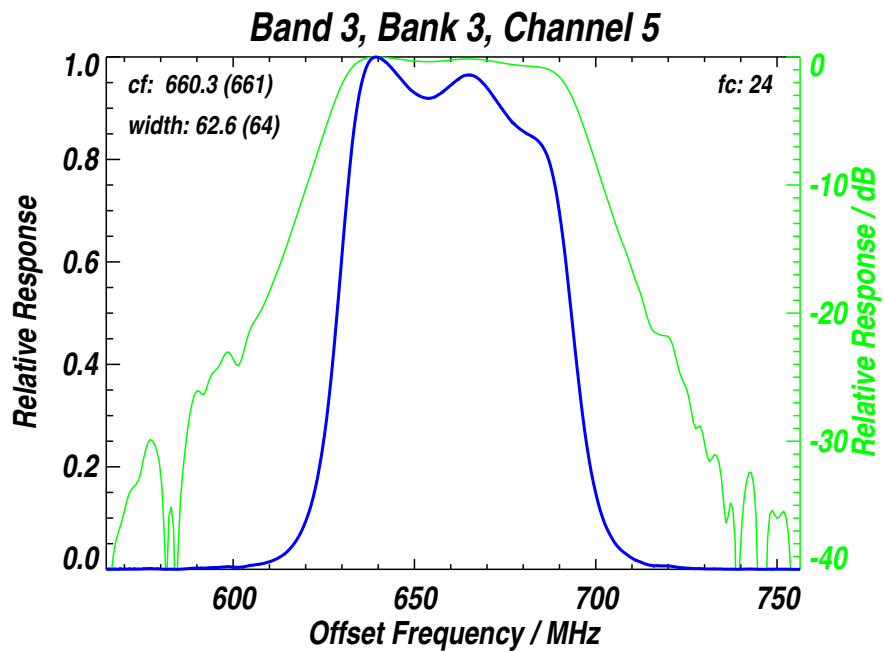


Figure H.69: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 5 to 8. See text for additional details.

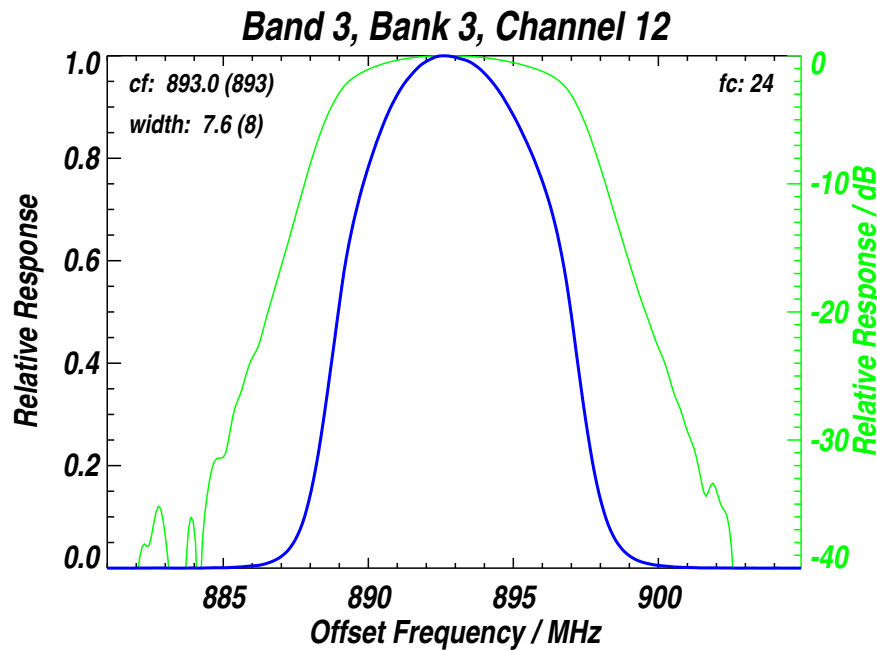
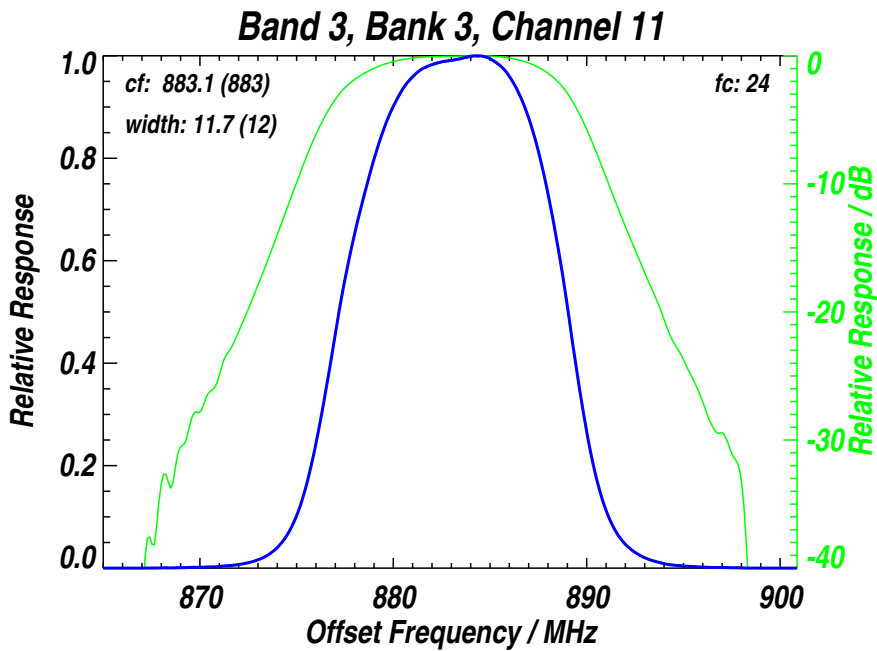
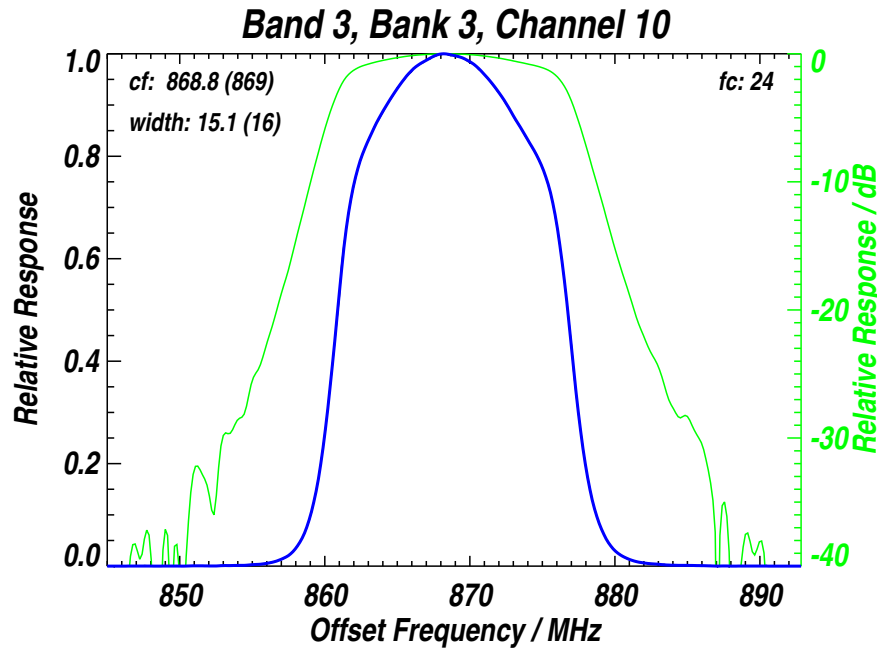
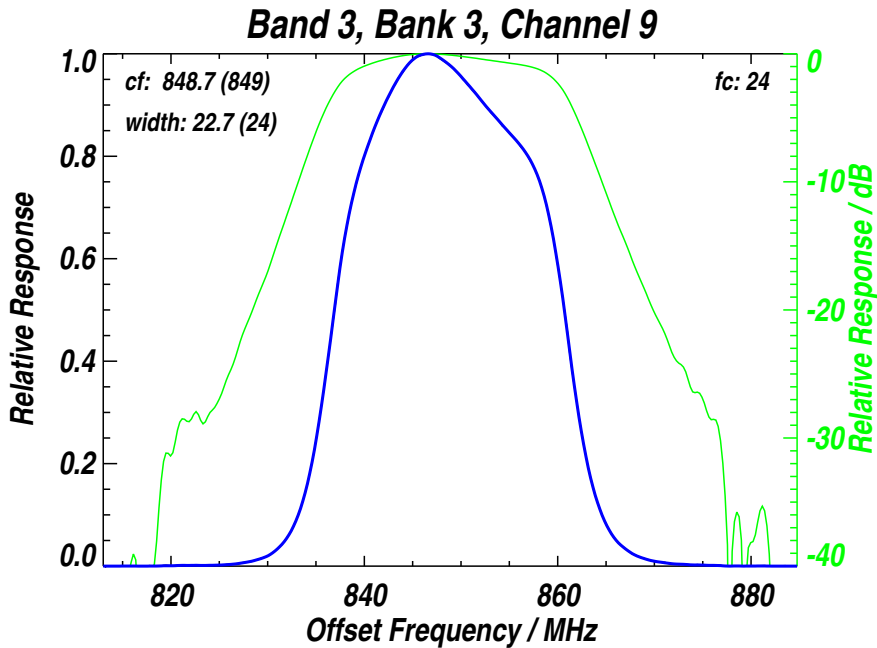


Figure H.70: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 9 to 12. See text for additional details.

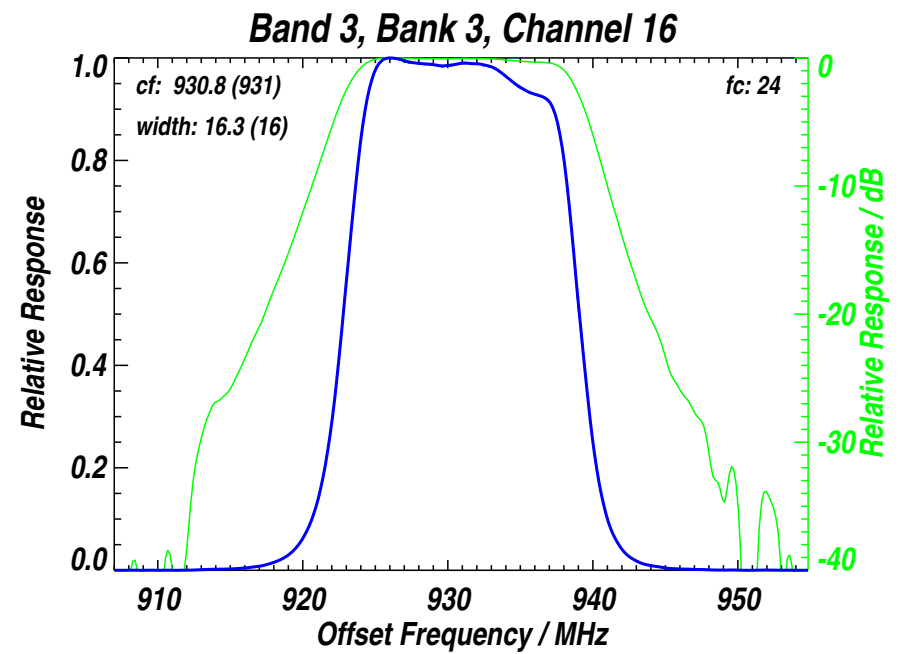
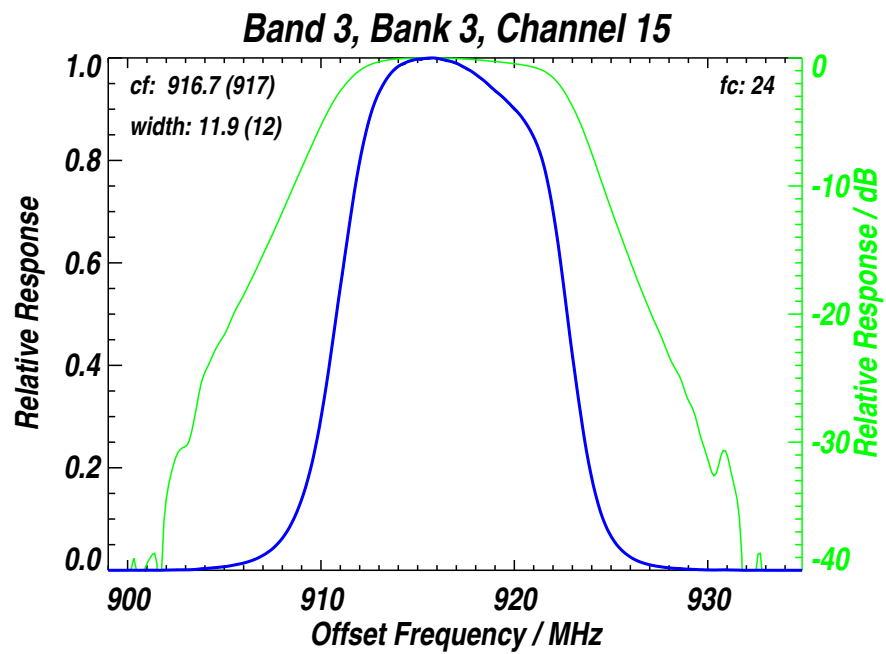
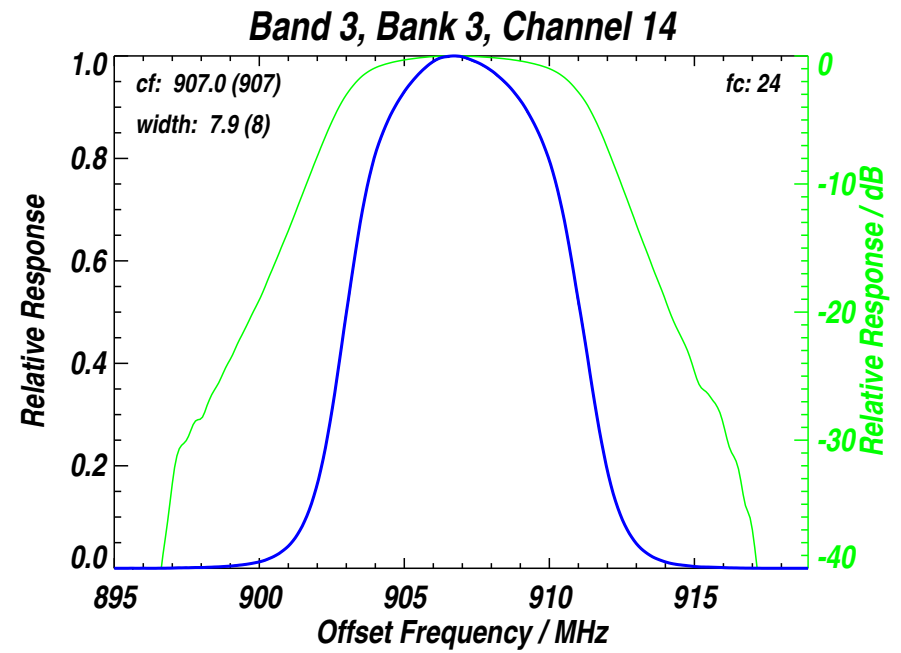
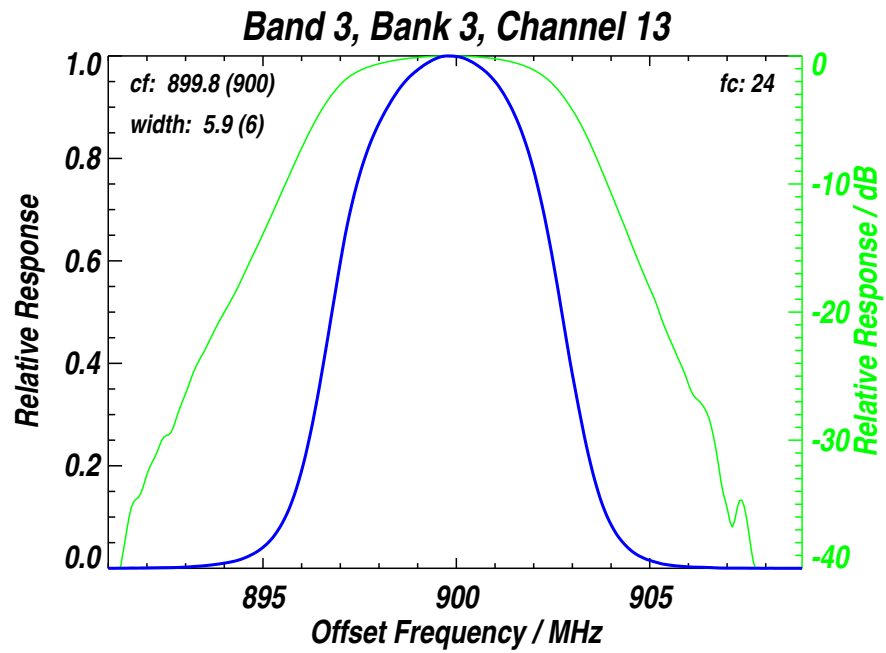


Figure H.71: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 13 to 16. See text for additional details.

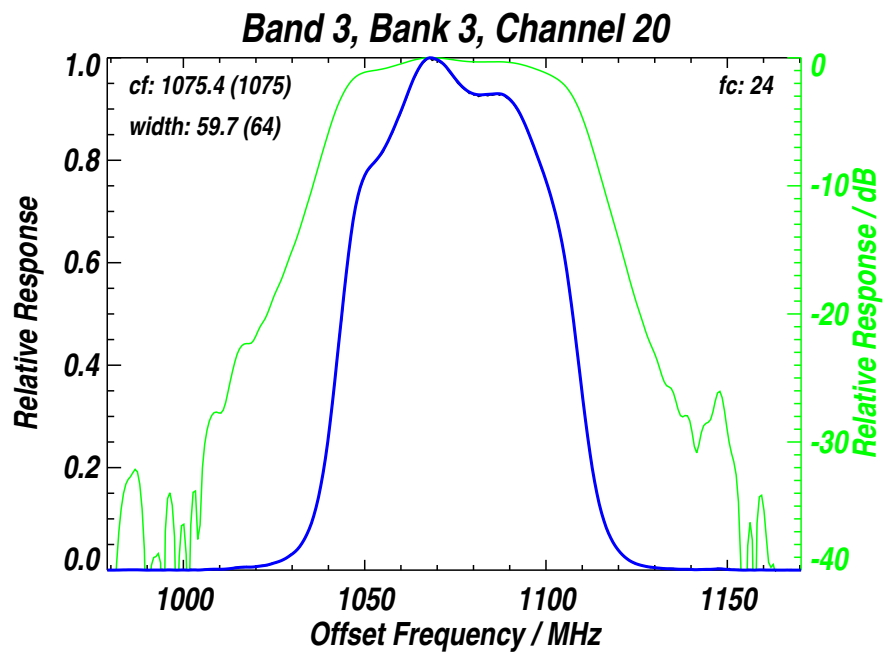
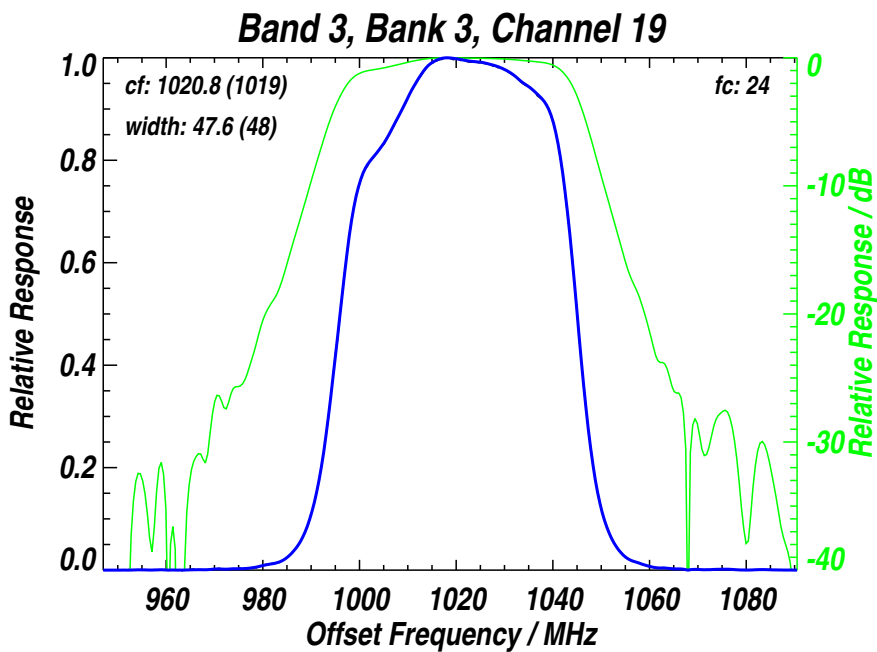
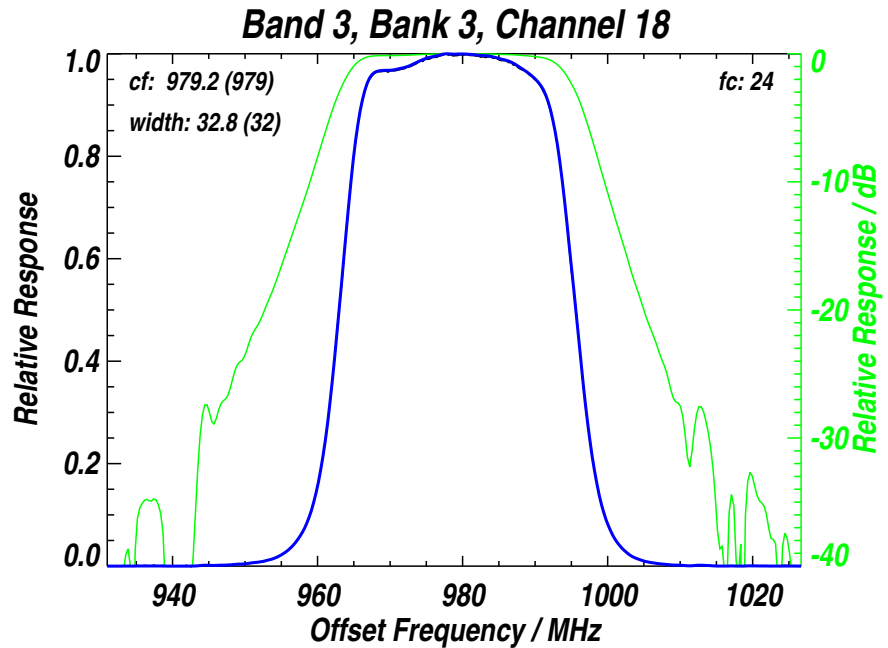
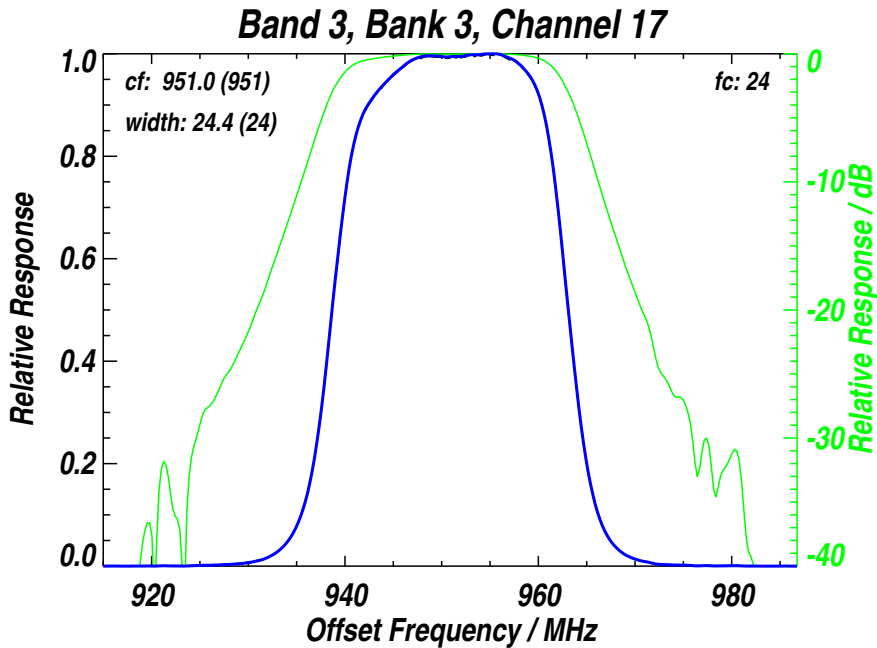


Figure H.72: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 17 to 20. See text for additional details.



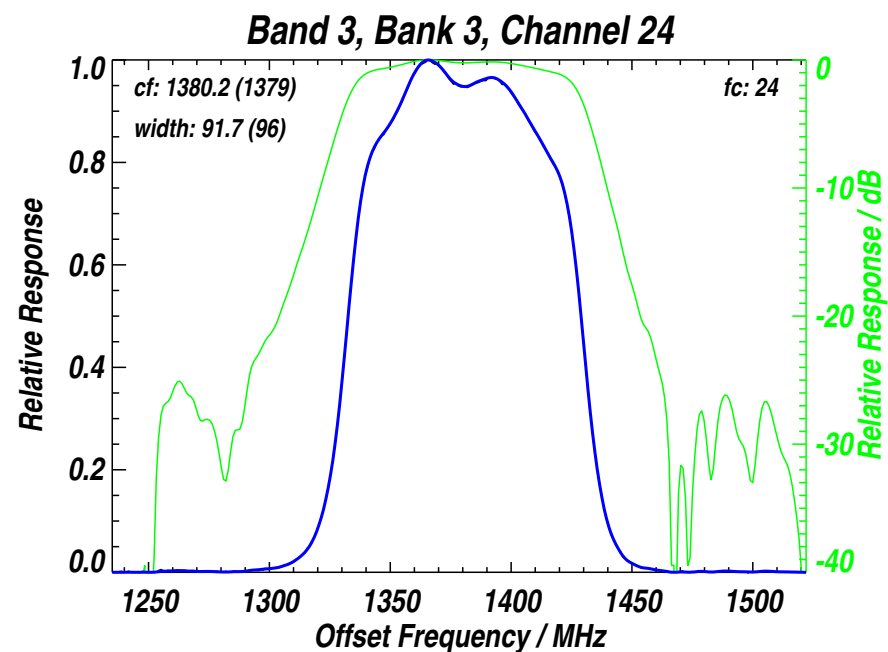
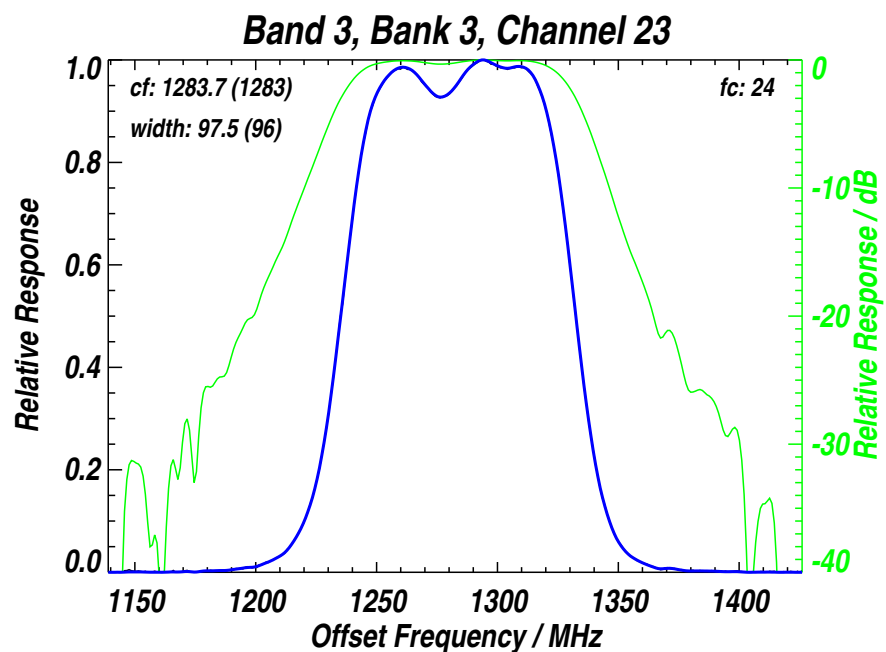
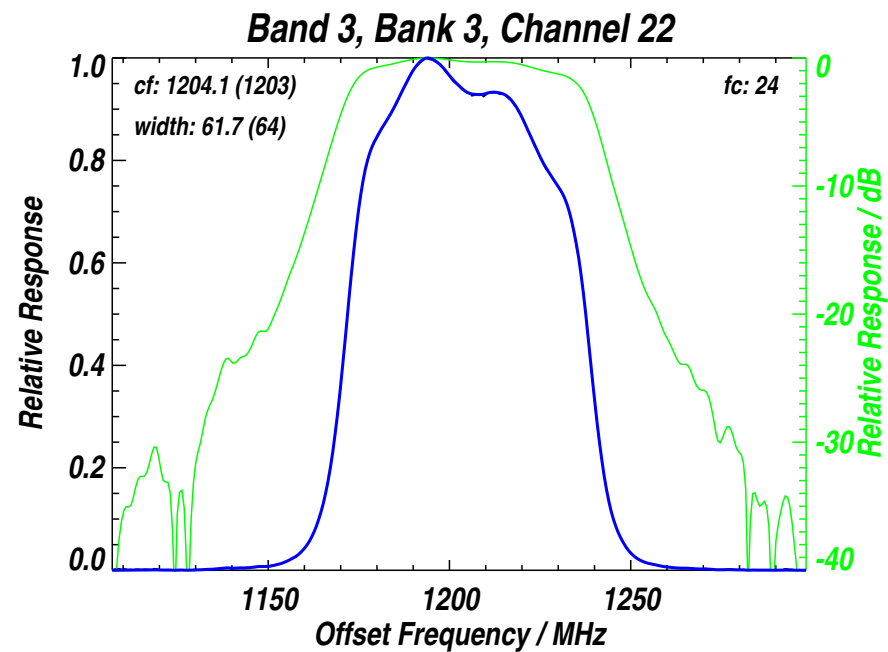
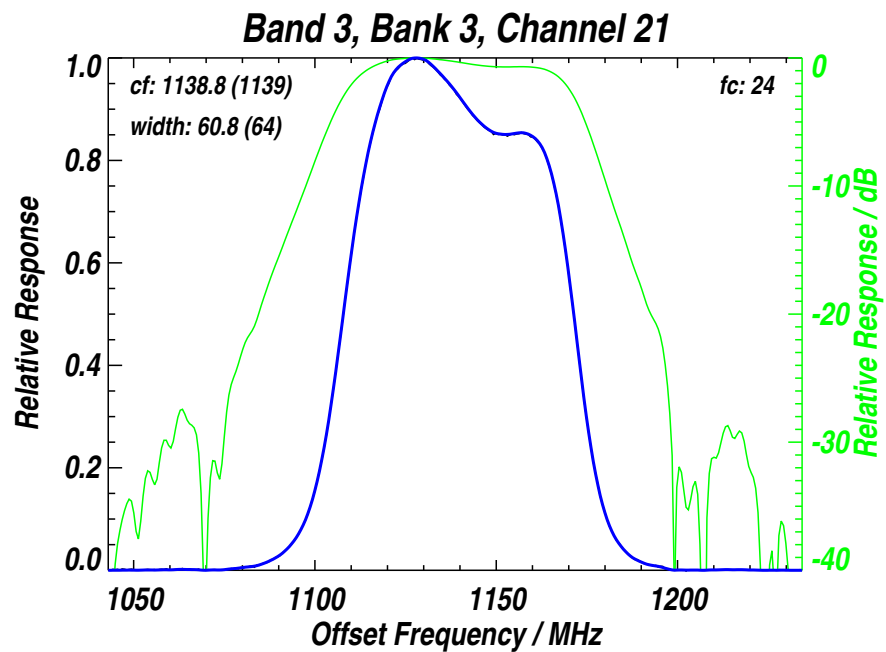
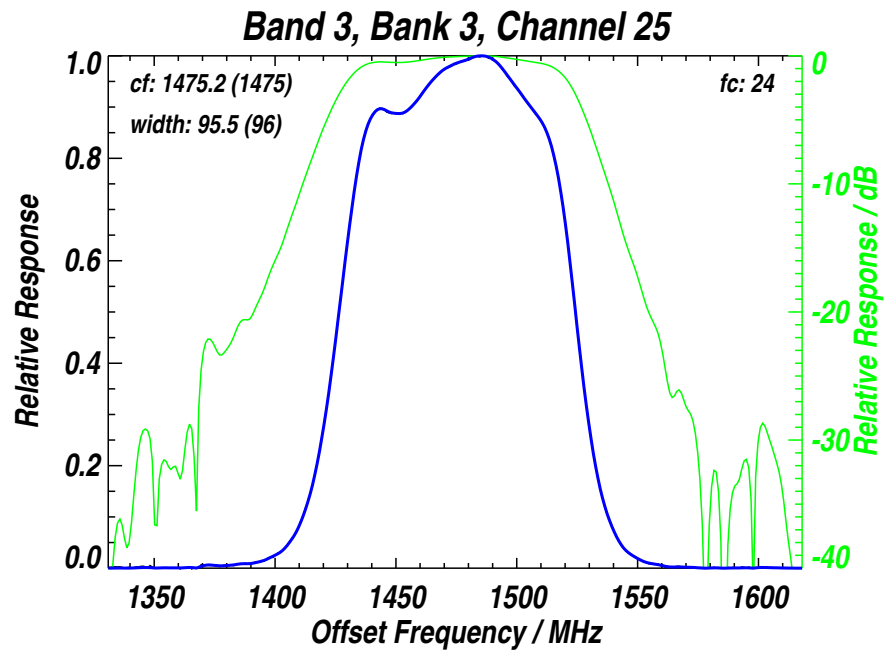


Figure H.73: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 3 (usb)**  
**Bank 3**  
**Origin = 200.080000000 GHz**

Figure H.74: Upper sideband front-end sweep data for Band 3 taken via Filterbank 3, channel 25. See text for additional details.

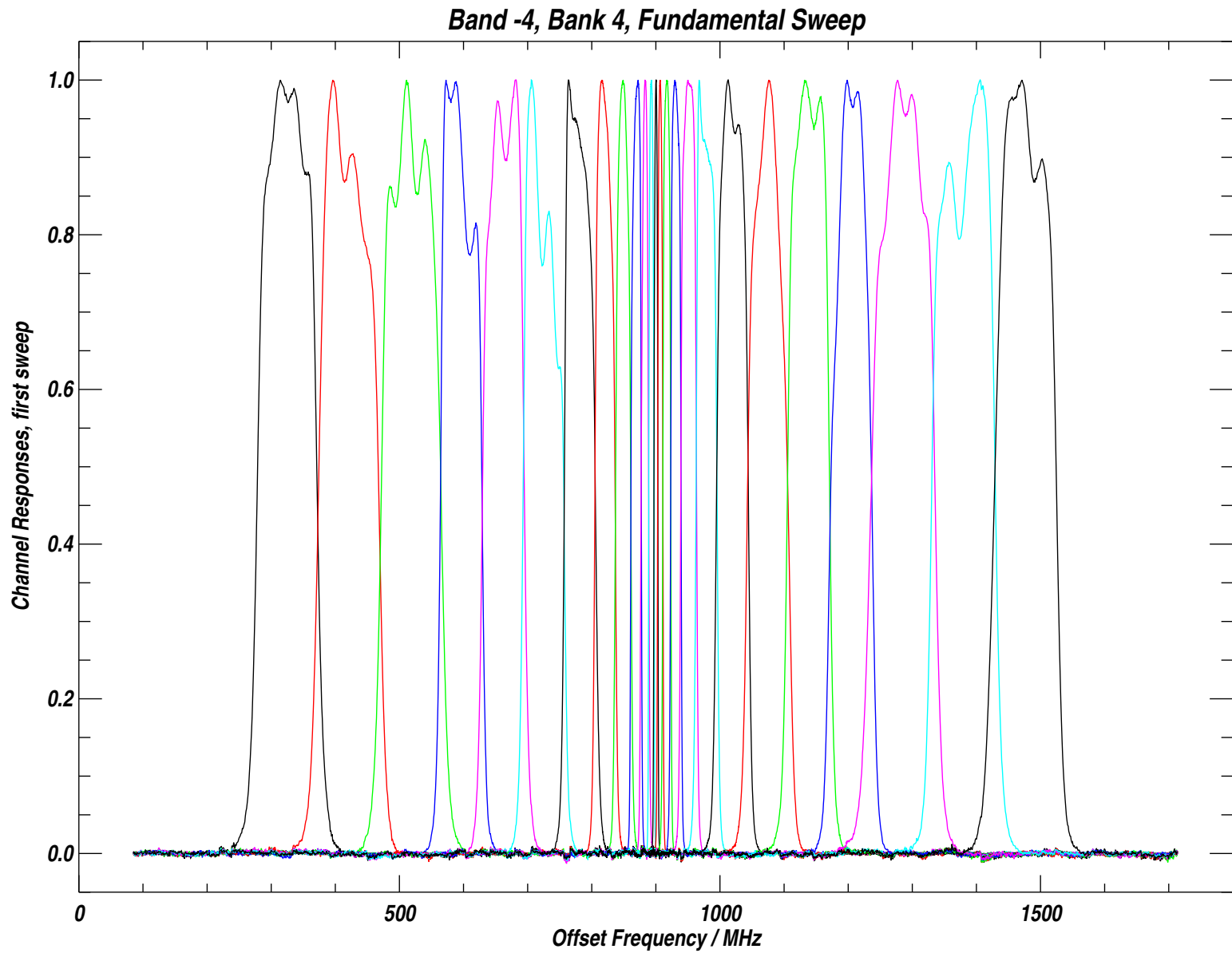


Figure H.75: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4. See text for additional details.

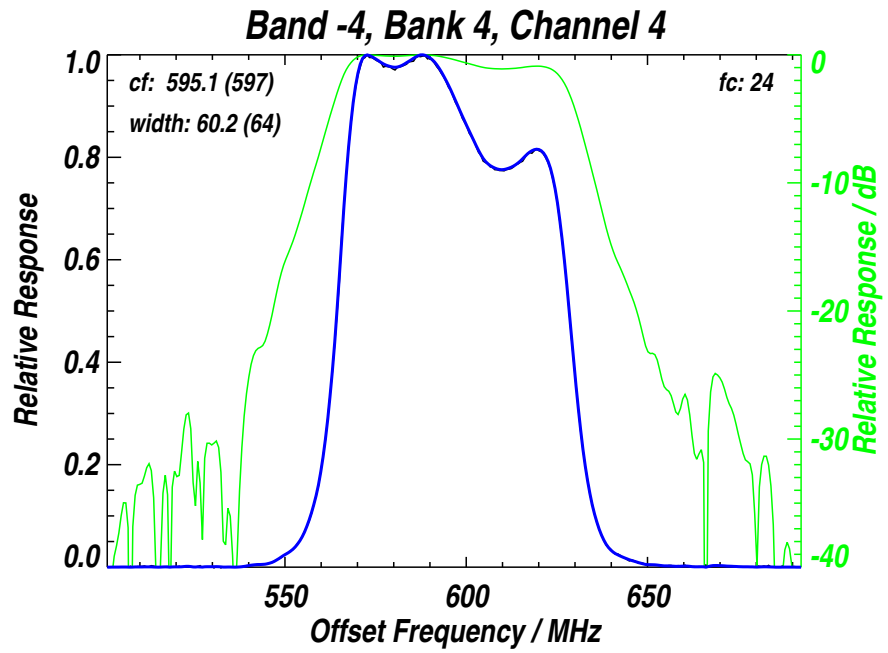
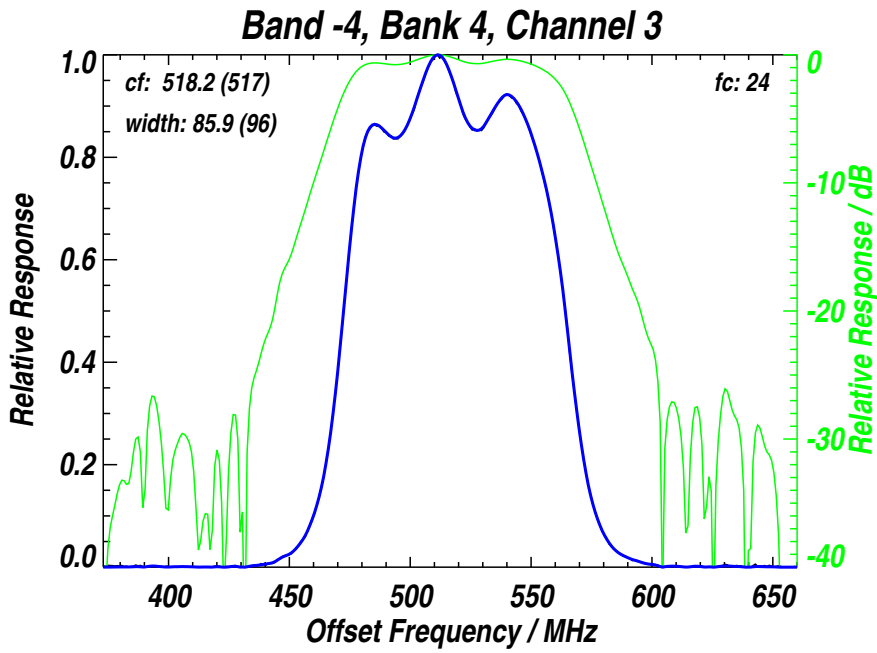
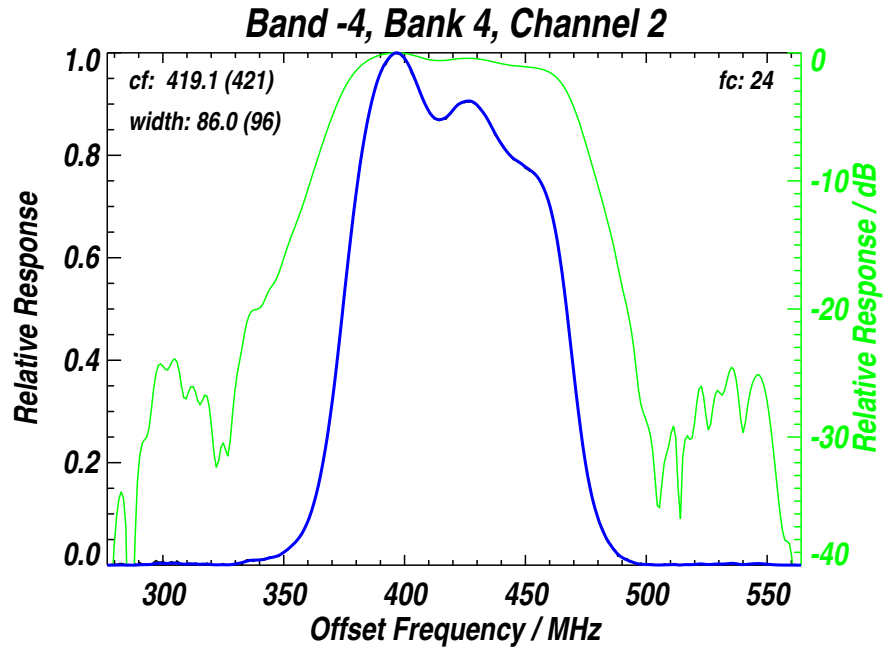
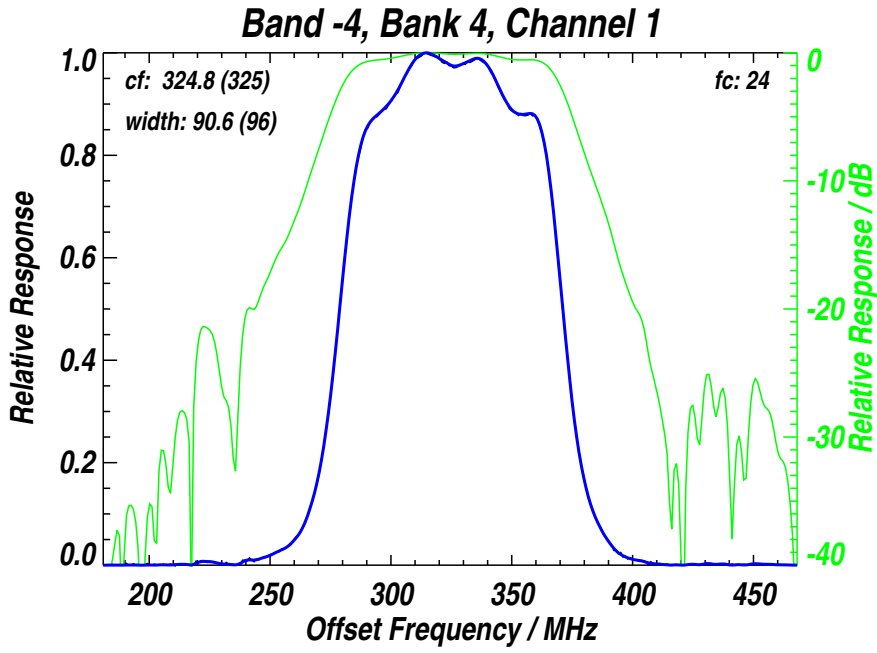


Figure H.76: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 1 to 4. See text for additional details.

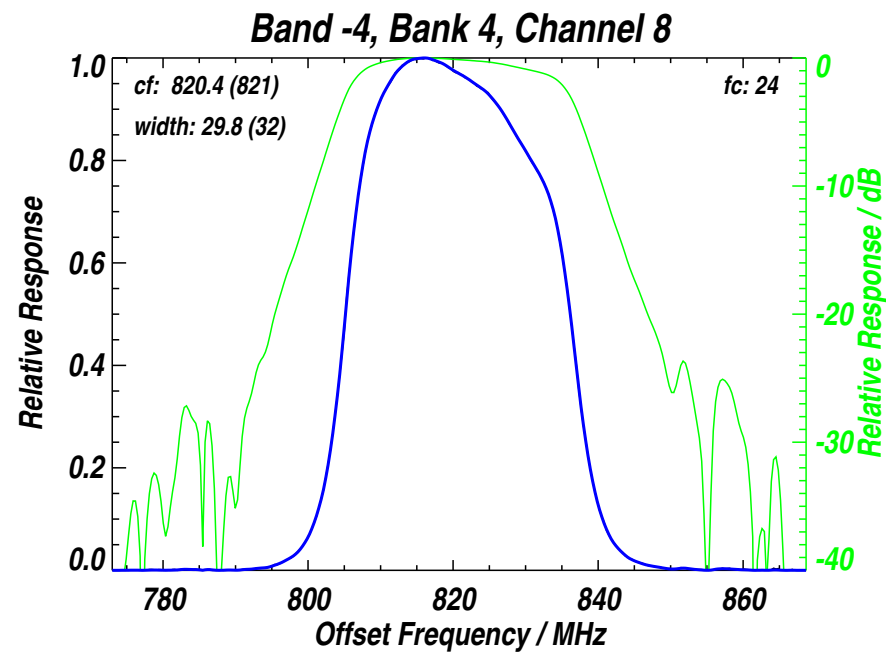
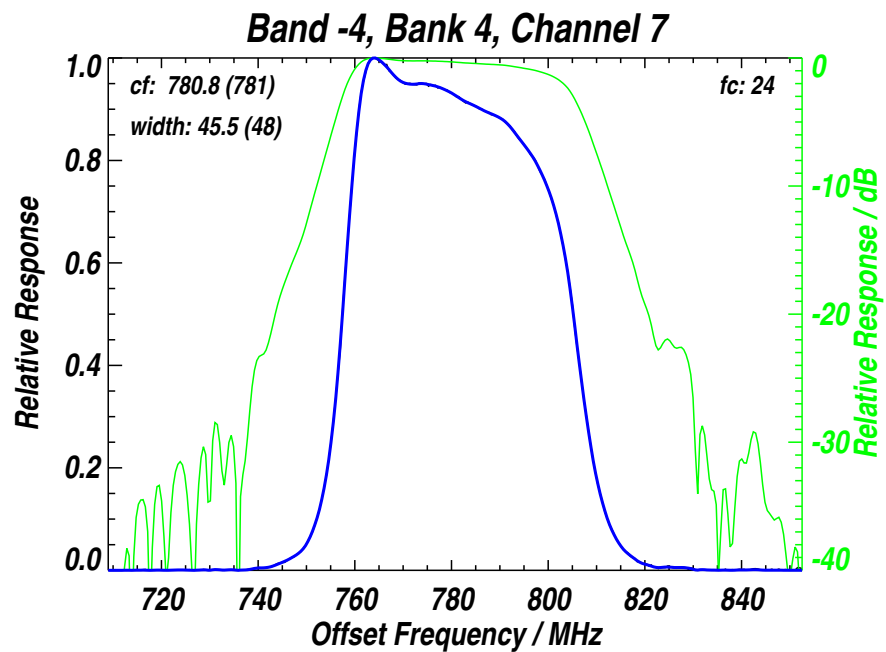
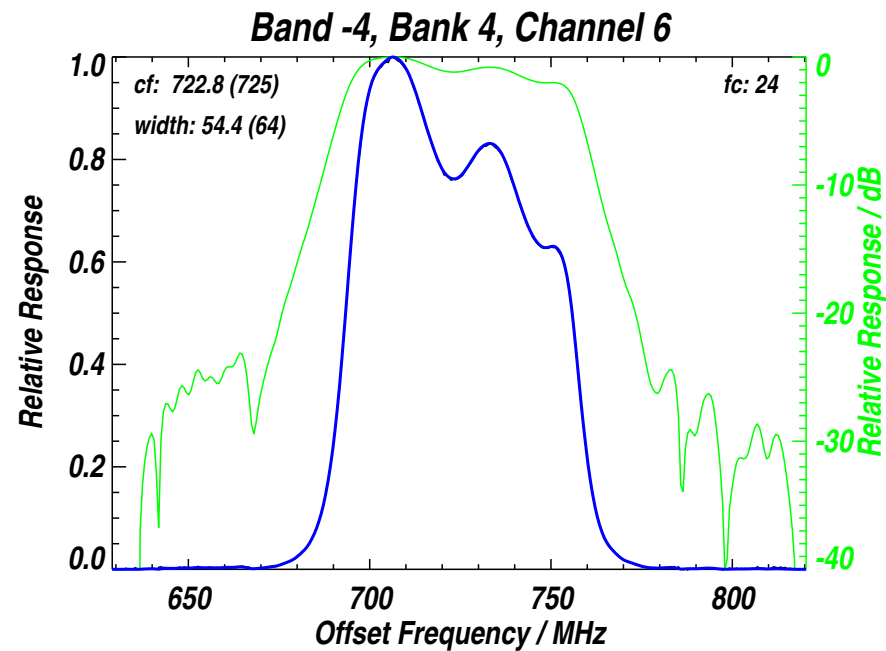
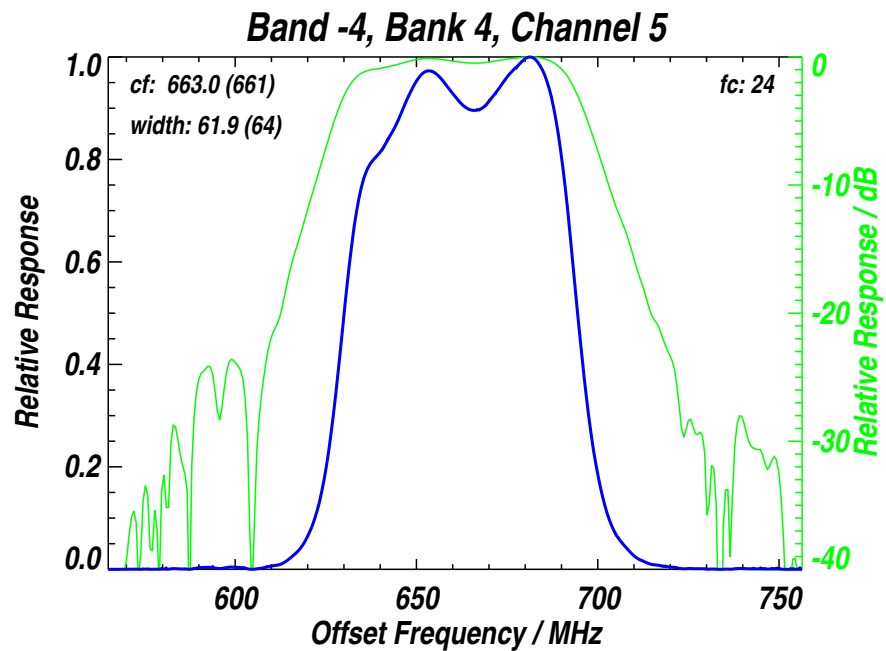


Figure H.77: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 5 to 8. See text for additional details.

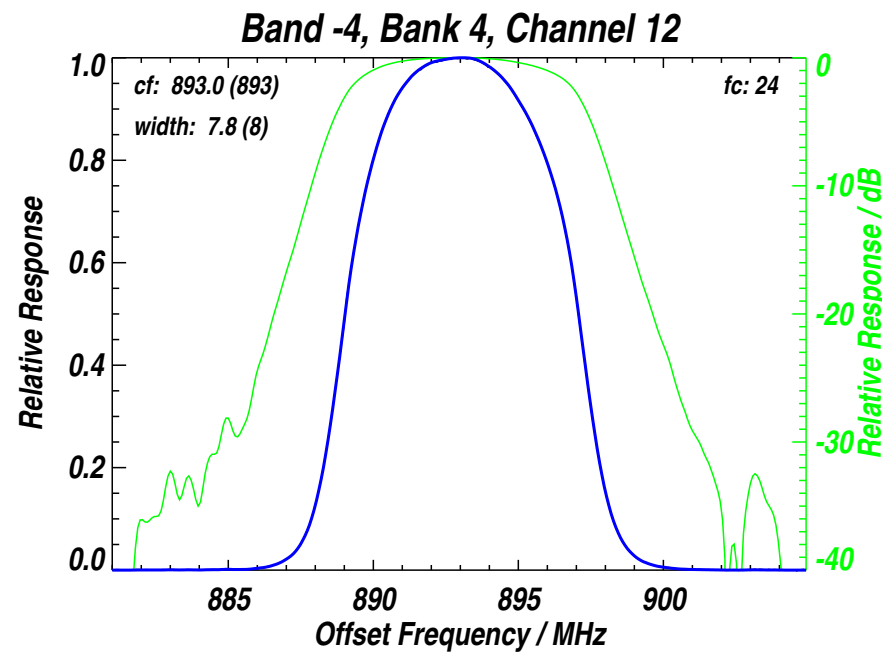
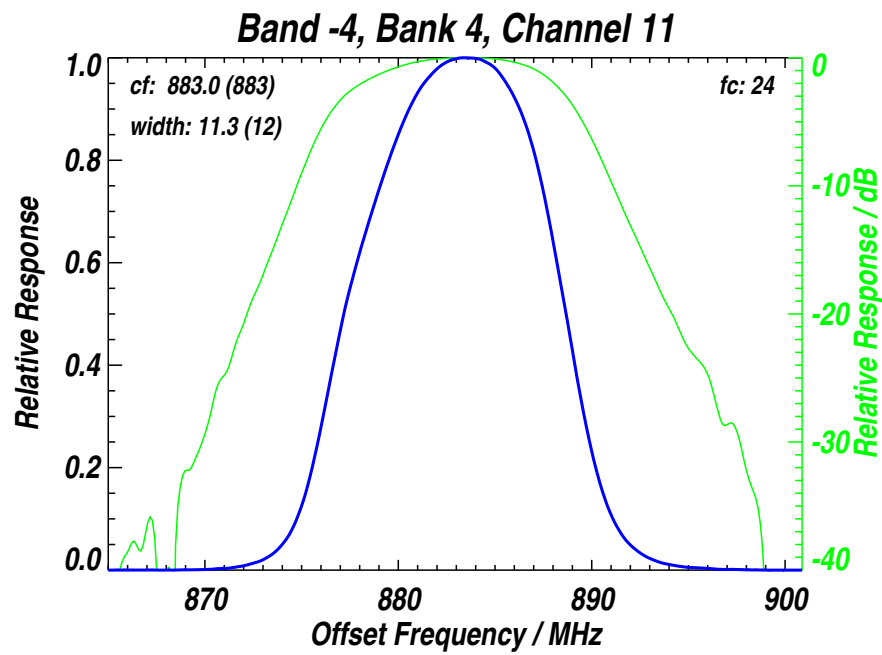
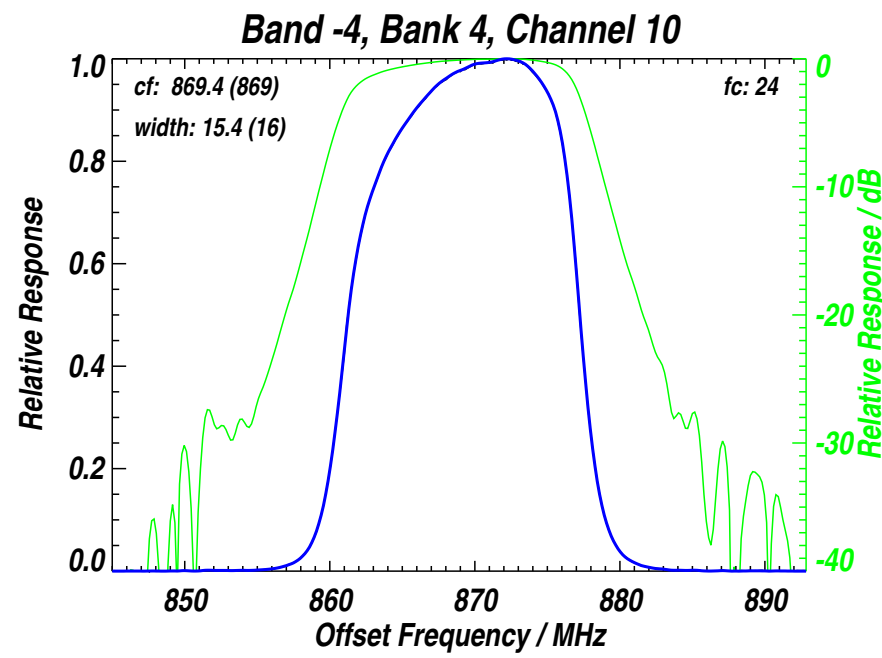
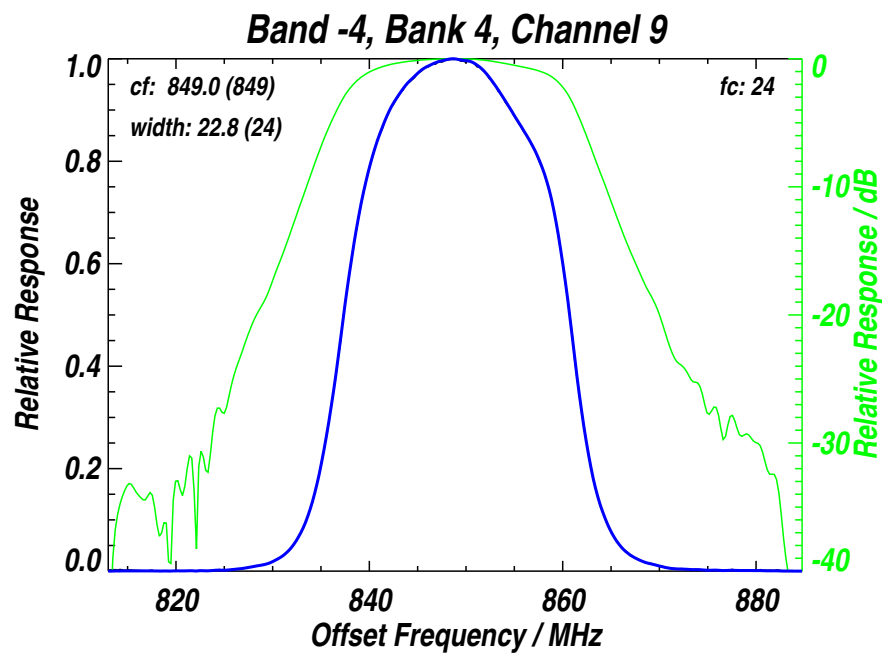


Figure H.78: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 9 to 12. See text for additional details.

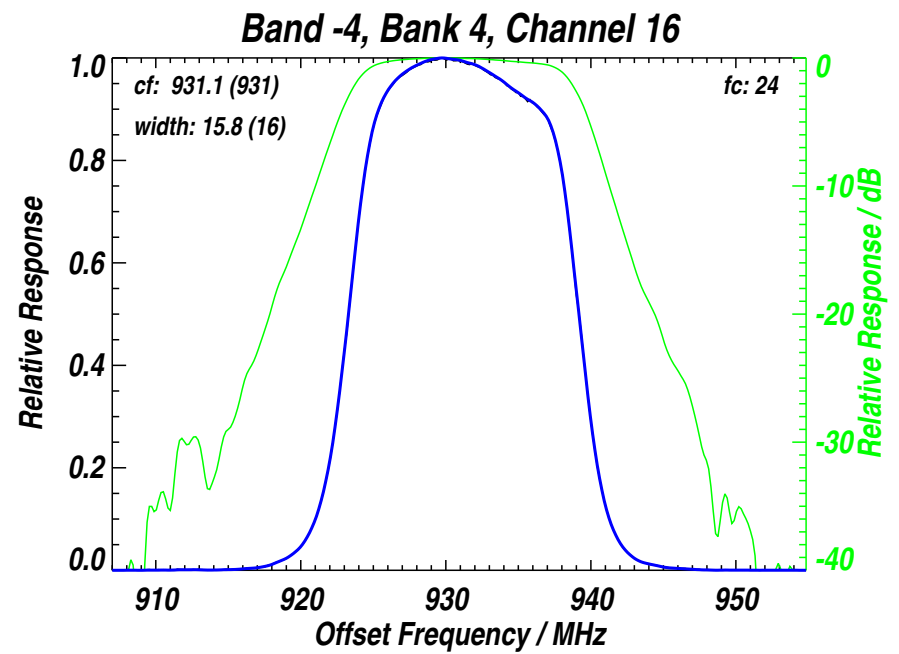
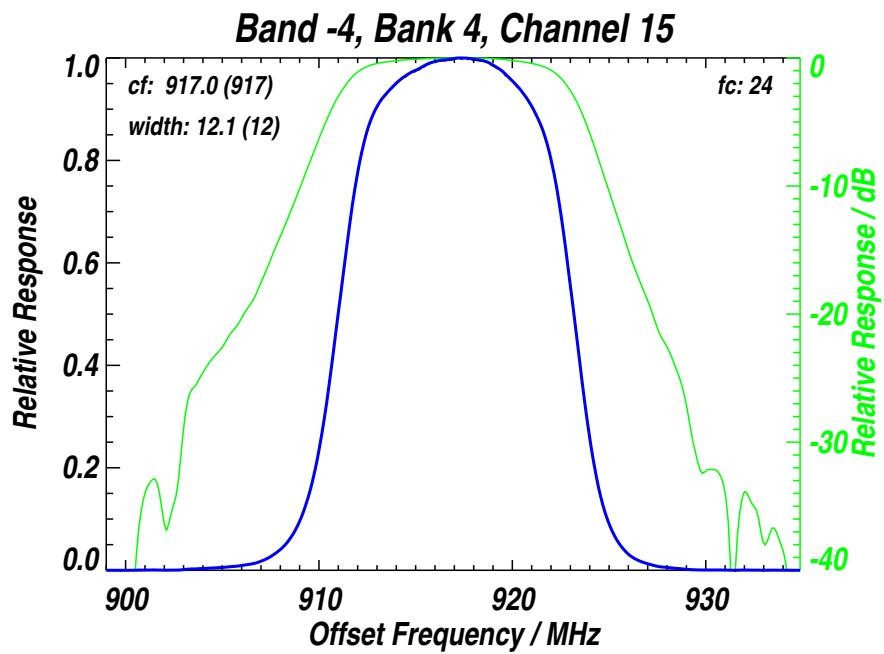
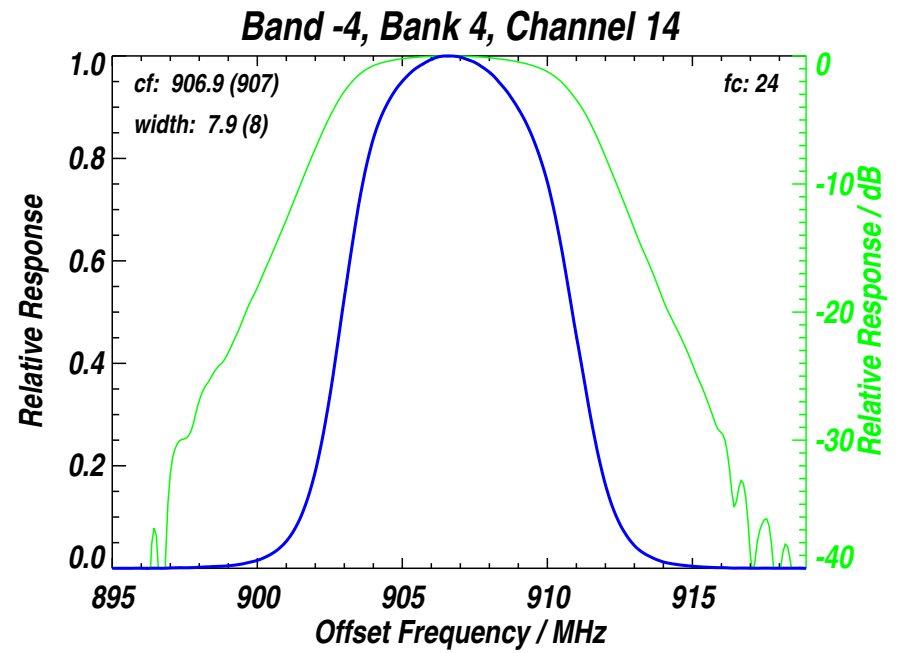
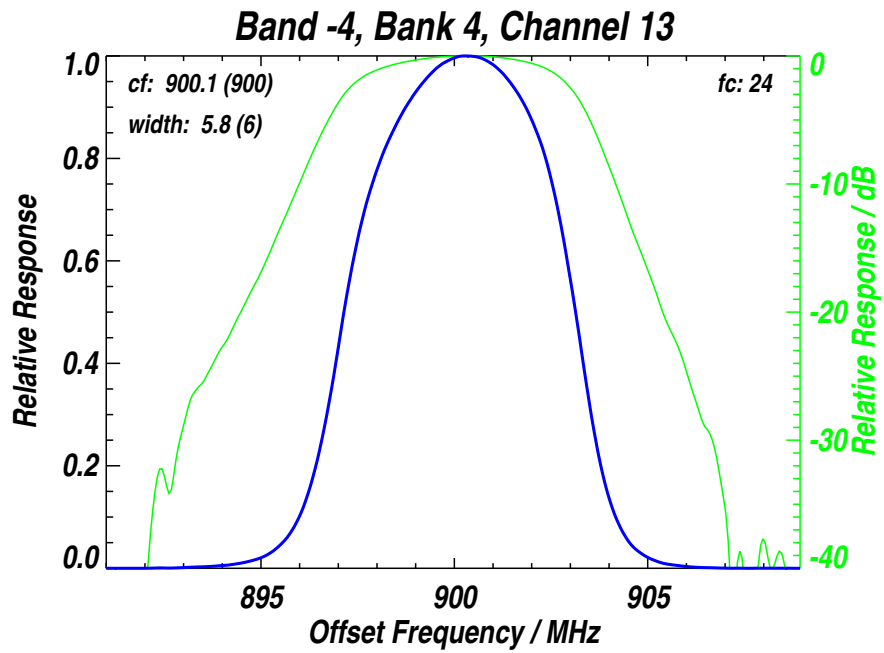


Figure H.79: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 13 to 16. See text for additional details.

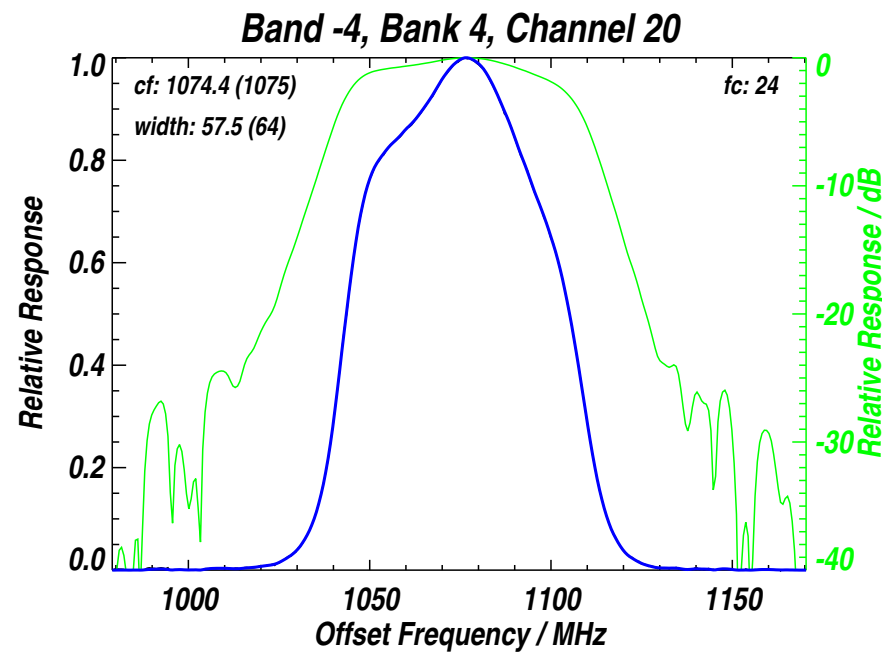
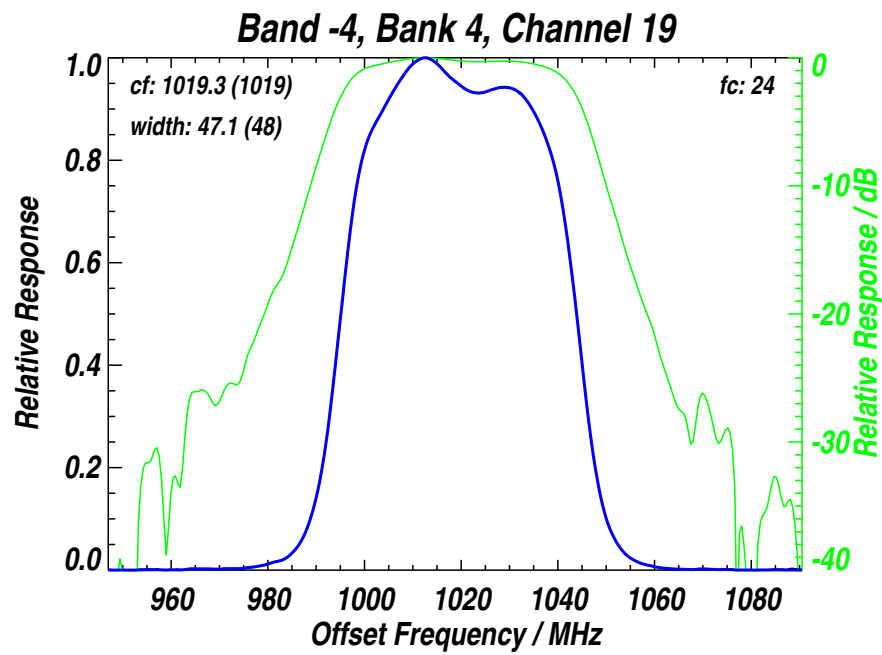
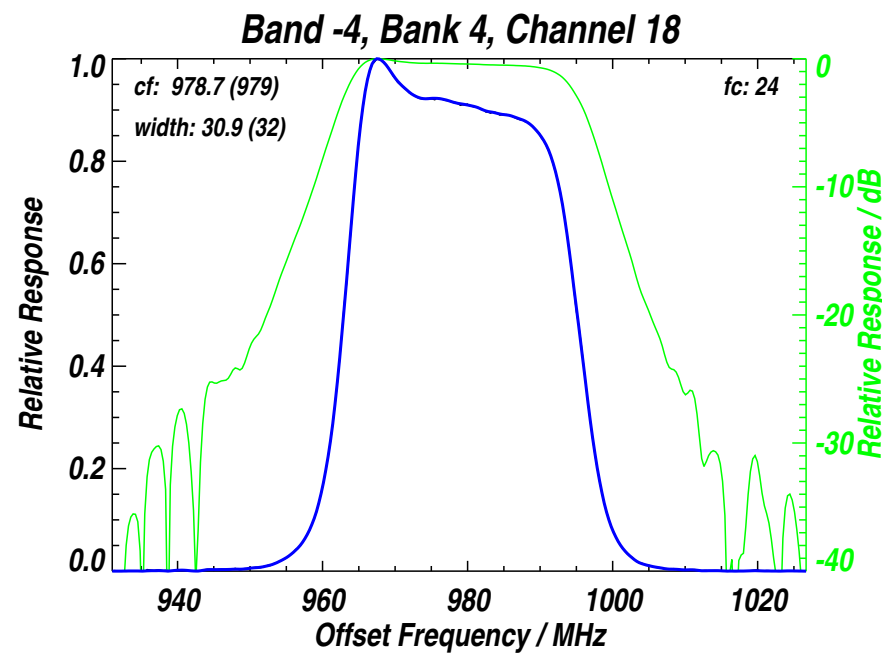
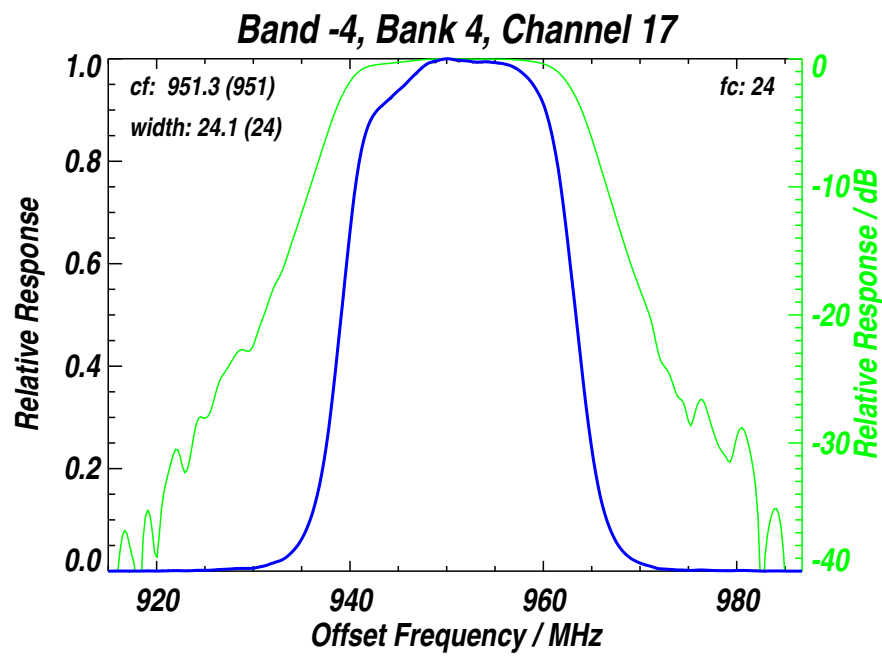


Figure H.80: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 17 to 20. See text for additional details.



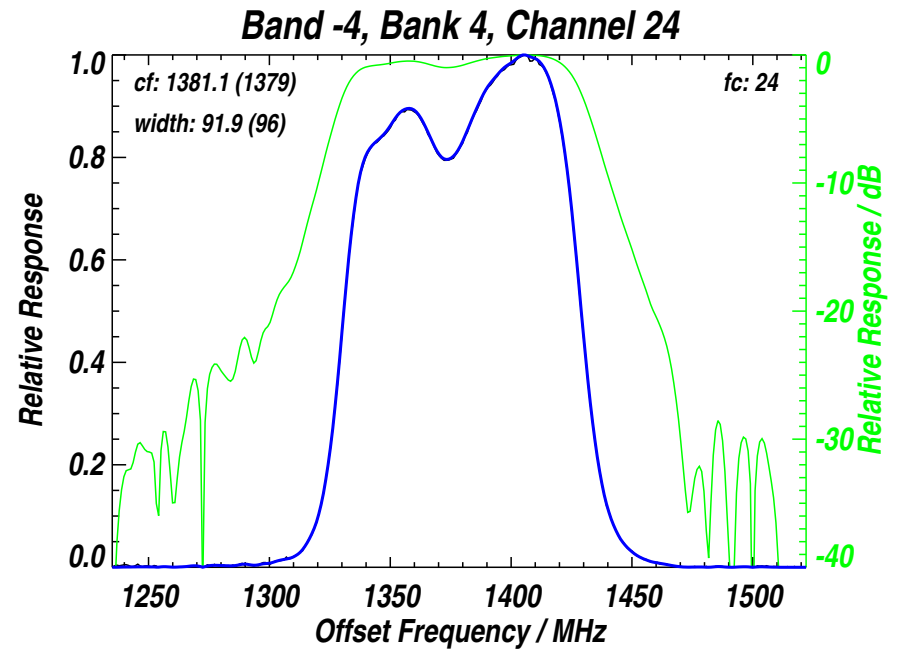
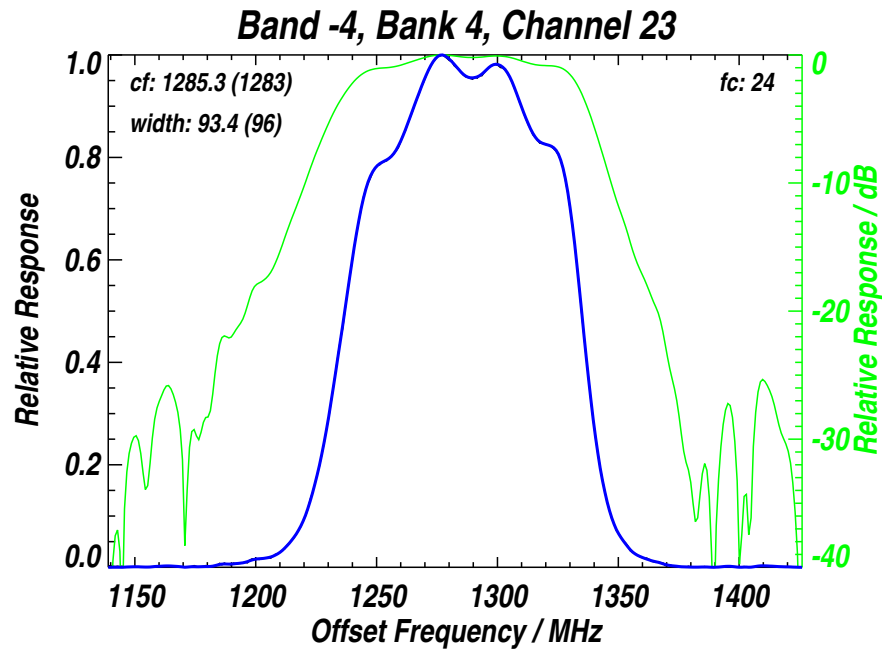
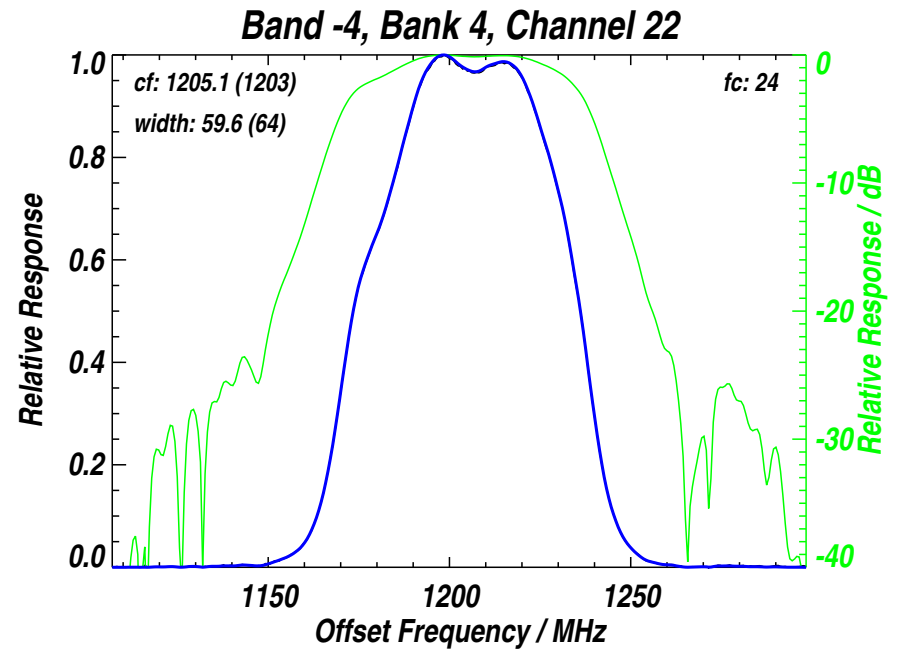
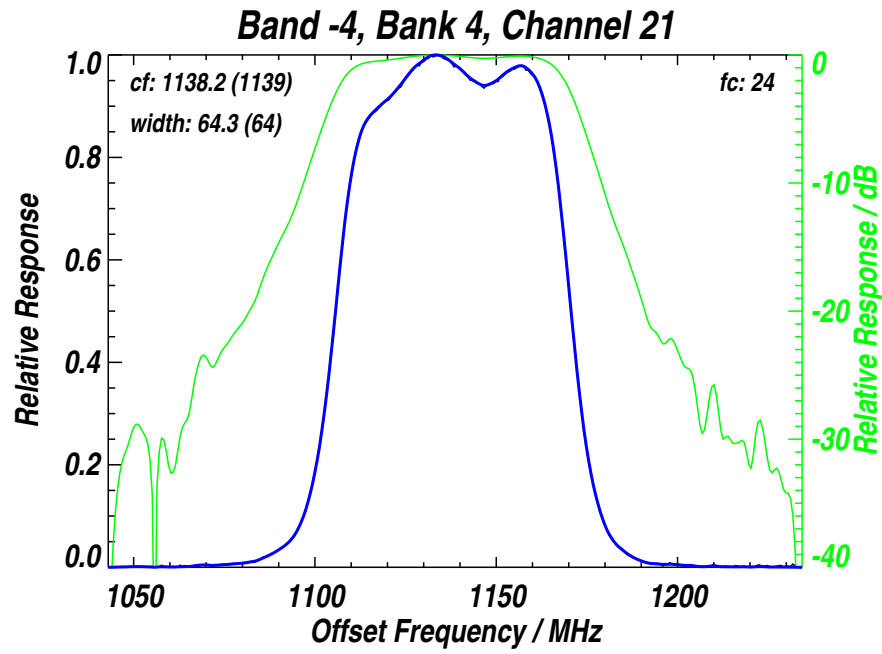
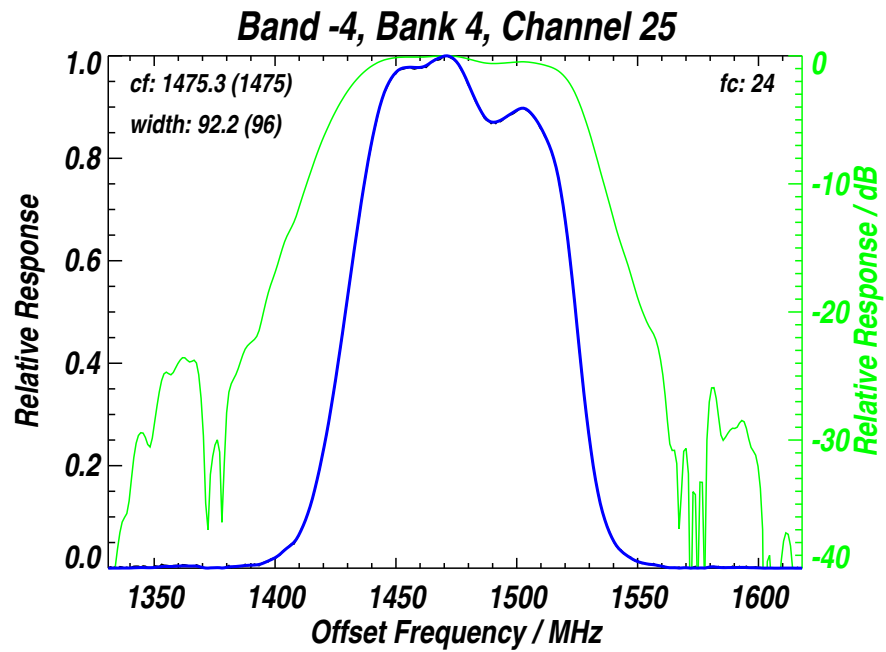


Figure H.81: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 21 to 24. See text for additional details.



**Band 4 (lsb)**  
**Bank 4**  
**Origin = 180.698333328 GHz**

Figure H.82: Lower sideband front-end sweep data for Band 4 taken via Filterbank 4, channel 25. See text for additional details.

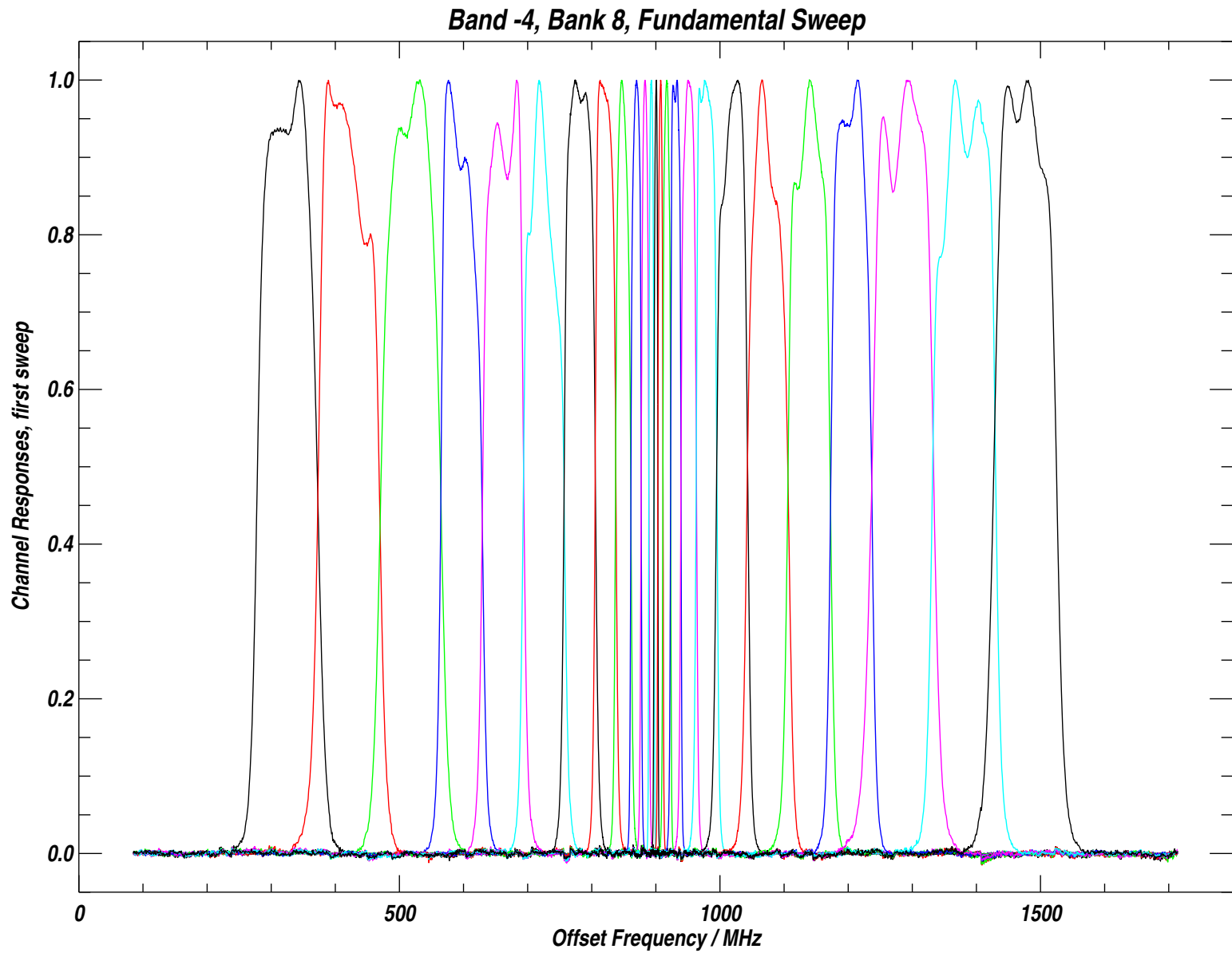


Figure H.83: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8. See text for additional details.

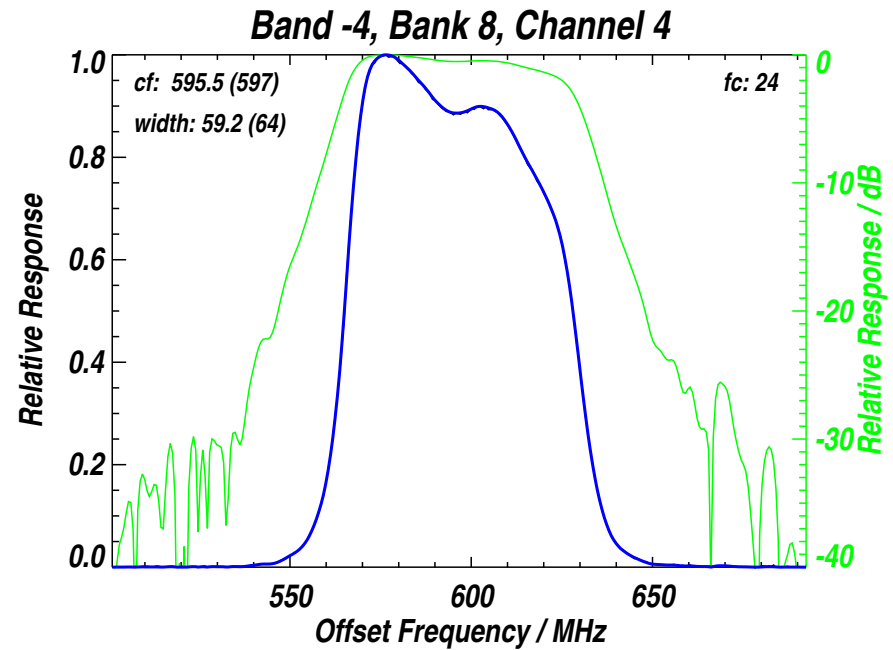
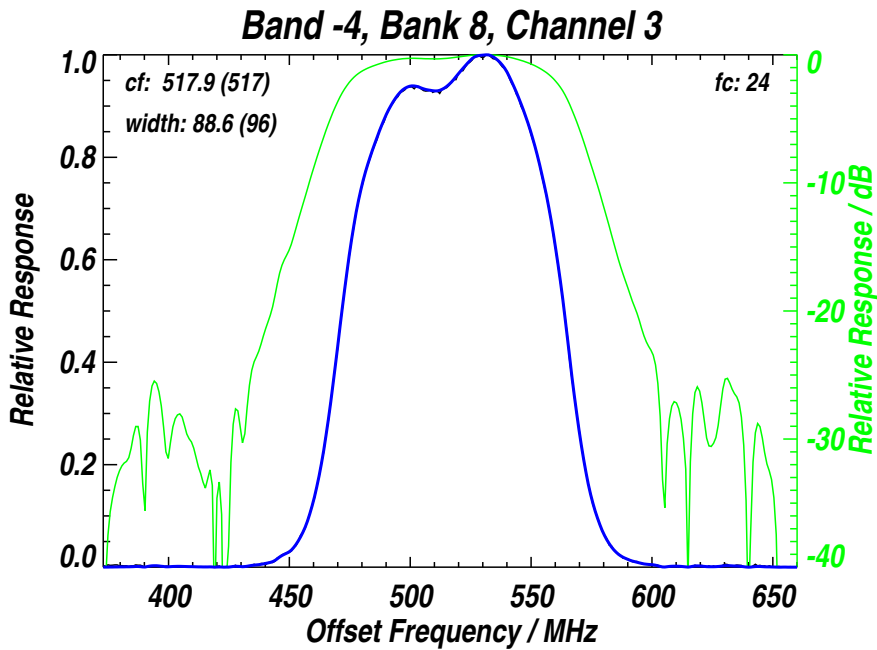
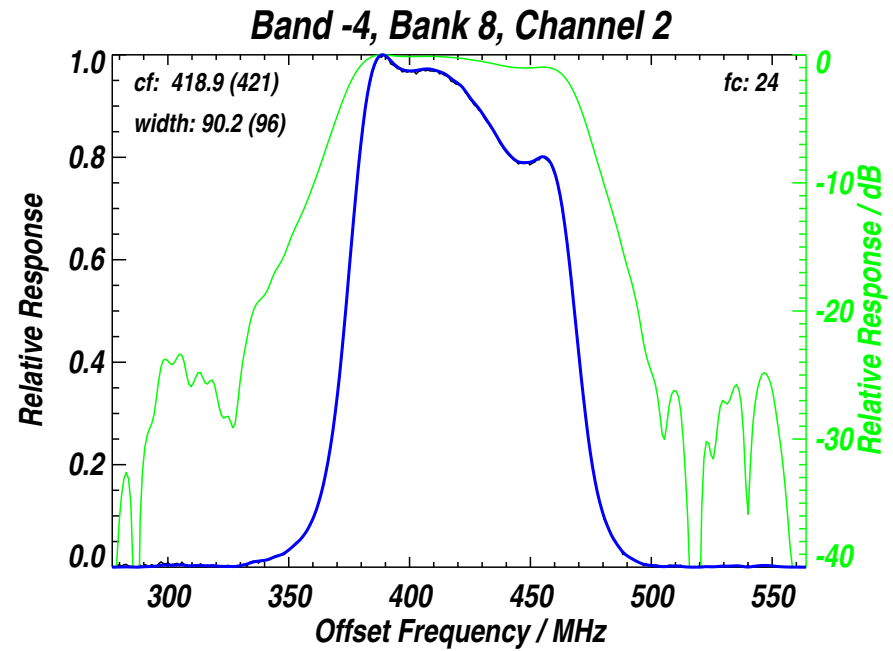
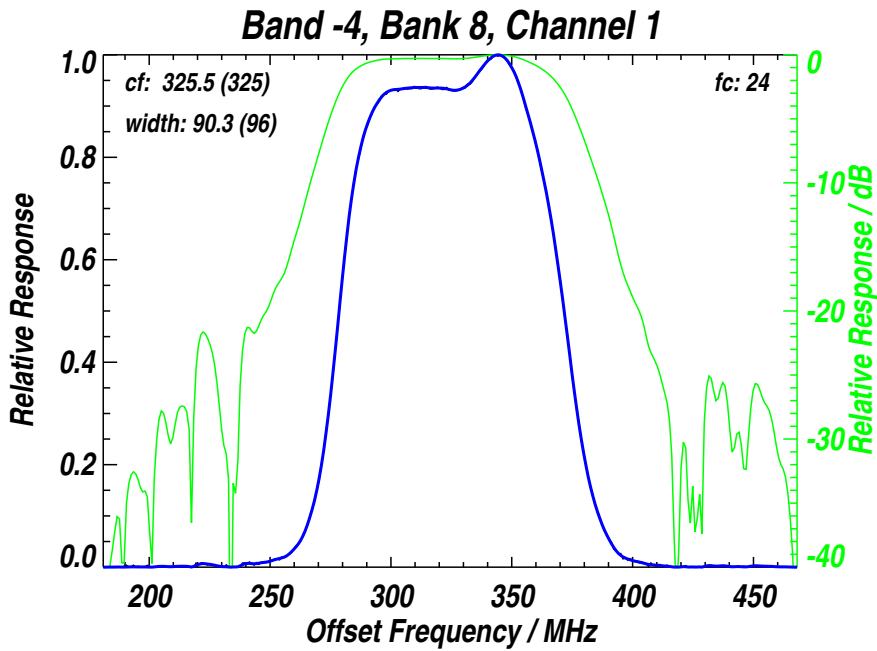


Figure H.84: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 1 to 4. See text for additional details.

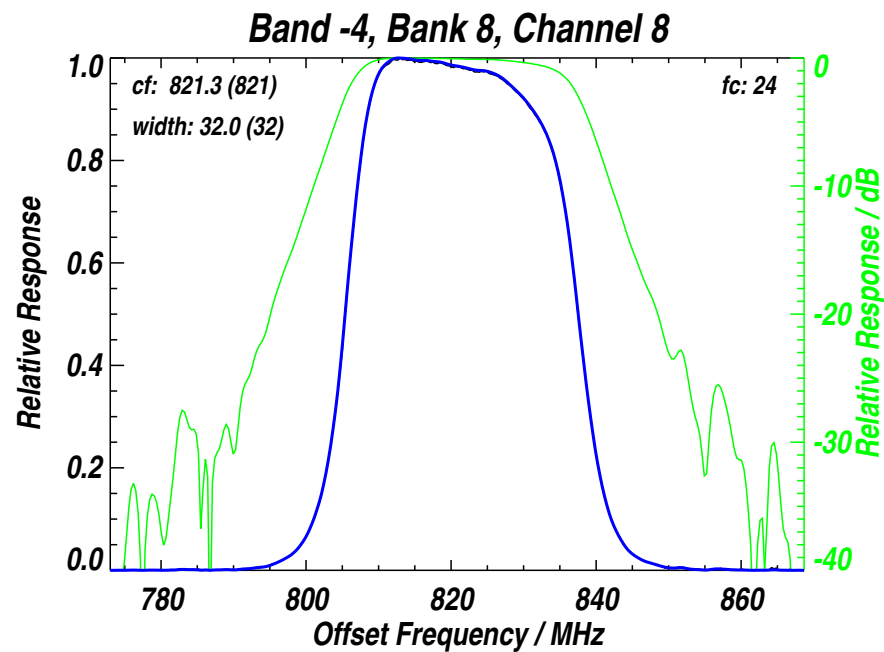
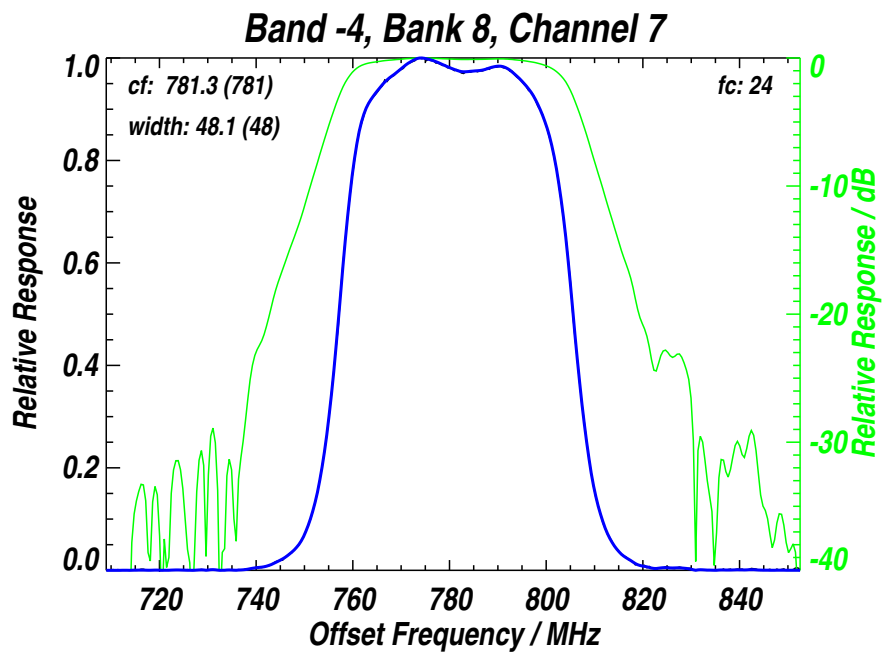
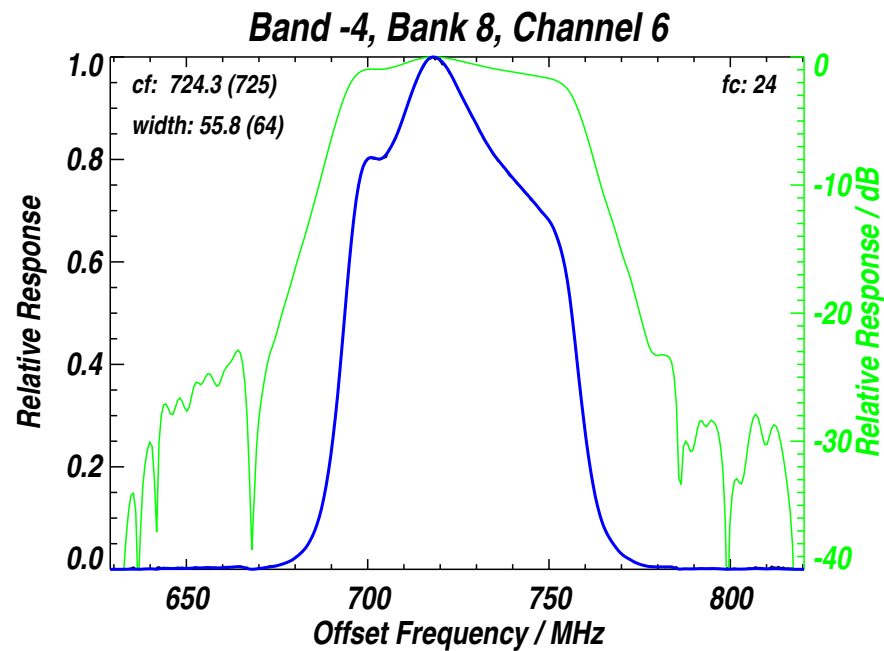
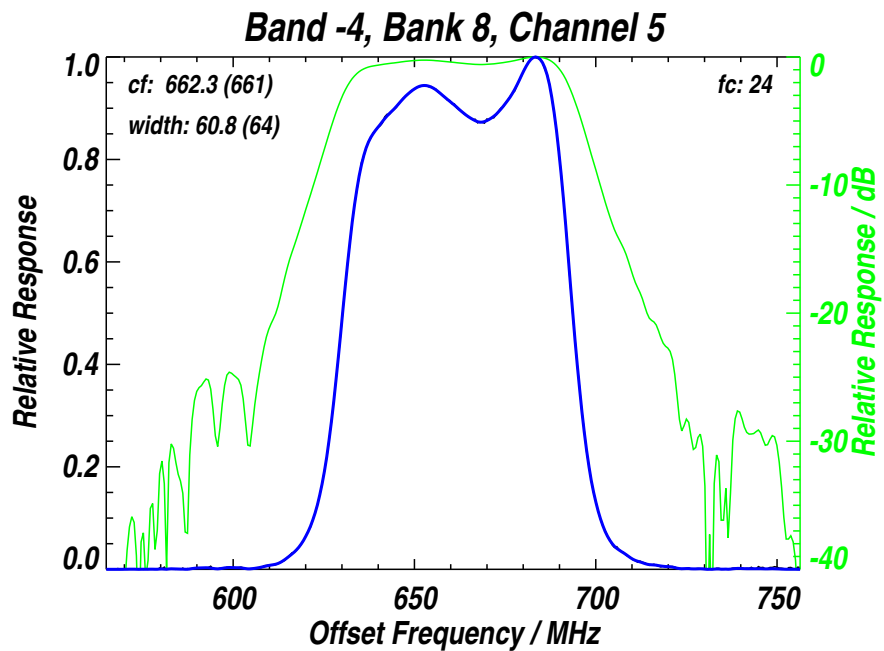


Figure H.85: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 5 to 8. See text for additional details.

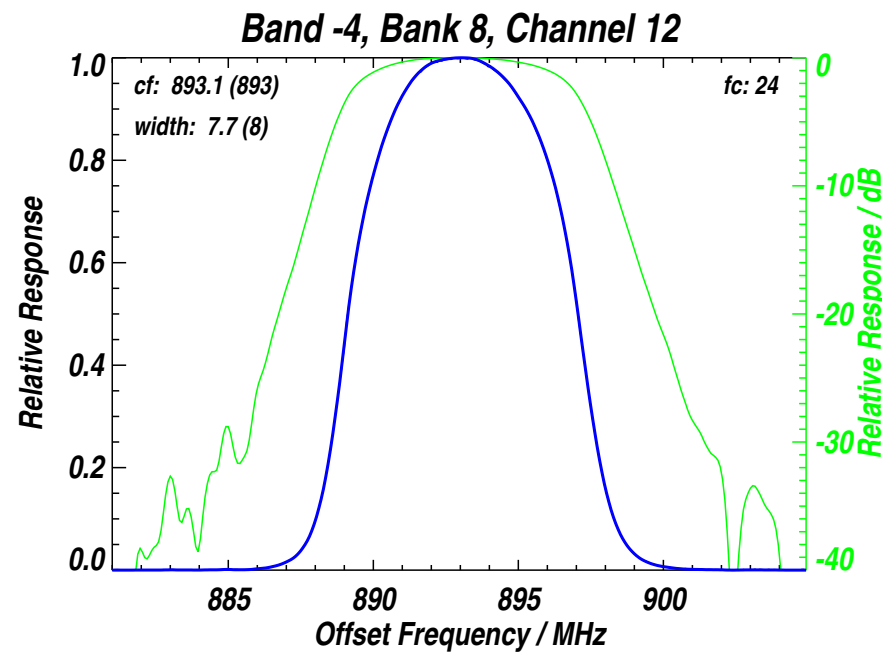
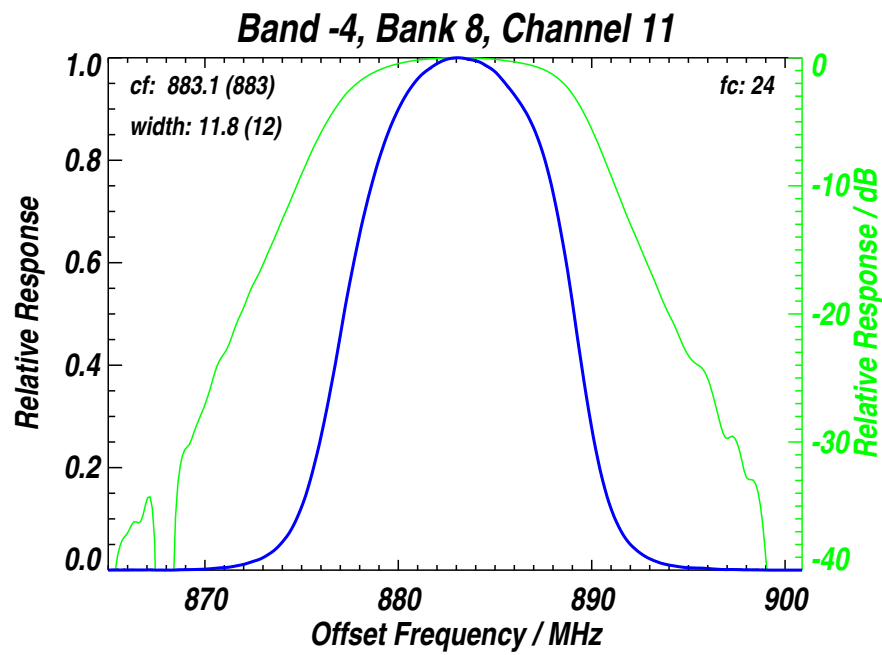
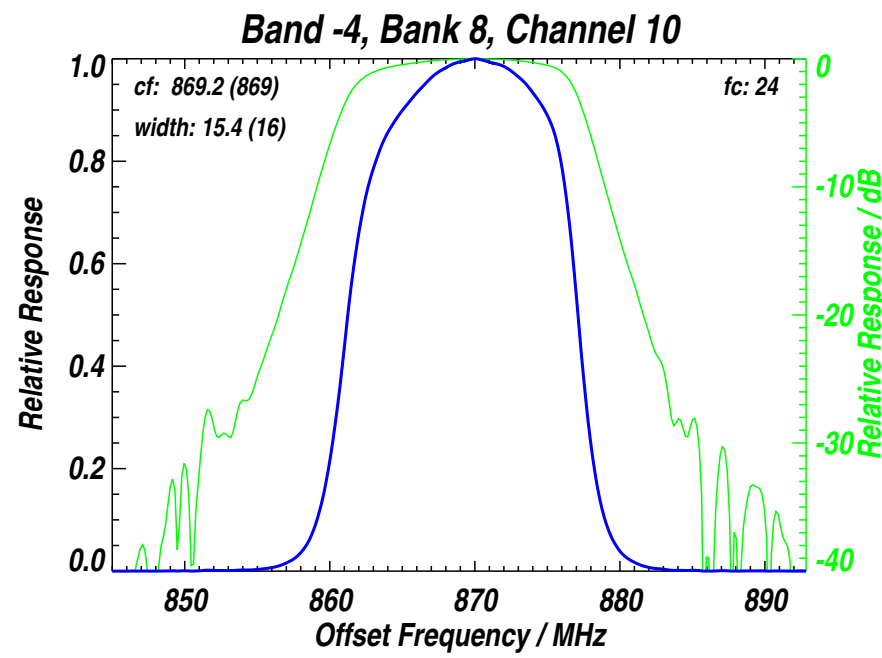
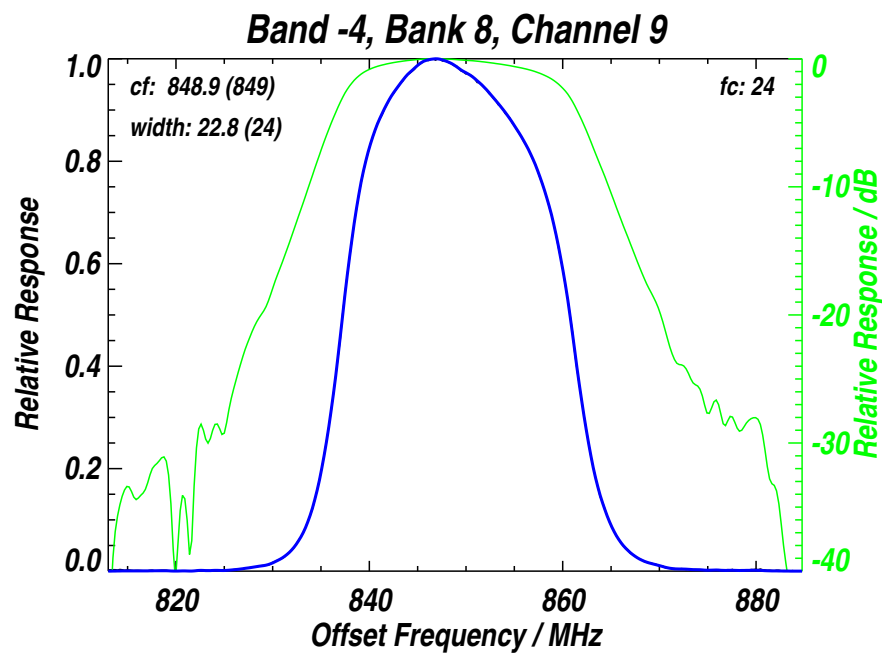


Figure H.86: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 9 to 12. See text for additional details.

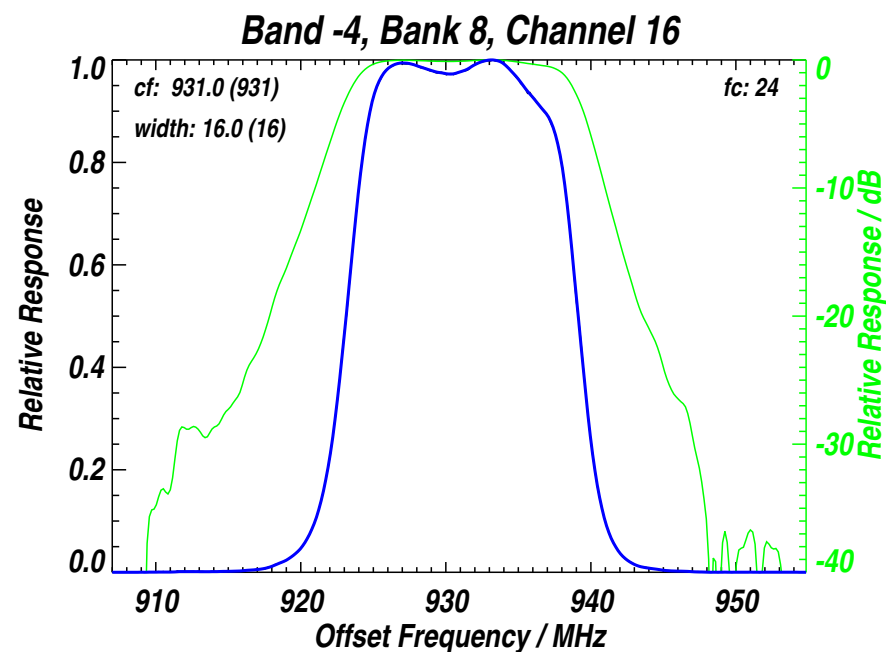
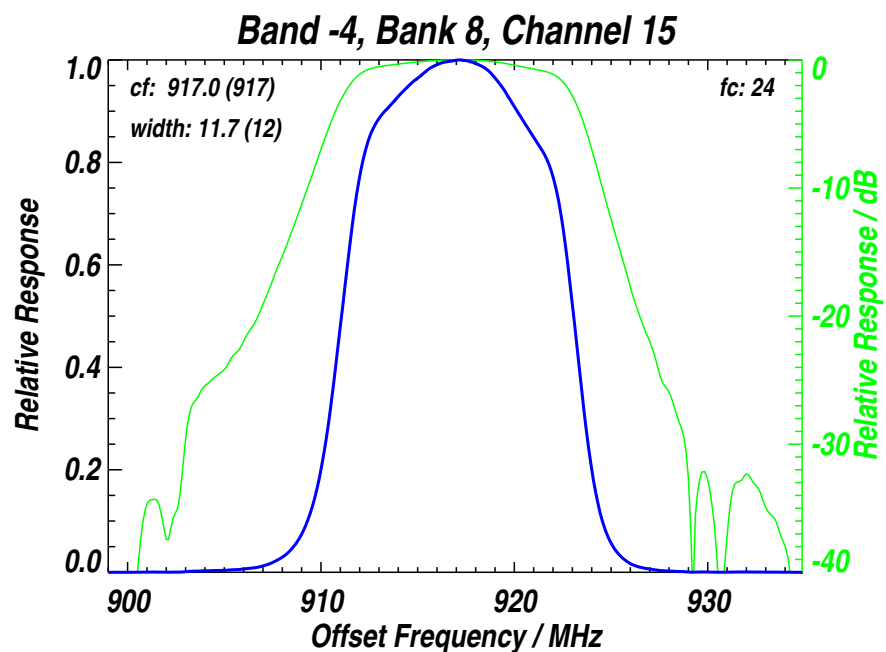
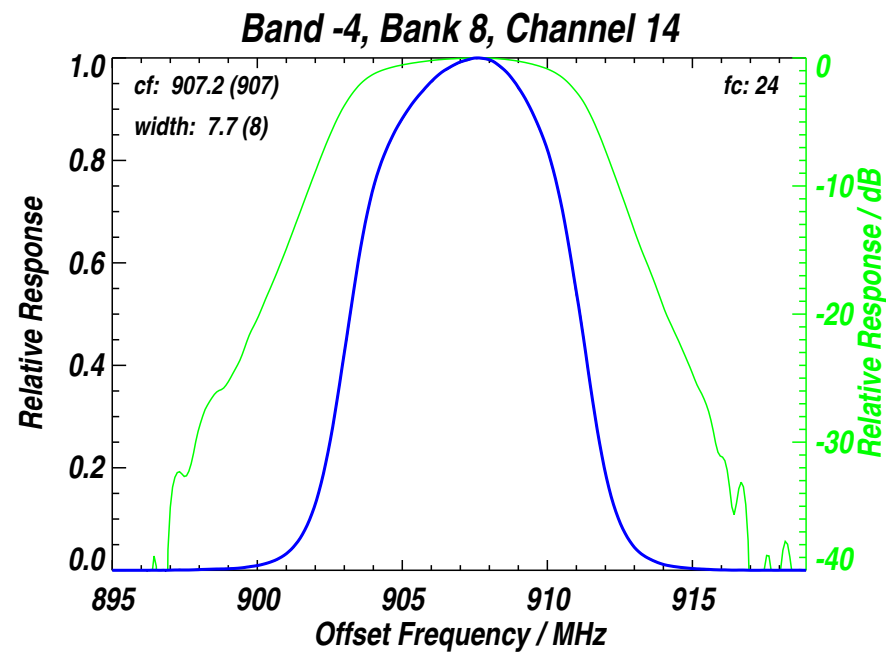
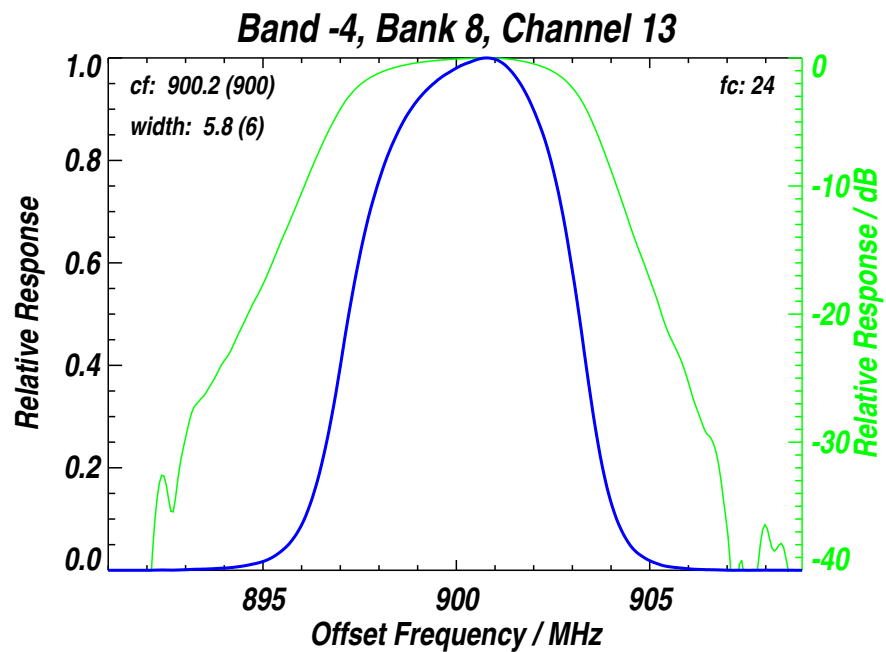


Figure H.87: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 13 to 16. See text for additional details.

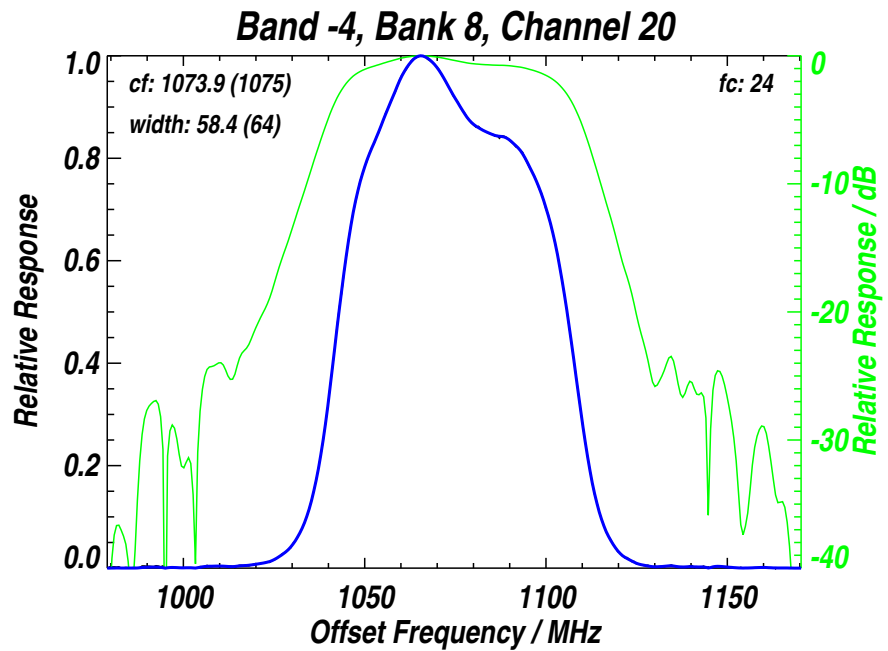
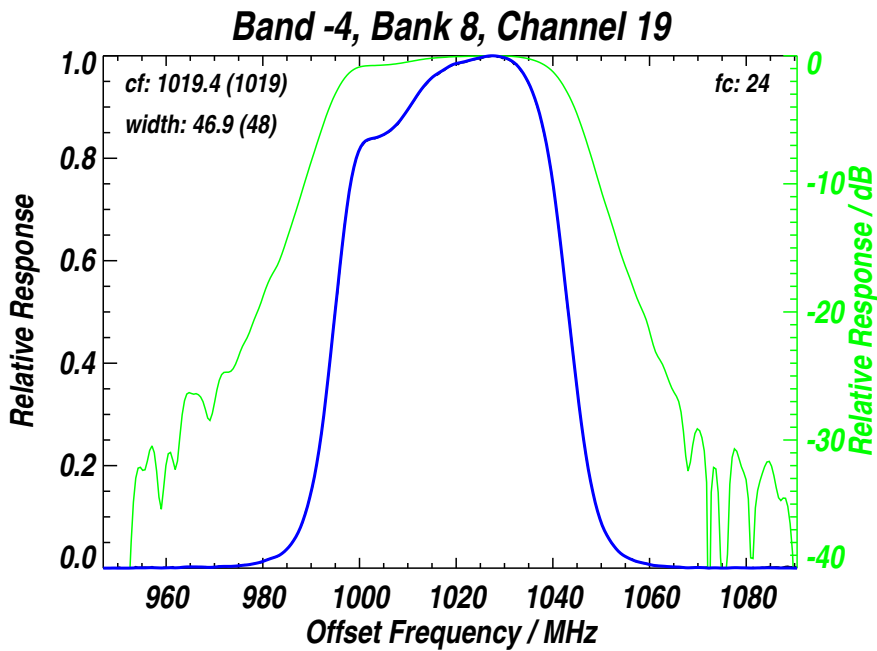
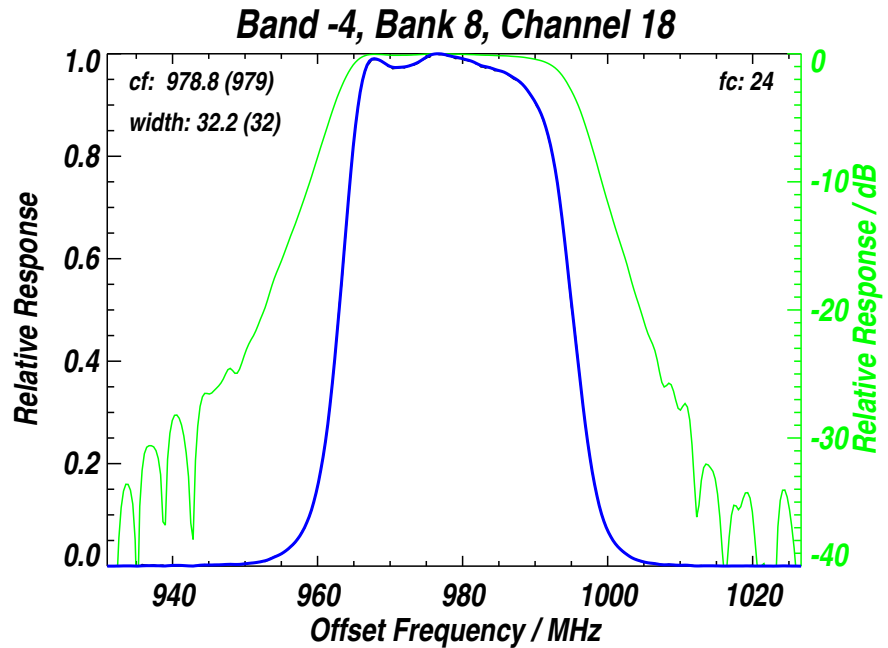
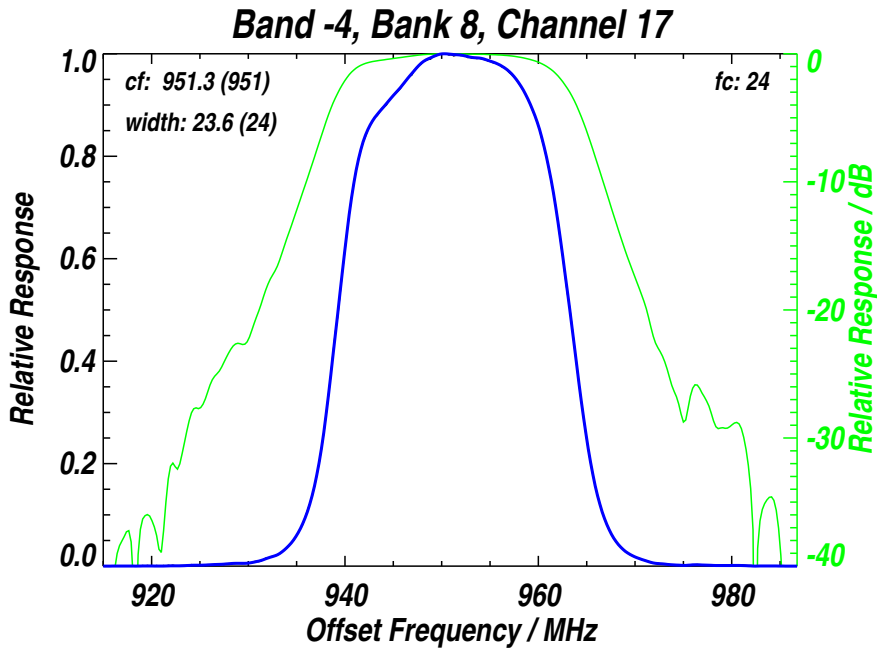


Figure H.88: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 17 to 20. See text for additional details.



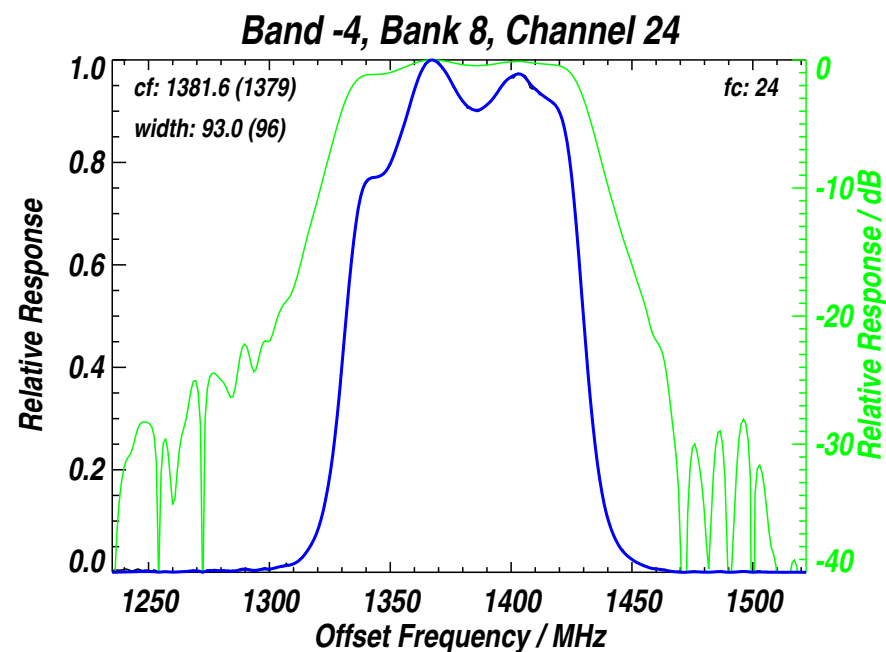
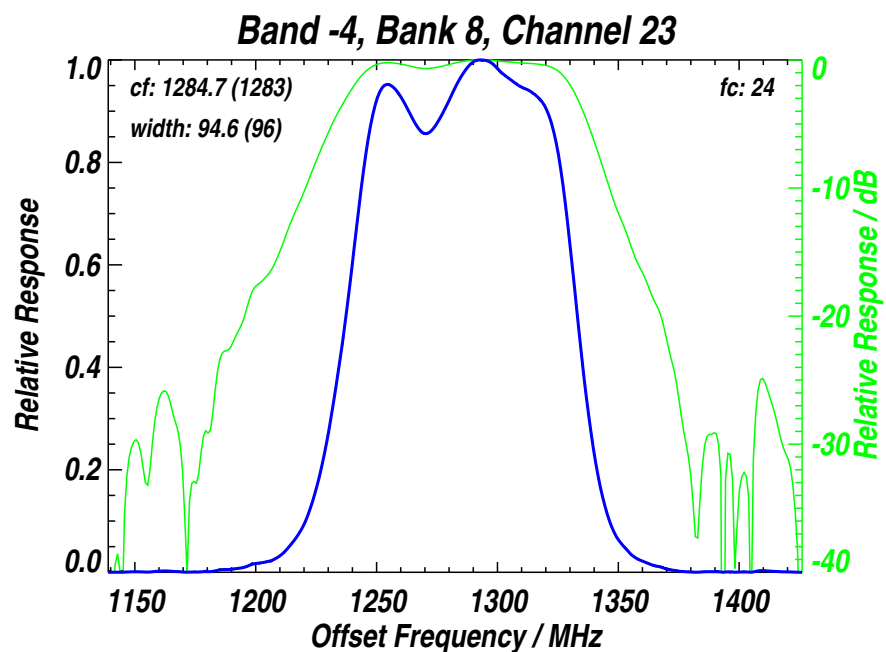
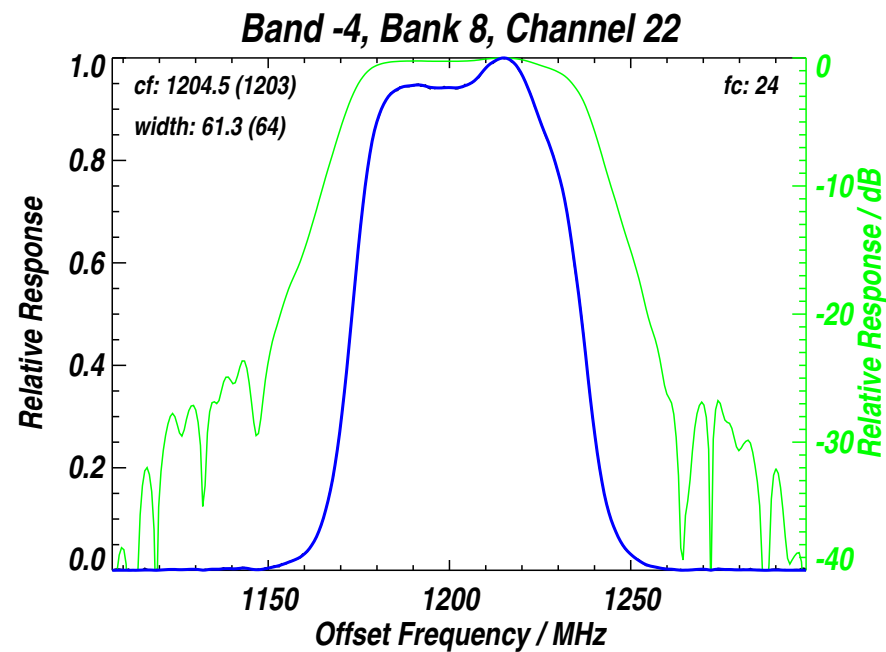
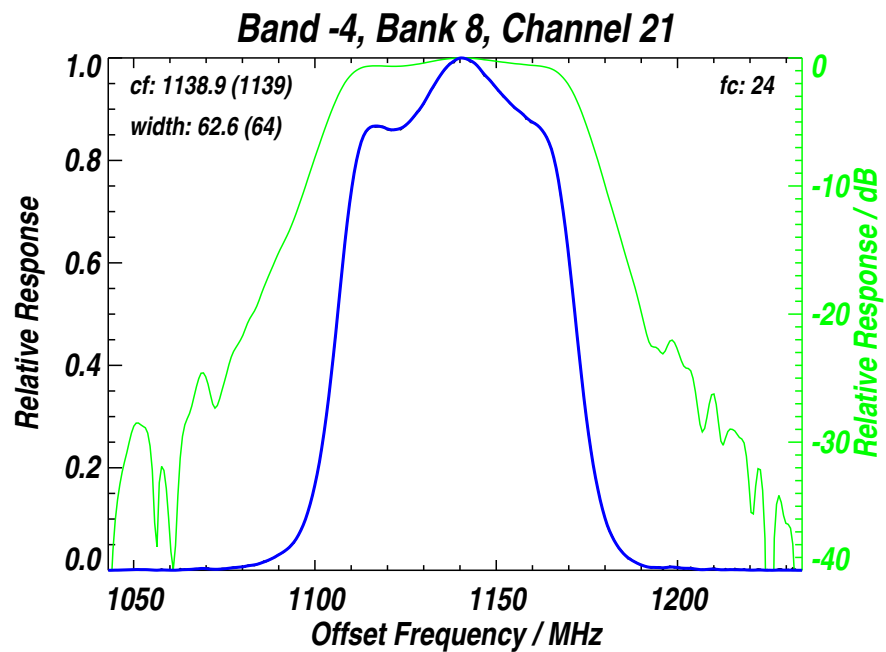
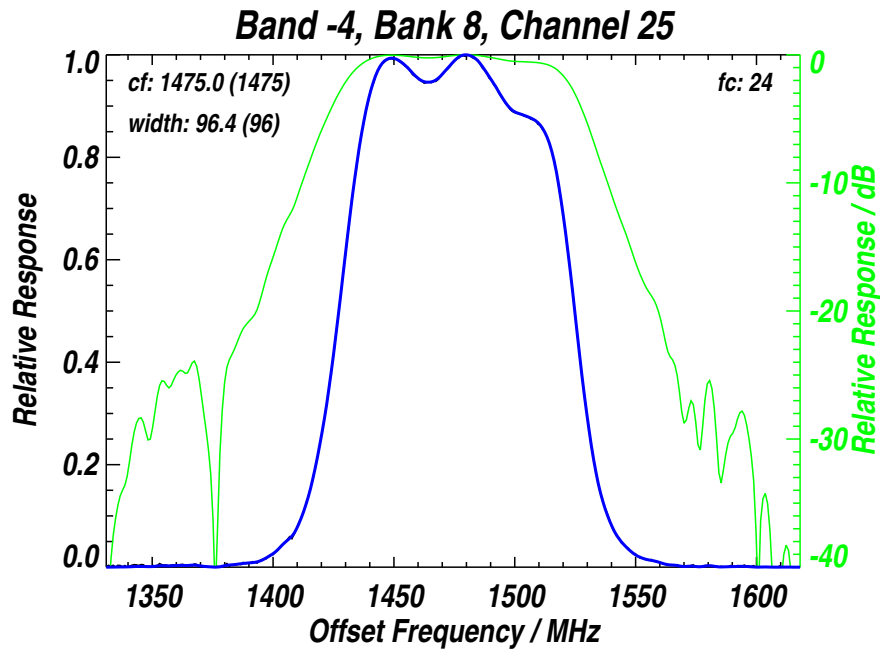


Figure H.89: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 4 (lsb)**  
**Bank 8**  
**Origin = 180.698333328 GHz**

Figure H.90: Lower sideband front-end sweep data for Band 4 taken via Filterbank 8, channel 25. See text for additional details.

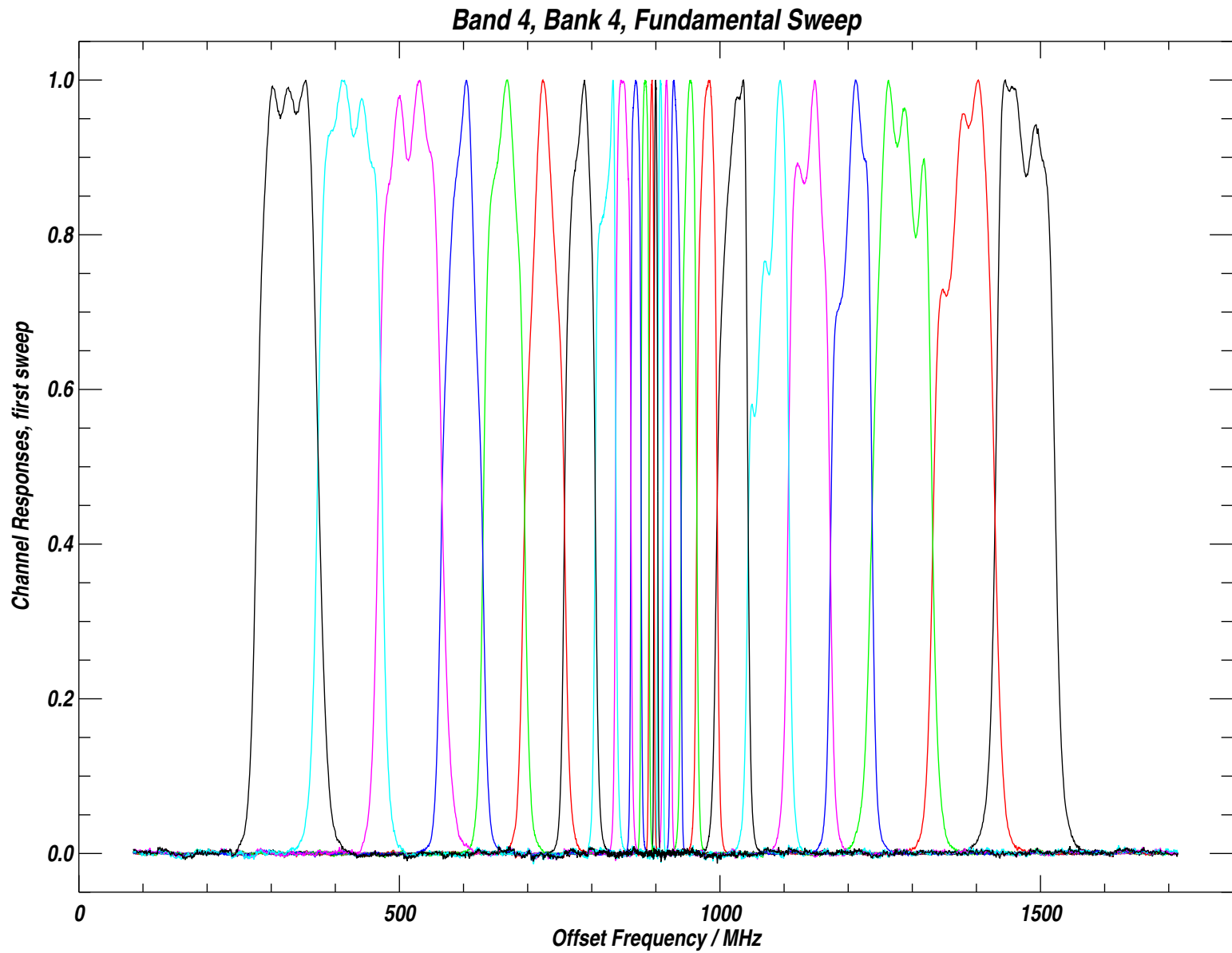


Figure H.91: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4. See text for additional details.

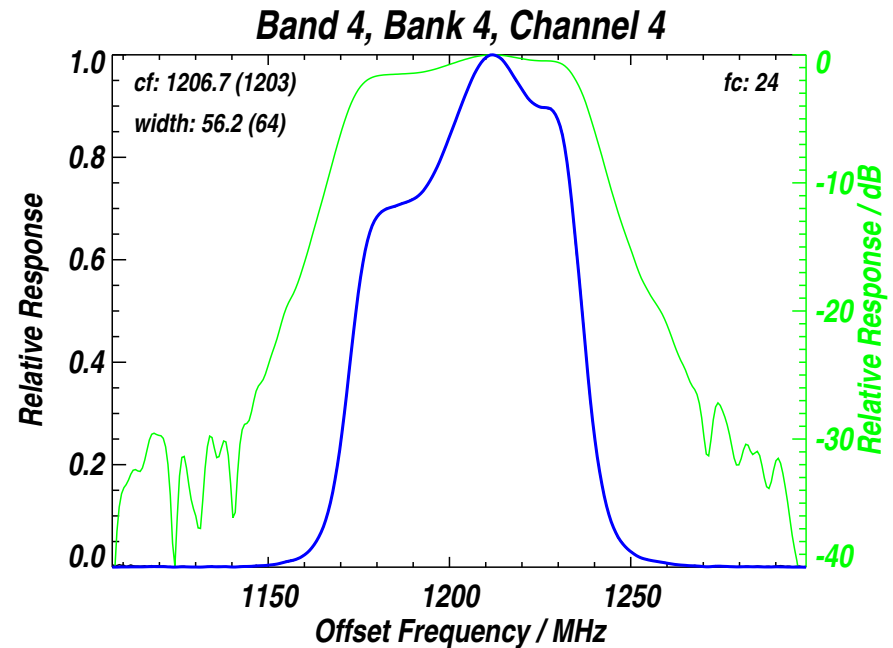
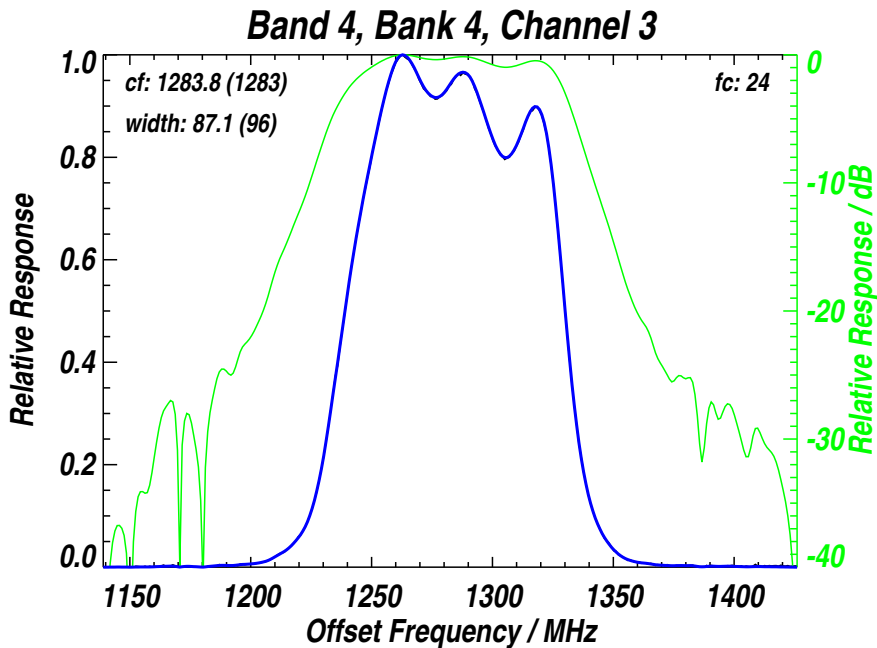
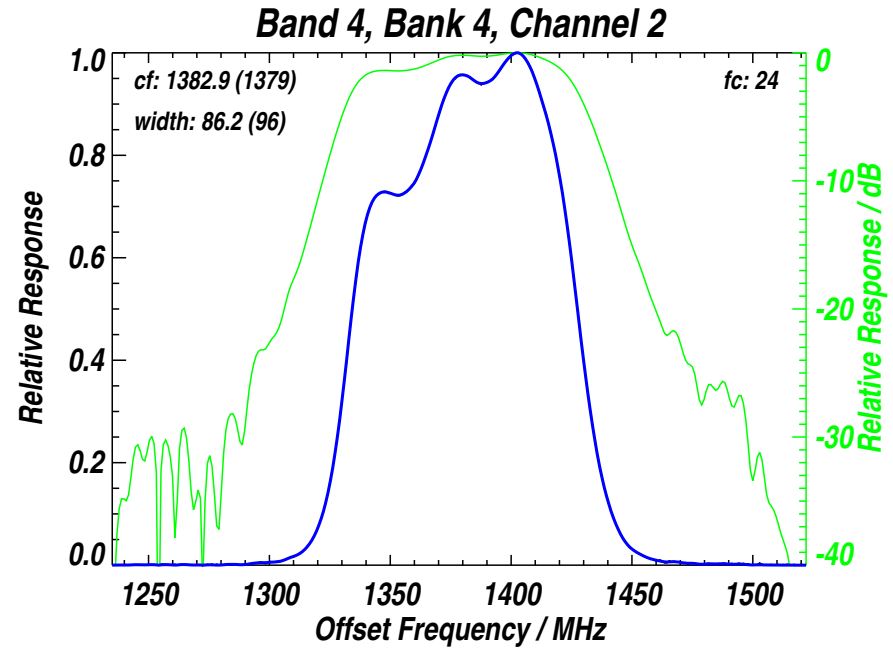
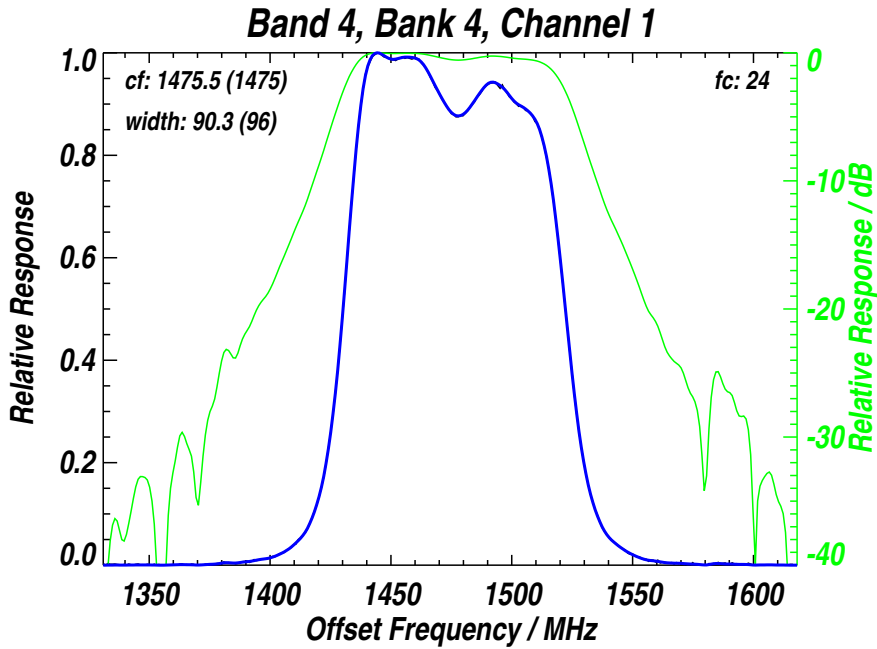


Figure H.92: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 1 to 4. See text for additional details.

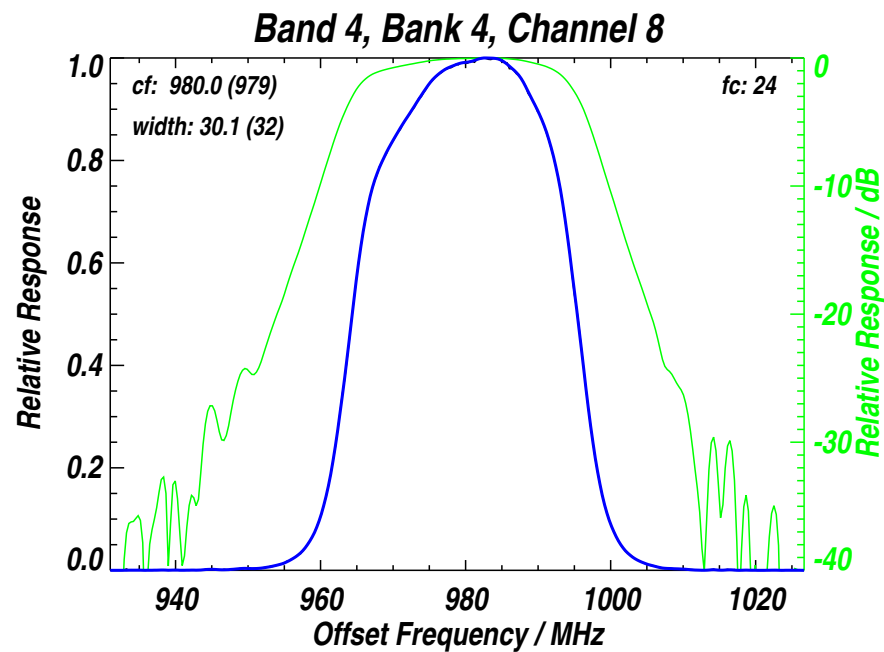
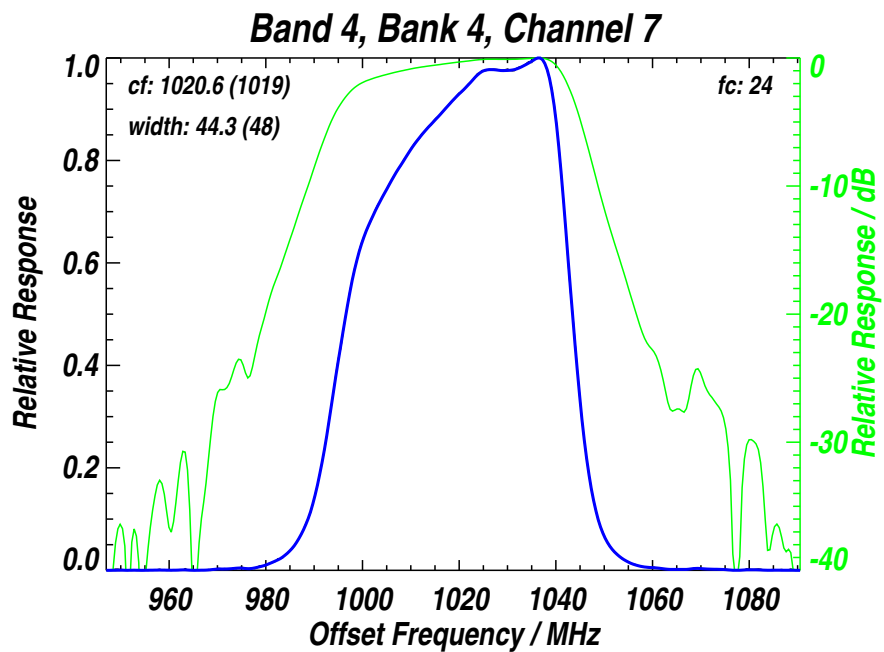
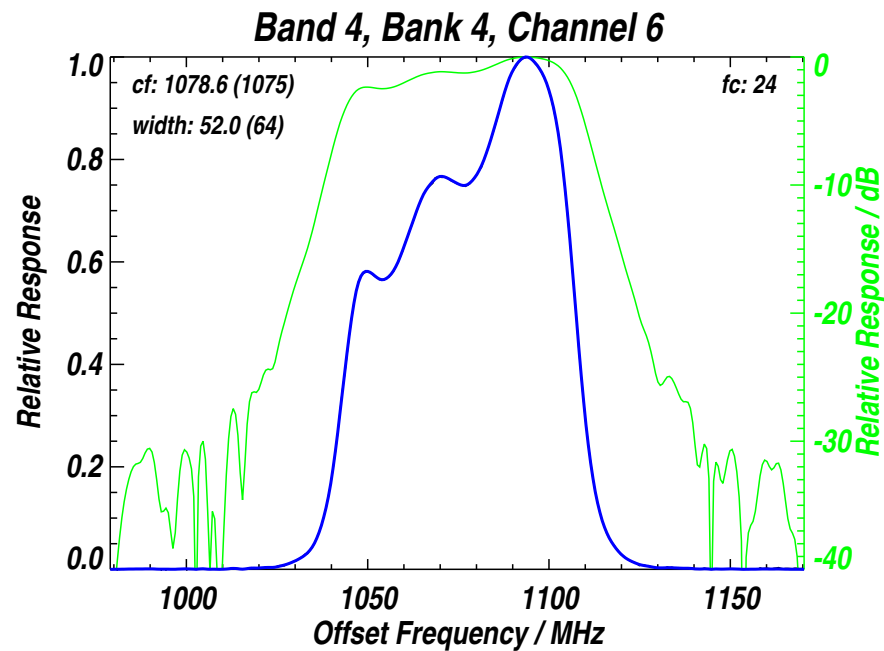
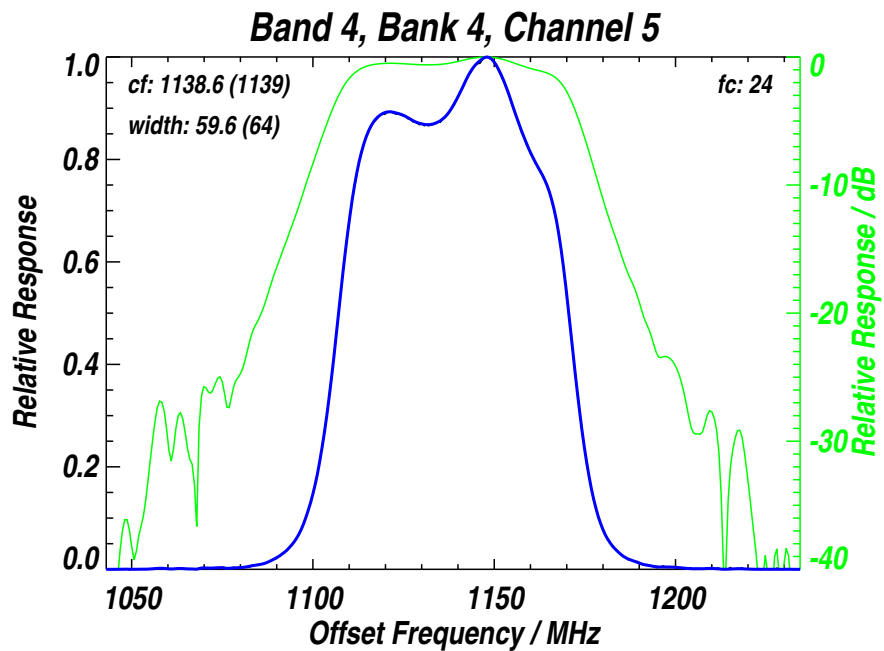


Figure H.93: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 5 to 8. See text for additional details.

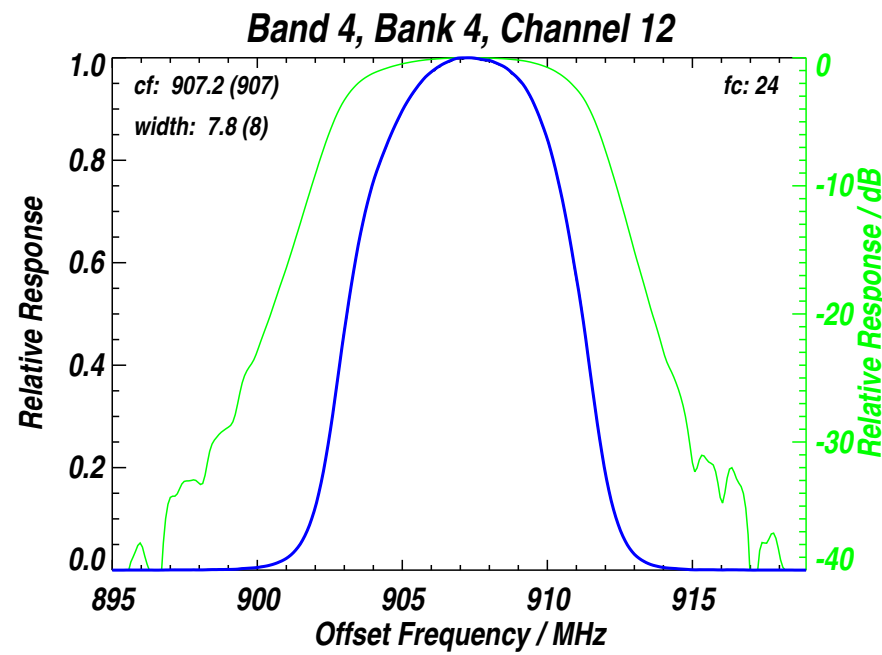
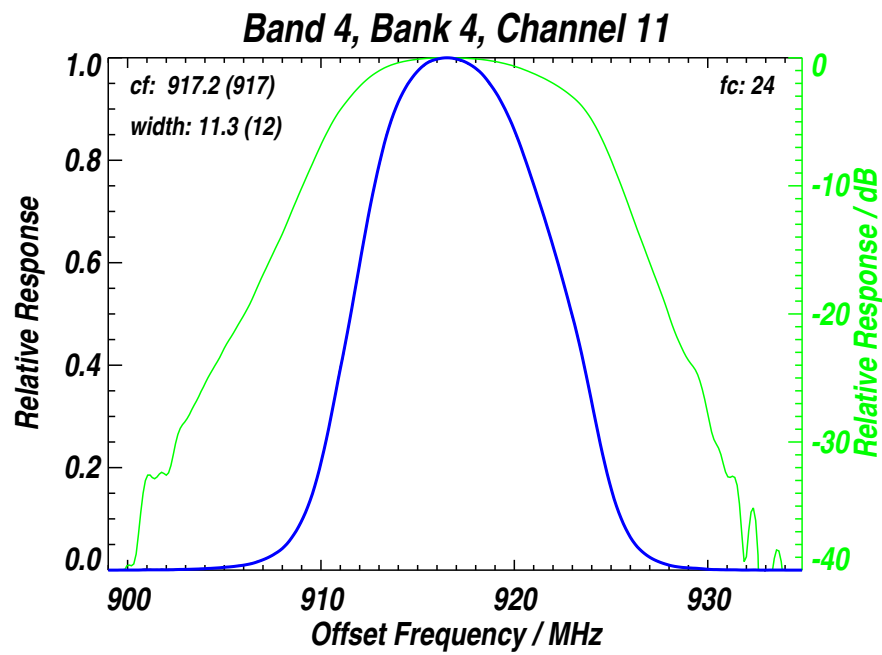
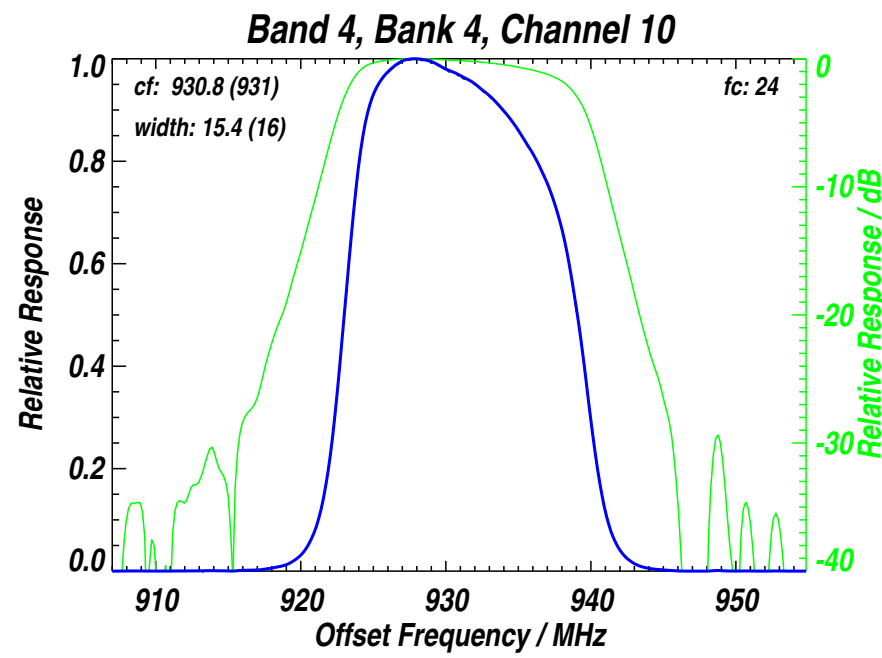
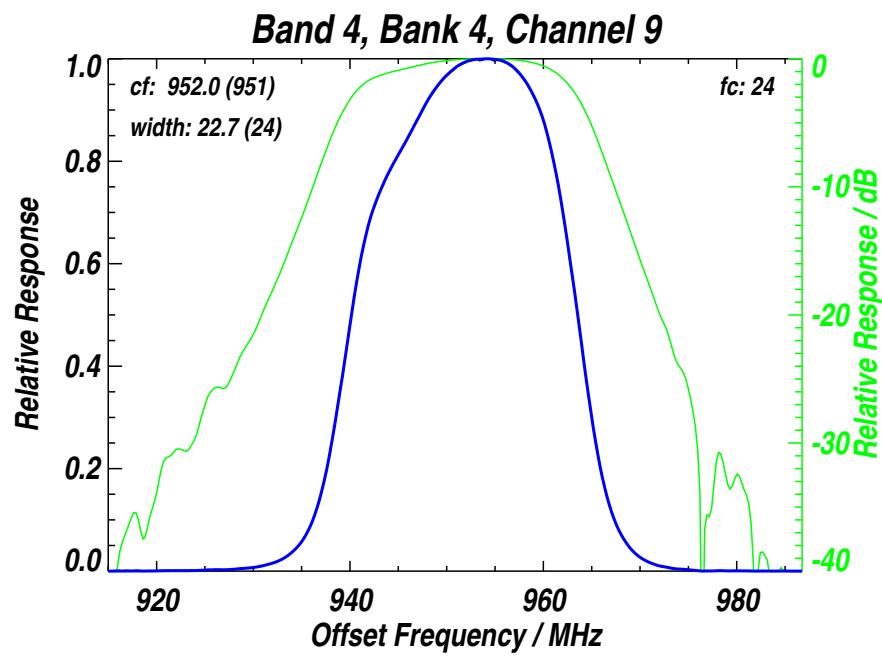


Figure H.94: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 9 to 12. See text for additional details.

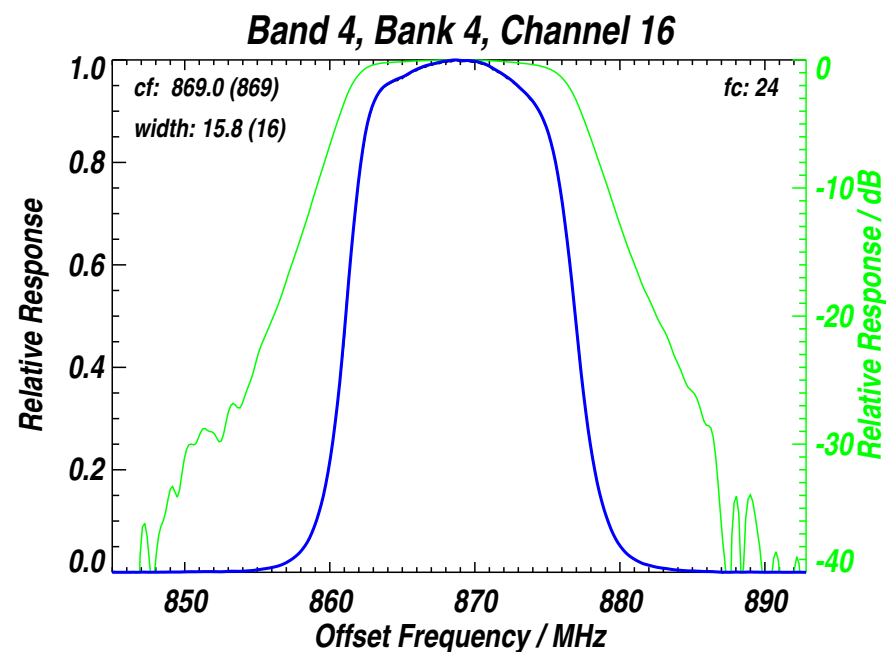
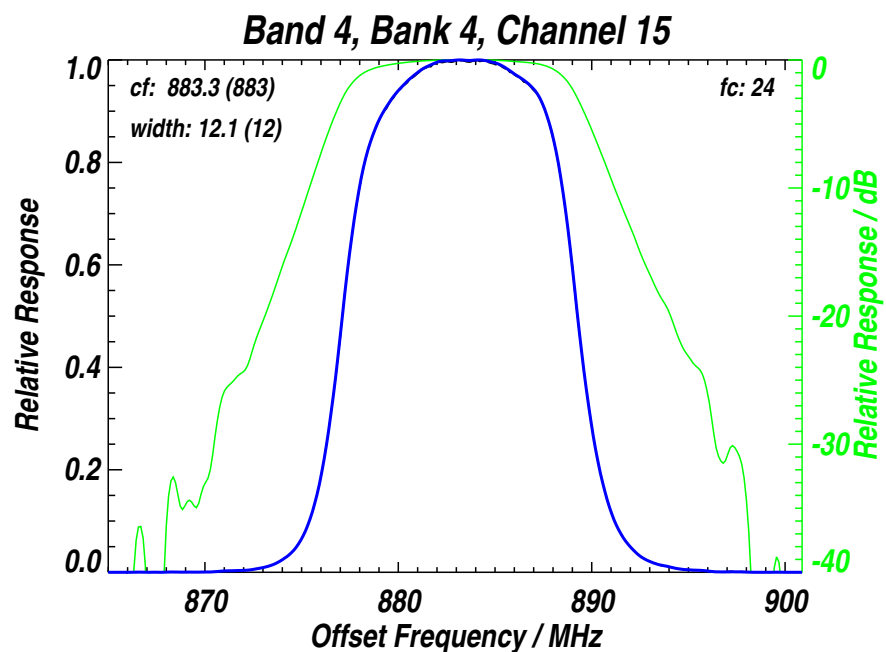
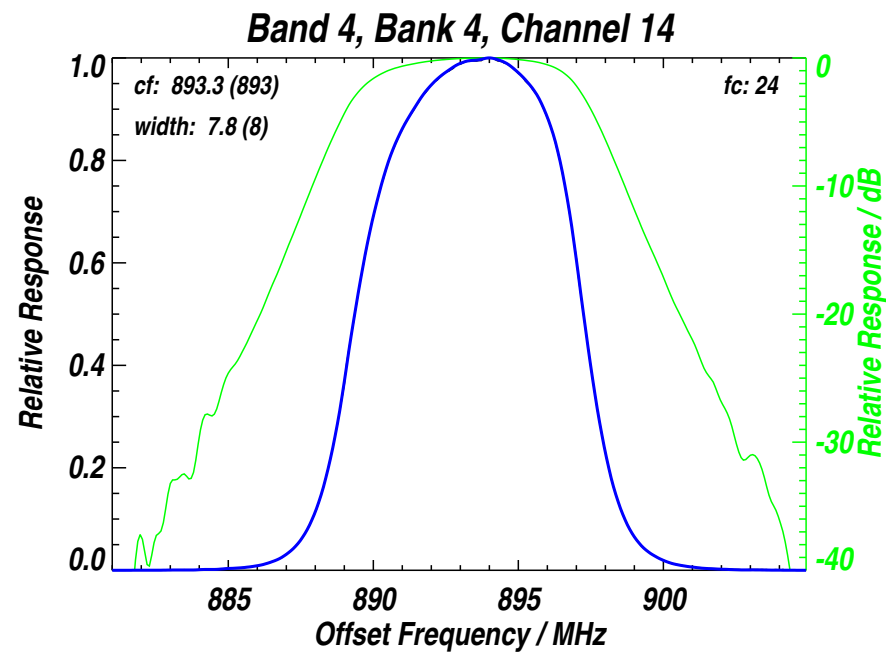
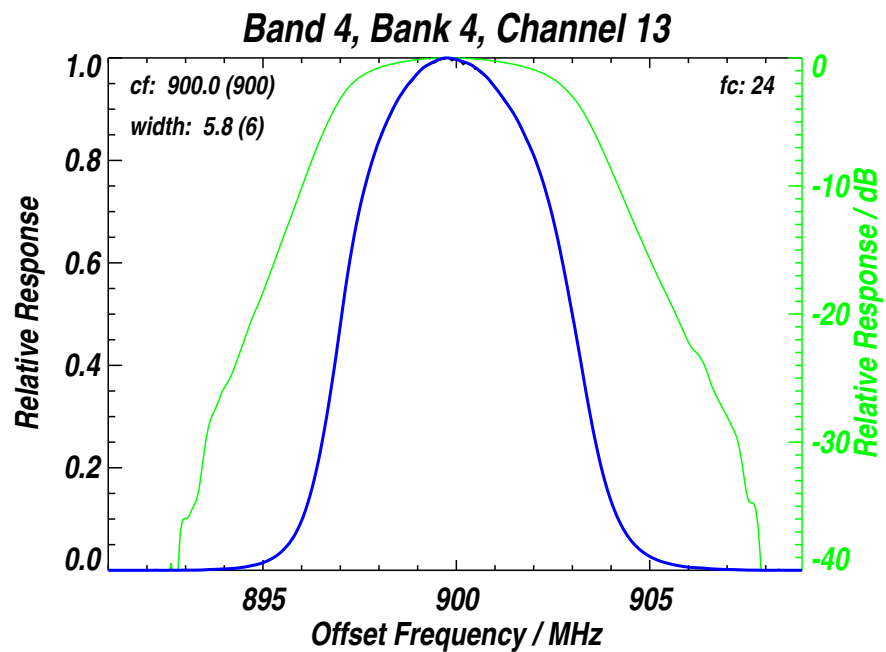


Figure H.95: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 13 to 16. See text for additional details.

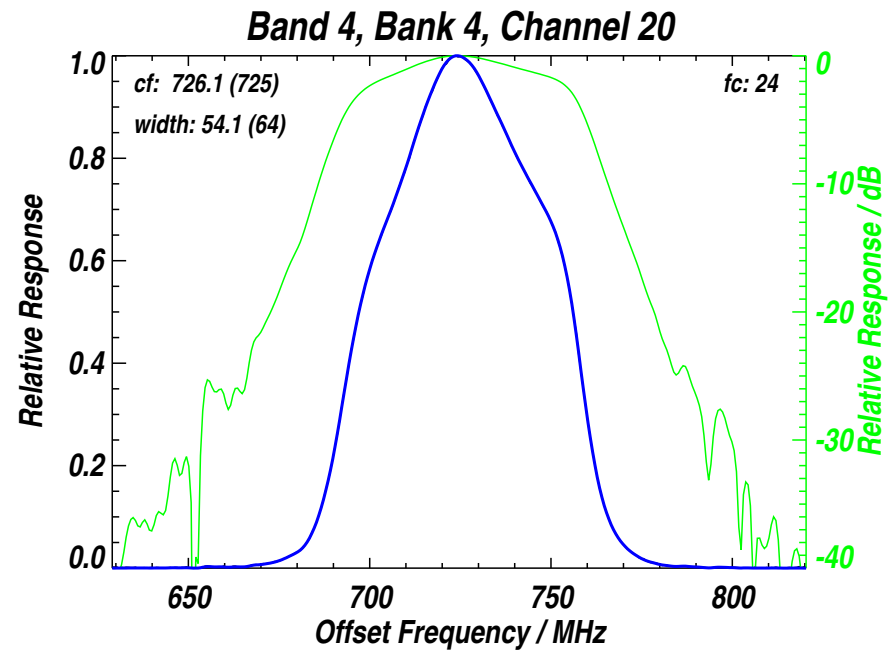
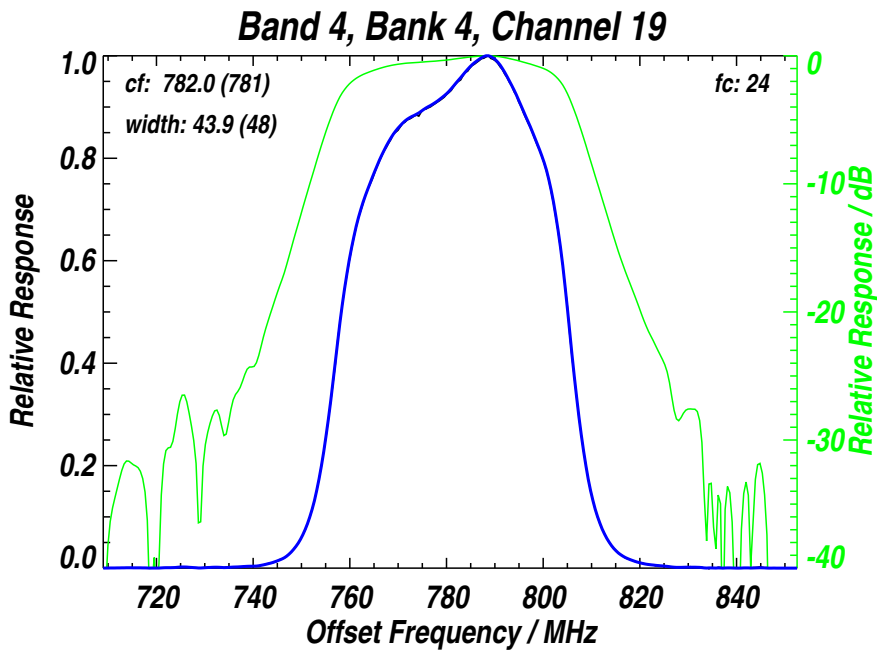
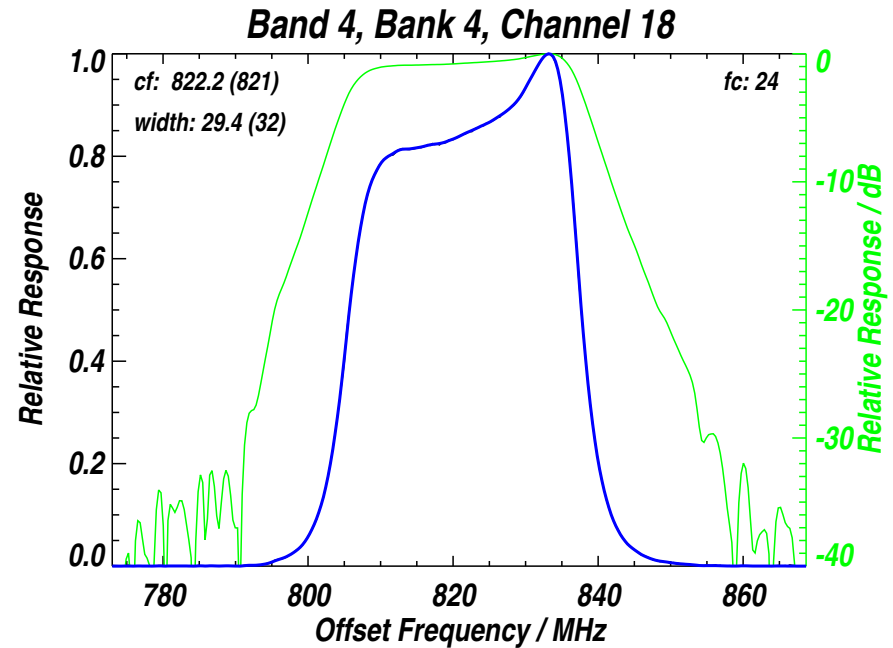
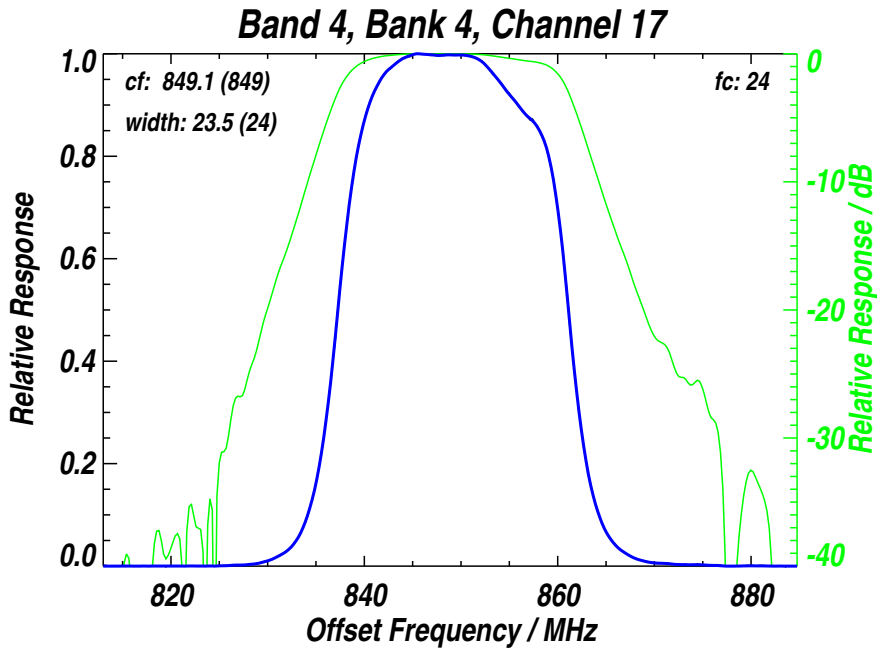


Figure H.96: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 17 to 20. See text for additional details.



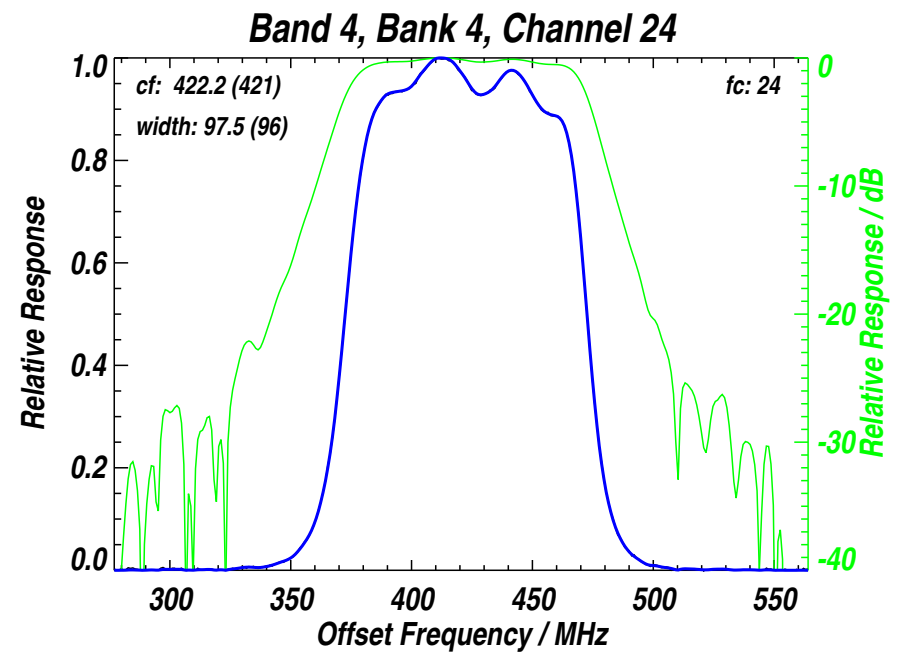
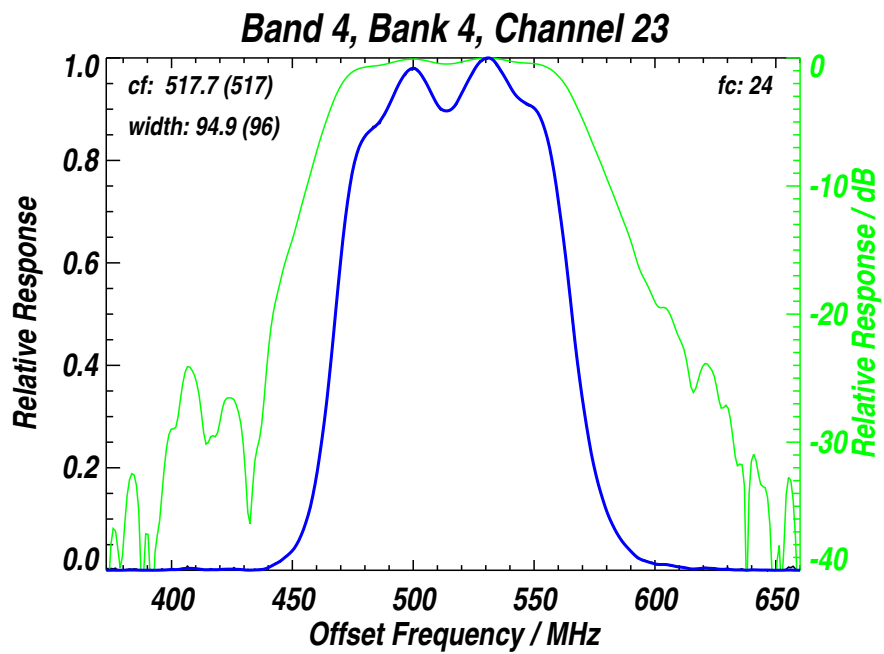
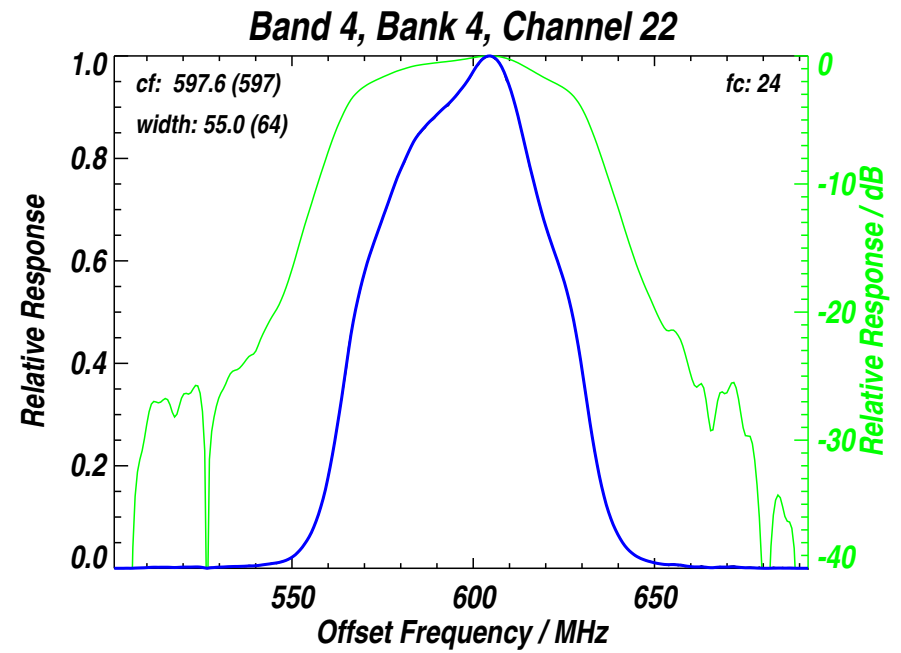
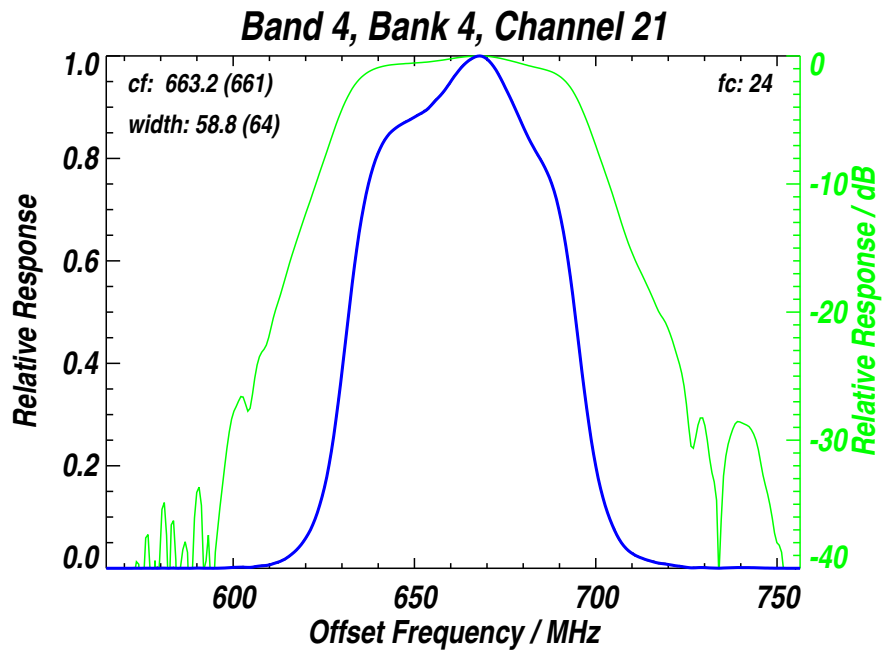
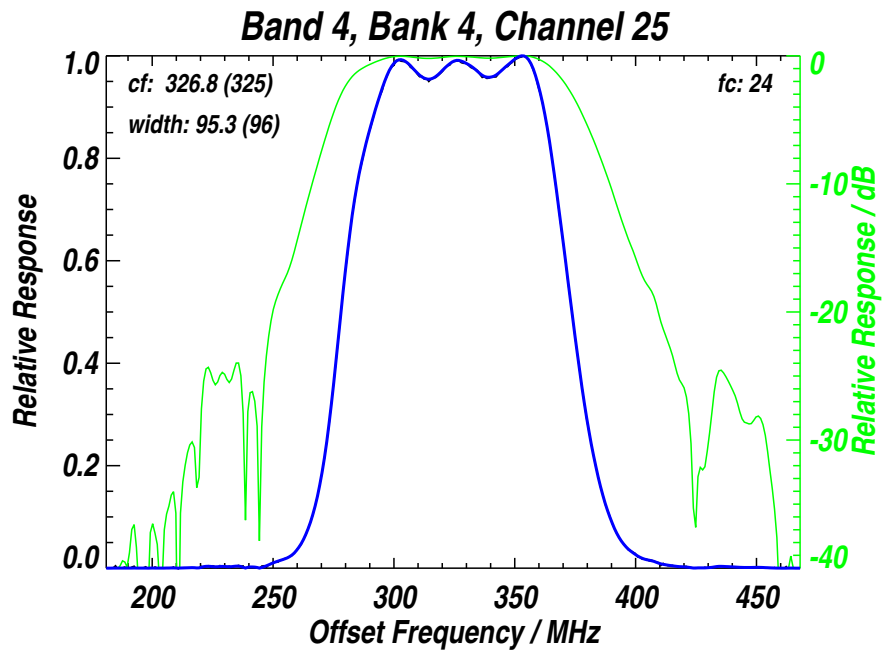


Figure H.97: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channels 21 to 24. See text for additional details.



**Band 4 (usb)**  
**Bank 4**  
**Origin = 201.301666680 GHz**

Figure H.98: Upper sideband front-end sweep data for Band 4 taken via Filterbank 4, channel 25. See text for additional details.

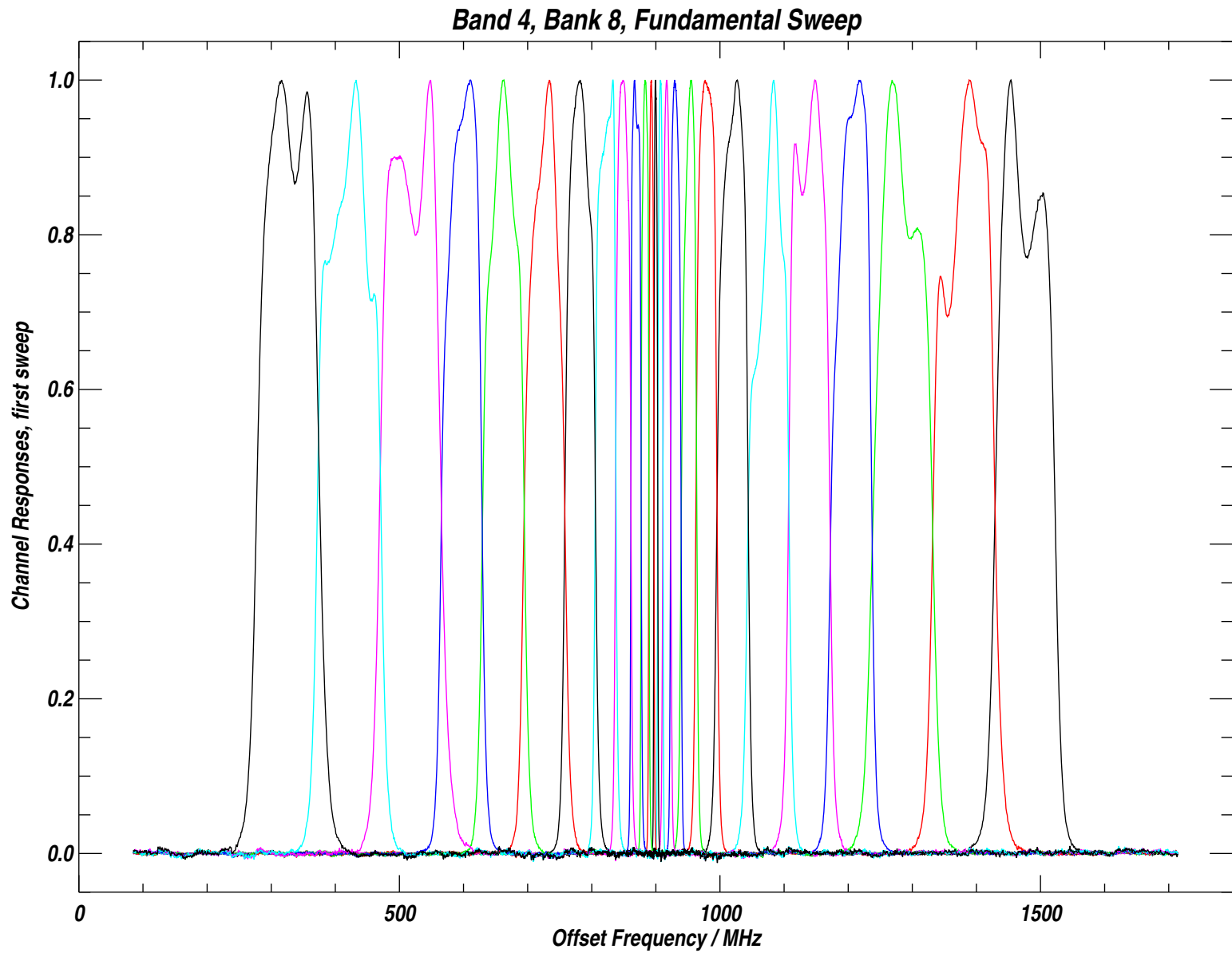


Figure H.99: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8. See text for additional details.

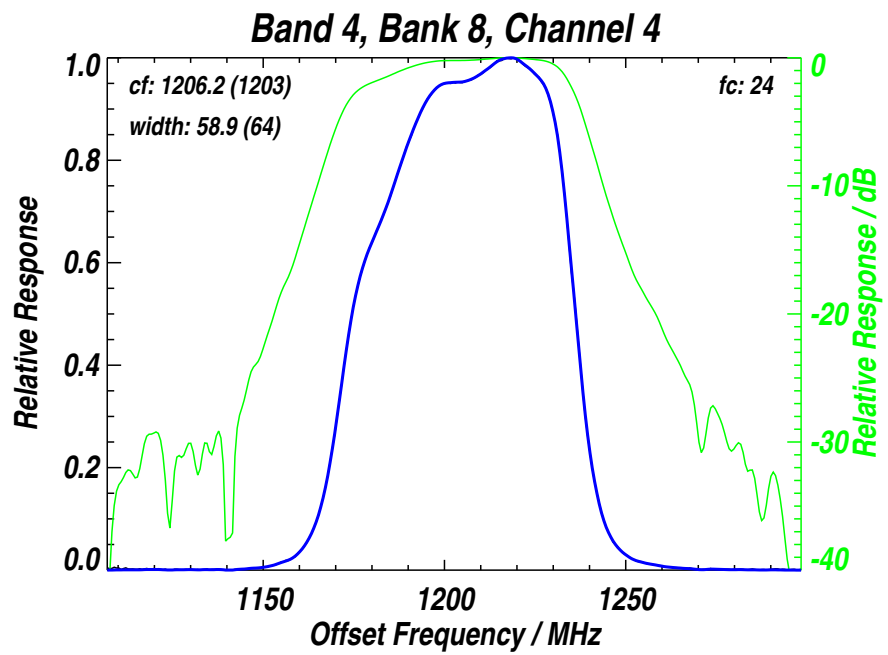
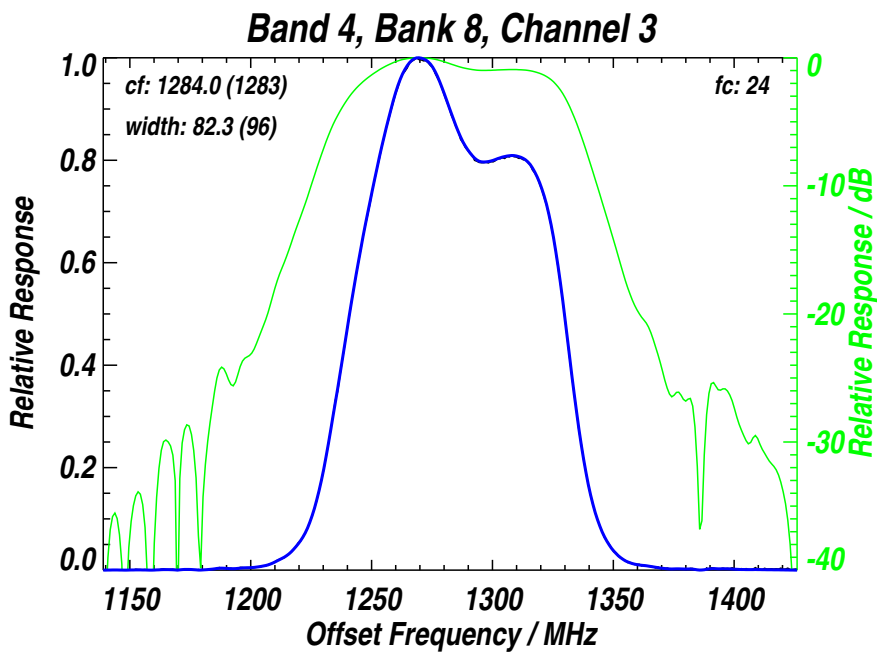
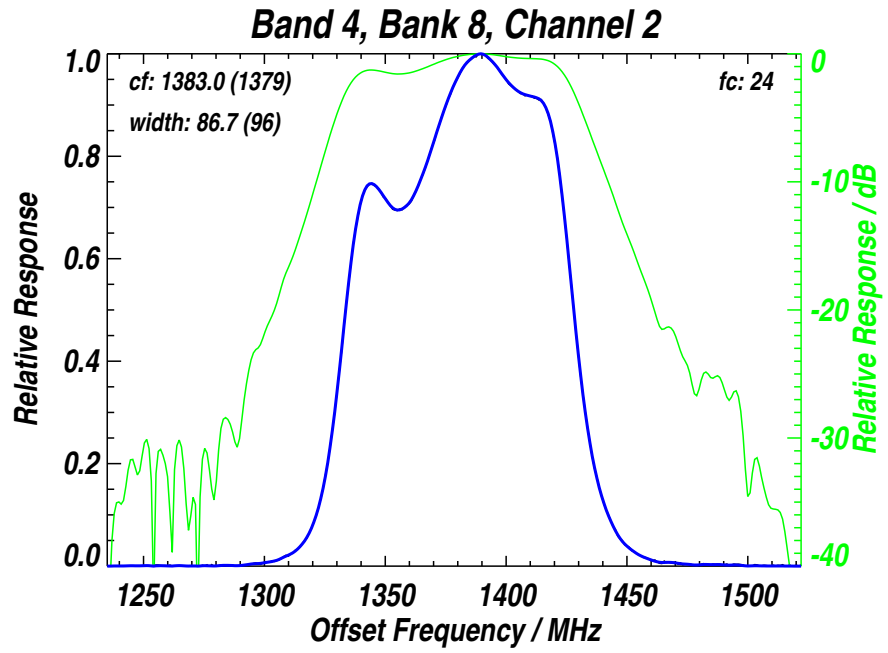
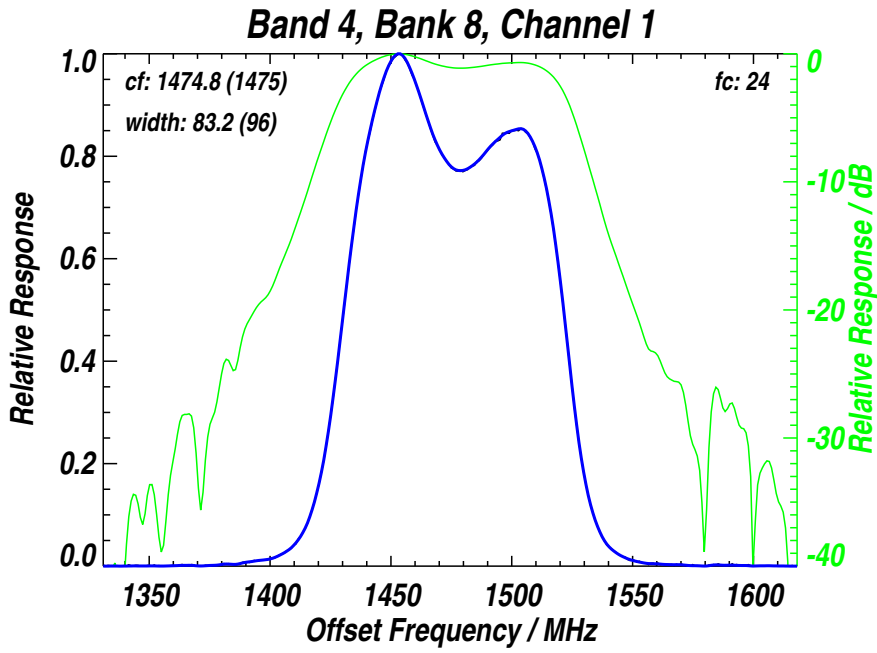


Figure H.100: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 1 to 4. See text for additional details.

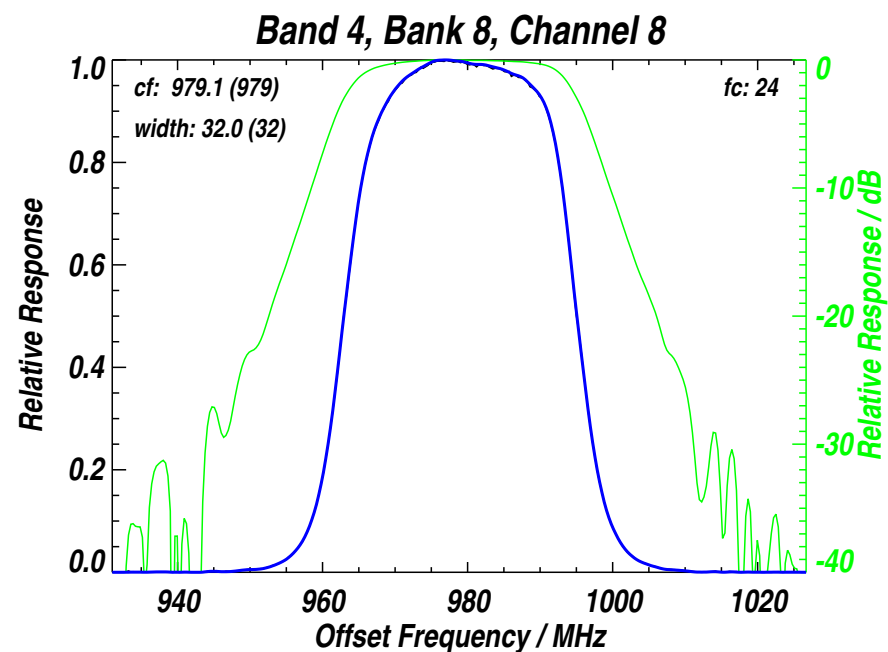
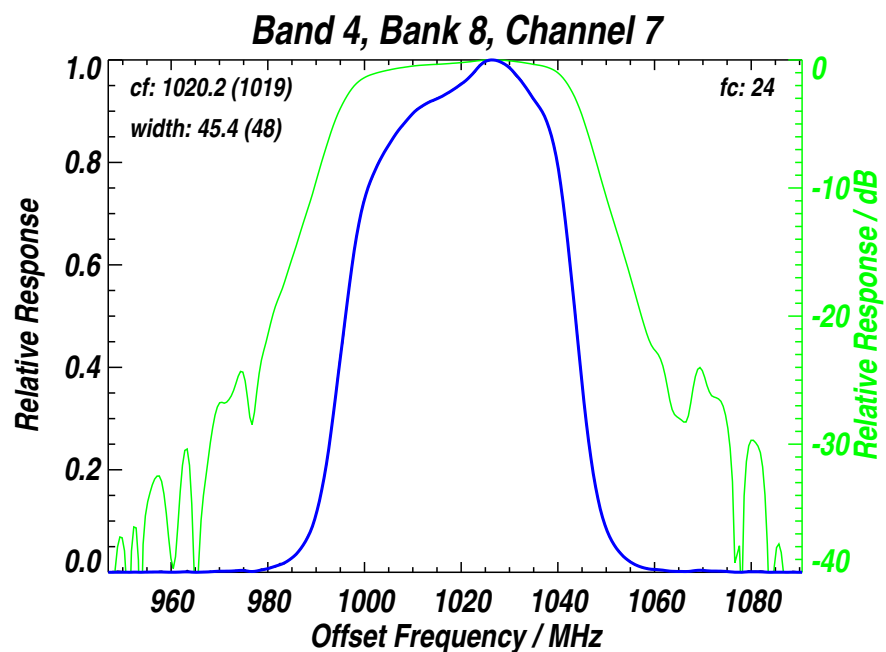
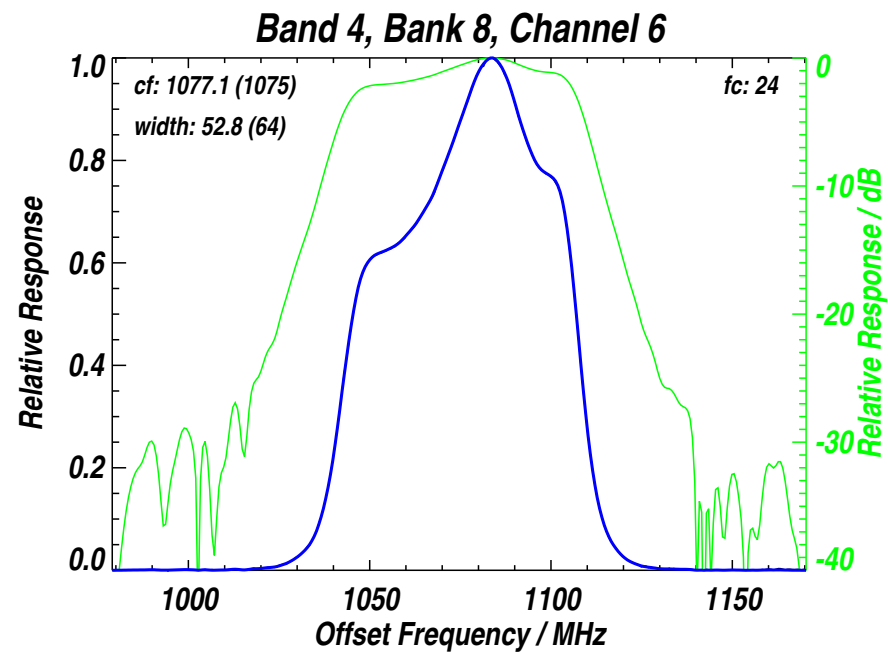
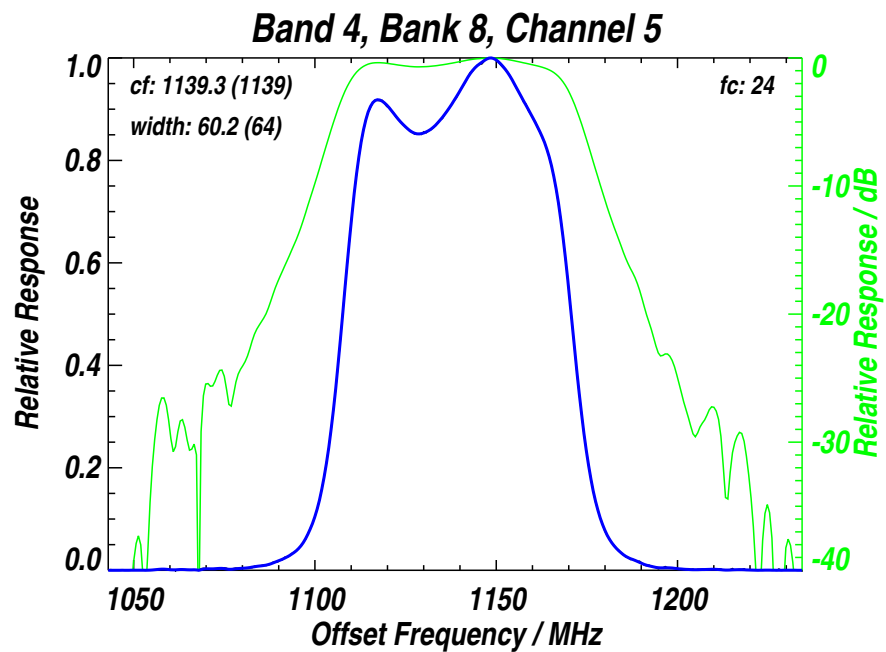


Figure H.101: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 5 to 8. See text for additional details.

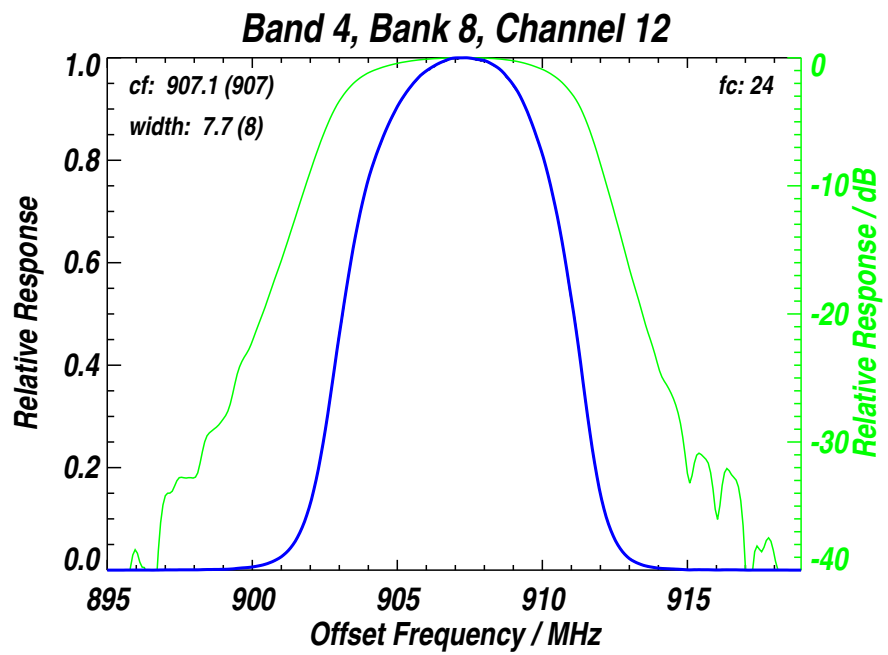
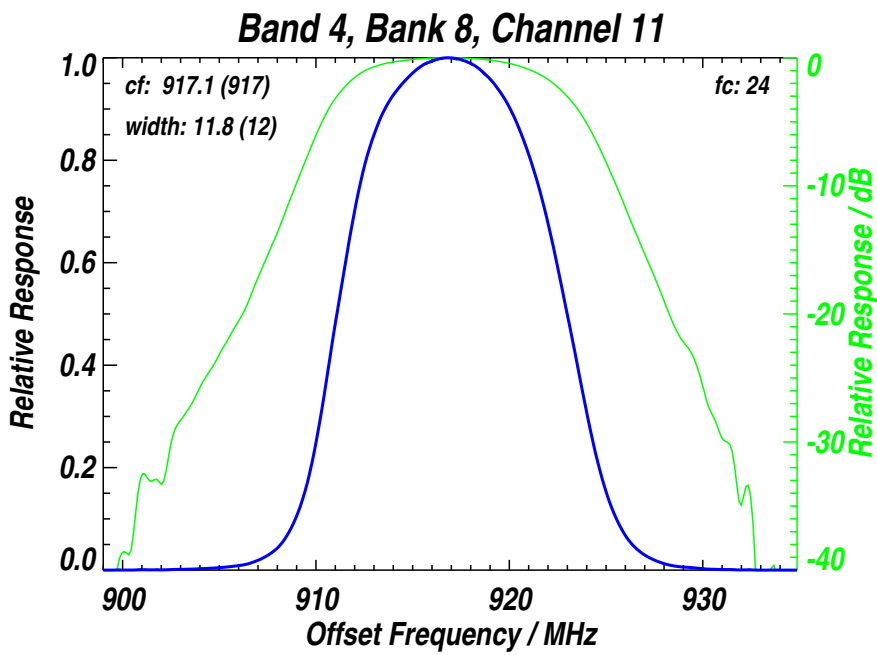
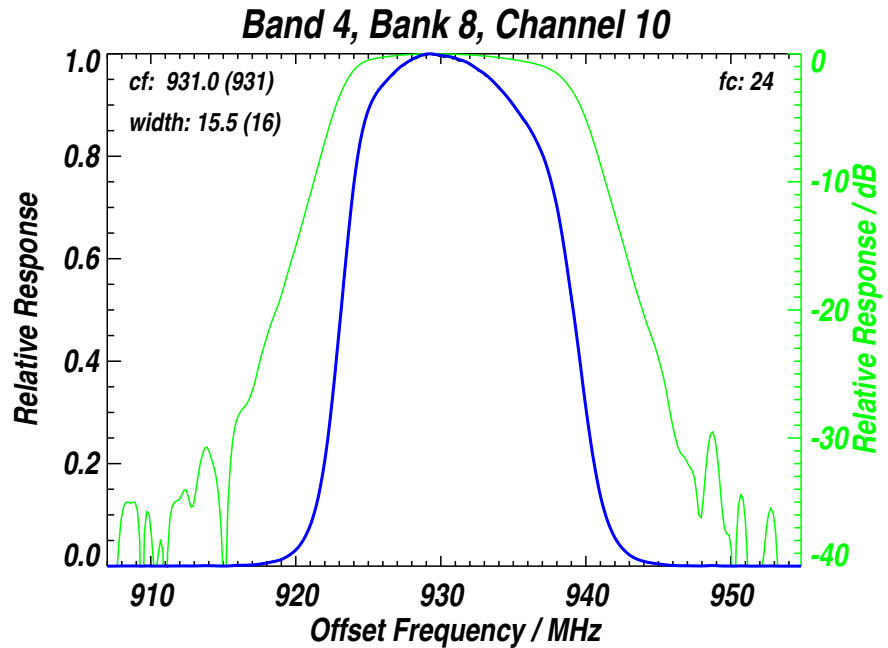
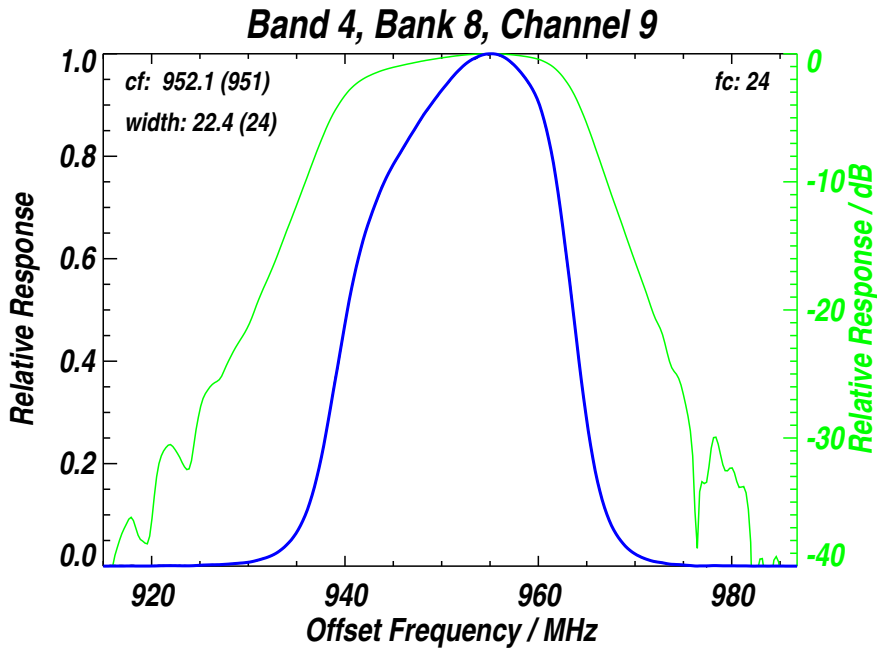


Figure H.102: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 9 to 12. See text for additional details.

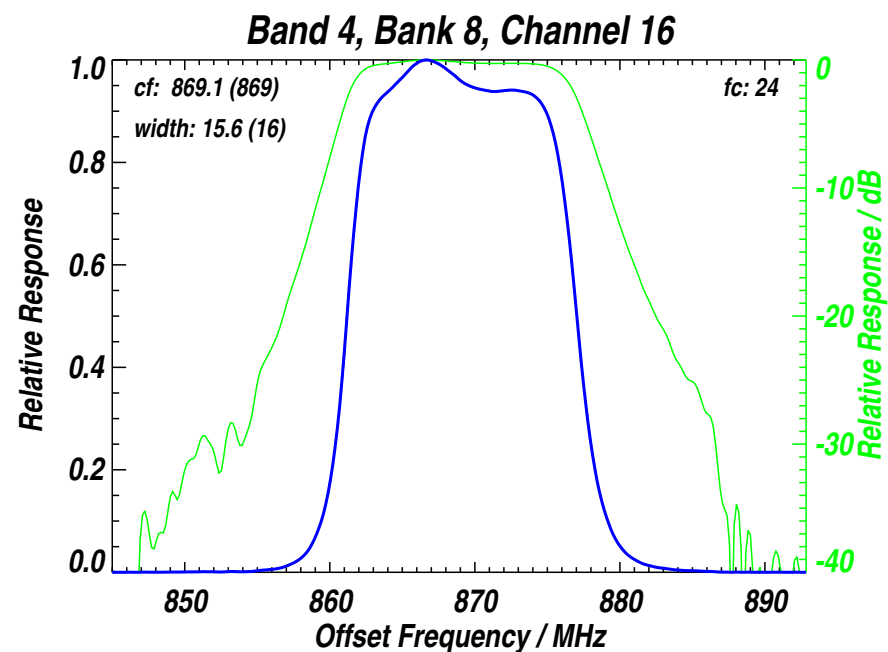
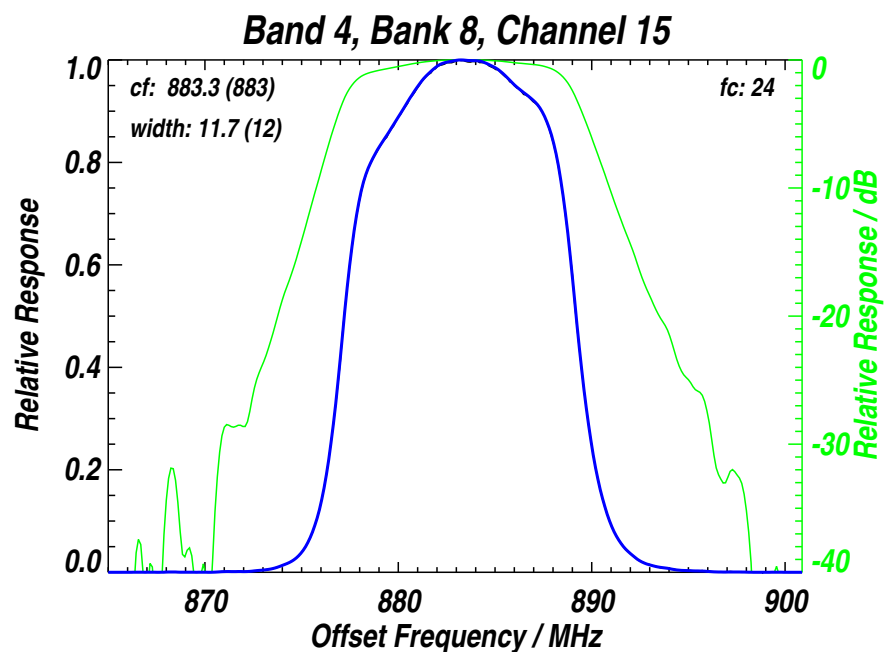
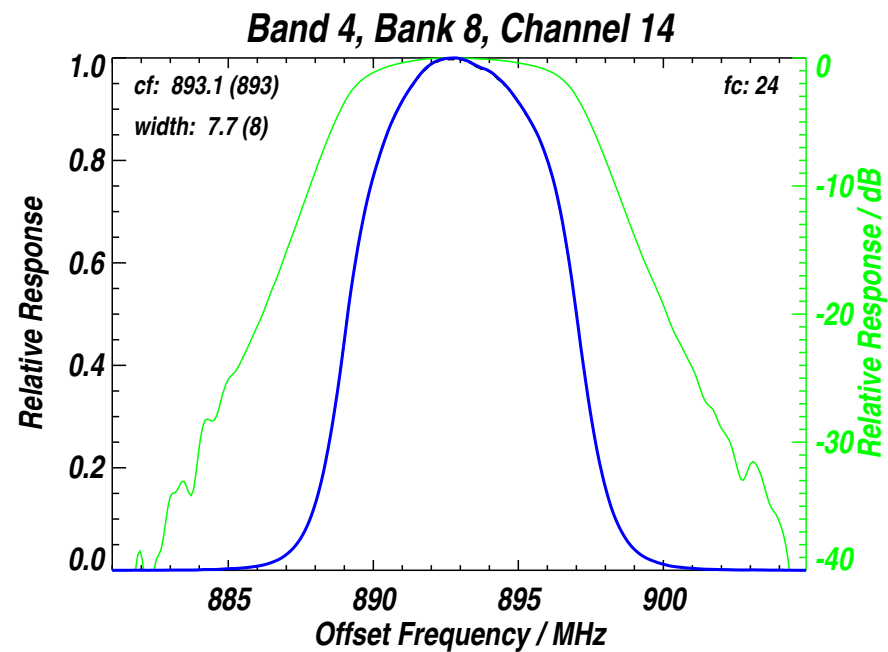
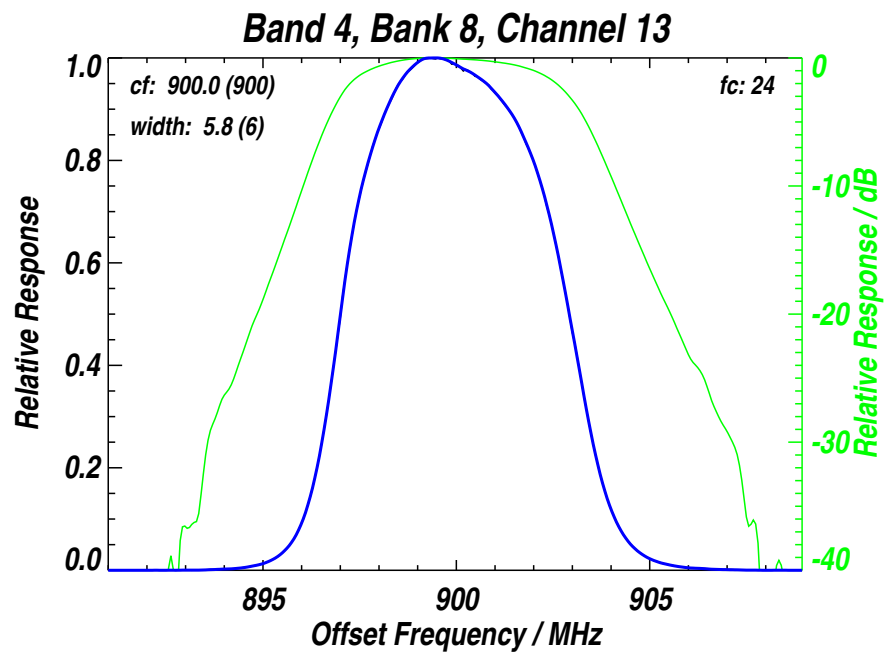


Figure H.103: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 13 to 16. See text for additional details.

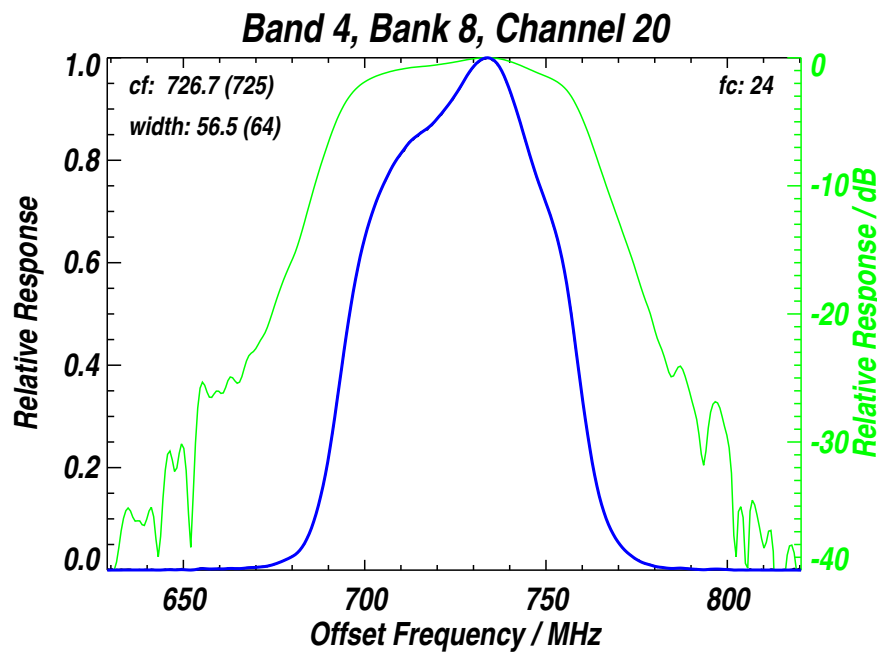
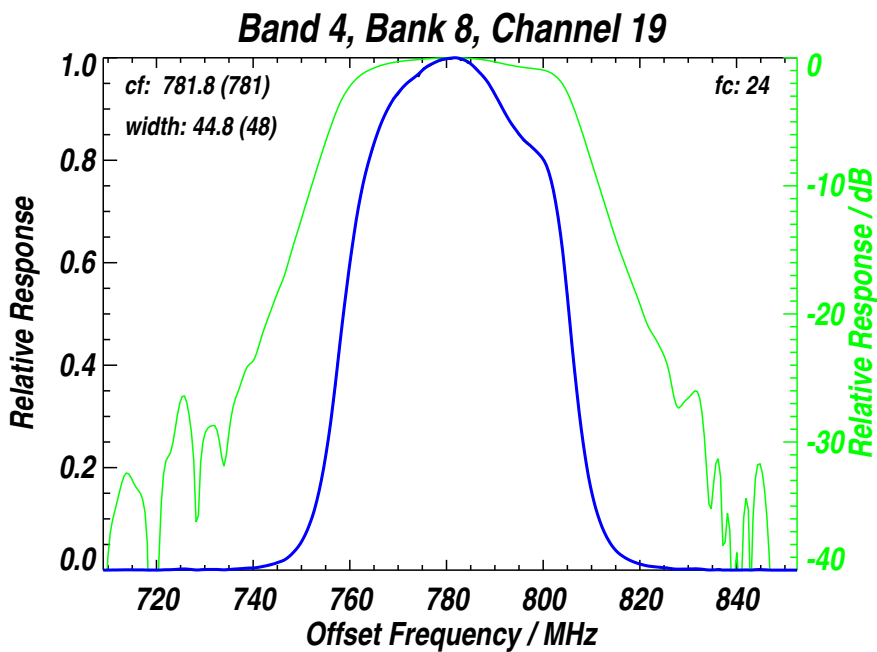
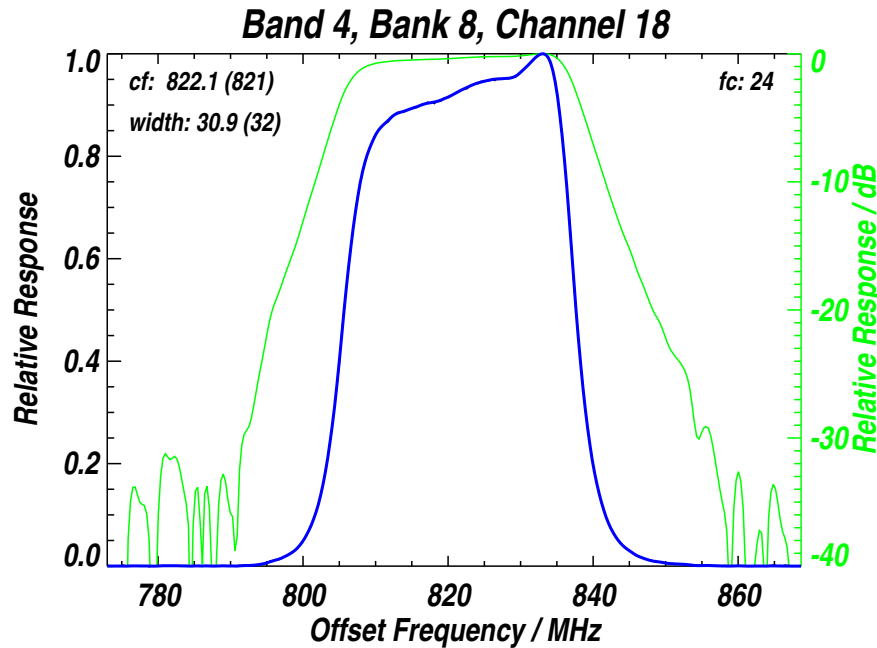
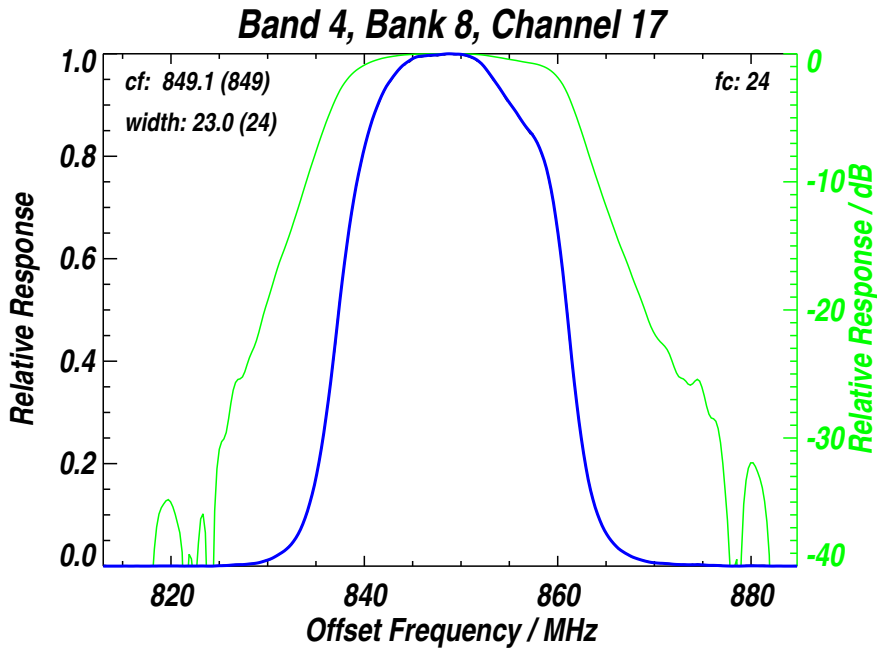


Figure H.104: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 17 to 20. See text for additional details.



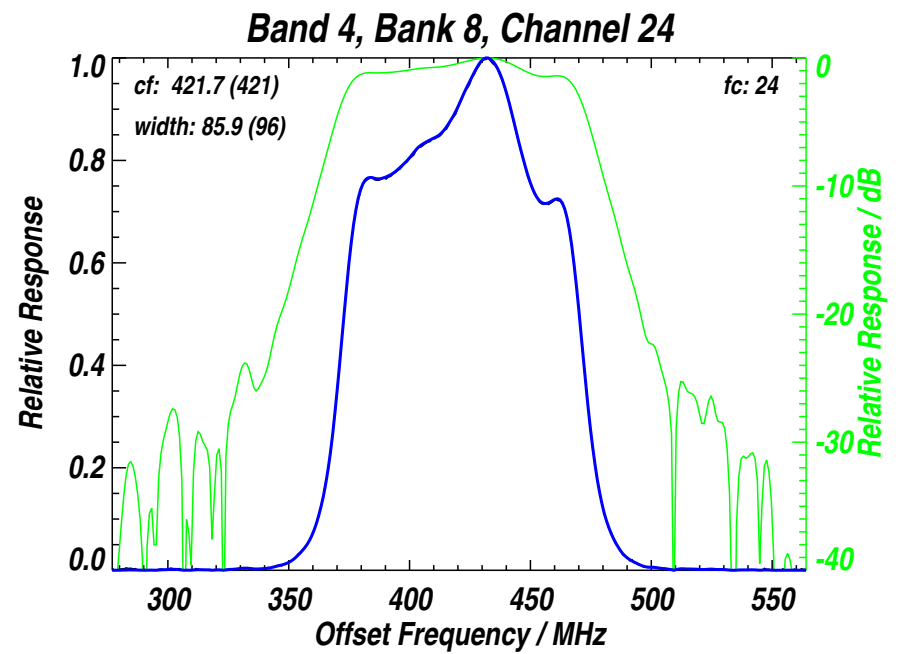
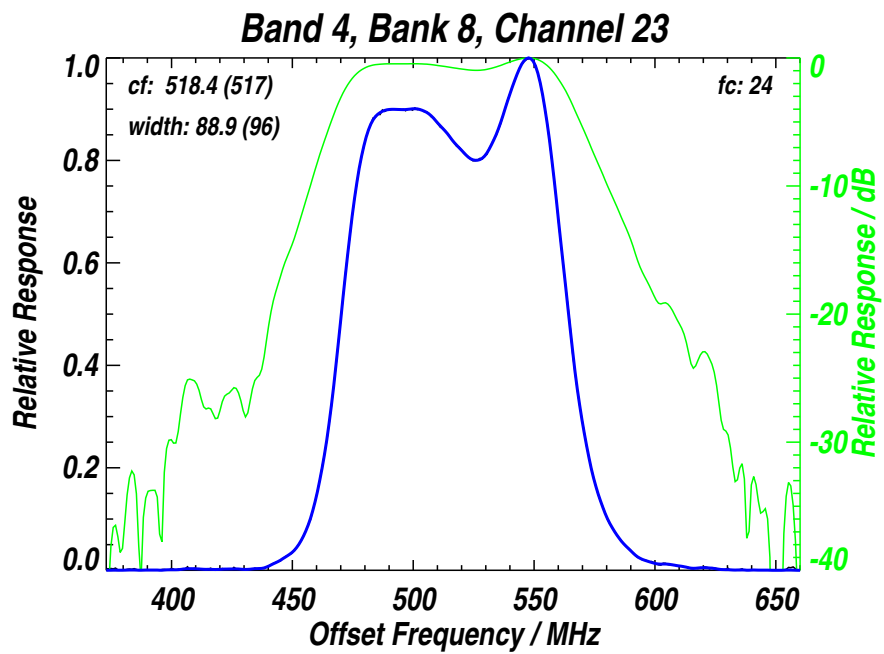
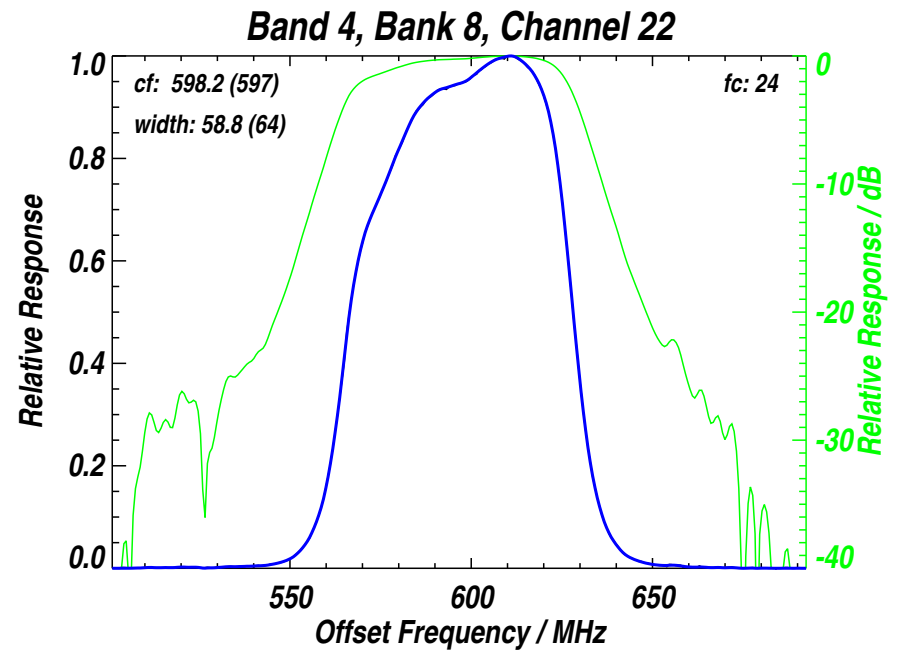
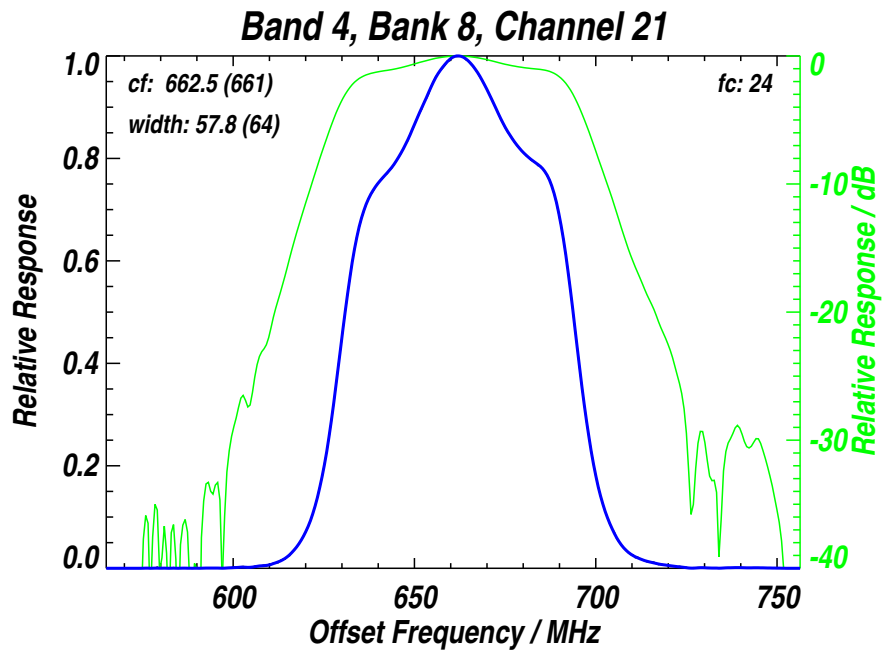
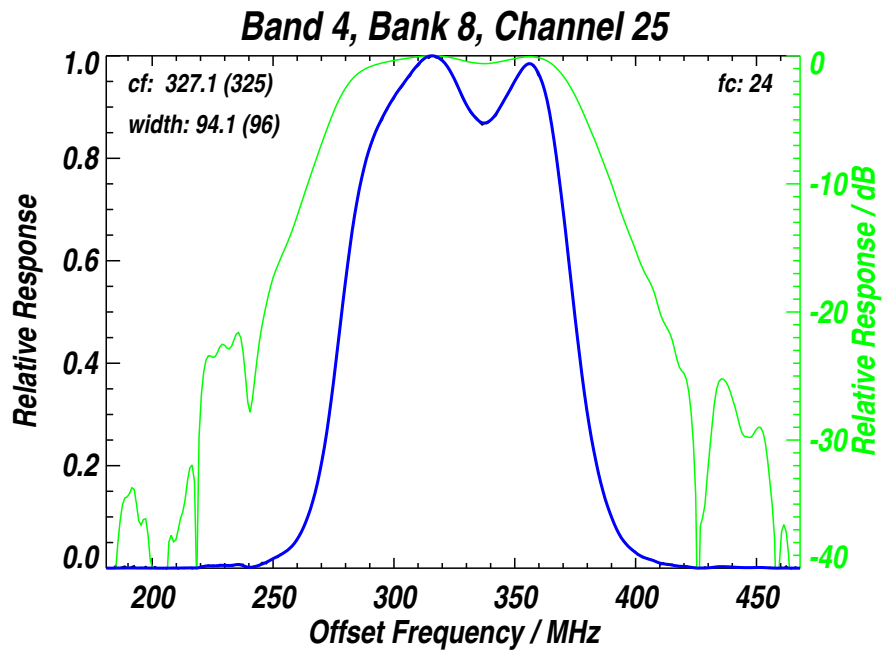


Figure H.105: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 4 (usb)**  
**Bank 8**  
**Origin = 201.301666680 GHz**

Figure H.106: Upper sideband front-end sweep data for Band 4 taken via Filterbank 8, channel 25. See text for additional details.

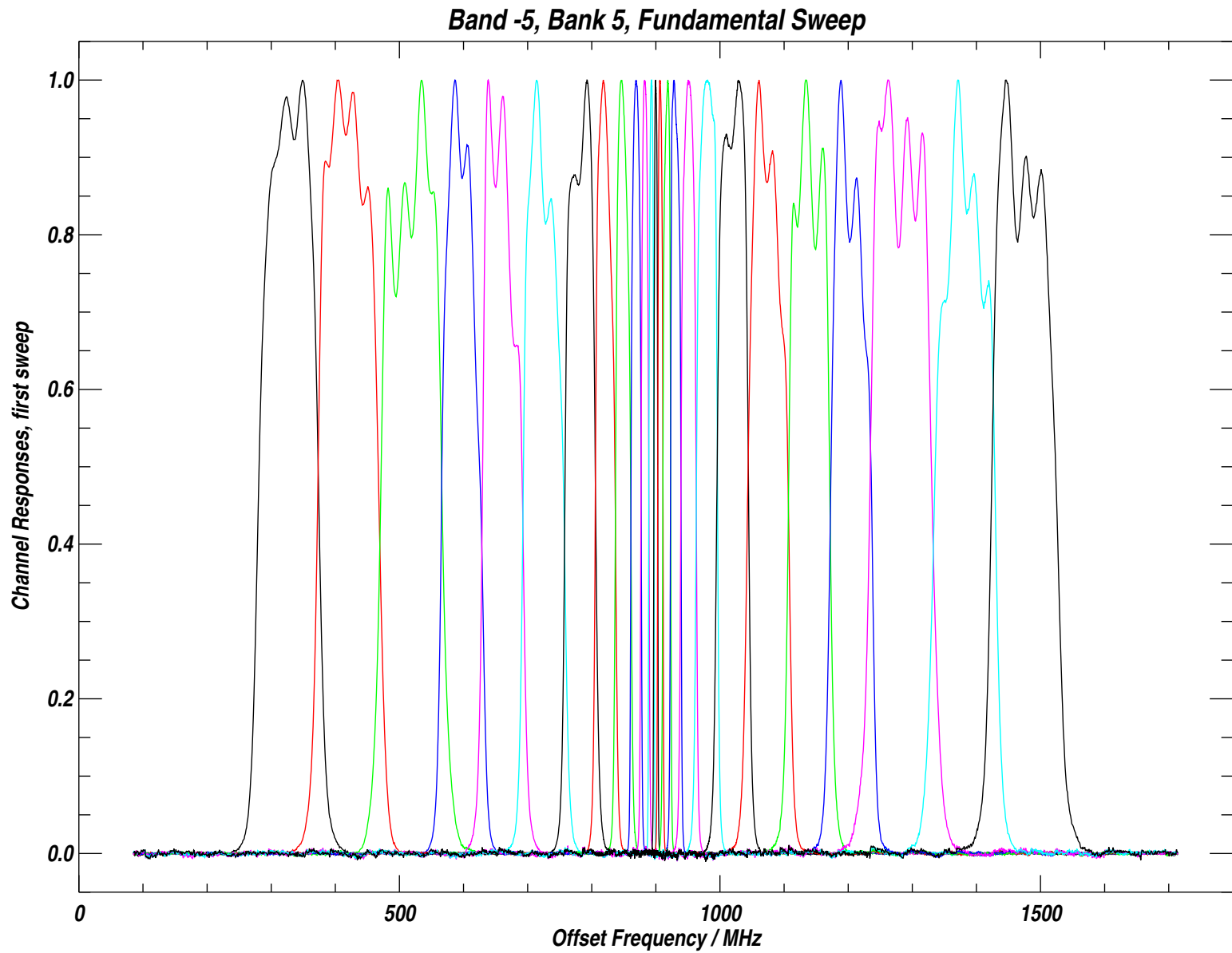


Figure H.107: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5. See text for additional details.

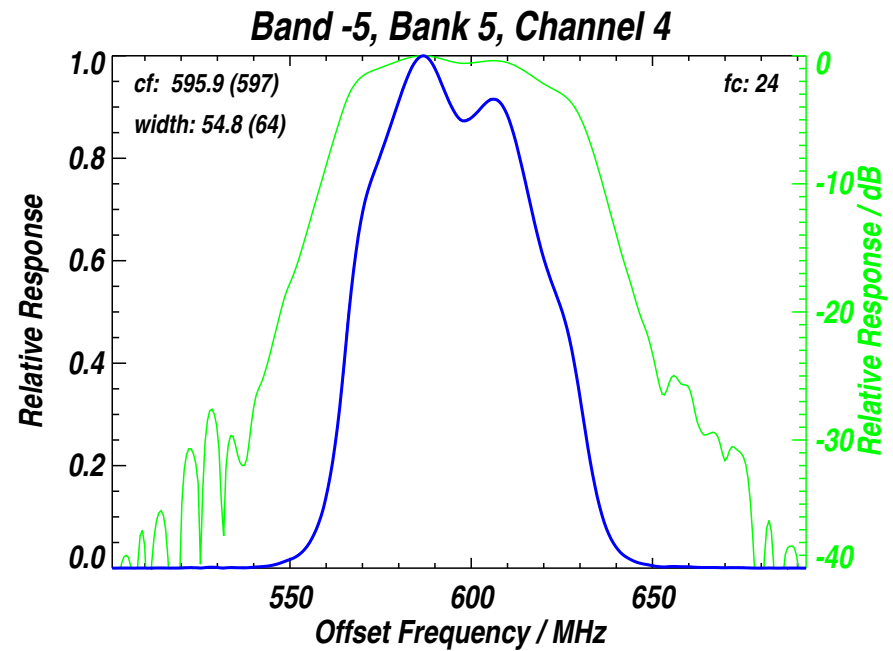
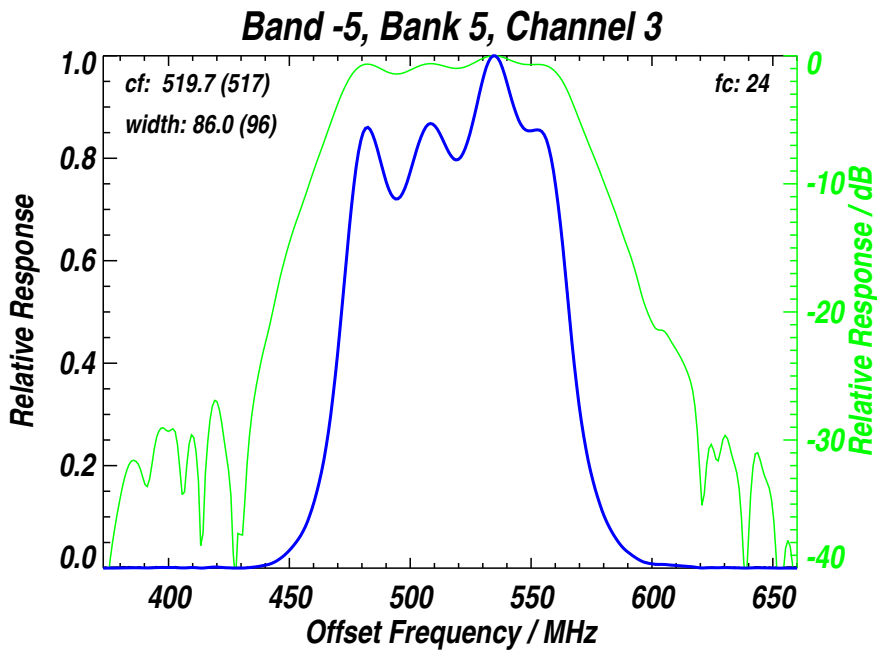
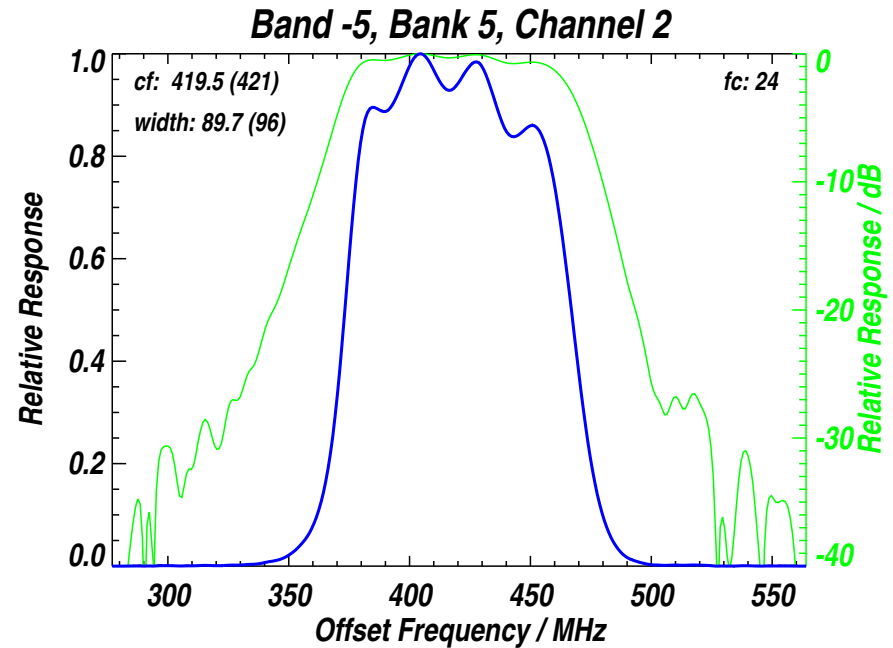
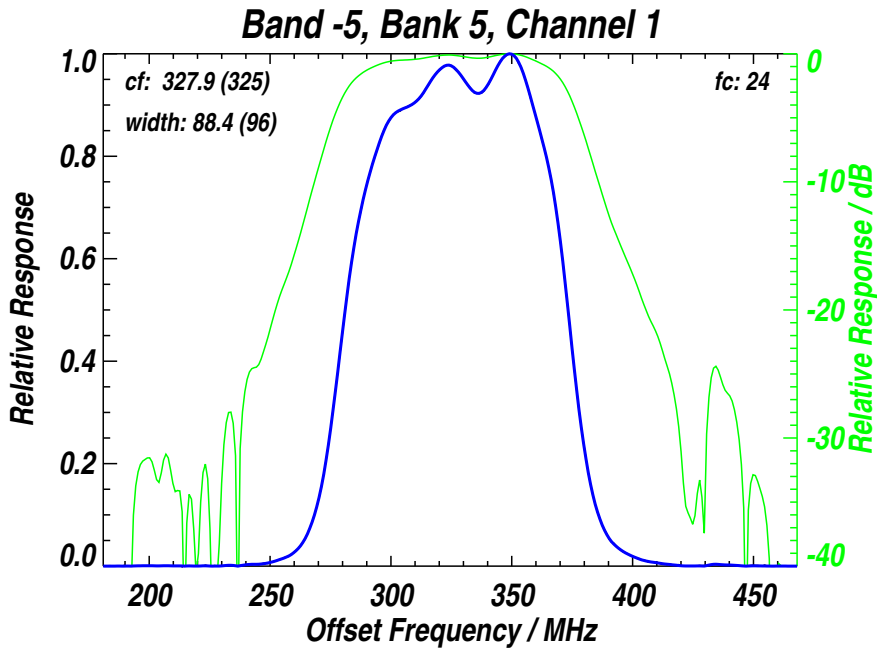


Figure H.108: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 1 to 4. See text for additional details.

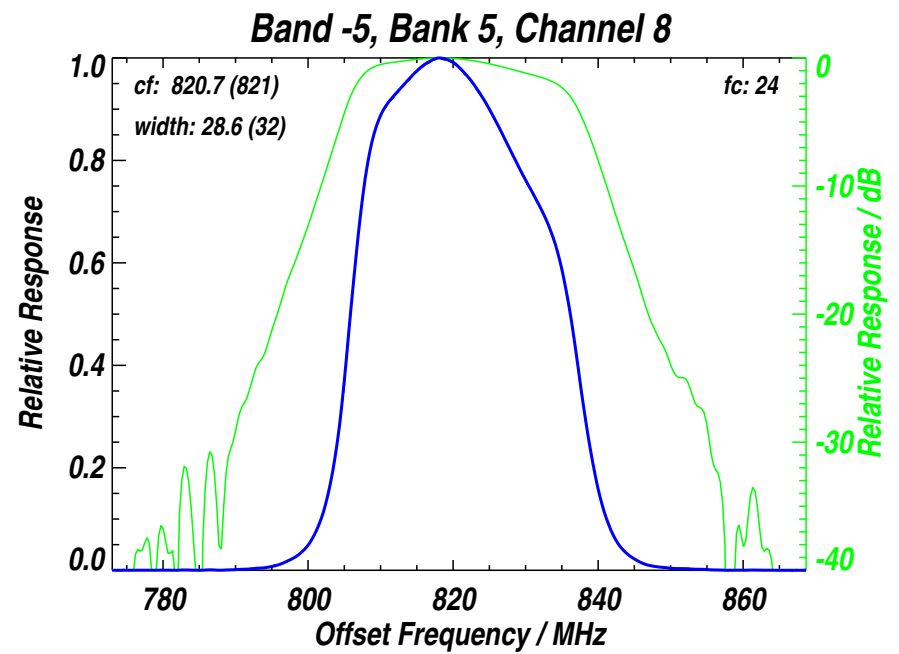
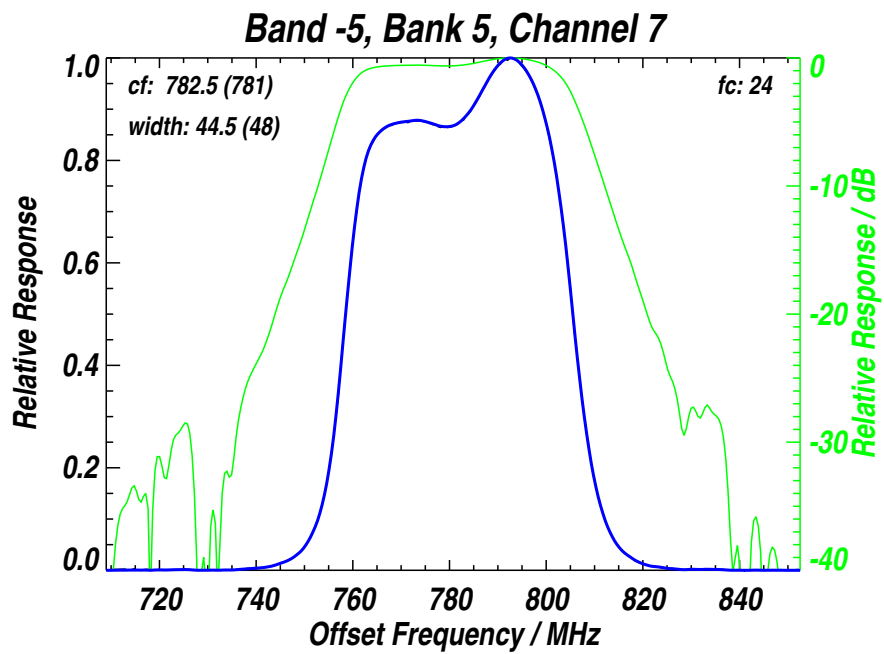
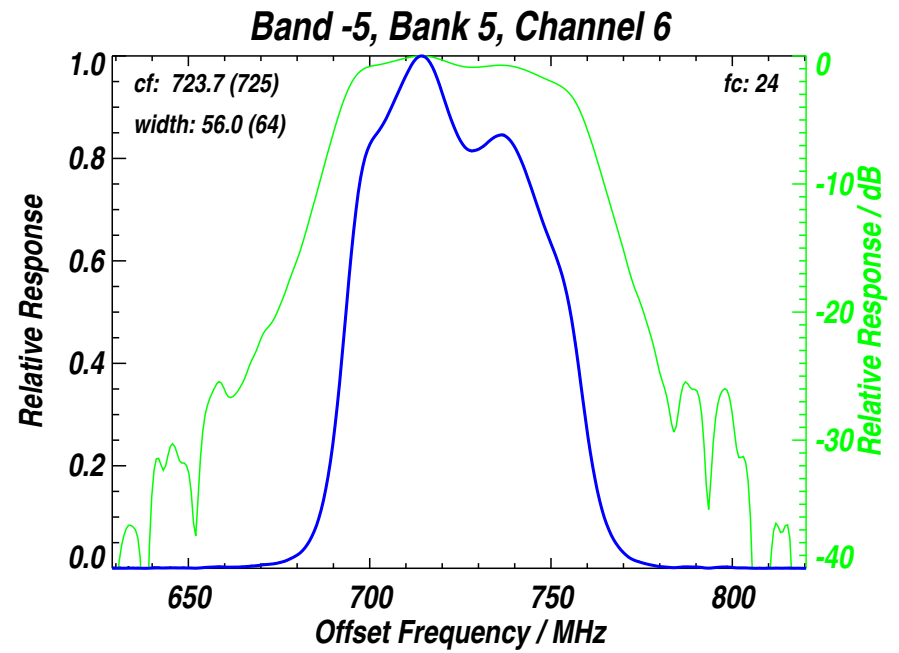
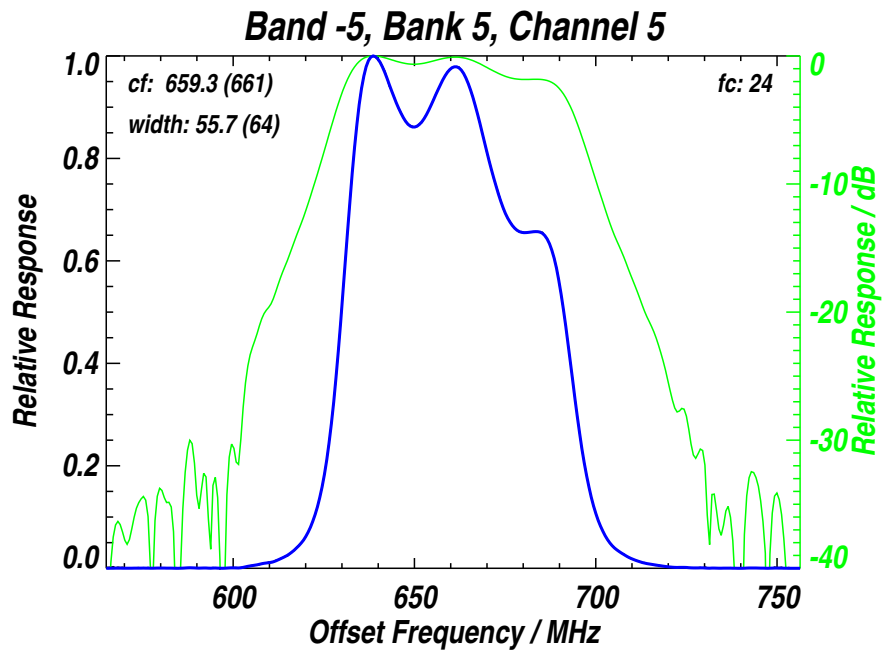


Figure H.109: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 5 to 8. See text for additional details.

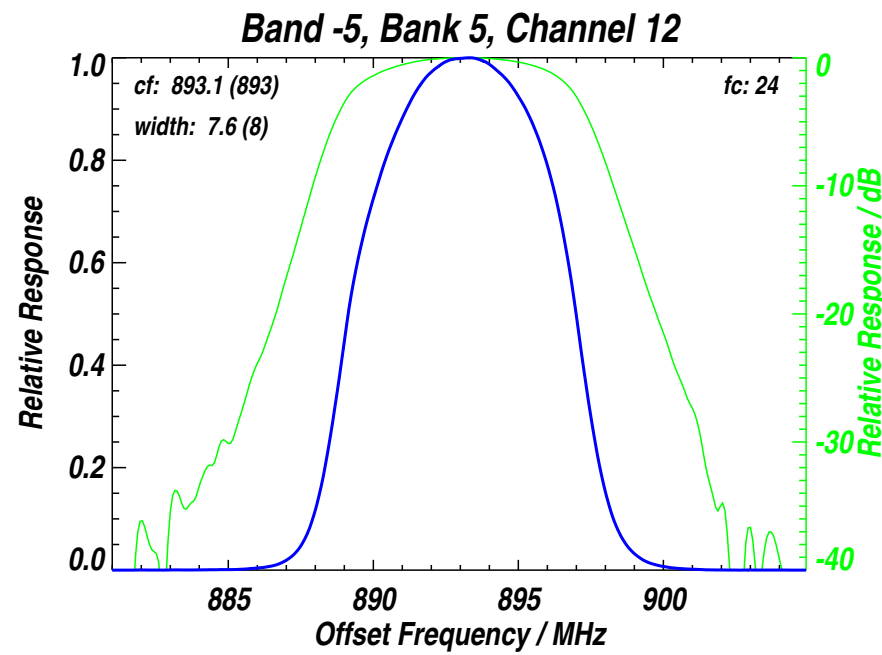
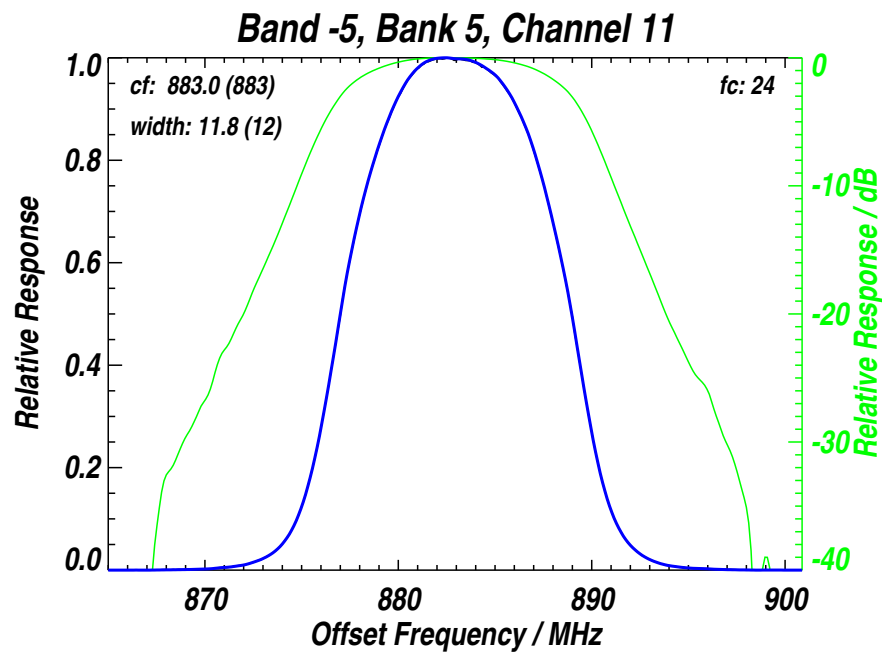
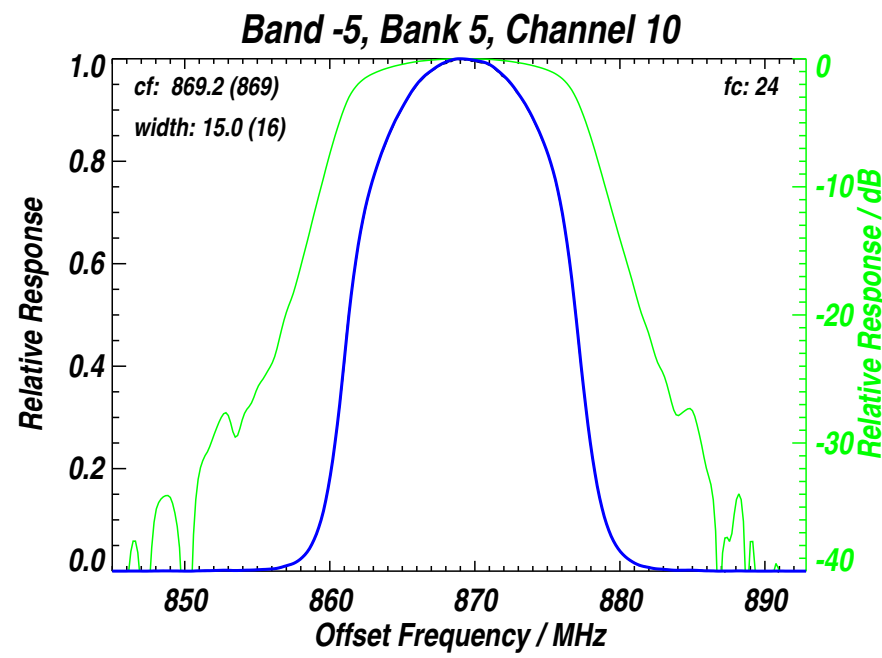
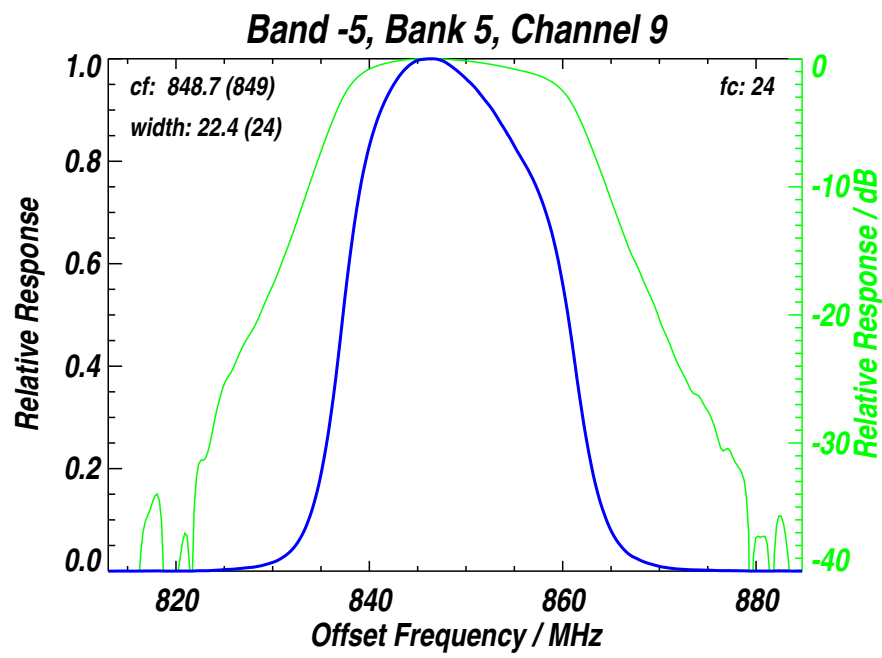


Figure H.110: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 9 to 12. See text for additional details.

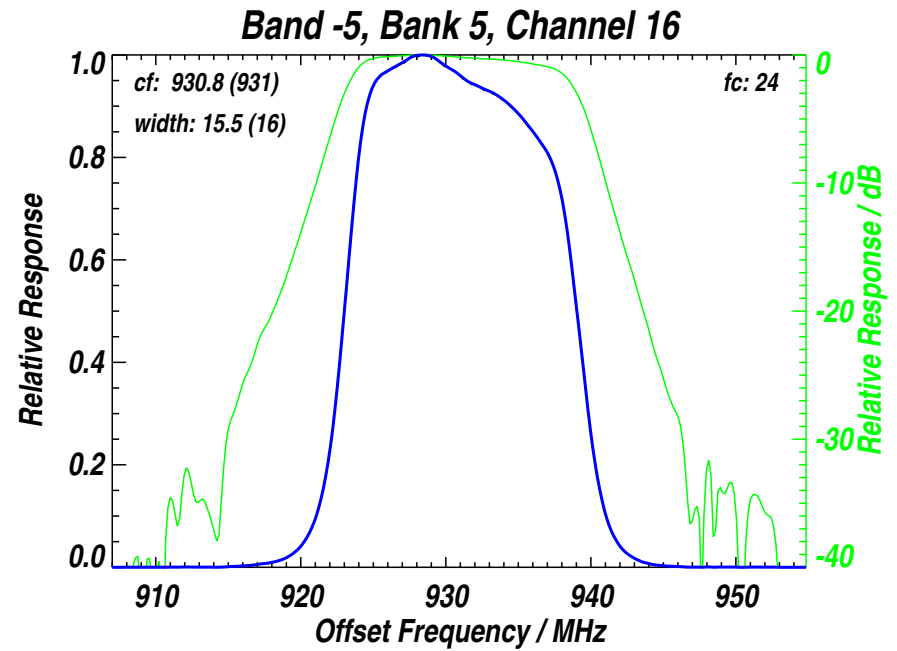
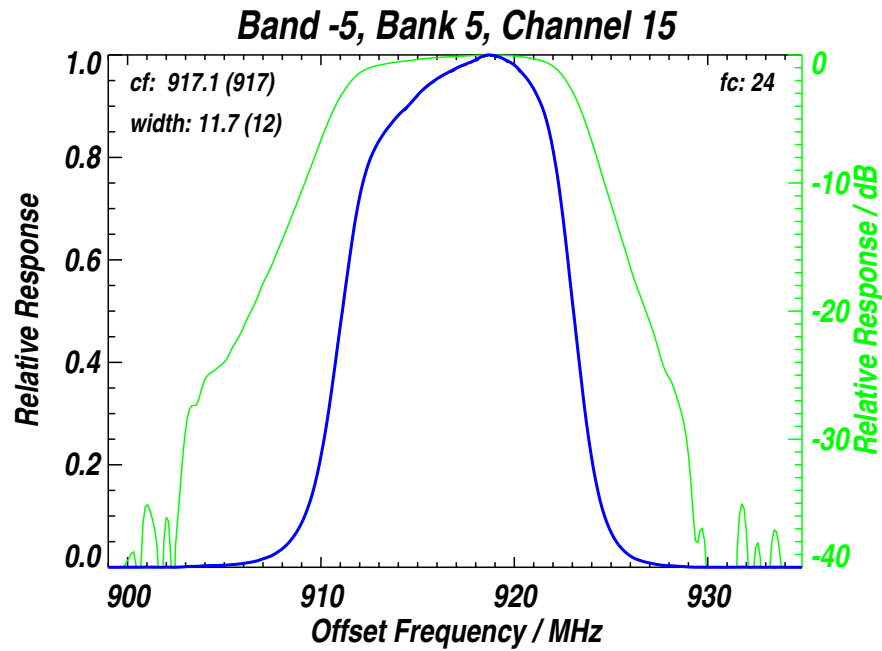
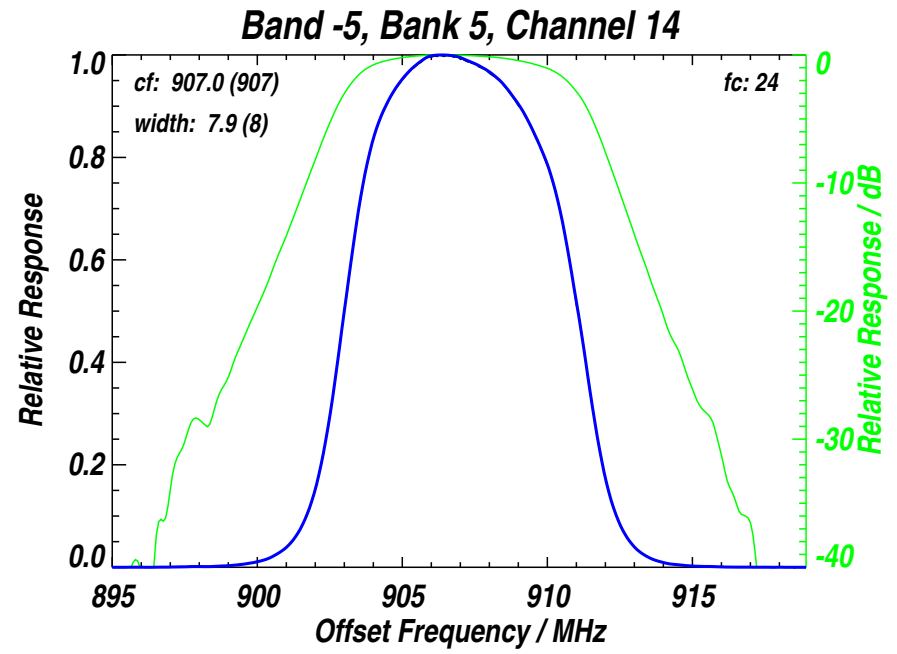
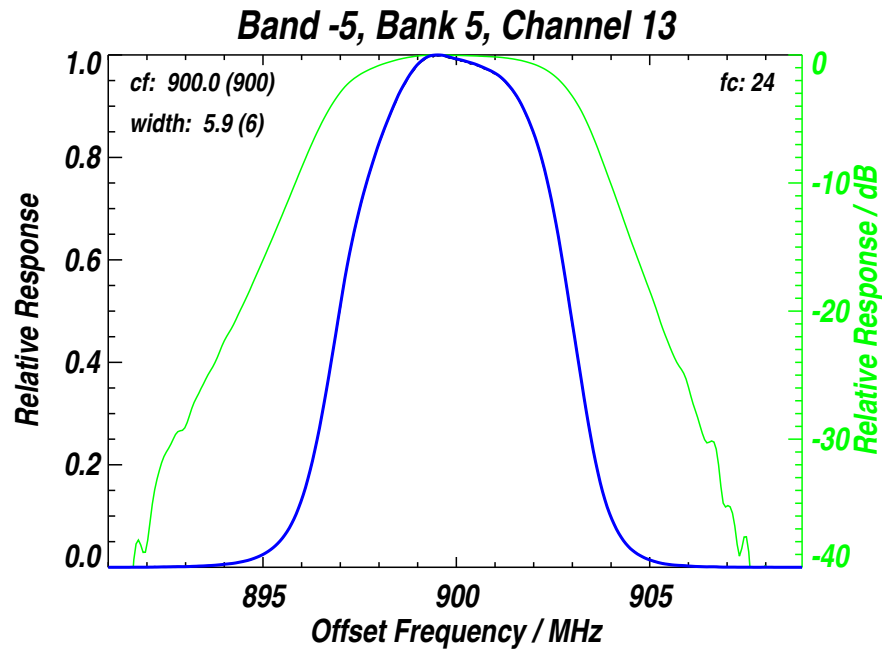


Figure H.111: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 13 to 16. See text for additional details.

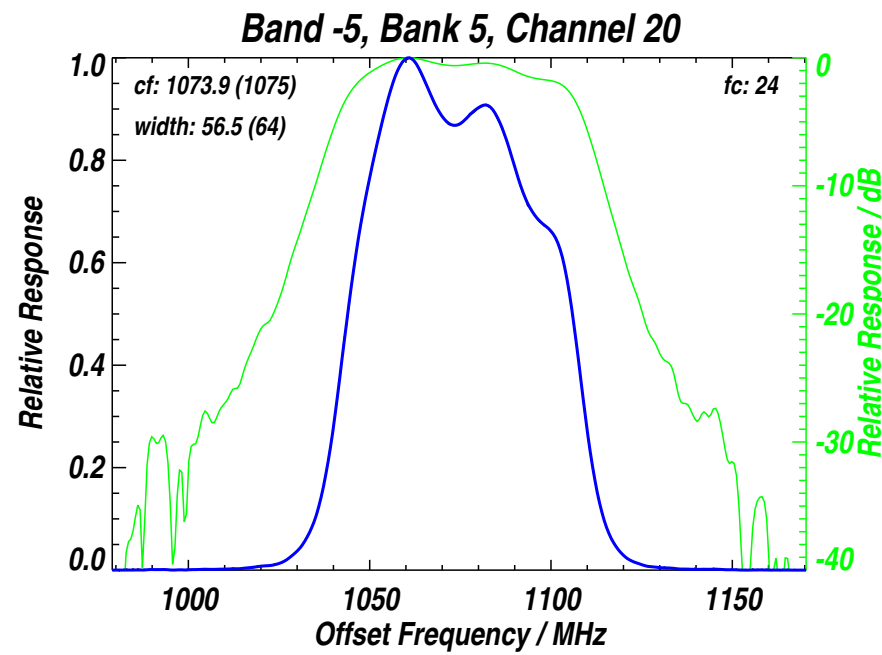
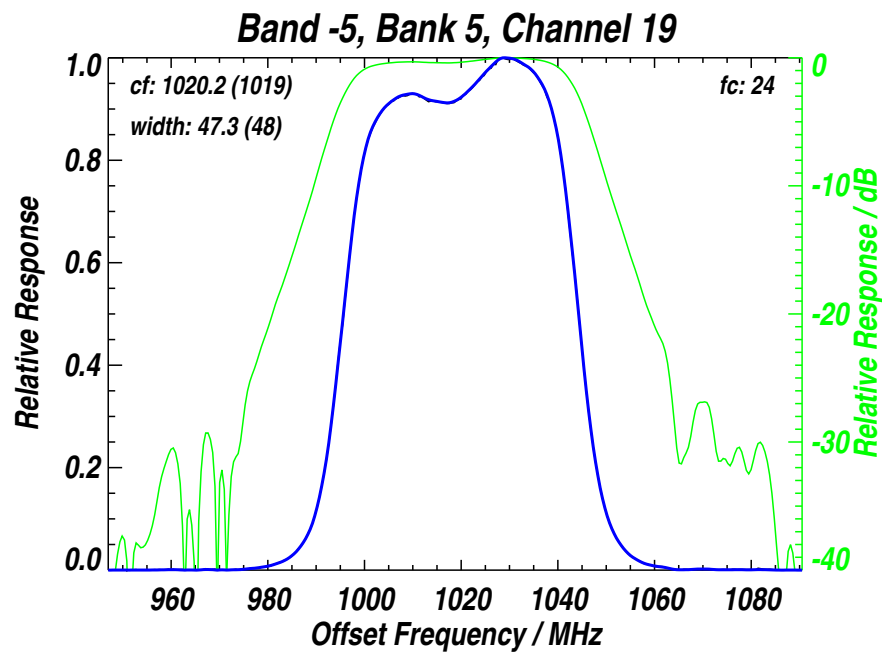
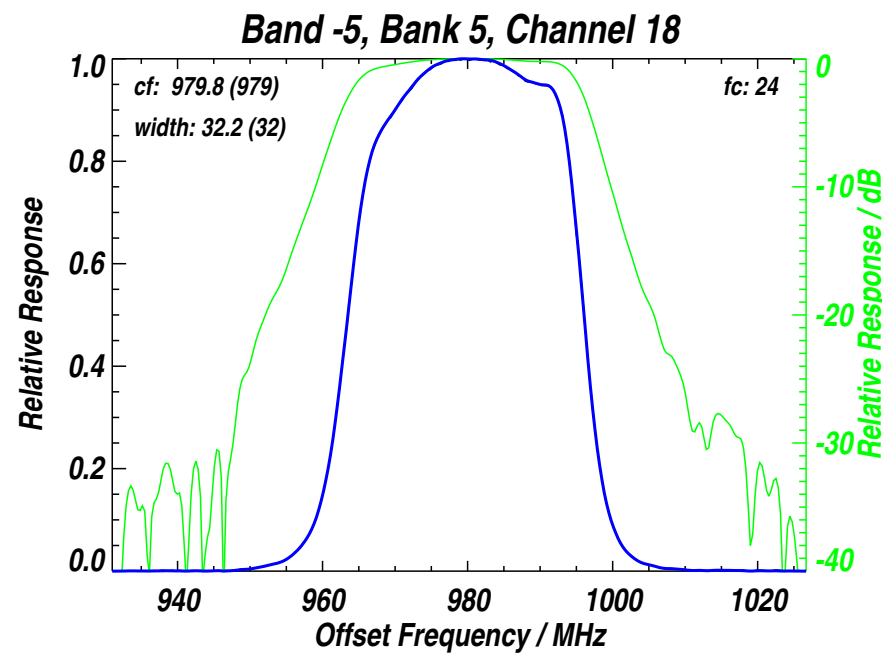
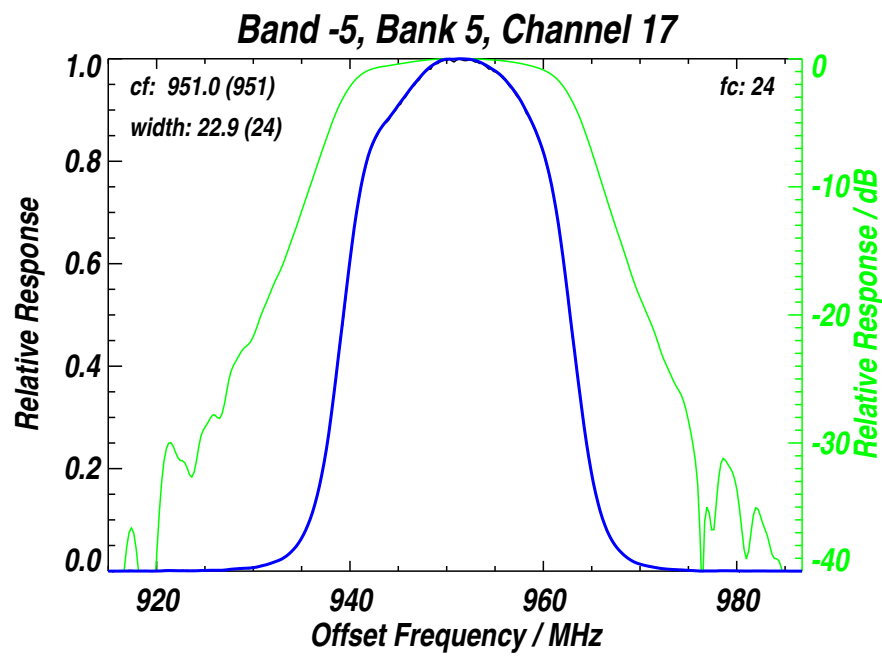


Figure H.112: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 17 to 20. See text for additional details.



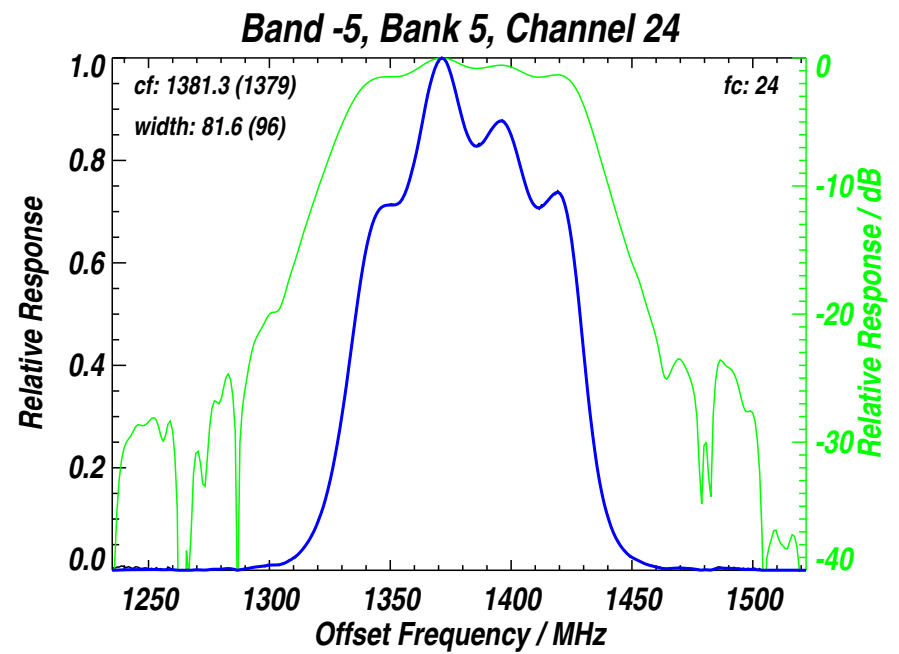
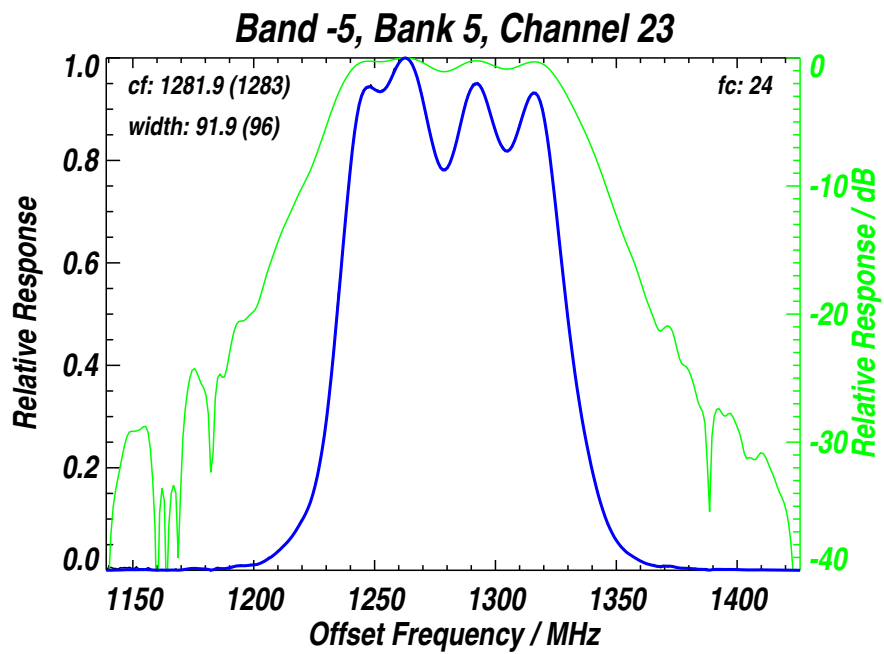
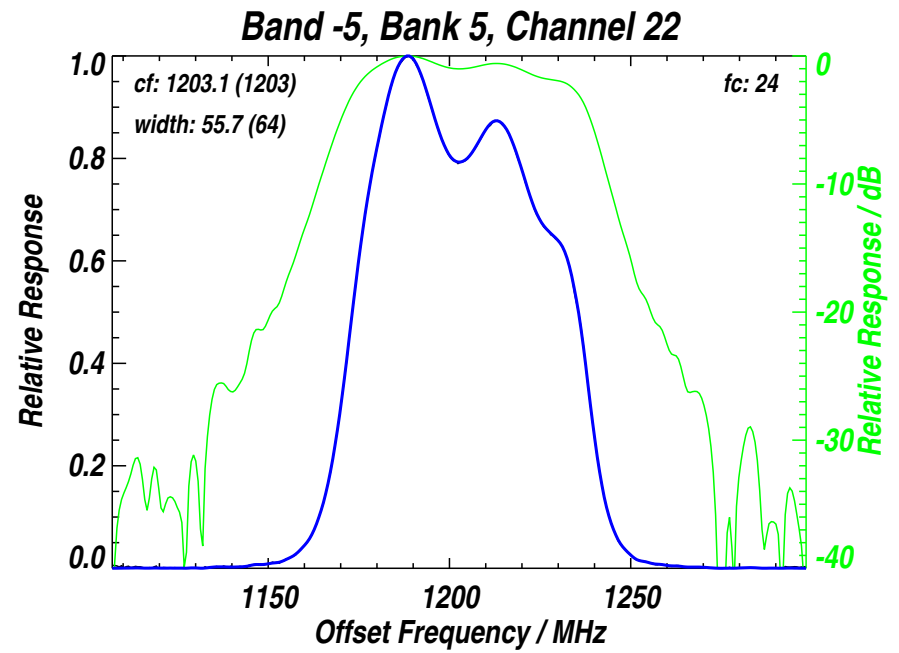
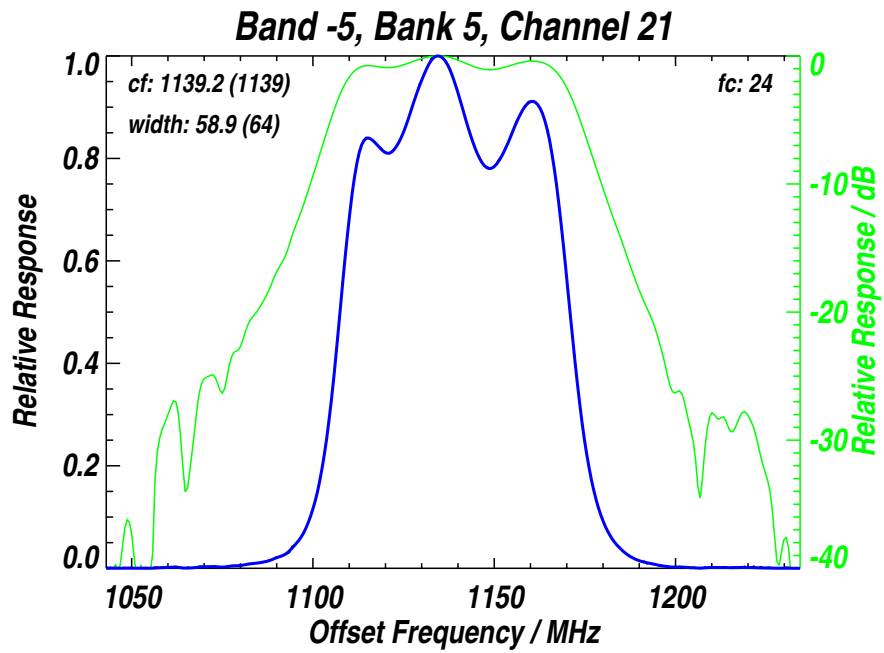
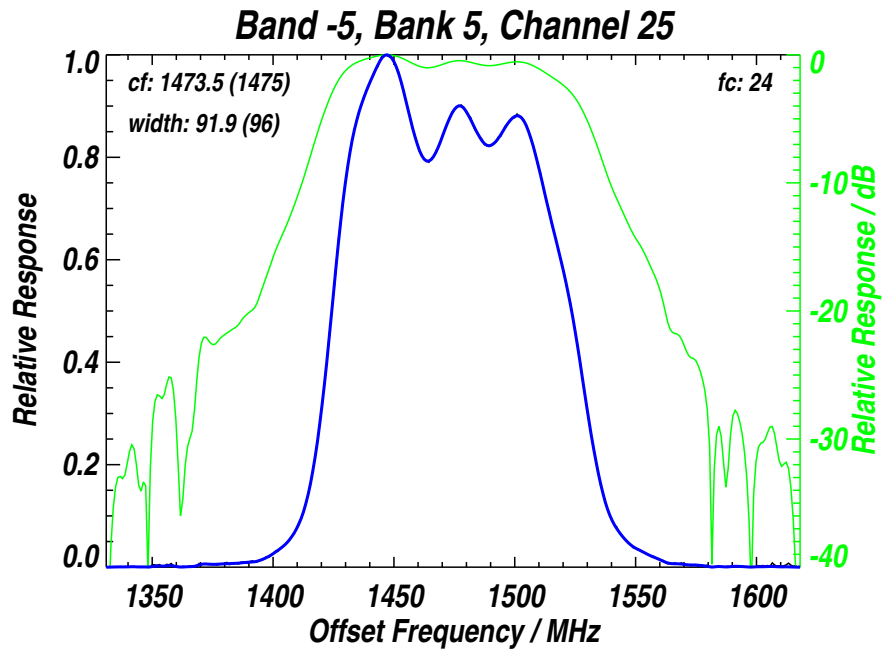


Figure H.113: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 21 to 24. See text for additional details.



**Band 5 (lsb)**  
**Bank 5**  
**Origin = 178.543333332 GHz**

Figure H.114: Lower sideband front-end sweep data for Band 5 taken via Filterbank 5, channel 25. See text for additional details.

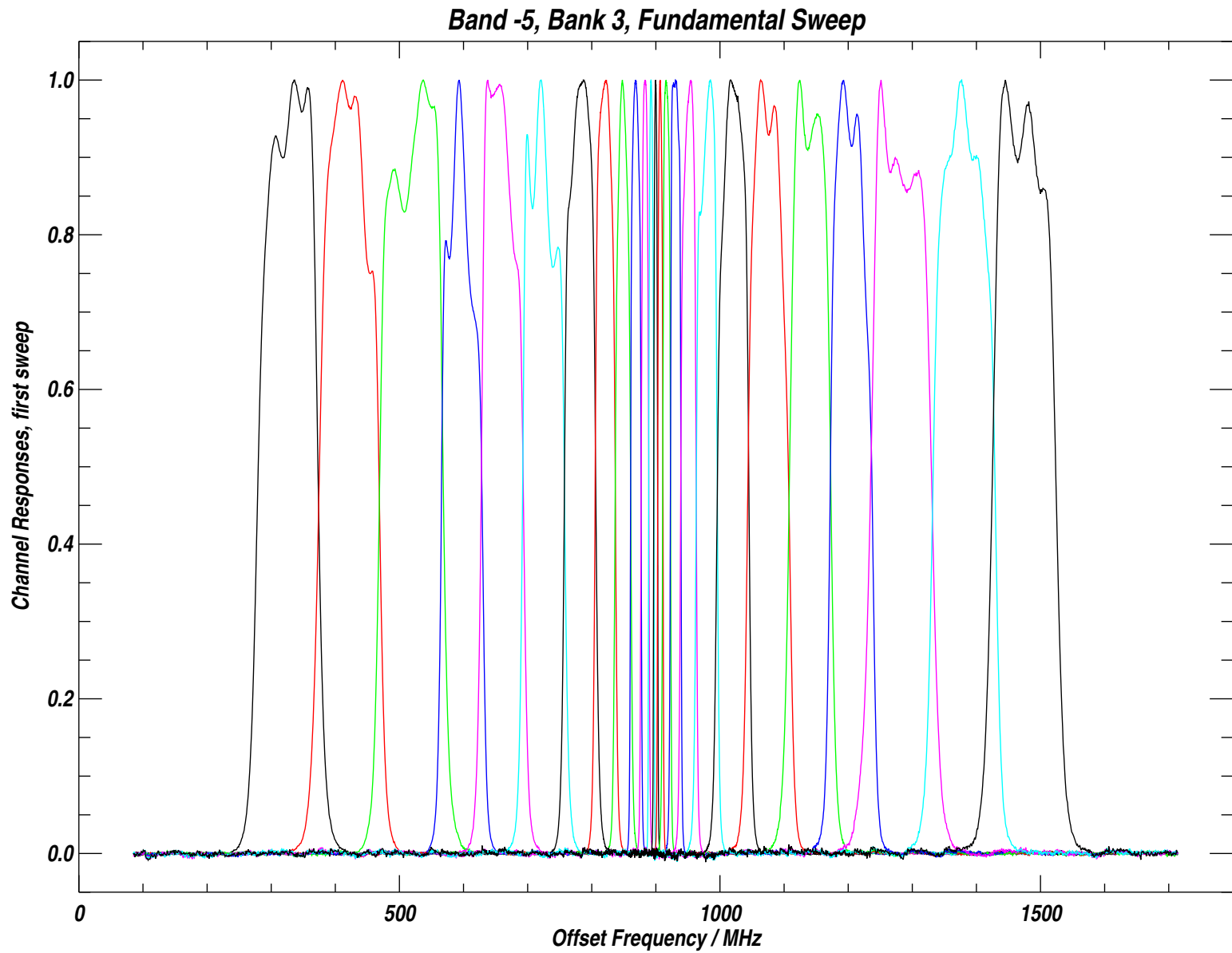


Figure H.115: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3. See text for additional details.

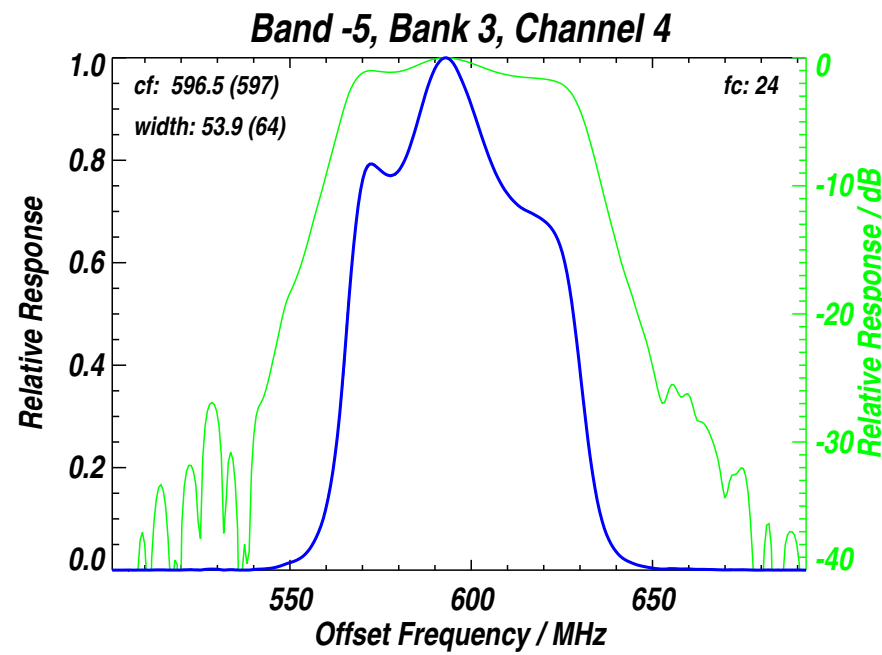
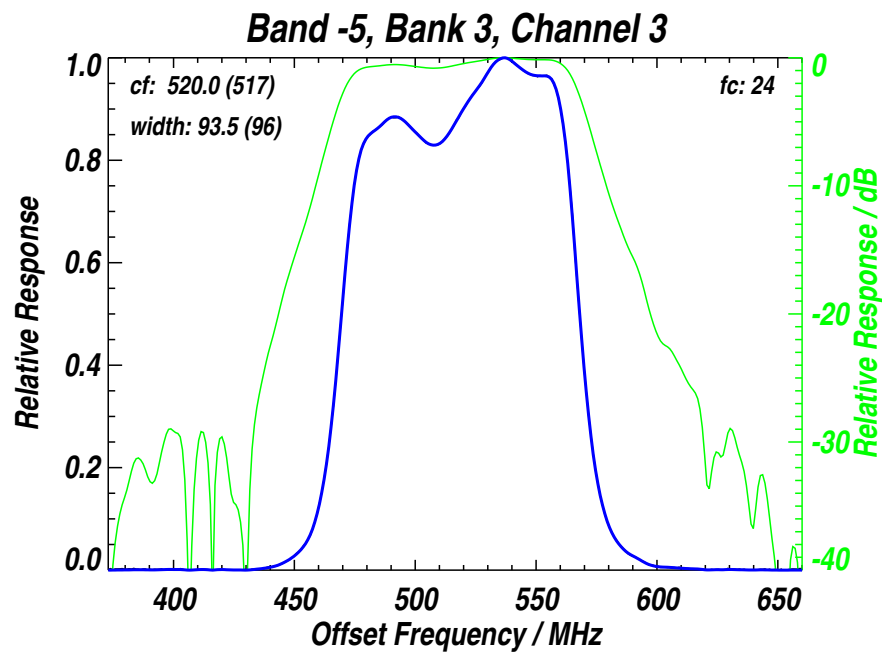
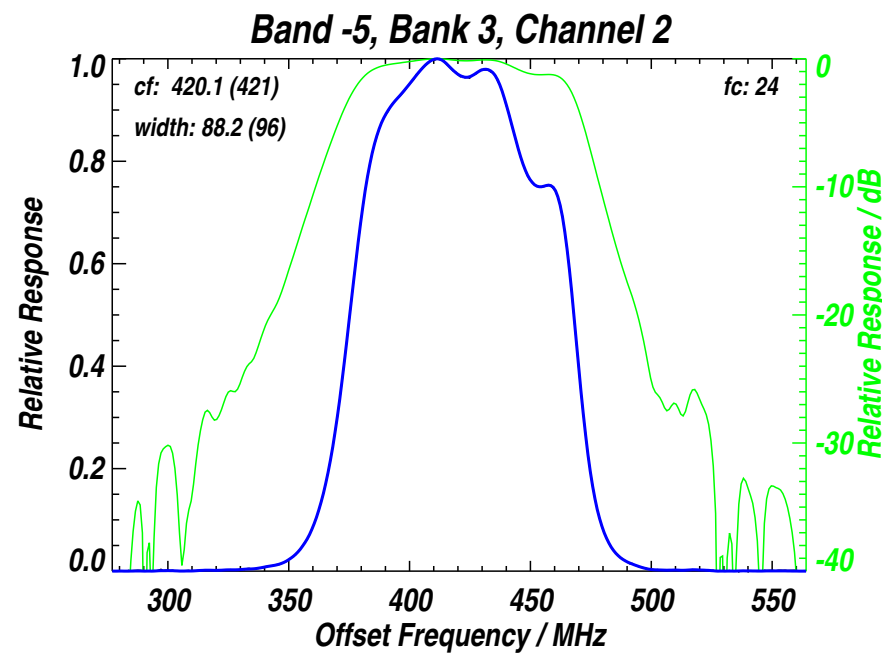
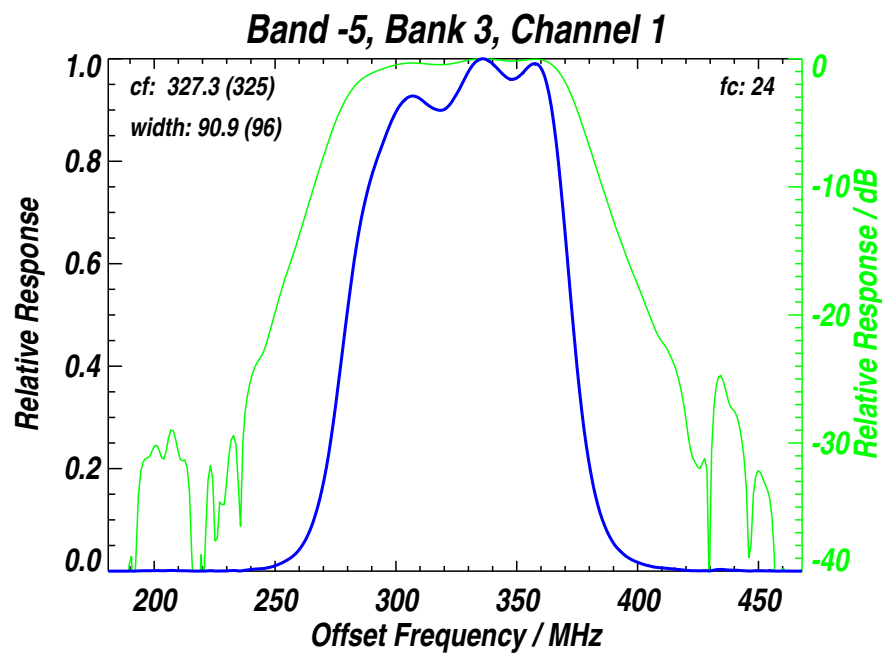


Figure H.116: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 1 to 4. See text for additional details.

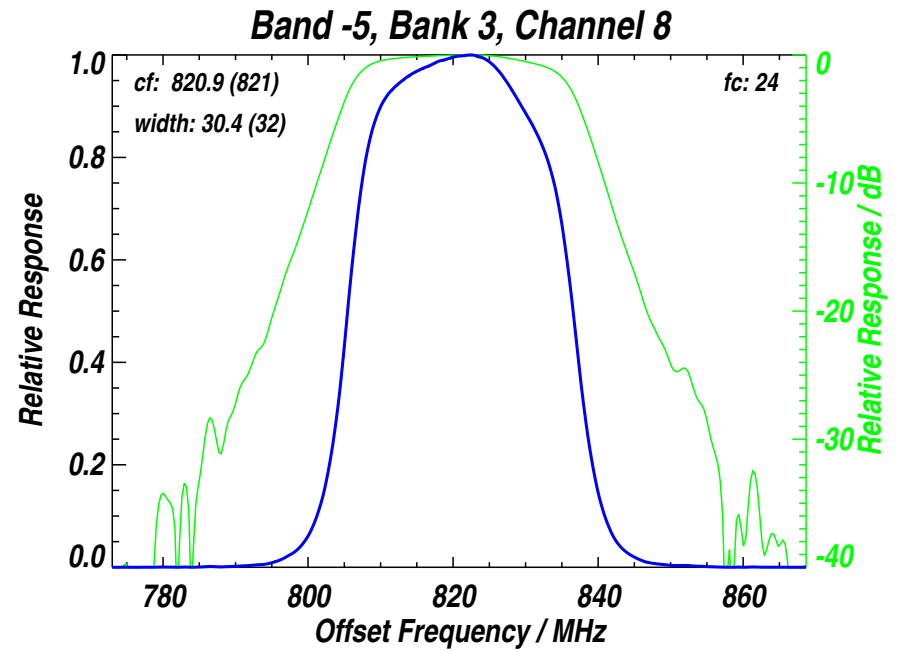
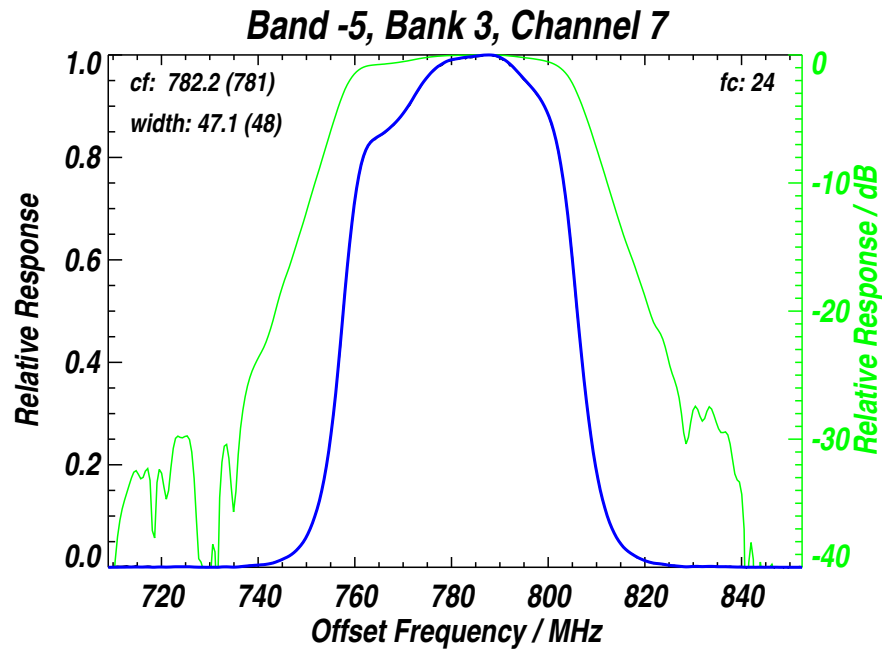
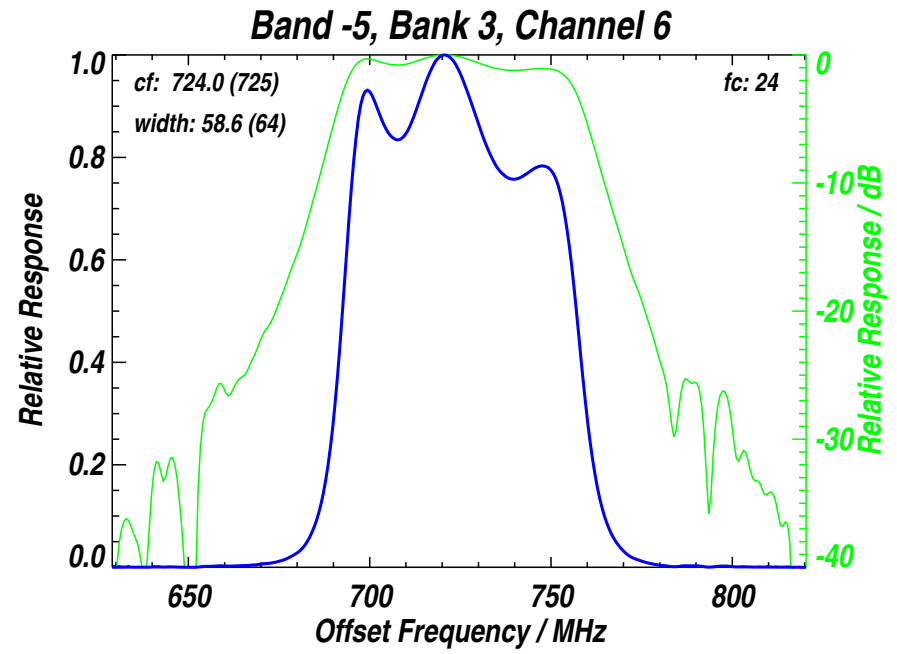
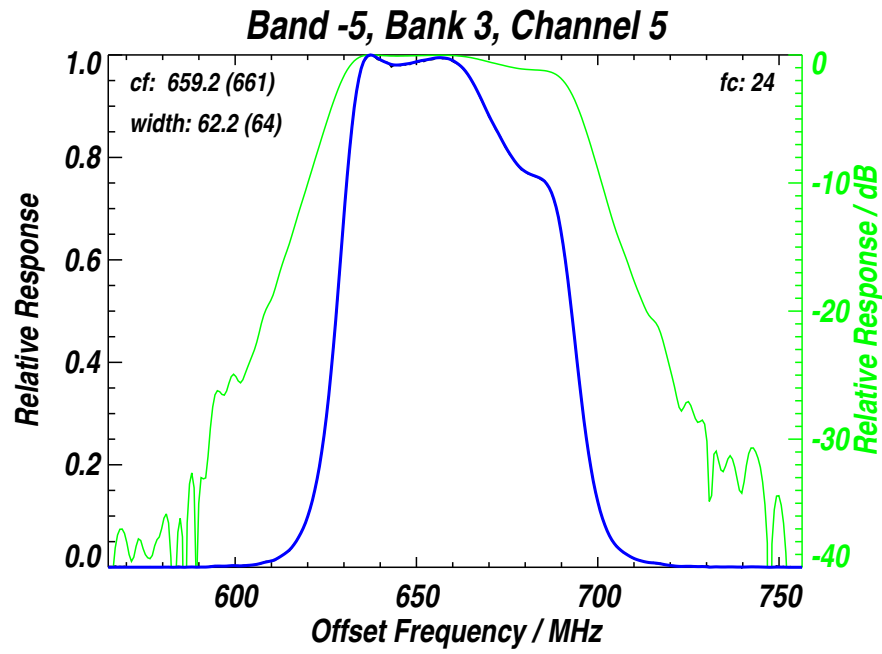


Figure H.117: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 5 to 8. See text for additional details.

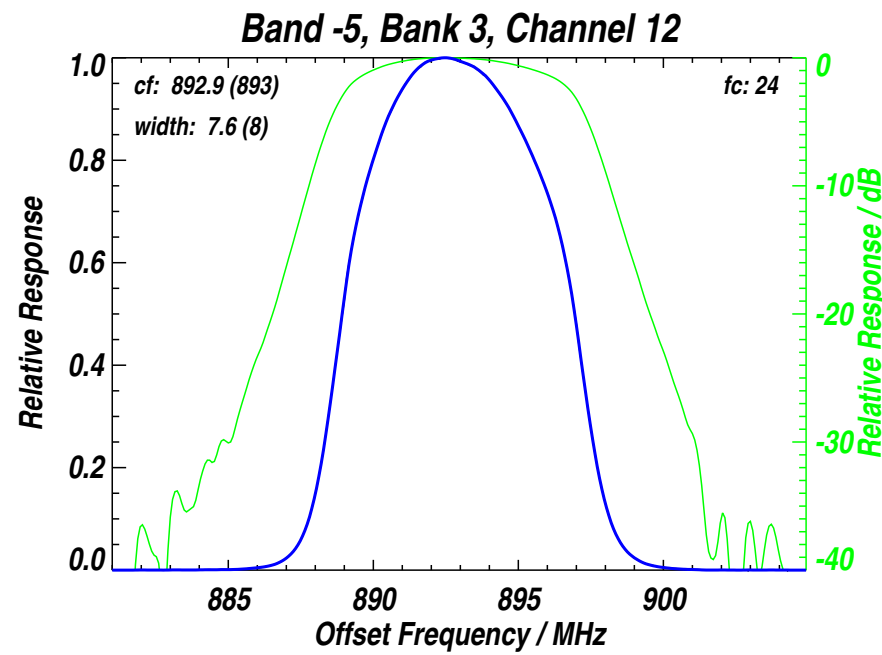
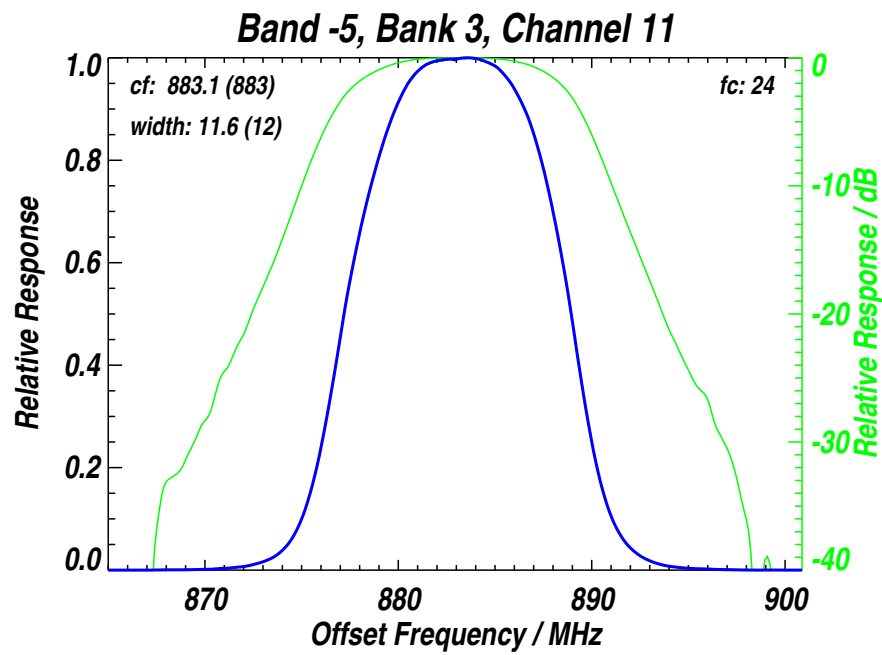
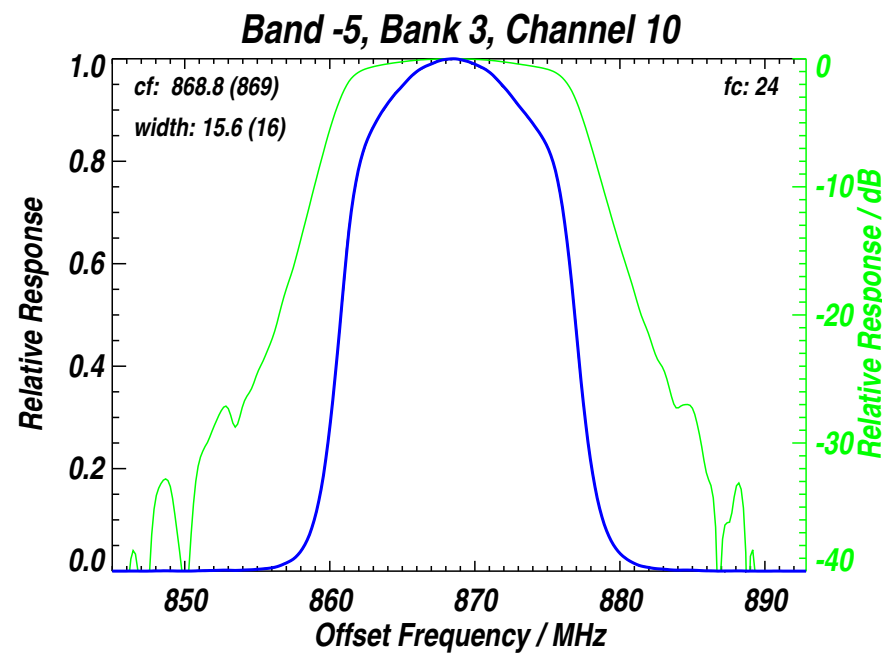
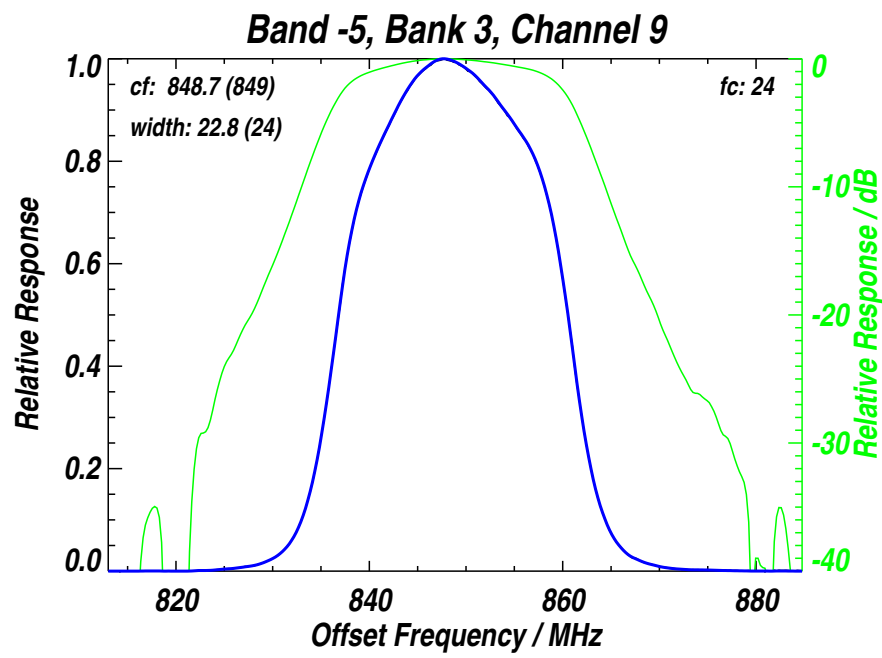


Figure H.118: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 9 to 12. See text for additional details.

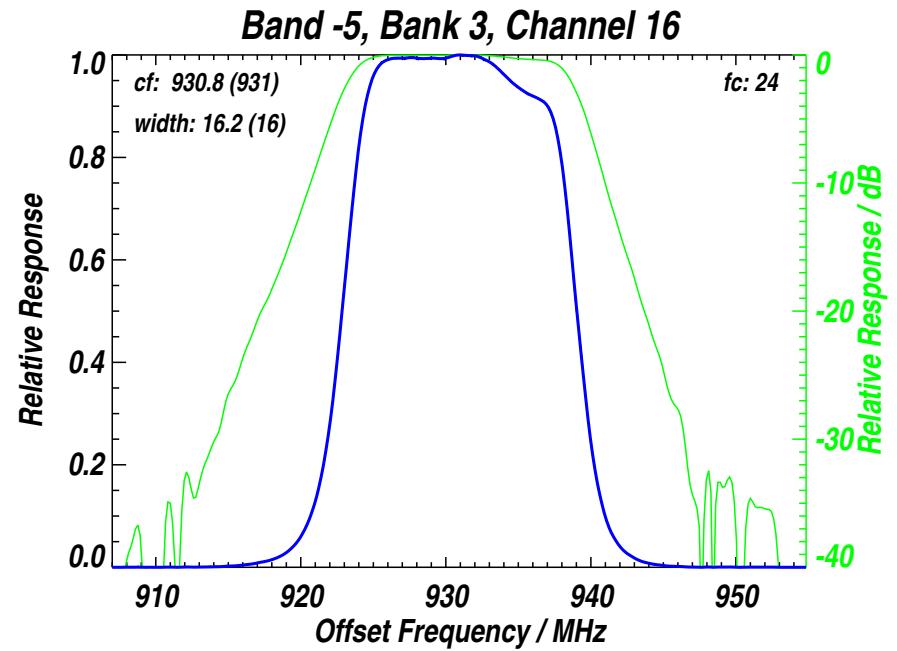
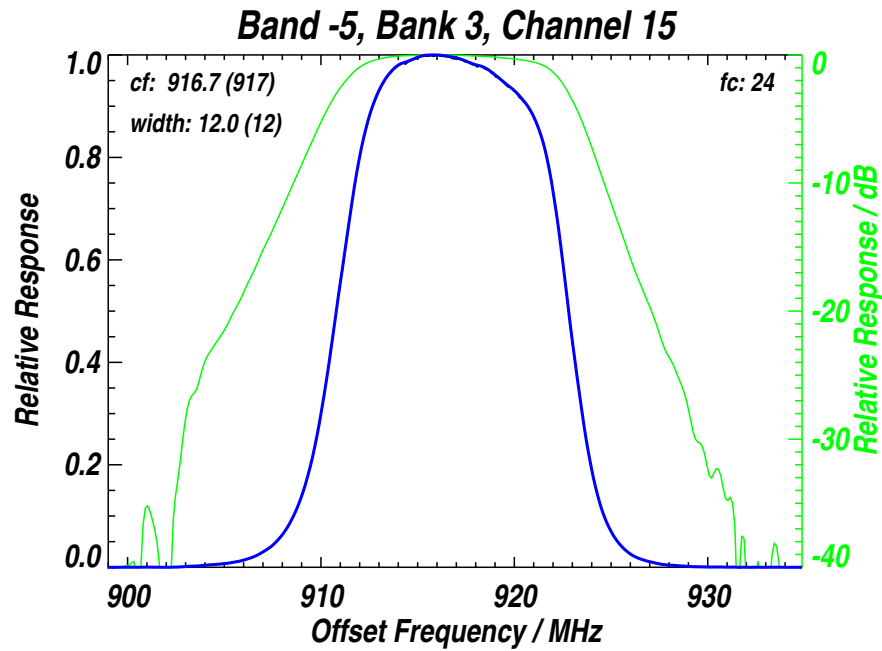
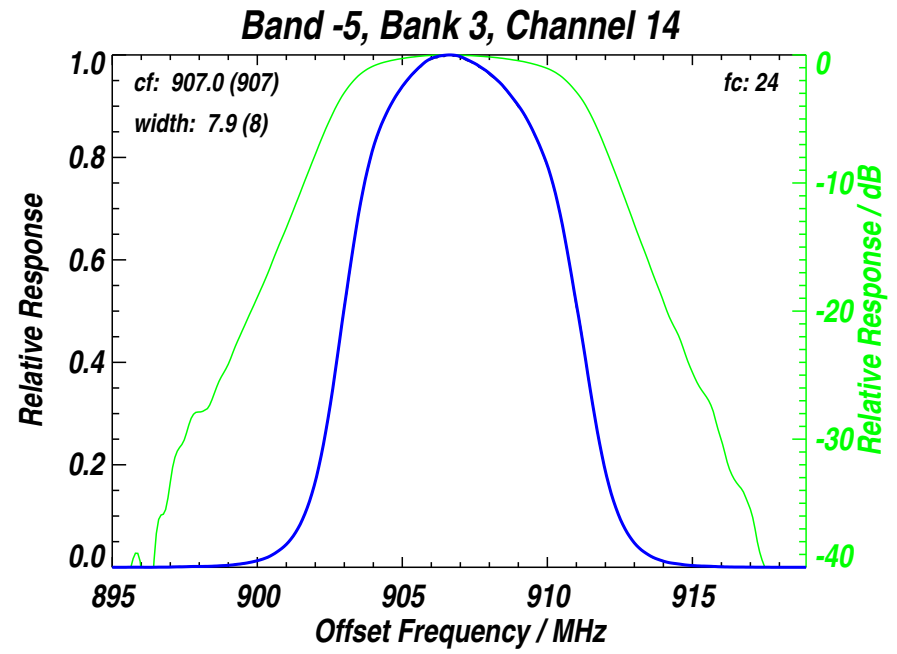
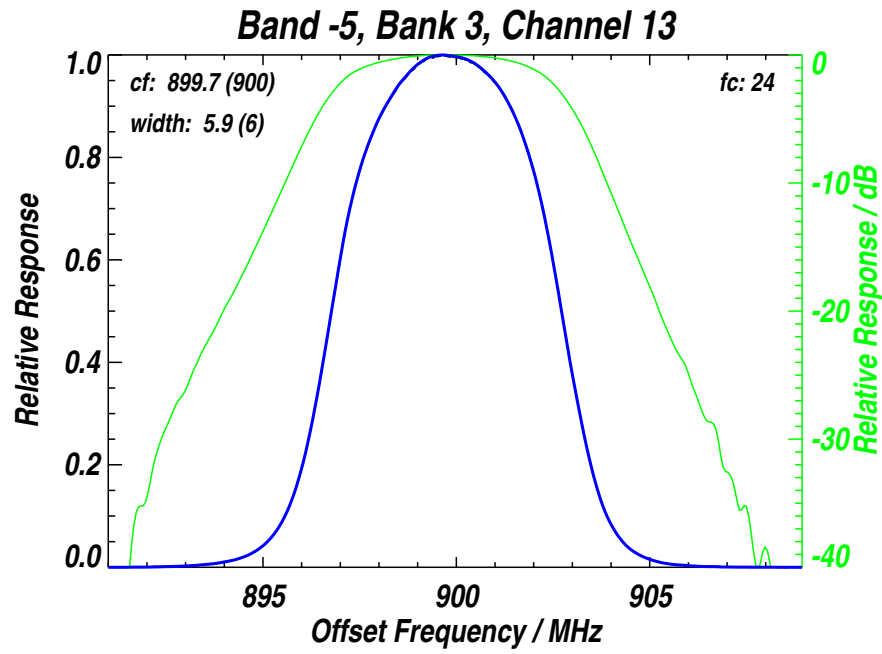


Figure H.119: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 13 to 16. See text for additional details.

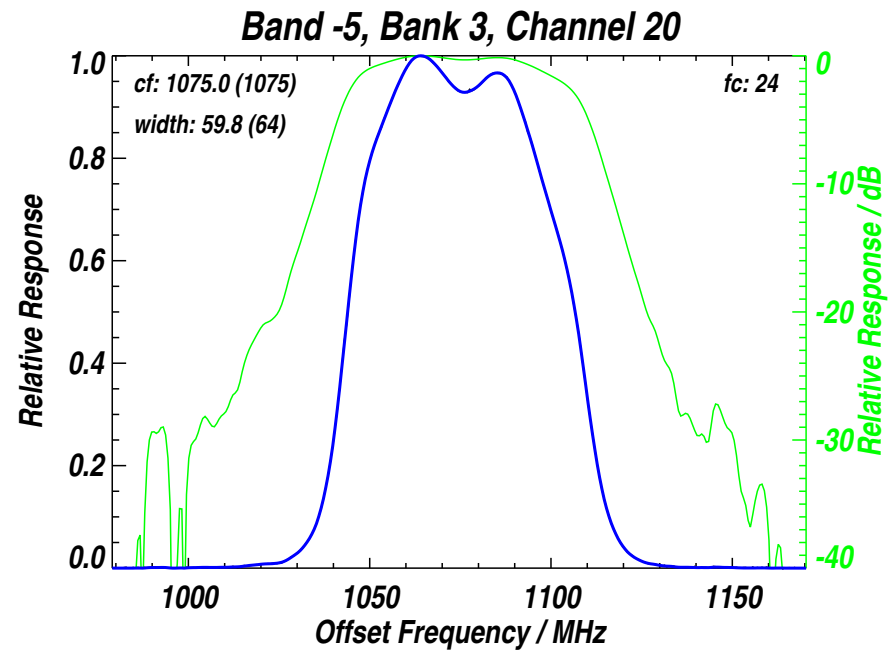
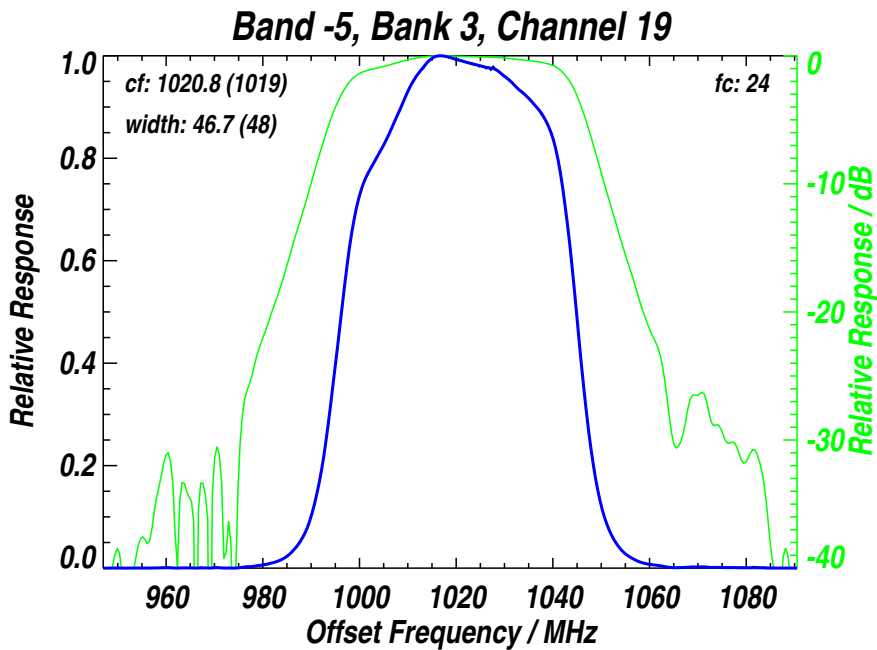
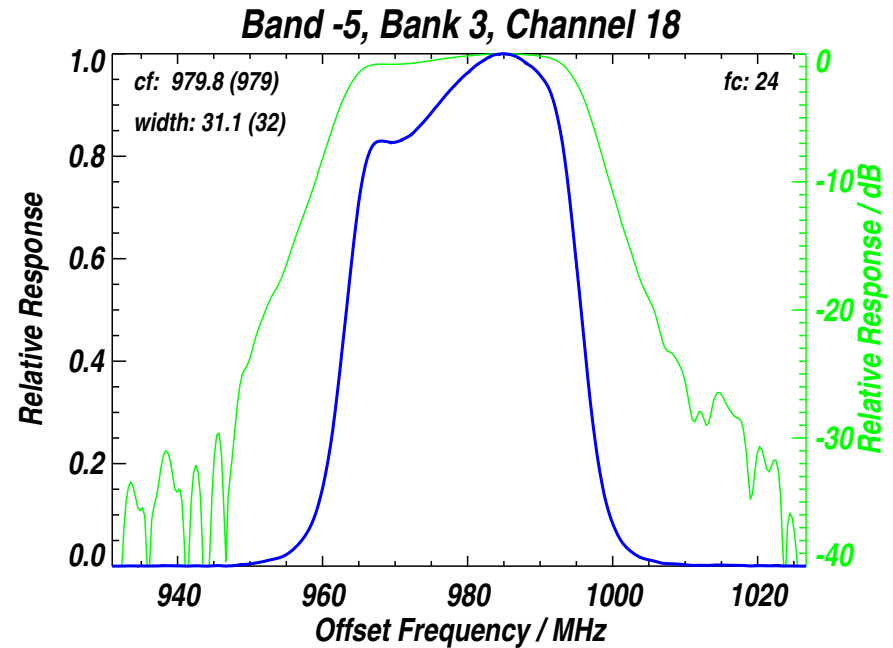
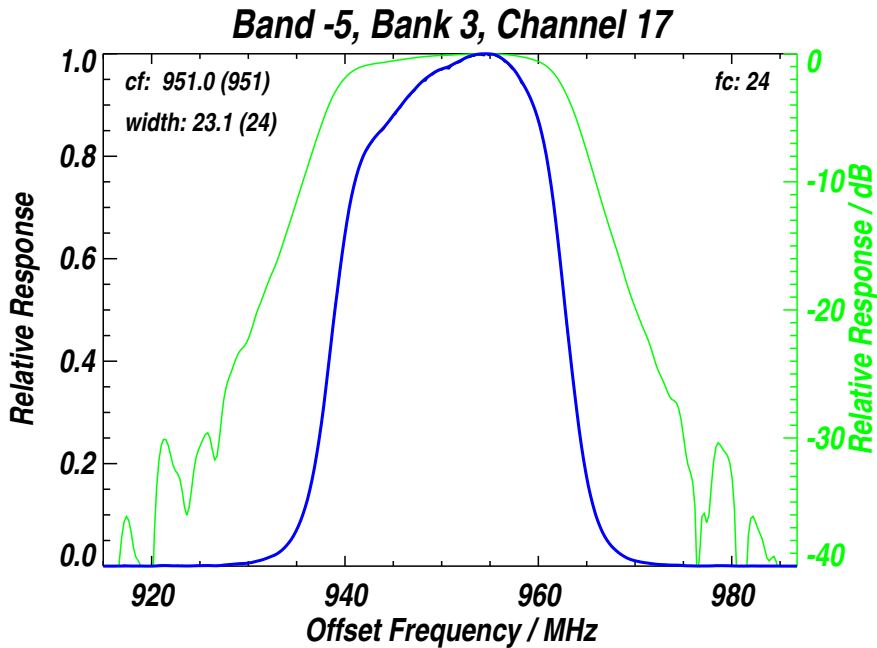


Figure H.120: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 17 to 20. See text for additional details.



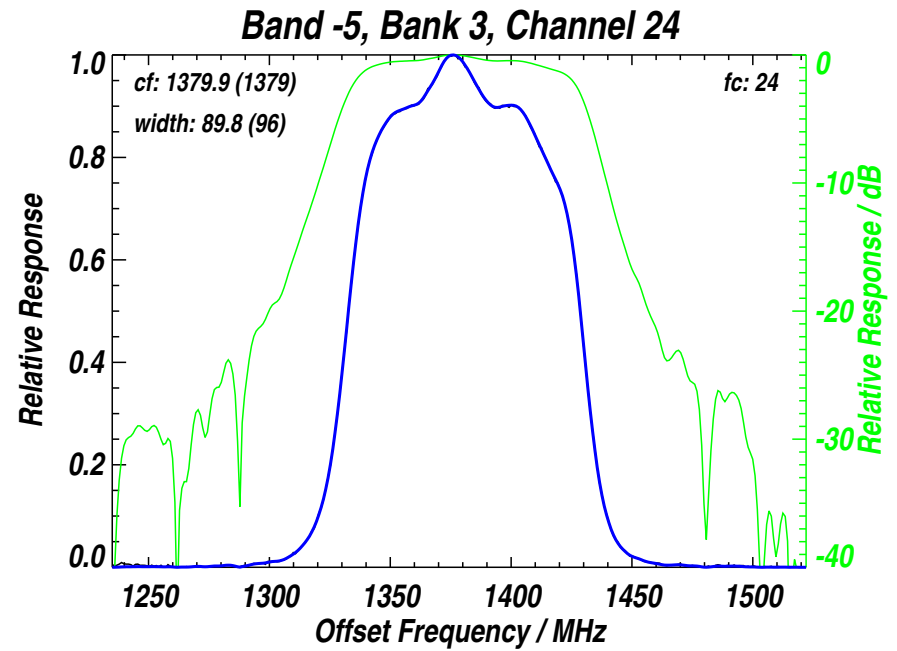
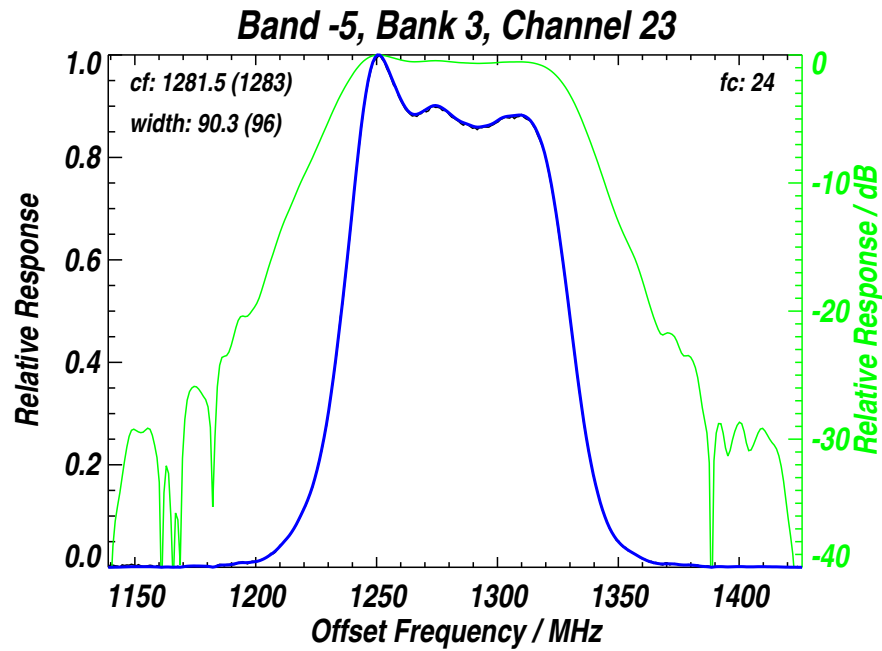
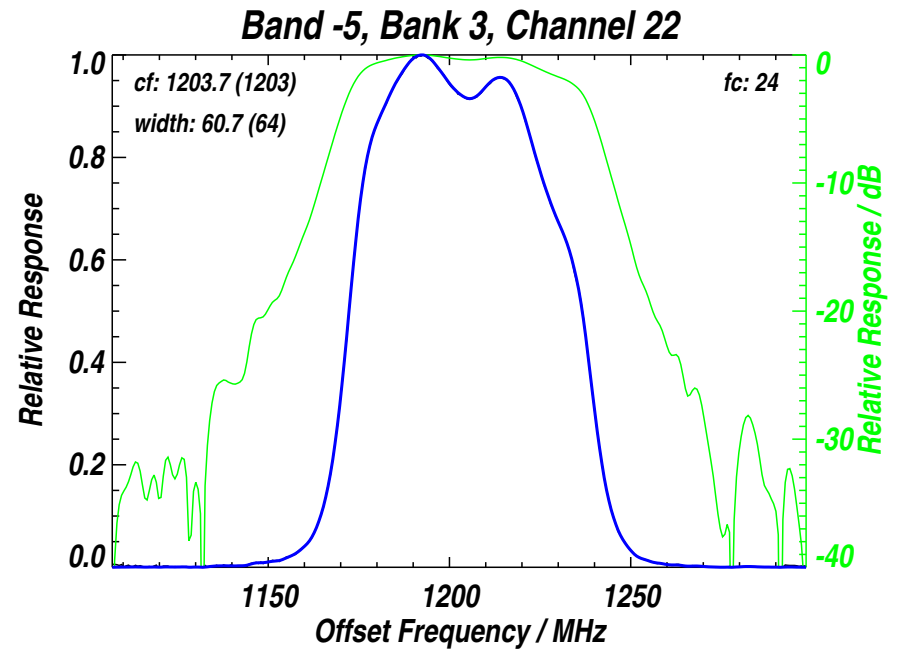
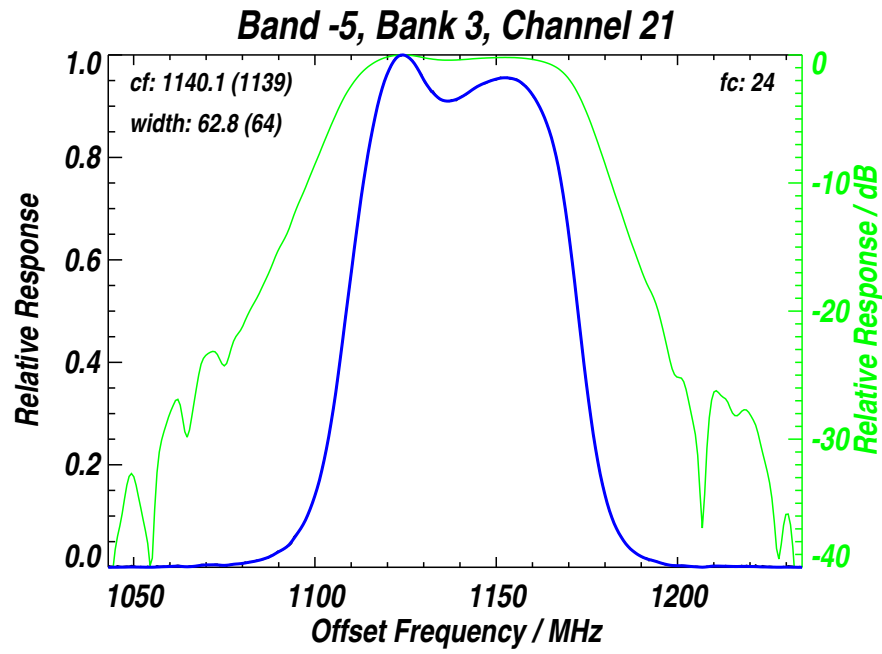
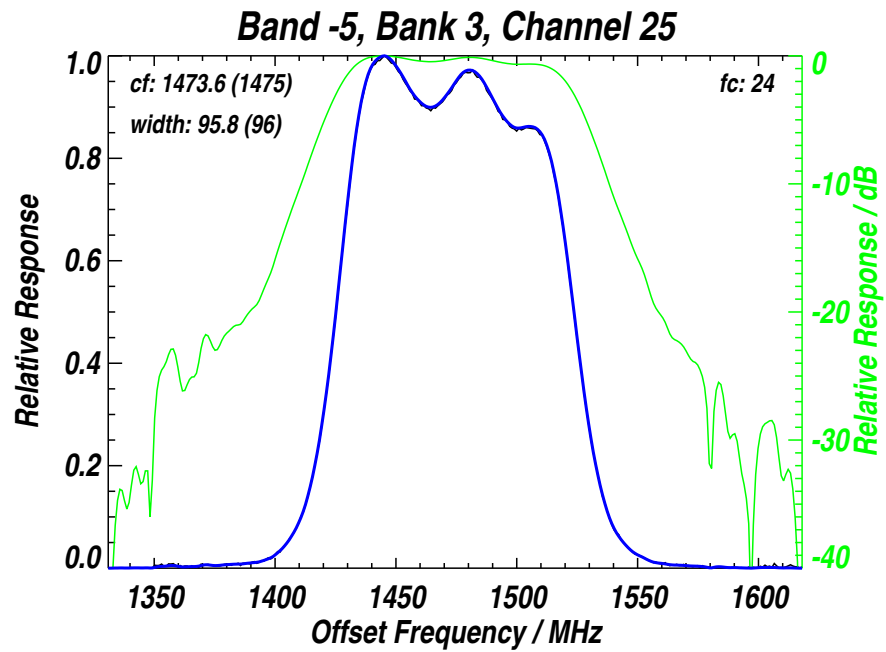


Figure H.121: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 5 (lsb)**  
**Bank 3**  
**Origin = 178.543333332 GHz**

Figure H.122: Lower sideband front-end sweep data for Band 5 taken via Filterbank 3, channel 25. See text for additional details.

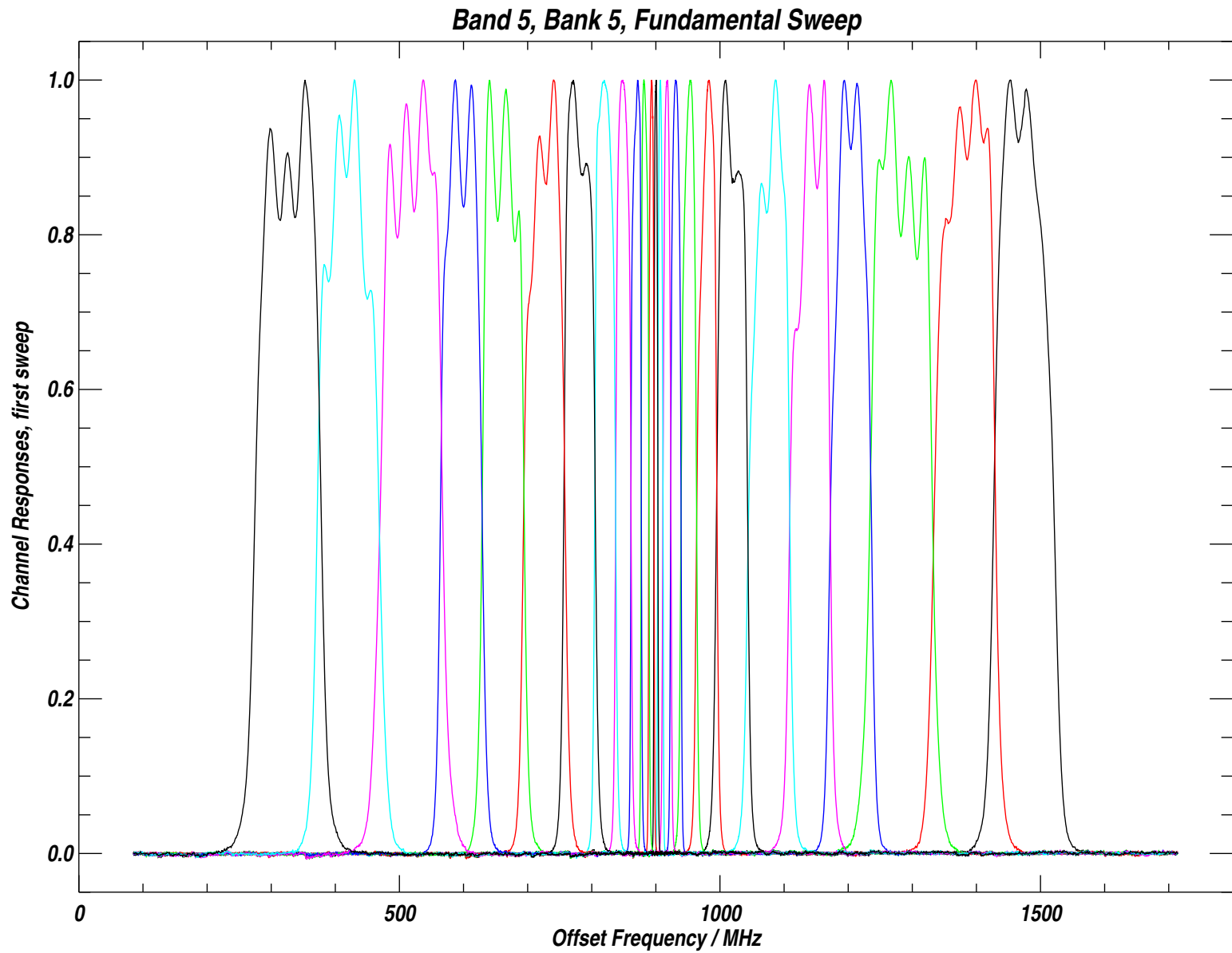


Figure H.123: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5. See text for additional details.

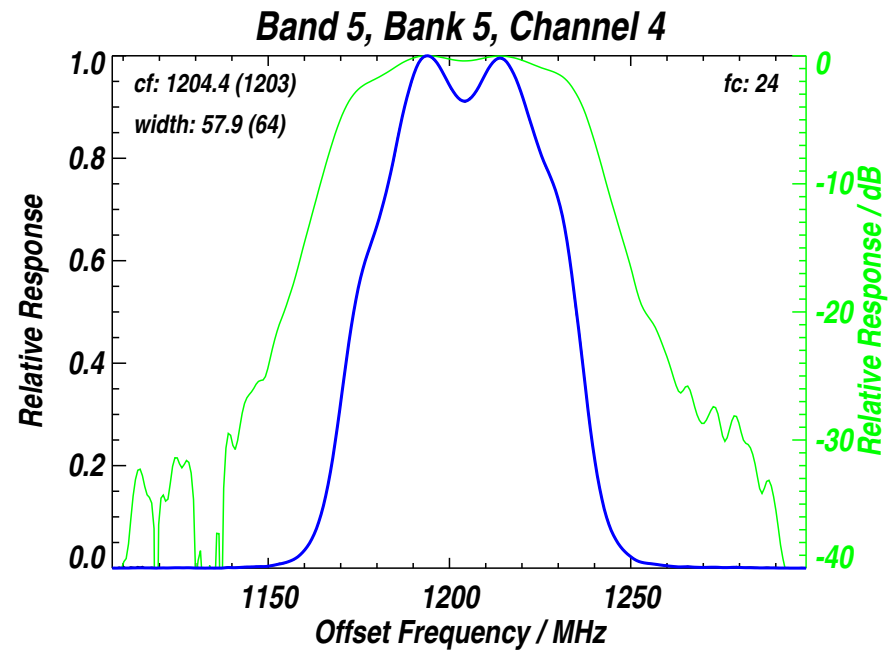
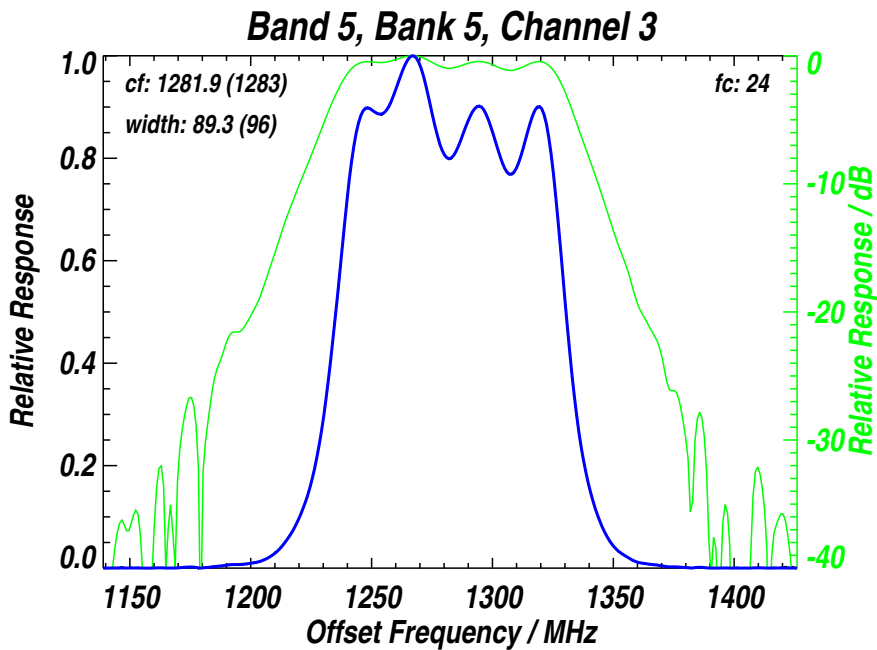
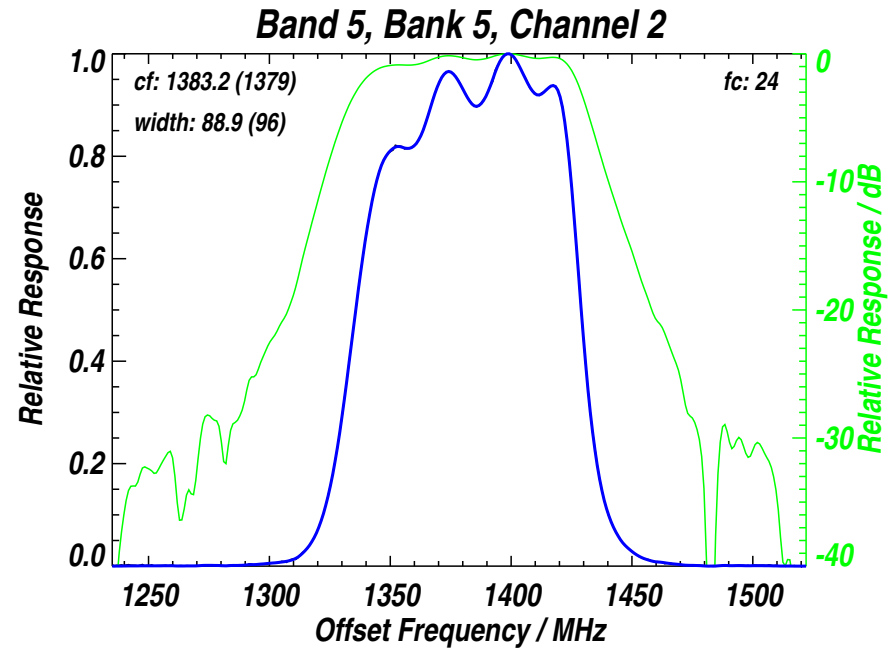
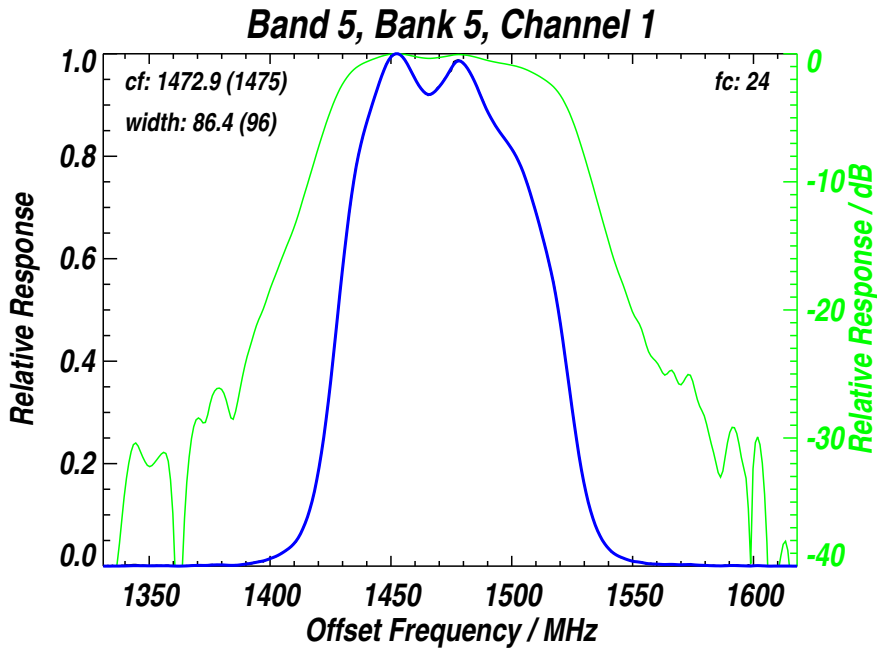


Figure H.124: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 1 to 4. See text for additional details.

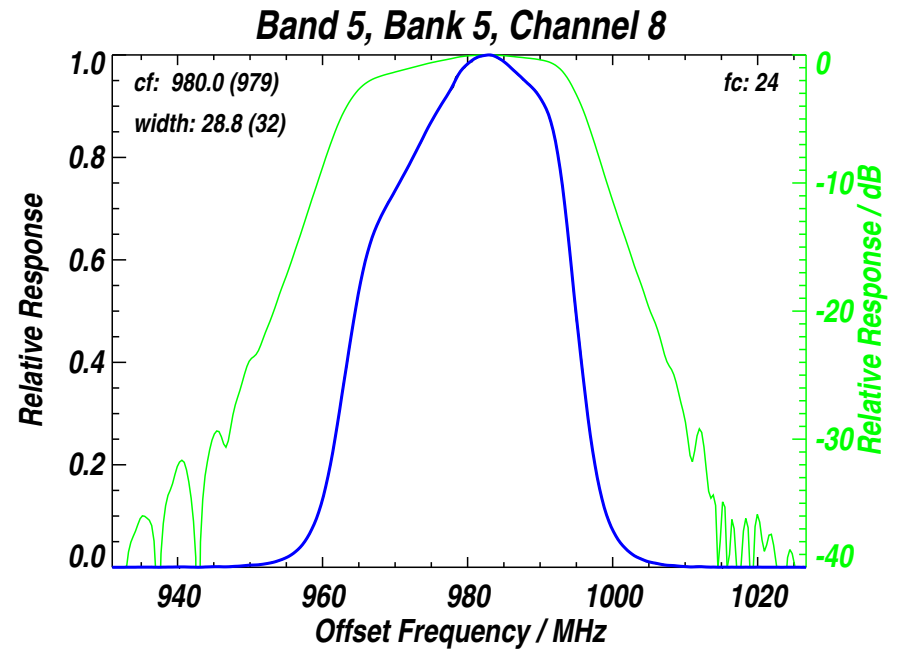
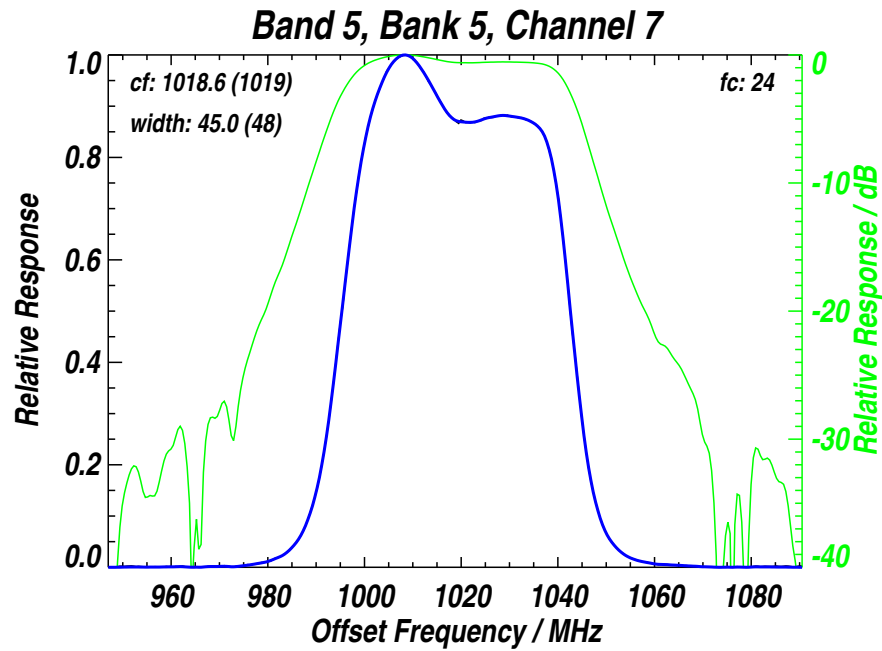
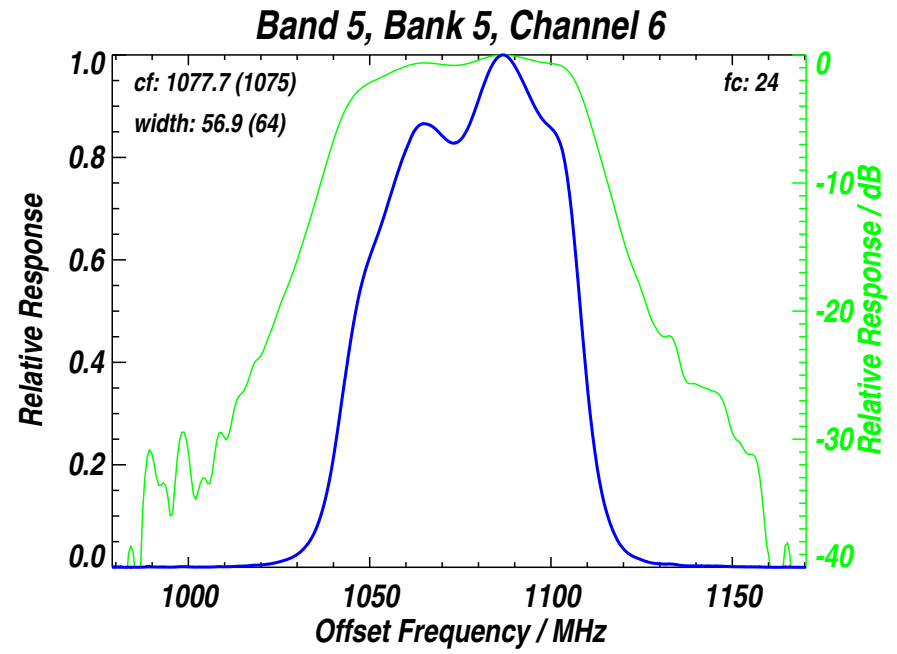
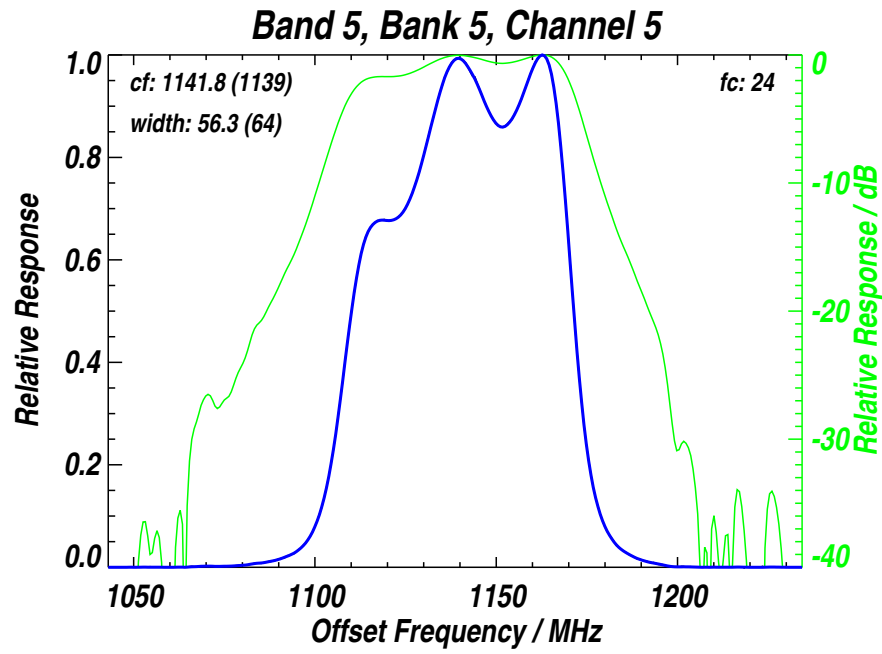


Figure H.125: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 5 to 8. See text for additional details.

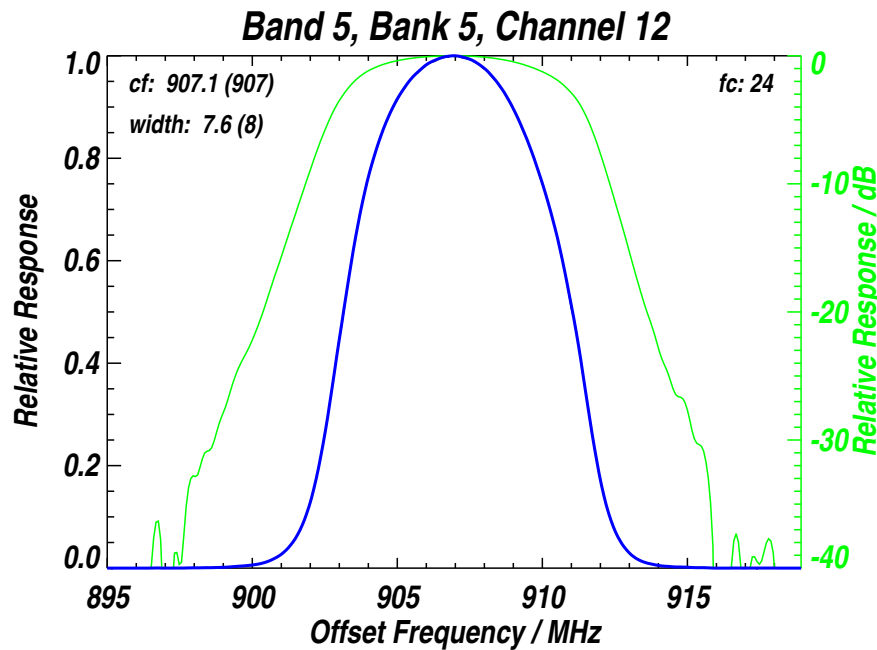
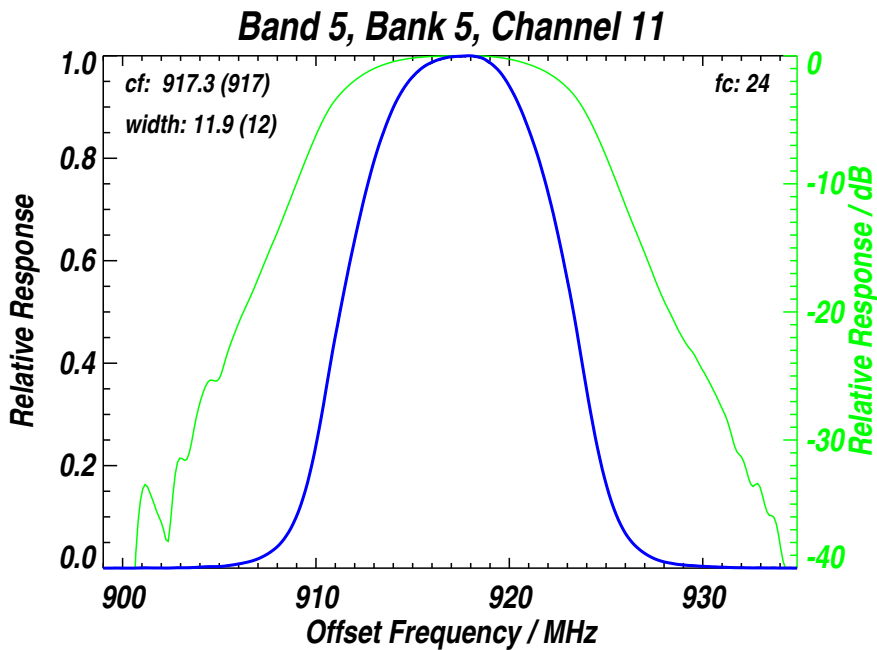
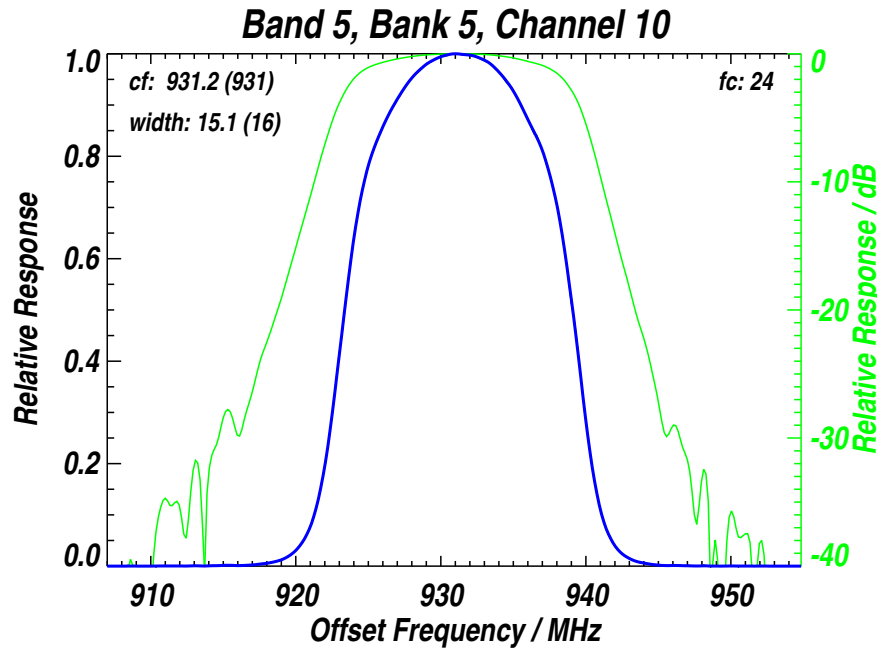
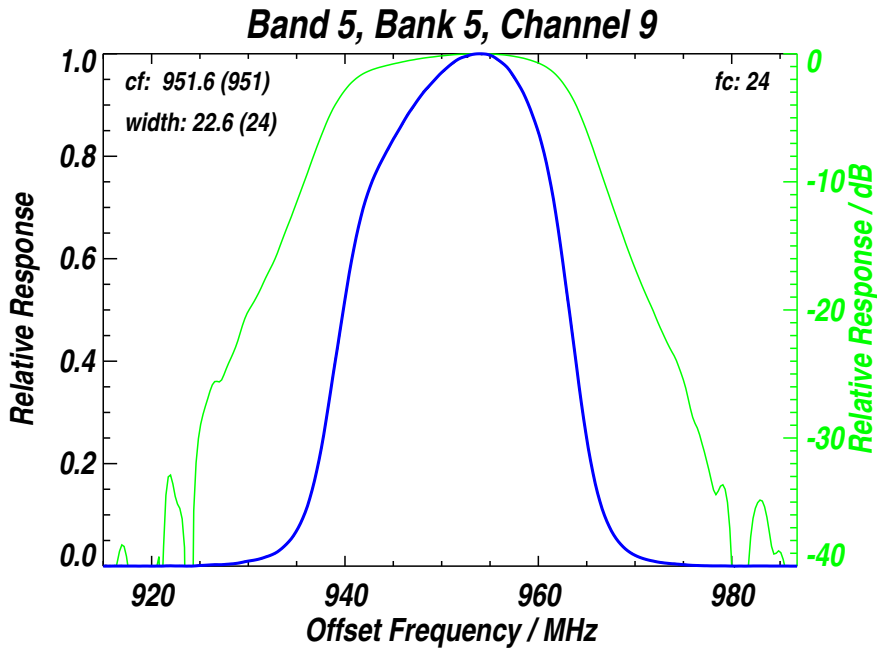


Figure H.126: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 9 to 12. See text for additional details.

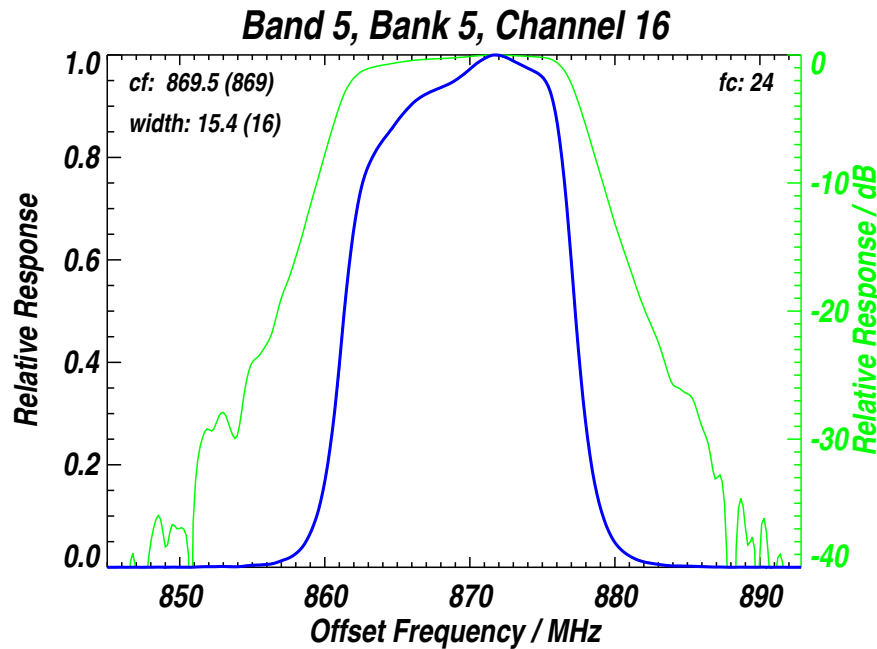
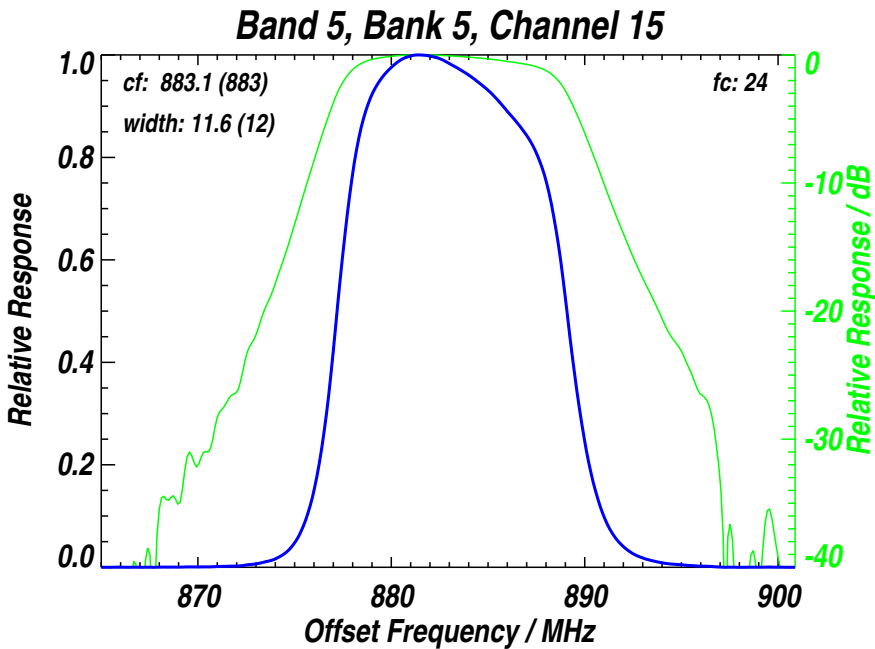
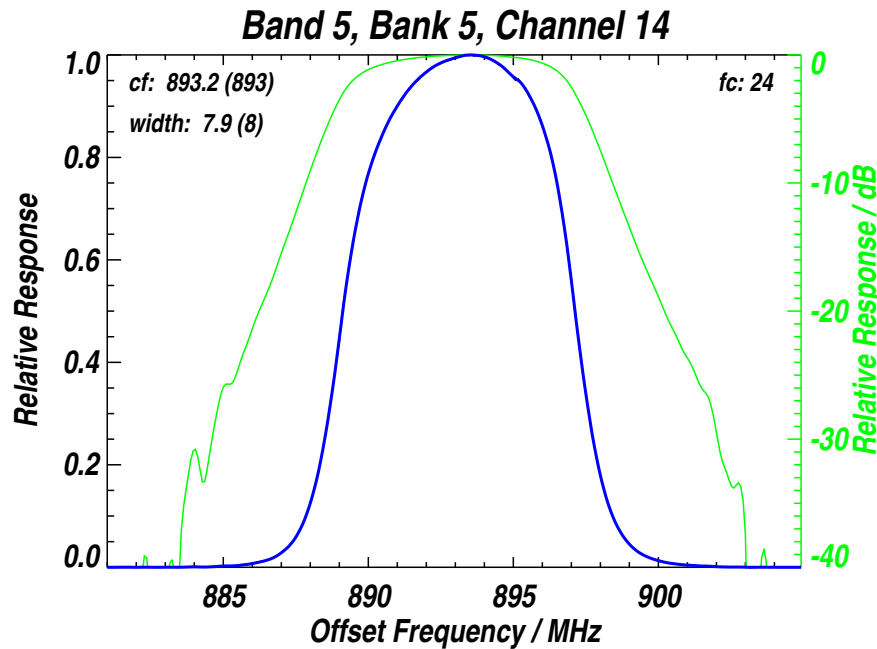
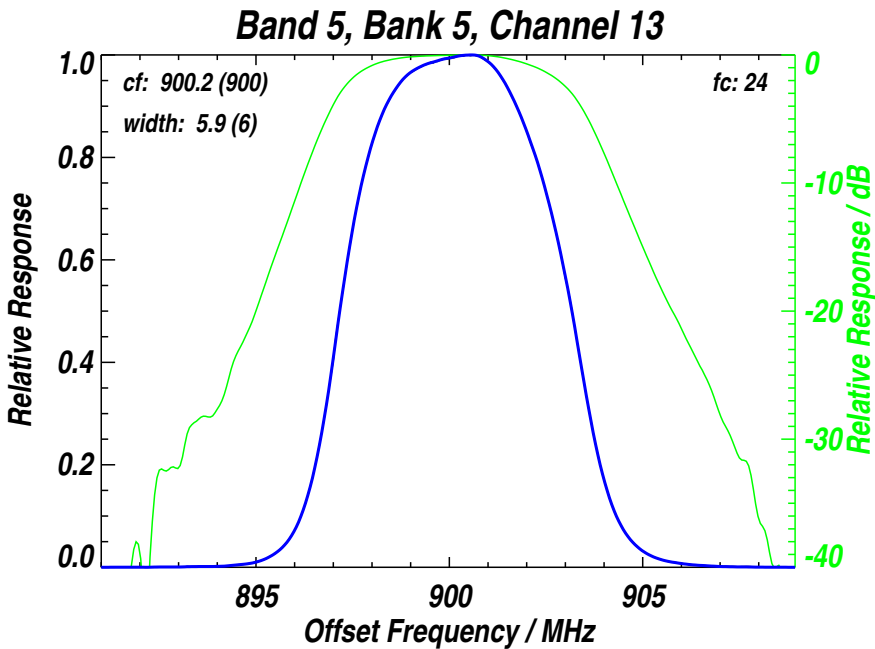


Figure H.127: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 13 to 16. See text for additional details.

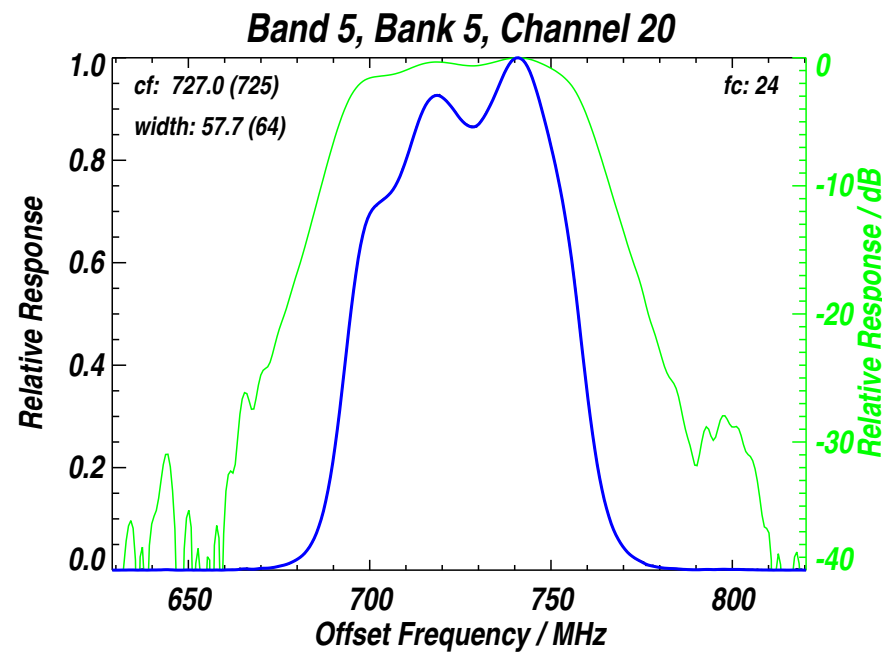
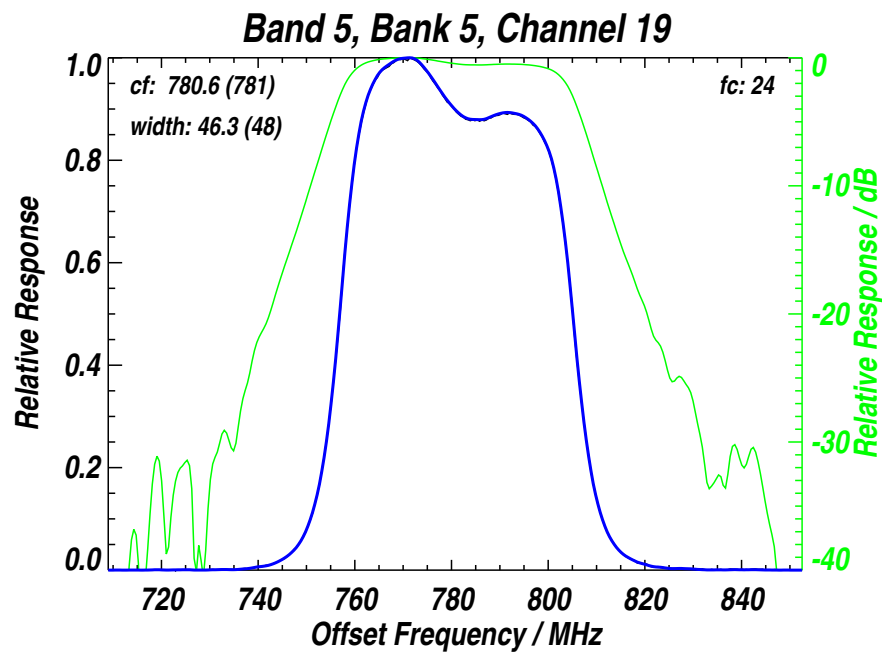
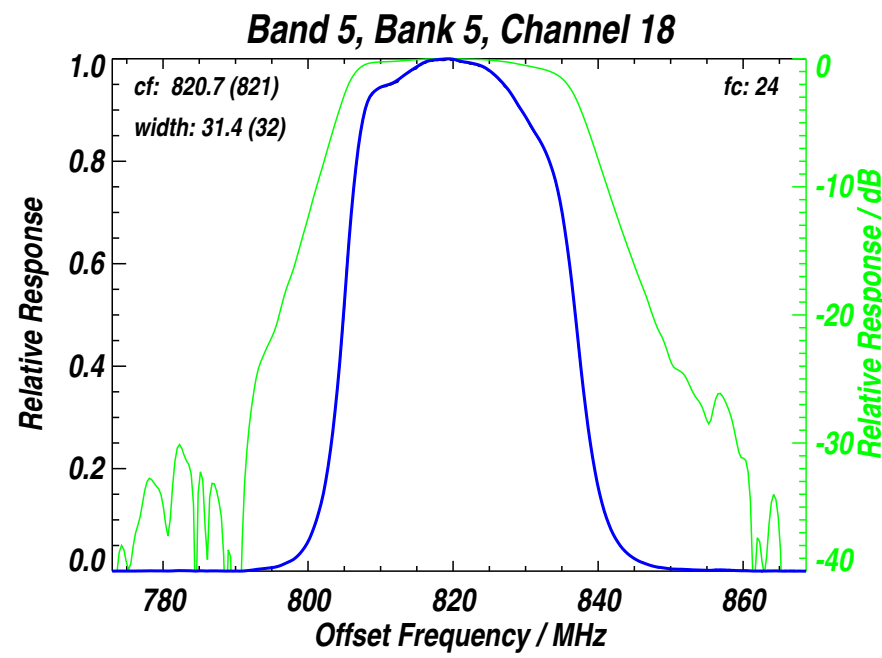
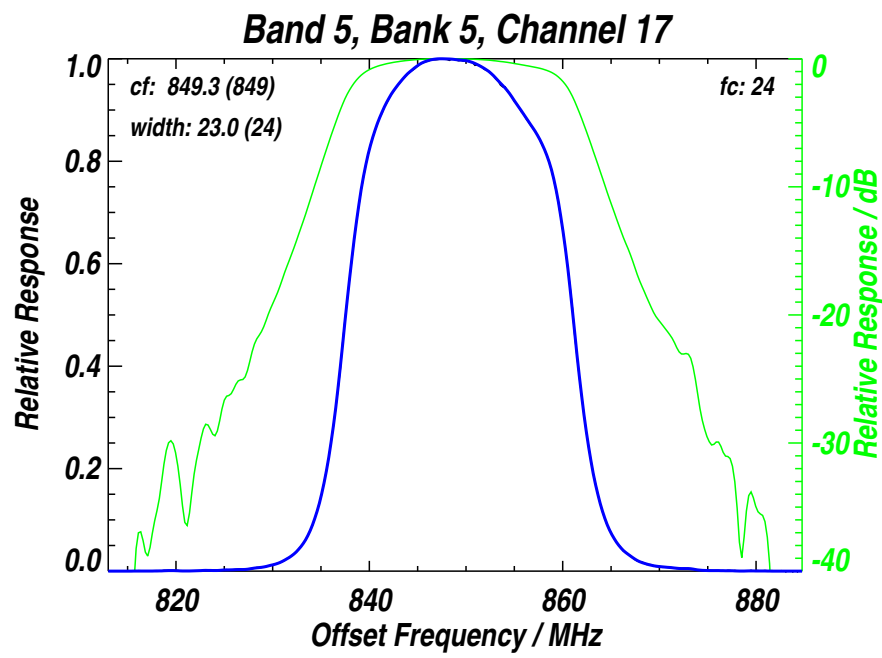


Figure H.128: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 17 to 20. See text for additional details.



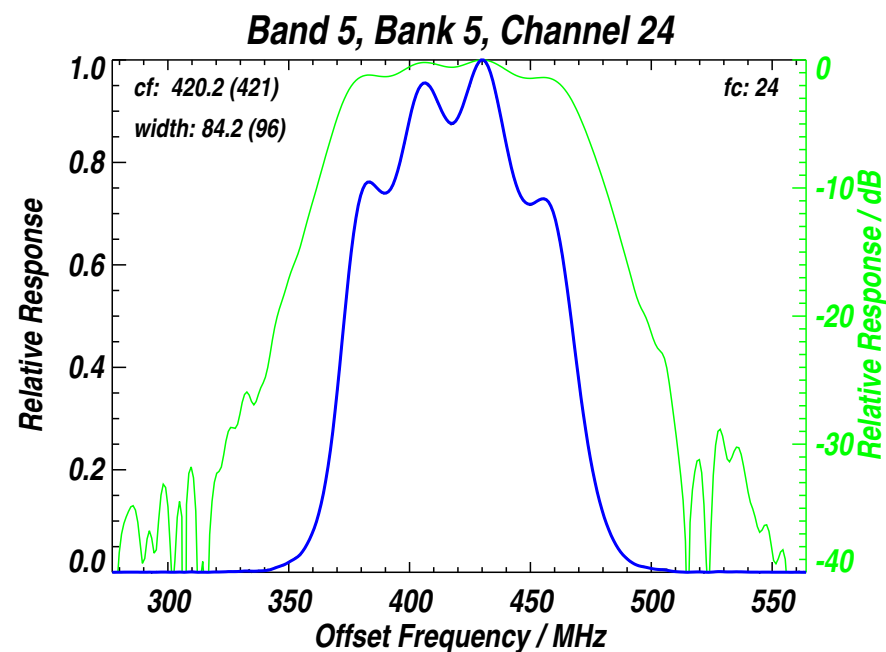
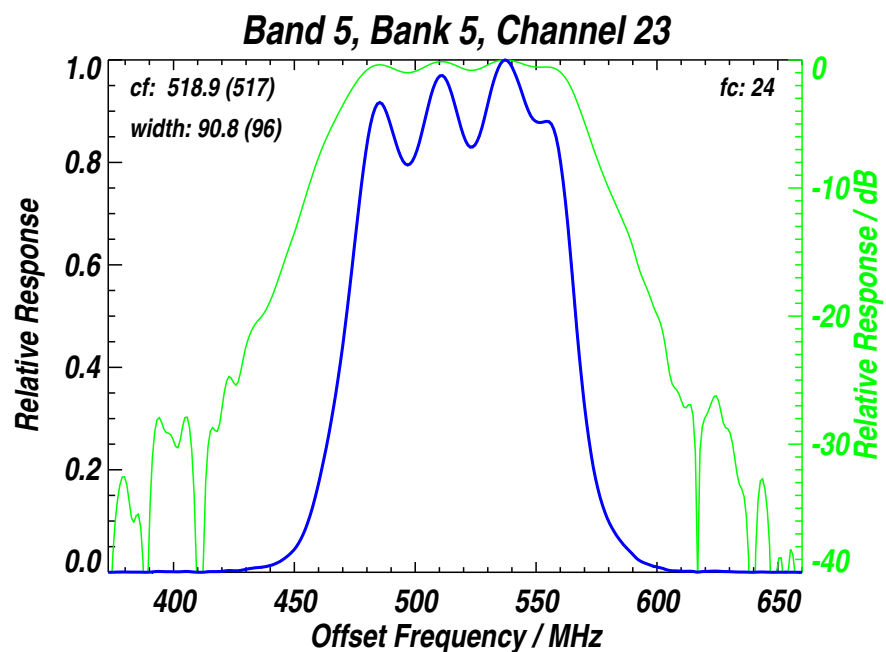
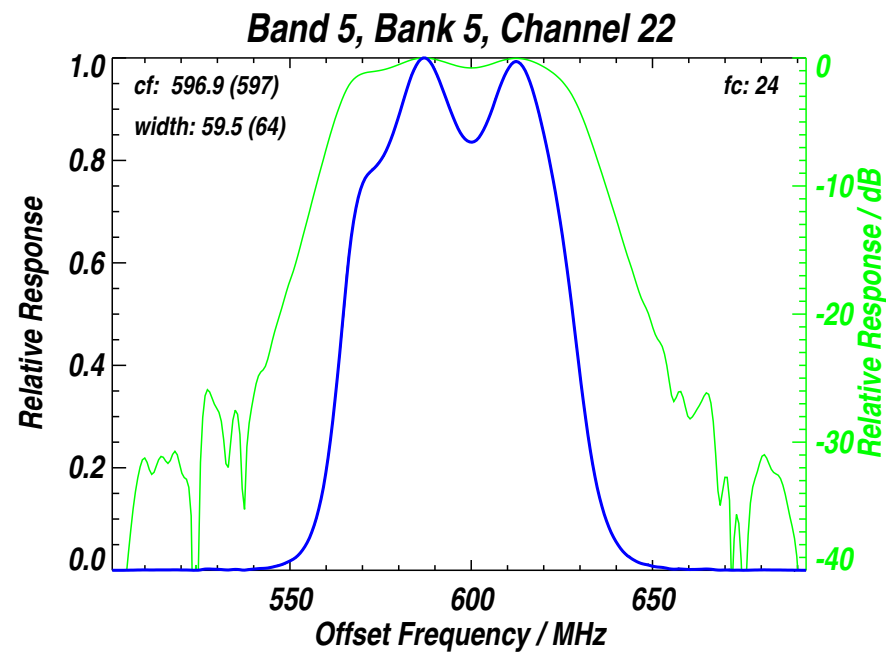
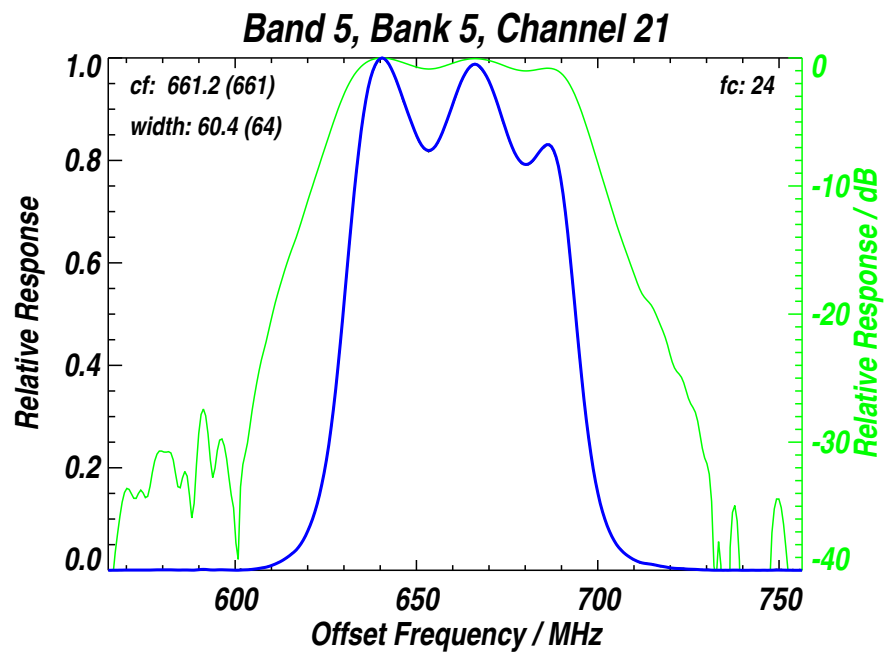
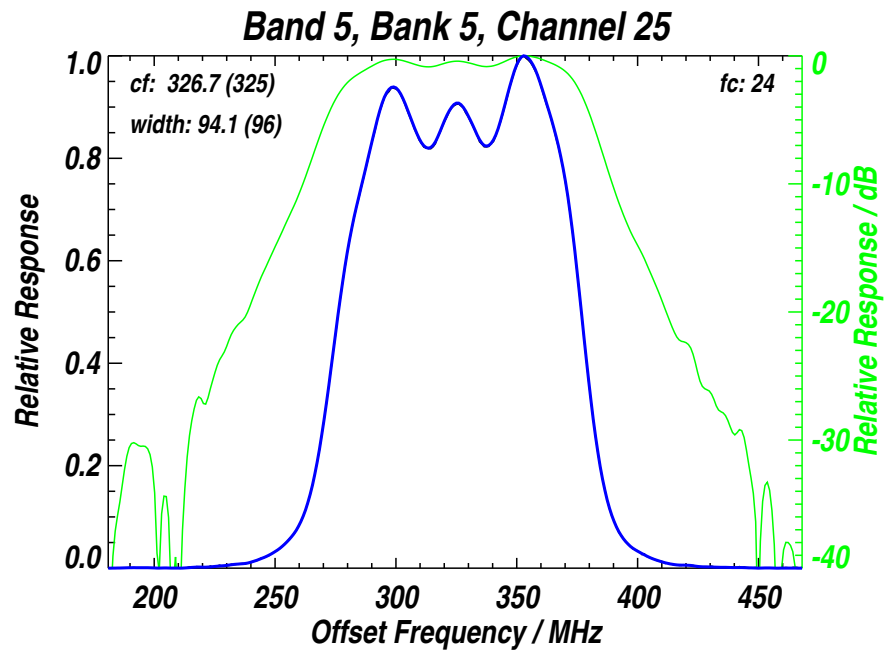


Figure H.129: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channels 21 to 24. See text for additional details.



**Band 5 (usb)**  
**Bank 5**  
**Origin = 203.456666676 GHz**

Figure H.130: Upper sideband front-end sweep data for Band 5 taken via Filterbank 5, channel 25. See text for additional details.

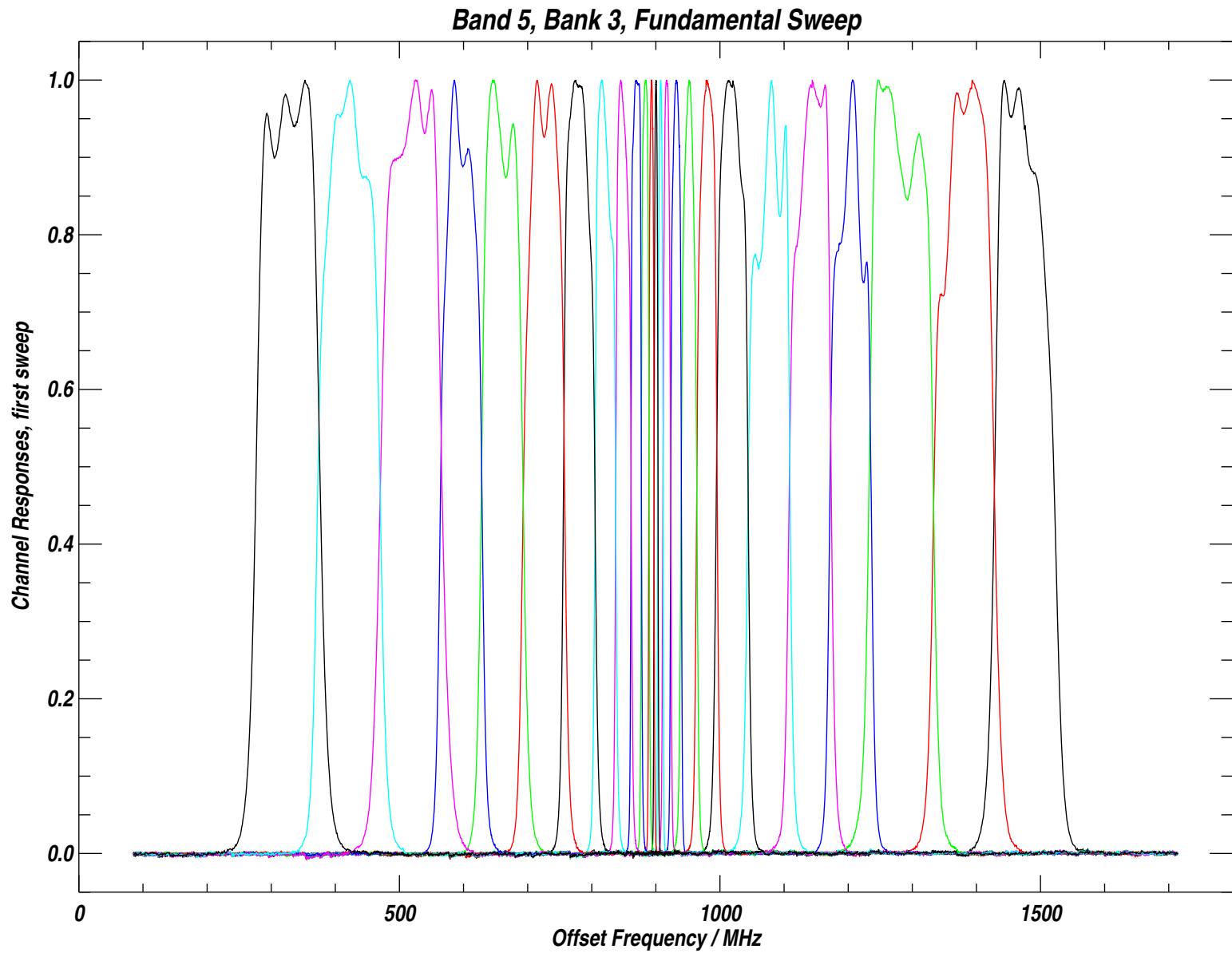


Figure H.131: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3. See text for additional details.

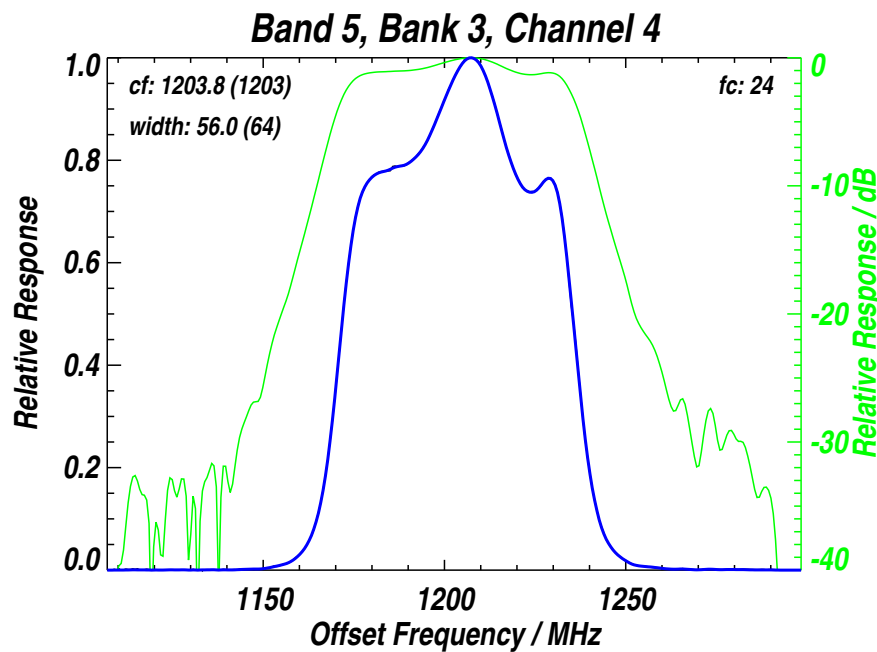
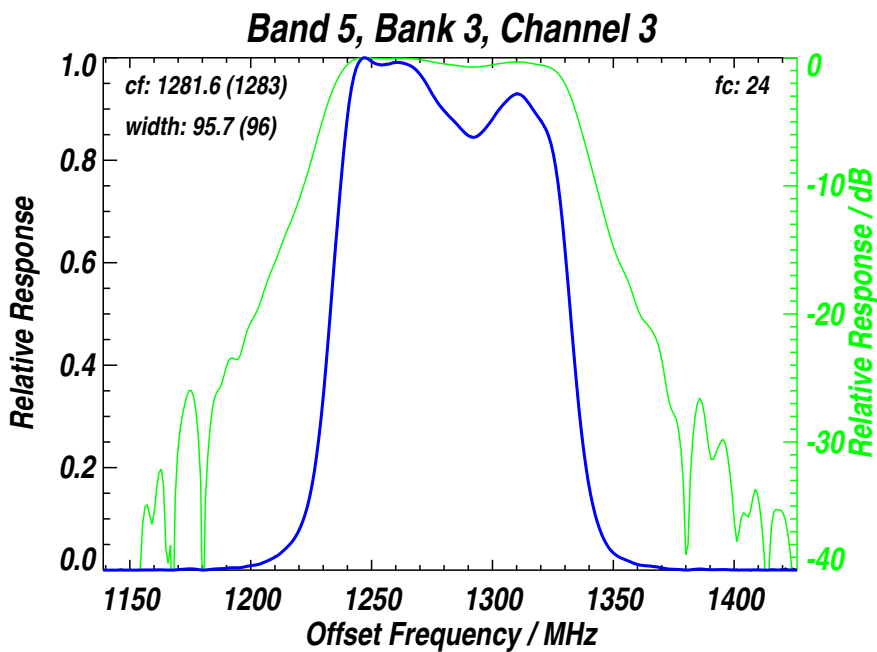
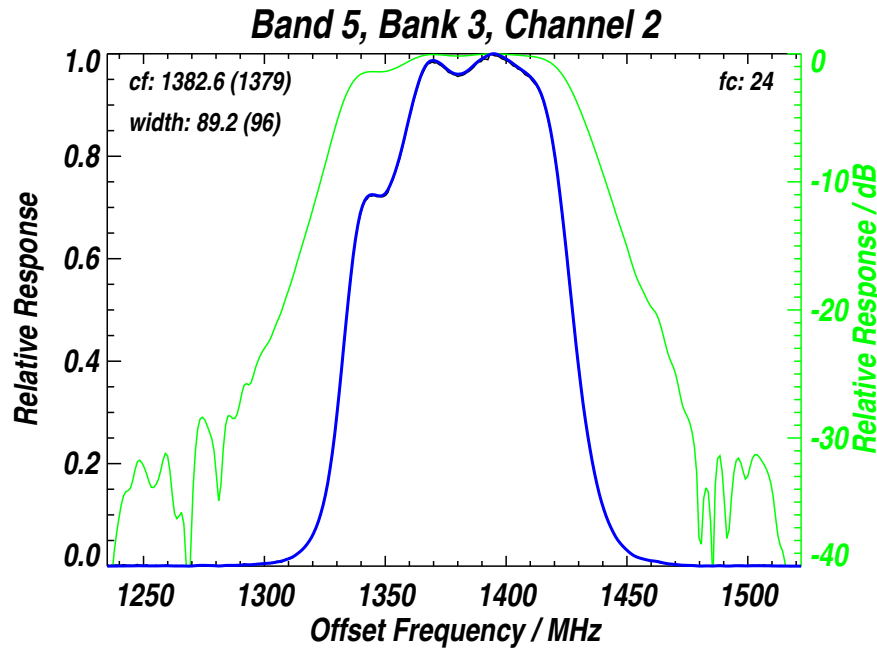
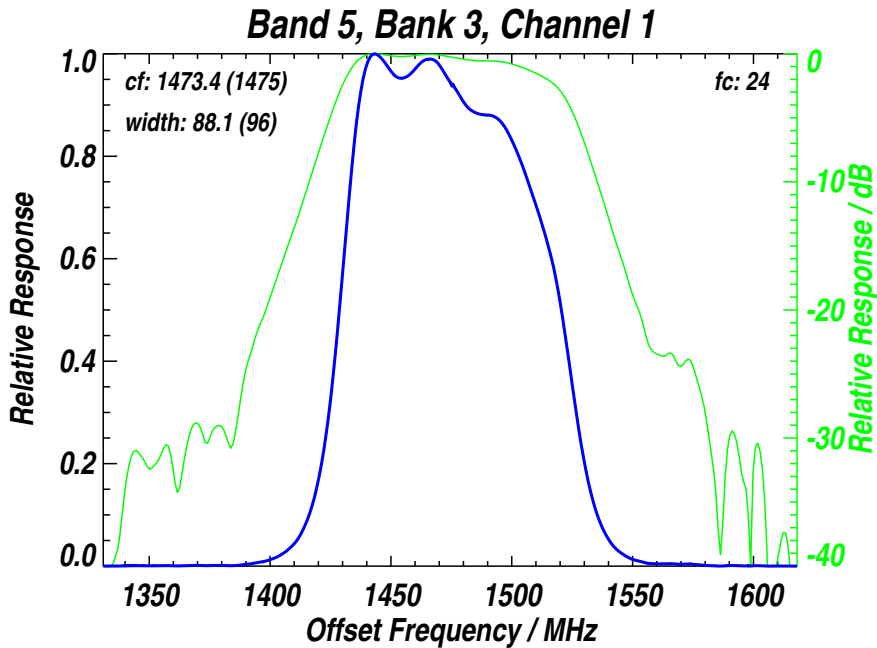


Figure H.132: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 1 to 4. See text for additional details.

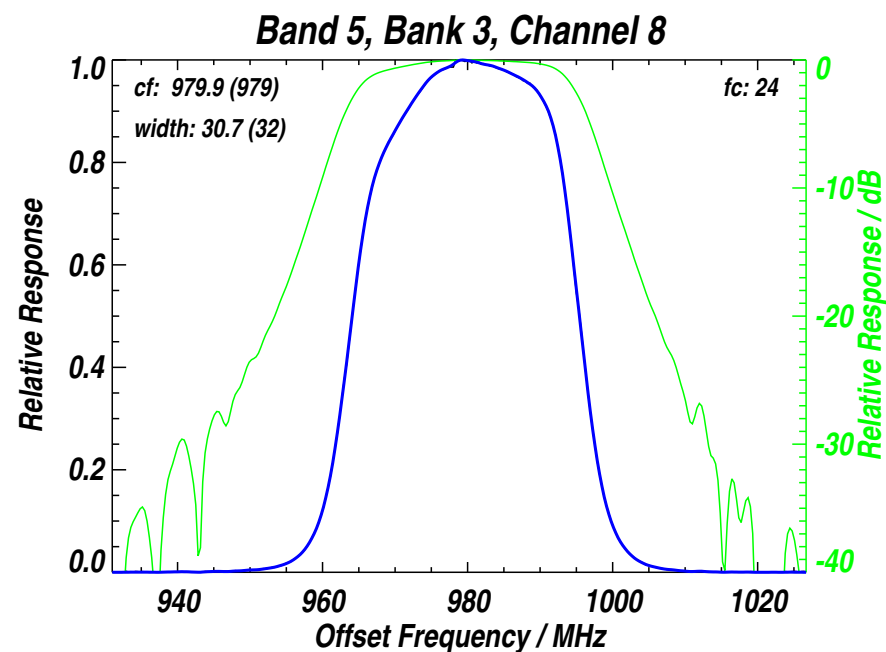
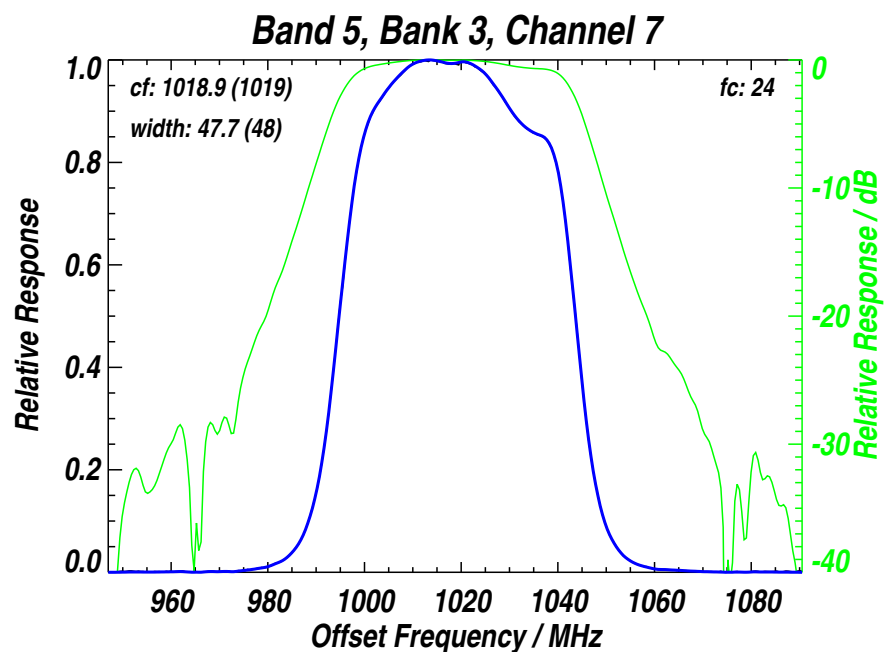
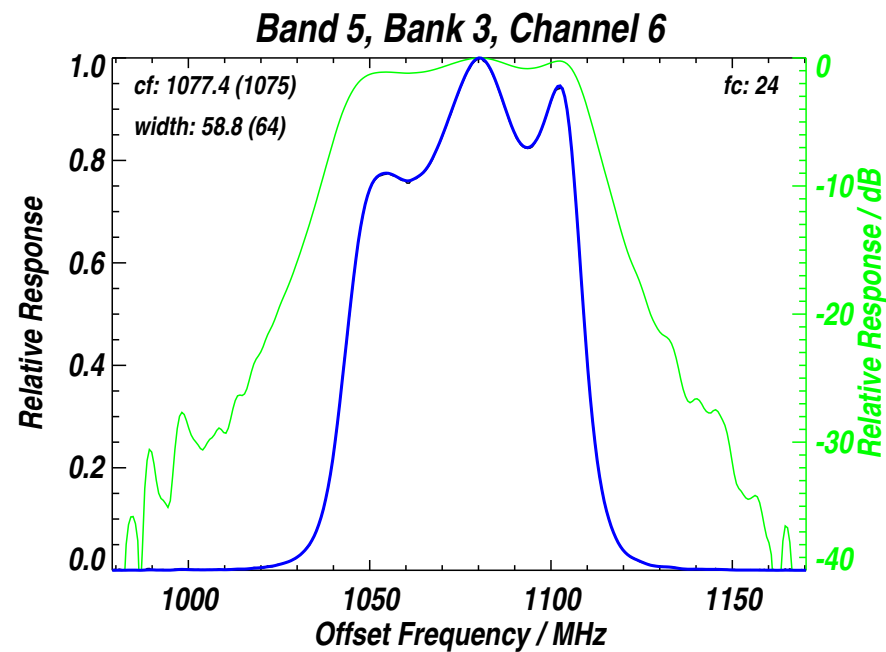
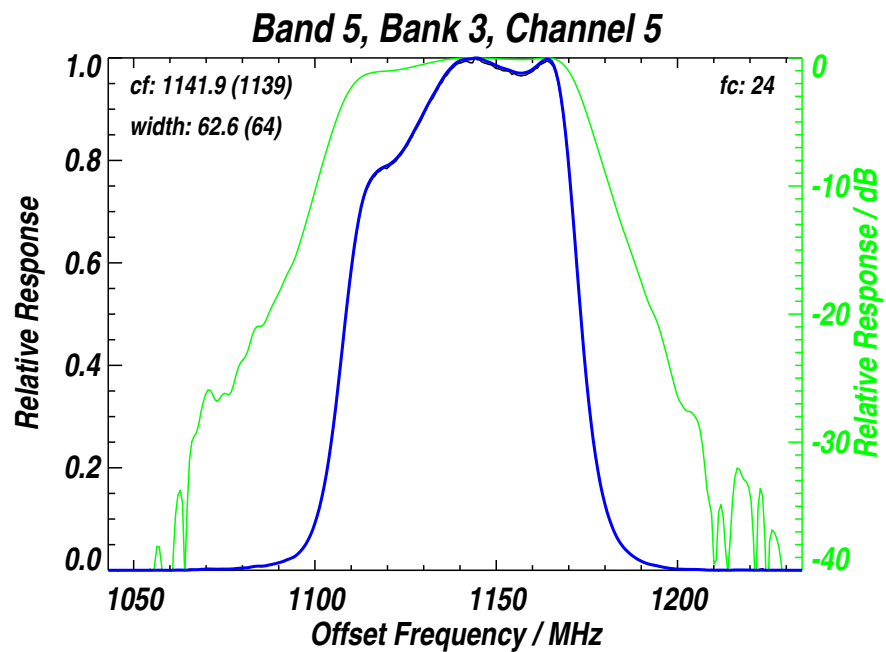


Figure H.133: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 5 to 8. See text for additional details.

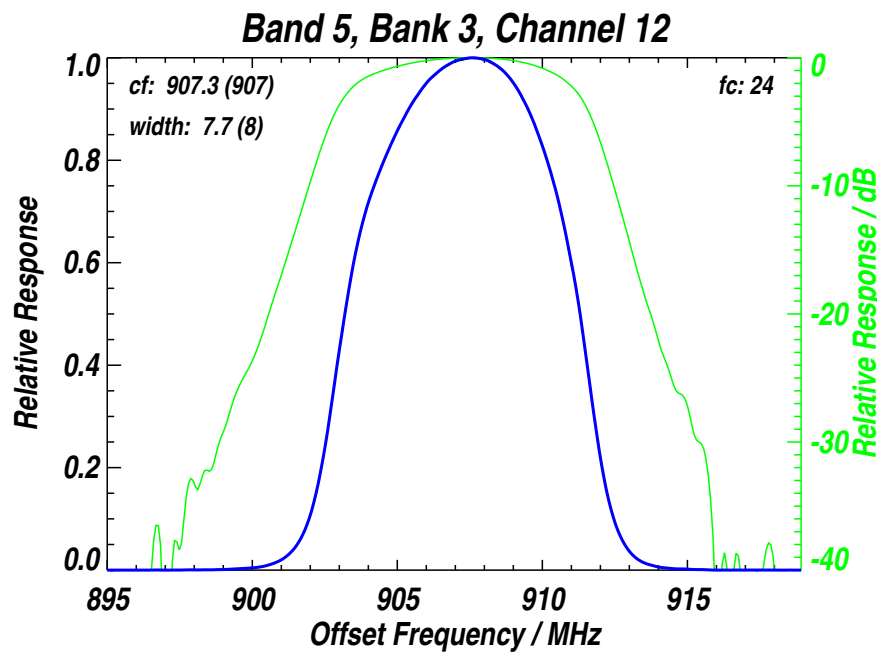
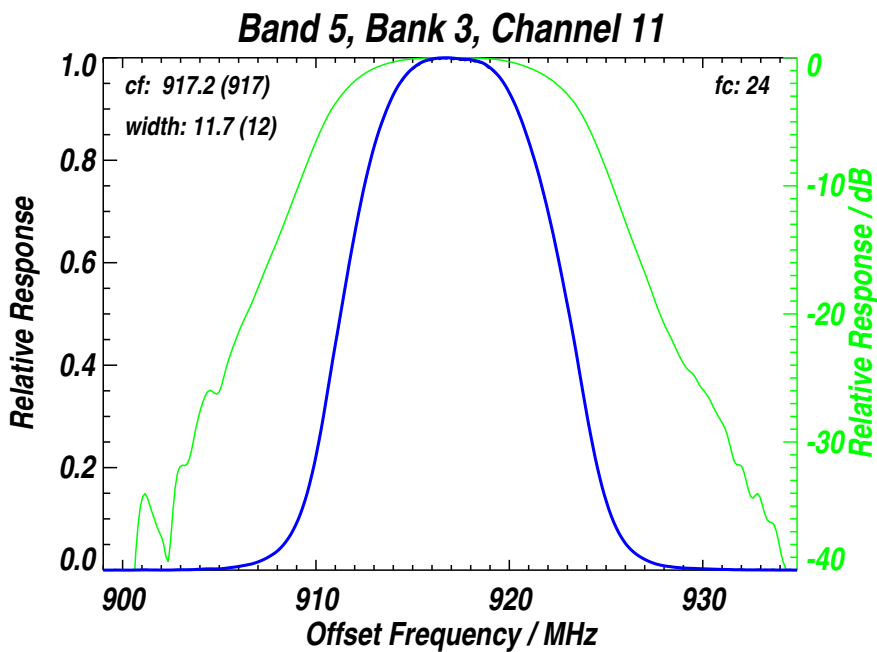
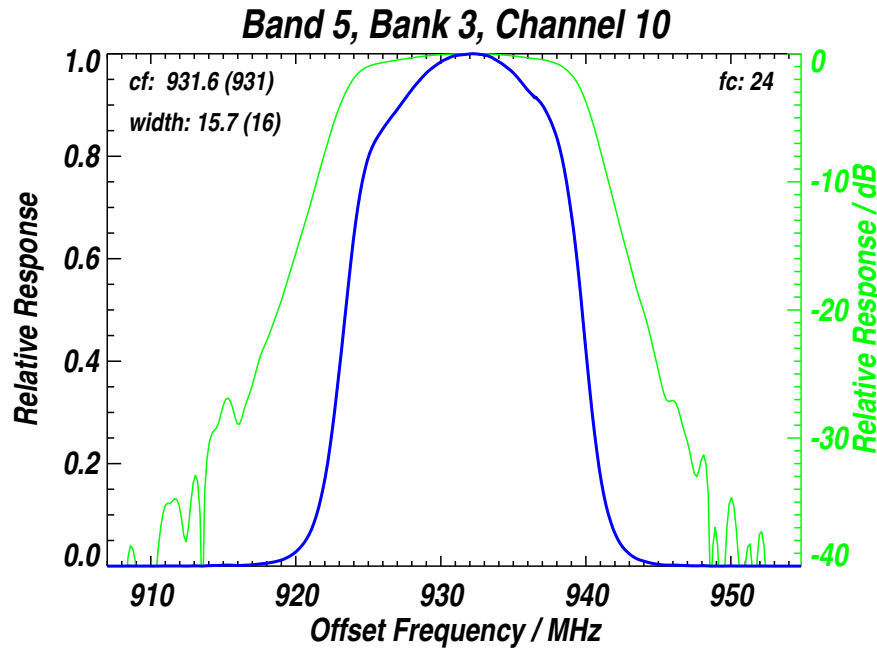
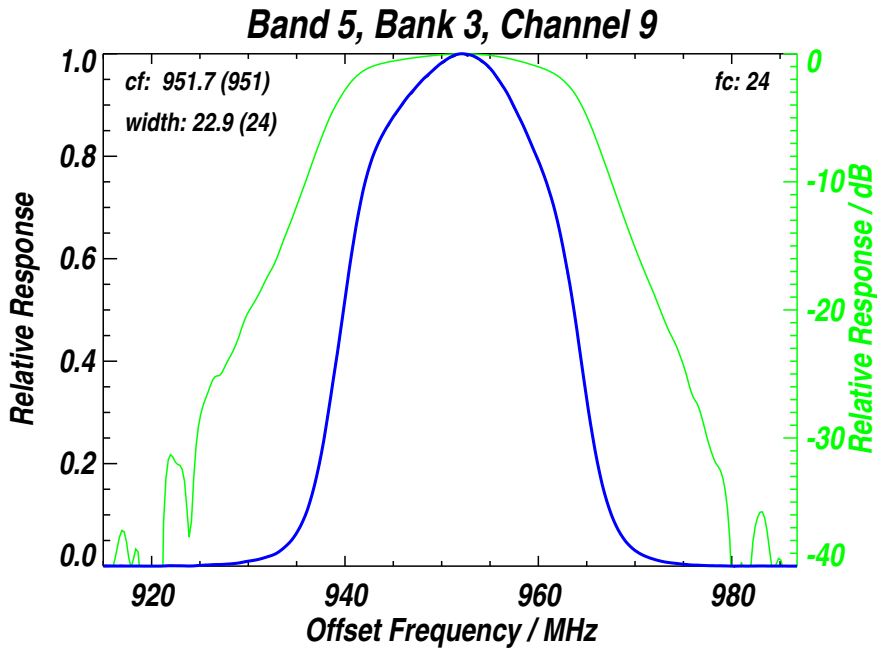


Figure H.134: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 9 to 12. See text for additional details.

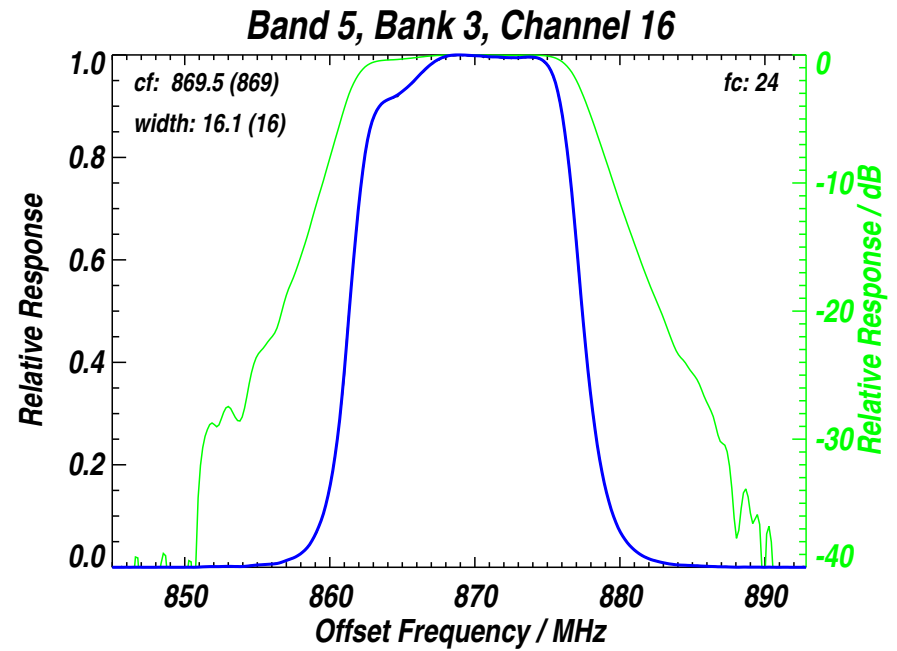
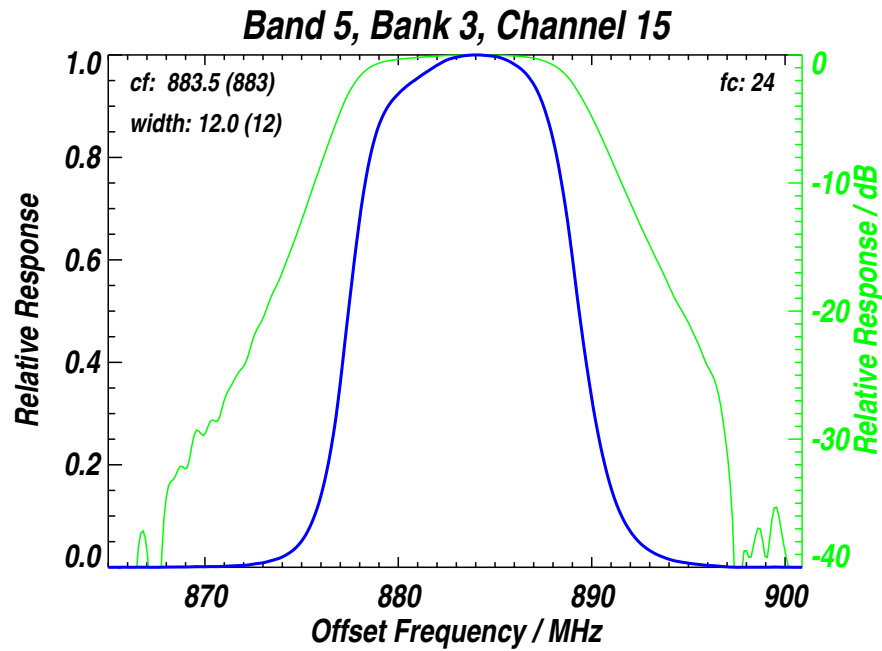
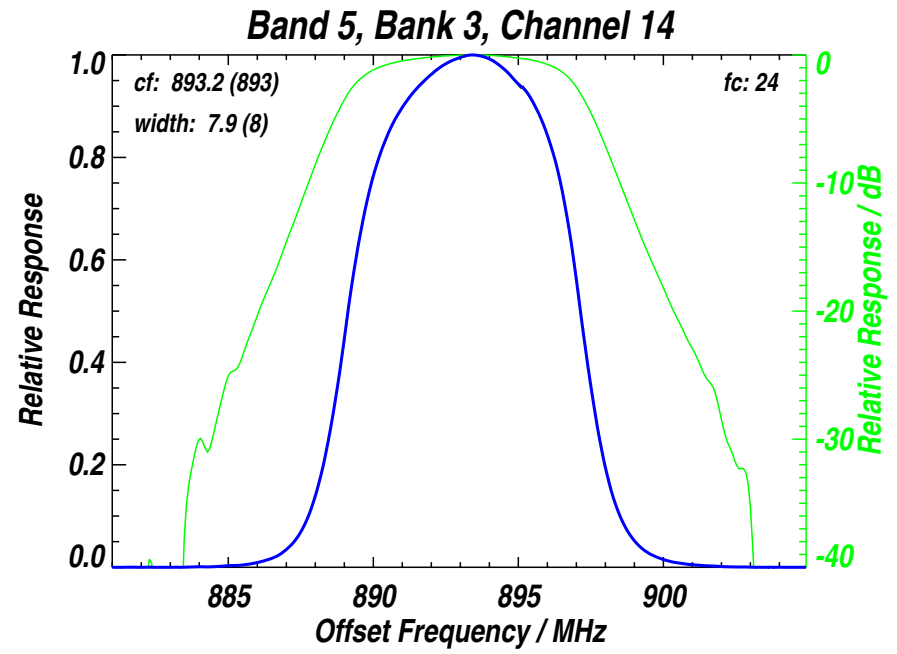
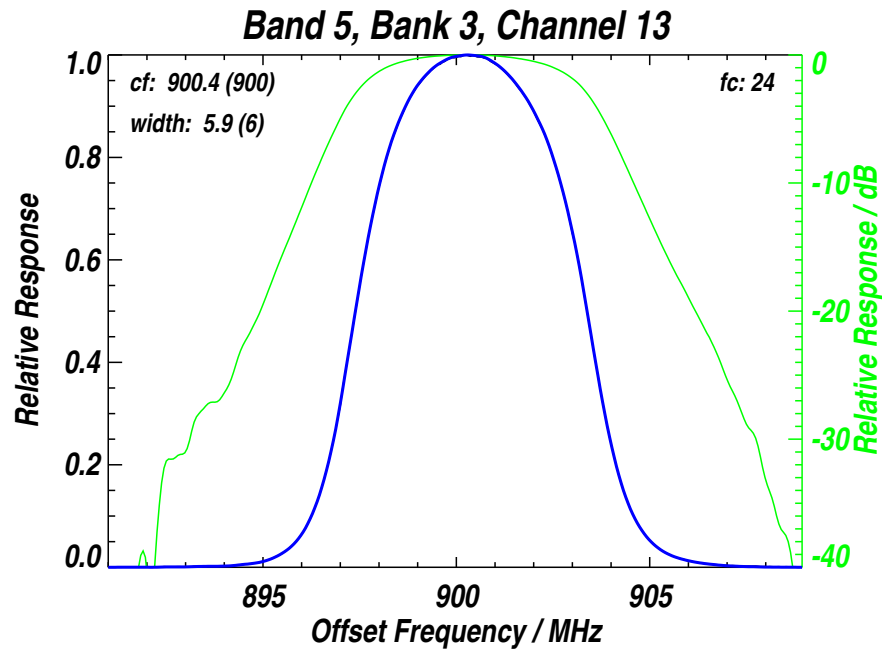


Figure H.135: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 13 to 16. See text for additional details.

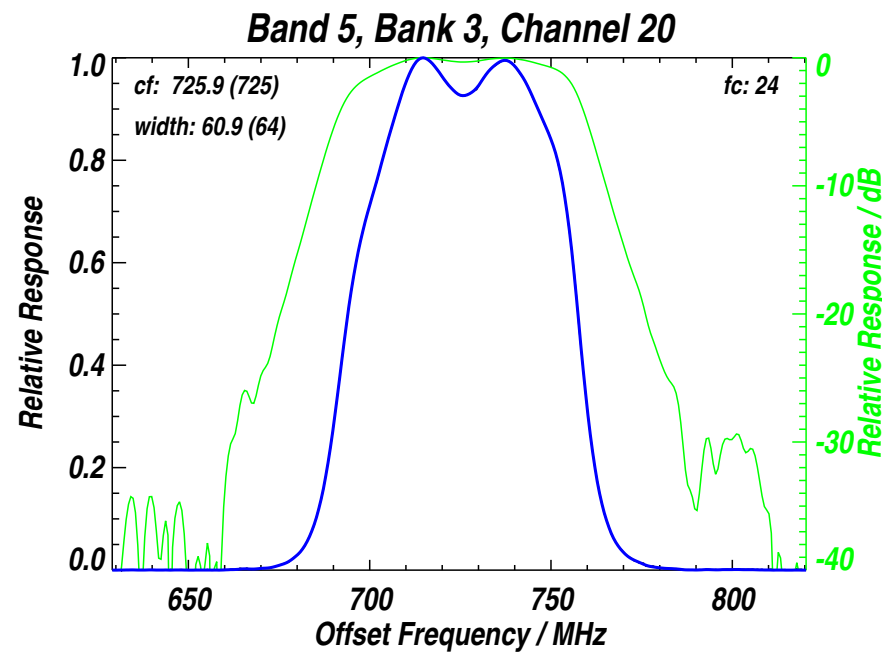
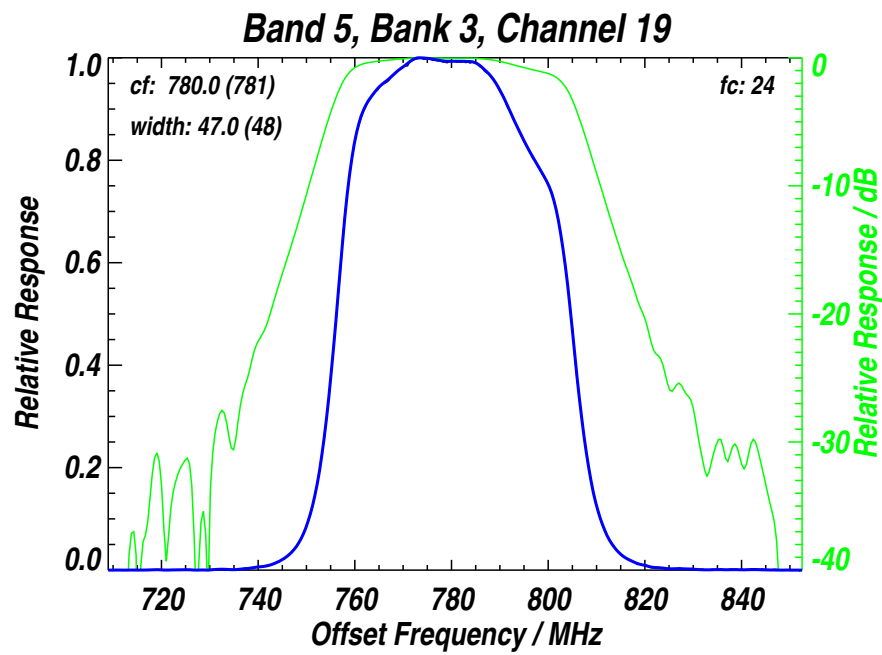
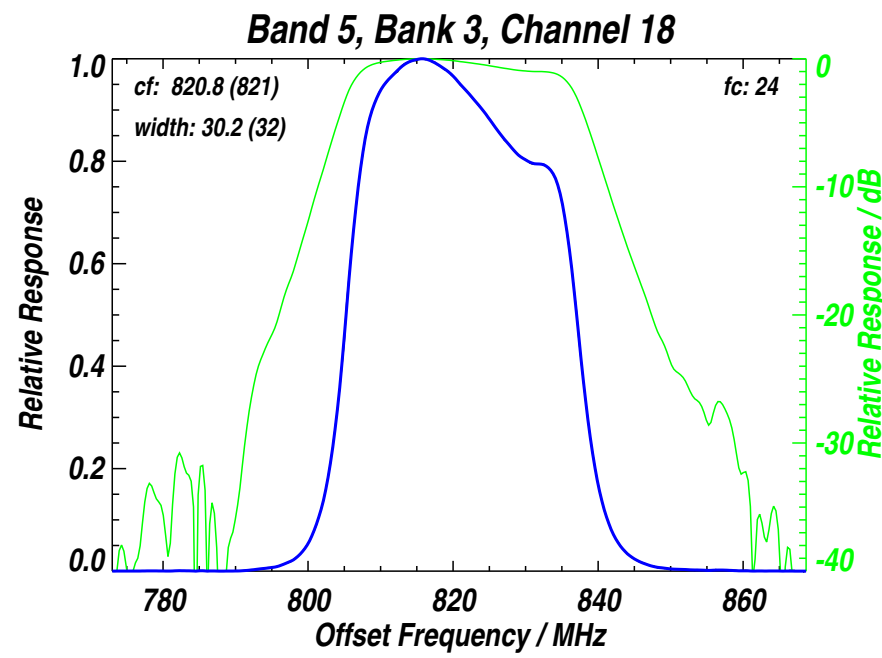
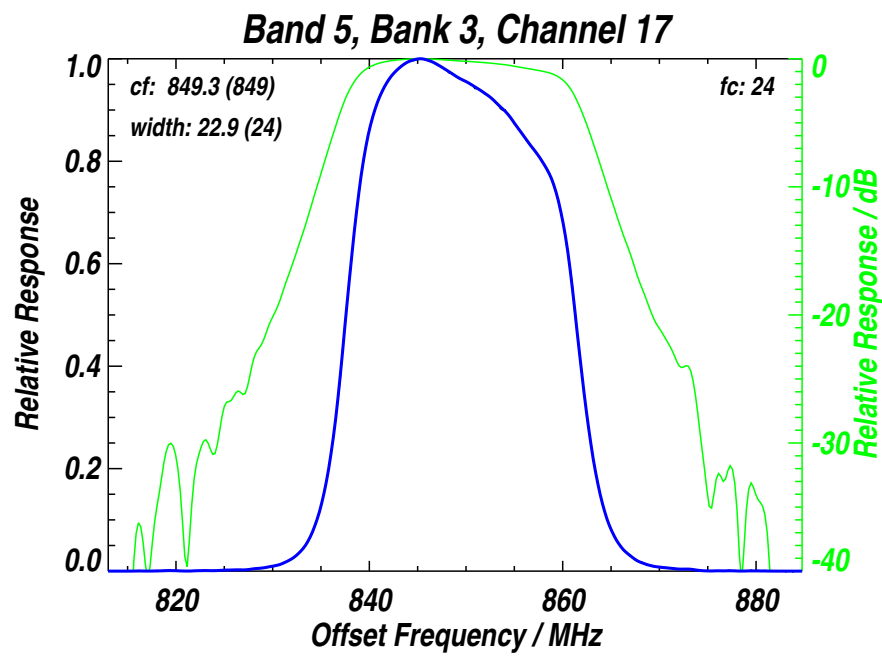


Figure H.136: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 17 to 20. See text for additional details.



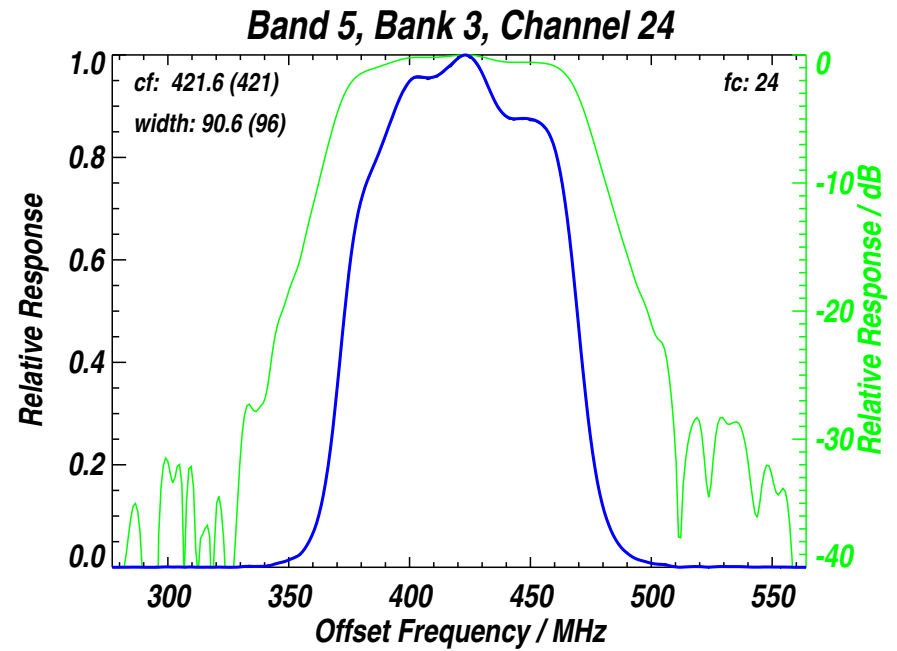
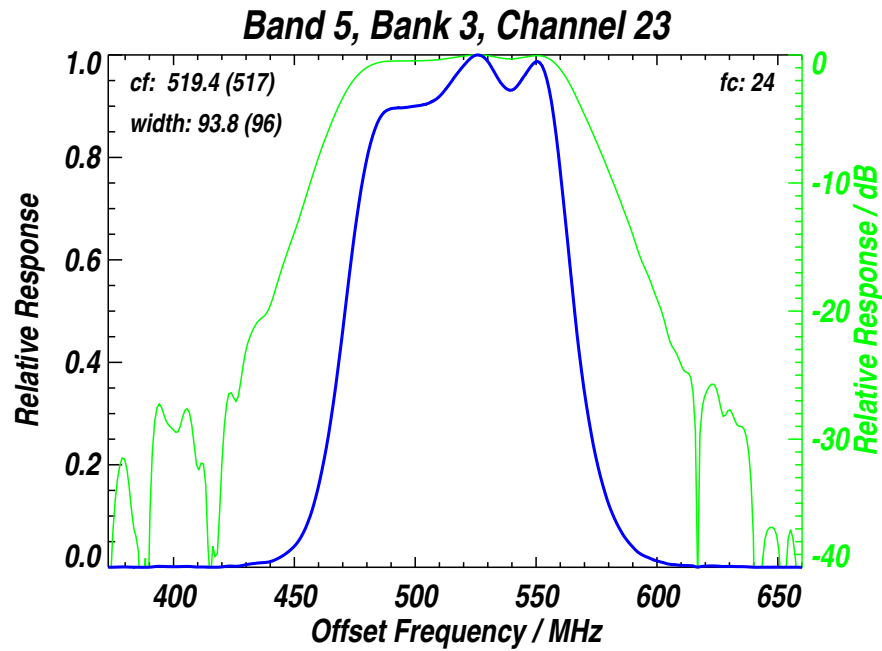
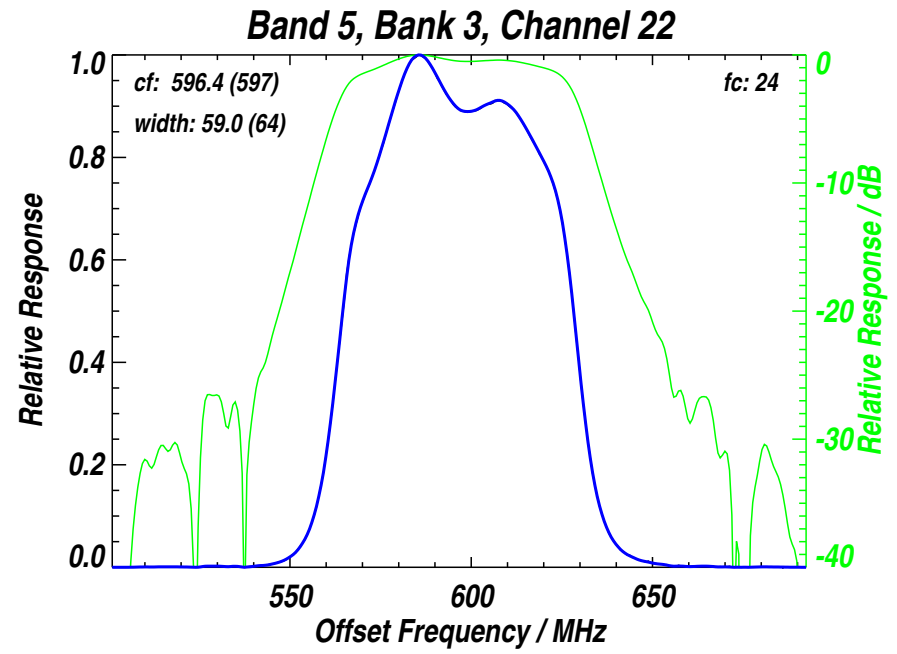
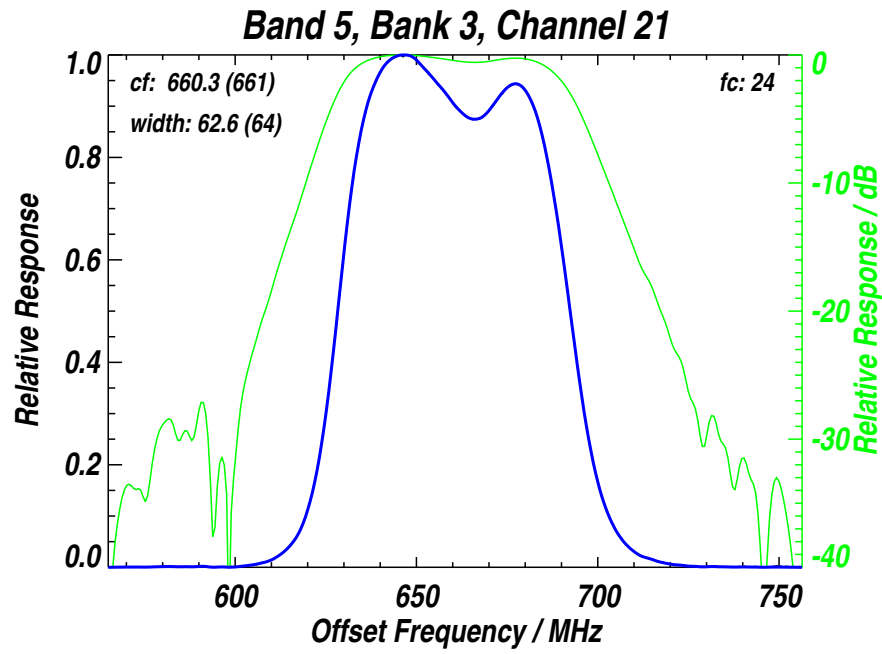
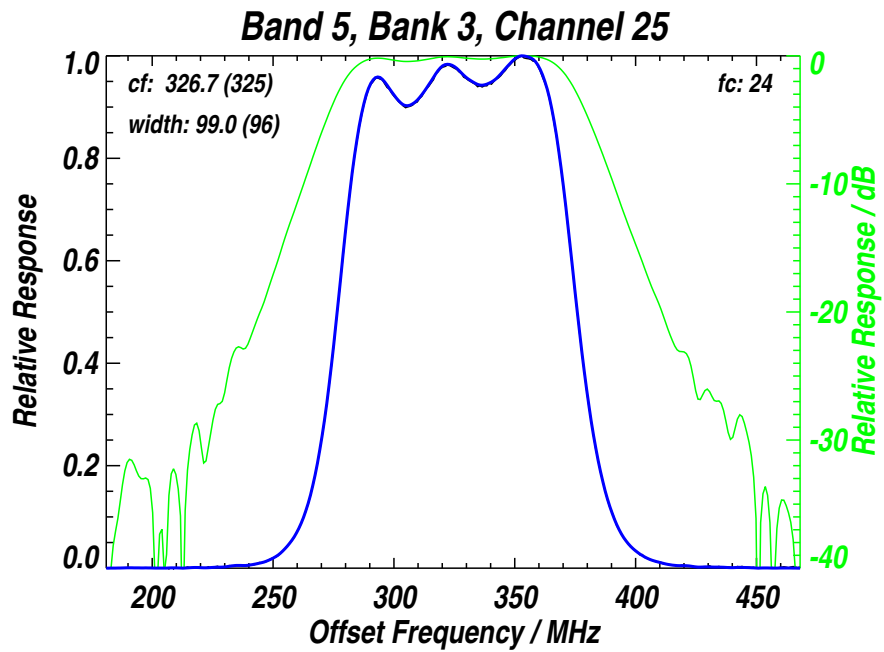


Figure H.137: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 5 (usb)**  
**Bank 3**  
**Origin = 203.456666676 GHz**

Figure H.138: Upper sideband front-end sweep data for Band 5 taken via Filterbank 3, channel 25. See text for additional details.

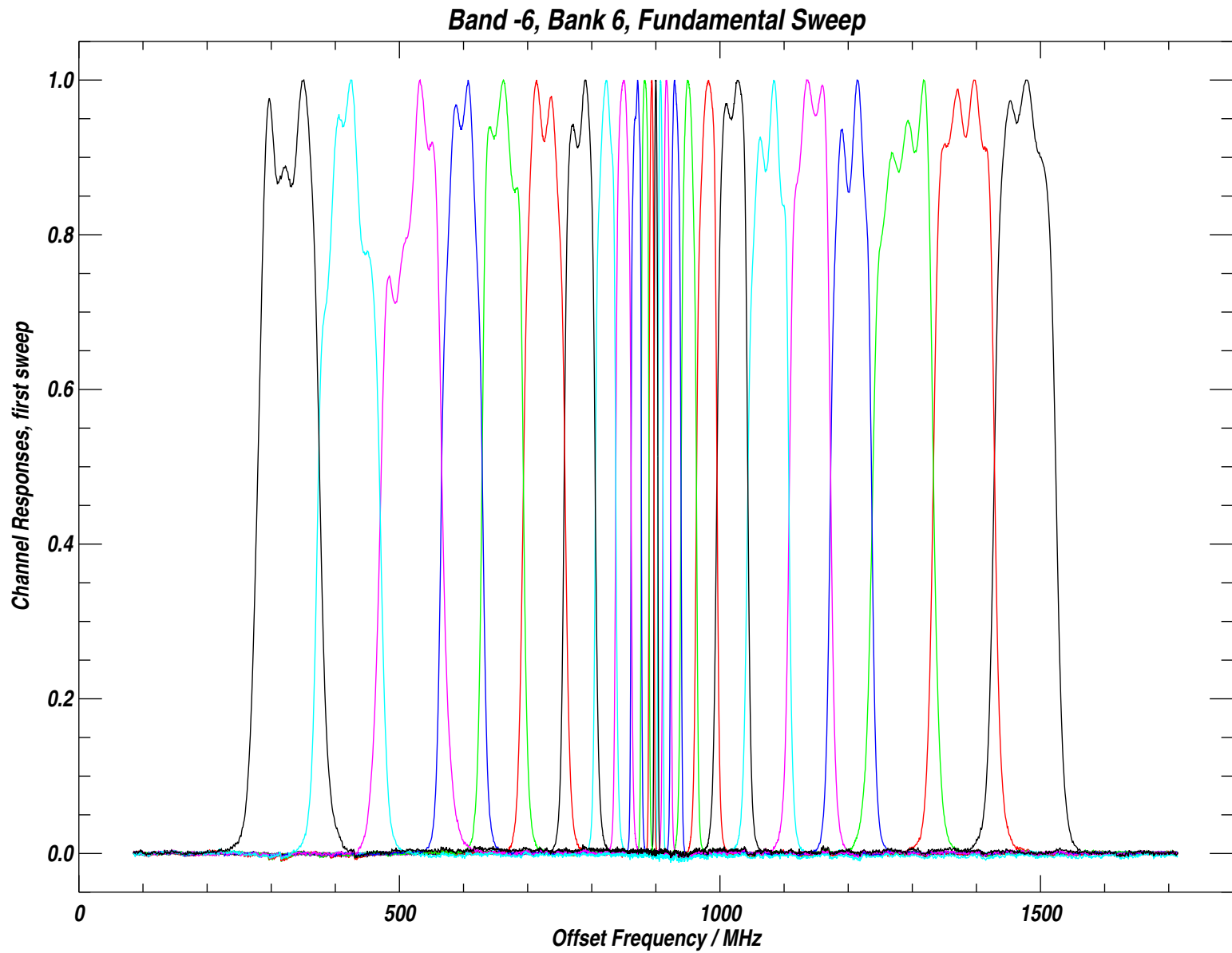


Figure H.139: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6. See text for additional details.

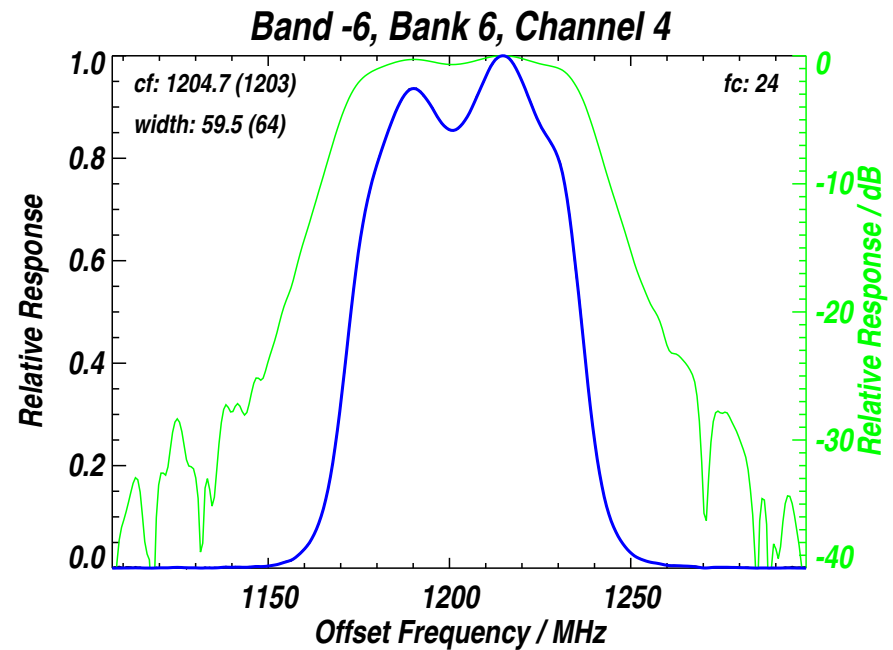
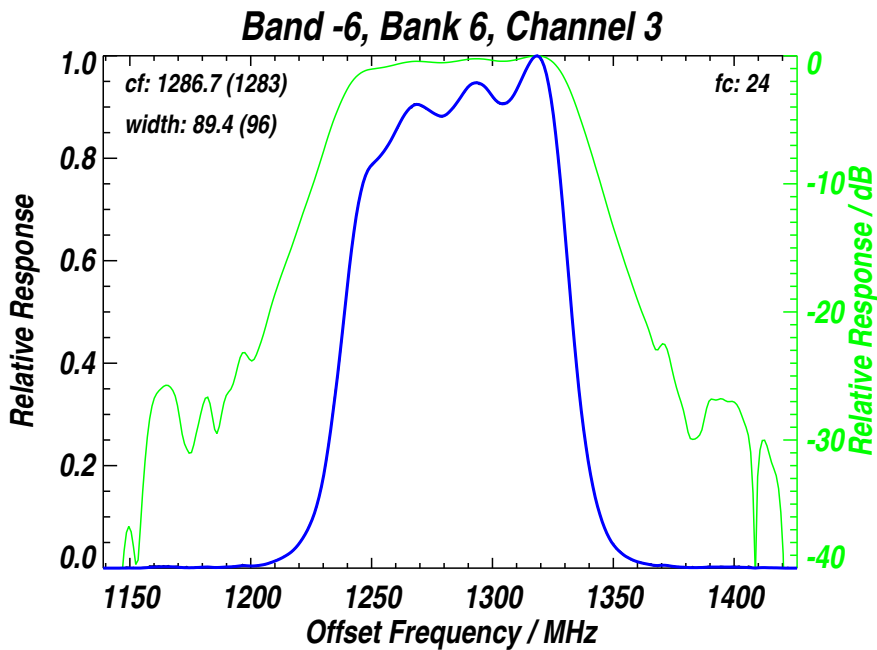
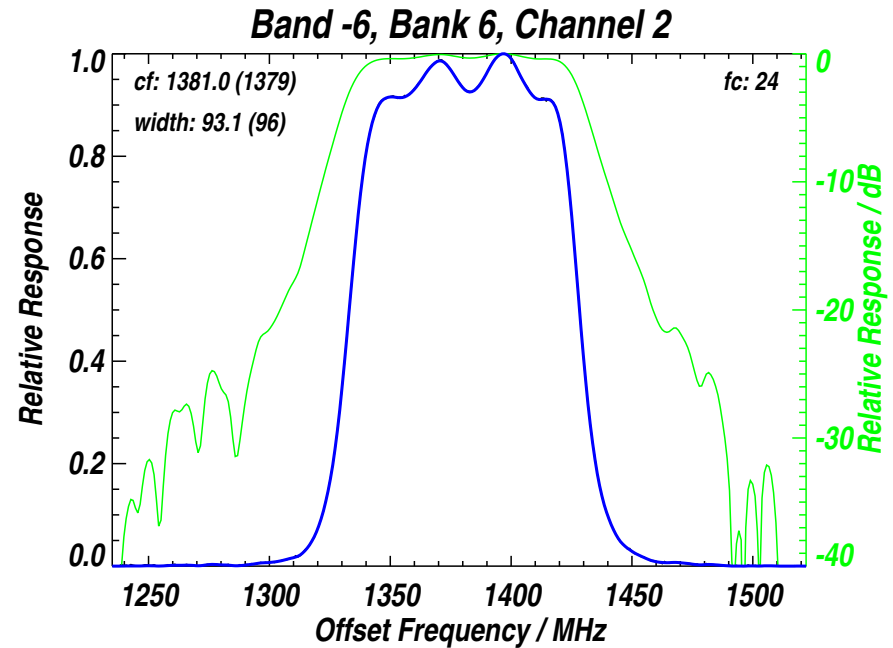
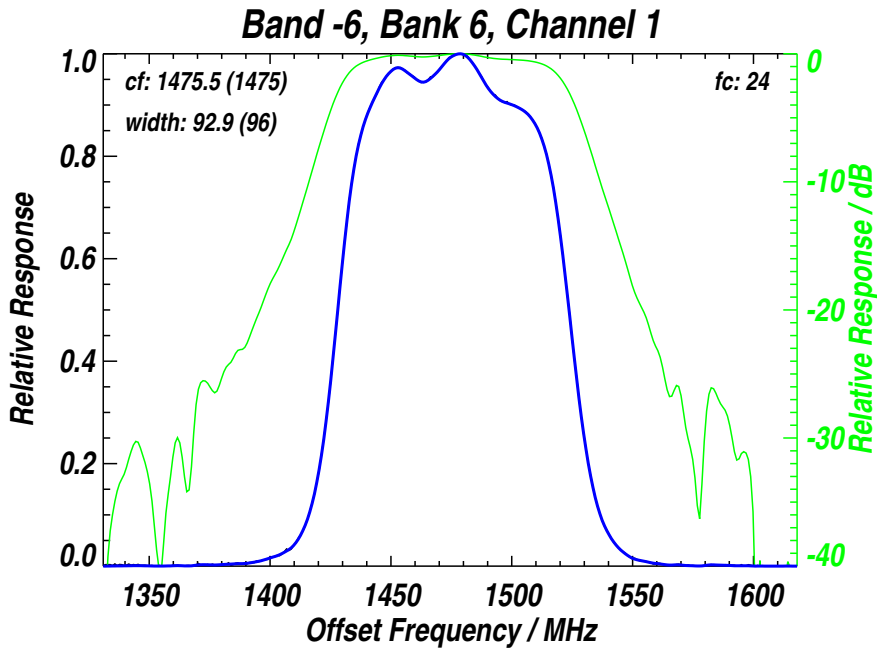


Figure H.140: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 1 to 4. See text for additional details.

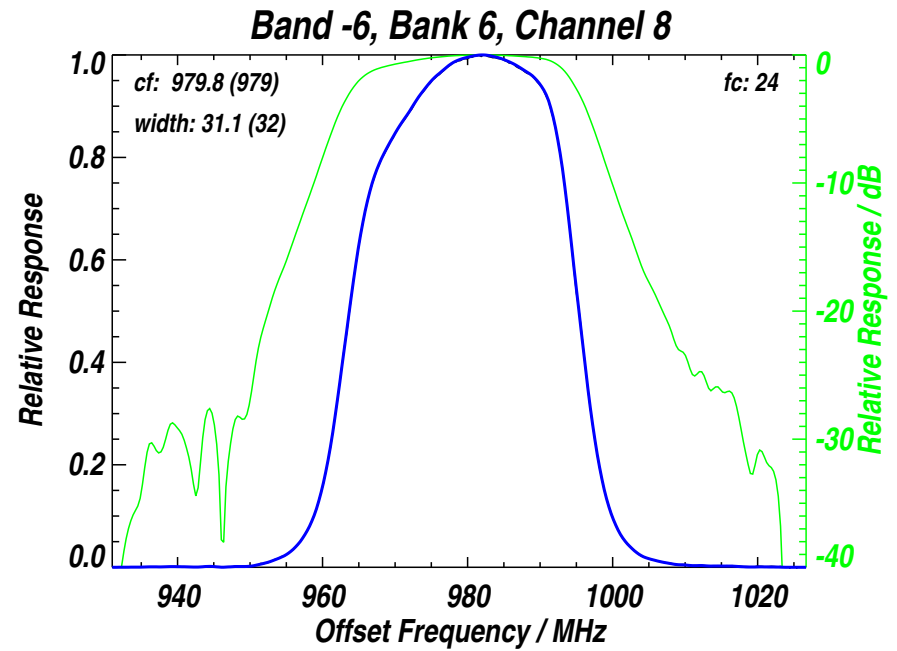
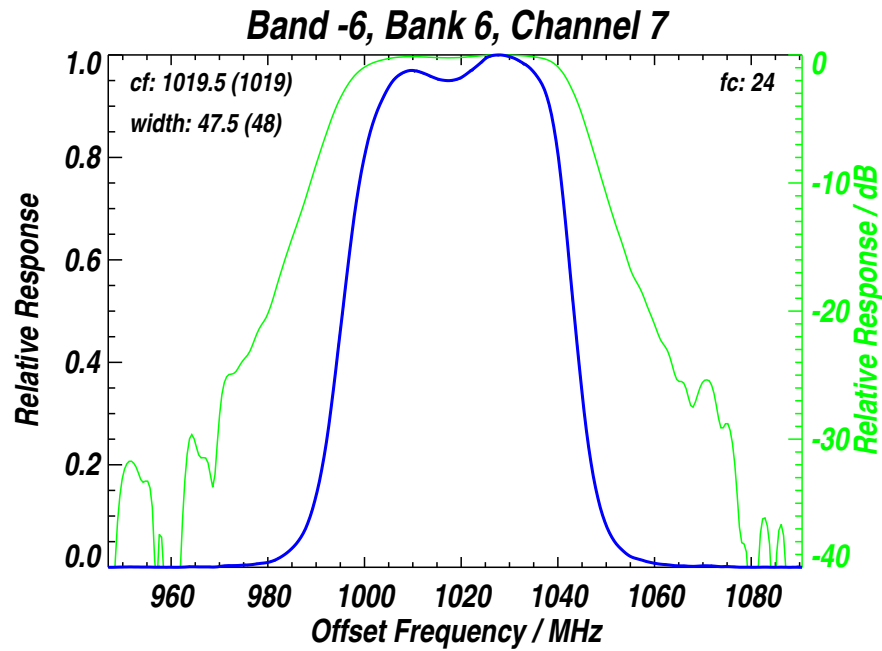
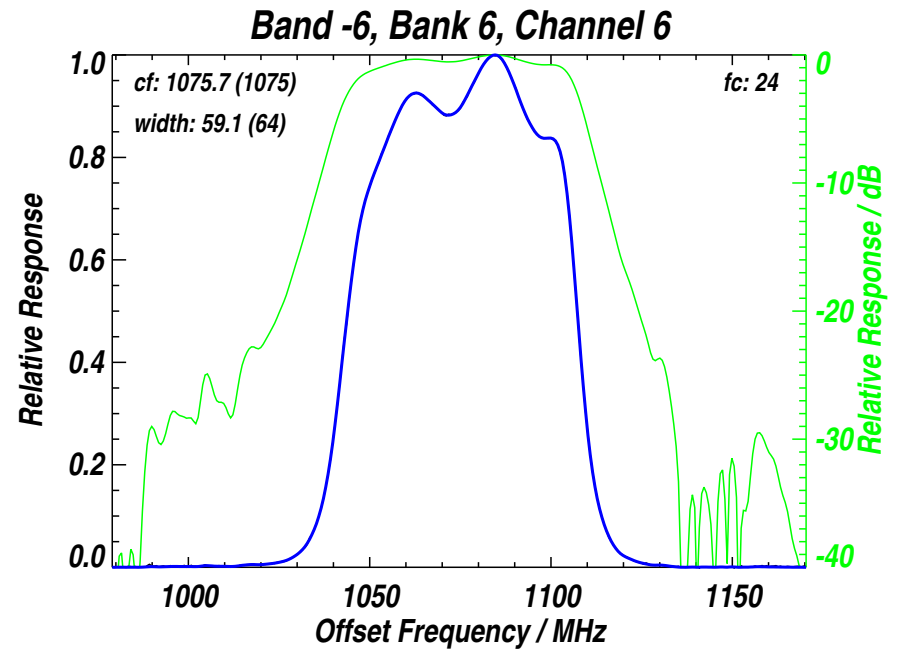
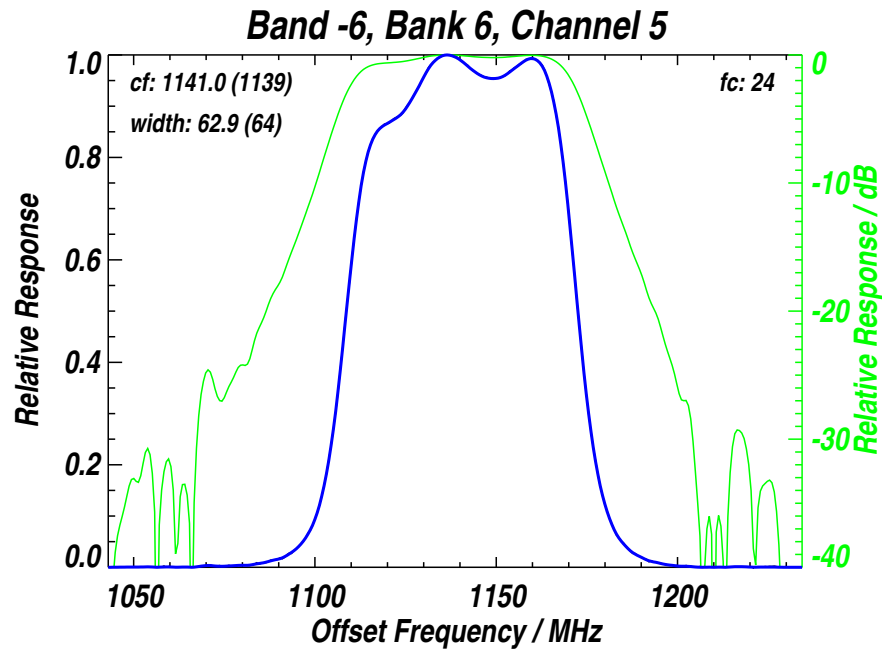


Figure H.141: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 5 to 8. See text for additional details.

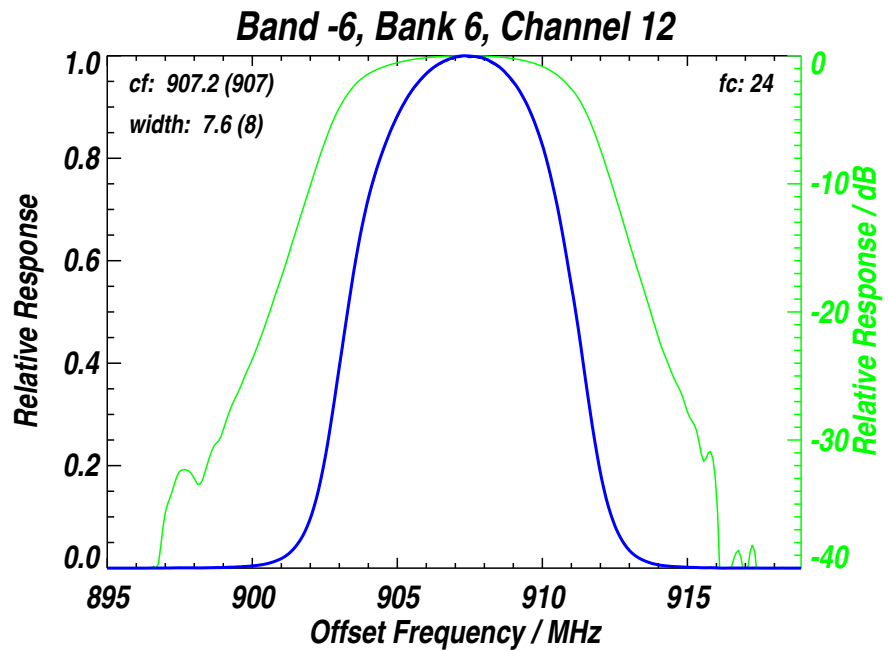
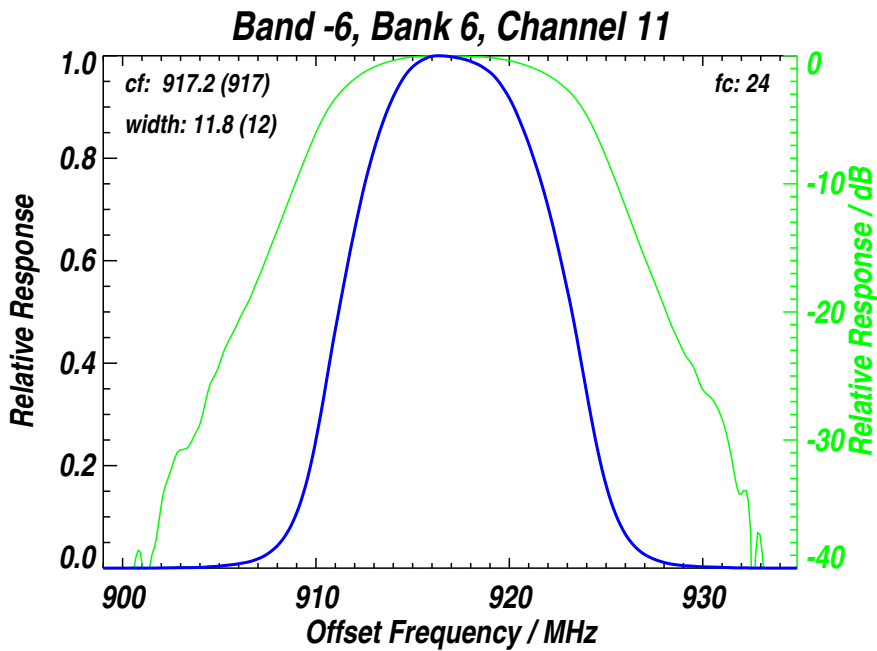
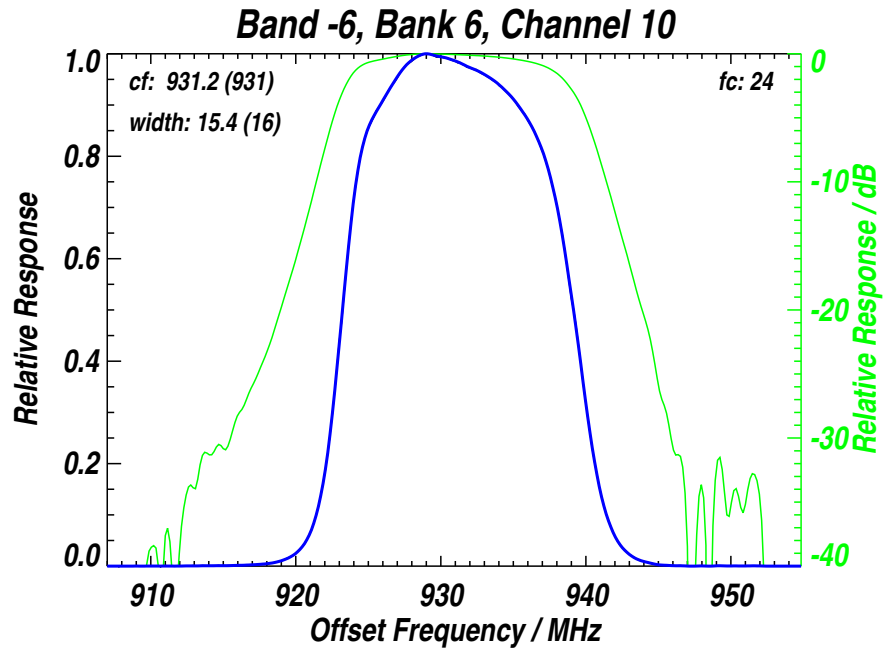
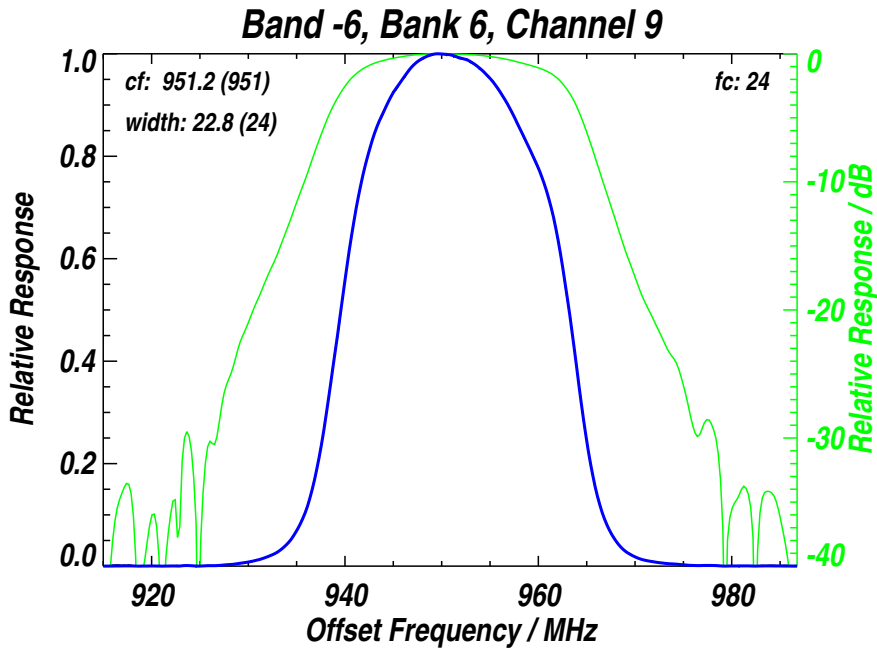


Figure H.142: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 9 to 12. See text for additional details.

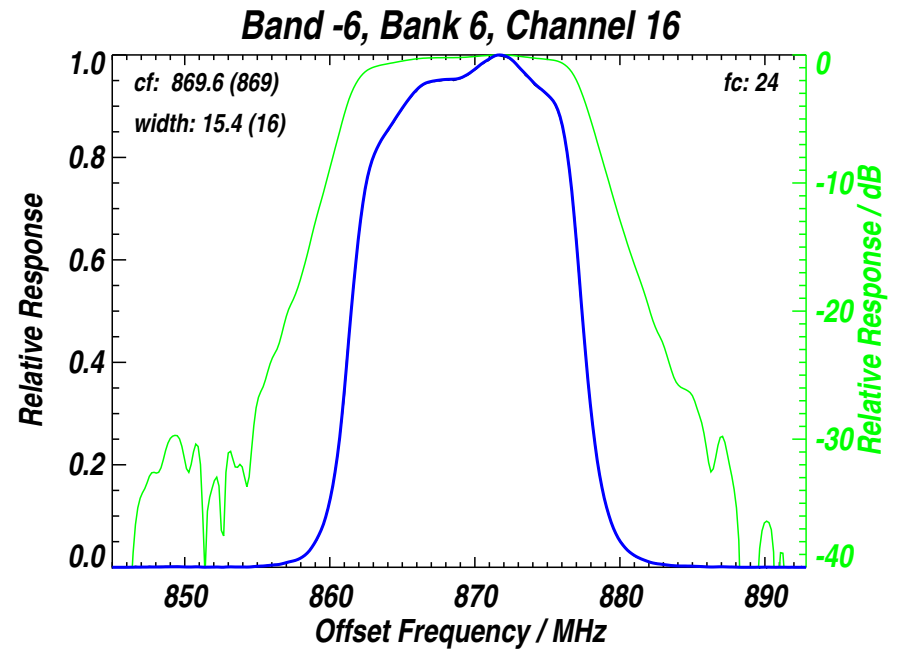
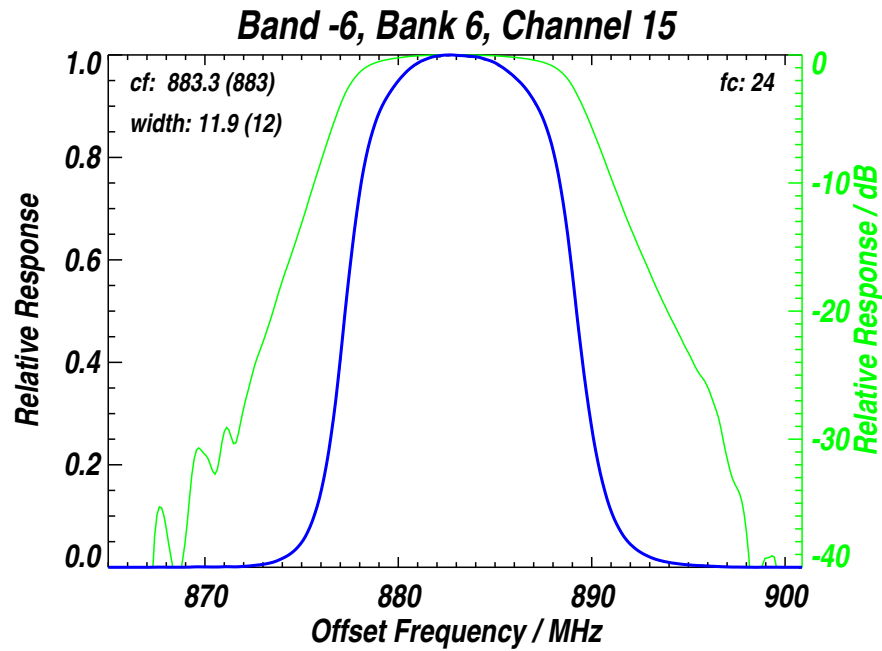
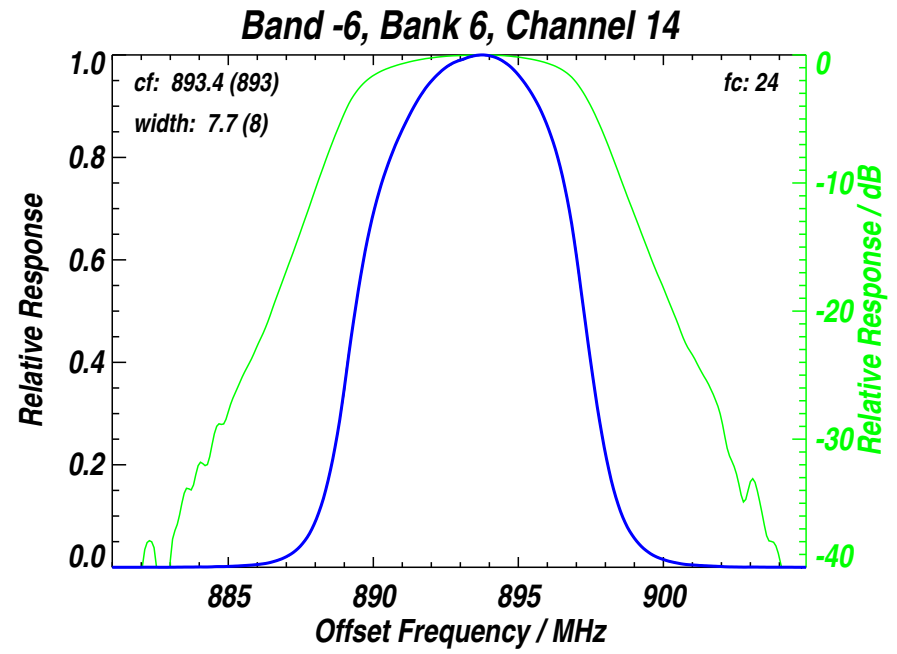
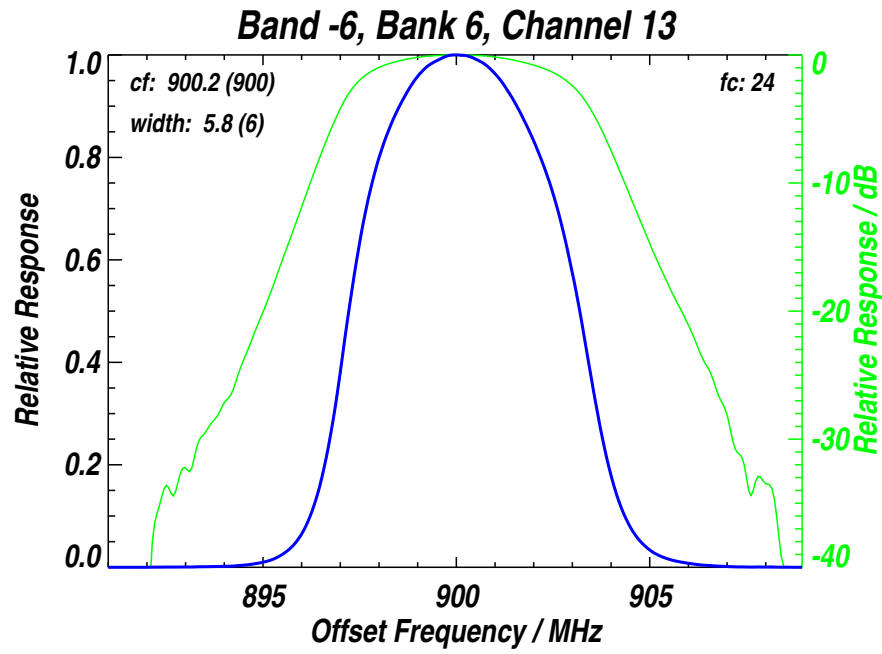


Figure H.143: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 13 to 16. See text for additional details.

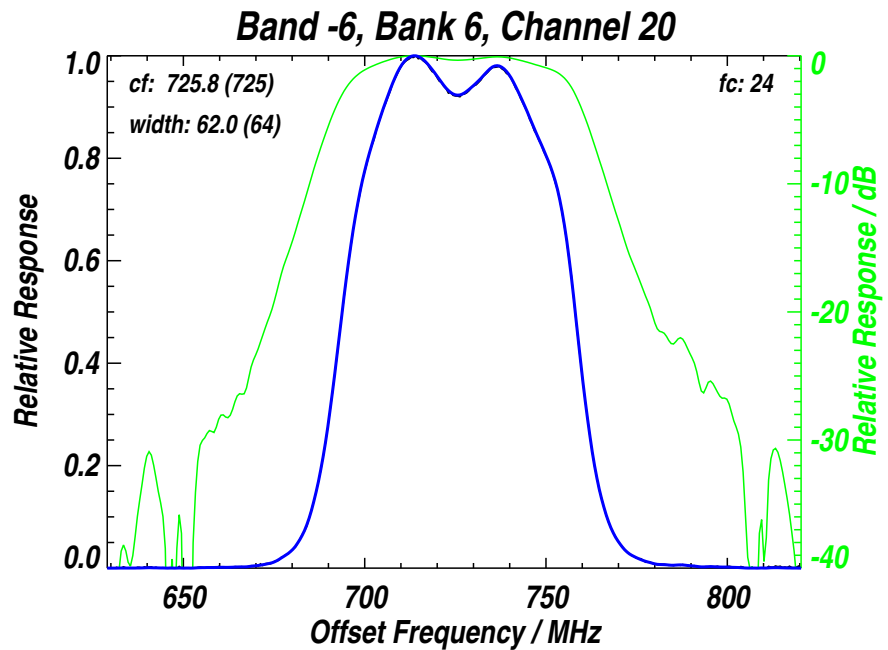
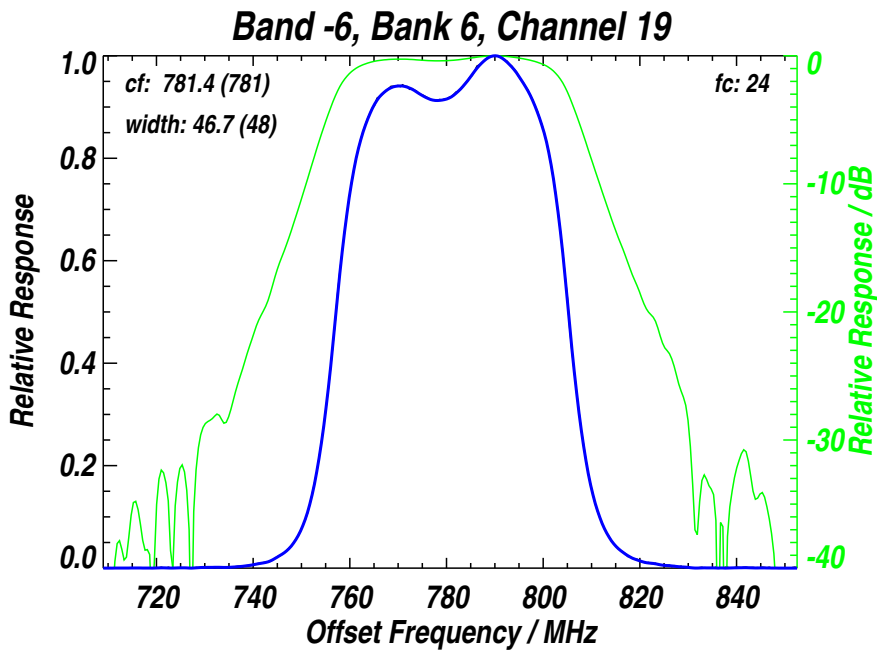
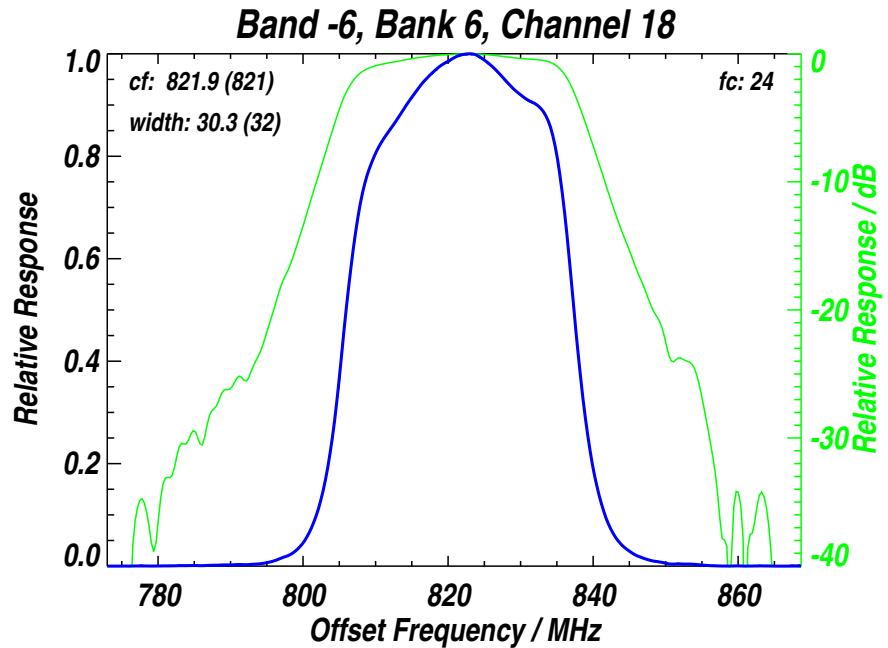
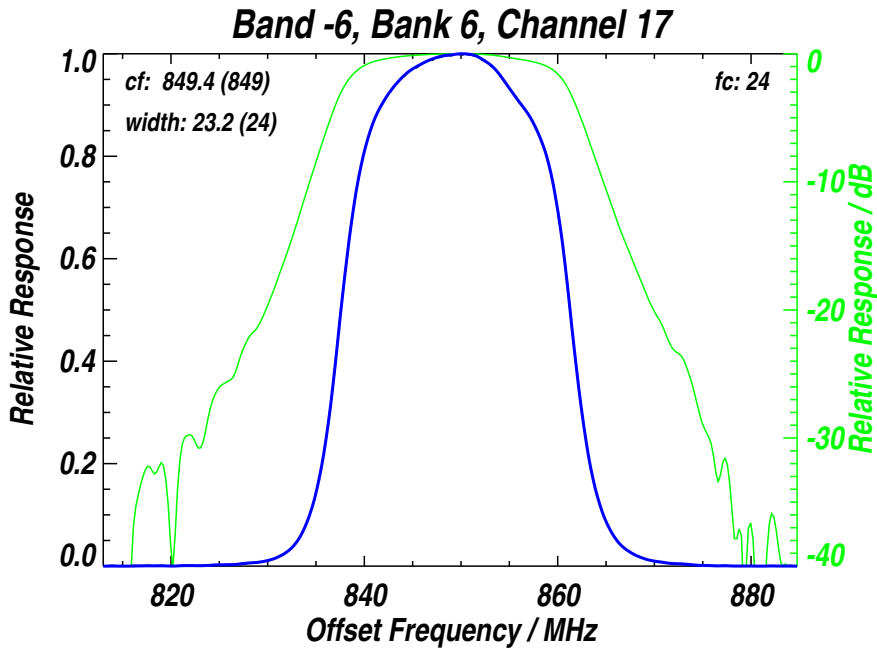


Figure H.144: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 17 to 20. See text for additional details.



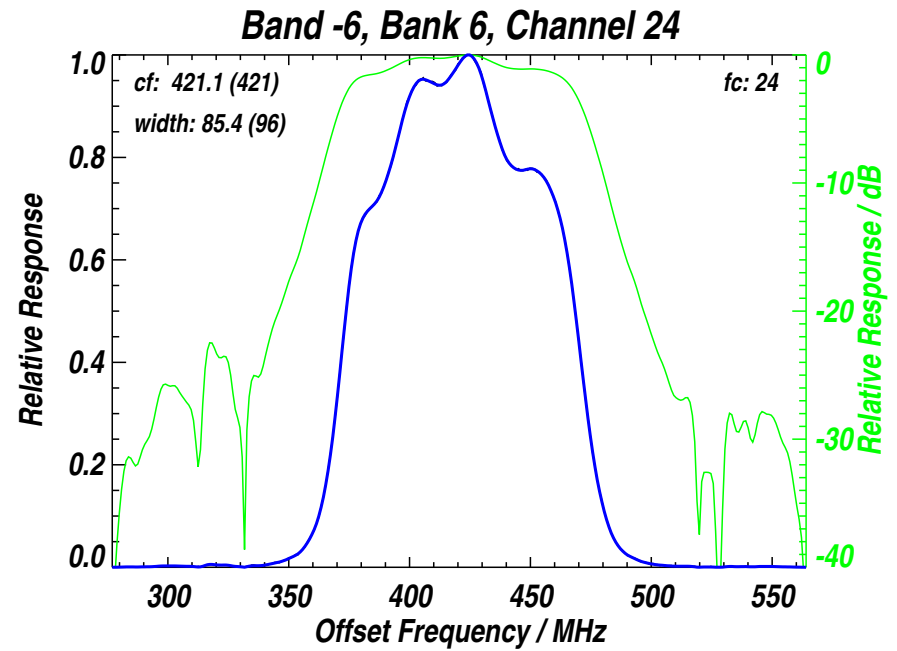
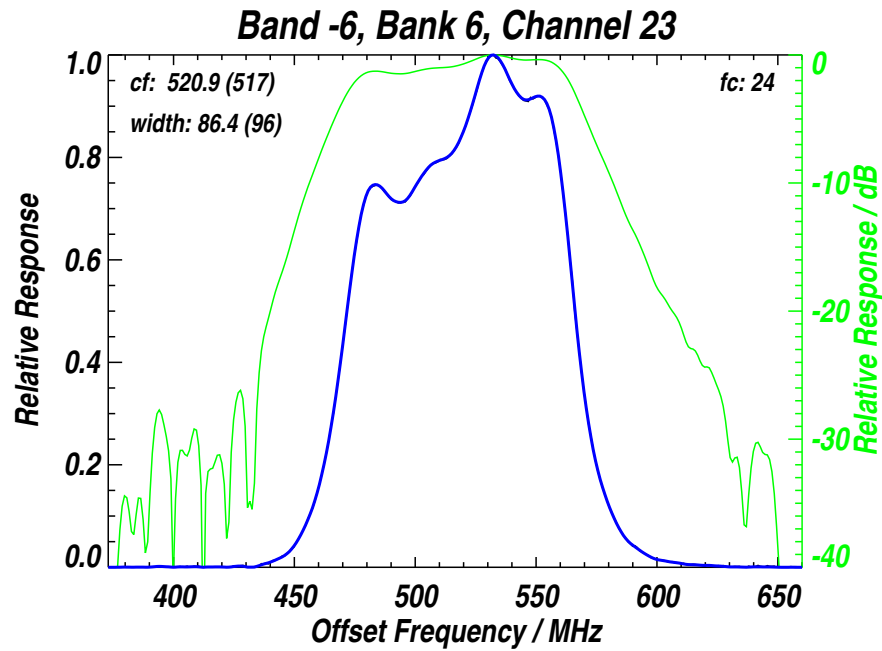
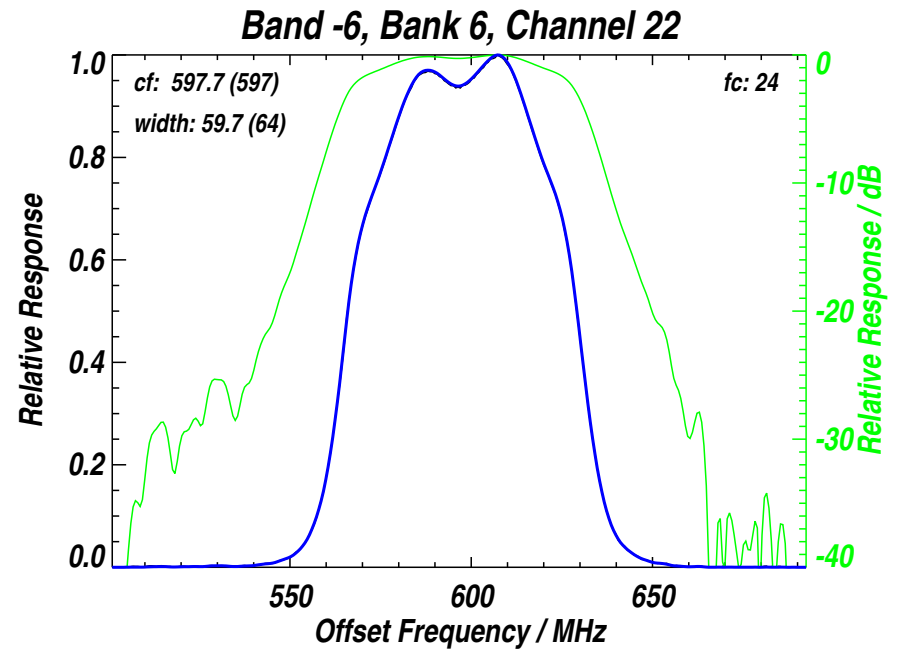
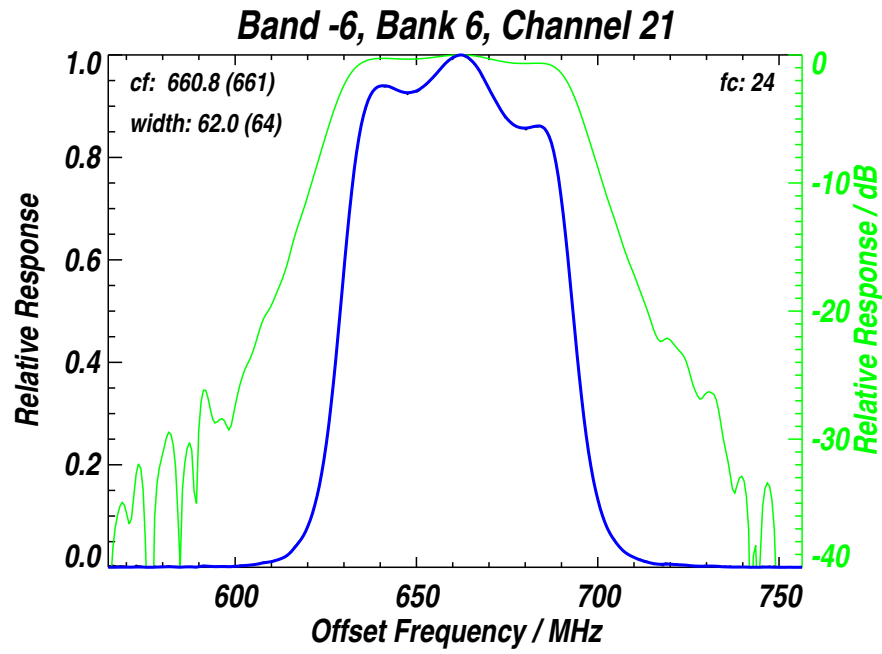
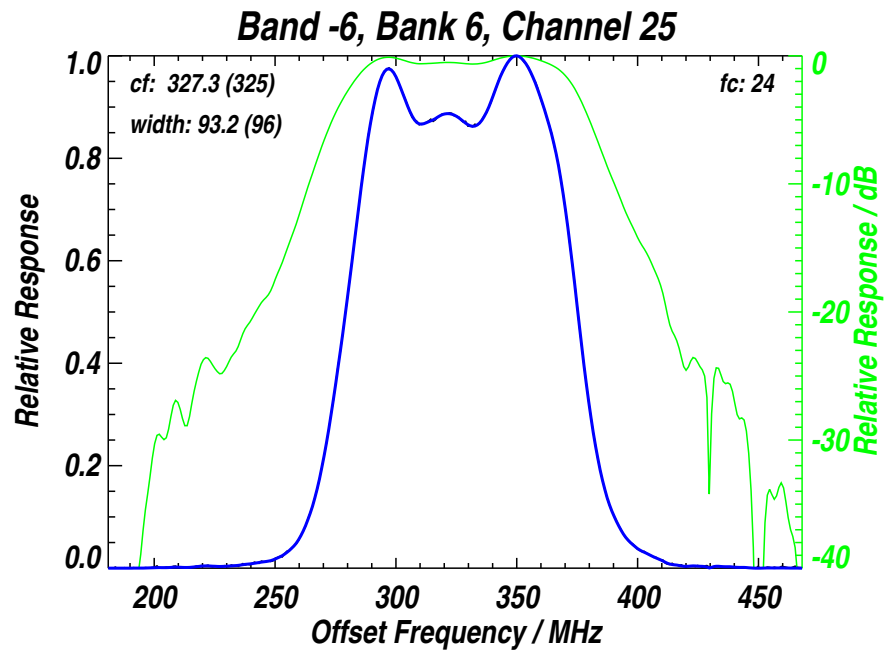


Figure H.145: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 21 to 24. See text for additional details.



**Band 6 (lsb)**  
**Bank 6**  
**Origin = 176.763333336 GHz**

Figure H.146: Lower sideband front-end sweep data for Band 6 taken via Filterbank 6, channel 25. See text for additional details.

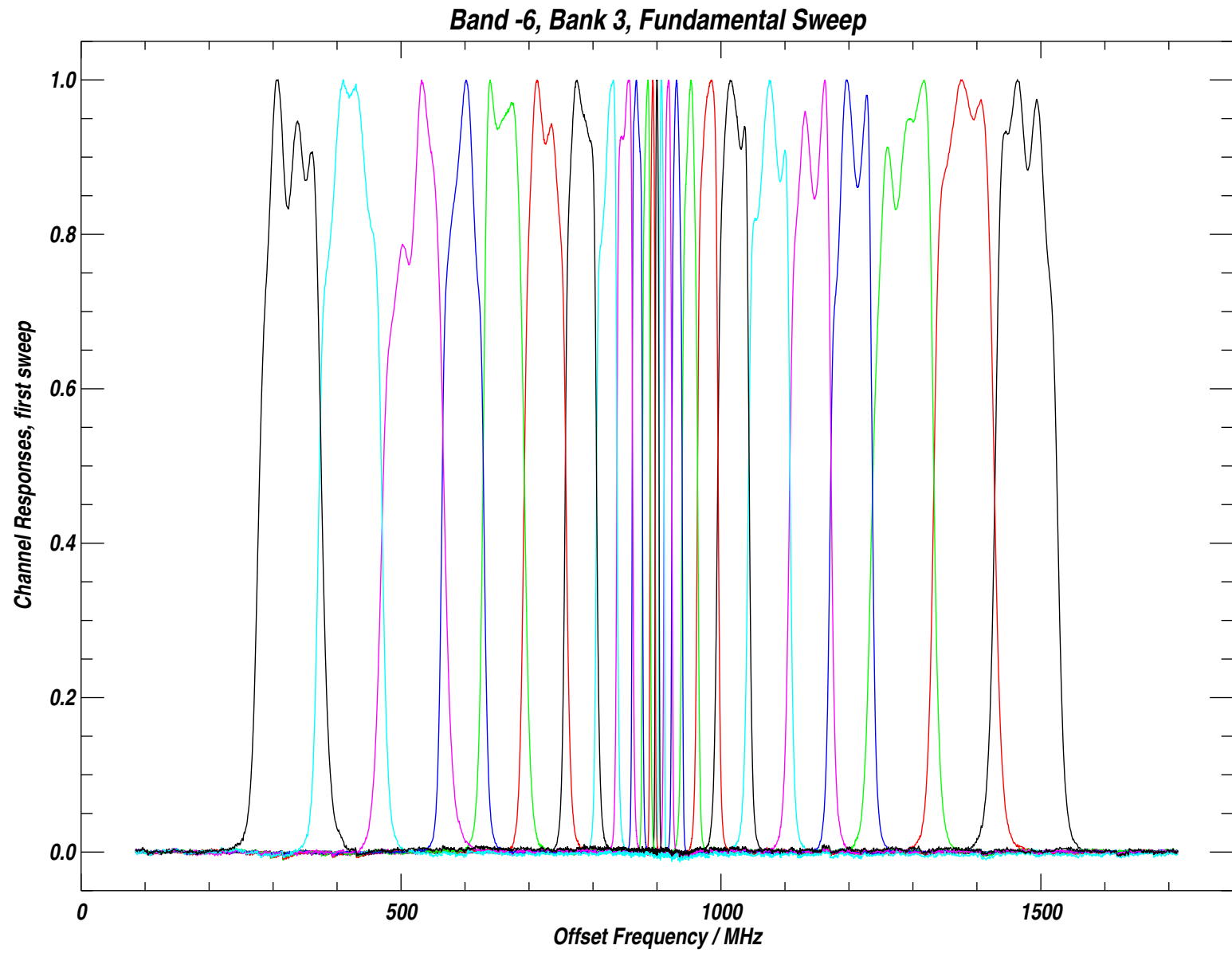


Figure H.147: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3. See text for additional details.

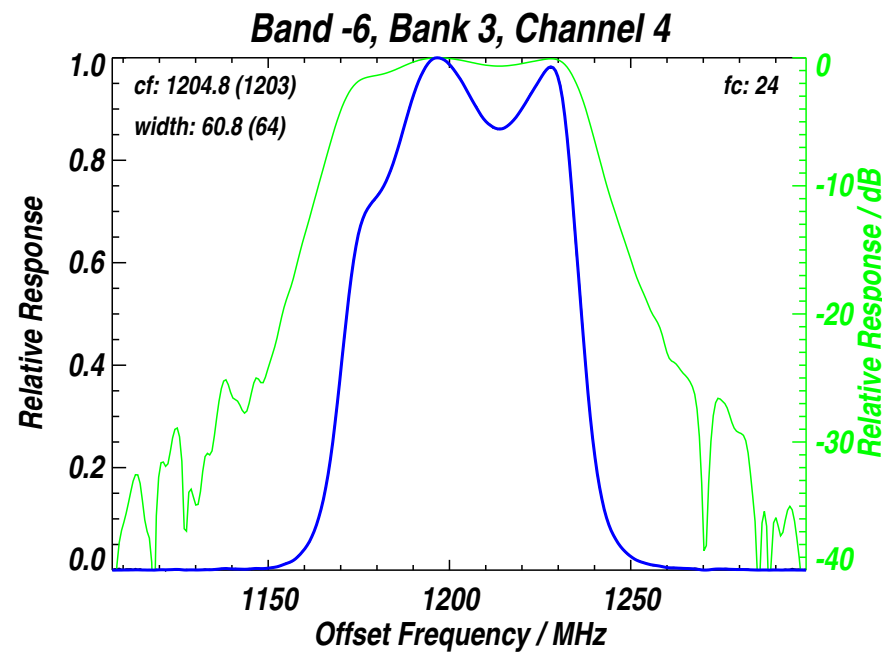
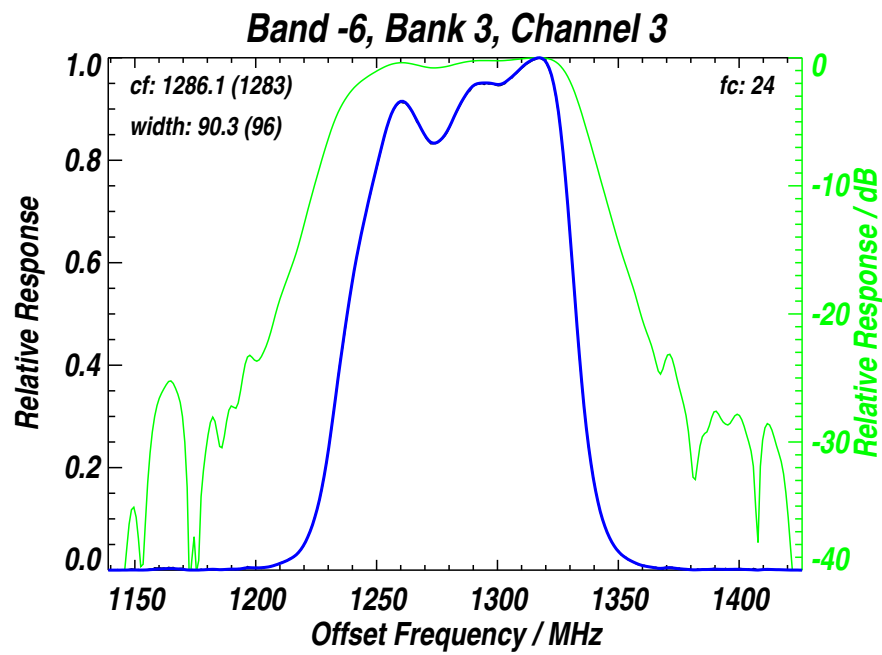
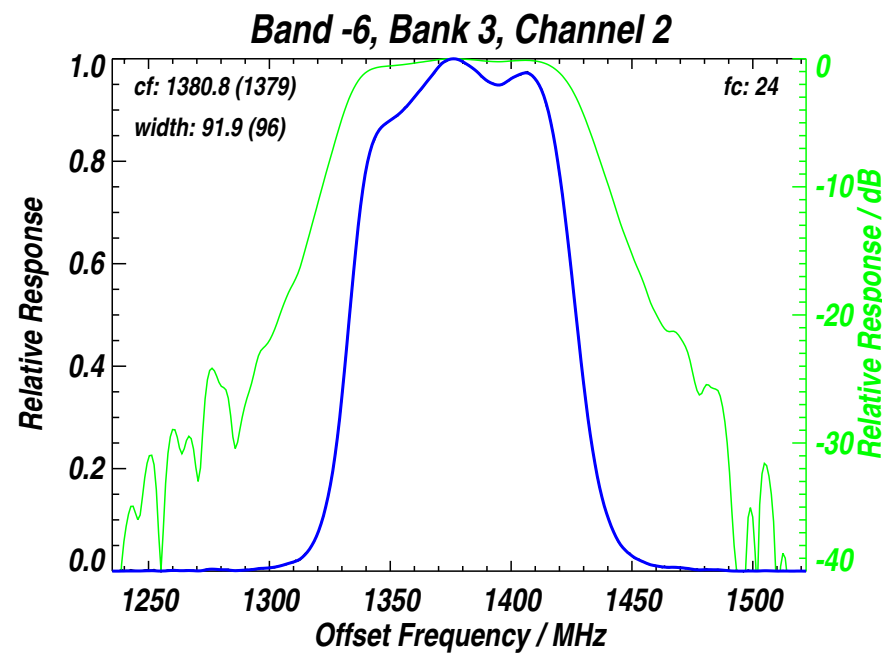
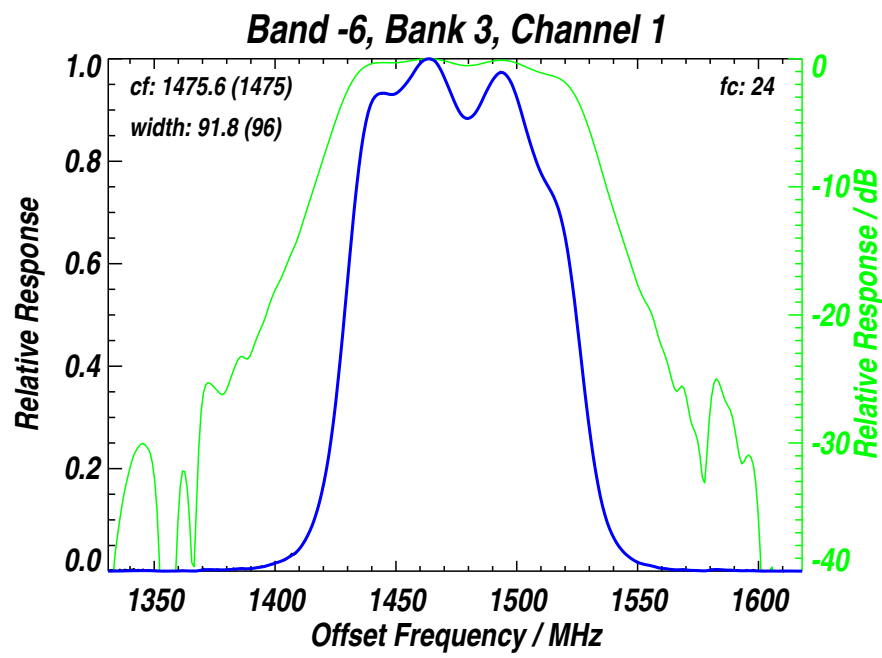


Figure H.148: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 1 to 4. See text for additional details.

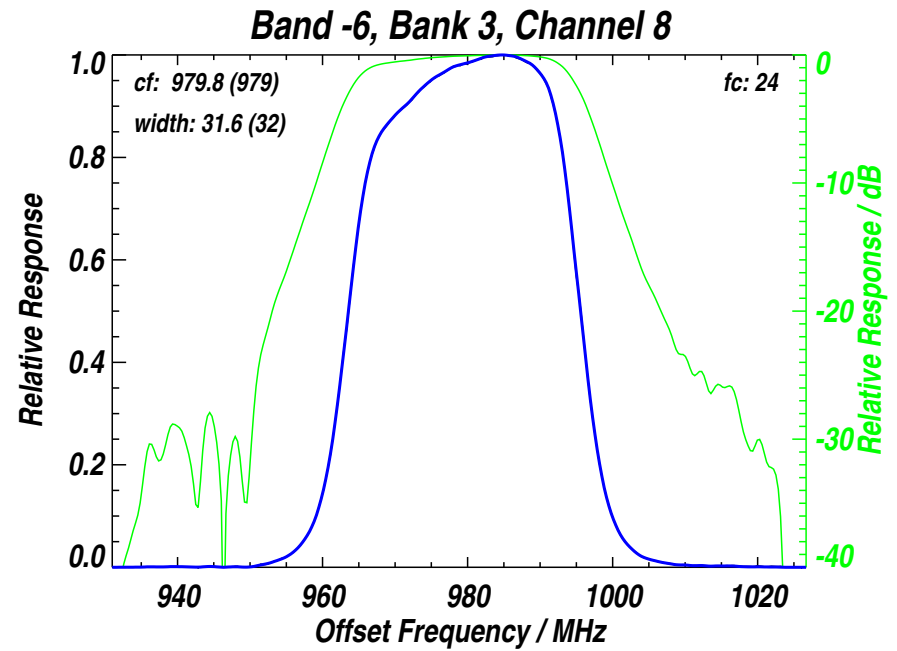
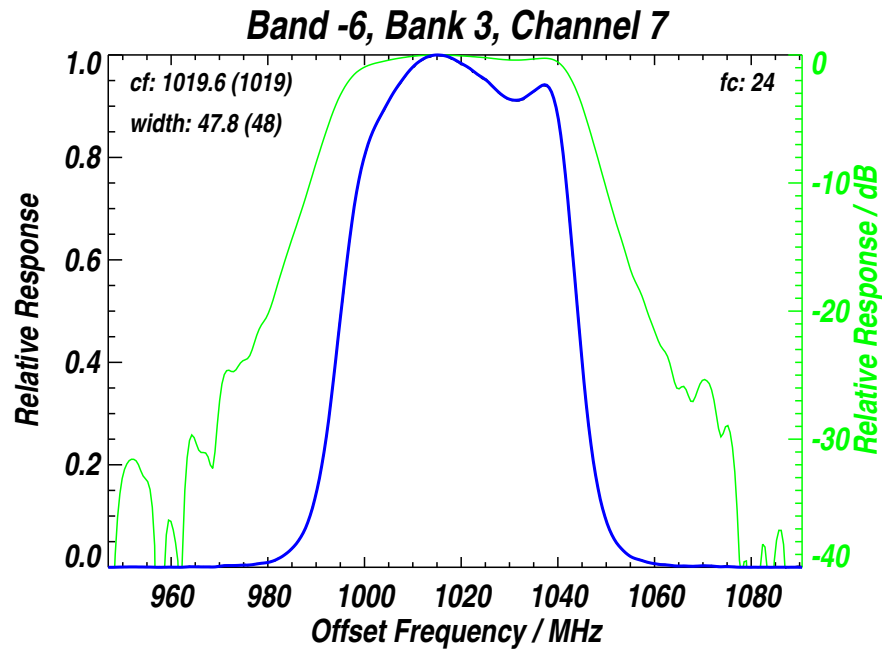
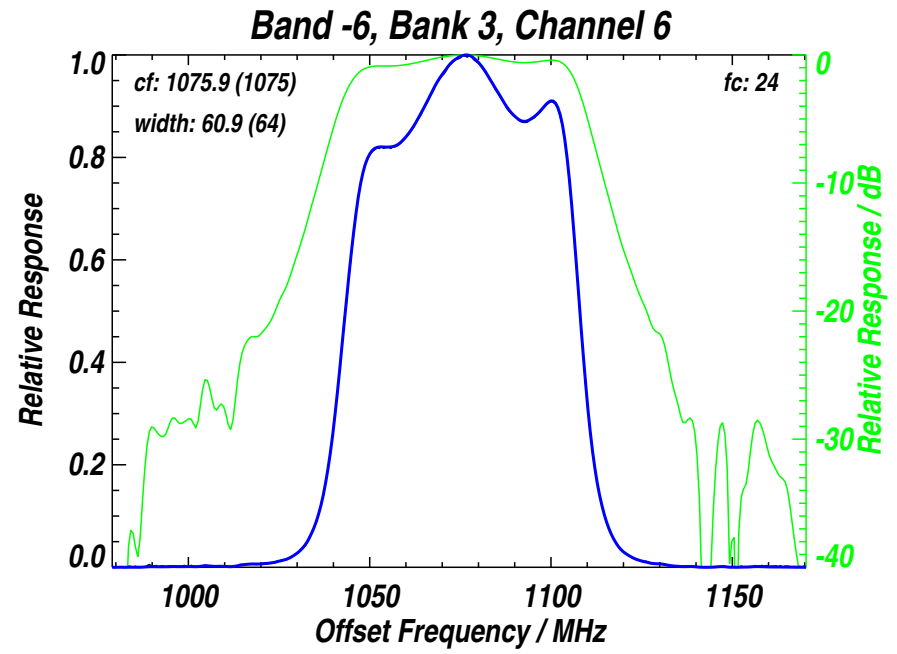
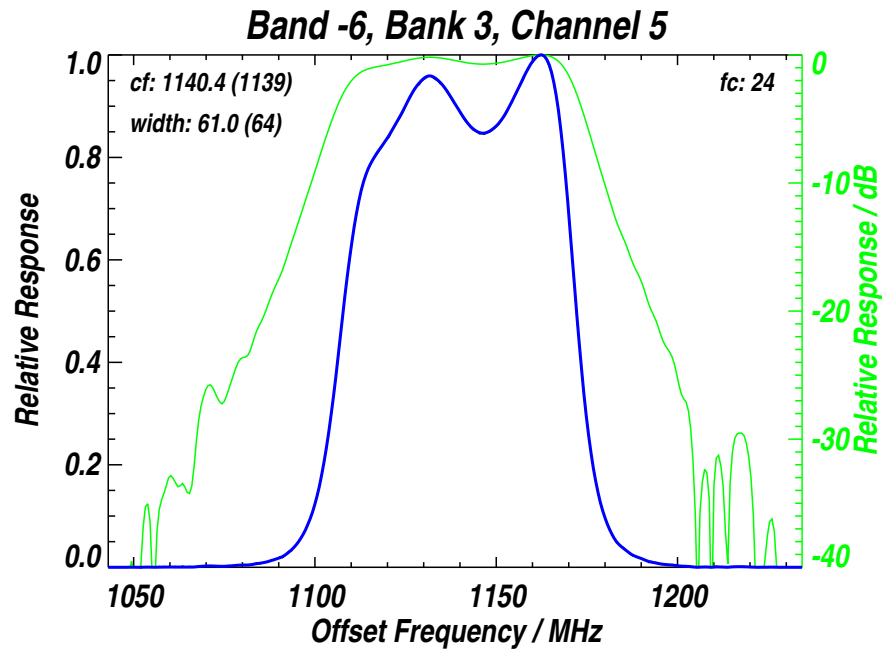


Figure H.149: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 5 to 8. See text for additional details.

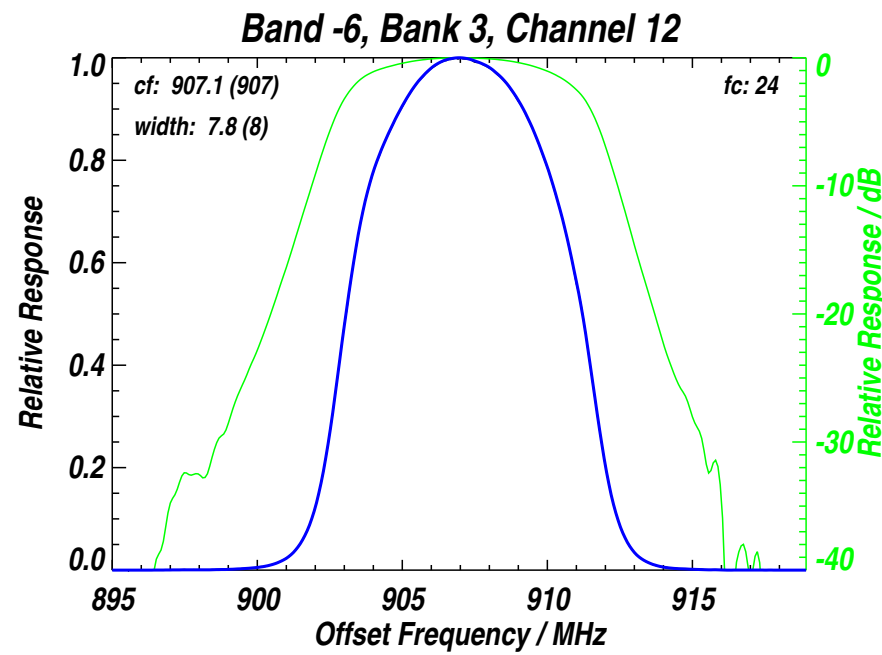
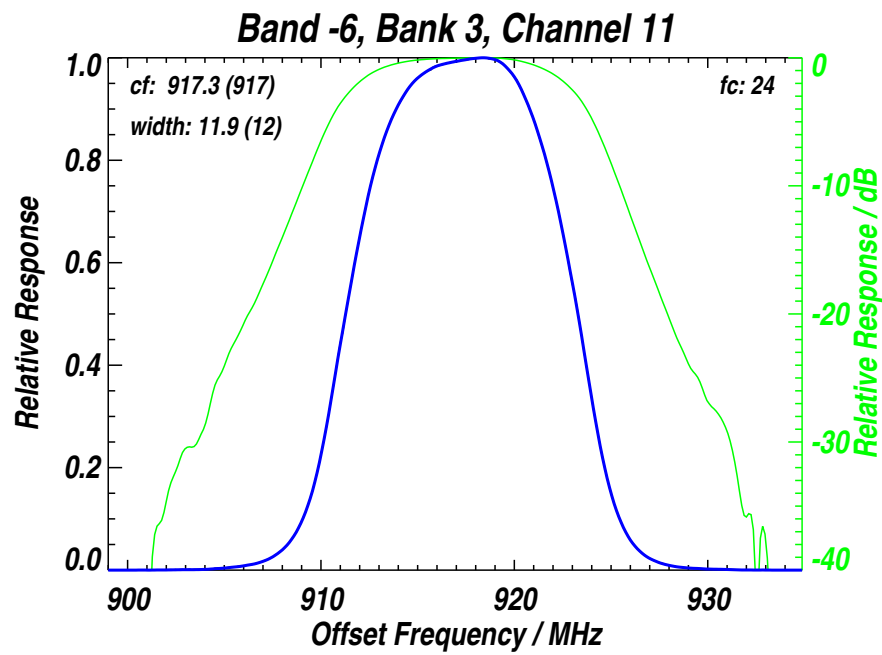
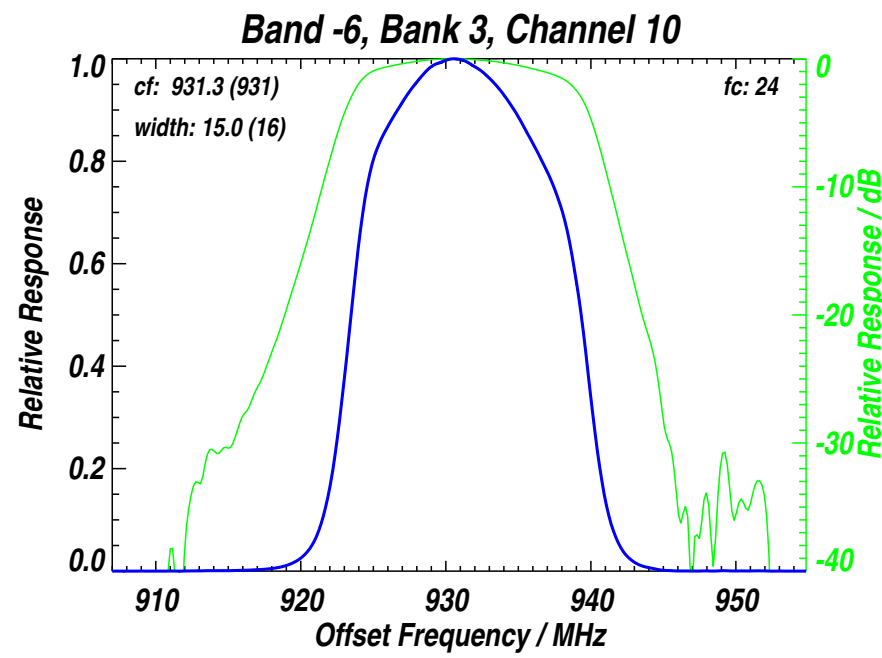
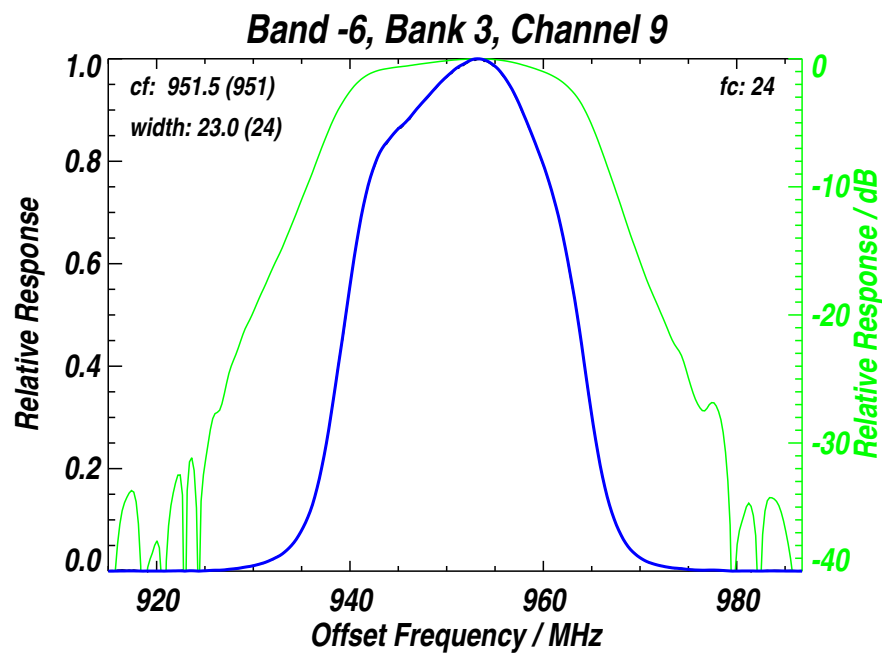


Figure H.150: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 9 to 12. See text for additional details.

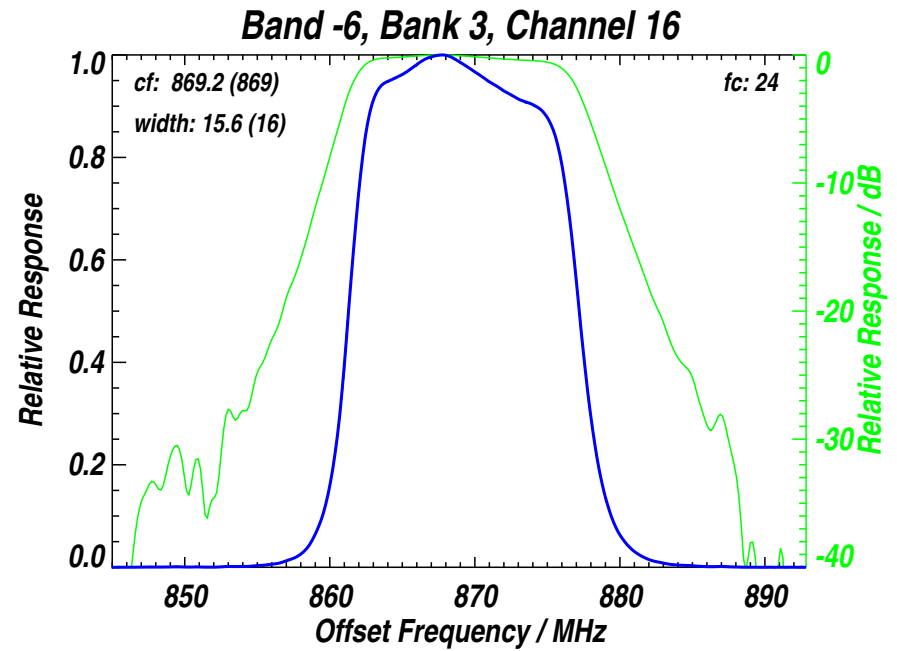
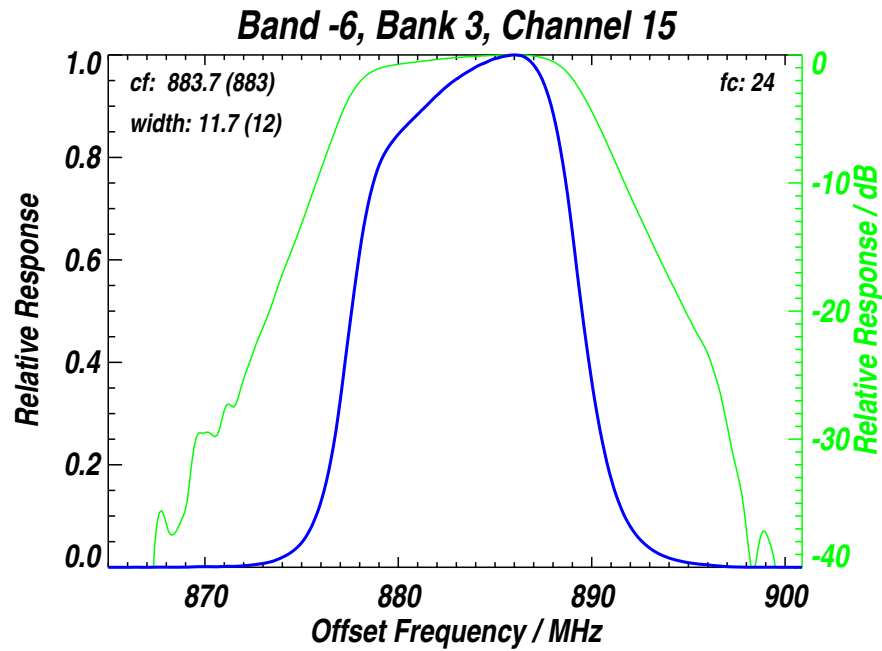
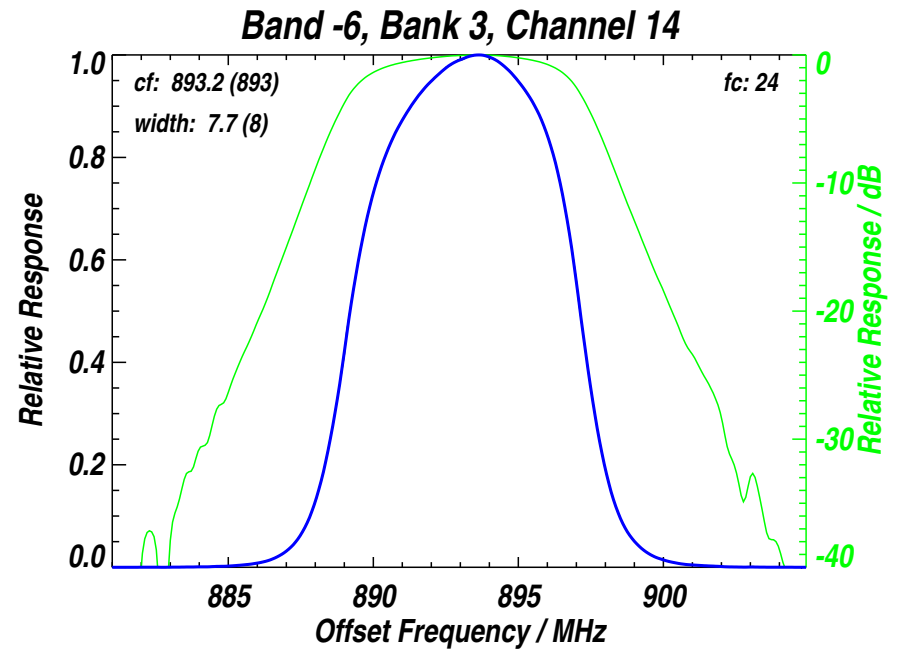
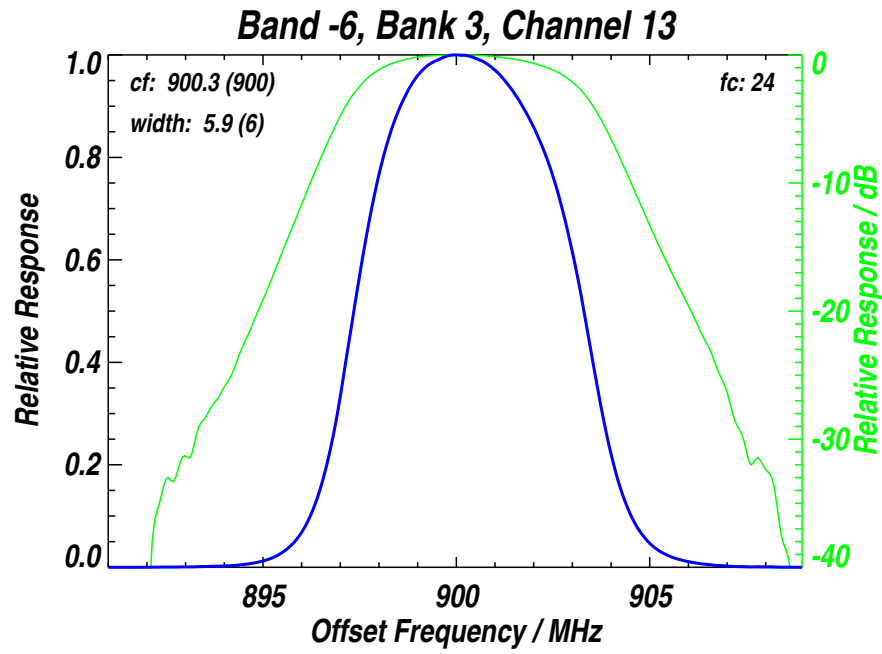


Figure H.151: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 13 to 16. See text for additional details.

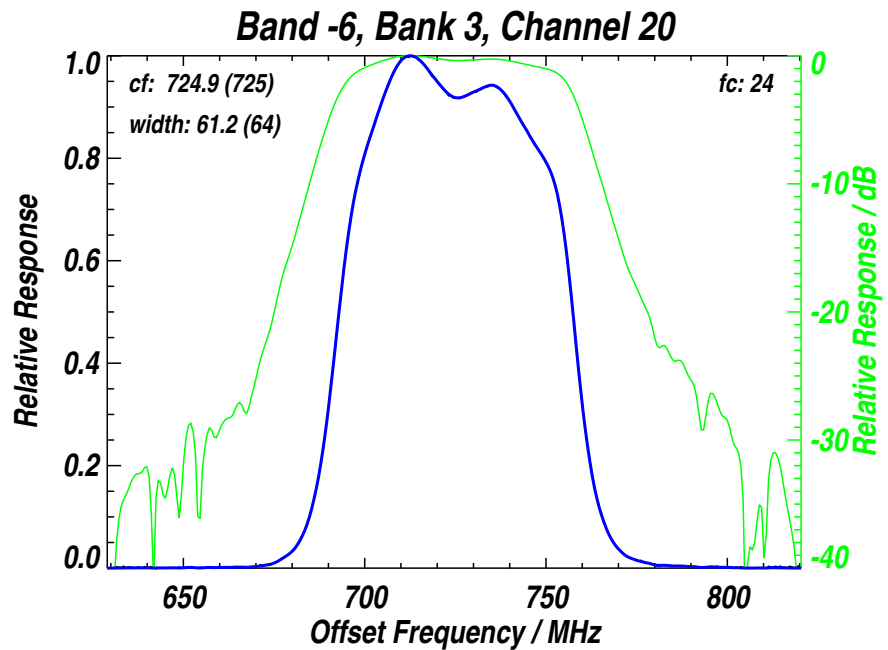
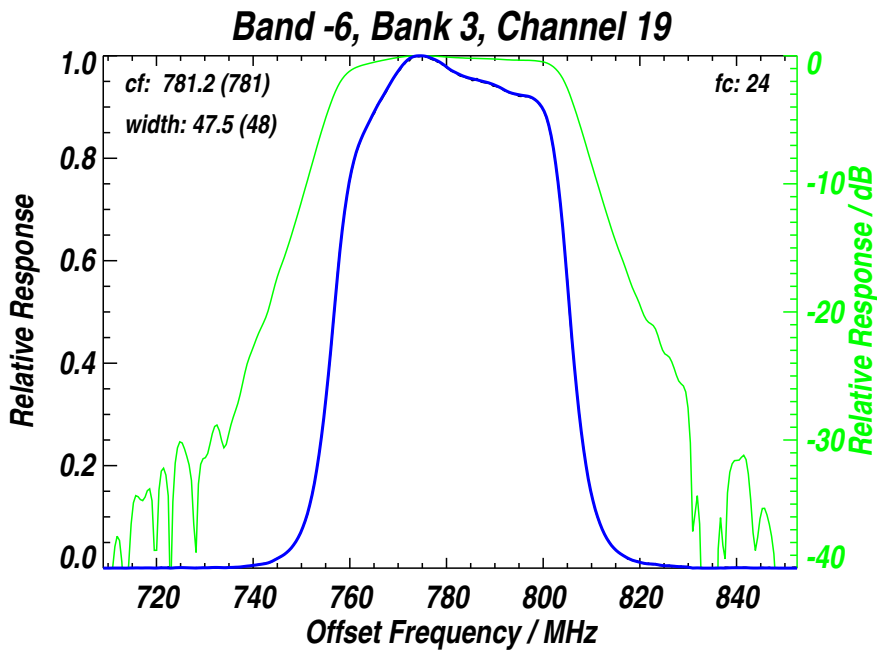
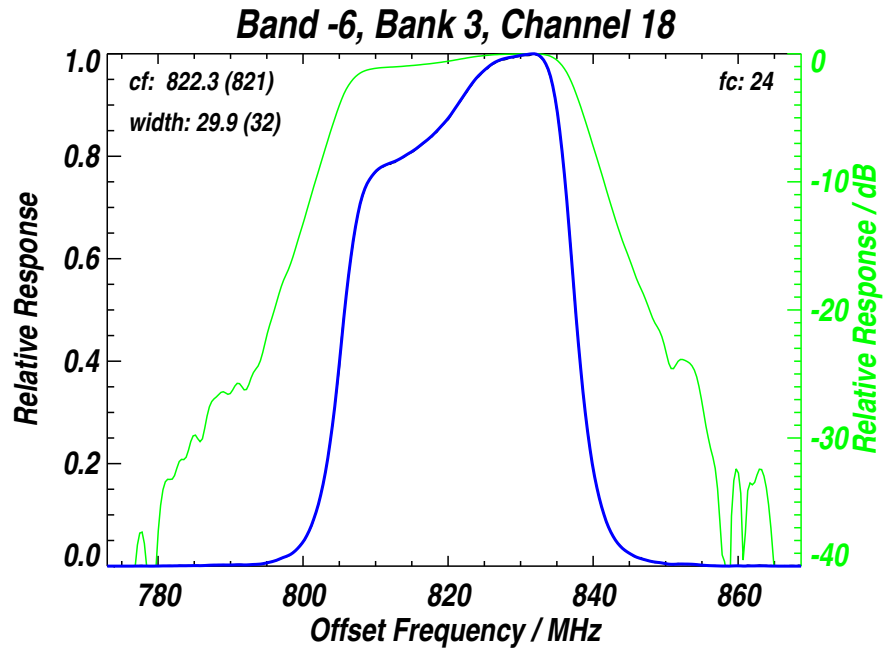
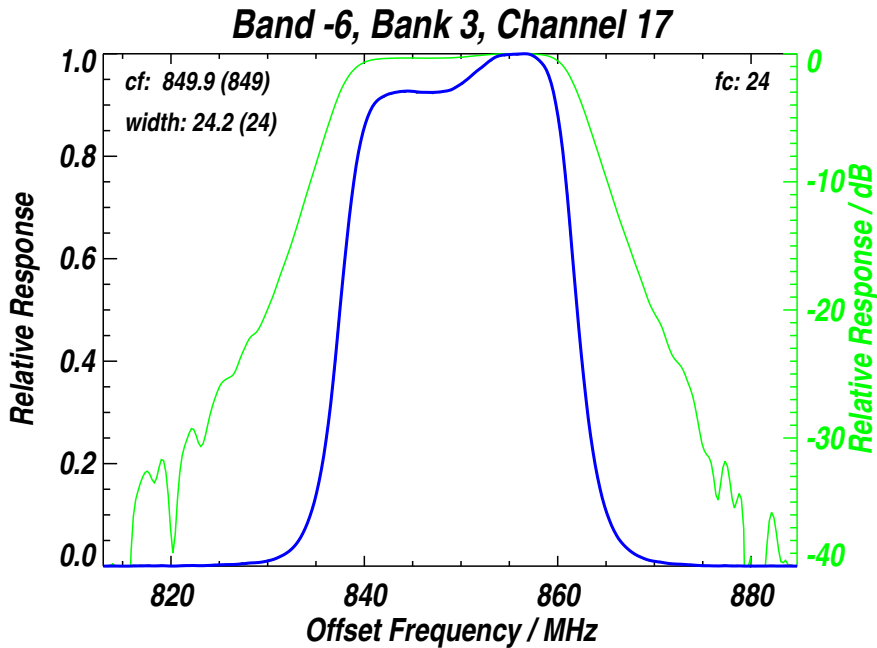


Figure H.152: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 17 to 20. See text for additional details.



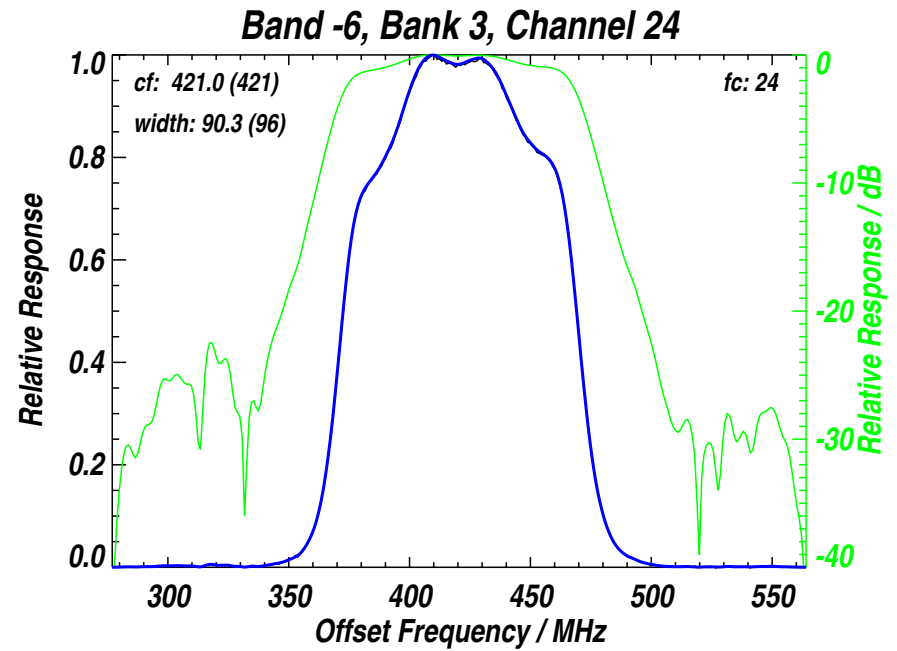
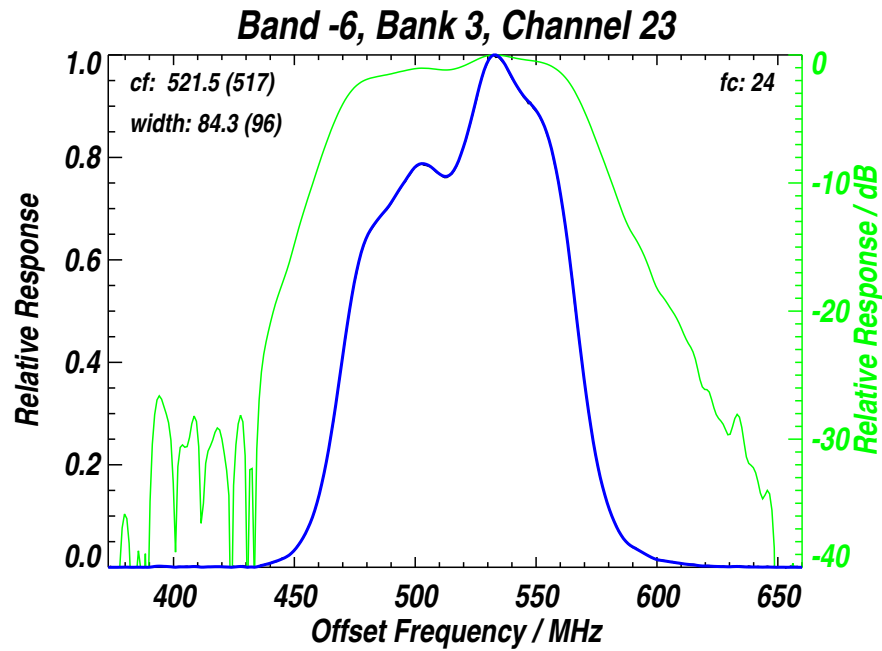
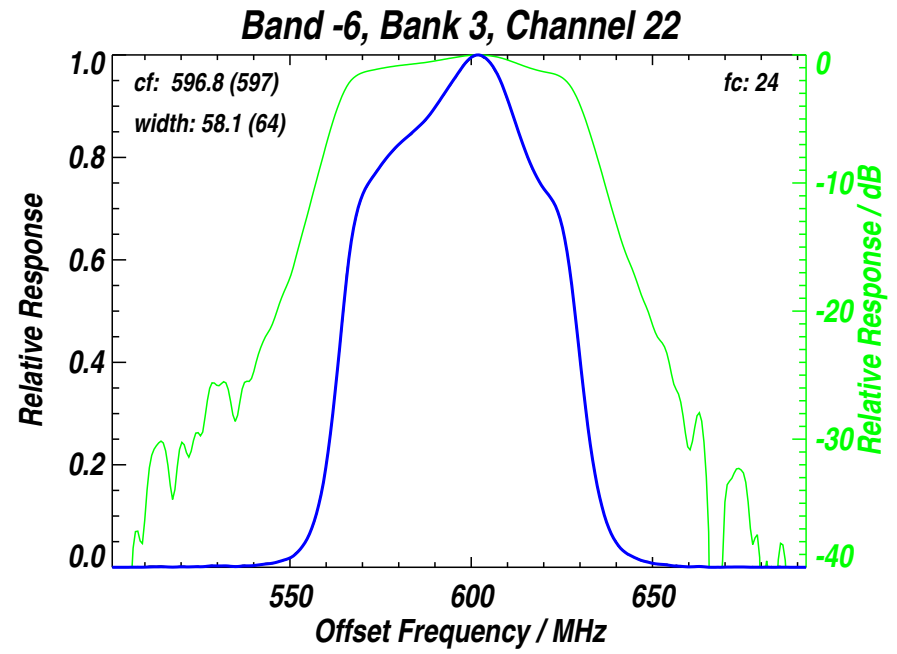
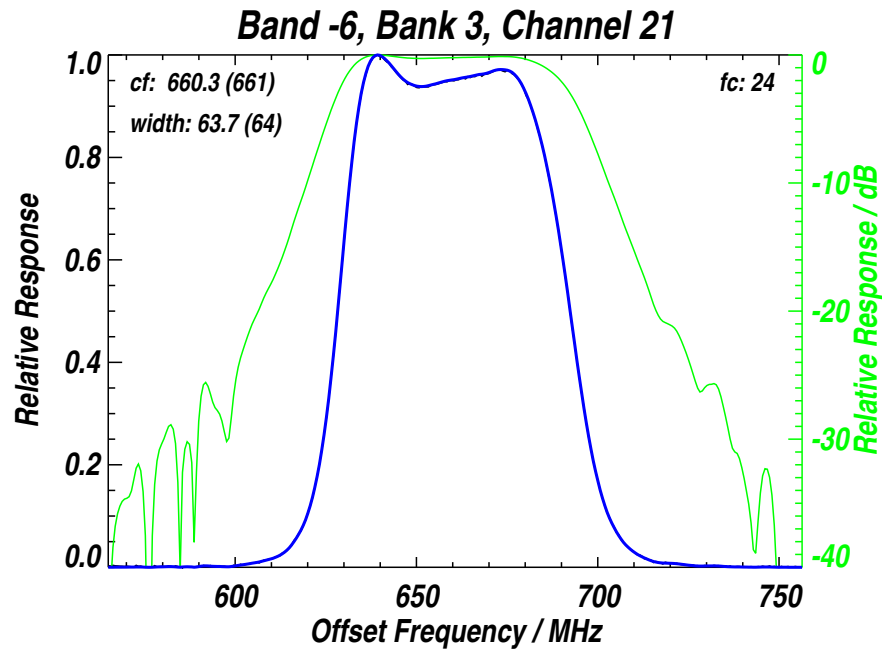
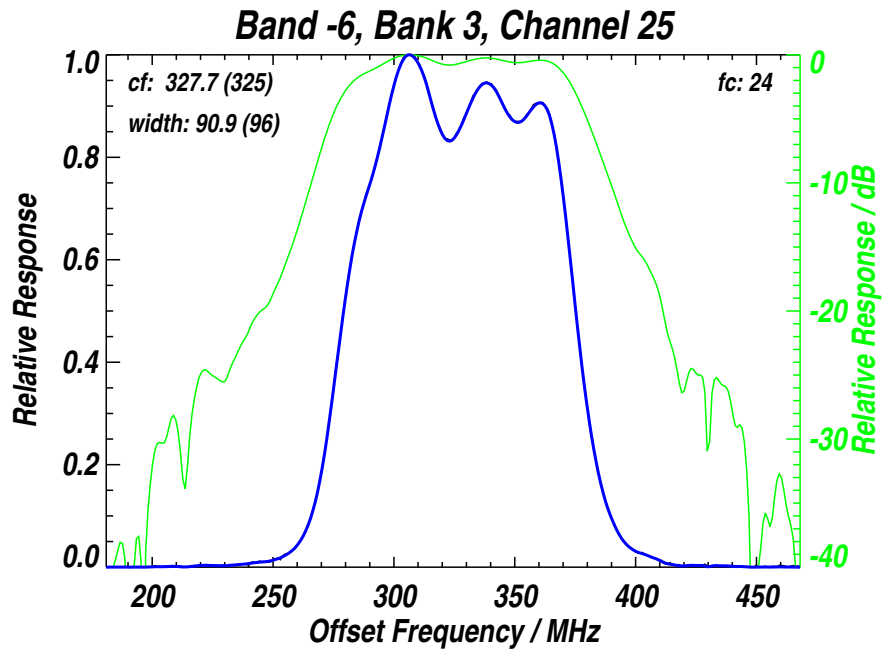


Figure H.153: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 6 (lsb)**  
**Bank 3**  
**Origin = 176.763333336 GHz**

Figure H.154: Lower sideband front-end sweep data for Band 6 taken via Filterbank 3, channel 25. See text for additional details.

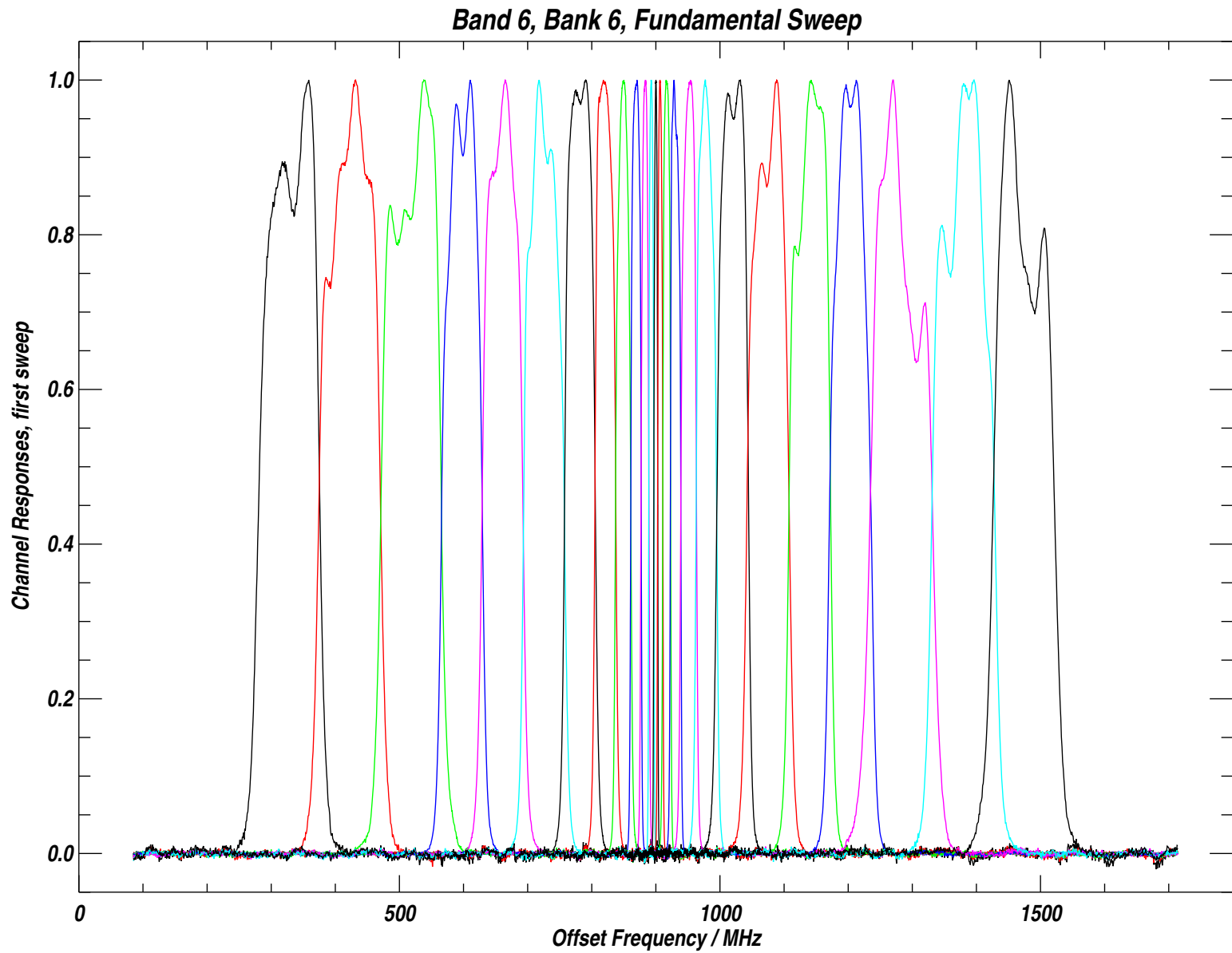


Figure H.155: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6. See text for additional details.

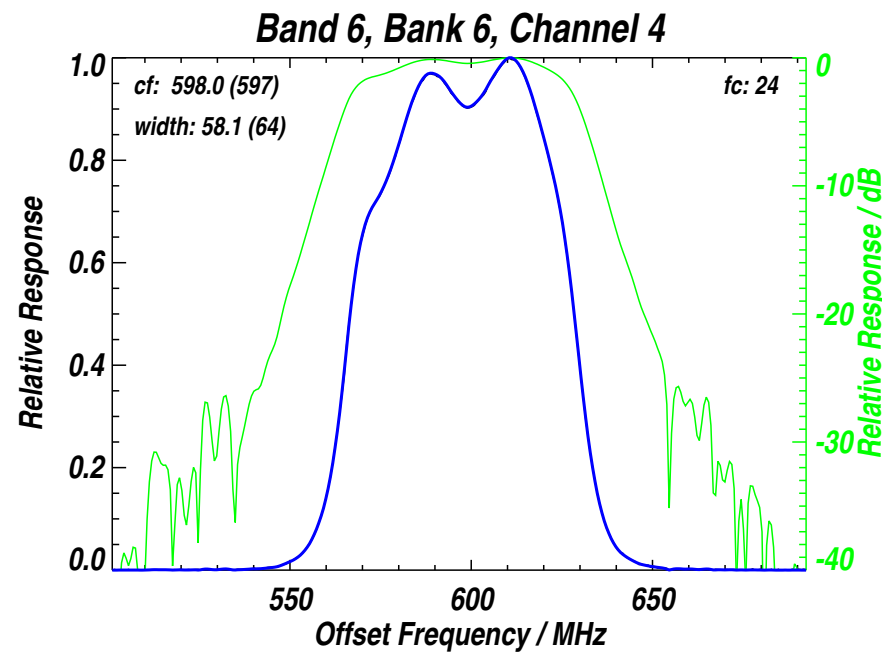
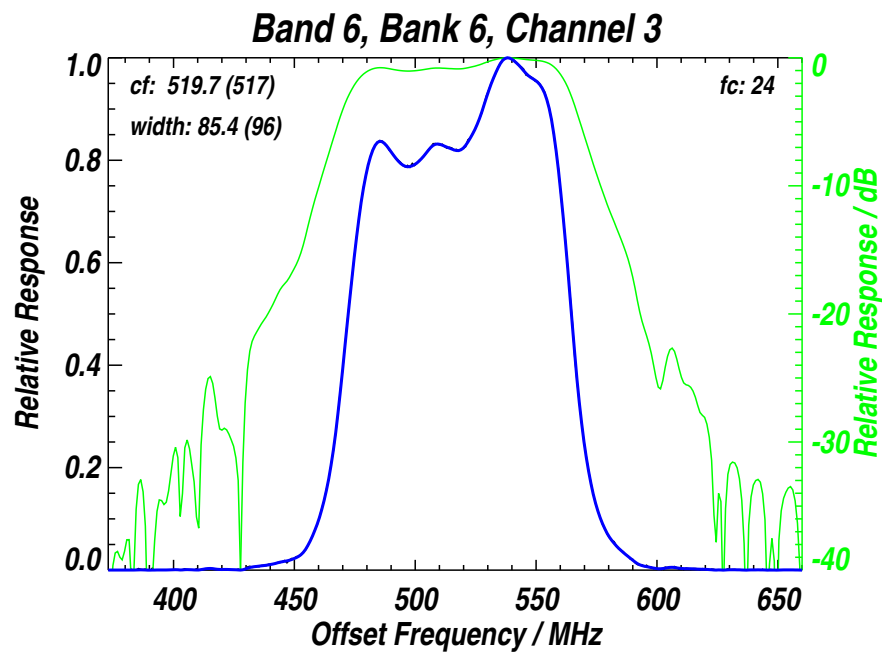
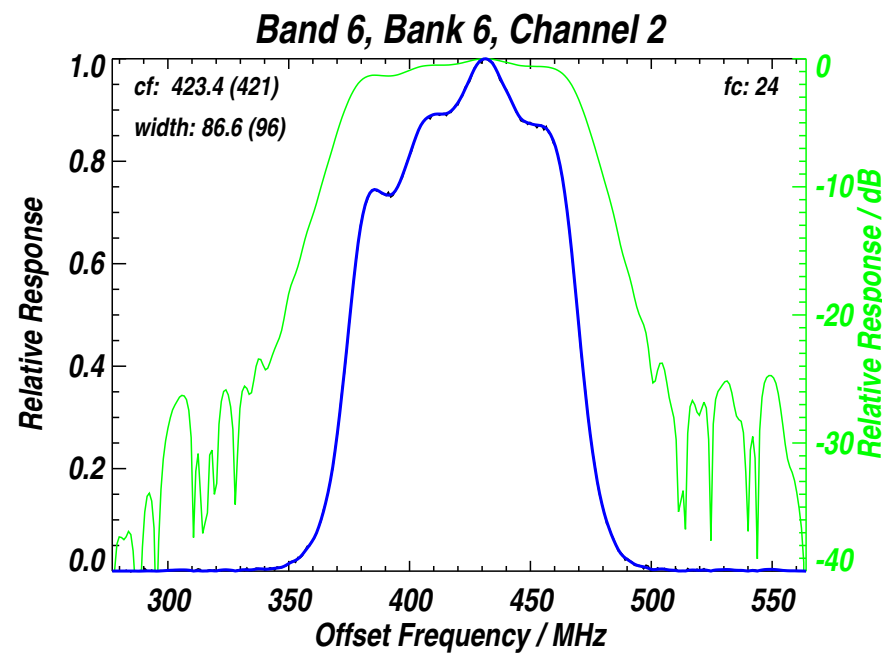
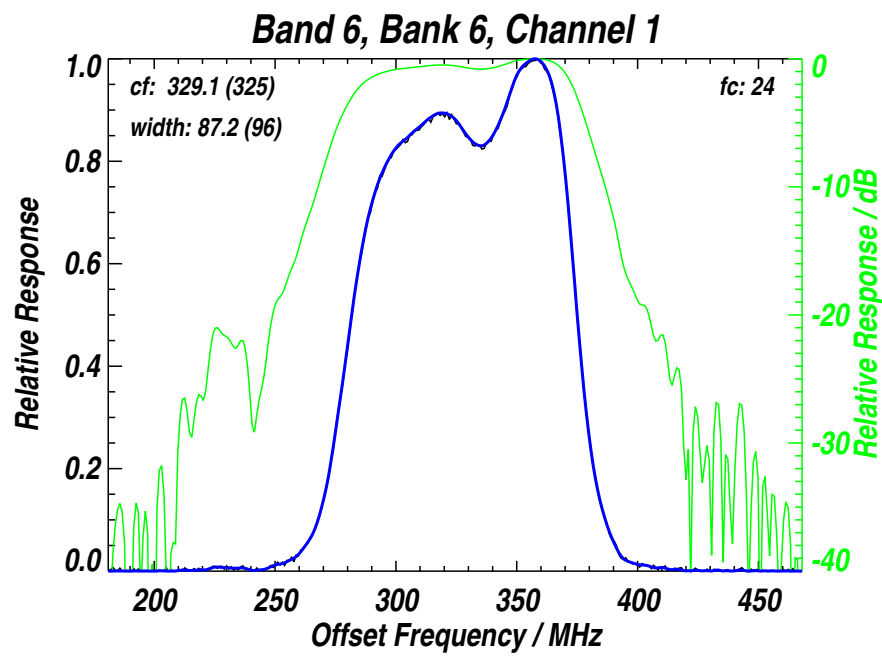


Figure H.156: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 1 to 4. See text for additional details.

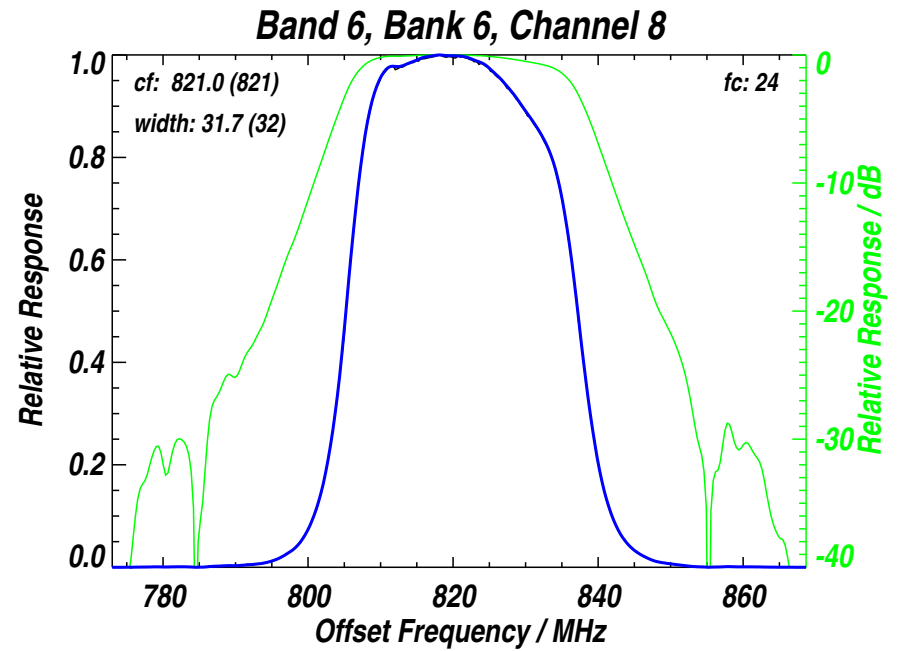
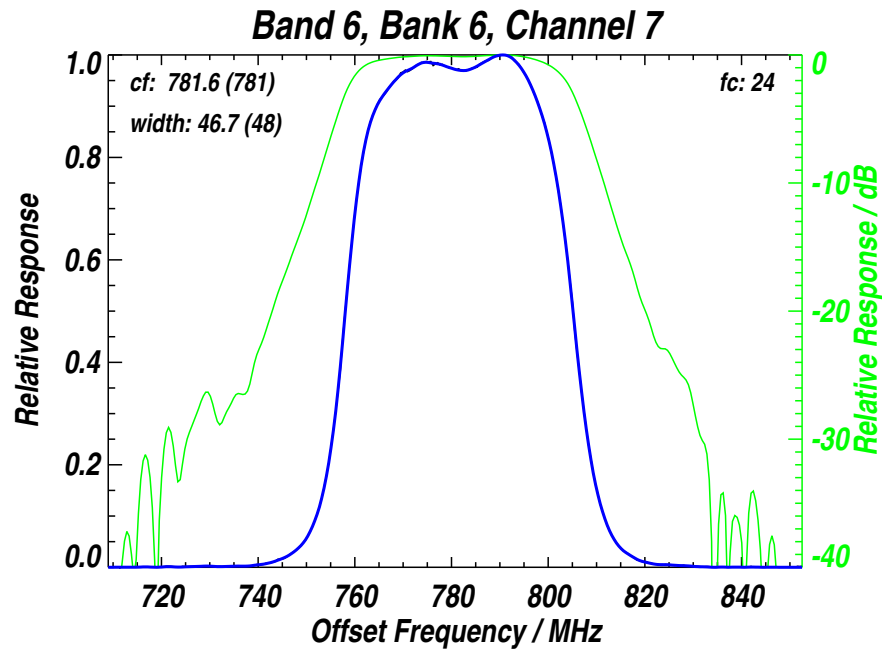
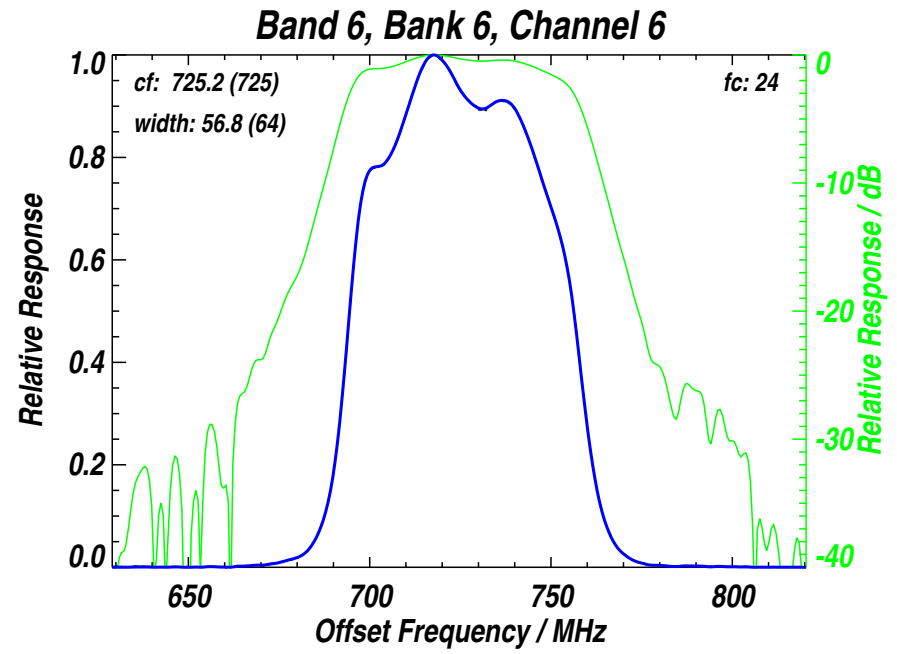
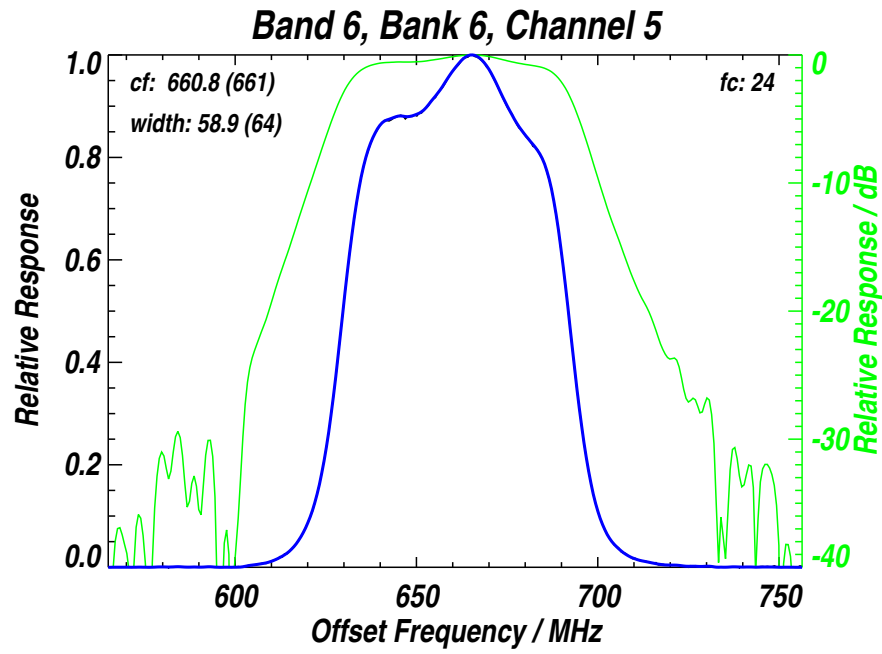


Figure H.157: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 5 to 8. See text for additional details.

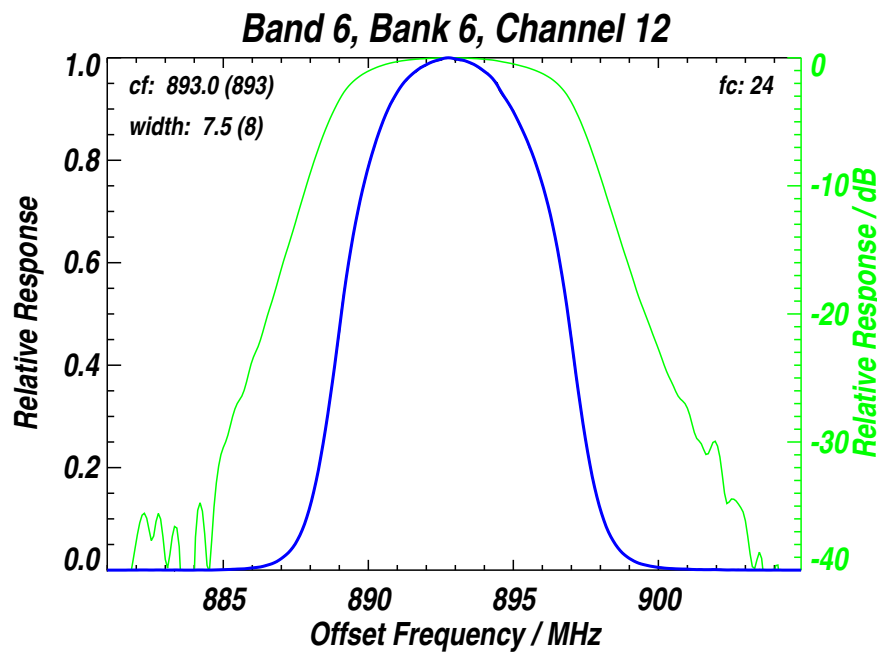
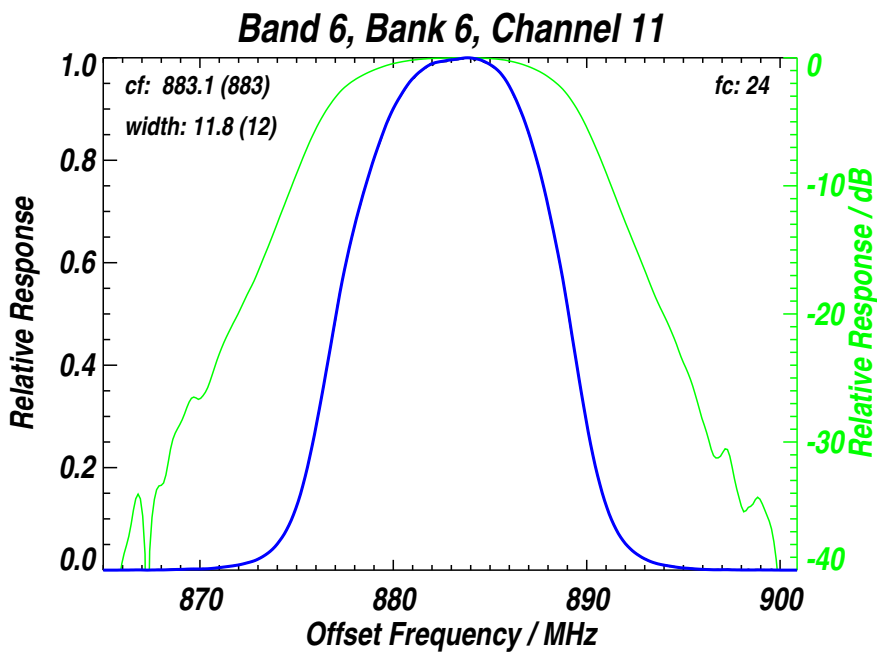
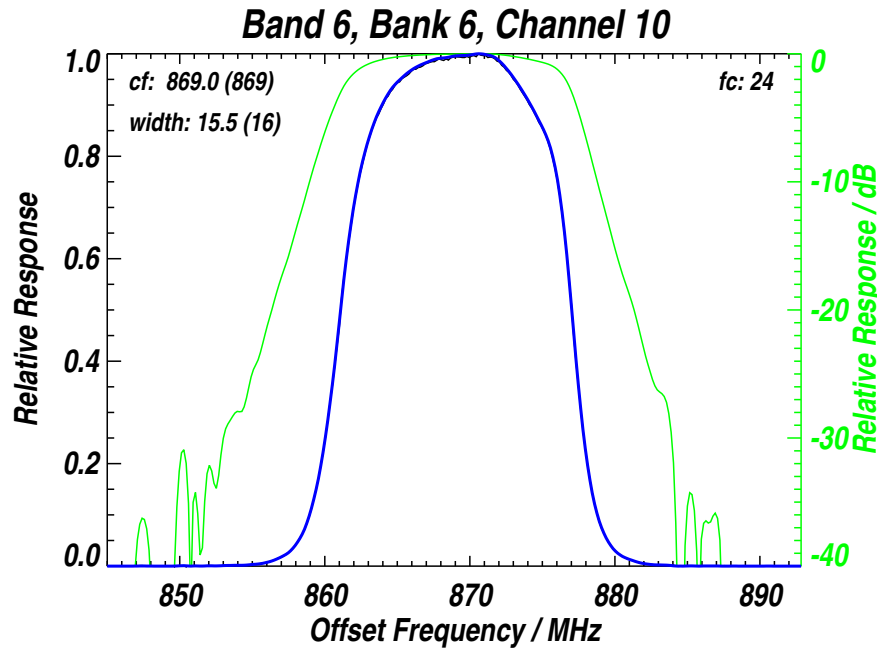
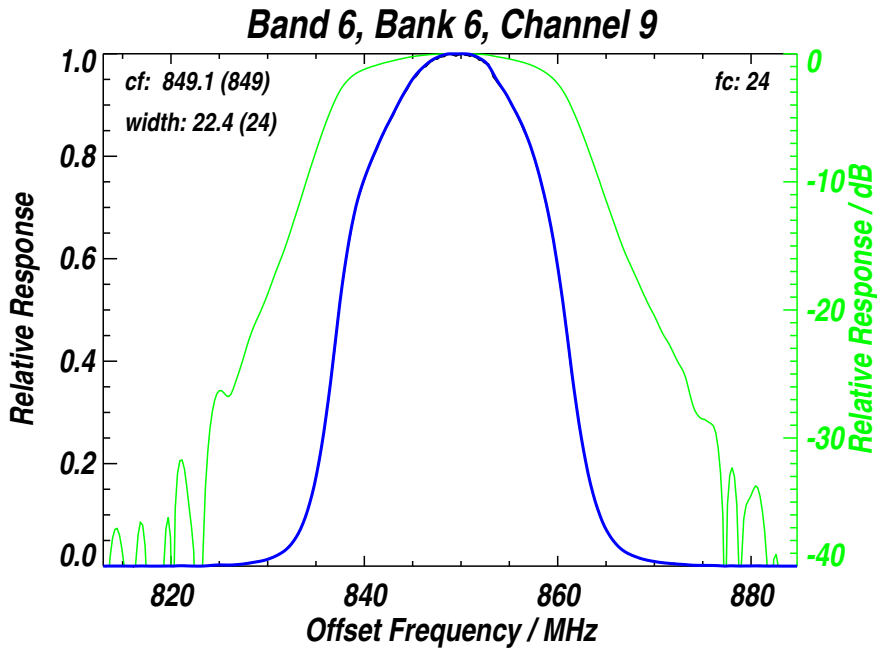


Figure H.158: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 9 to 12. See text for additional details.

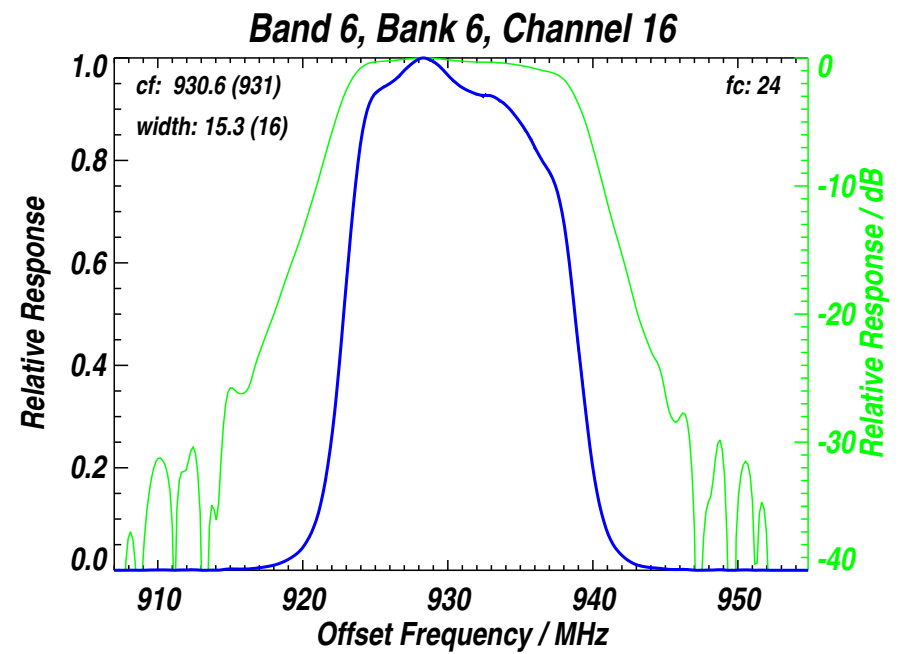
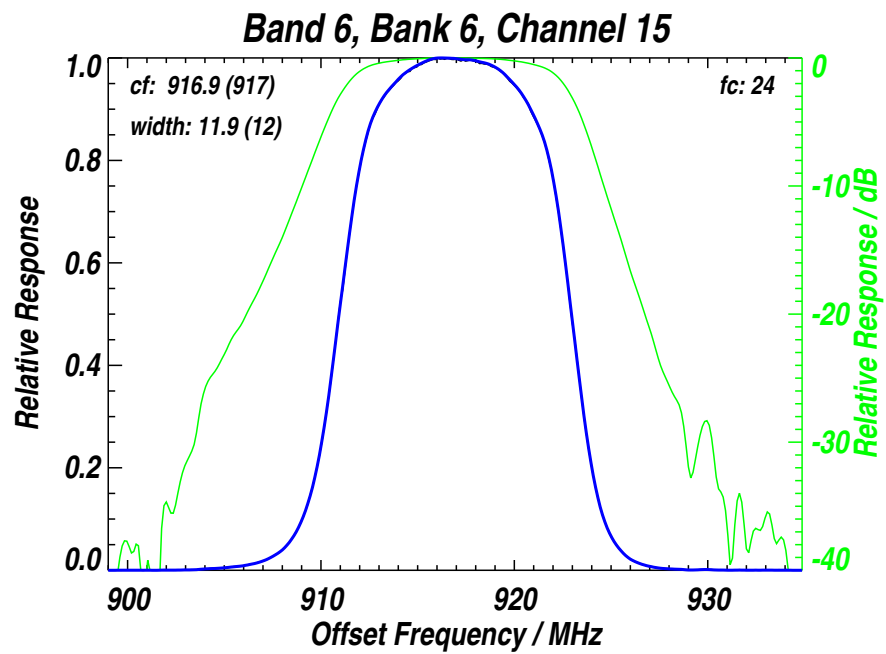
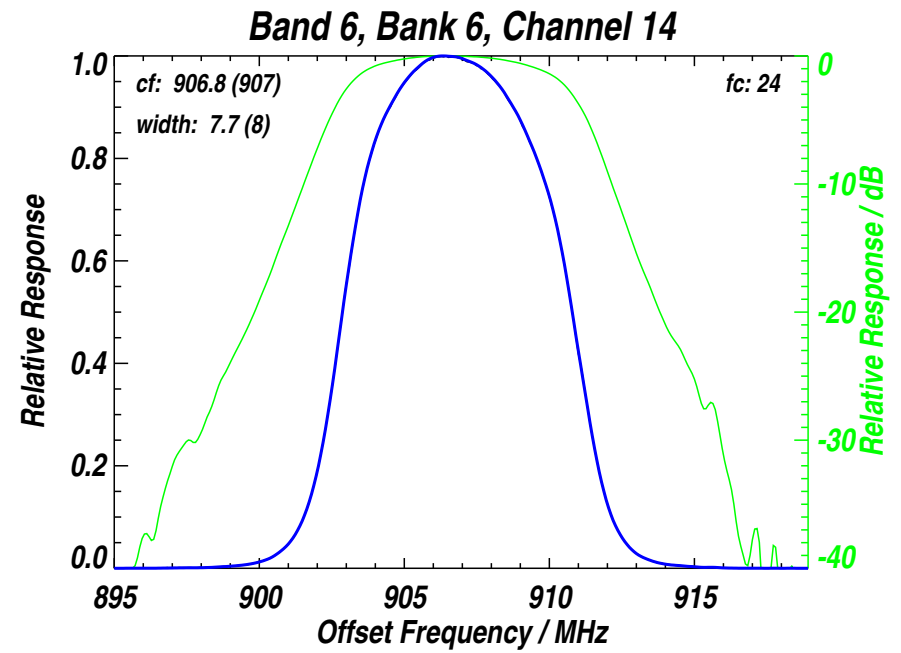
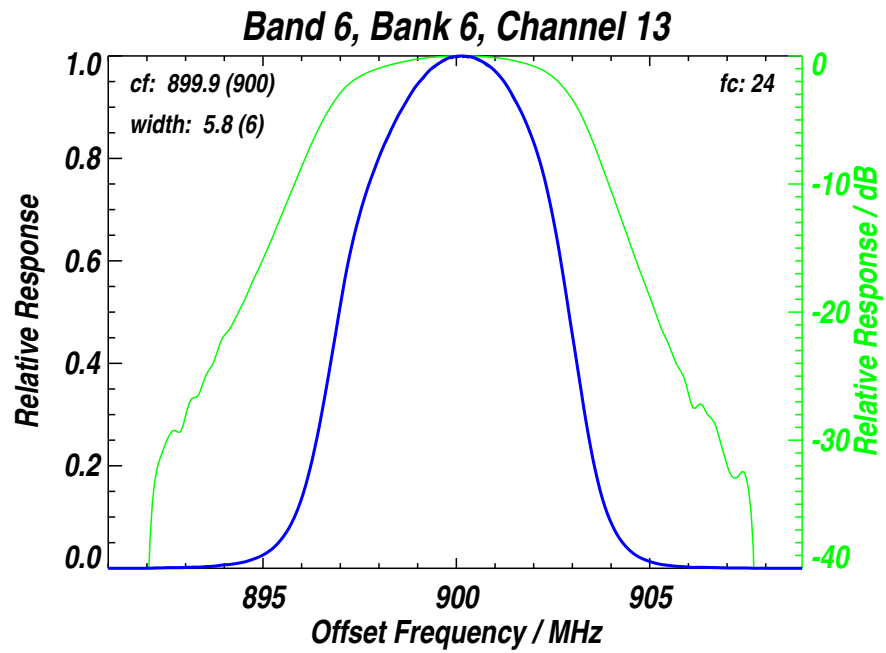


Figure H.159: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 13 to 16. See text for additional details.

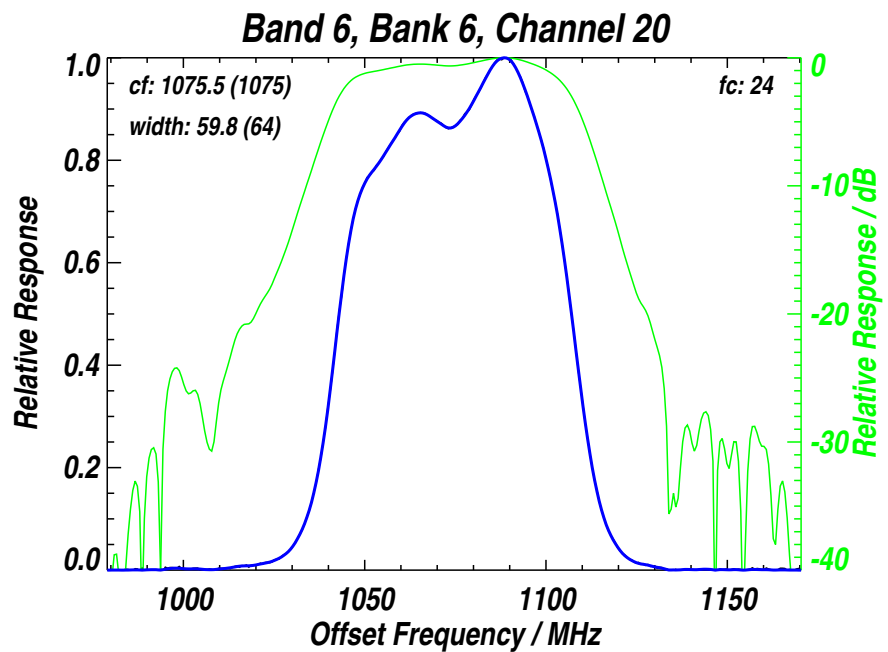
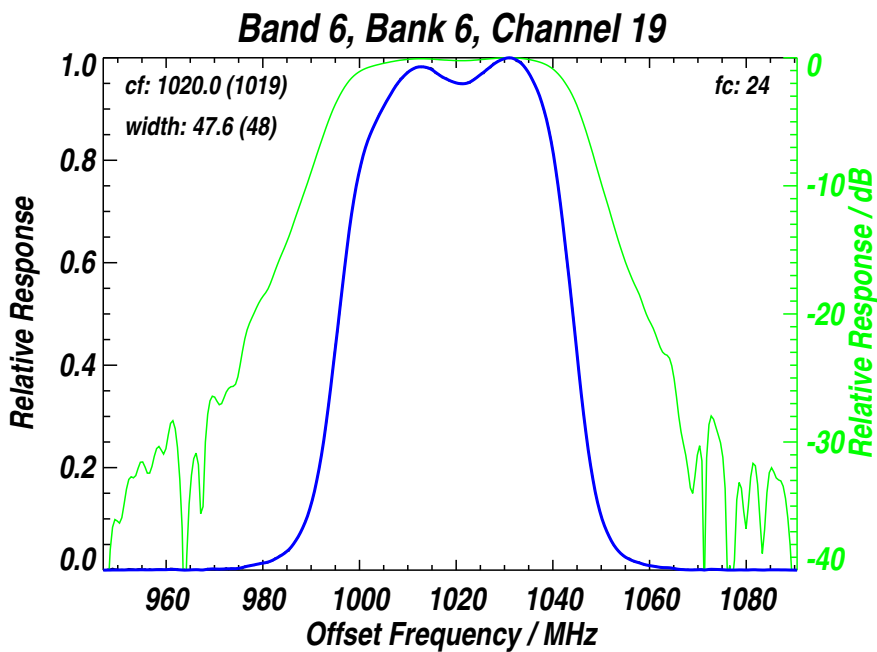
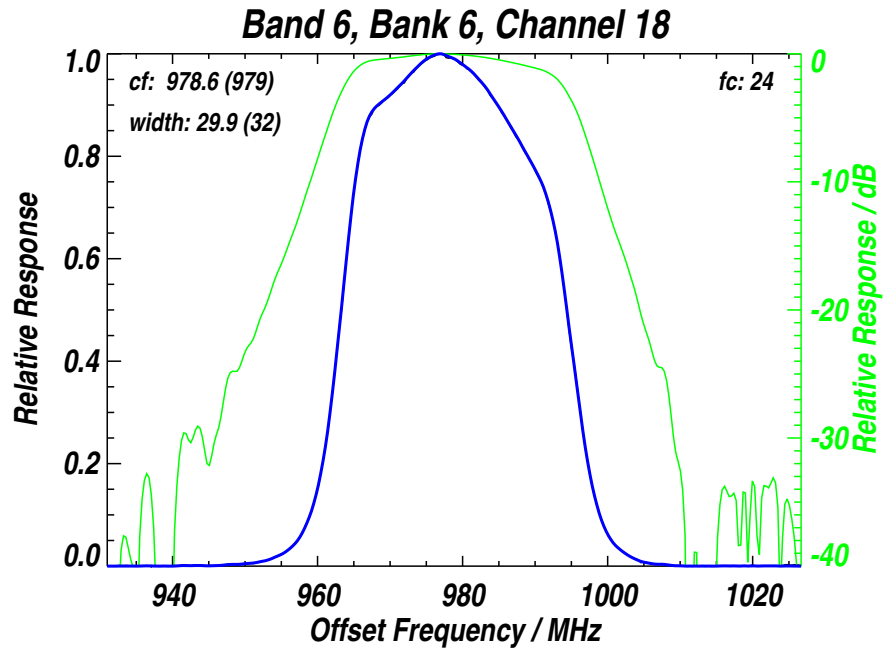
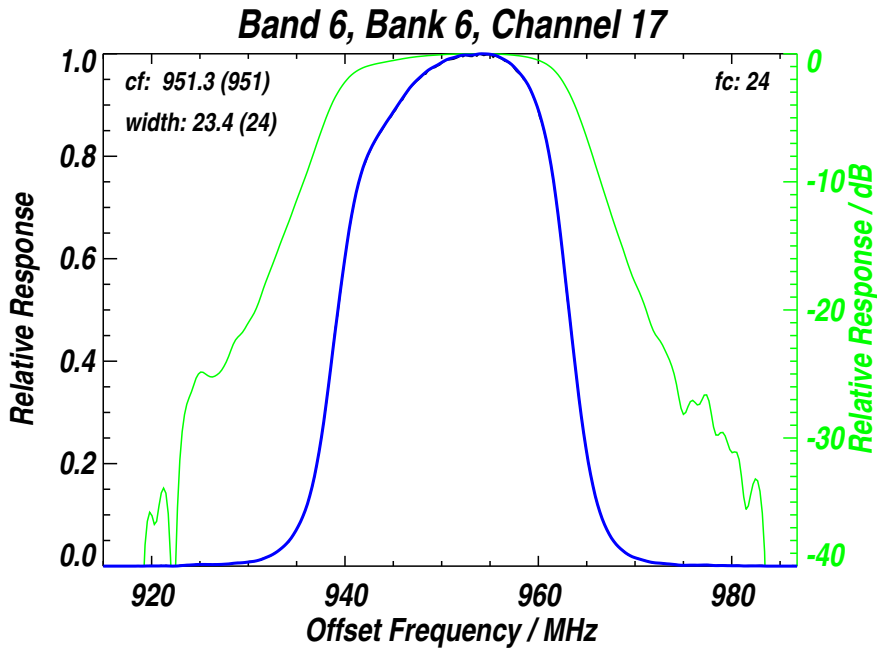


Figure H.160: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 17 to 20. See text for additional details.



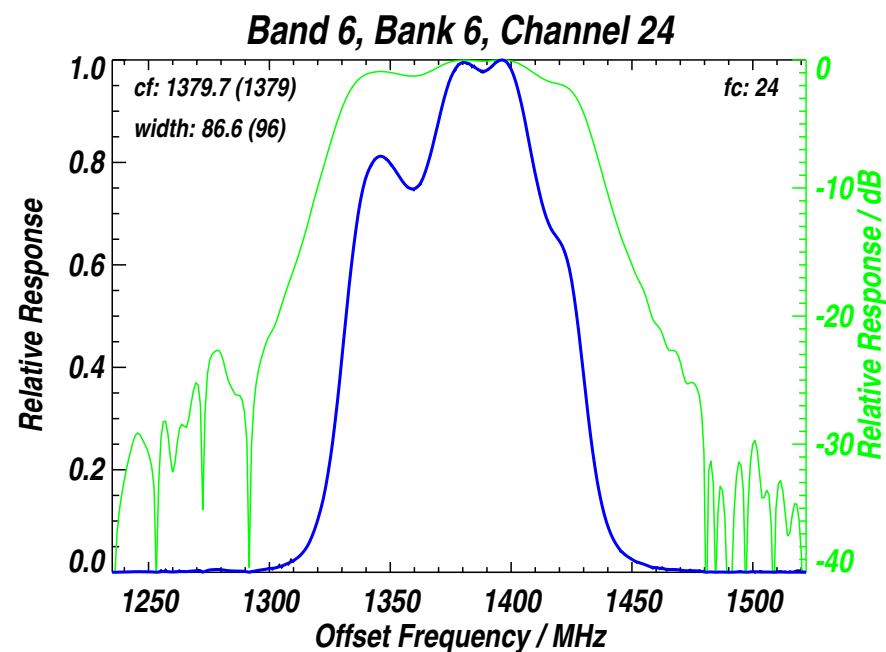
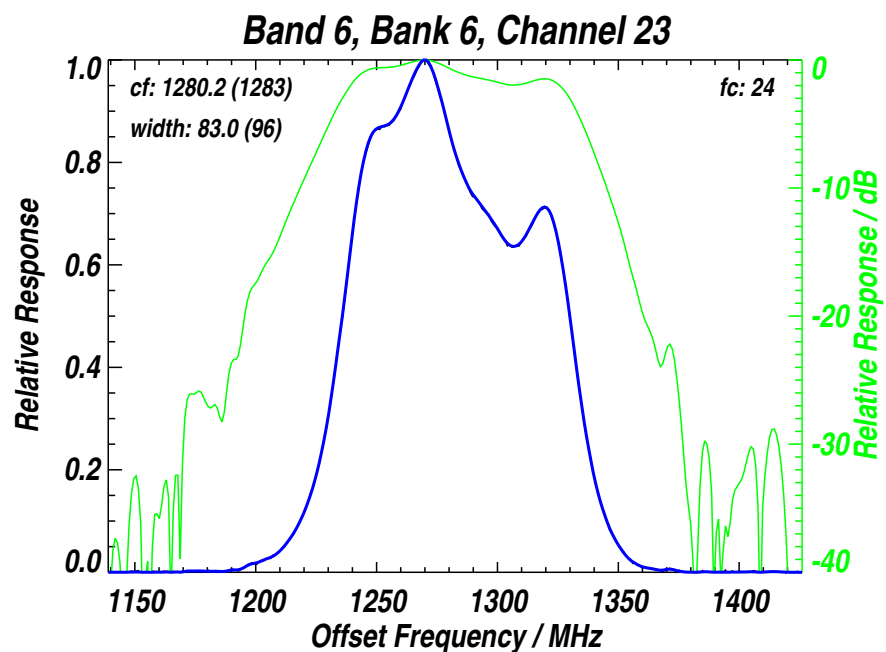
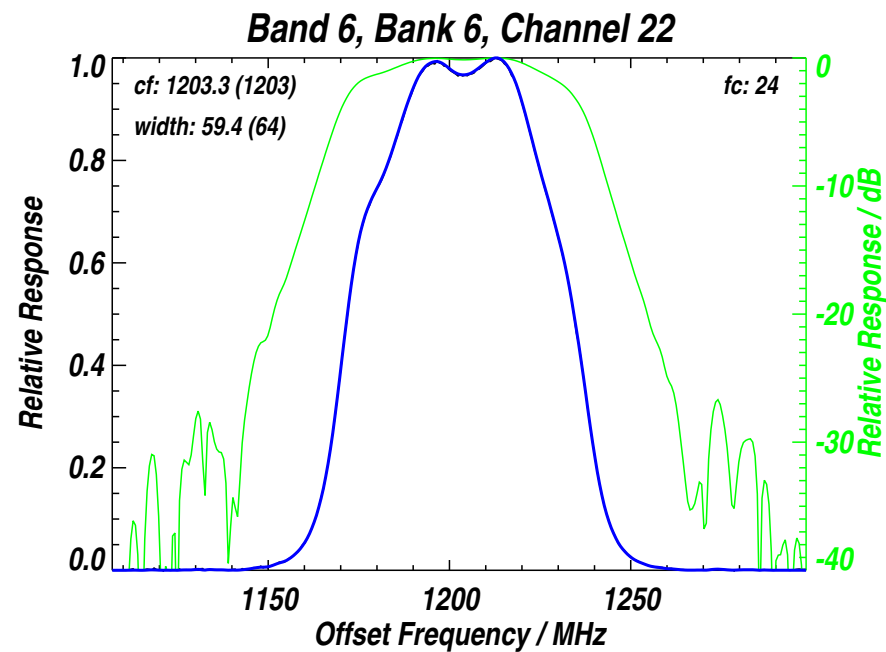
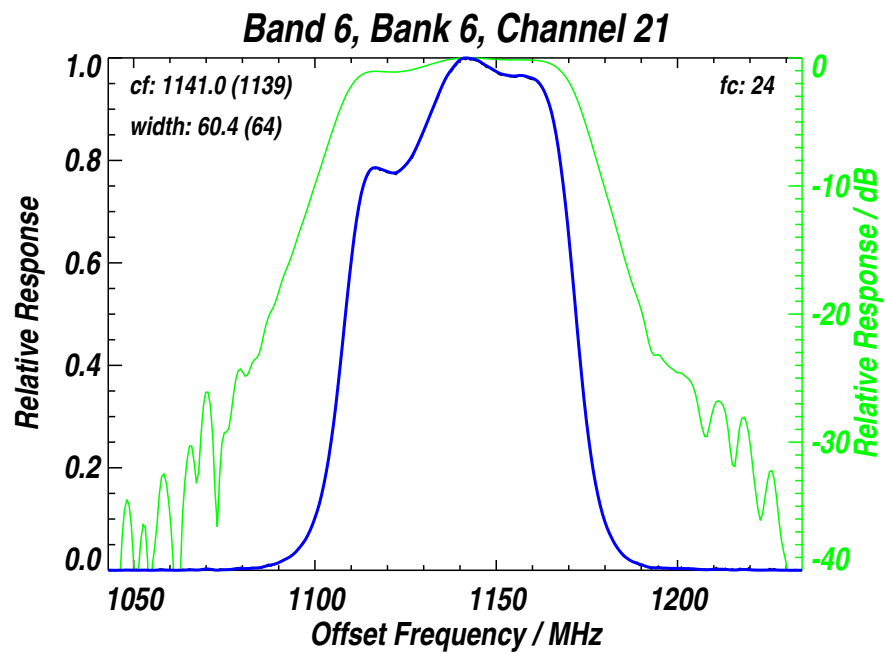
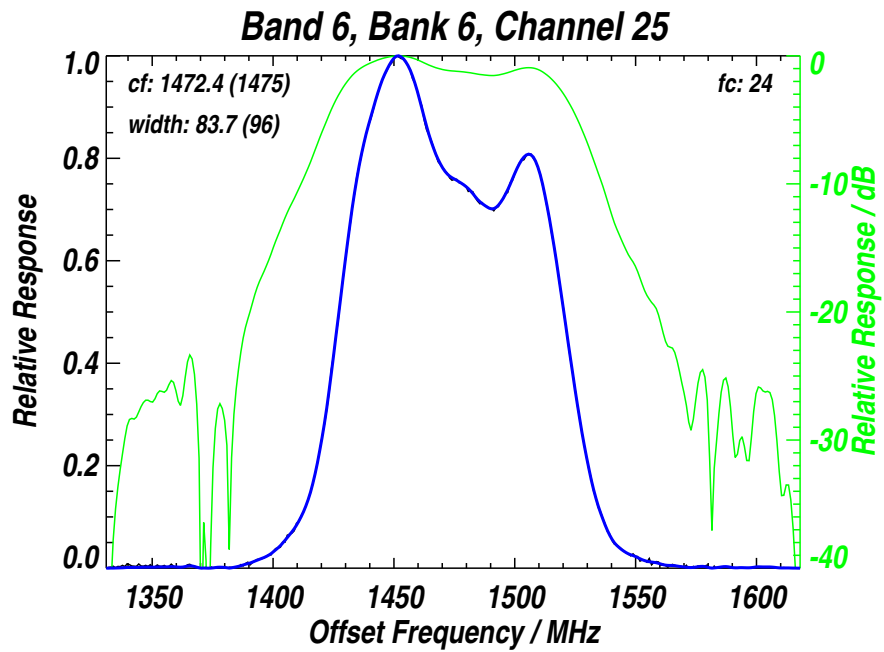


Figure H.161: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channels 21 to 24. See text for additional details.



**Band 6 (usb)**  
**Bank 6**  
**Origin = 205.236666672 GHz**

Figure H.162: Upper sideband front-end sweep data for Band 6 taken via Filterbank 6, channel 25. See text for additional details.

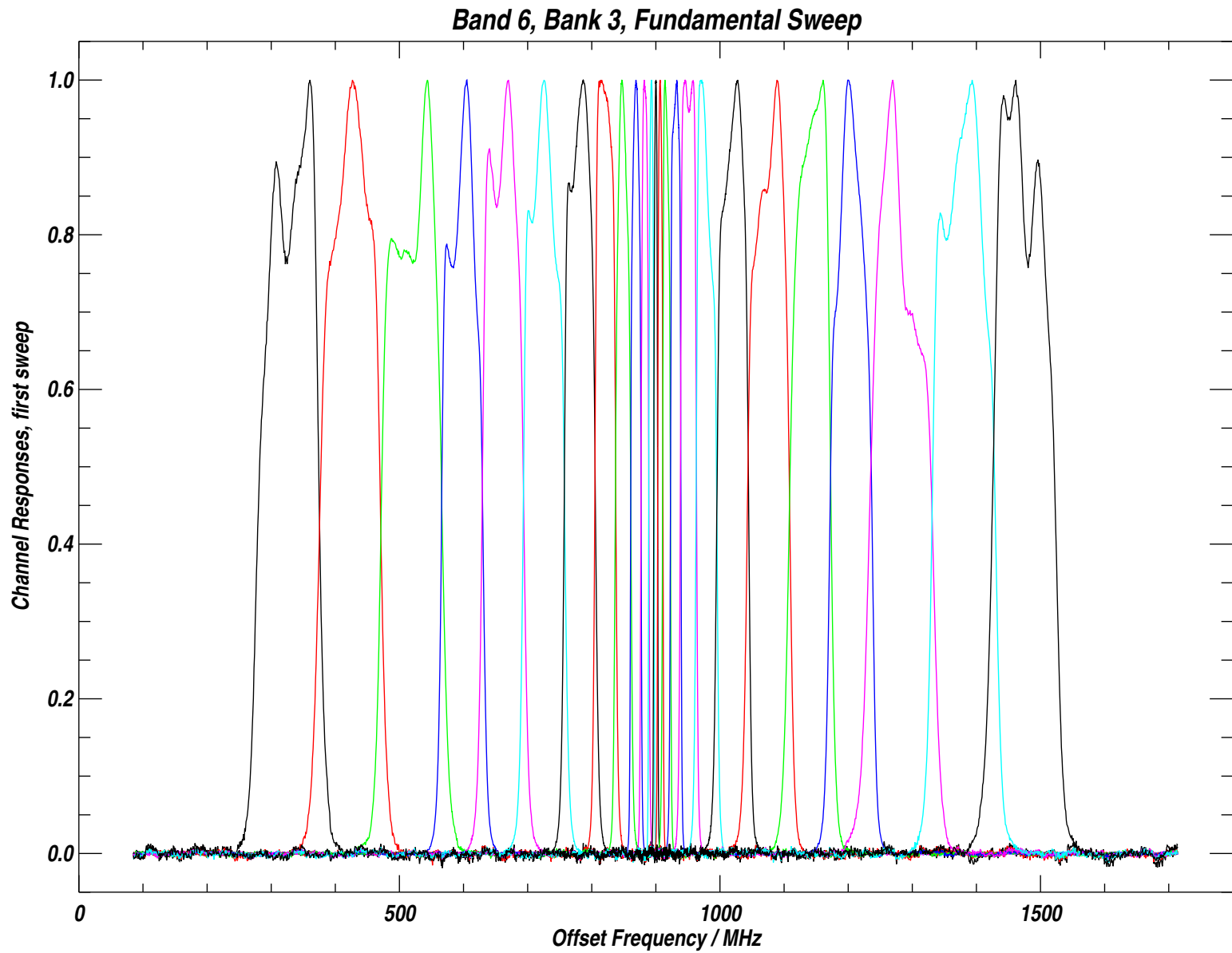


Figure H.163: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3. See text for additional details.

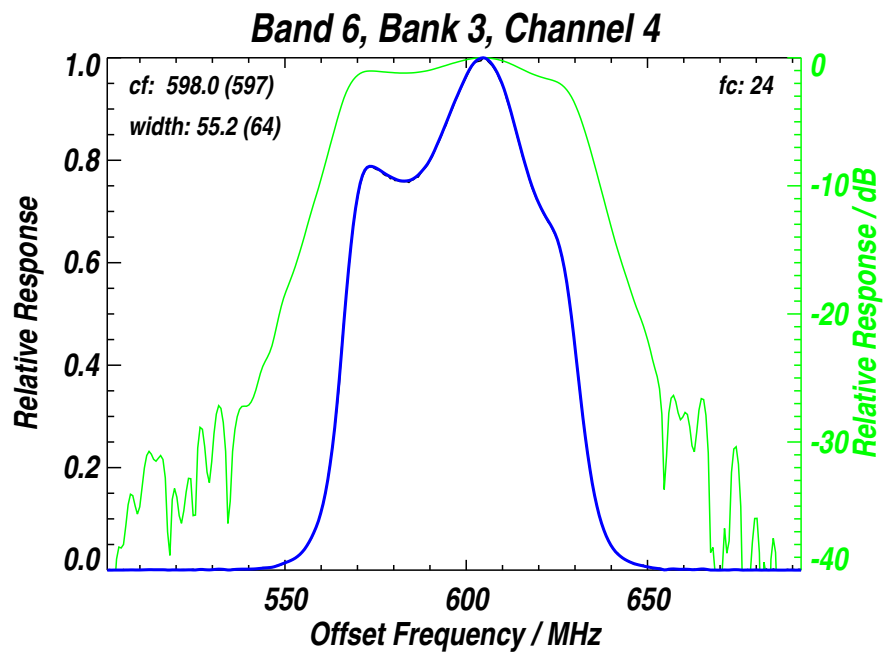
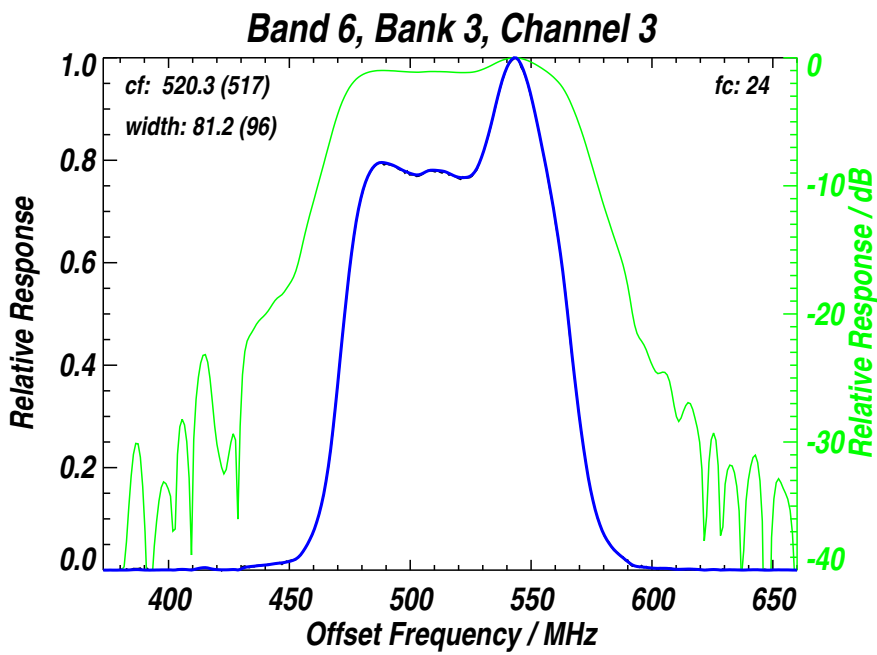
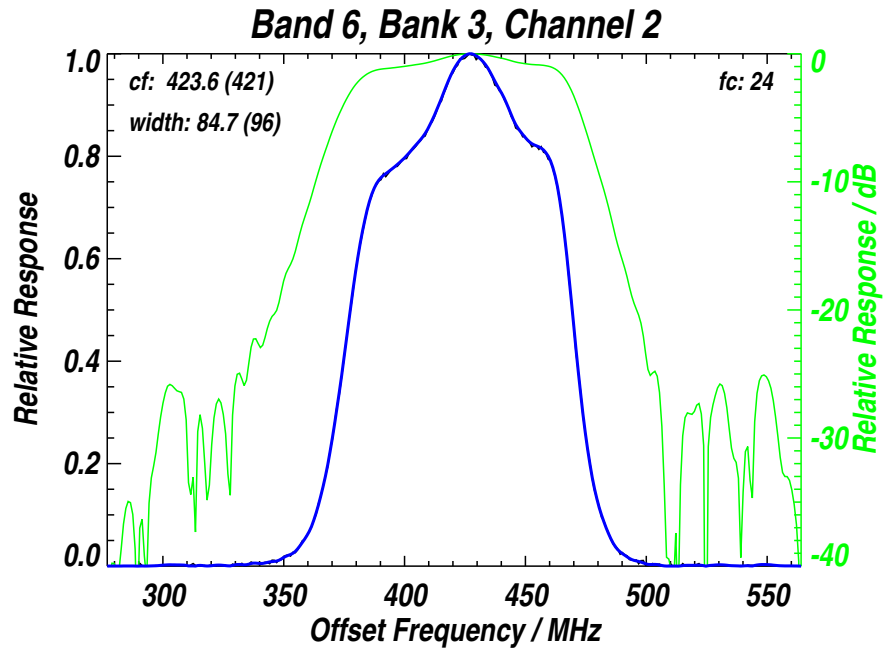
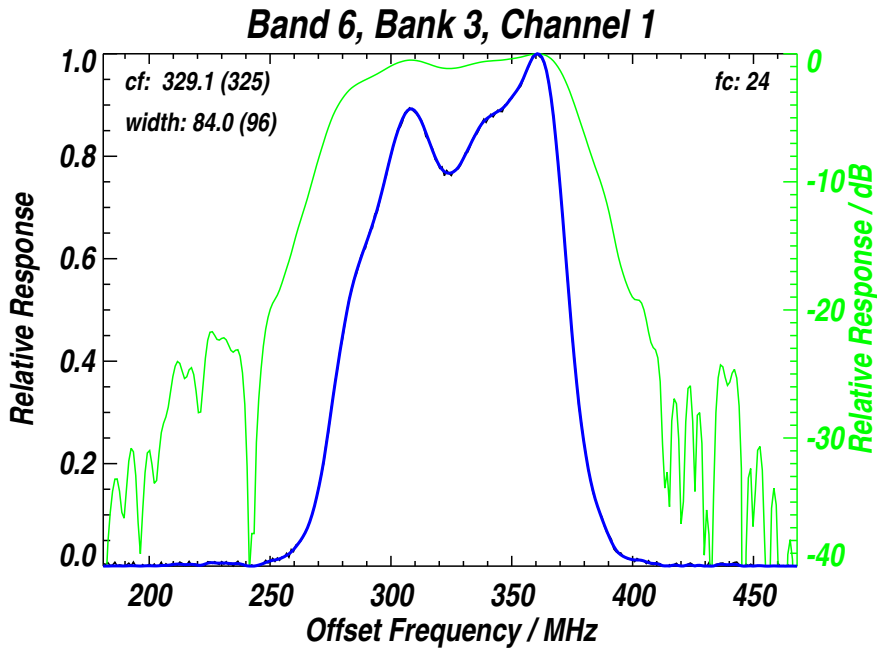


Figure H.164: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 1 to 4. See text for additional details.

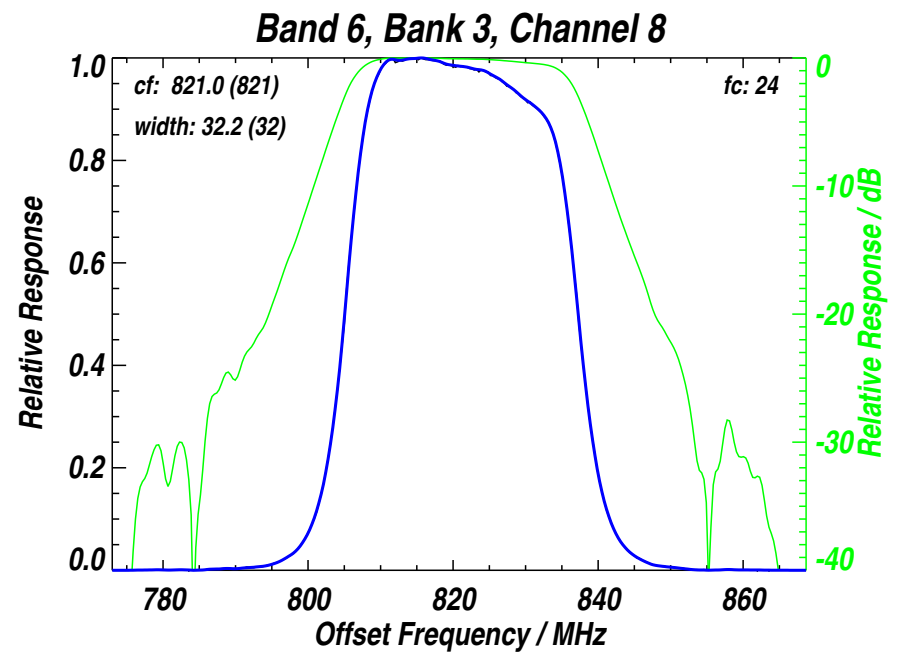
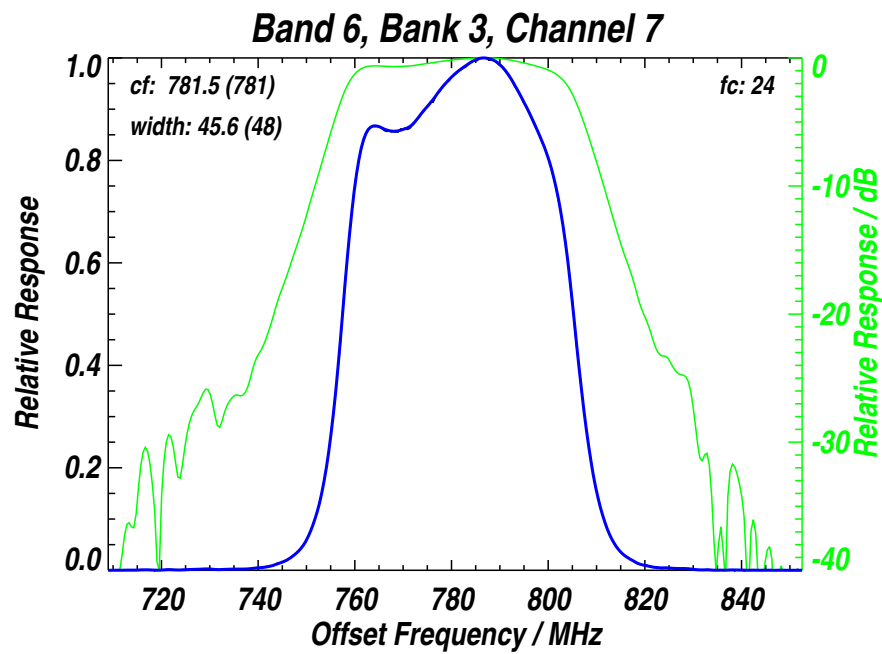
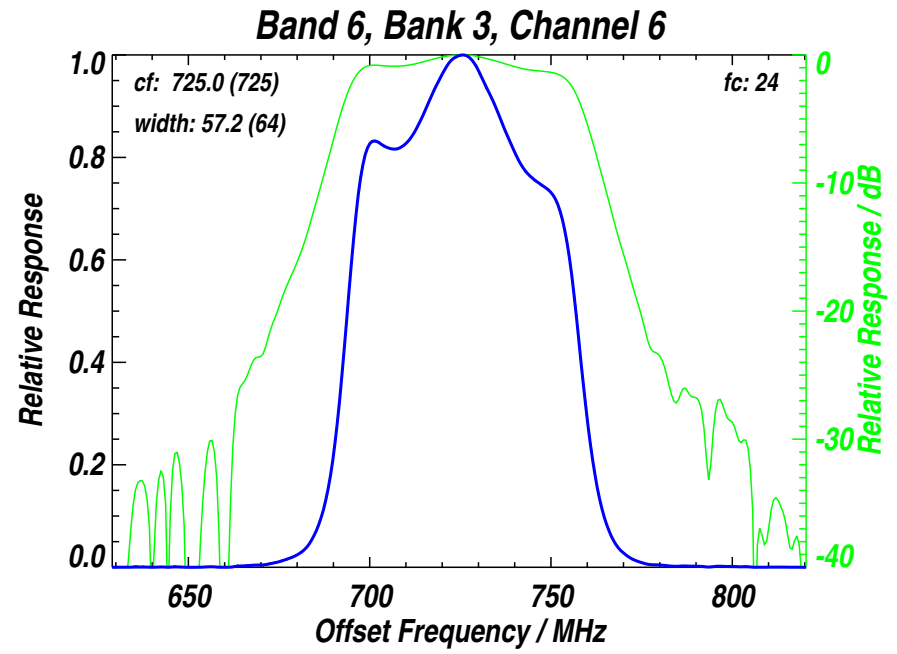
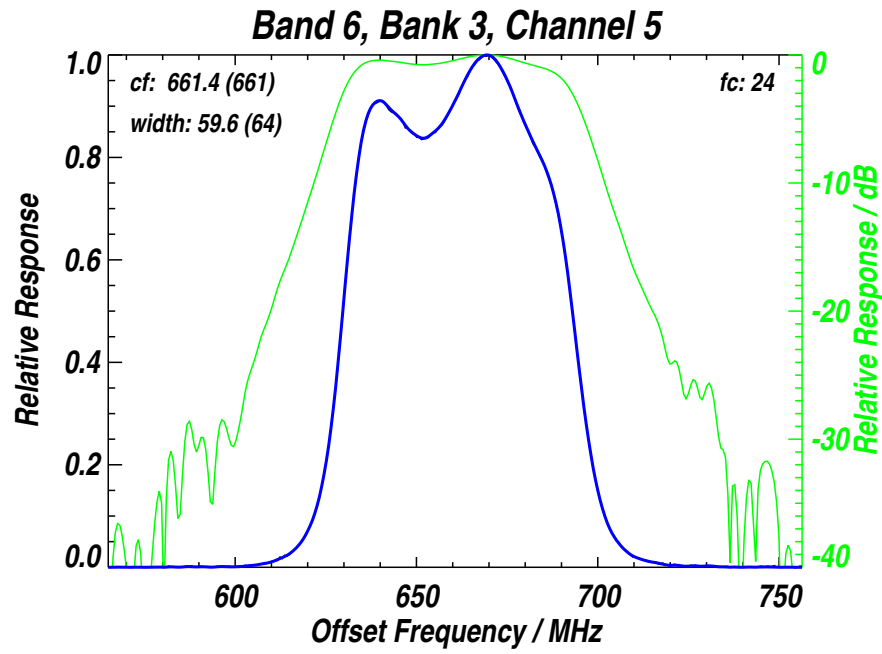


Figure H.165: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 5 to 8. See text for additional details.

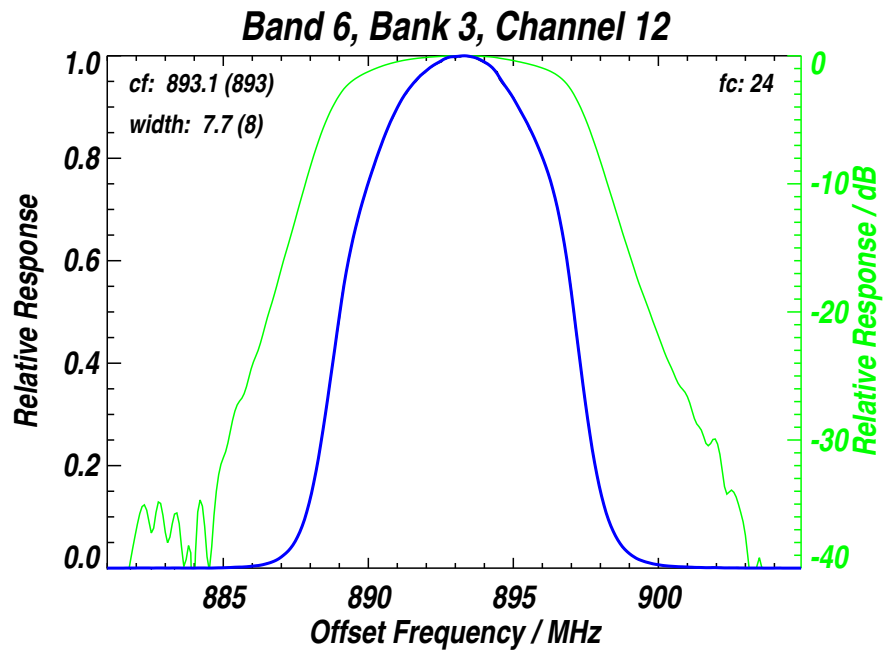
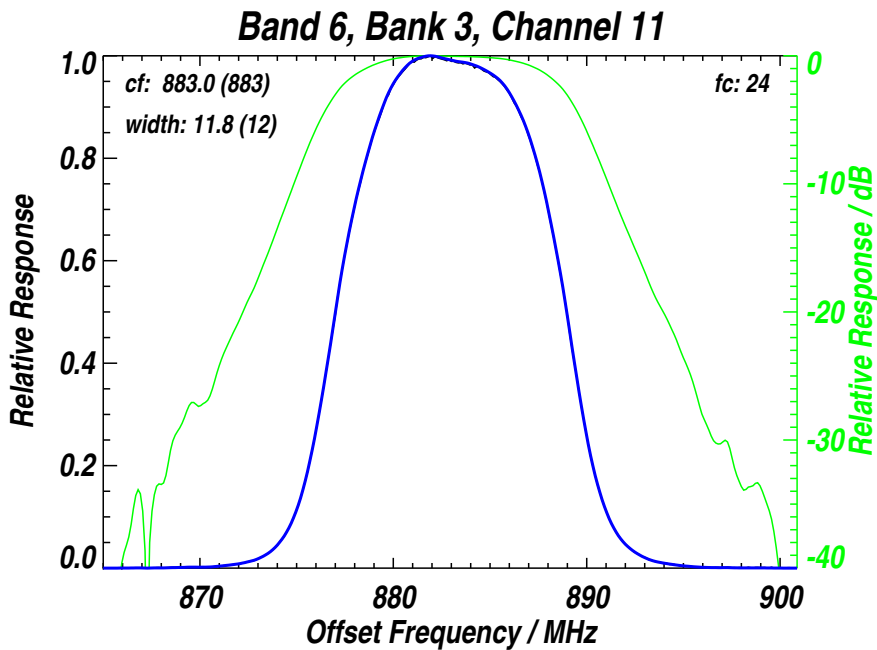
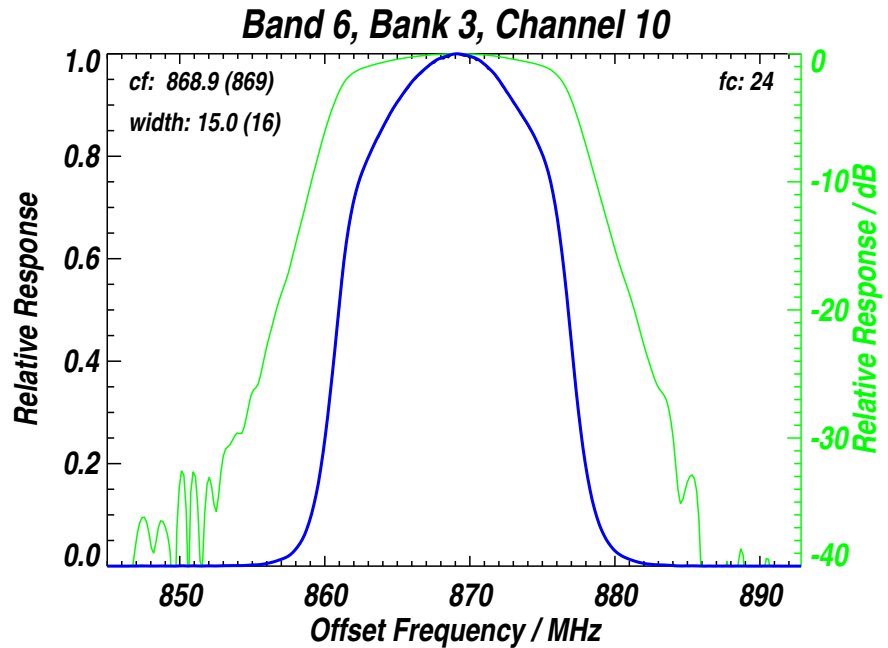
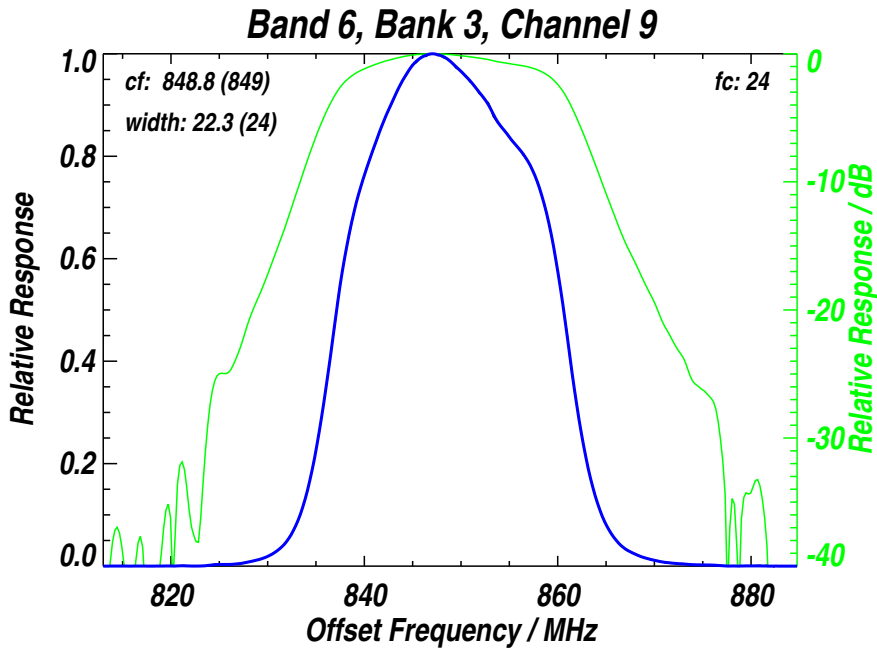


Figure H.166: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 9 to 12. See text for additional details.

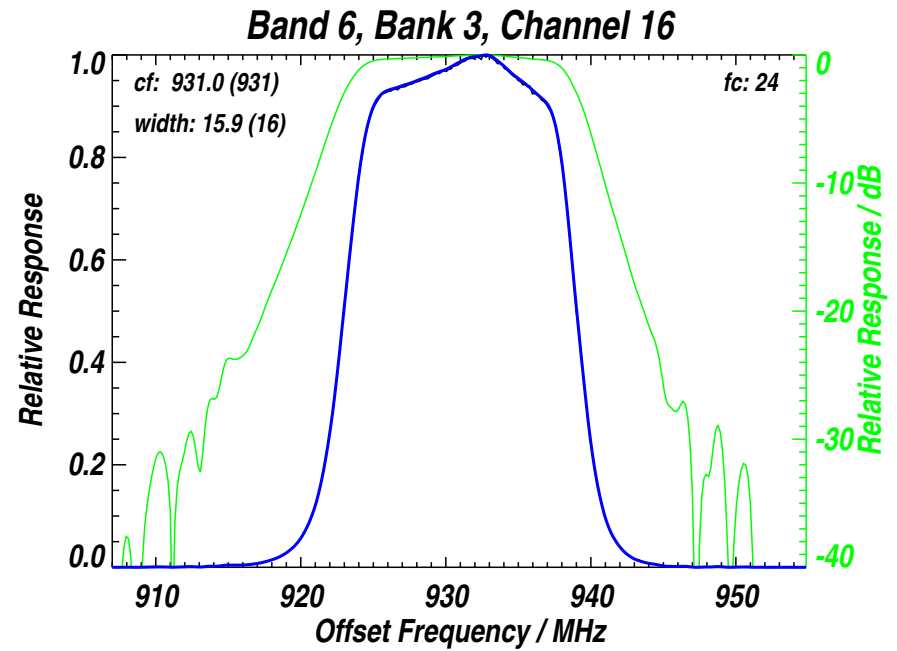
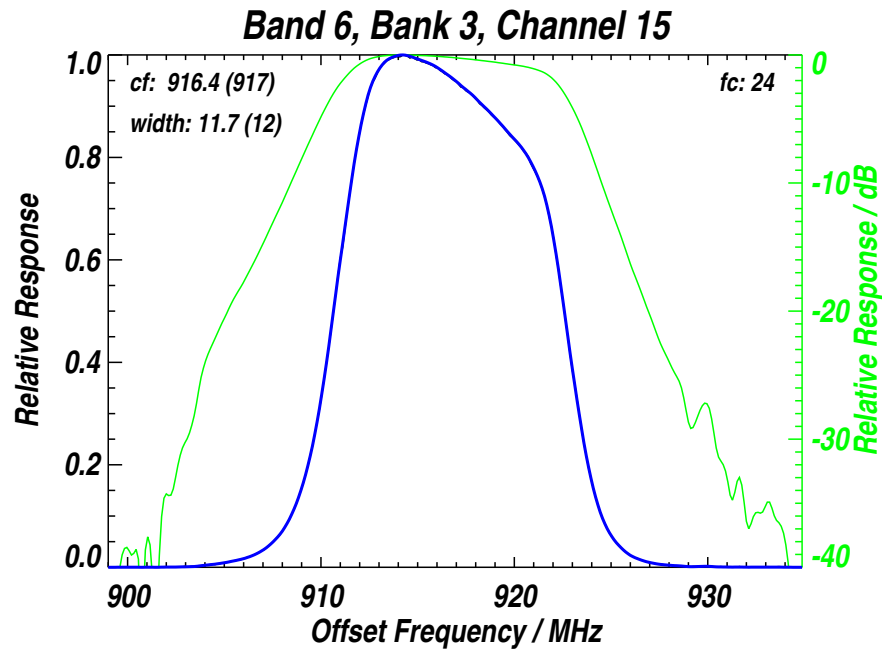
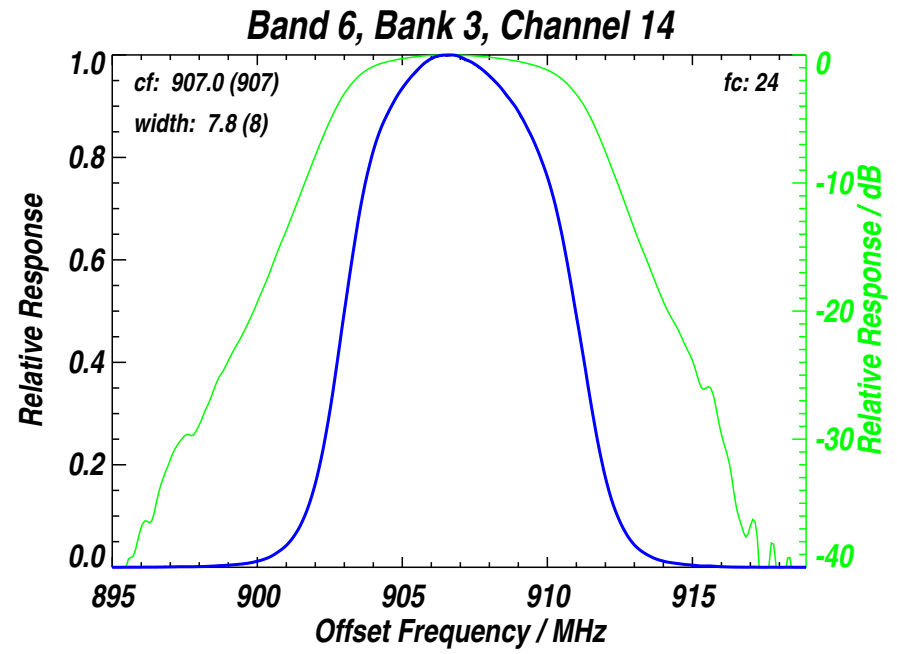
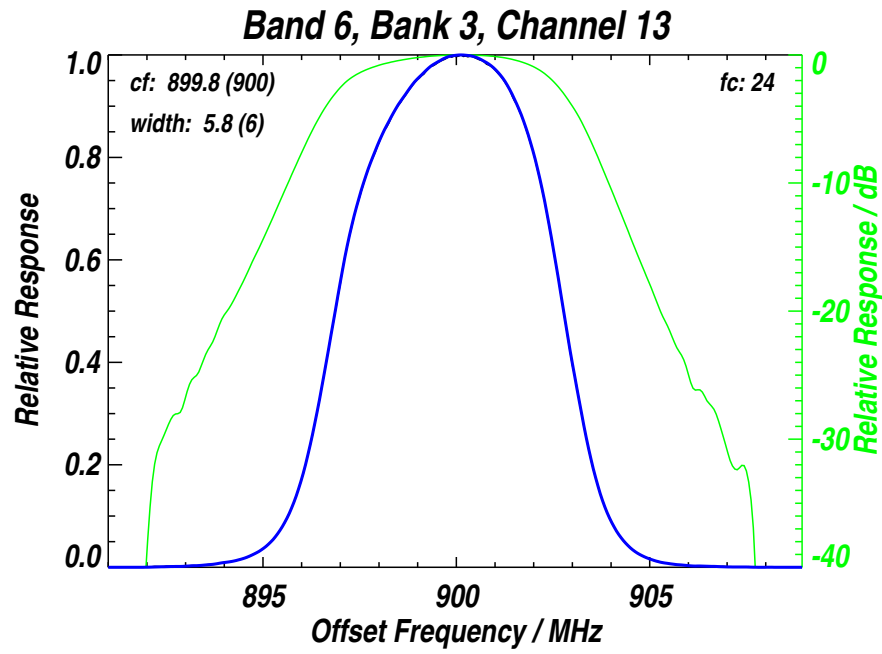


Figure H.167: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 13 to 16. See text for additional details.

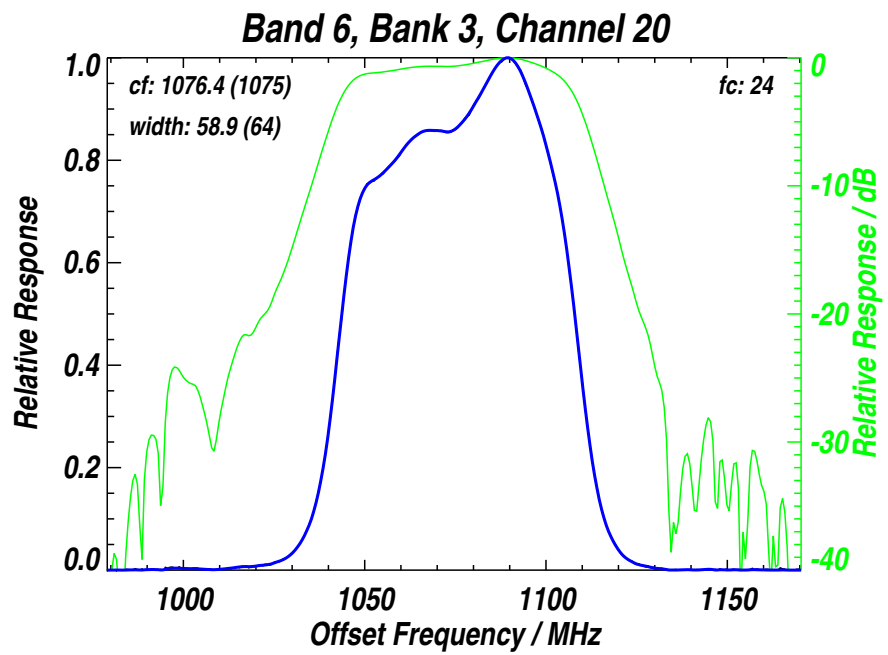
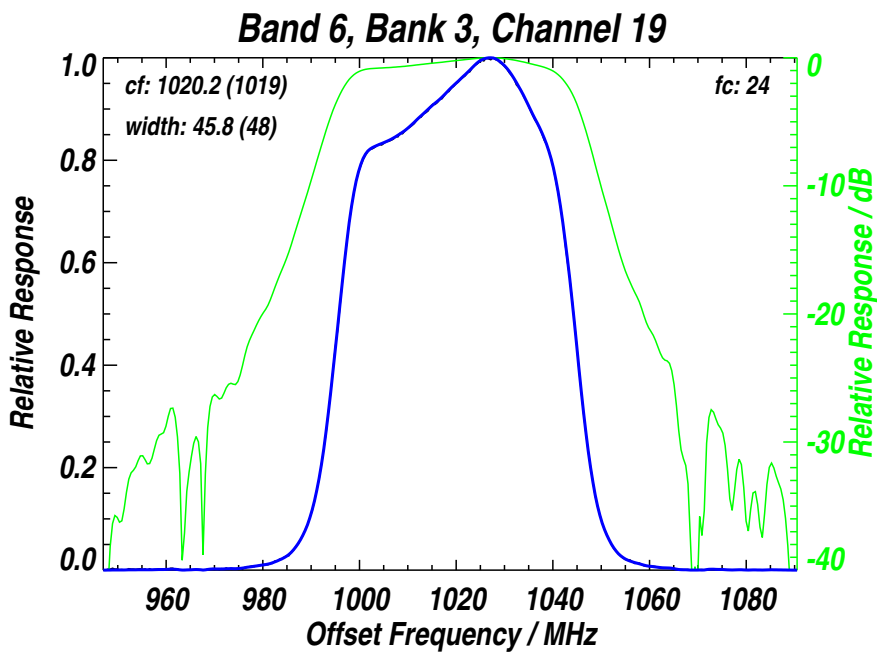
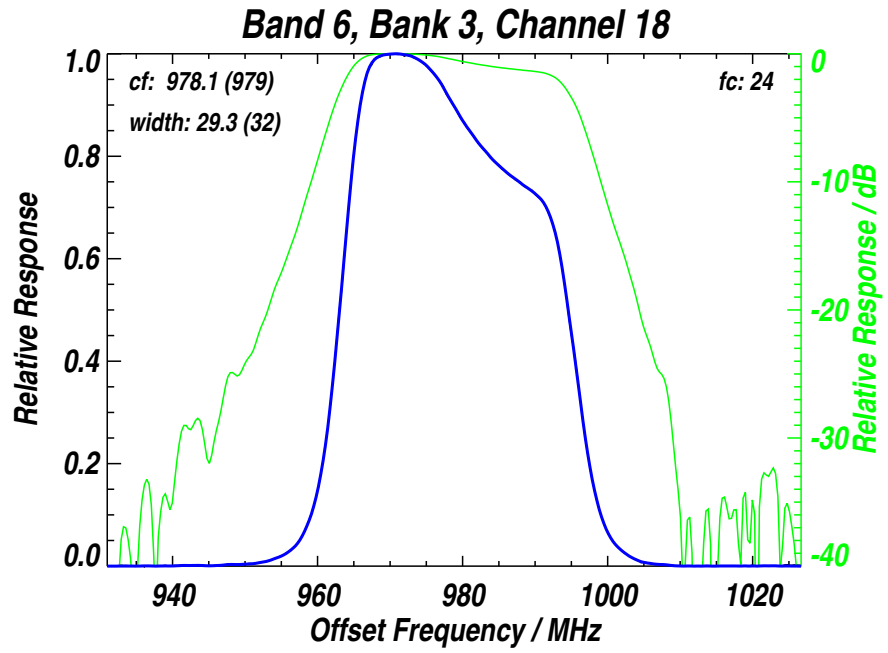
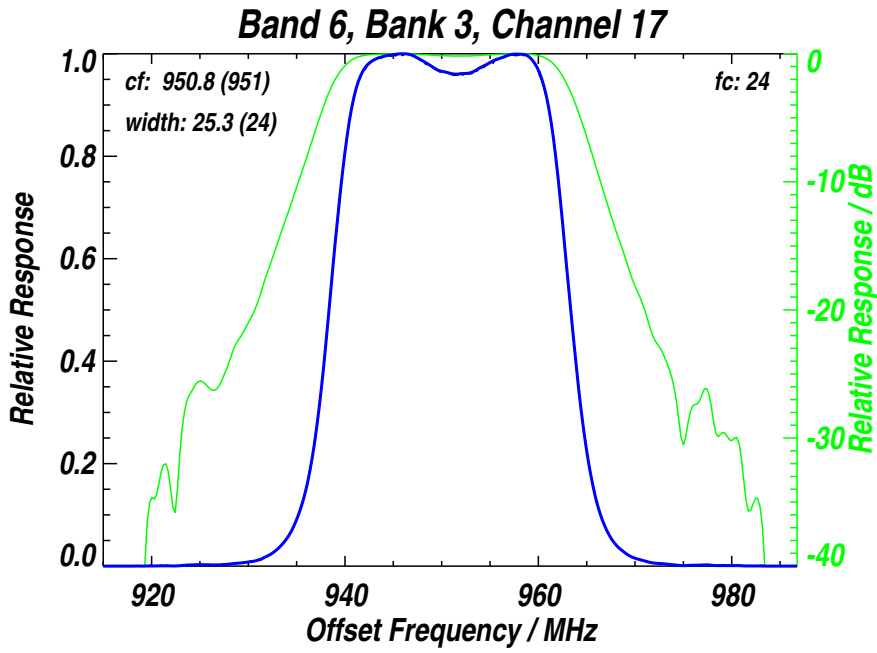


Figure H.168: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 17 to 20. See text for additional details.



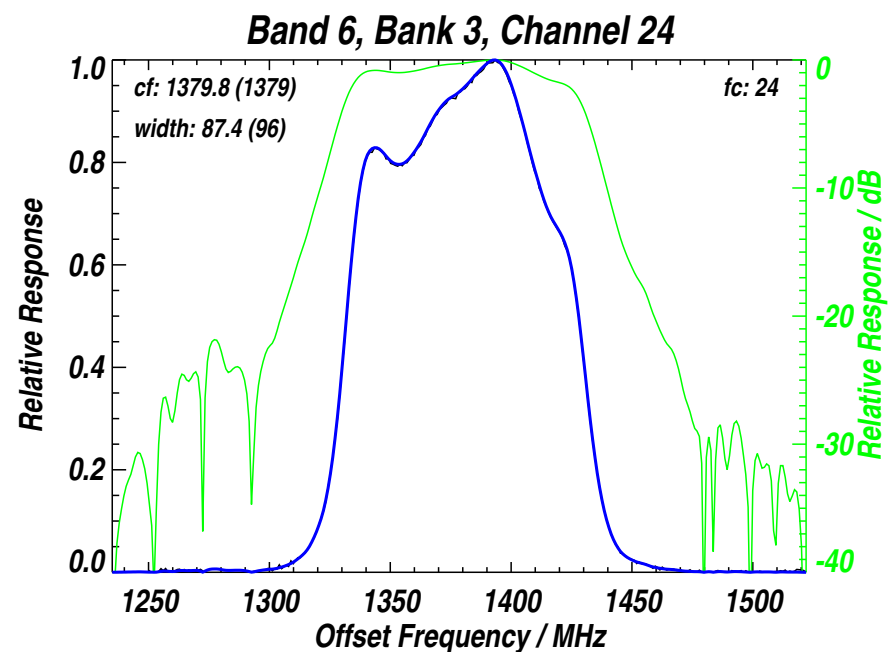
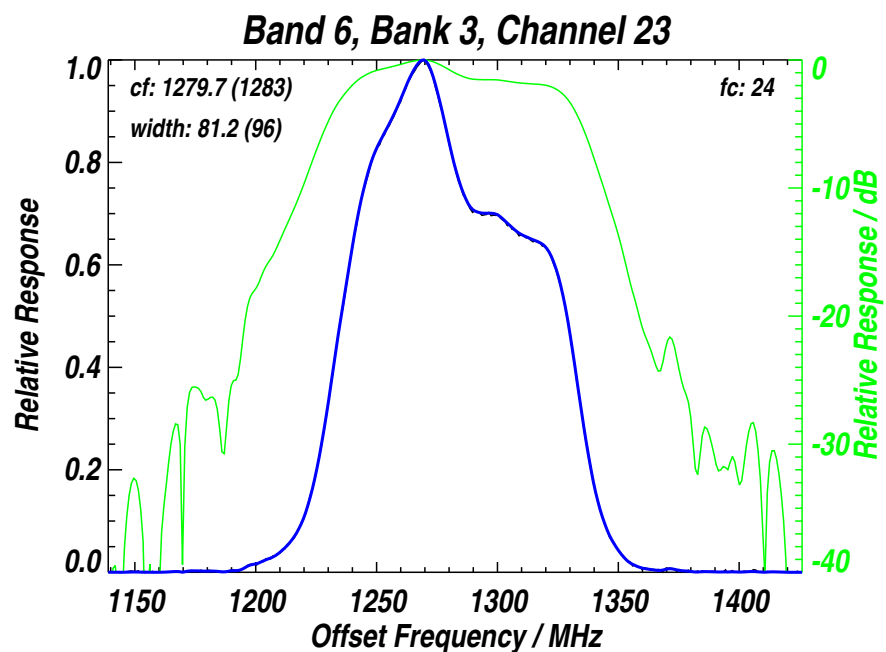
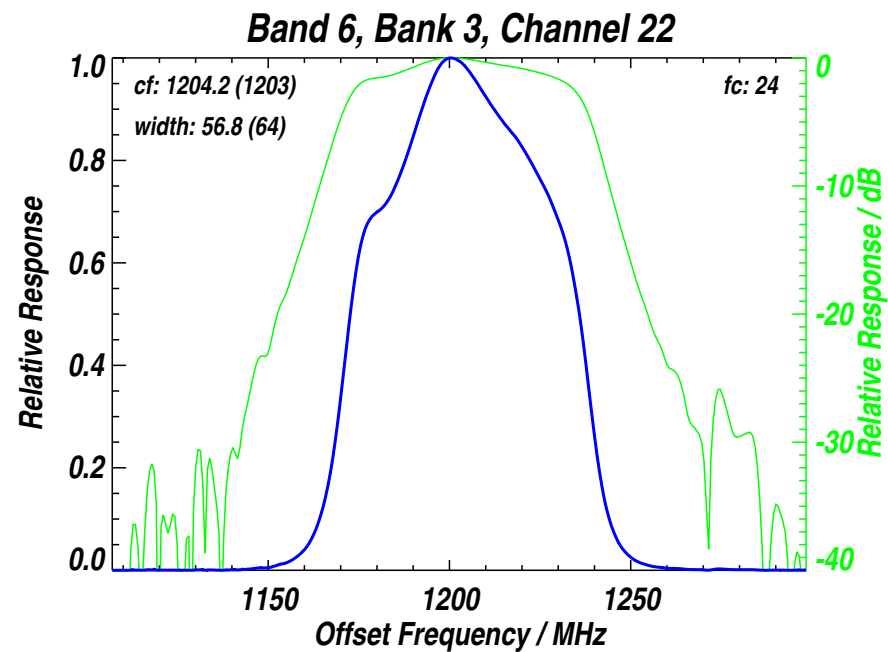
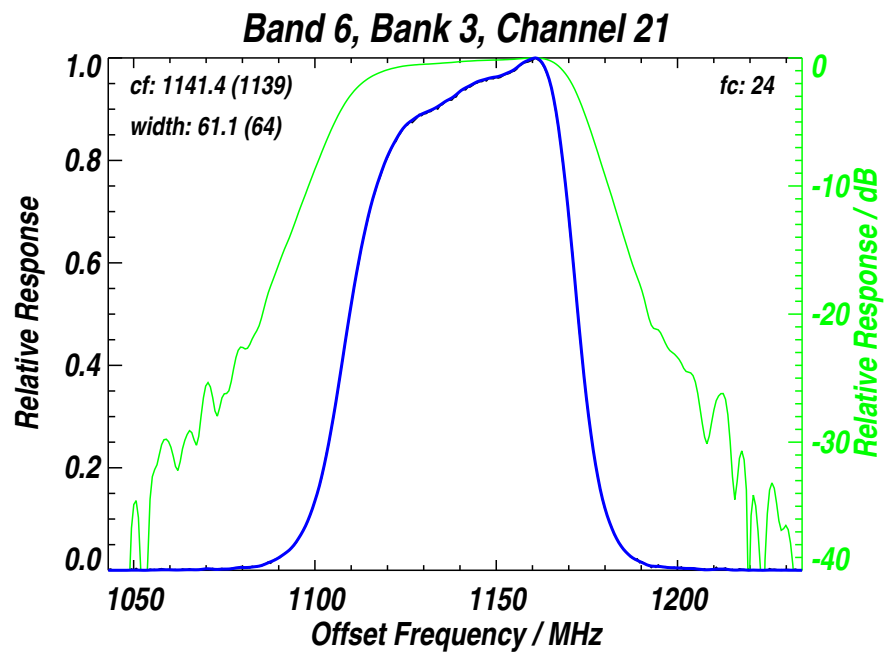
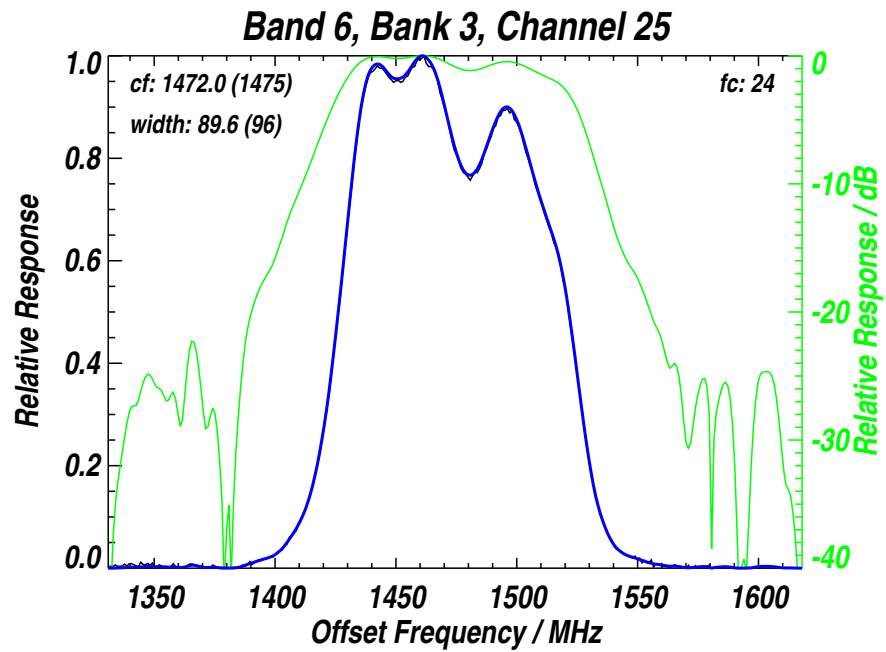


Figure H.169: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 6 (usb)**  
**Bank 3**  
**Origin = 205.236666672 GHz**

Figure H.170: Upper sideband front-end sweep data for Band 6 taken via Filterbank 3, channel 25. See text for additional details.

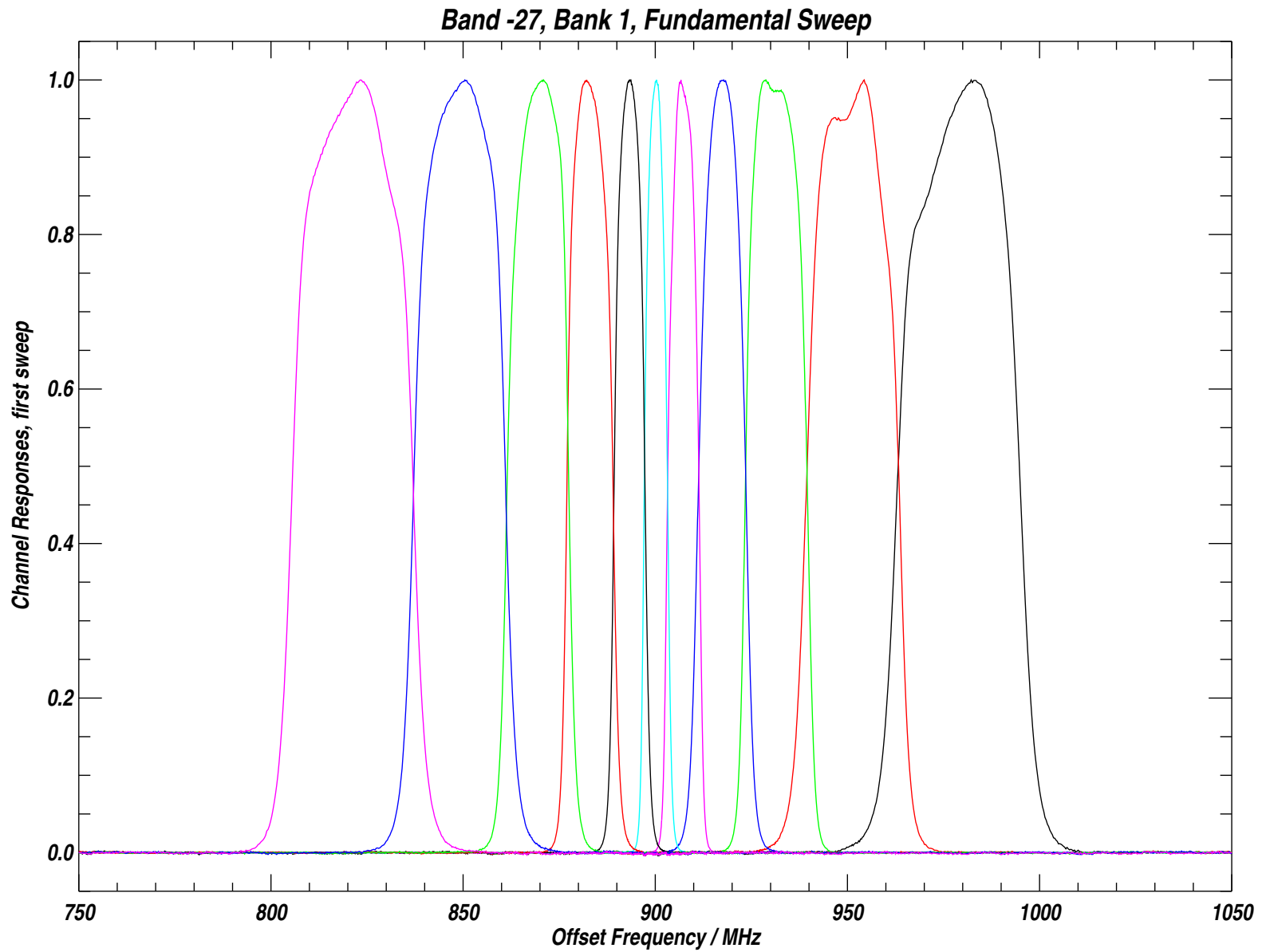
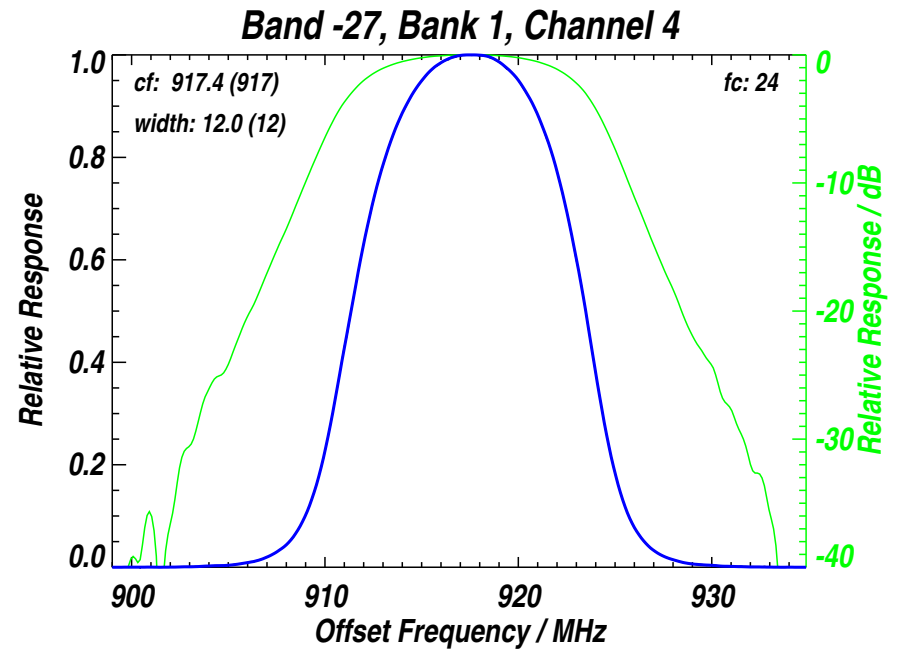
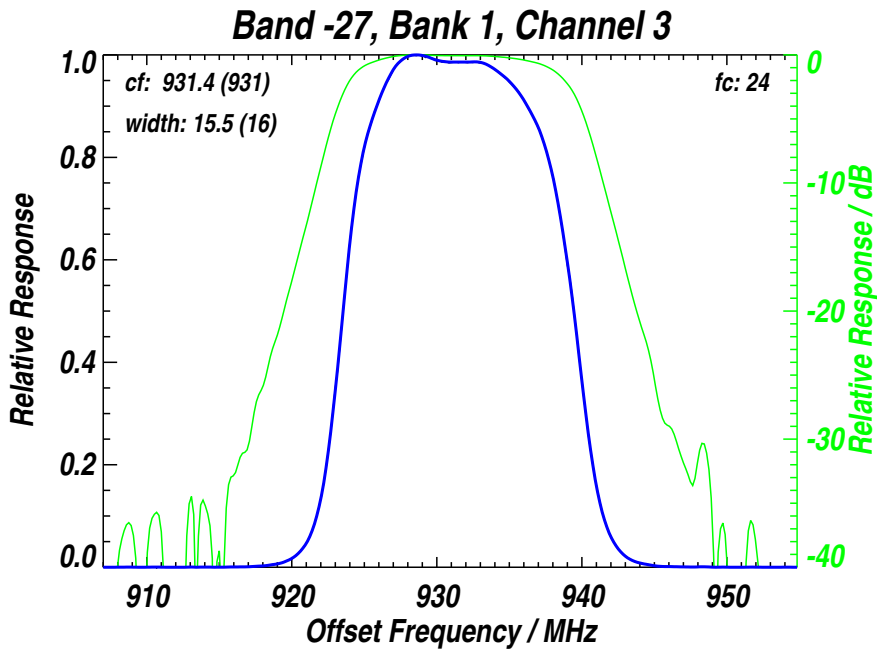
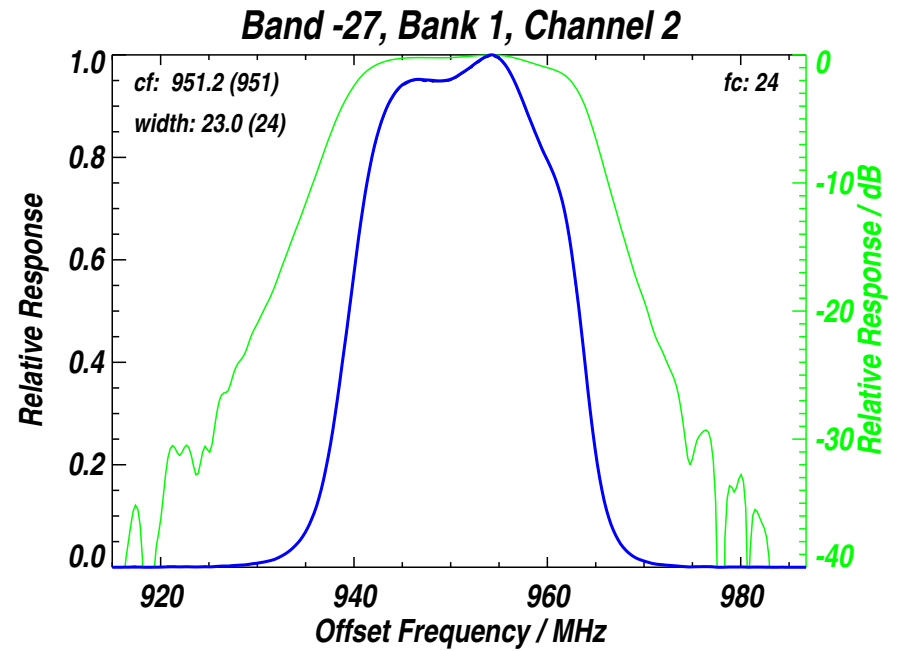
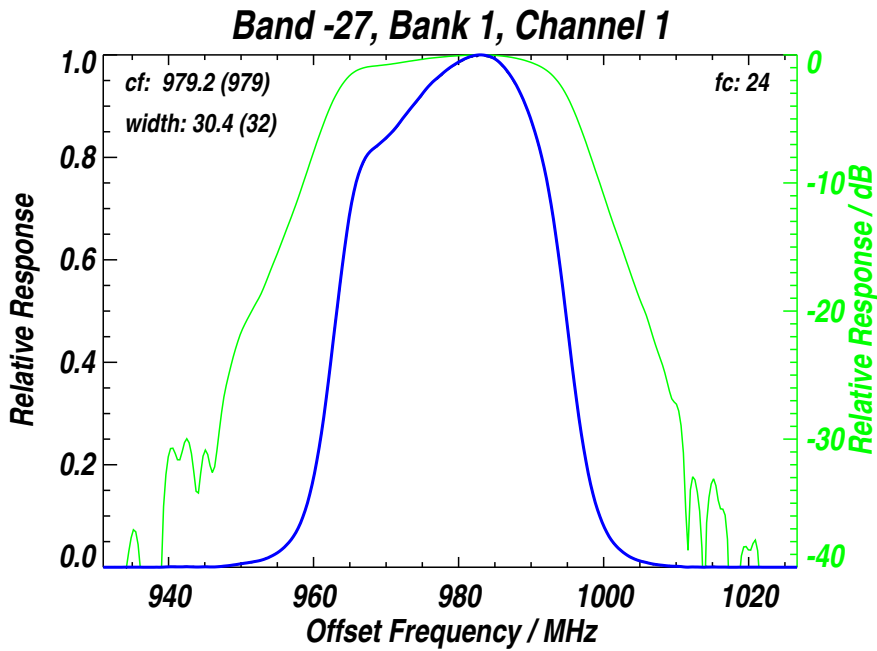


Figure H.171: Lower sideband front-end sweep data for Band 27. See text for additional details.



[ R2, MB27, Channels 1 to 4 ]

Figure H.172: Lower sideband front-end sweep data for Band 27, channels 1 to 4. See text for additional details.

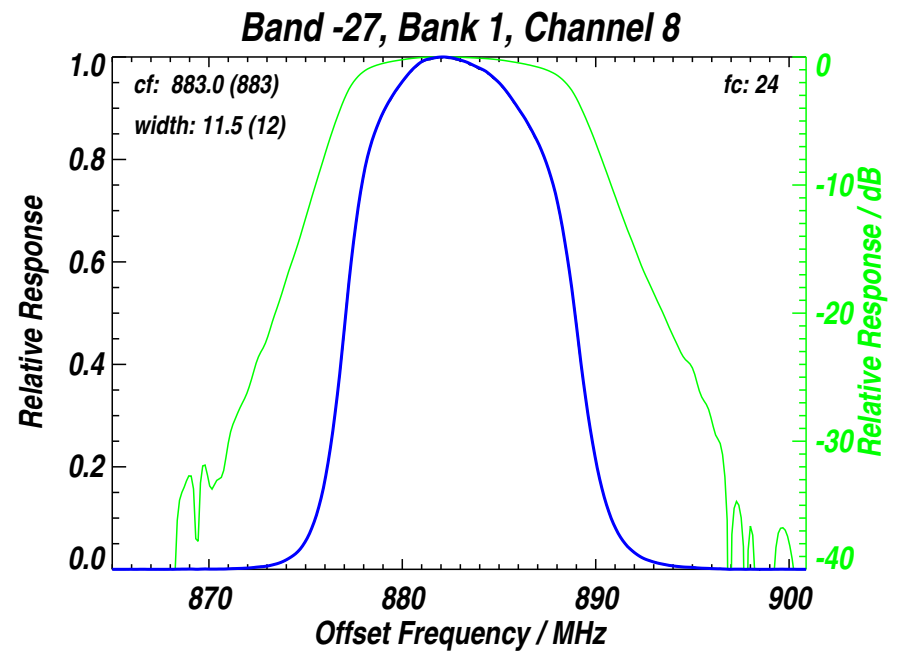
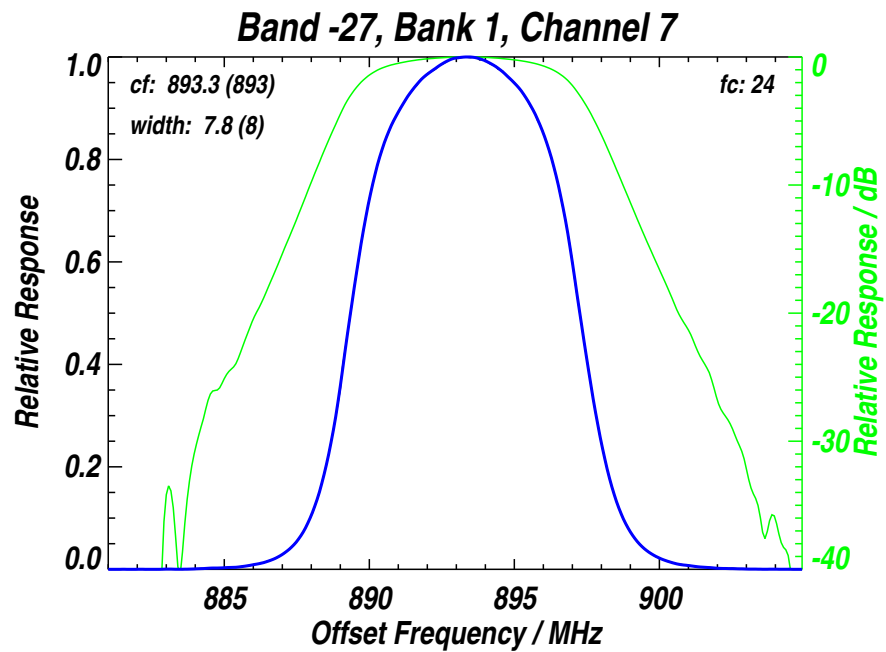
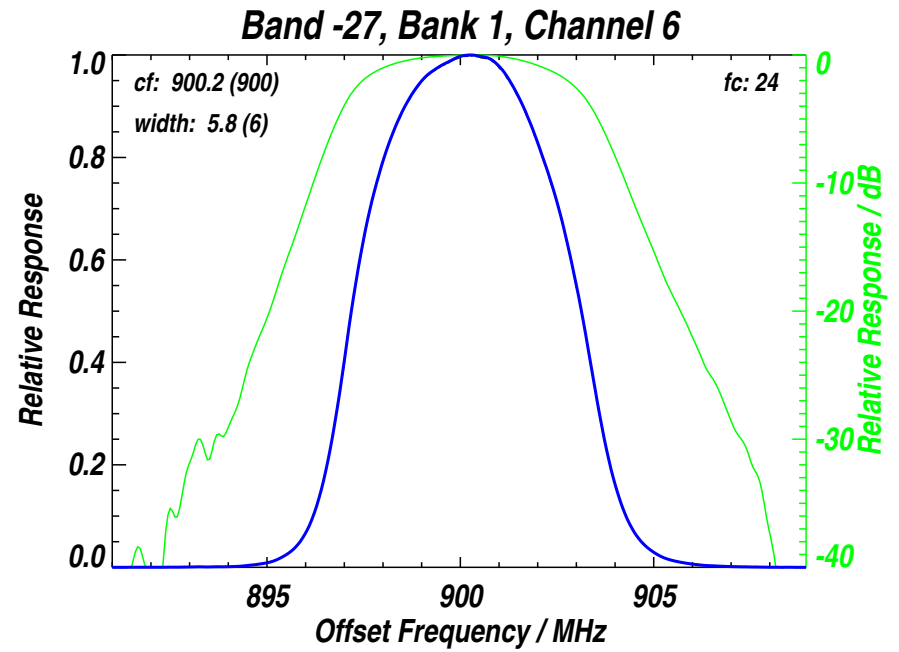
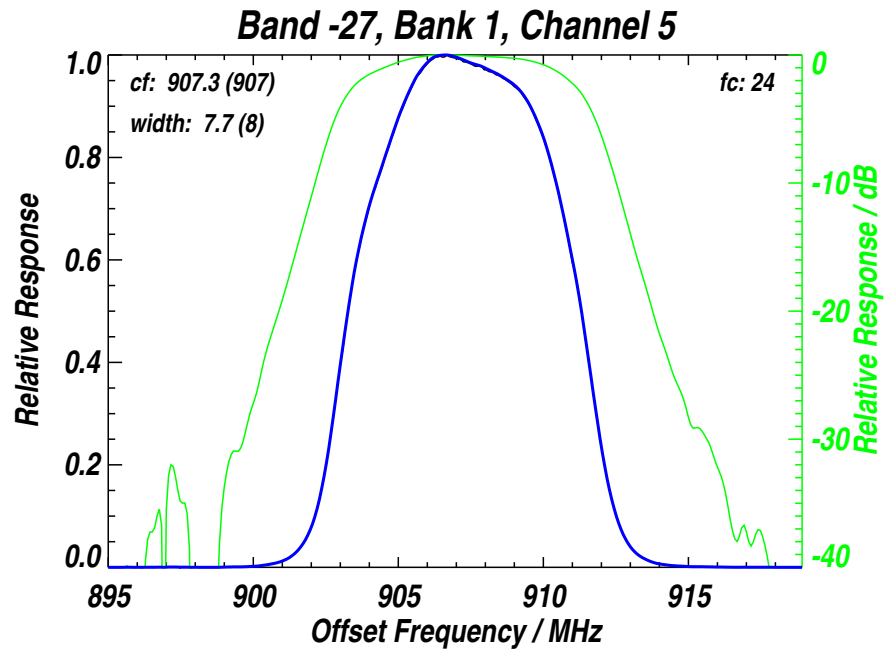
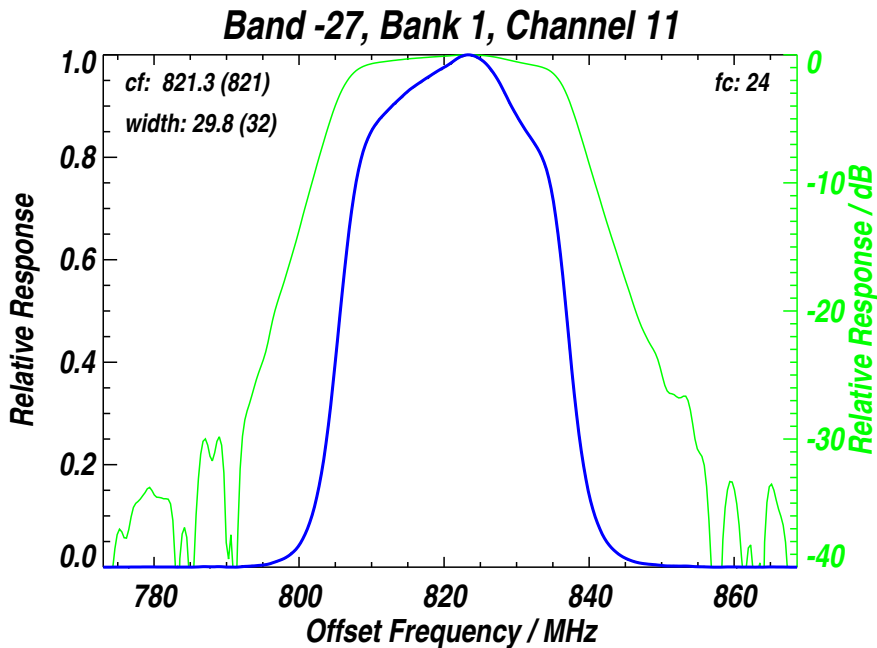
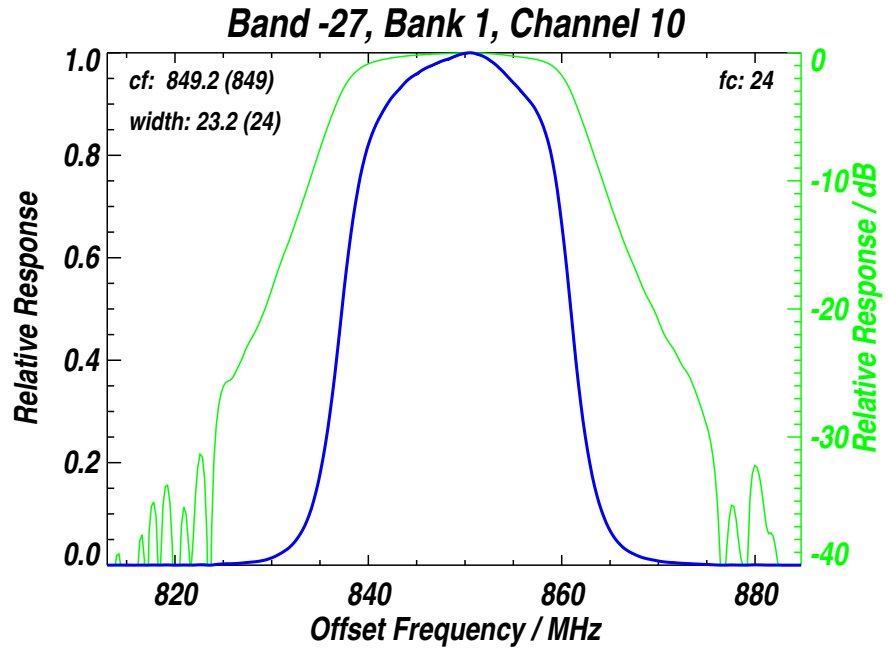
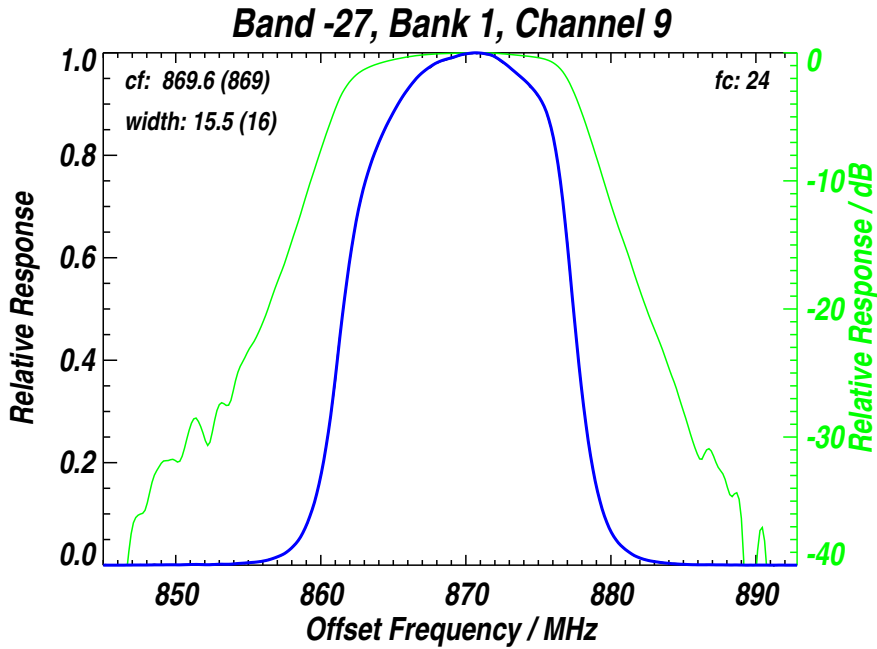


Figure H.173: Lower sideband front-end sweep data for Band 27, channels 5 to 8. See text for additional details.



**Band 27 (lsb)**  
**Bank 1**  
**Origin = 176.364999996 GHz**

Figure H.174: Lower sideband front-end sweep data for Band 27, channels 9 to 11. See text for additional details.

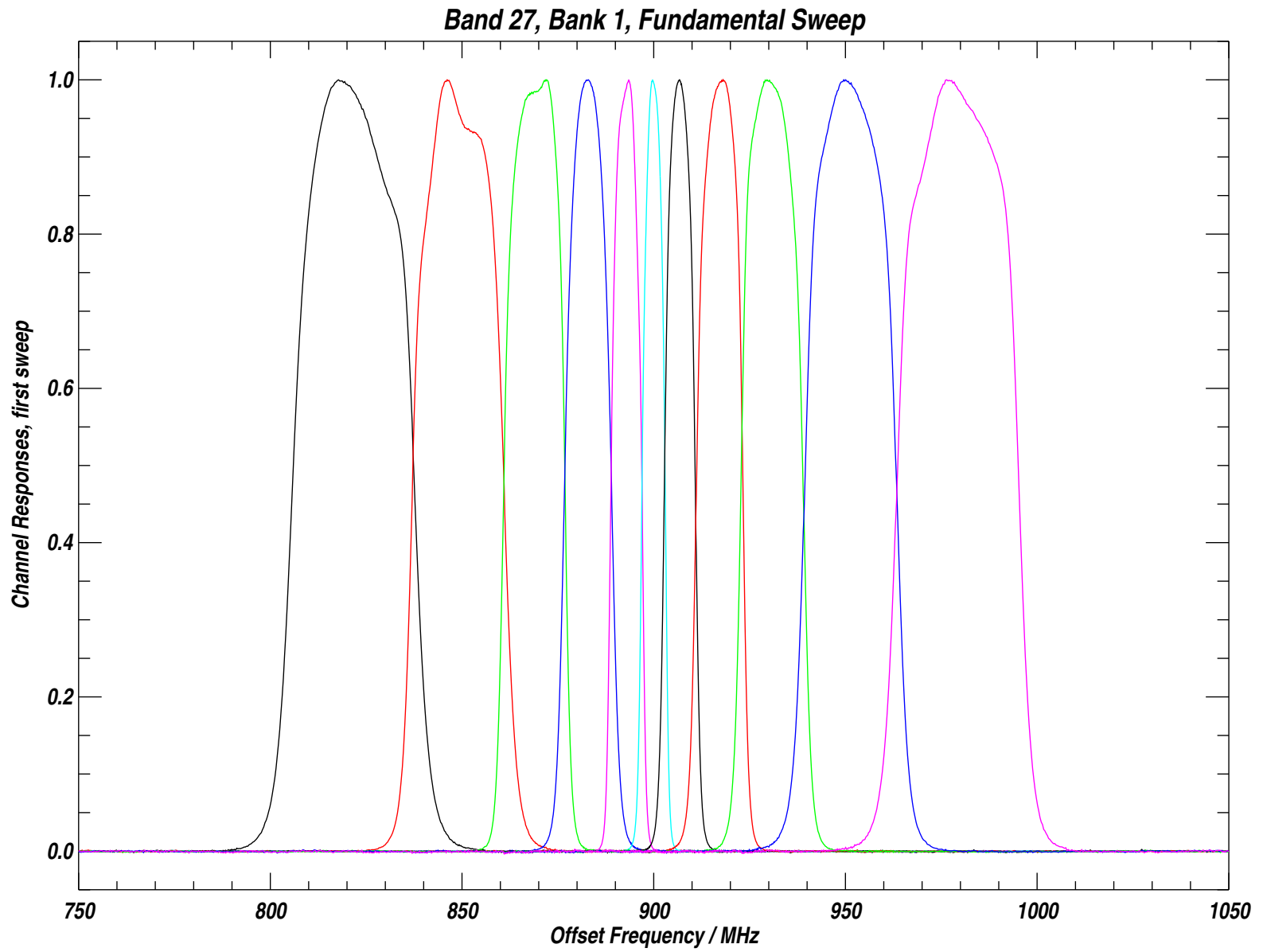


Figure H.175: Upper sideband front-end sweep data for Band 27. See text for additional details.

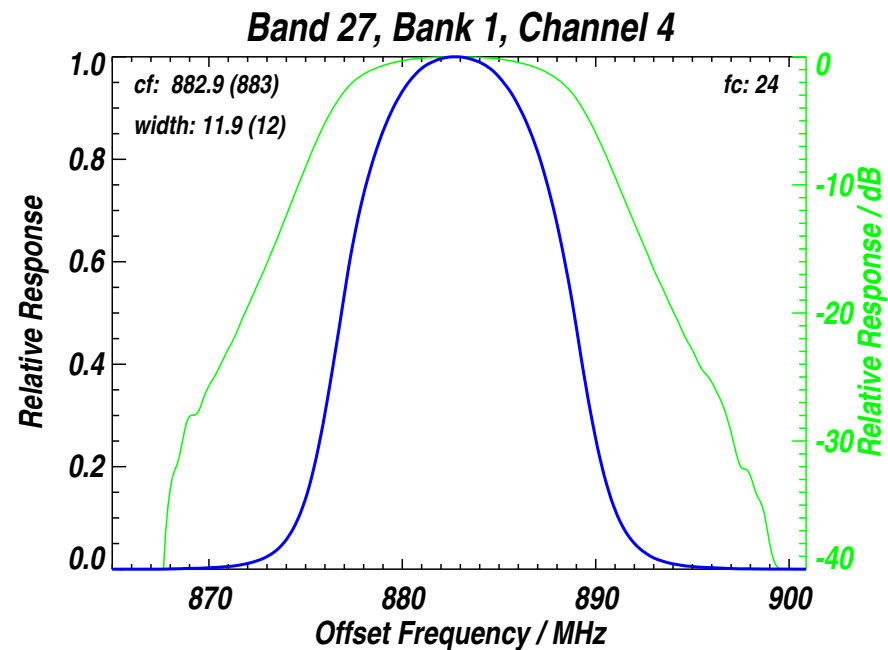
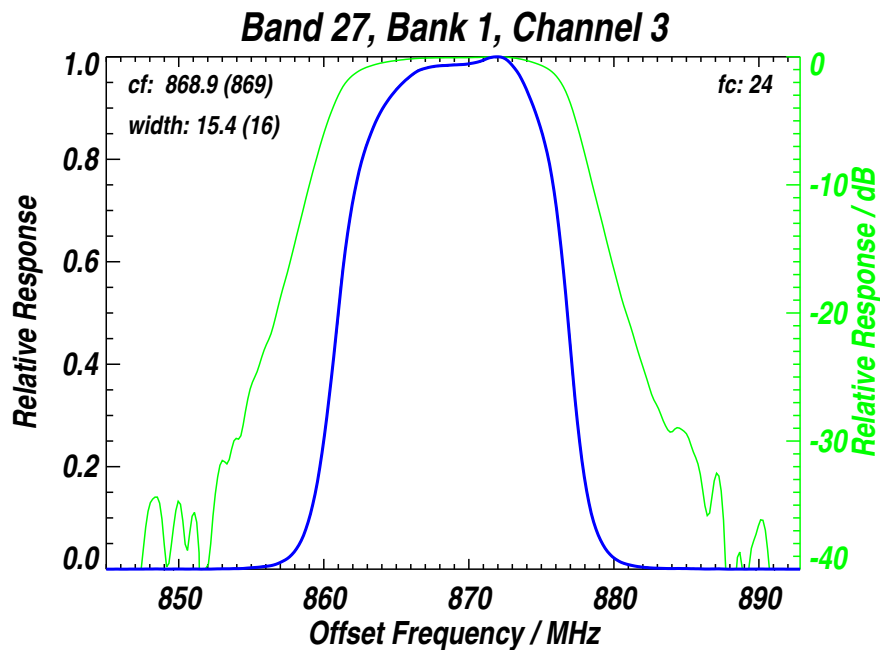
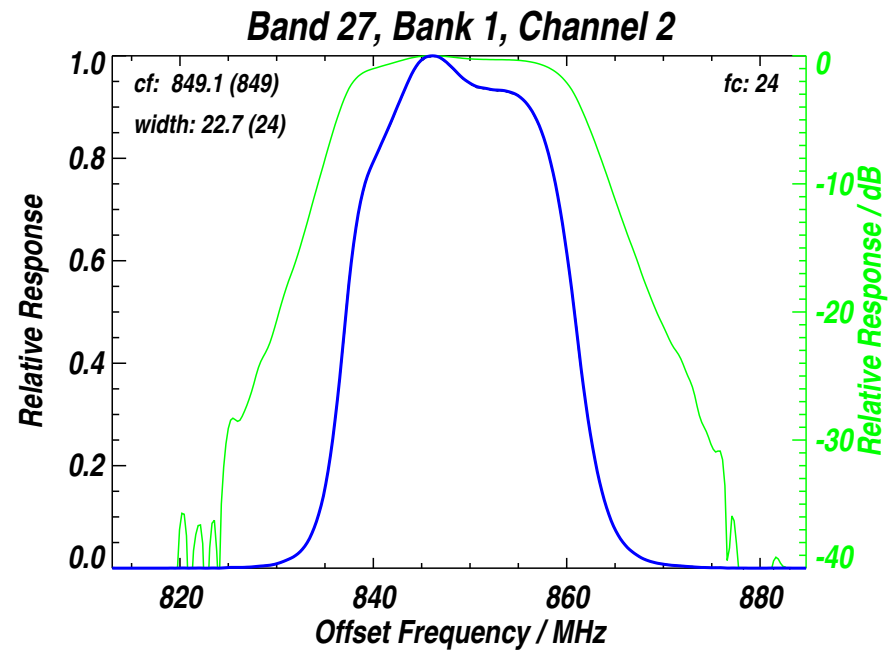
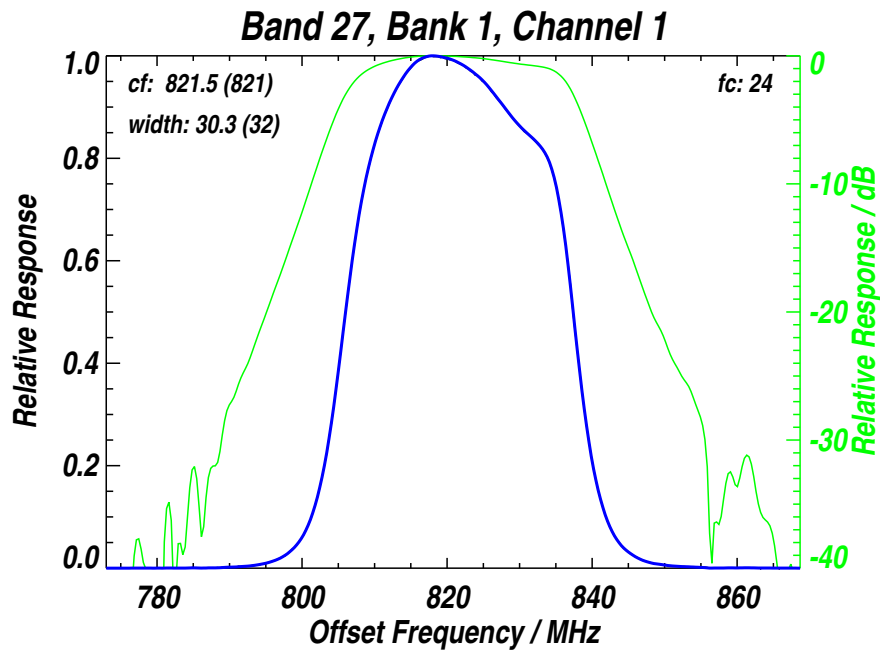


Figure H.176: Upper sideband front-end sweep data for Band 27, channels 1 to 4. See text for additional details.



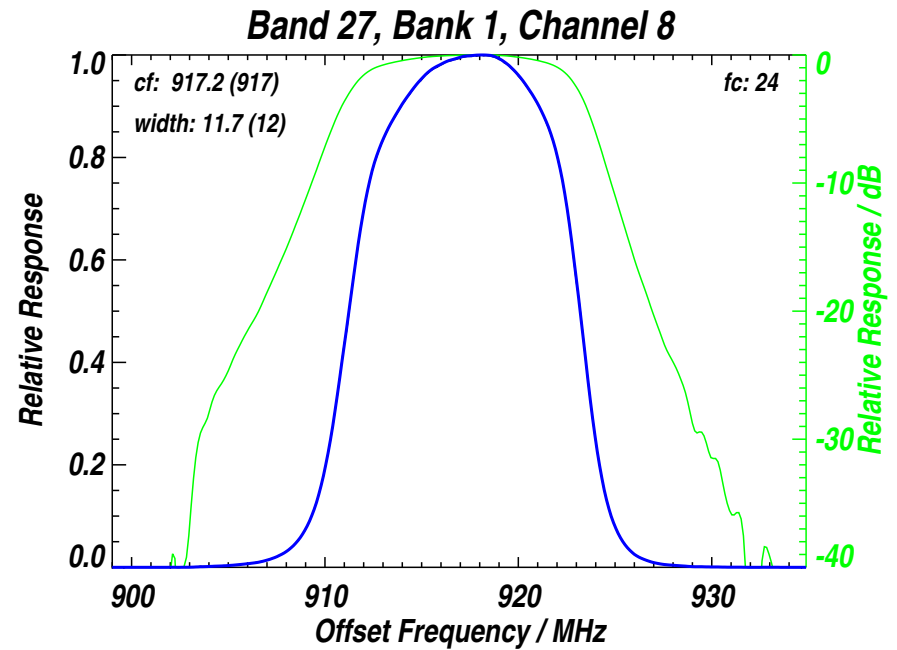
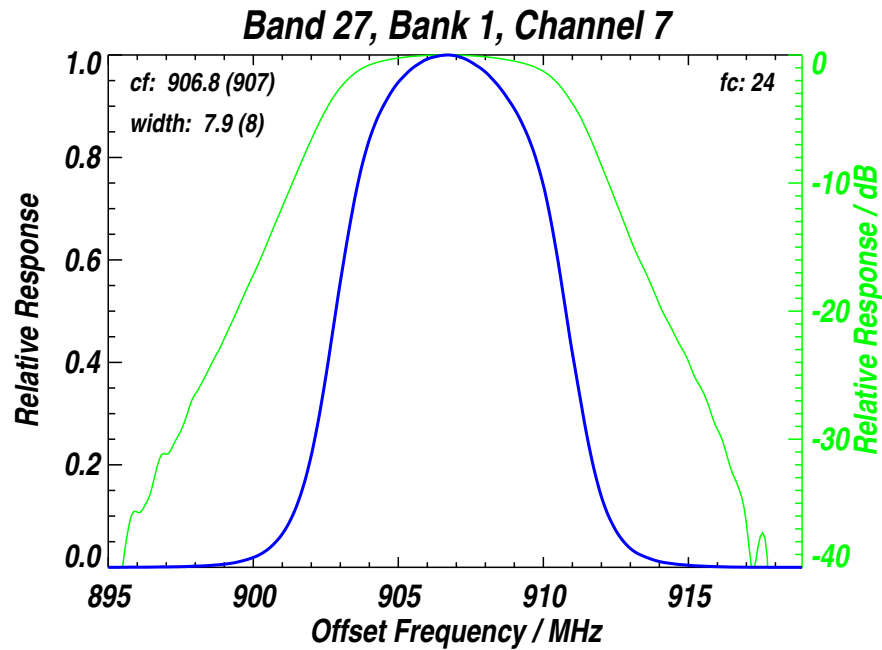
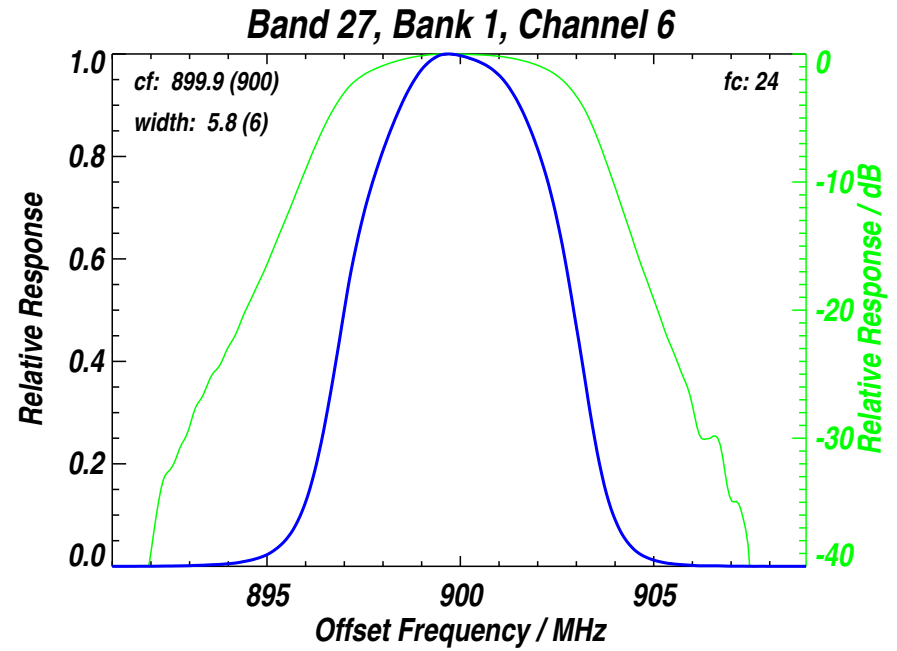
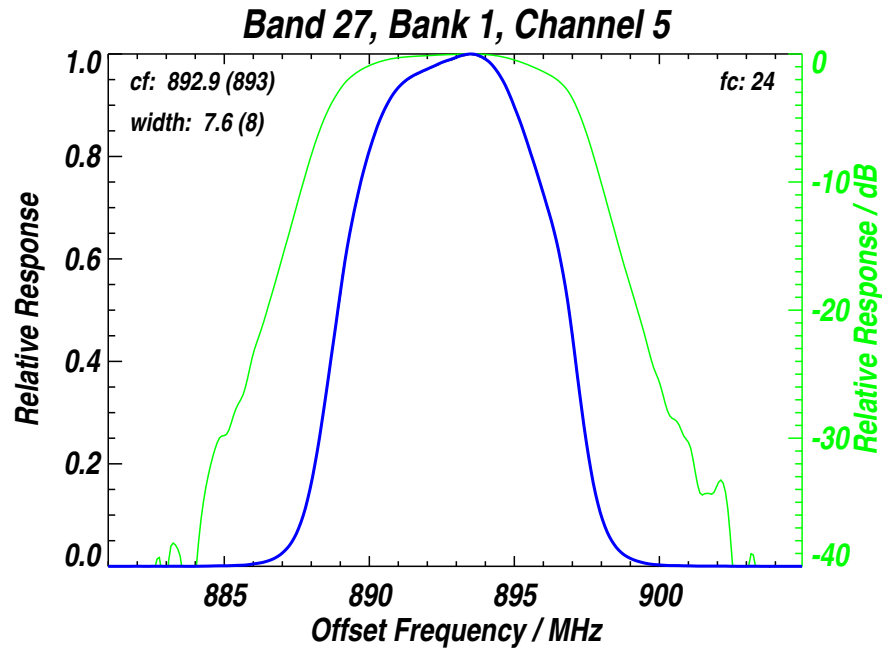
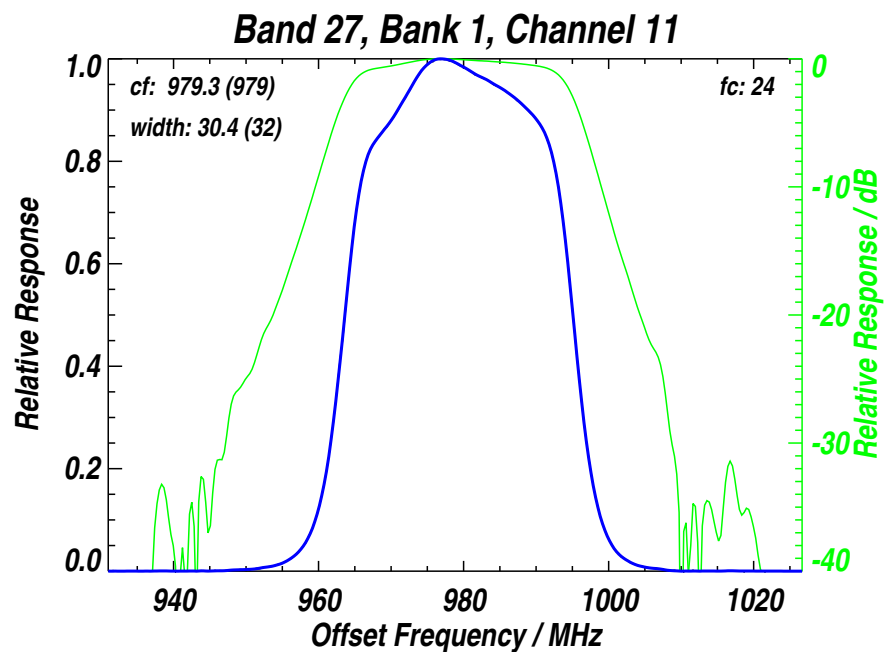
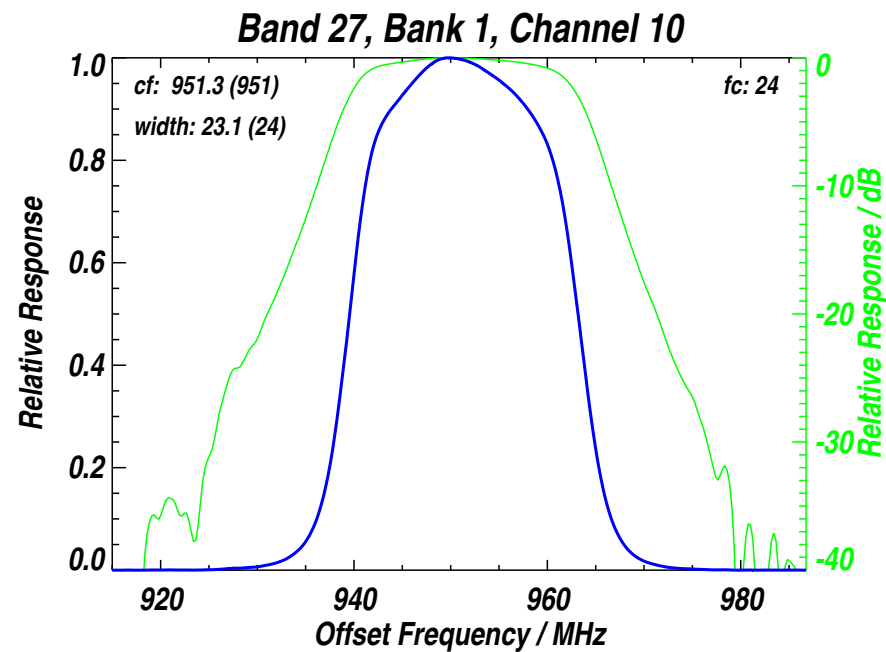
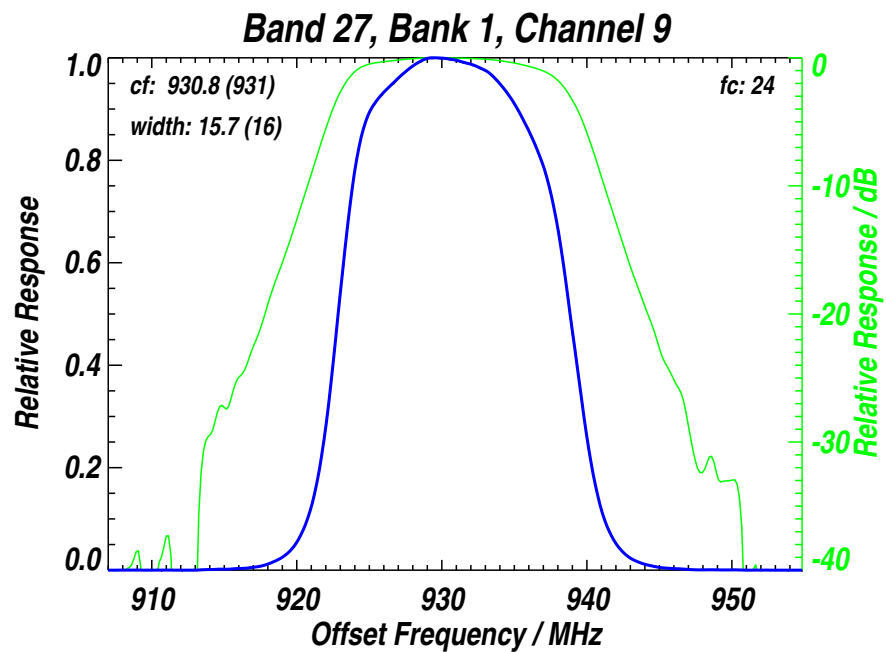


Figure H.177: Upper sideband front-end sweep data for Band 27, channels 5 to 8. See text for additional details.



Band 27 (usb)  
Bank 1  
Origin = 205.635000000 GHz

Figure H.178: Upper sideband front-end sweep data for Band 27, channels 9 to 11. See text for additional details.

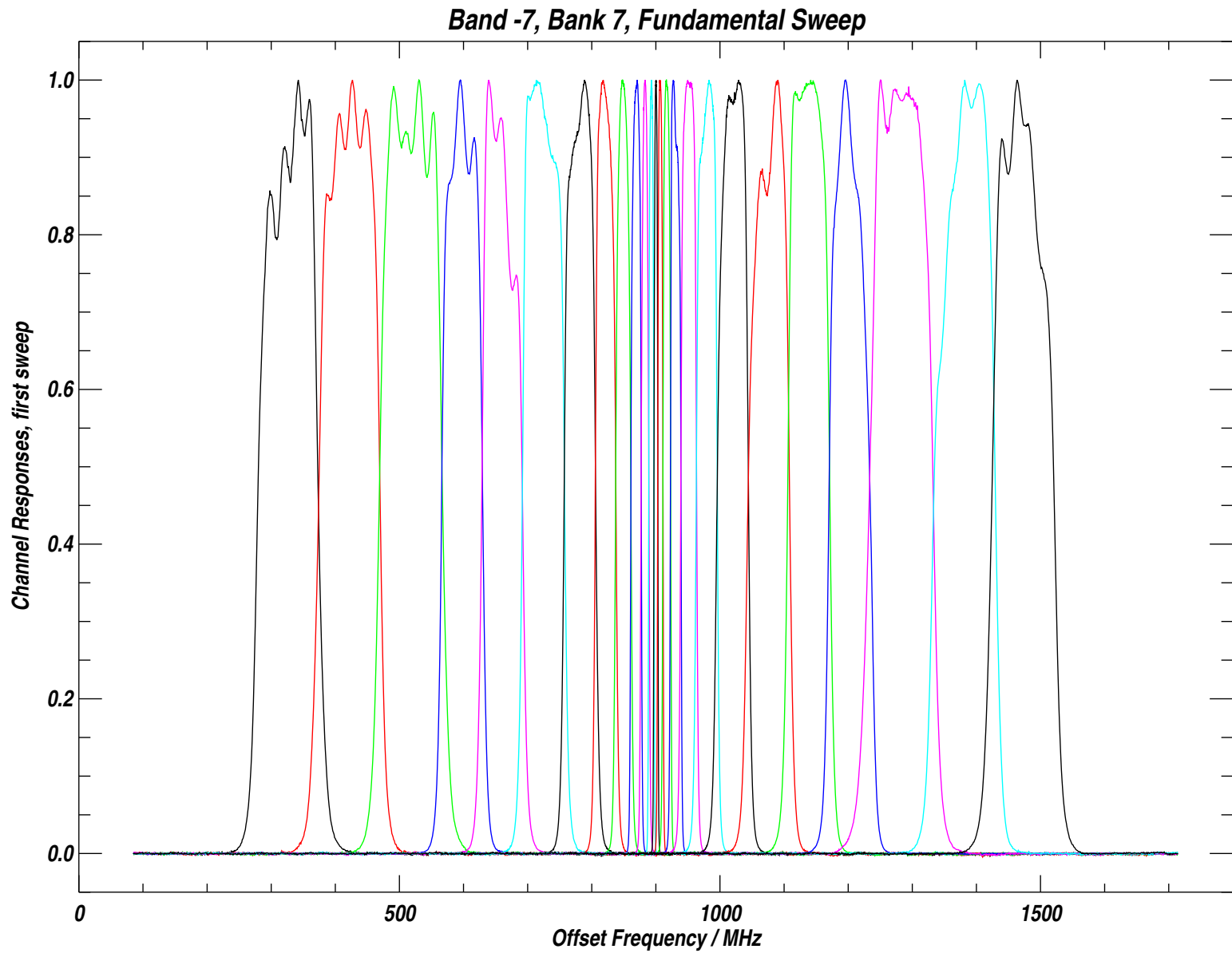


Figure H.179: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7. See text for additional details.

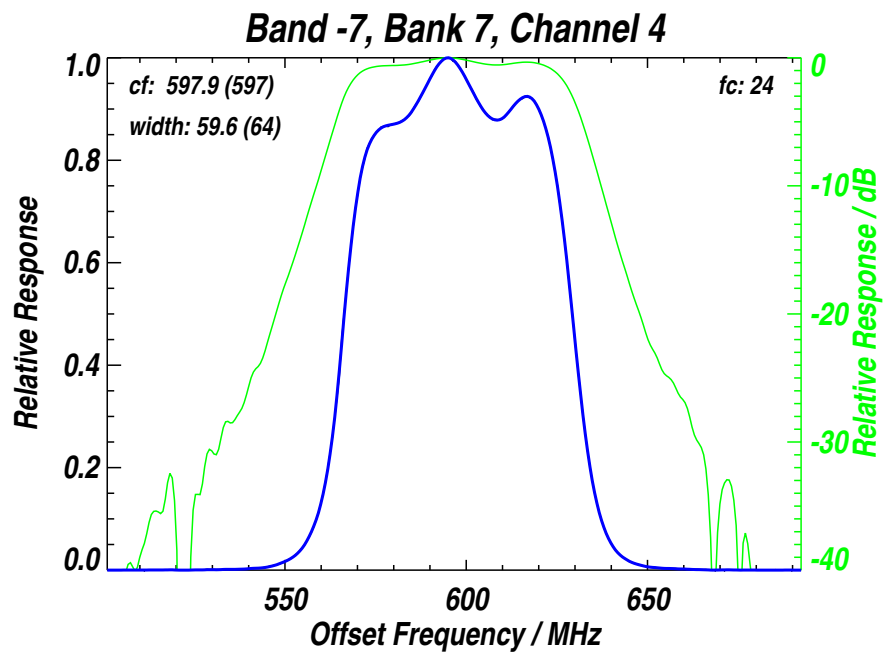
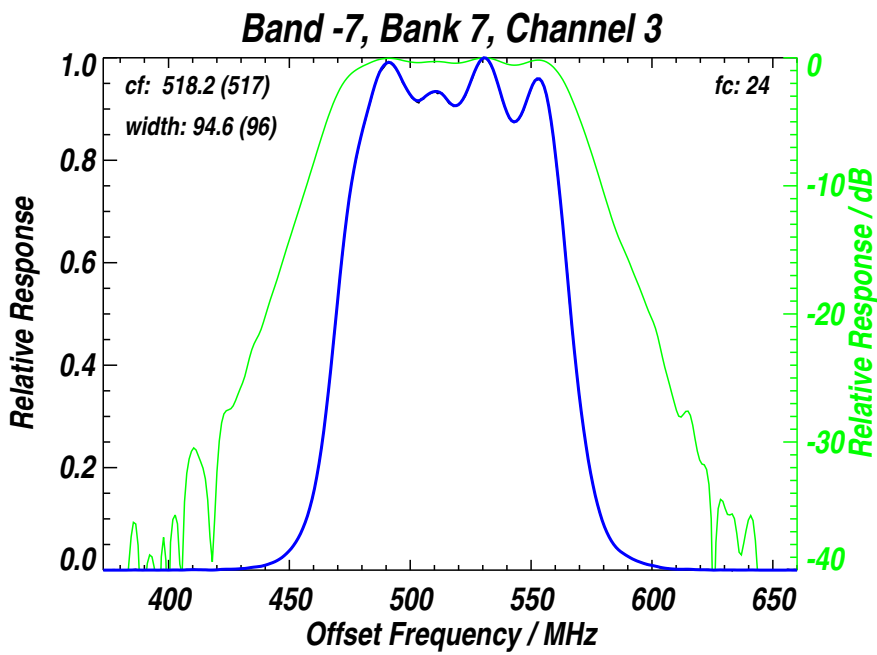
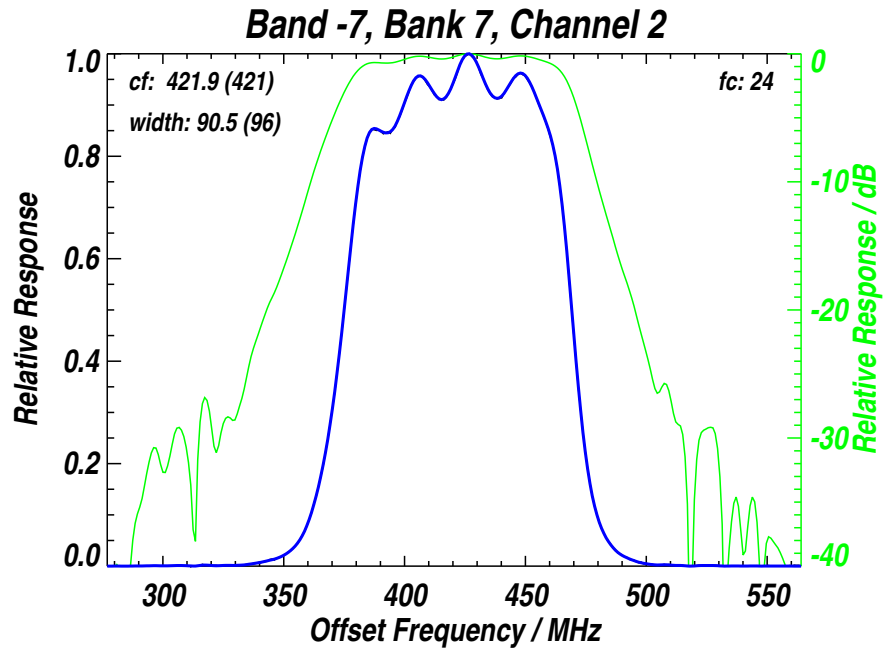
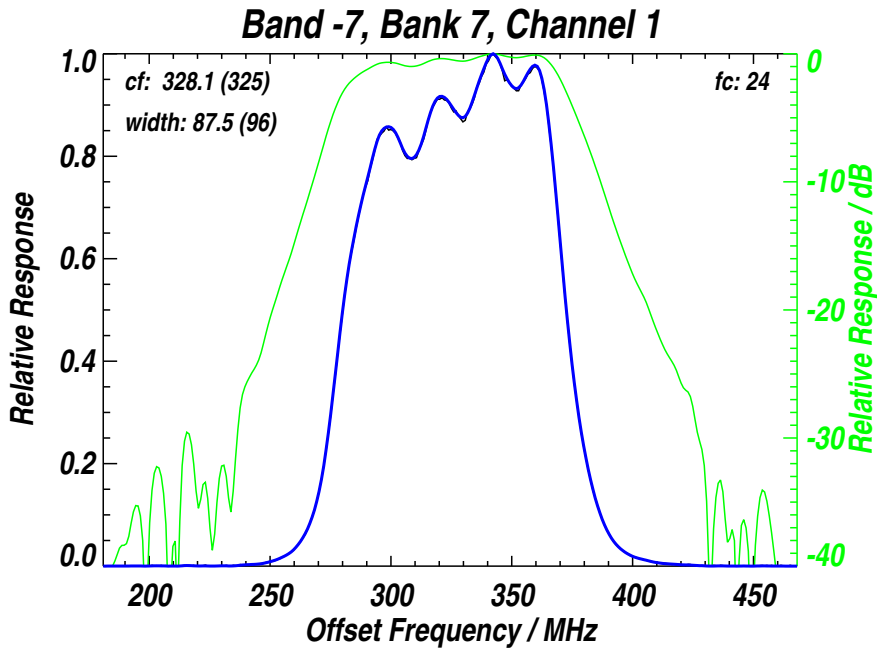


Figure H.180: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 1 to 4. See text for additional details.

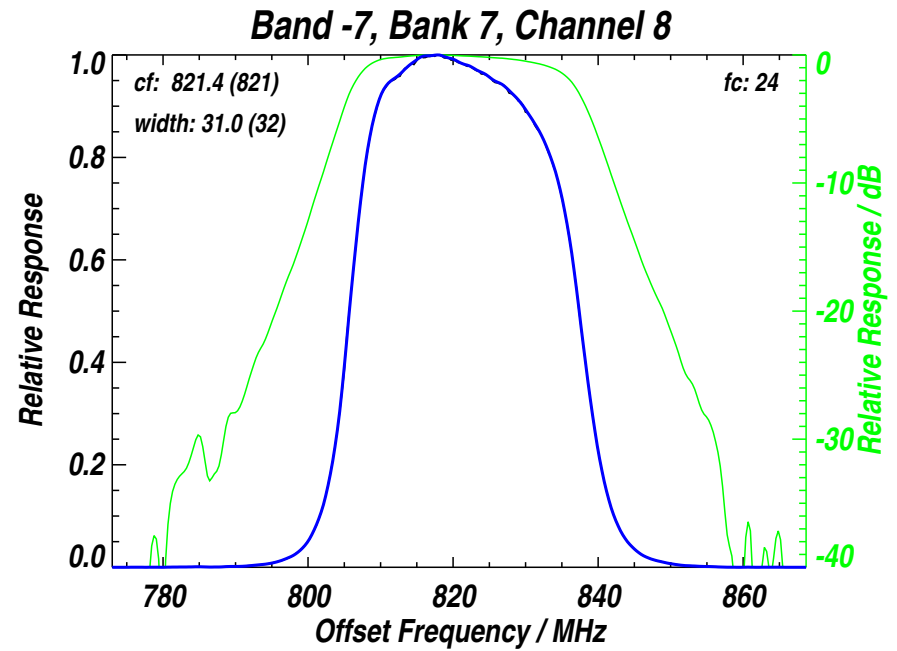
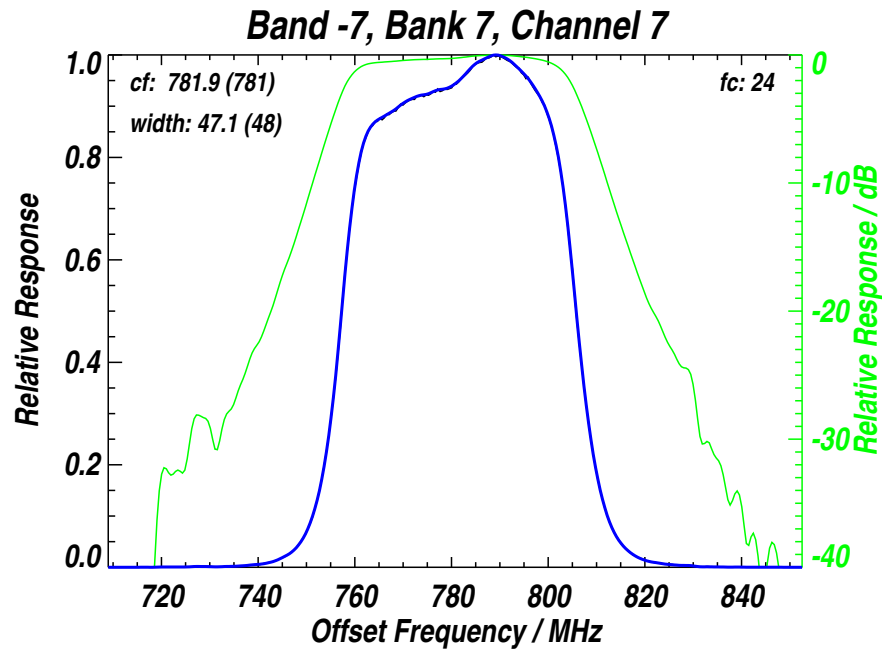
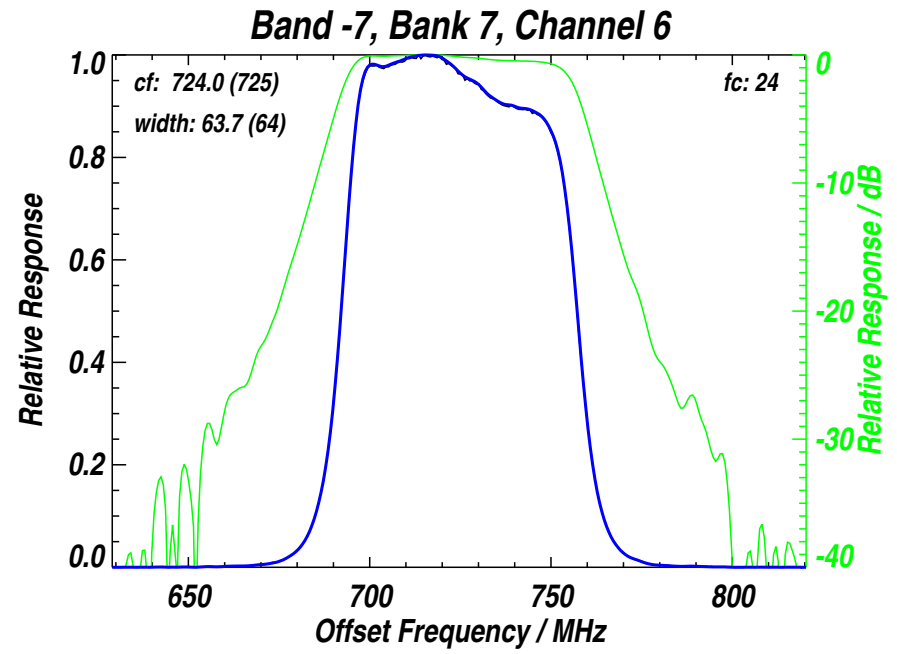
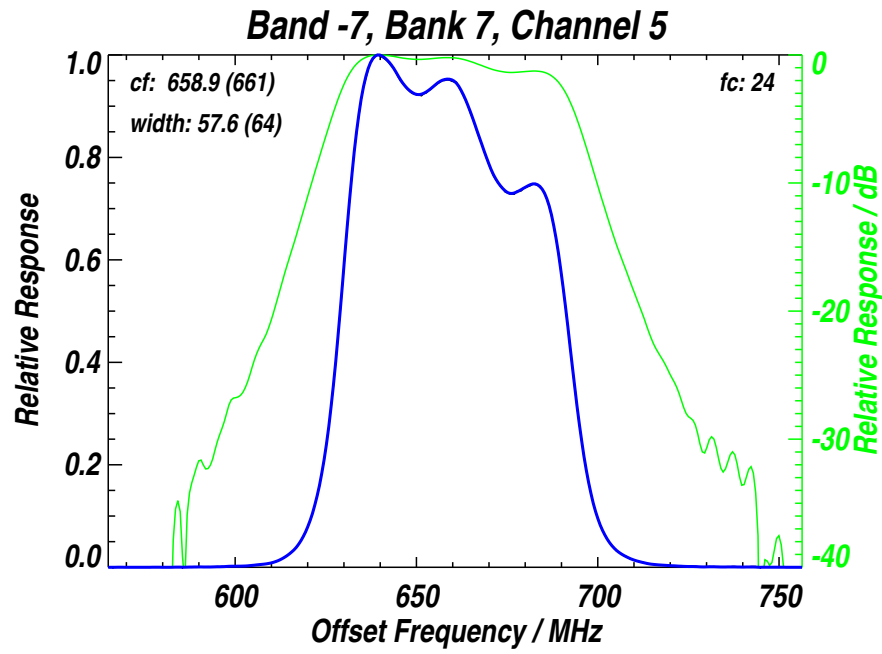


Figure H.181: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 5 to 8. See text for additional details.

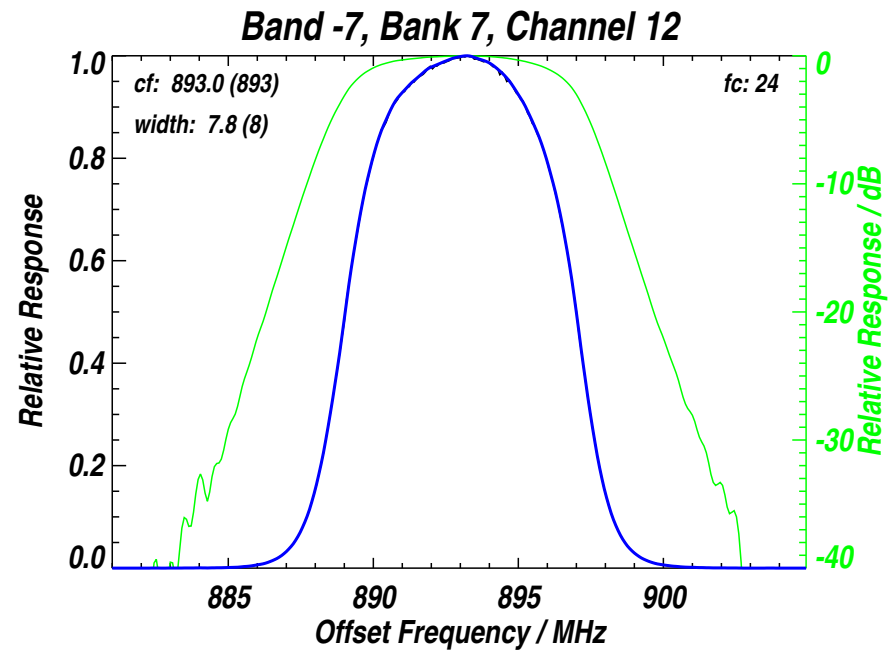
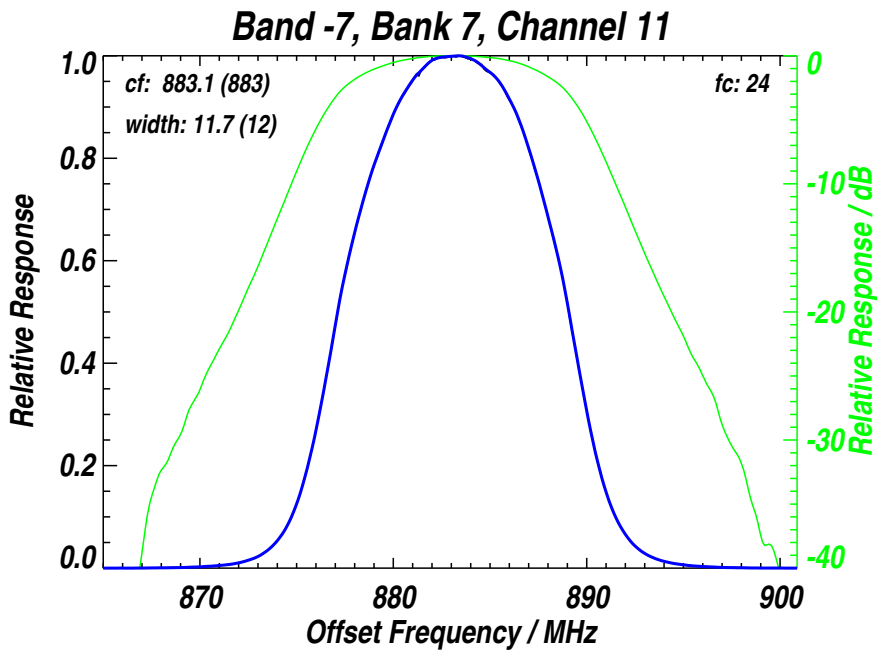
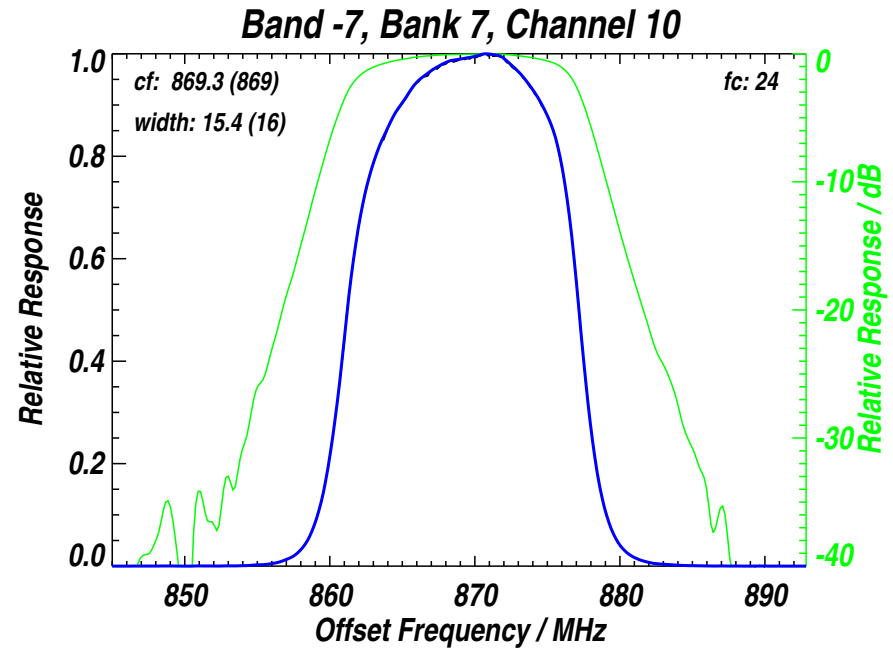
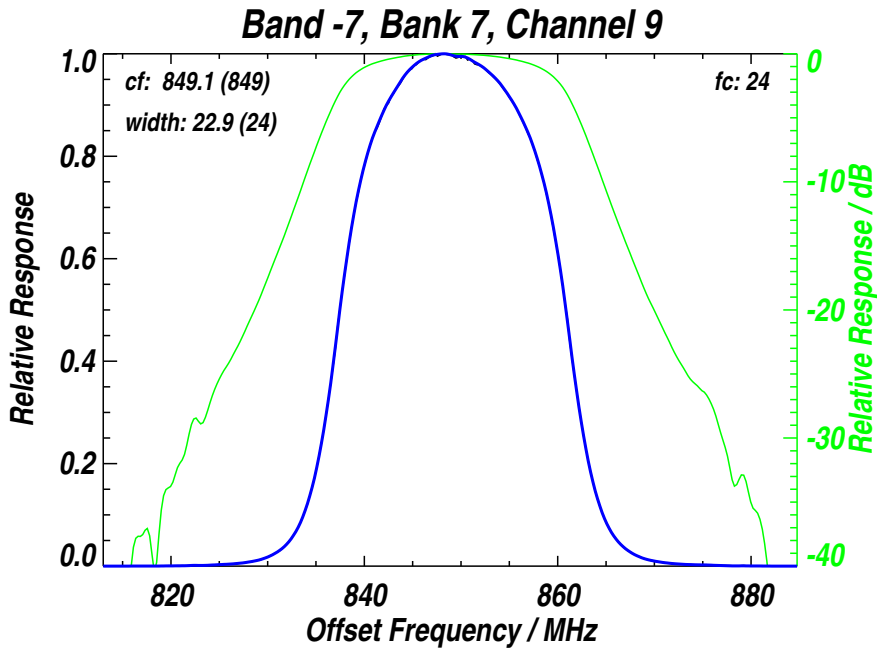


Figure H.182: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 9 to 12. See text for additional details.

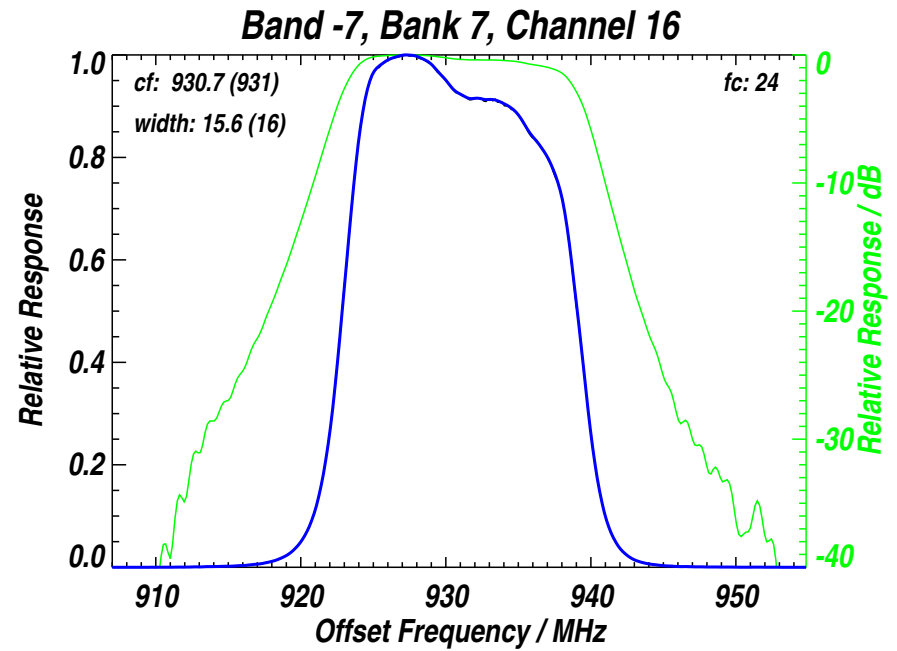
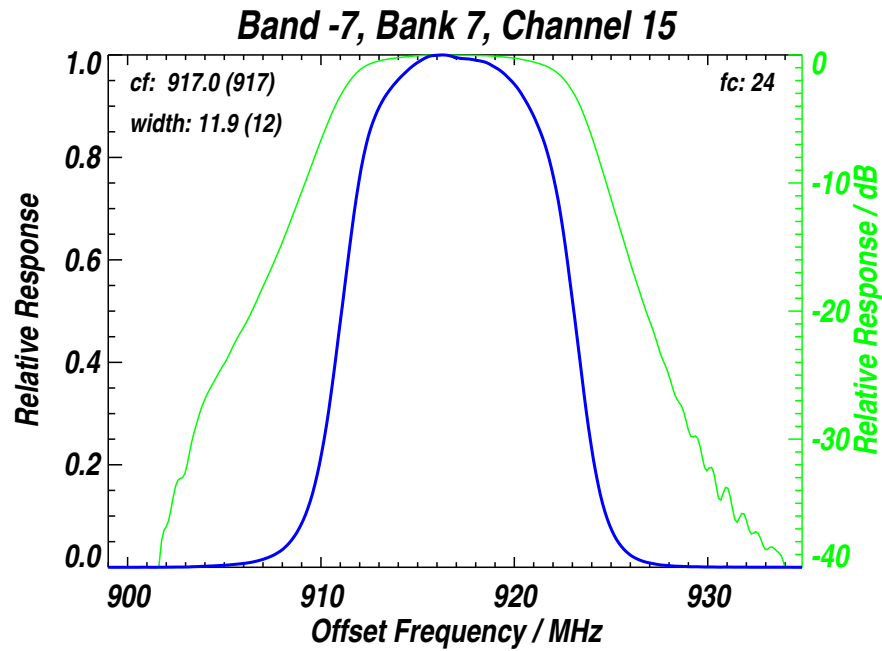
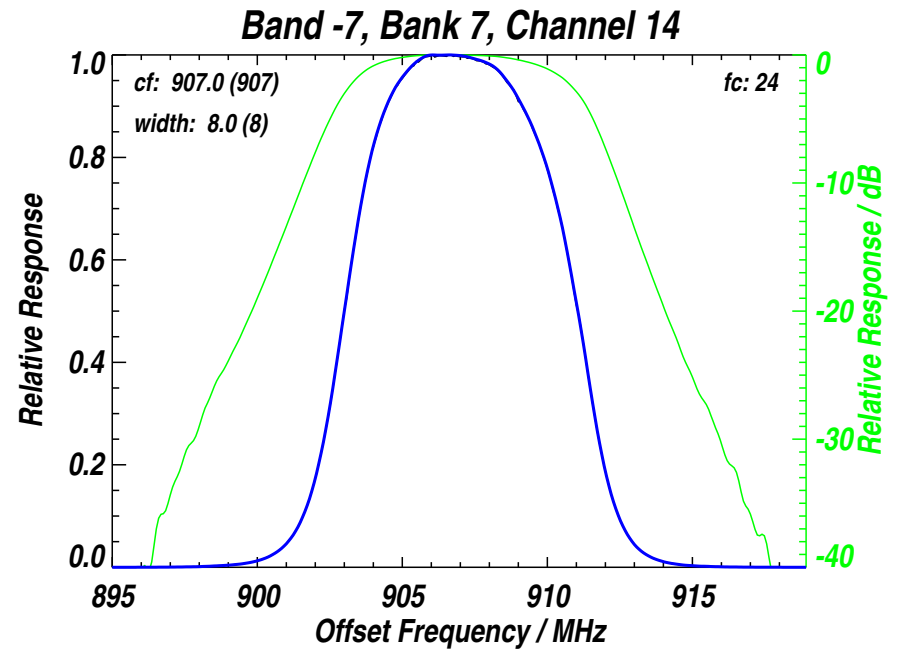
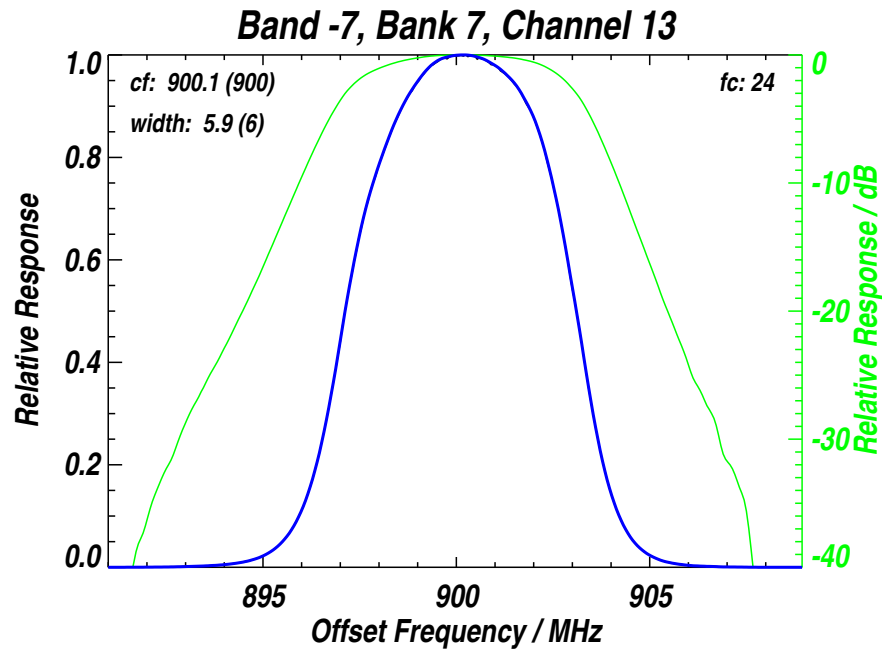


Figure H.183: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 13 to 16. See text for additional details.

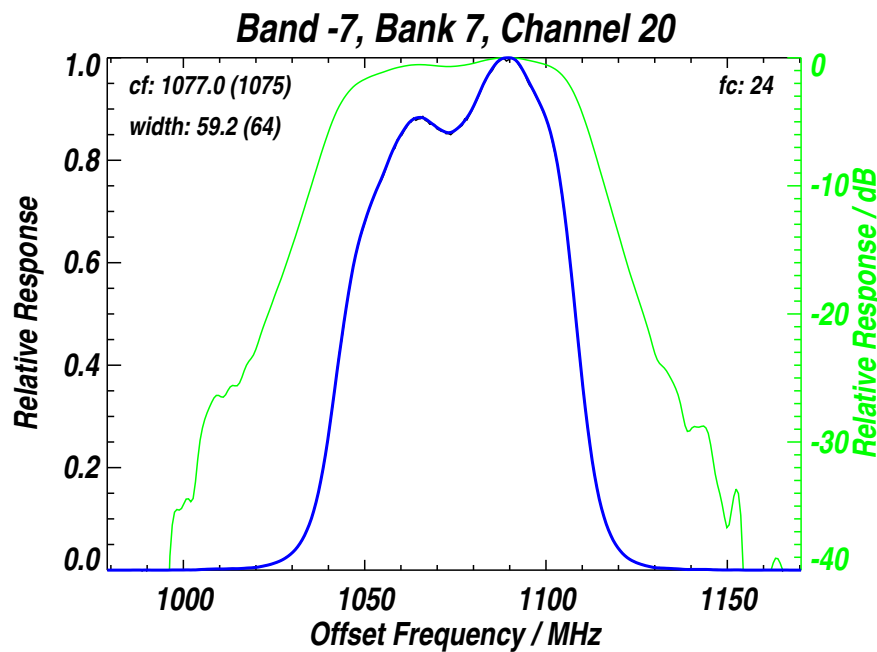
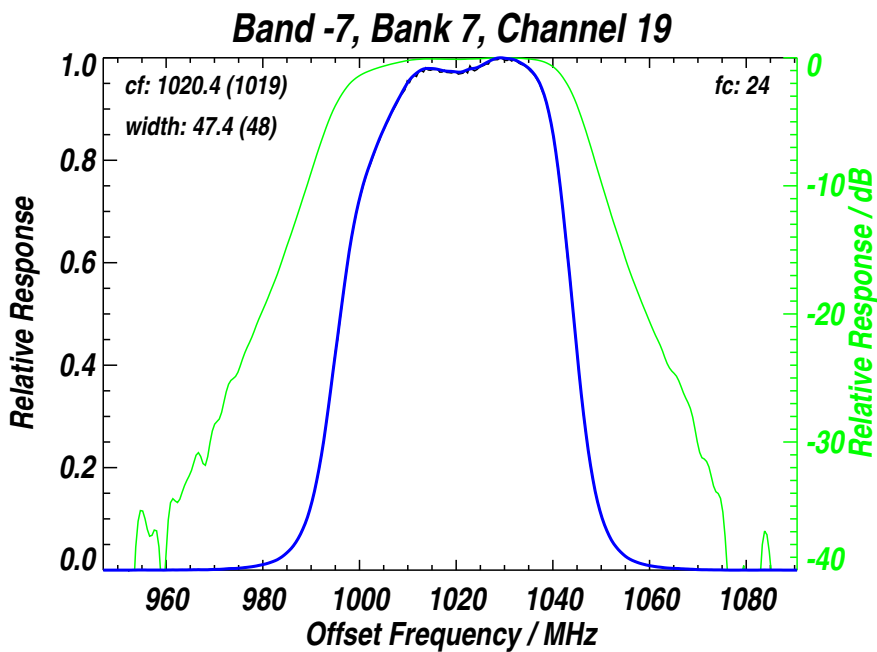
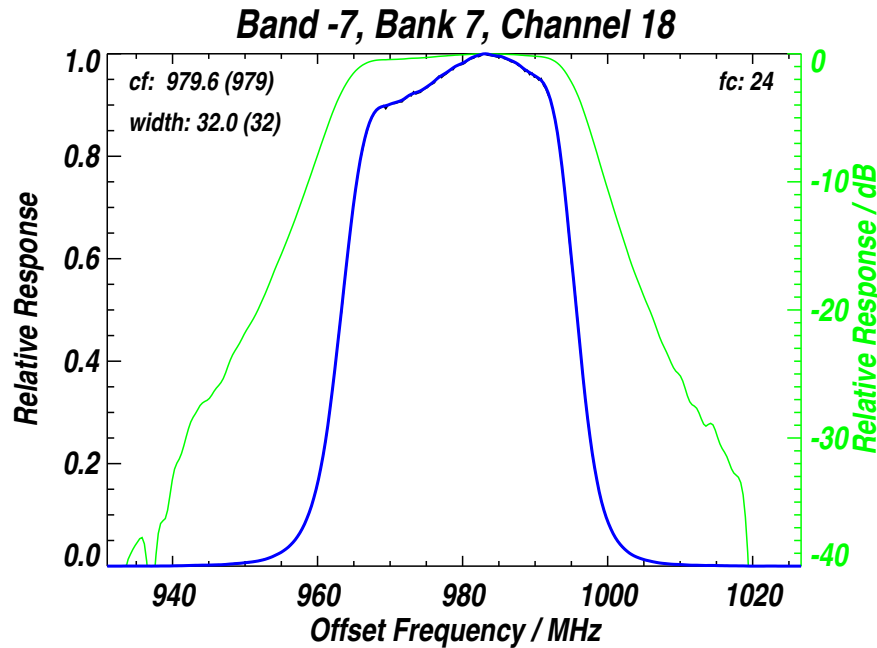
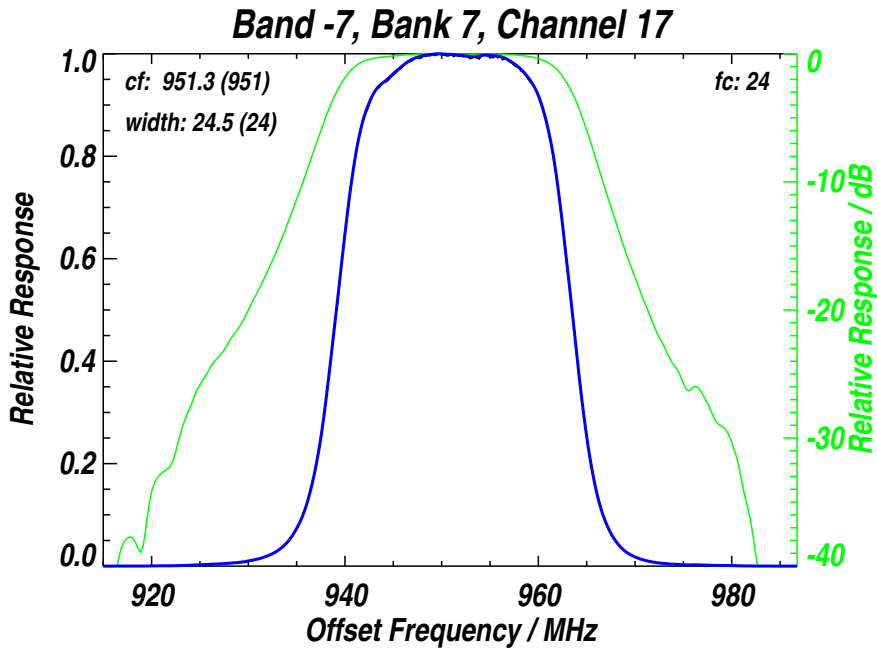


Figure H.184: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 17 to 20. See text for additional details.



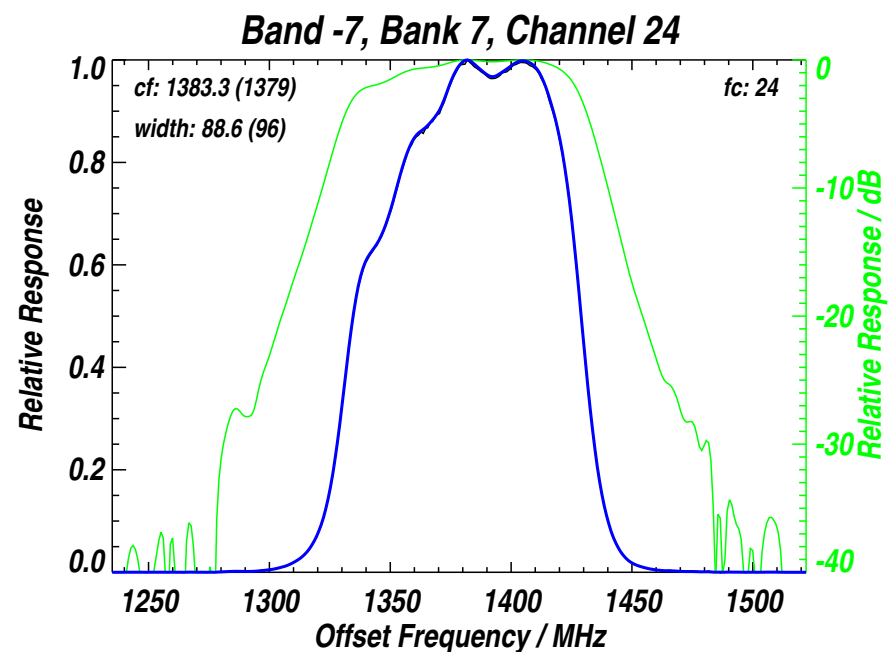
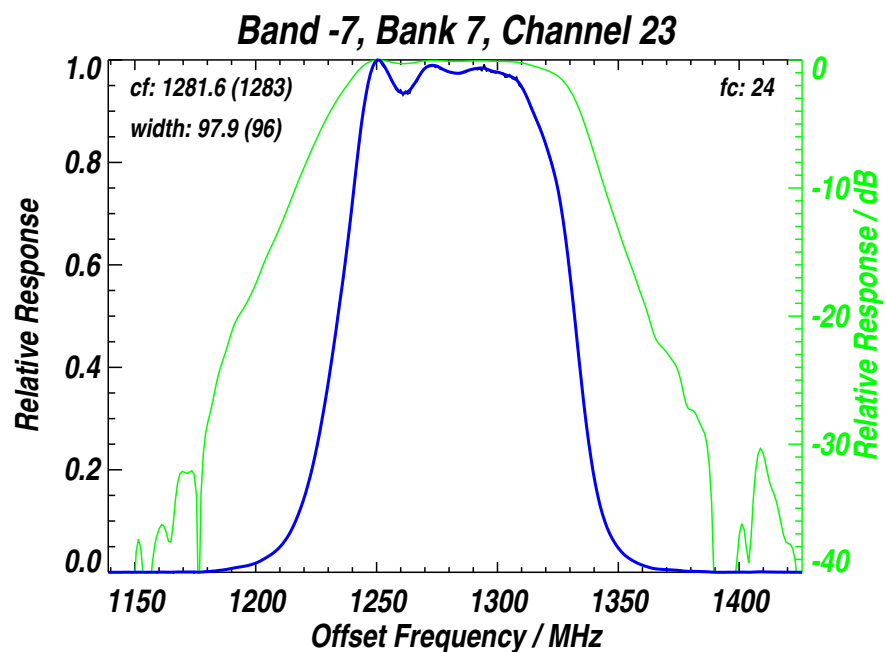
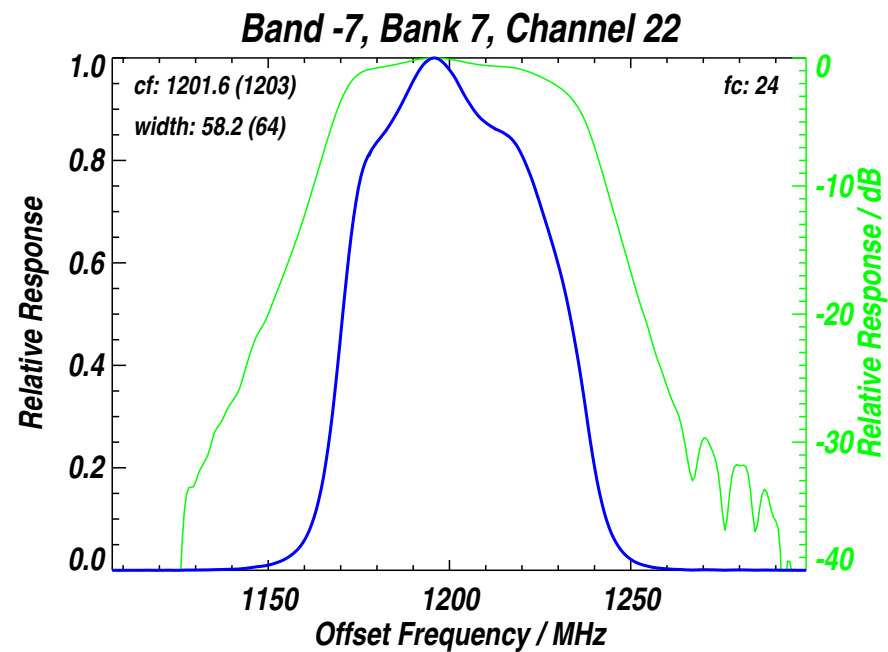
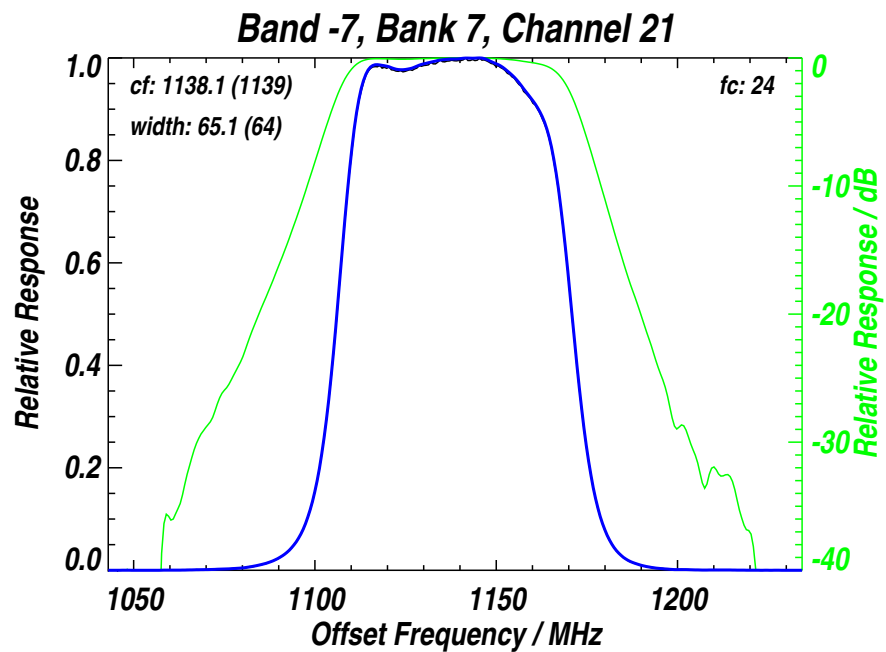
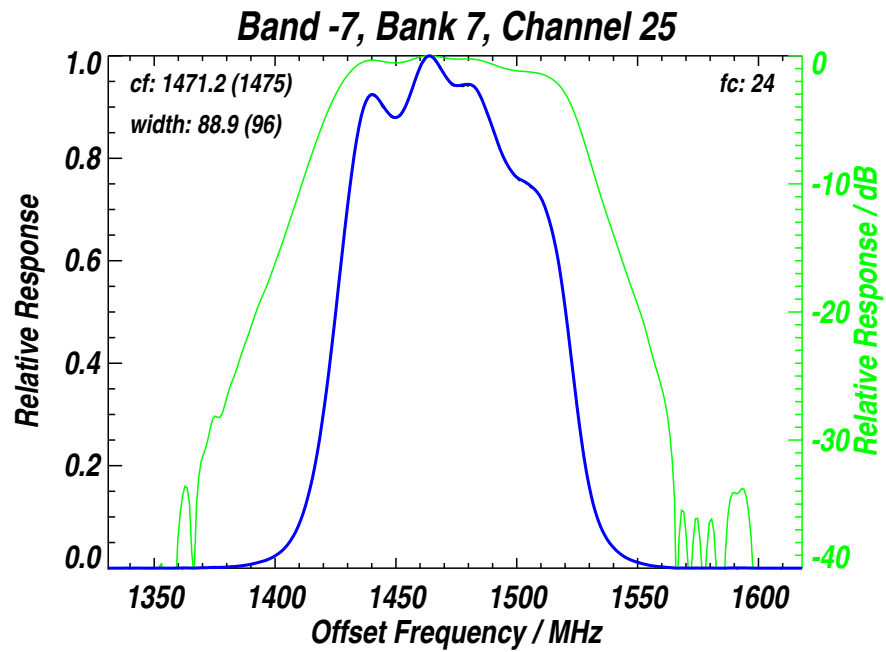


Figure H.185: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 21 to 24. See text for additional details.



**Band 7 (lsb)**  
**Bank 7**  
**Origin = 234.815000004 GHz**

Figure H.186: Lower sideband front-end sweep data for Band 7 taken via Filterbank 7, channel 25. See text for additional details.

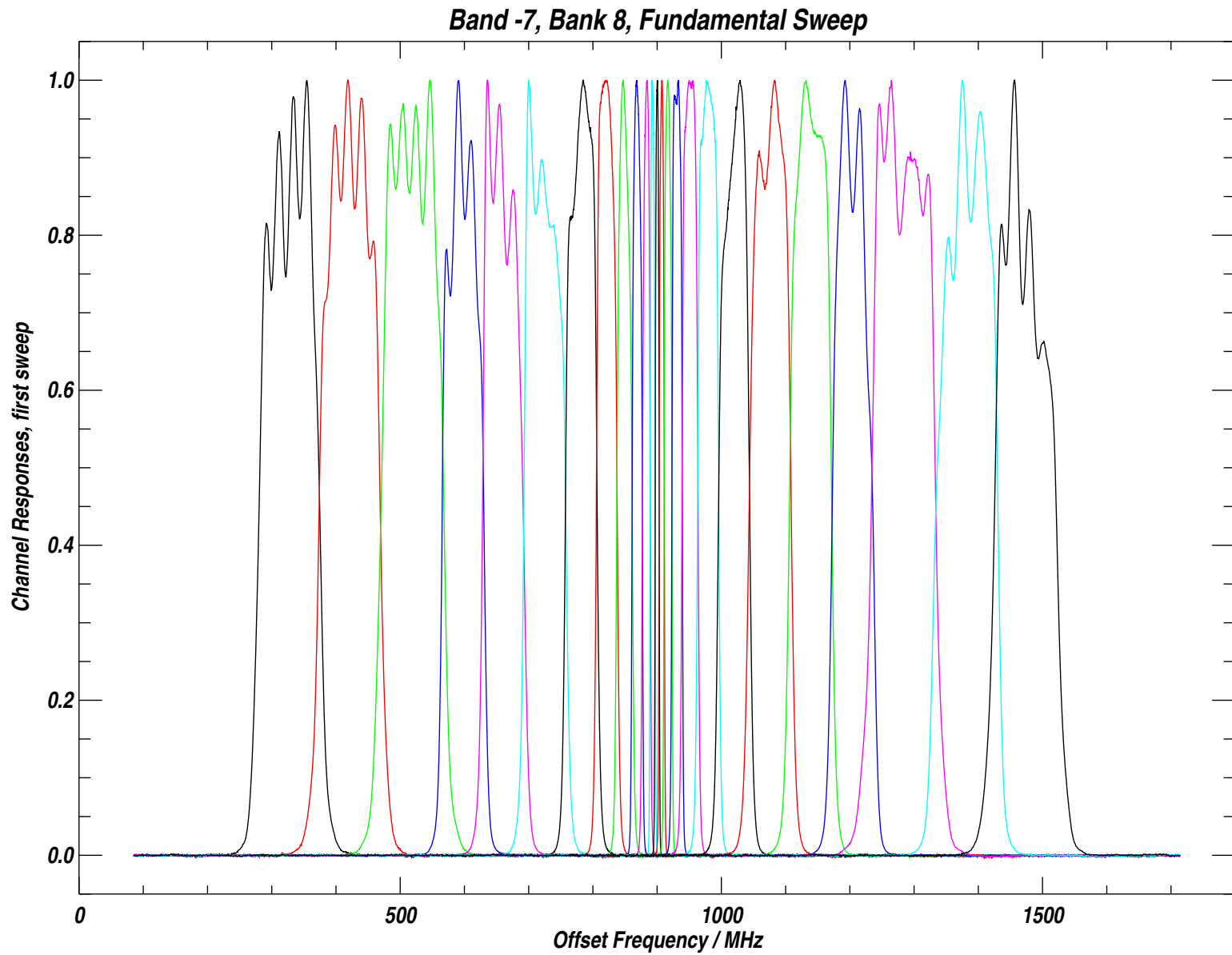


Figure H.187: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8. See text for additional details.

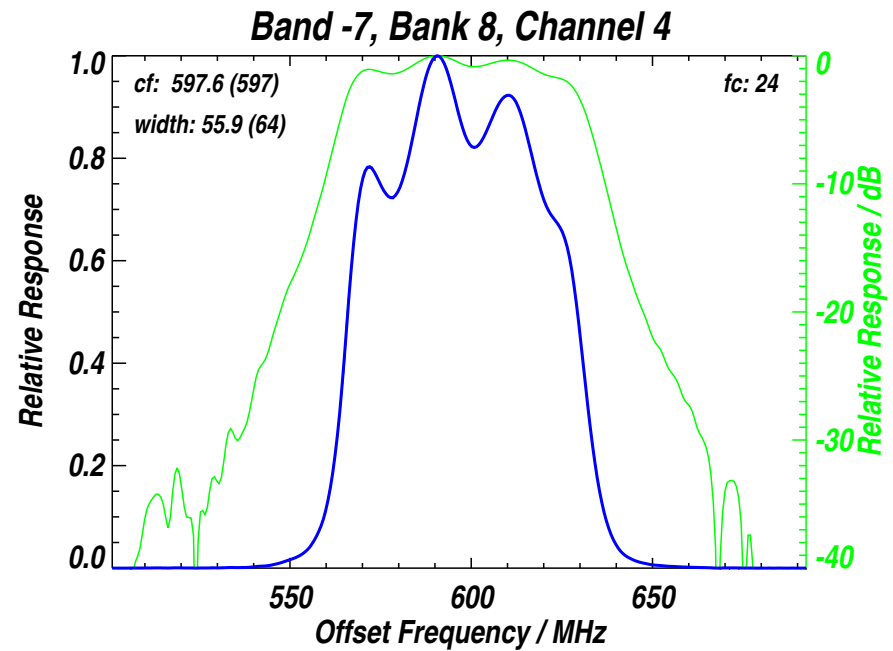
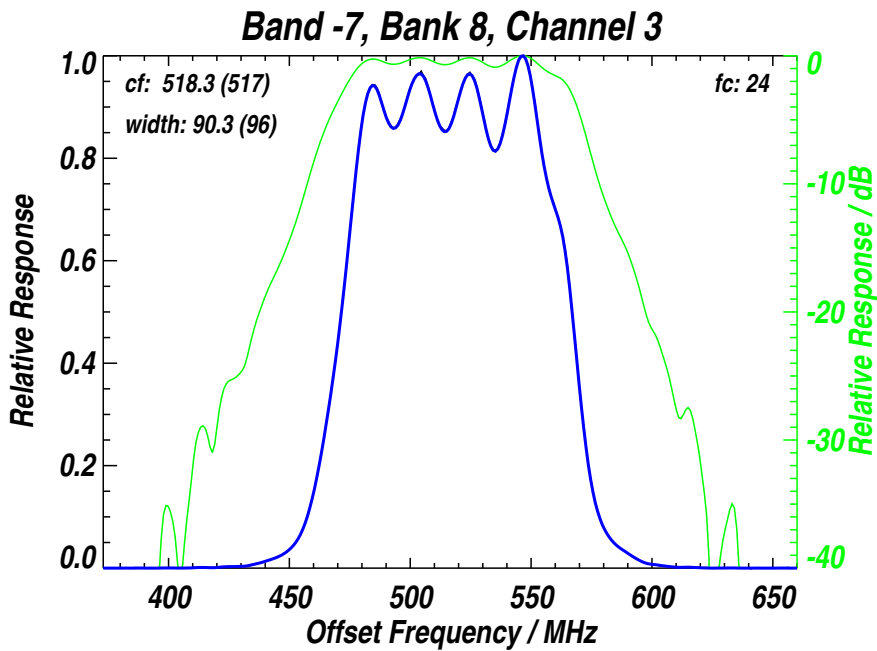
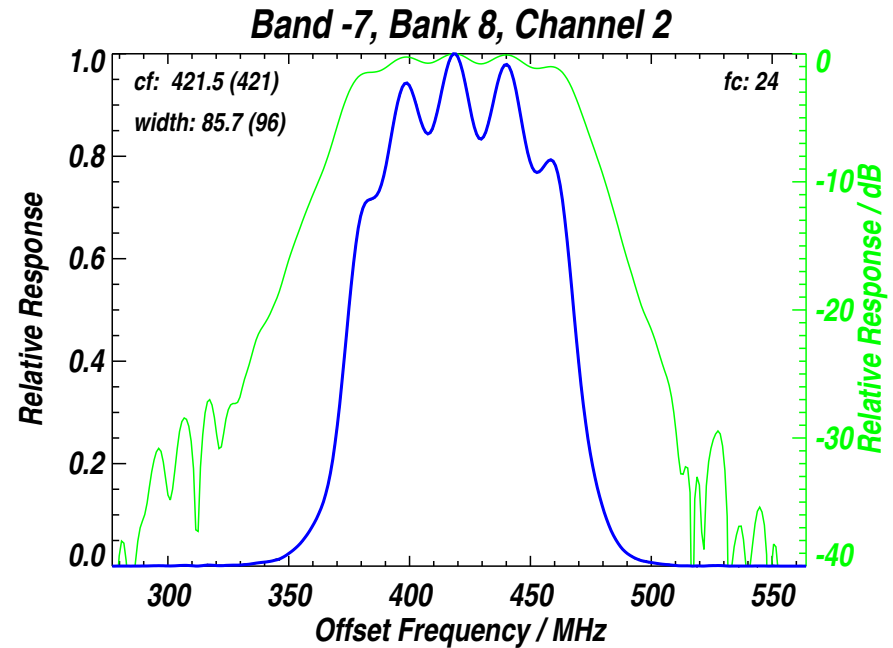
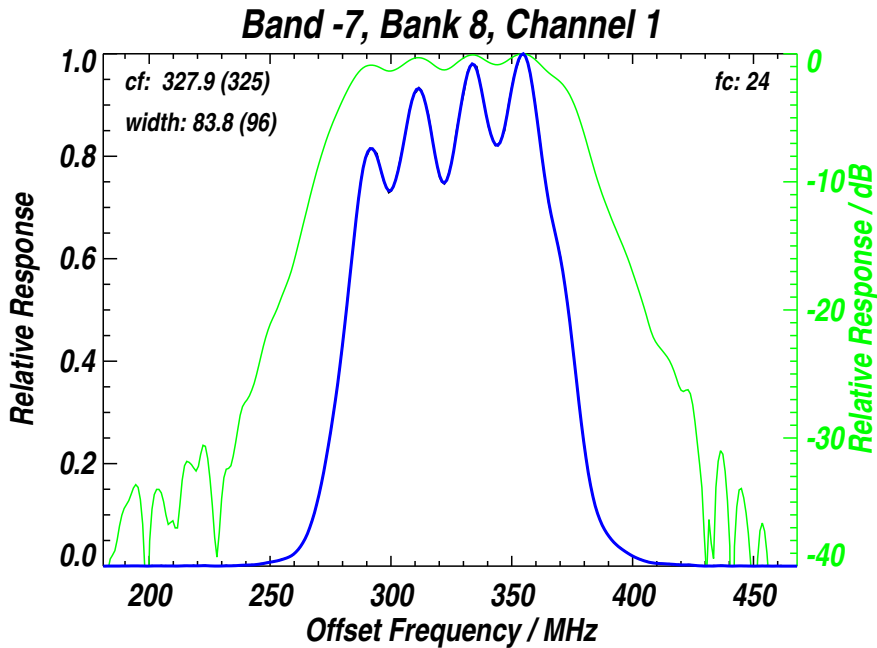


Figure H.188: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 1 to 4. See text for additional details.

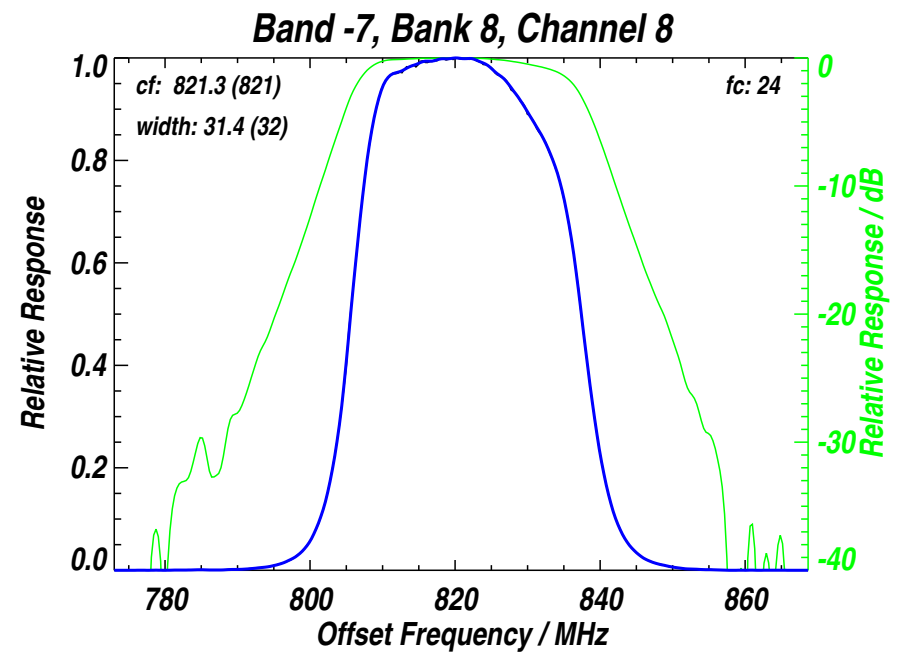
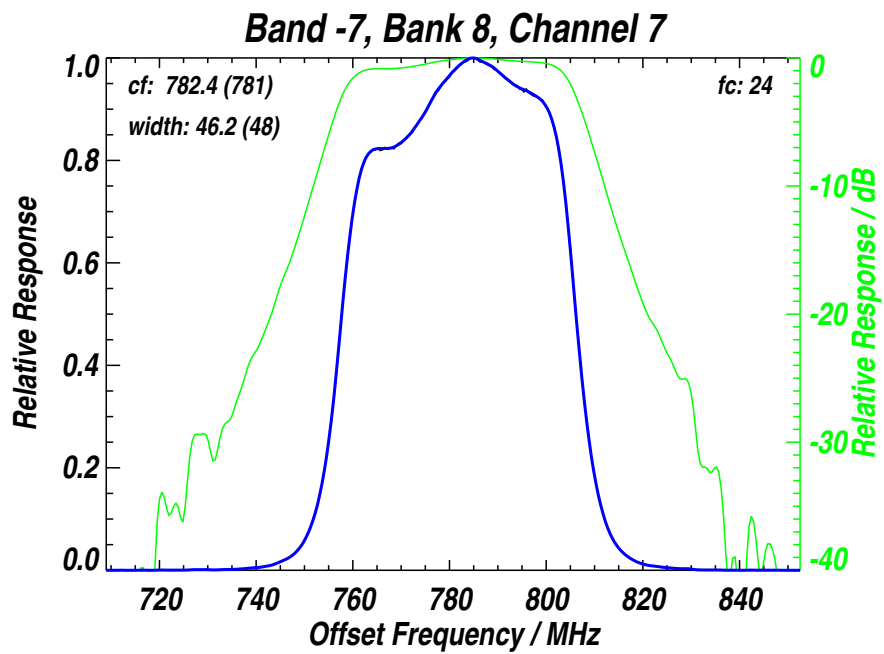
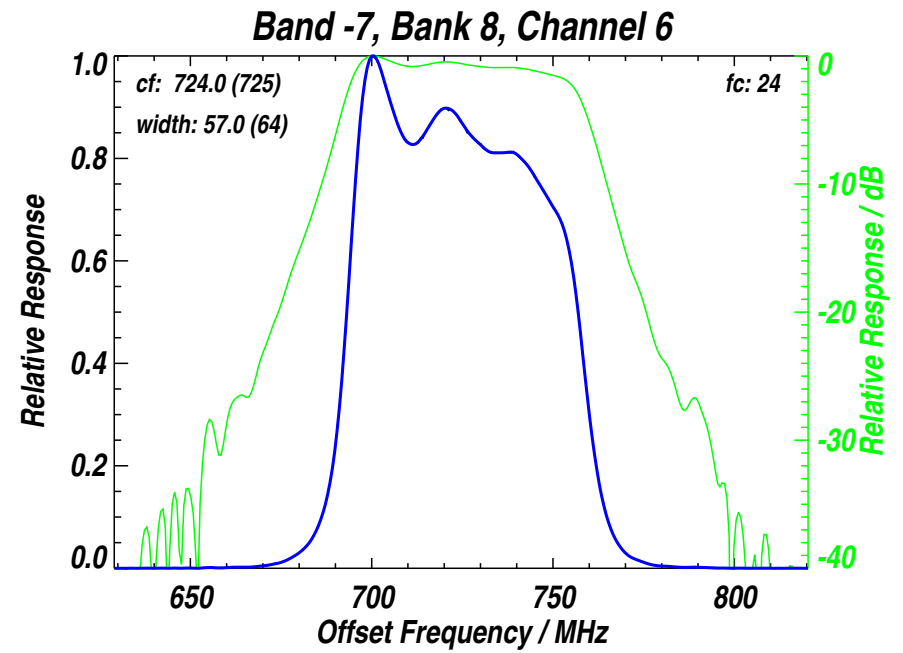
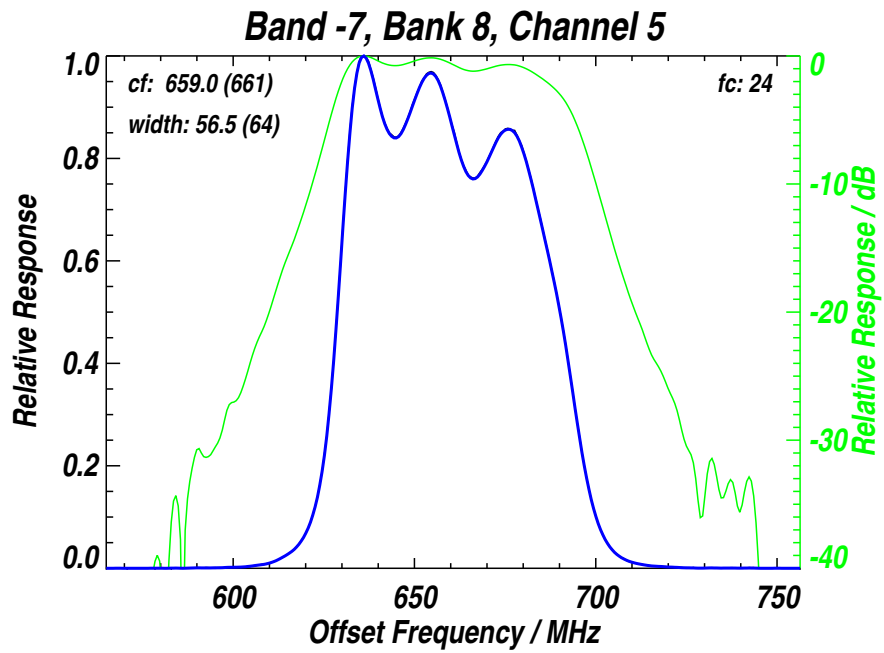


Figure H.189: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 5 to 8. See text for additional details.

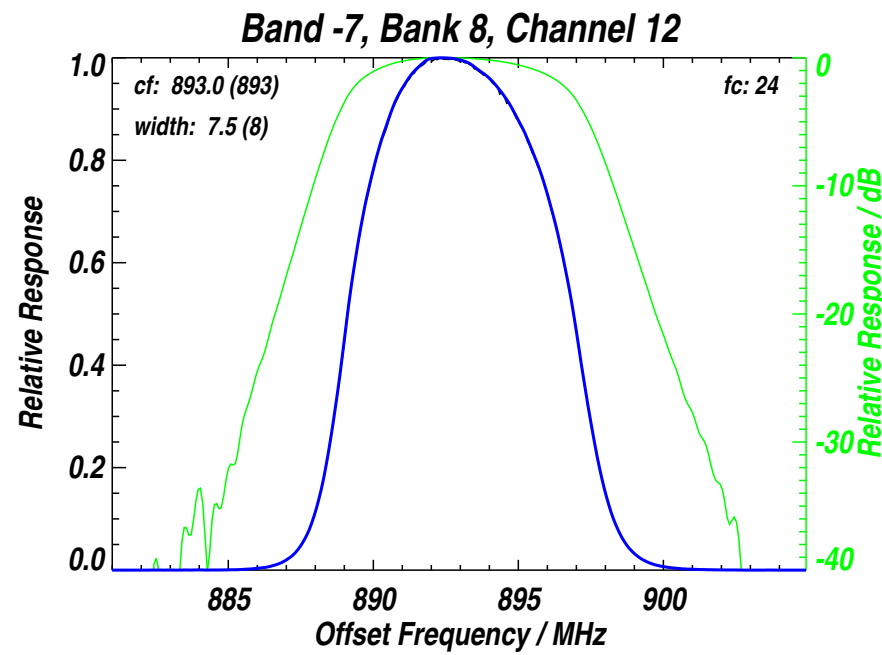
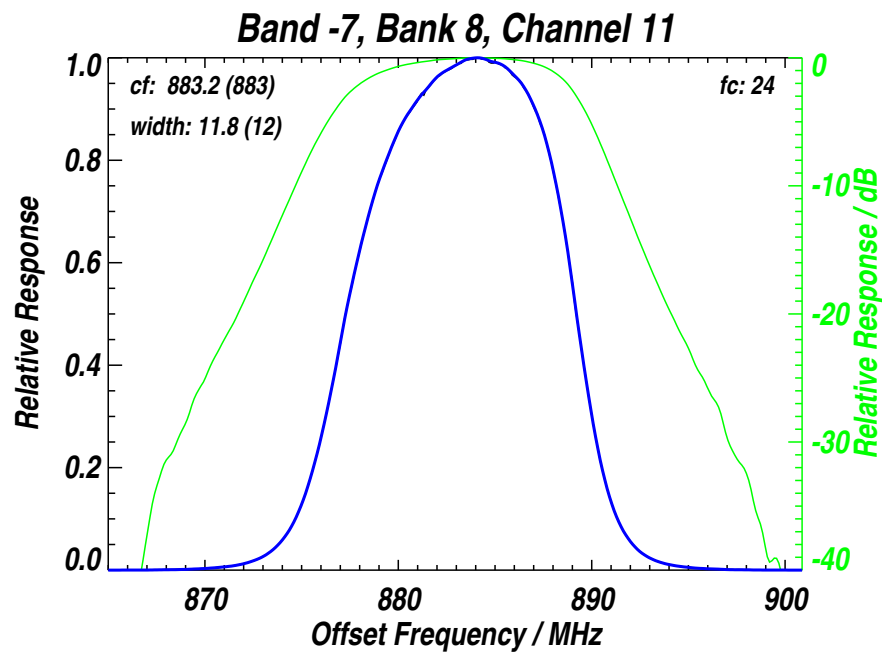
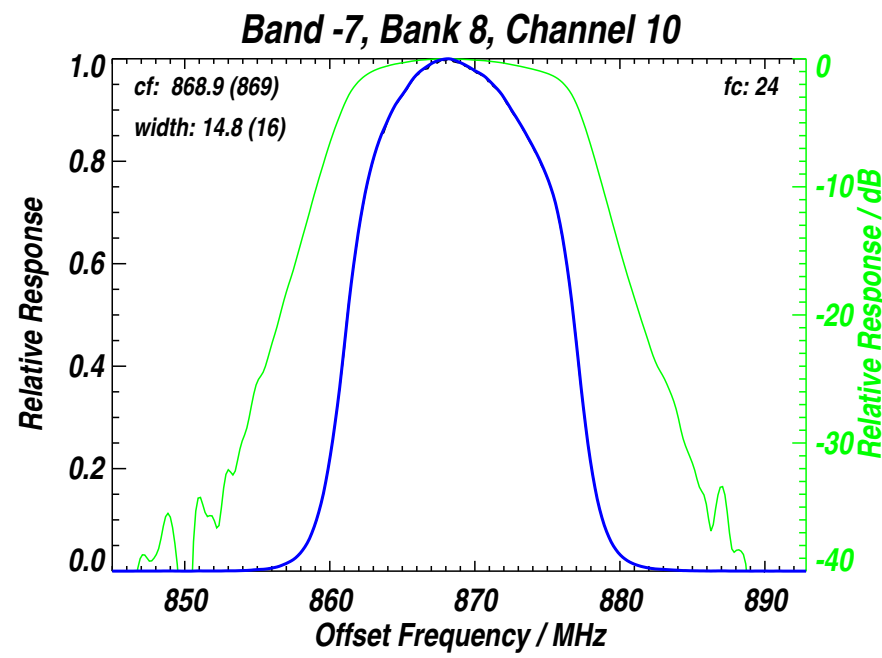
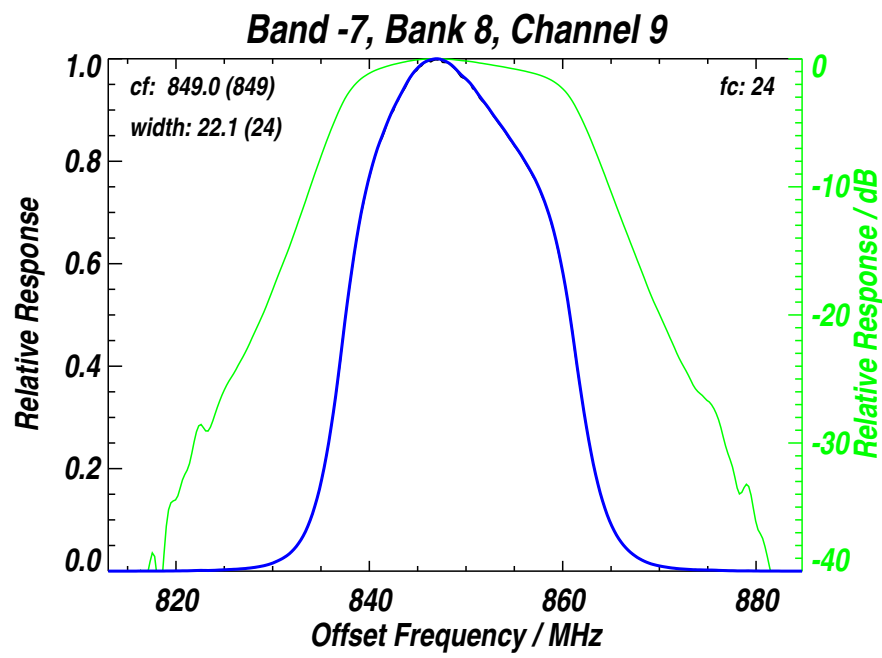


Figure H.190: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 9 to 12. See text for additional details.

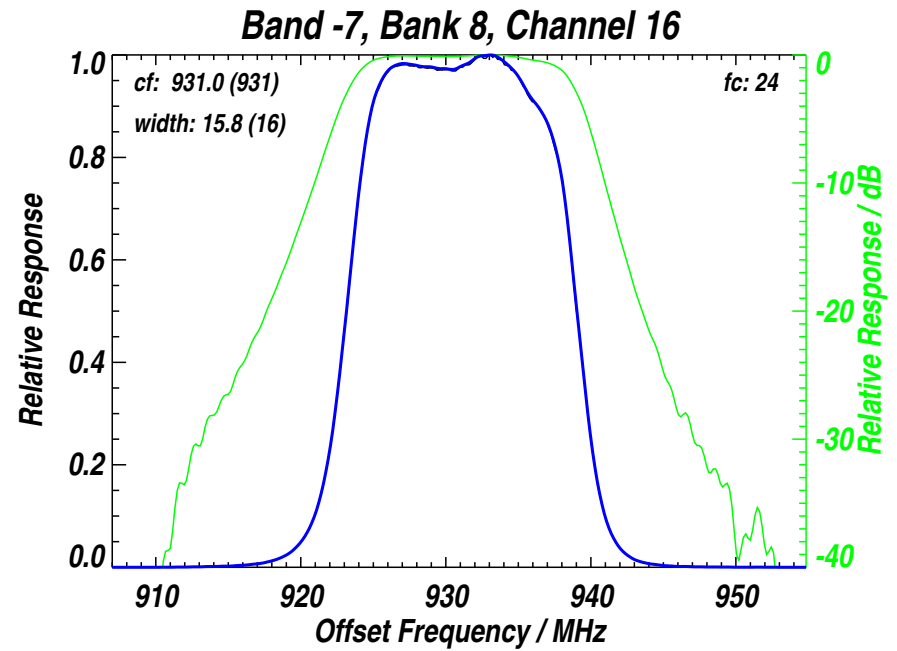
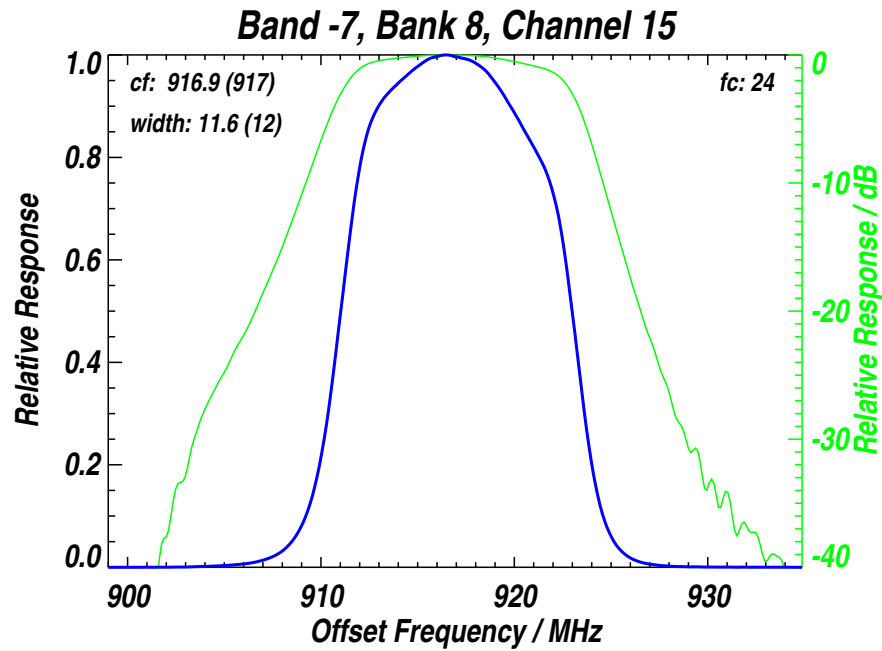
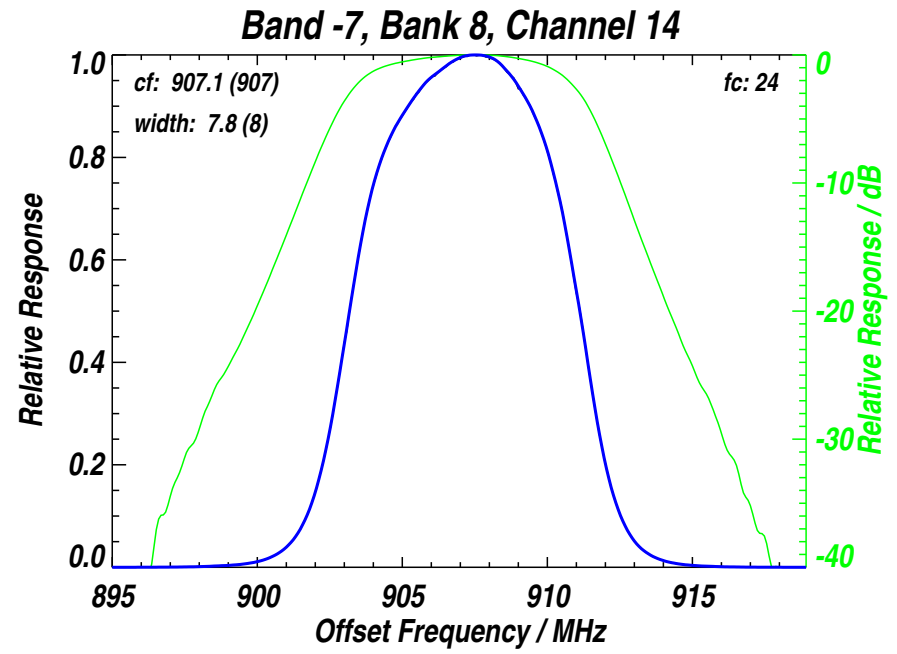
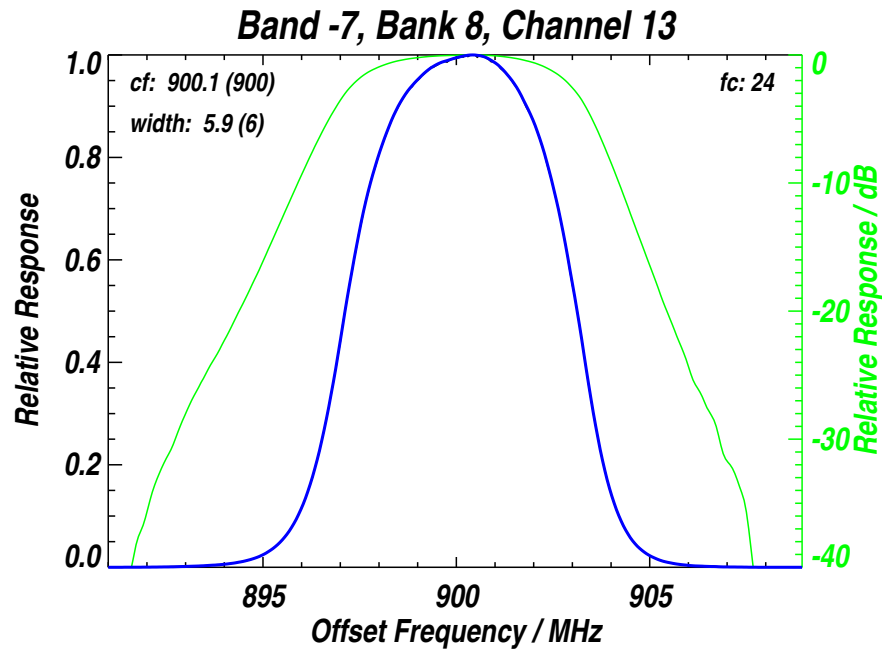


Figure H.191: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 13 to 16. See text for additional details.

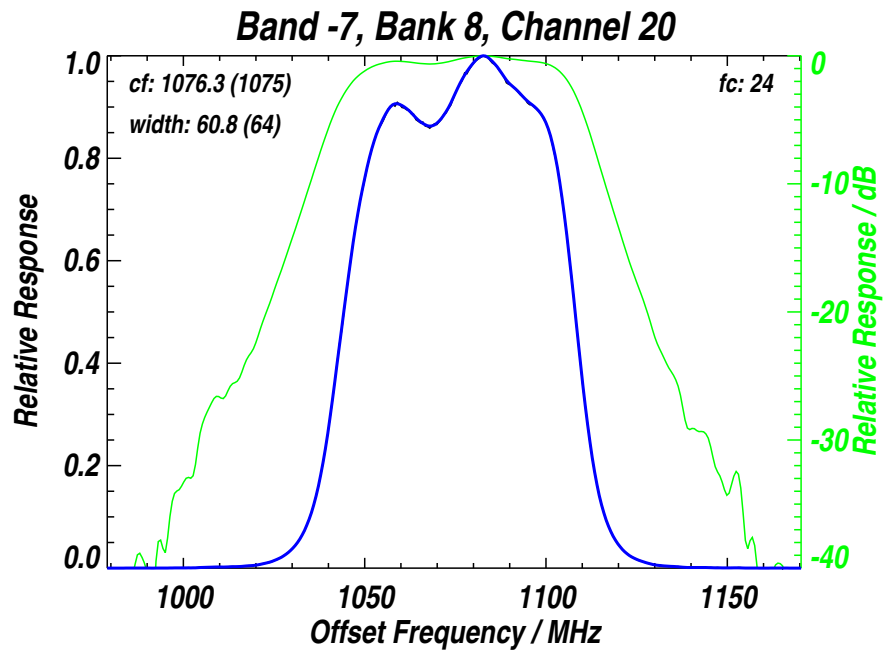
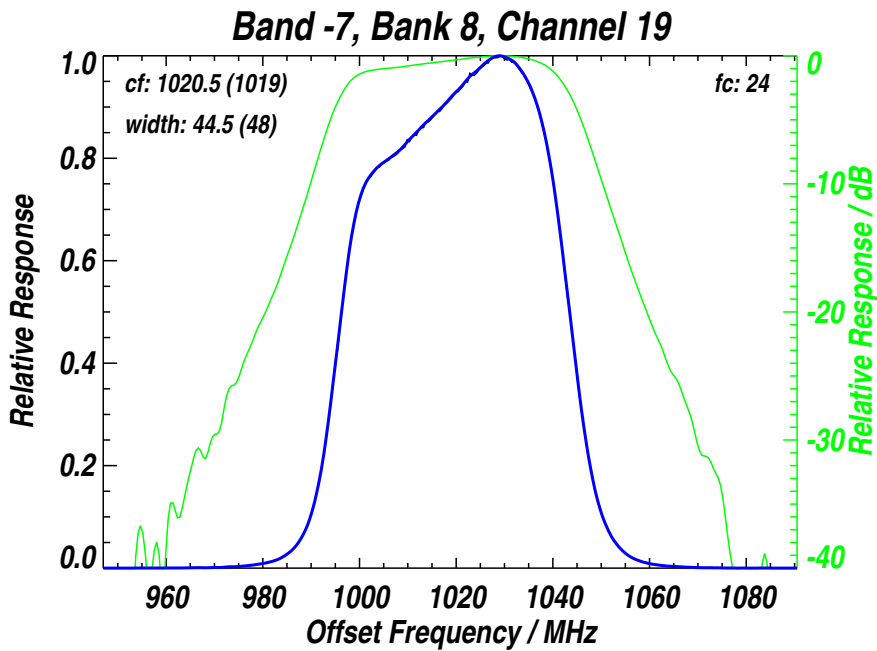
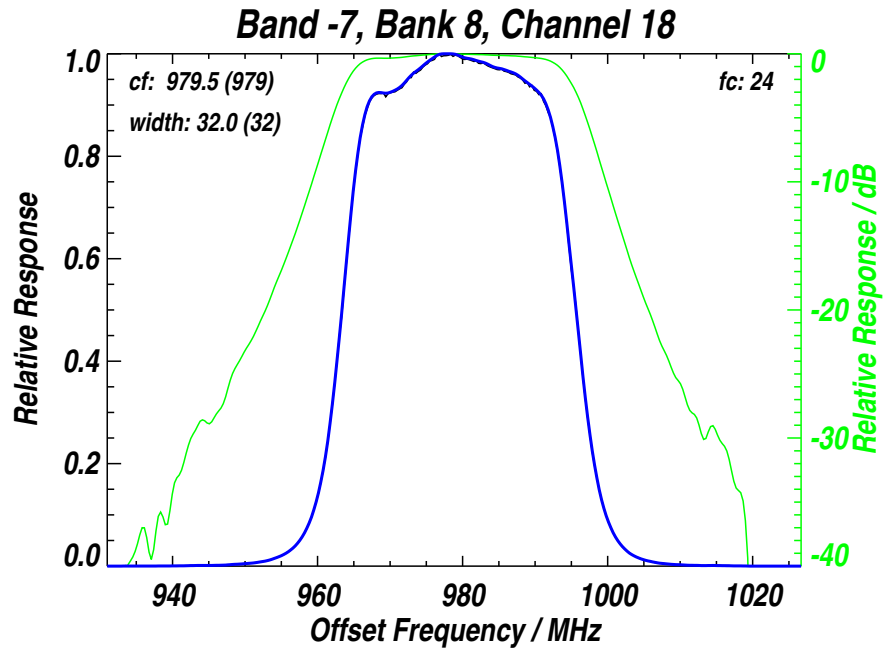
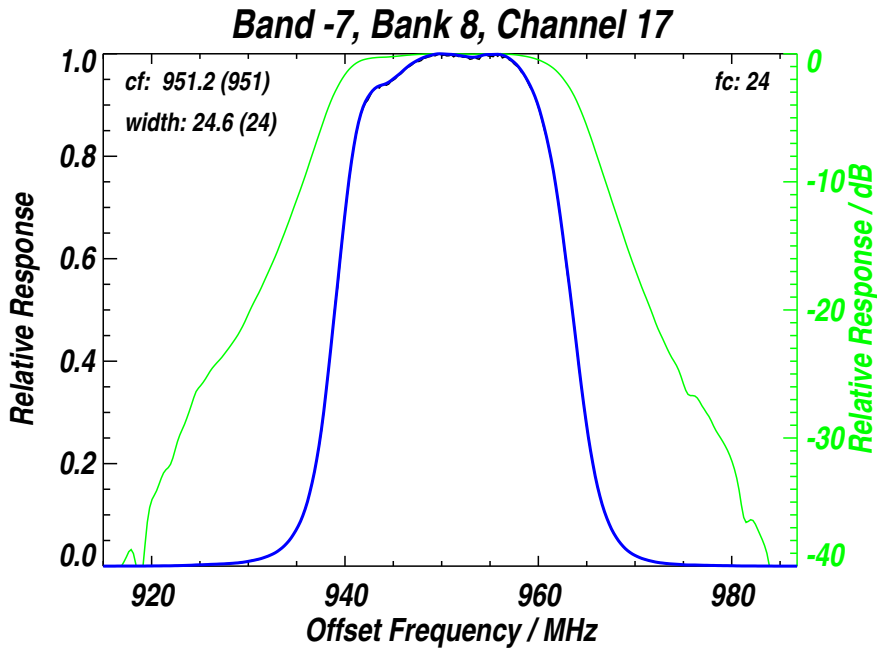


Figure H.192: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 17 to 20. See text for additional details.



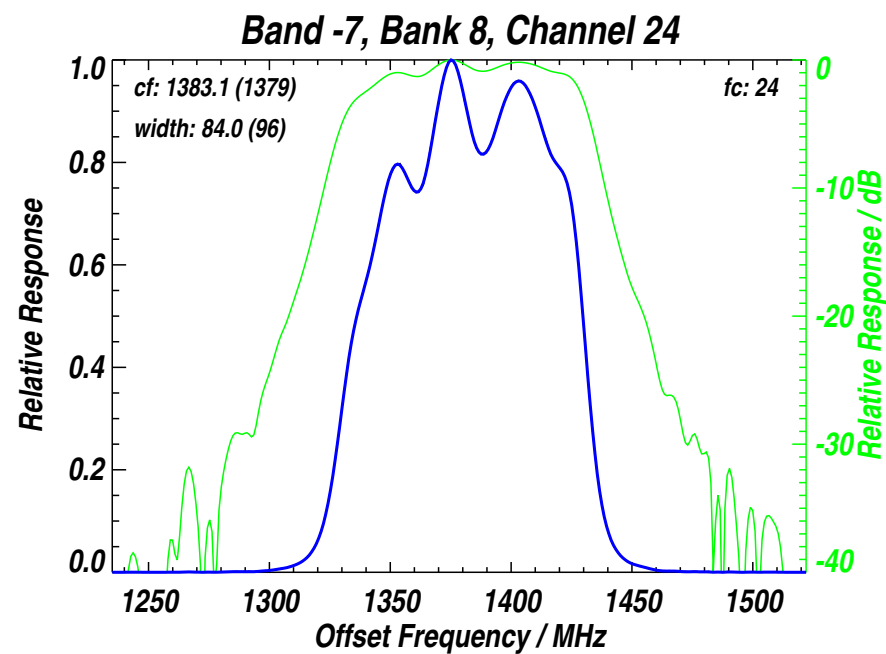
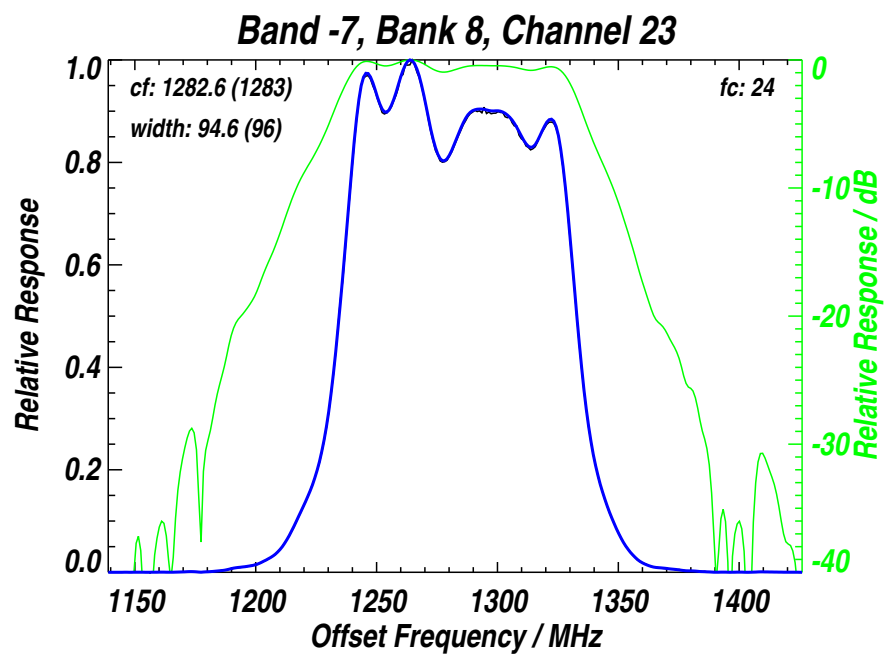
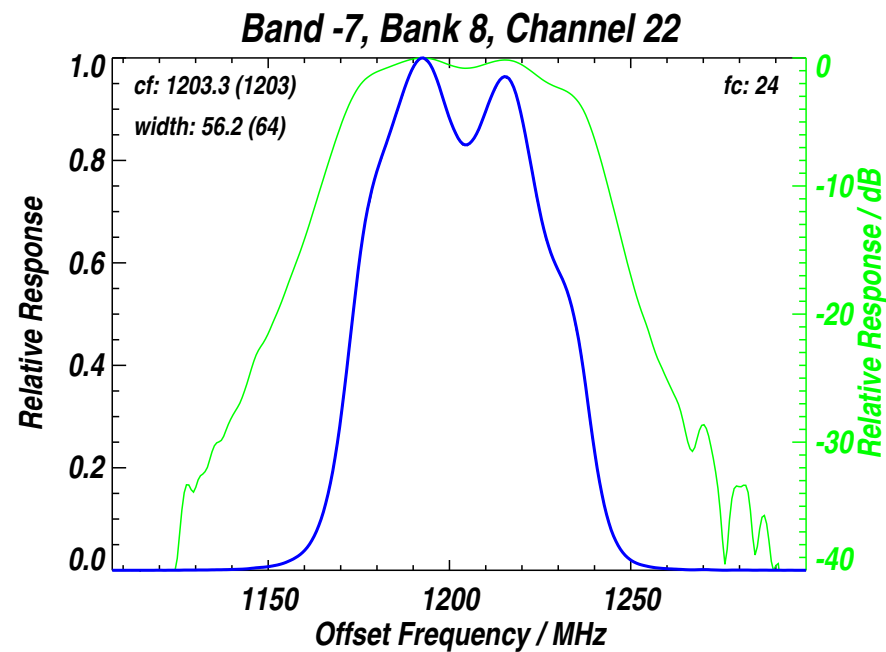
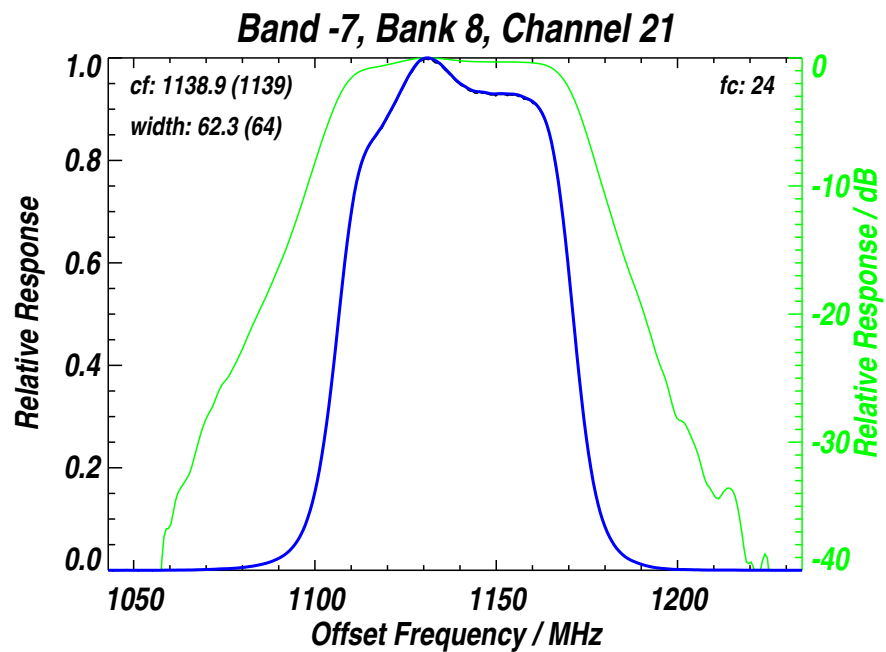
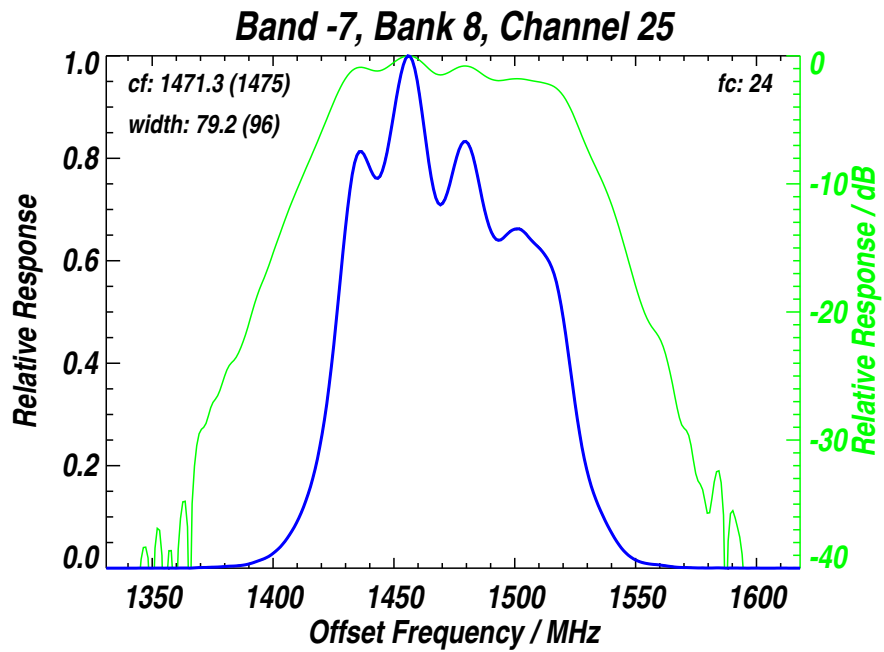


Figure H.193: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 7 (lsb)**  
**Bank 8**  
**Origin = 234.815000004 GHz**

Figure H.194: Lower sideband front-end sweep data for Band 7 taken via Filterbank 8, channel 25. See text for additional details.

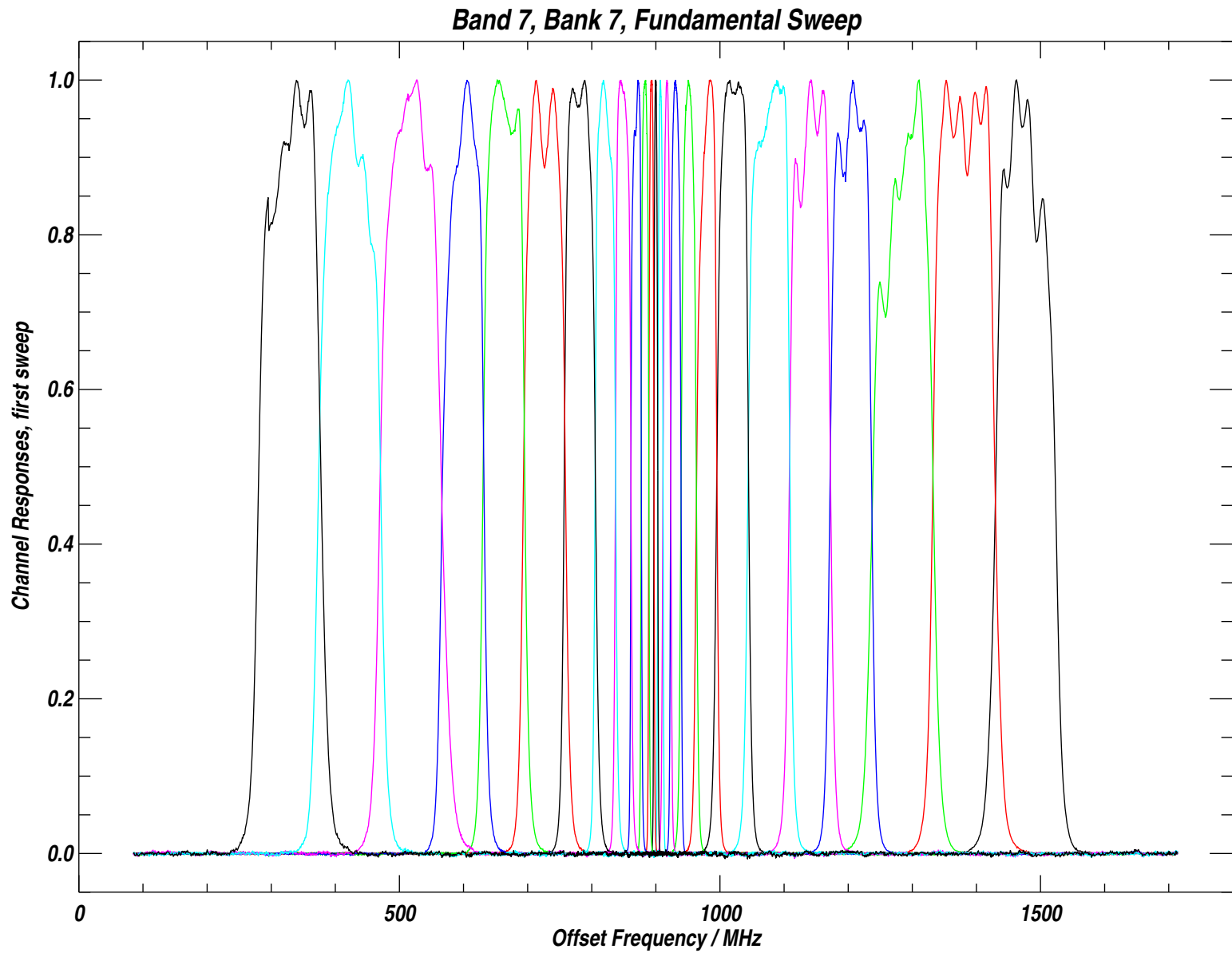


Figure H.195: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7. See text for additional details.

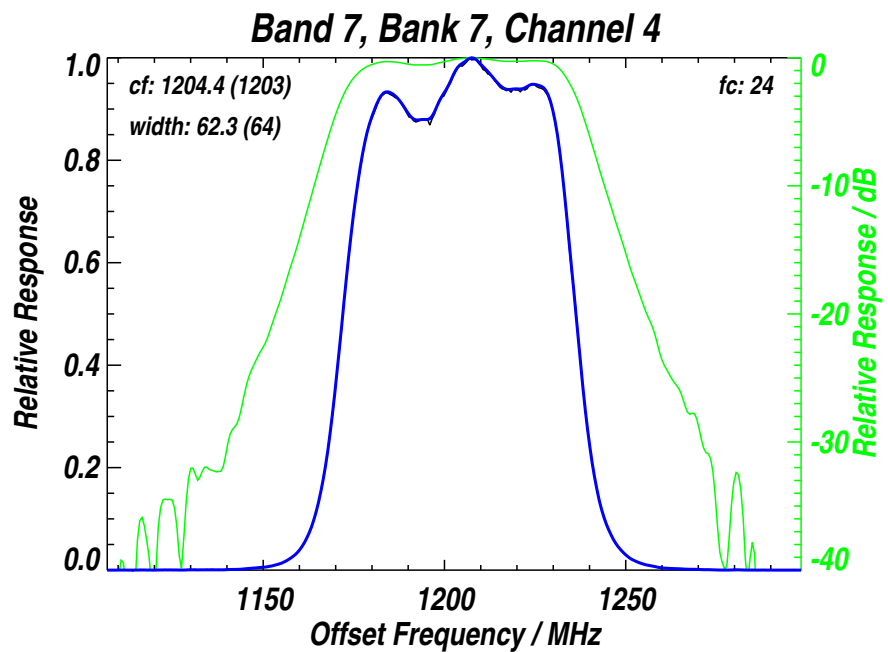
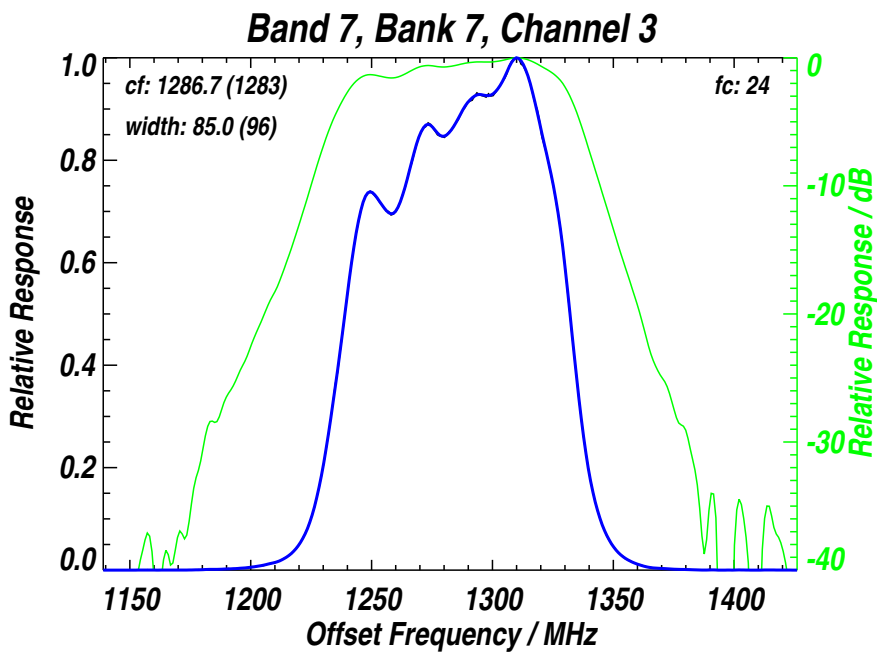
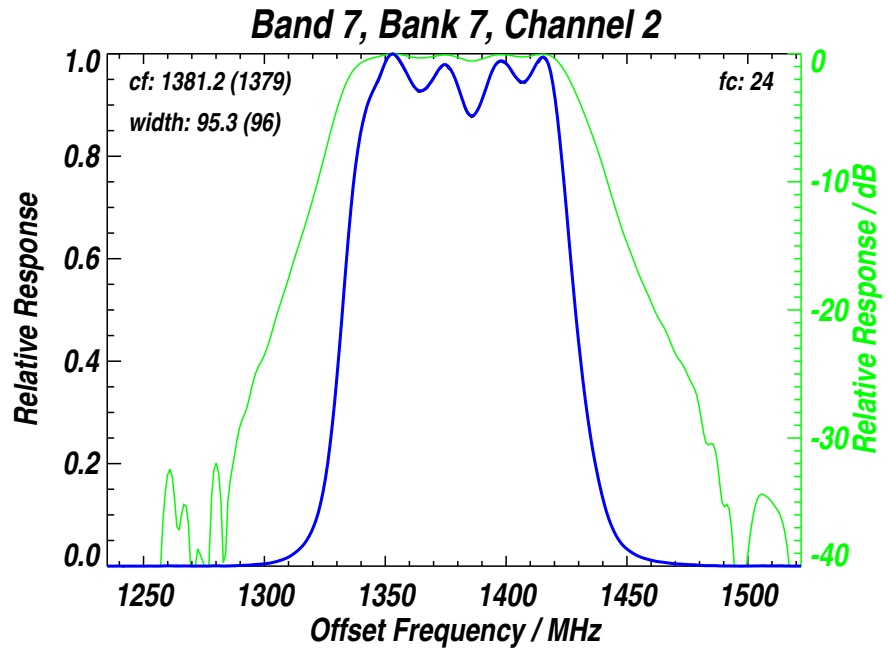
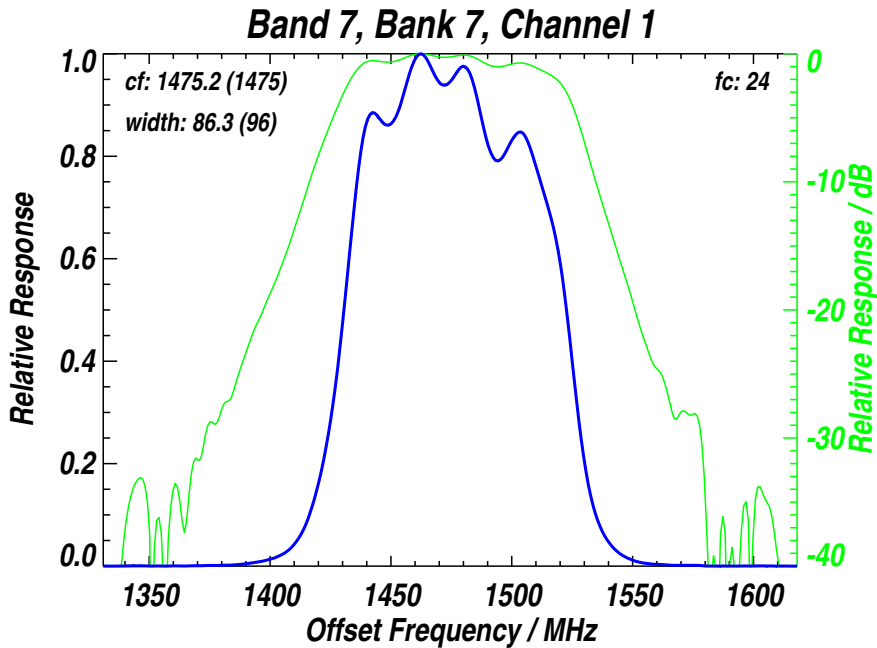


Figure H.196: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 1 to 4. See text for additional details.

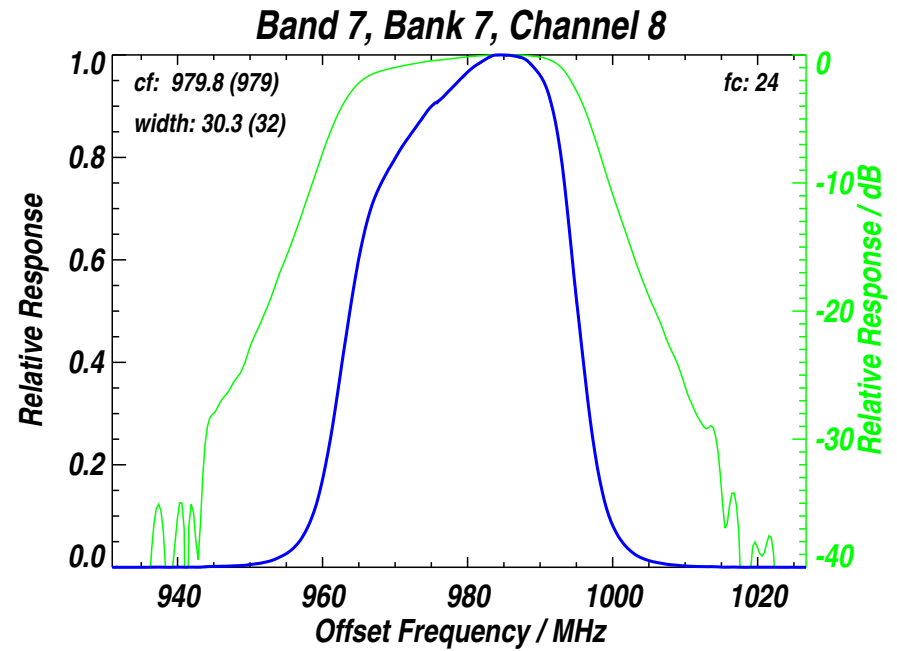
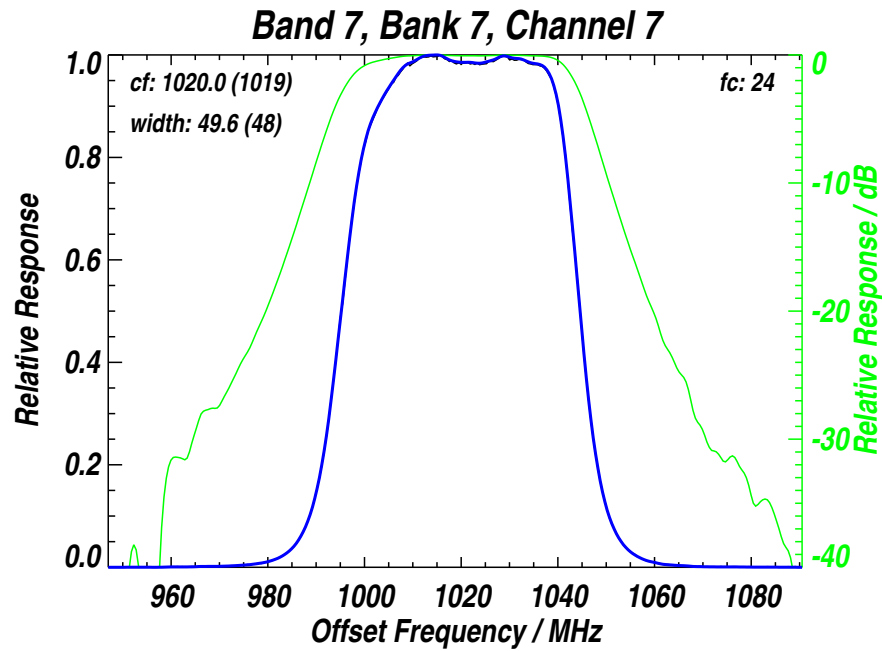
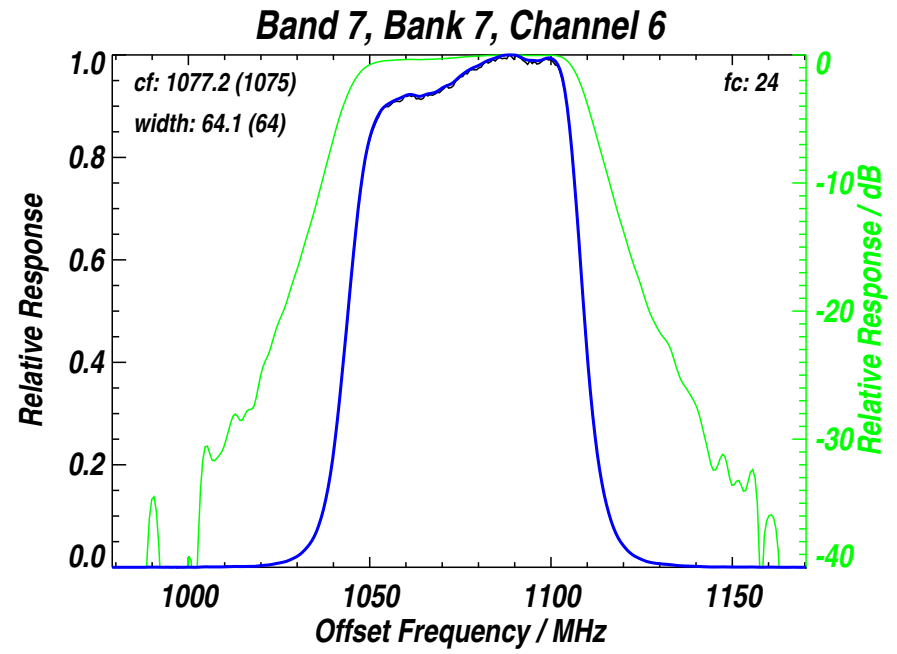
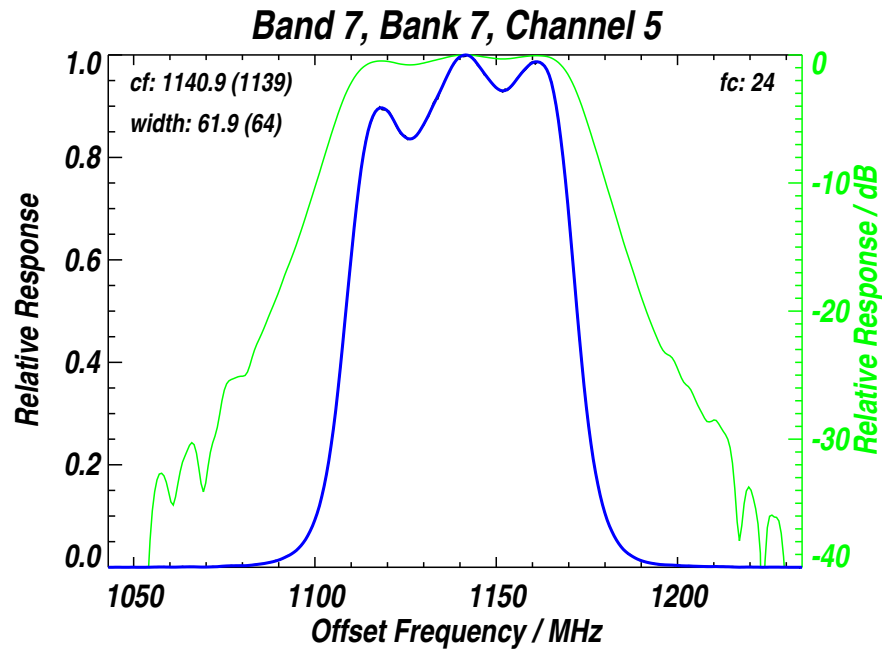


Figure H.197: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 5 to 8. See text for additional details.

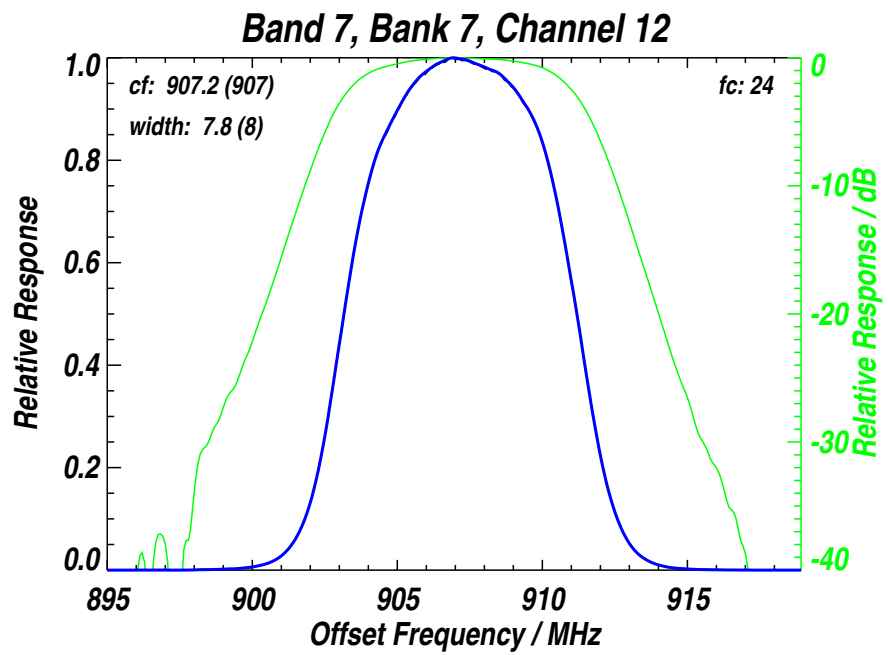
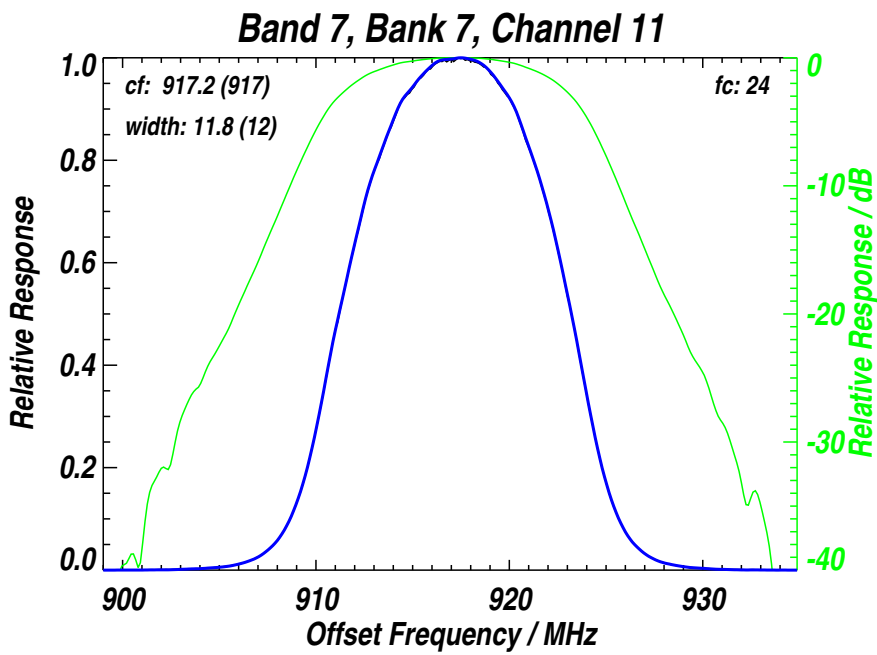
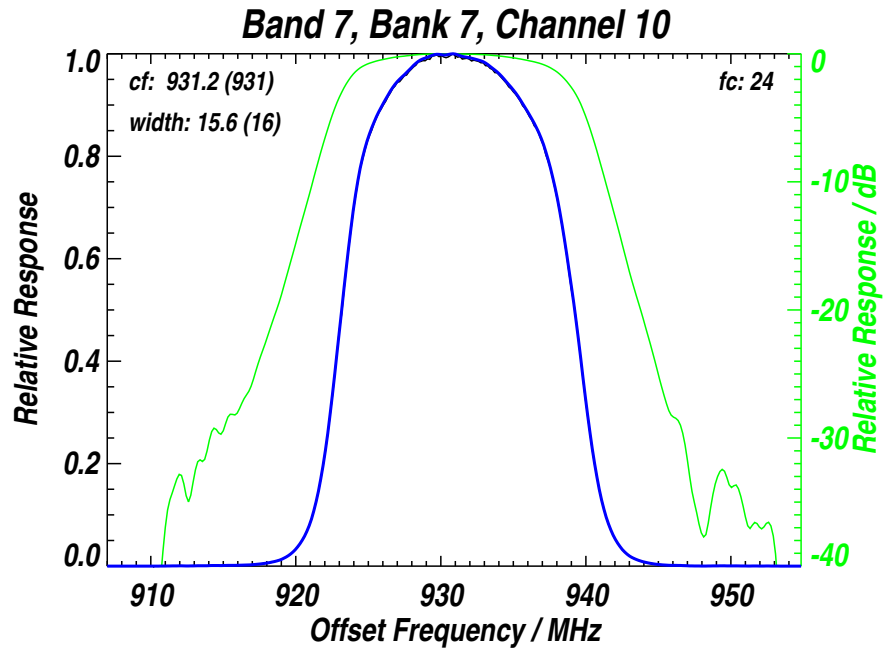
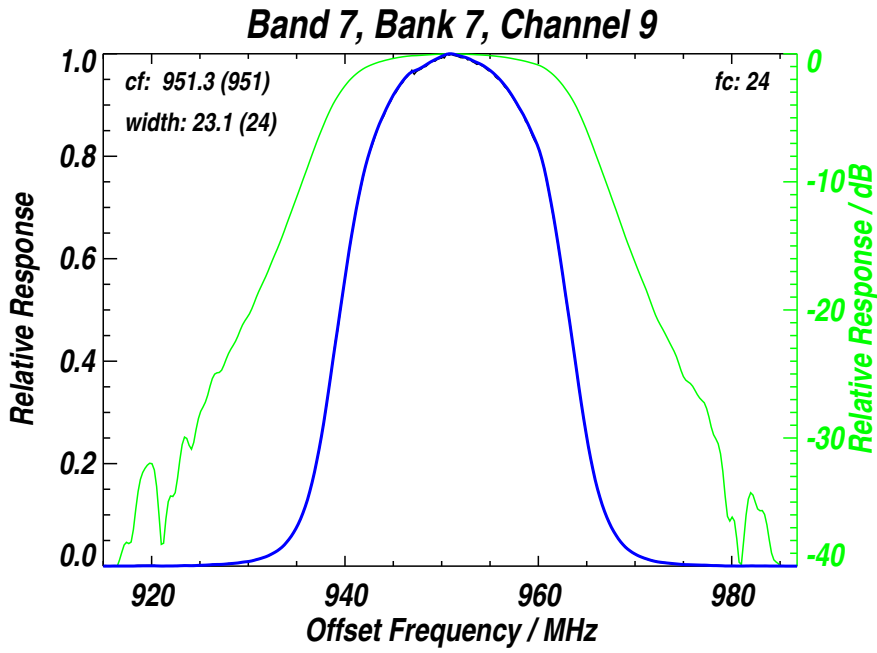


Figure H.198: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 9 to 12. See text for additional details.

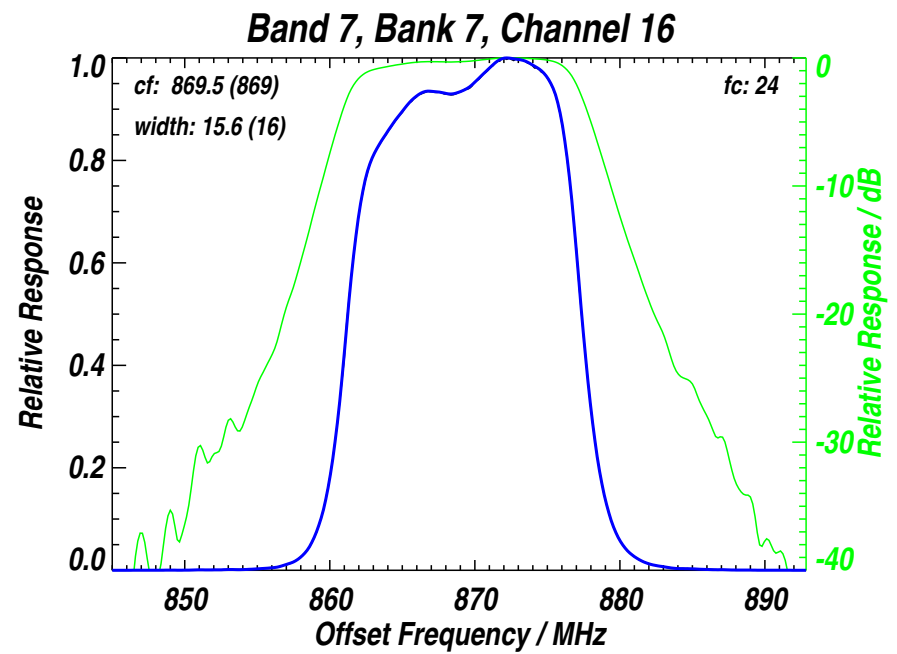
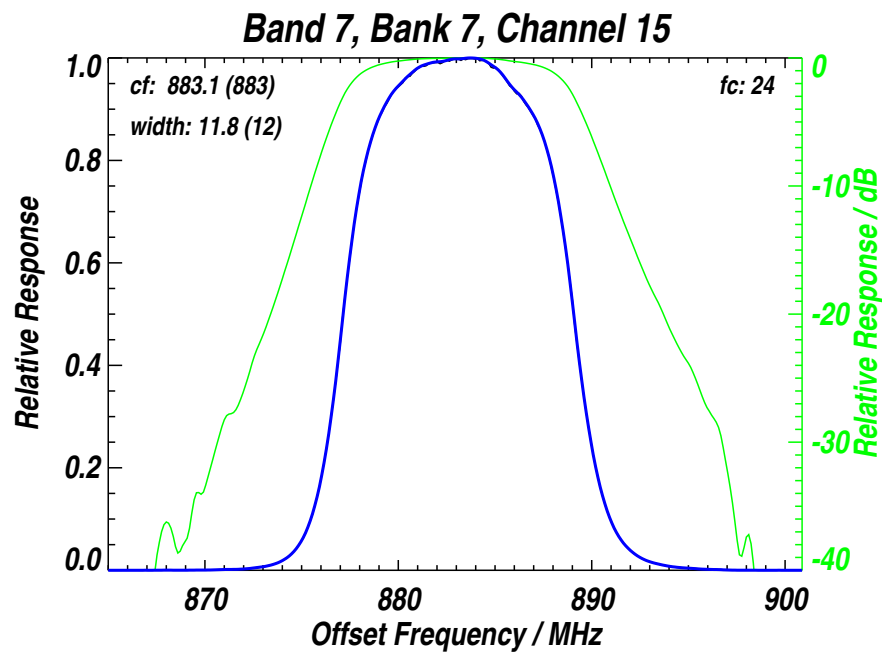
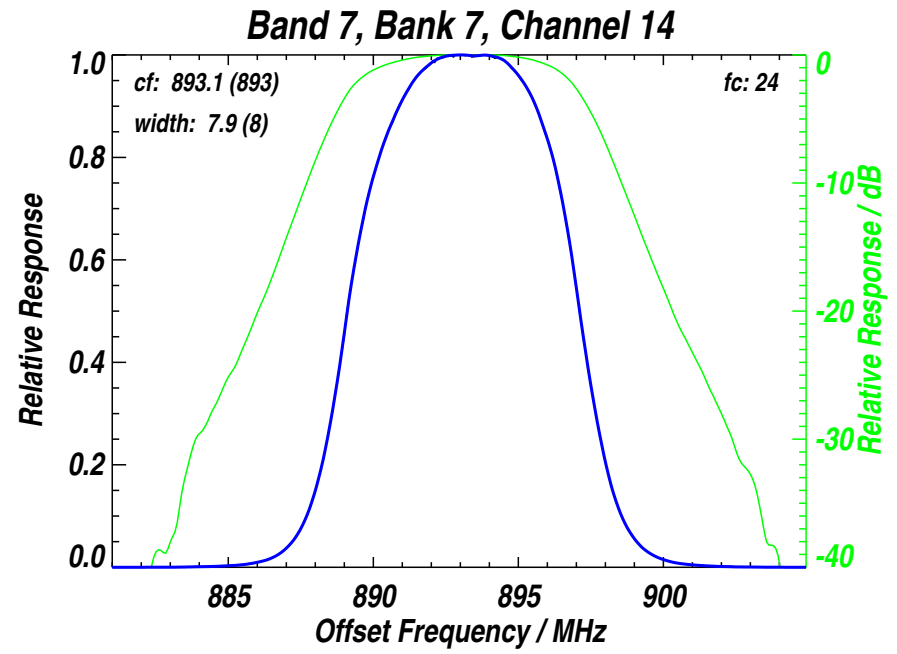
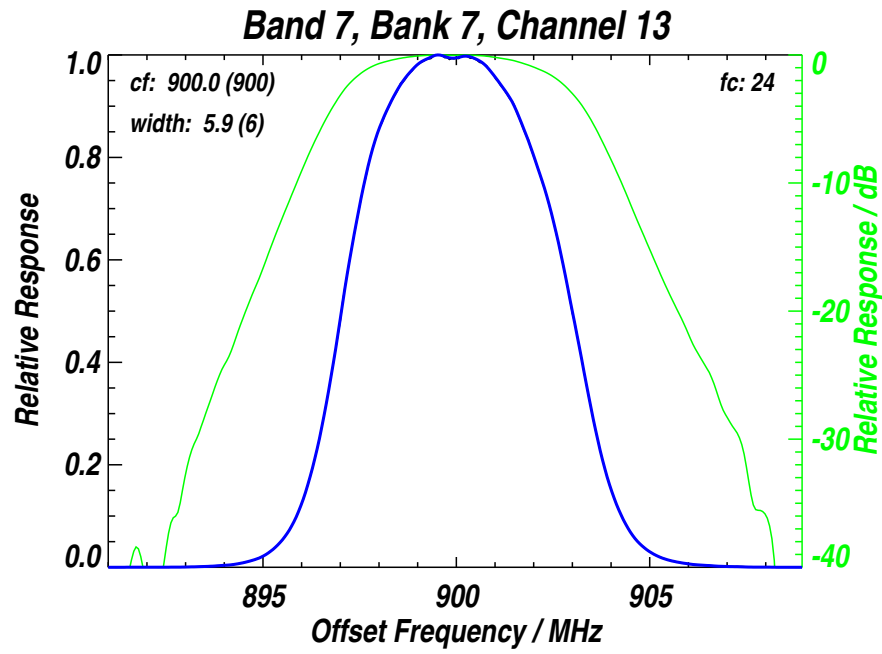


Figure H.199: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 13 to 16. See text for additional details.

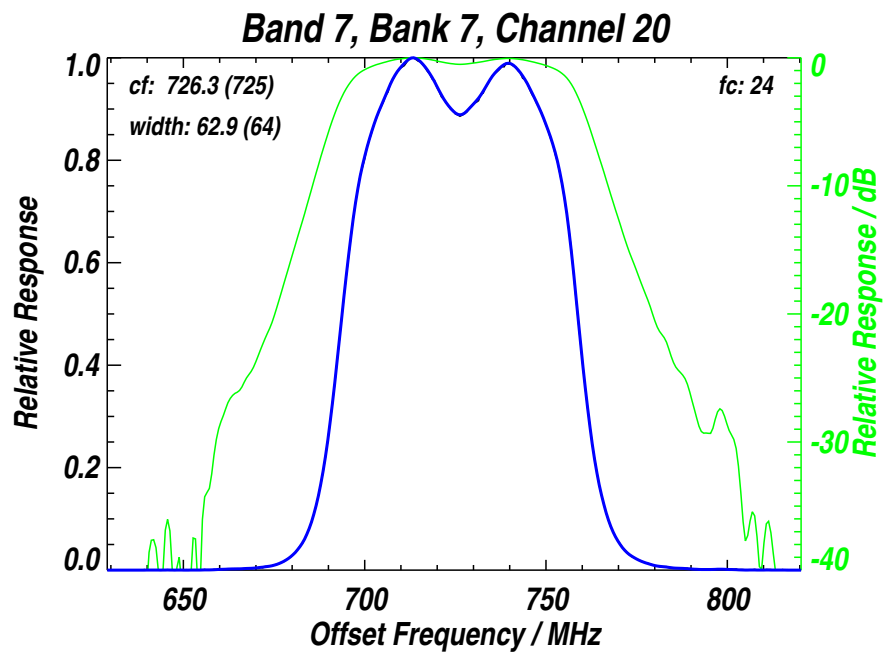
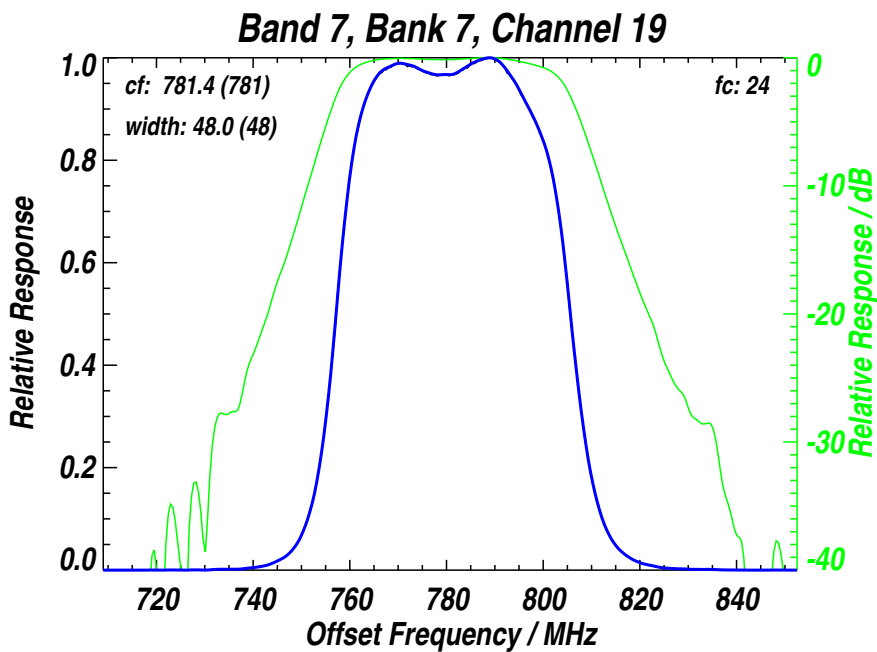
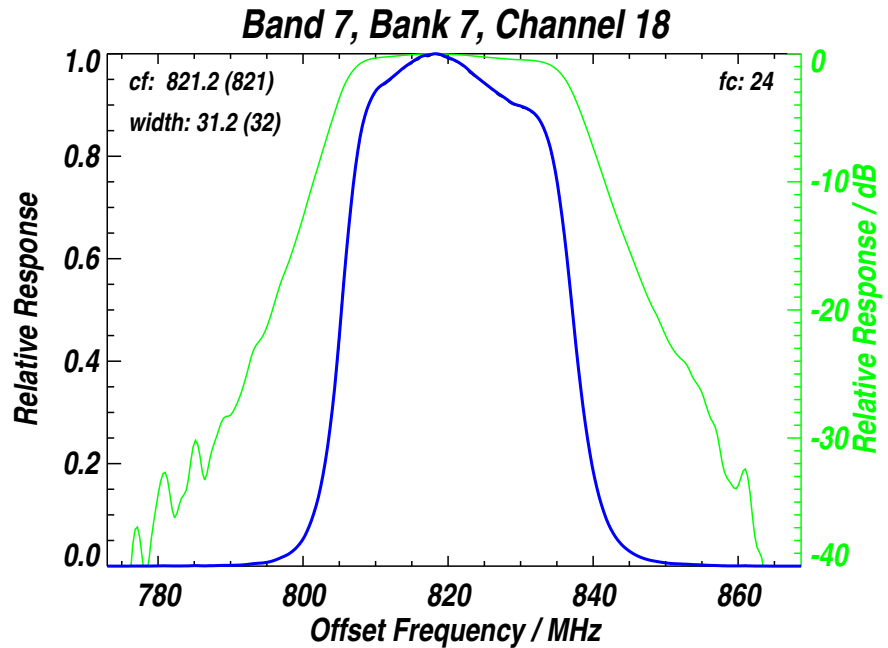
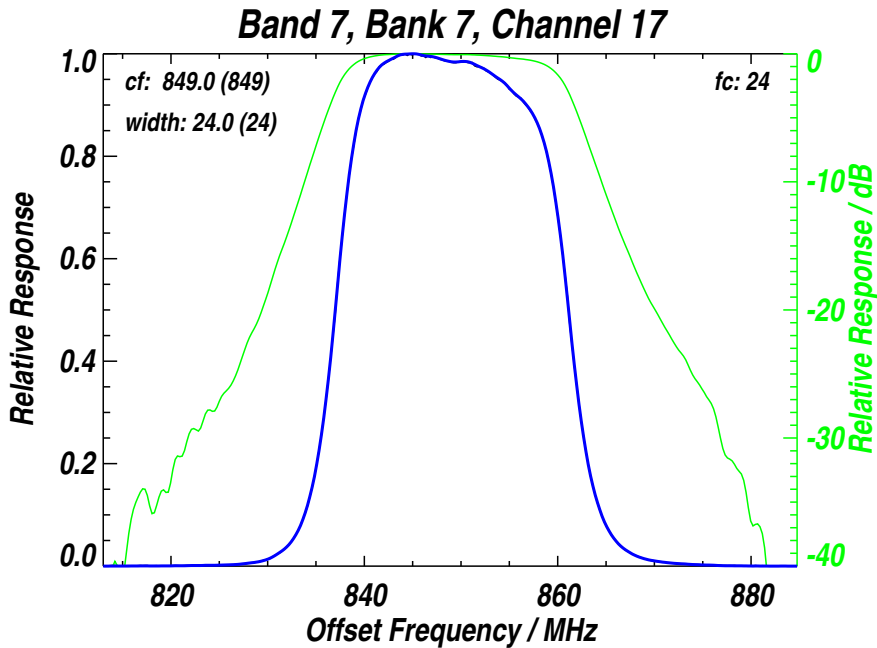


Figure H.200: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 17 to 20. See text for additional details.



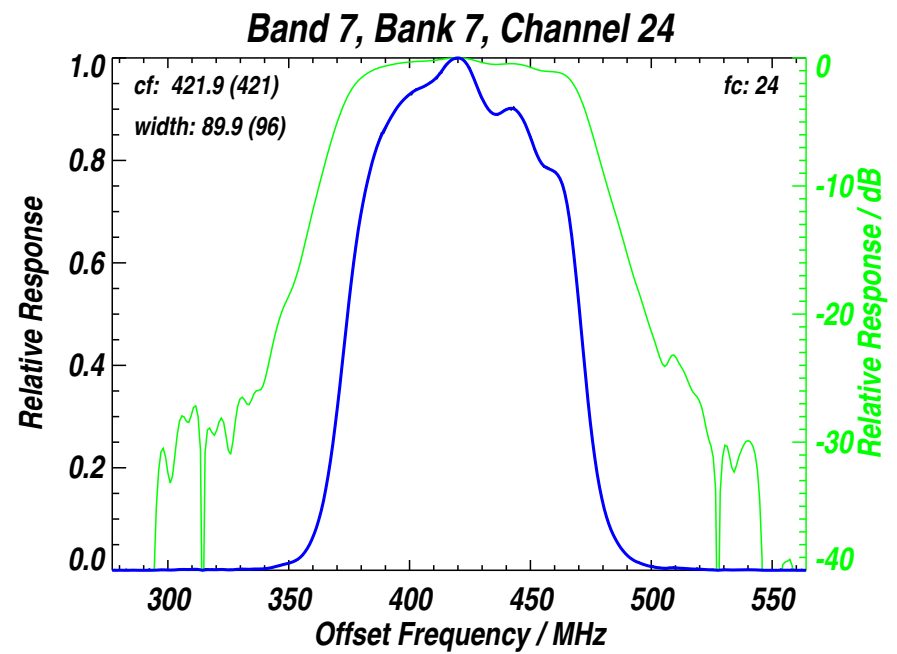
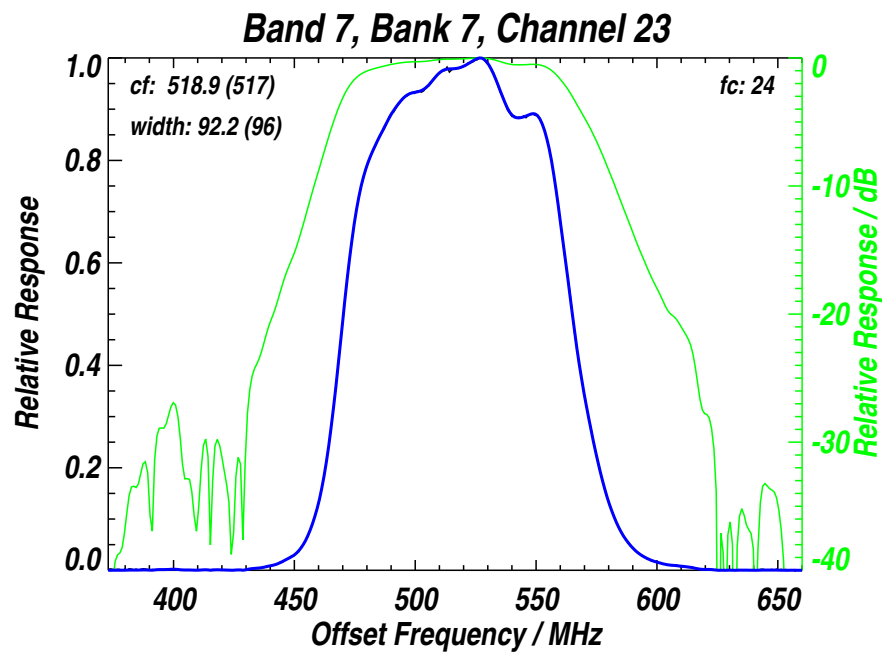
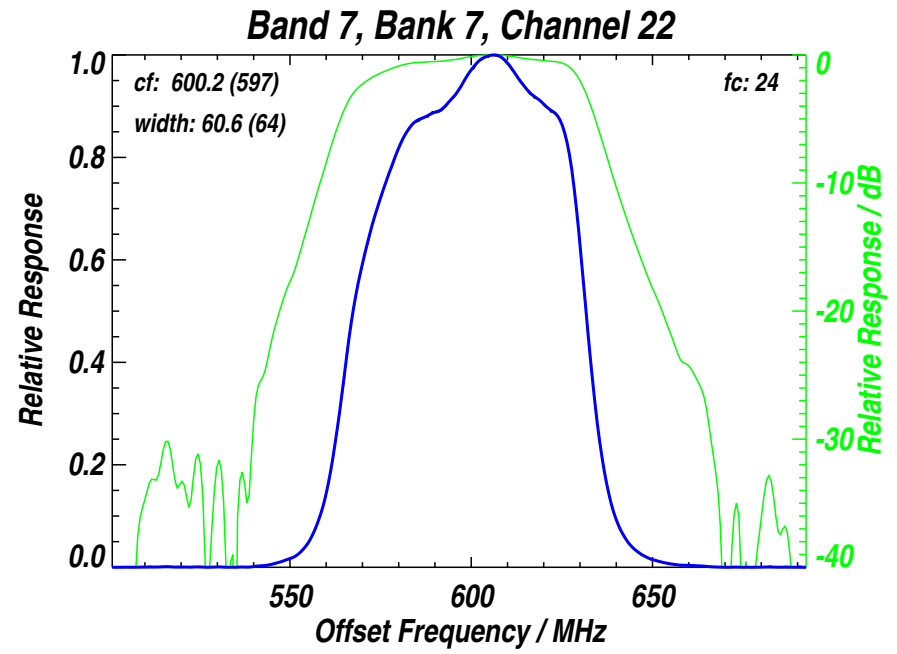
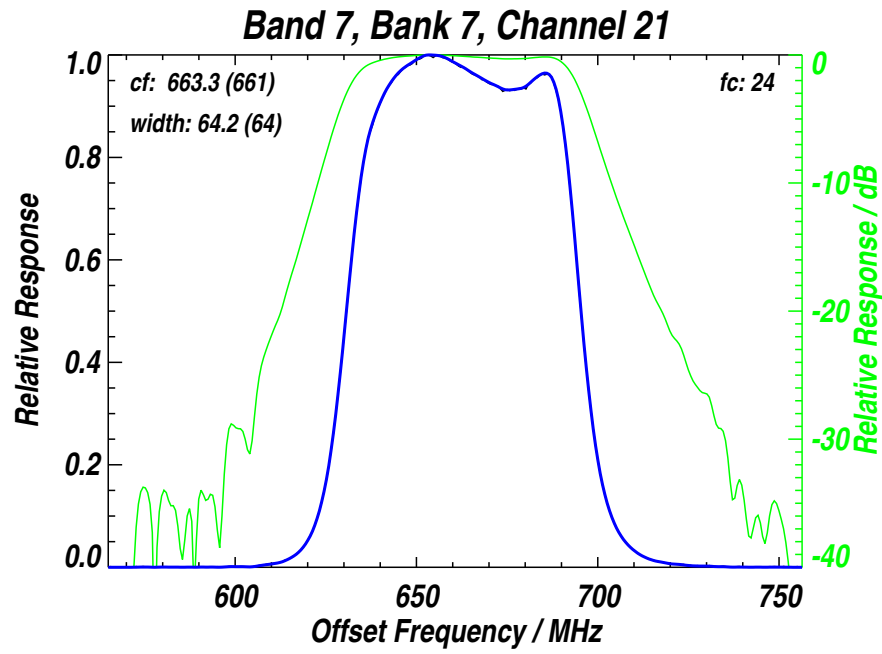
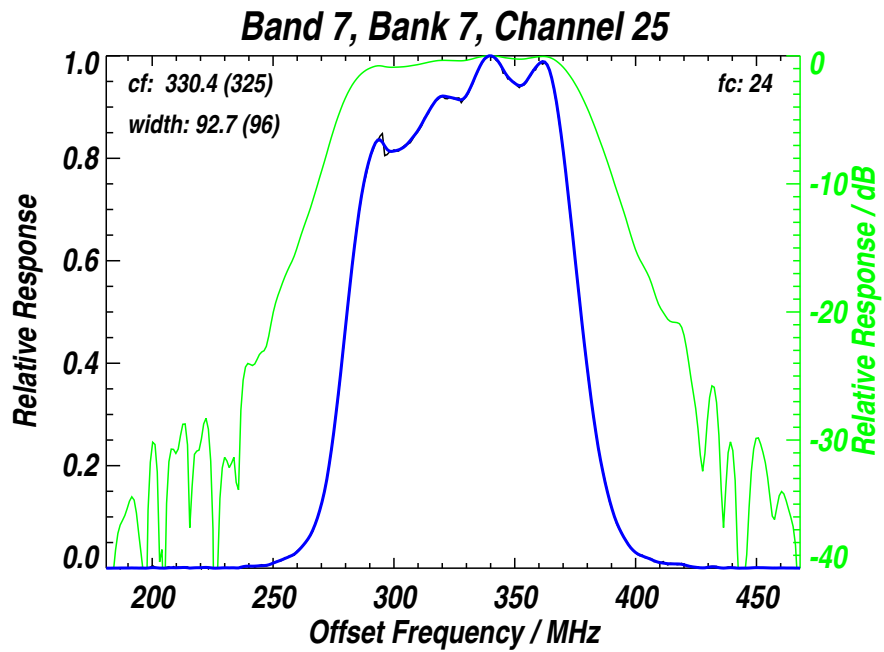


Figure H.201: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channels 21 to 24. See text for additional details.



**Band 7 (usb)**  
**Bank 7**  
**Origin = 242.704999998 GHz**

Figure H.202: Upper sideband front-end sweep data for Band 7 taken via Filterbank 7, channel 25. See text for additional details.

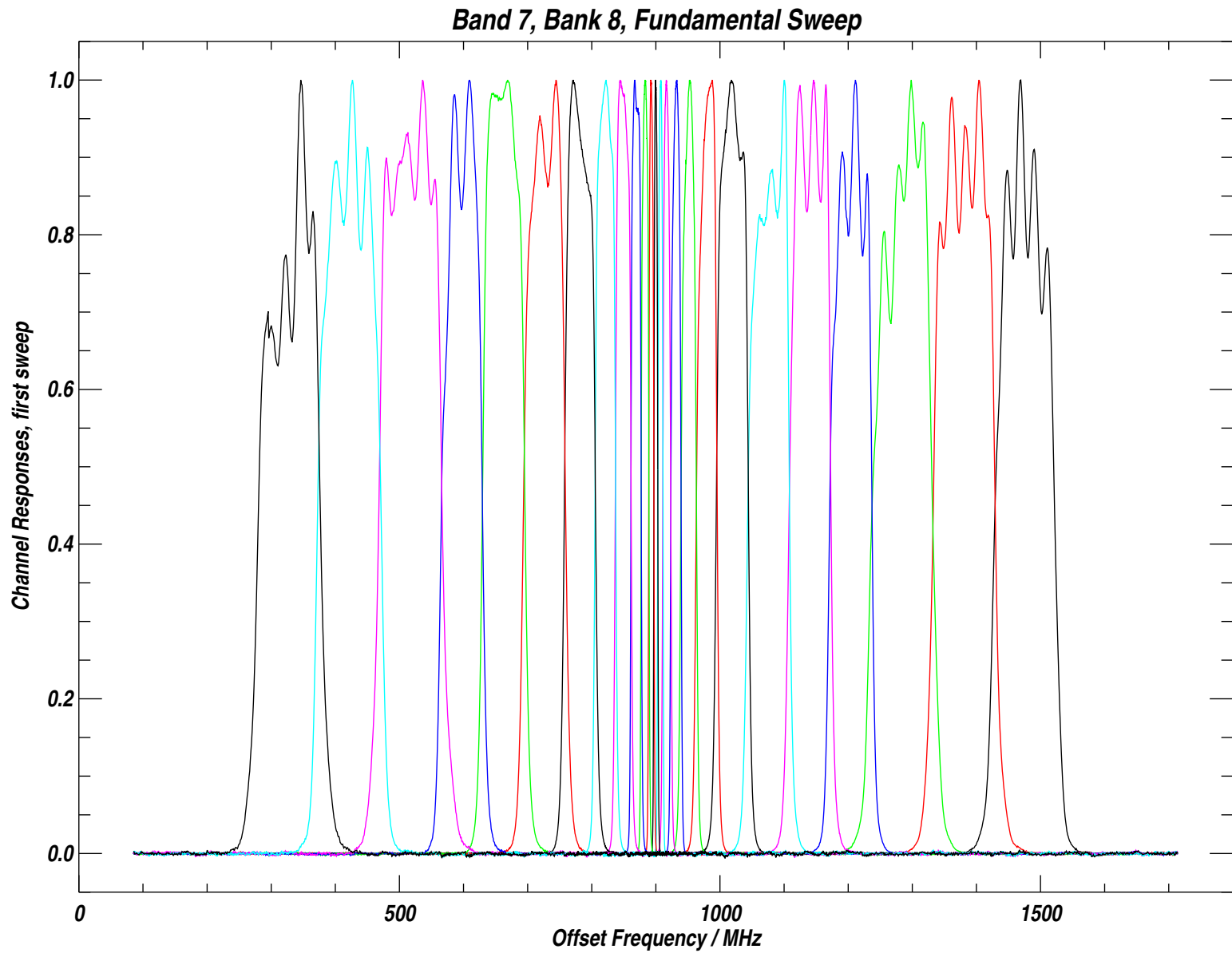


Figure H.203: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8. See text for additional details.

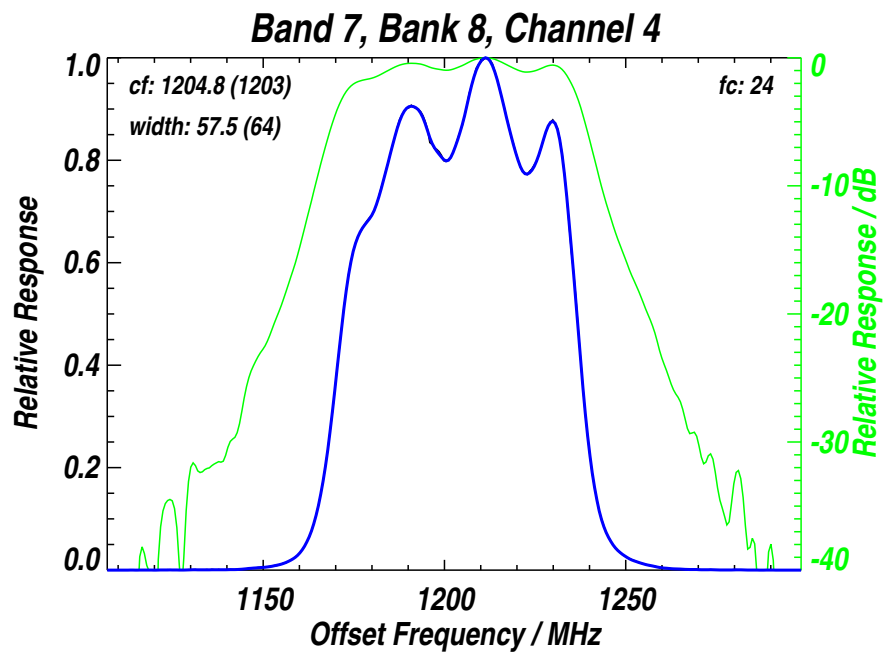
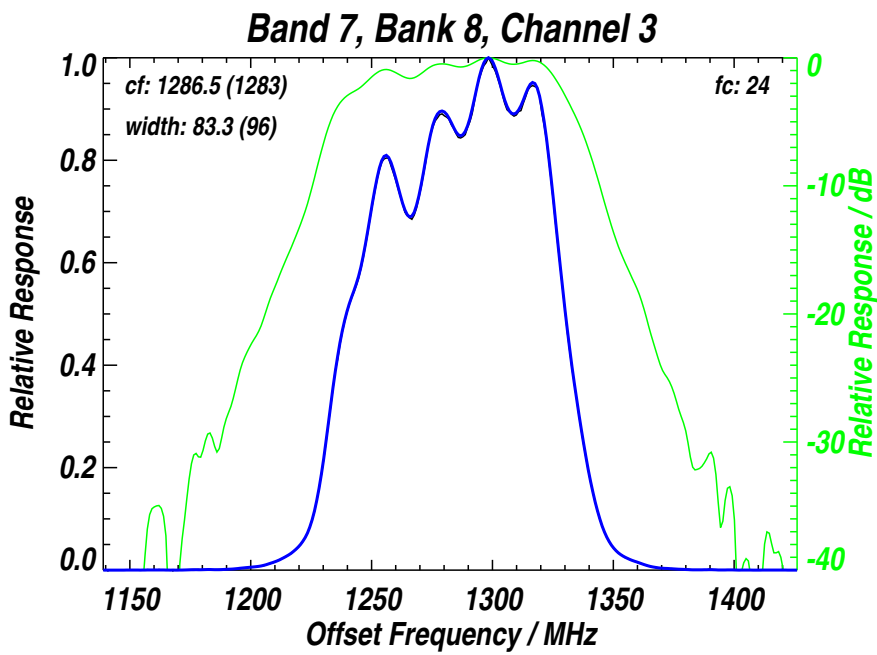
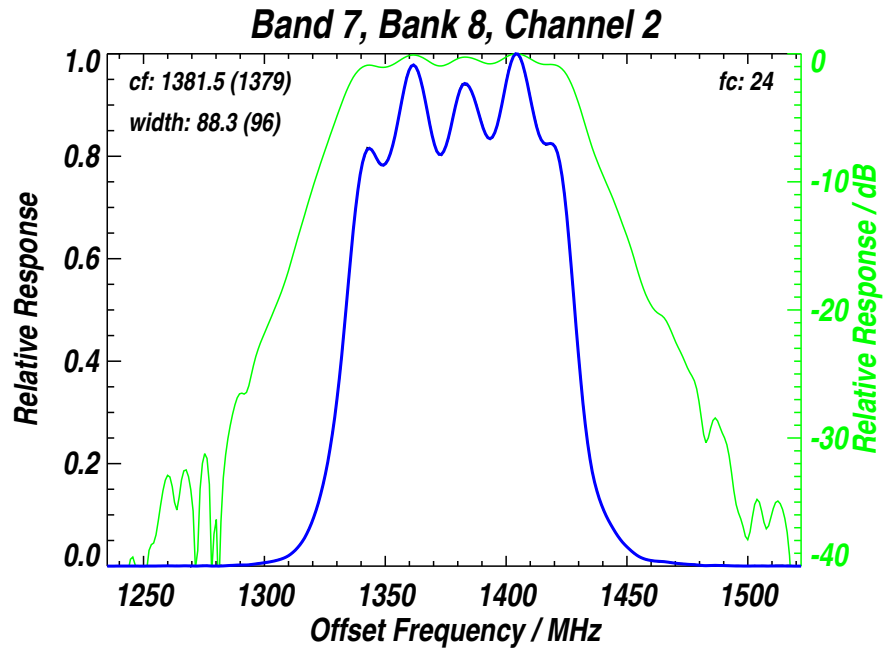
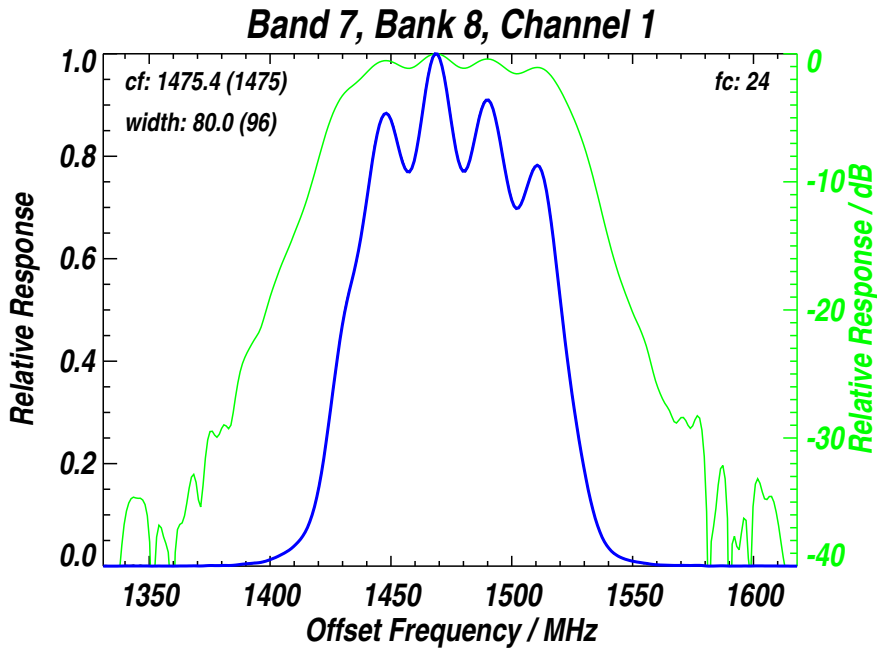


Figure H.204: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 1 to 4. See text for additional details.

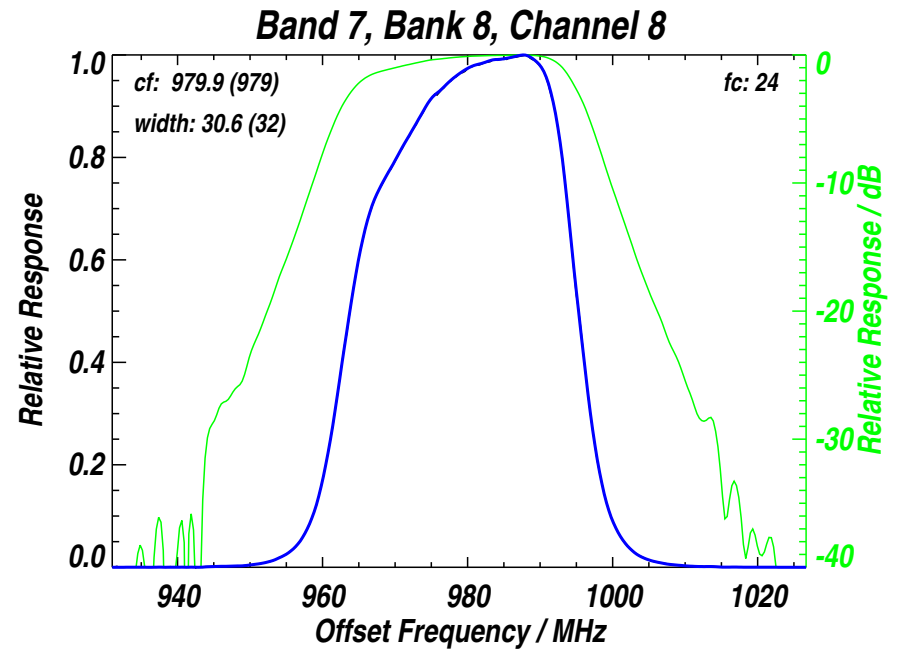
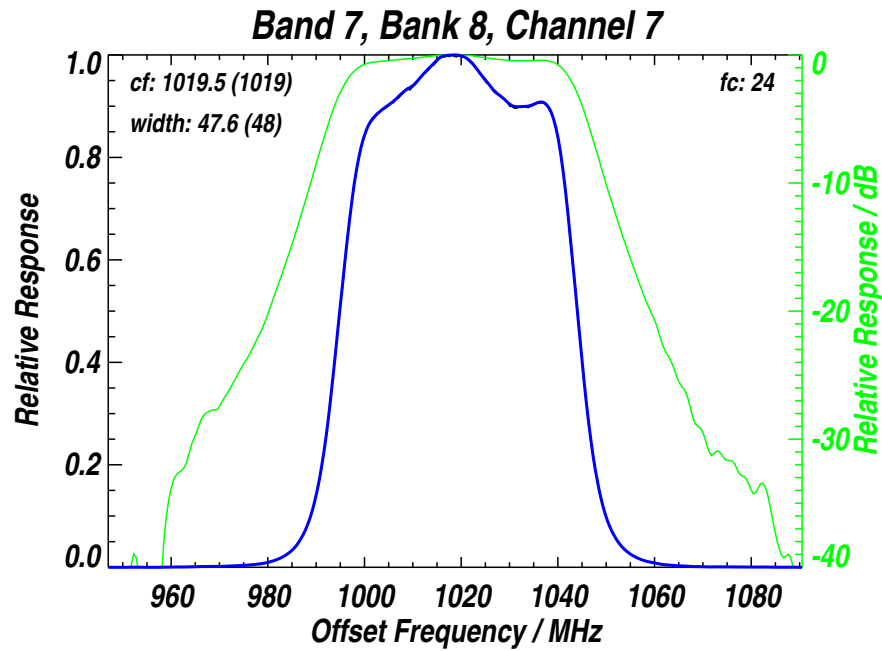
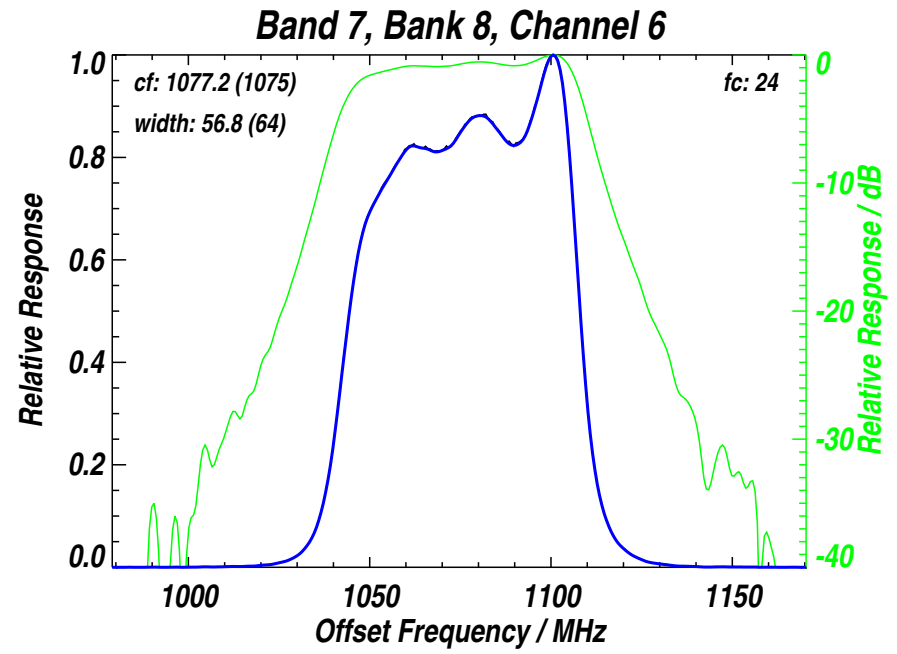
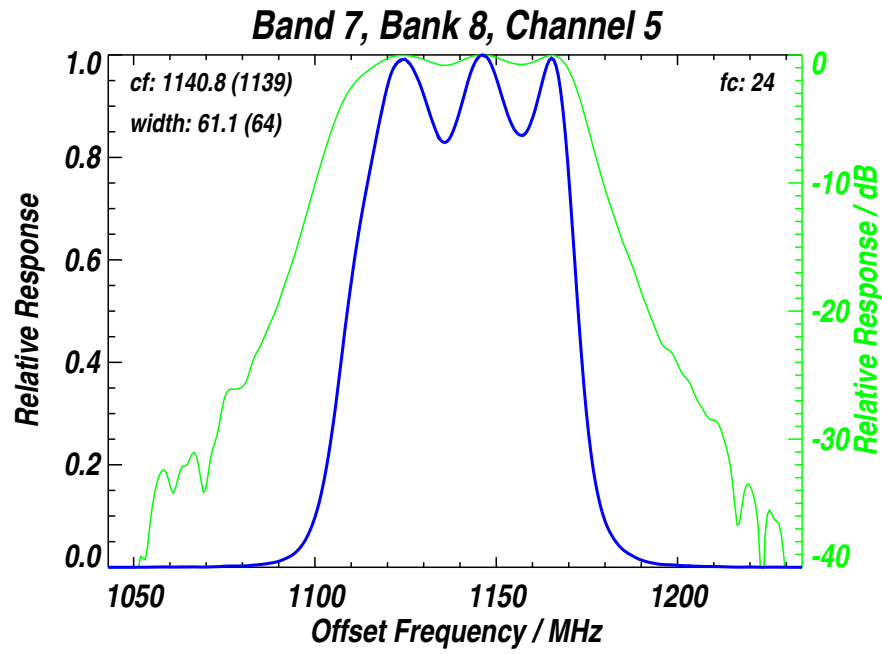


Figure H.205: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 5 to 8. See text for additional details.

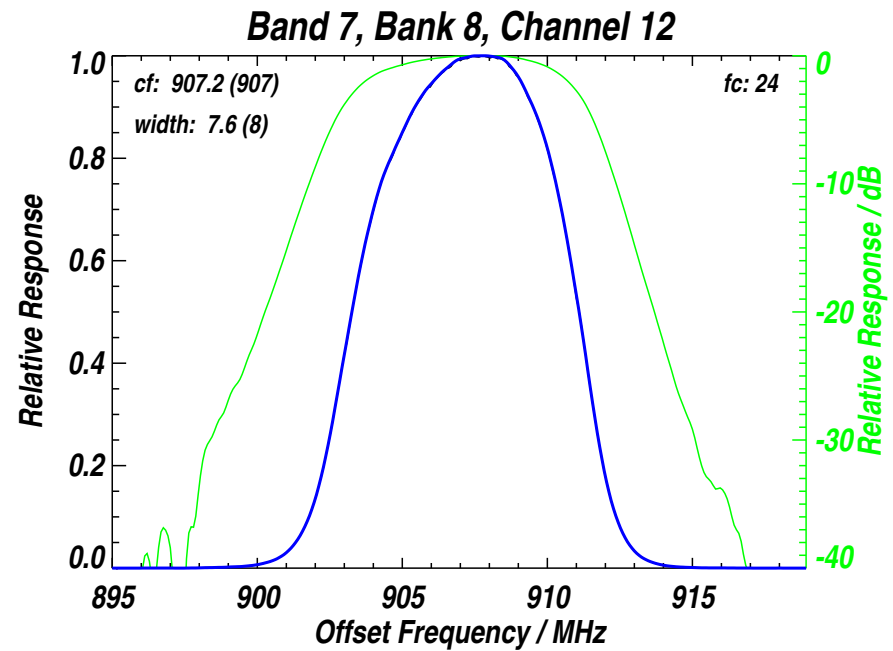
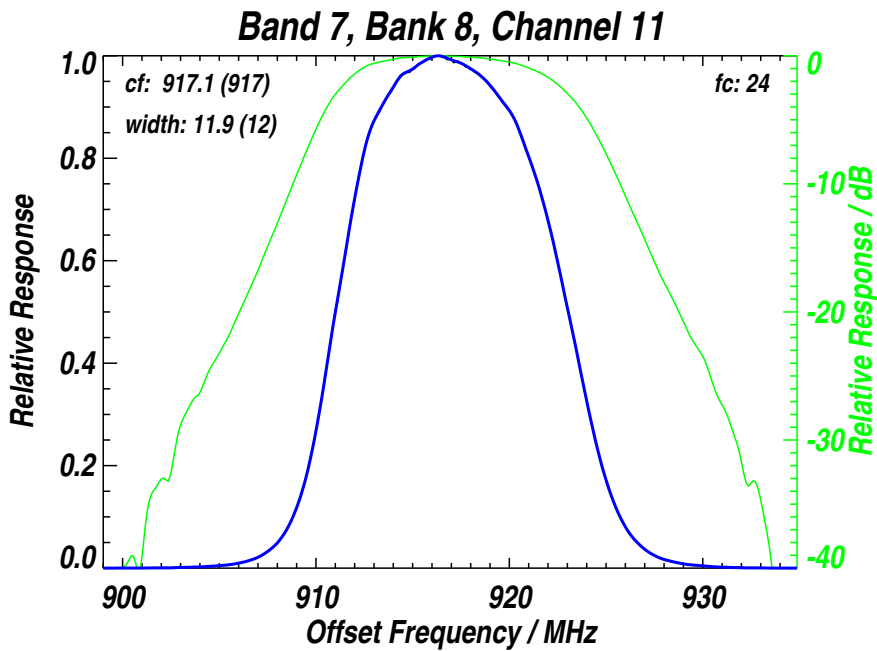
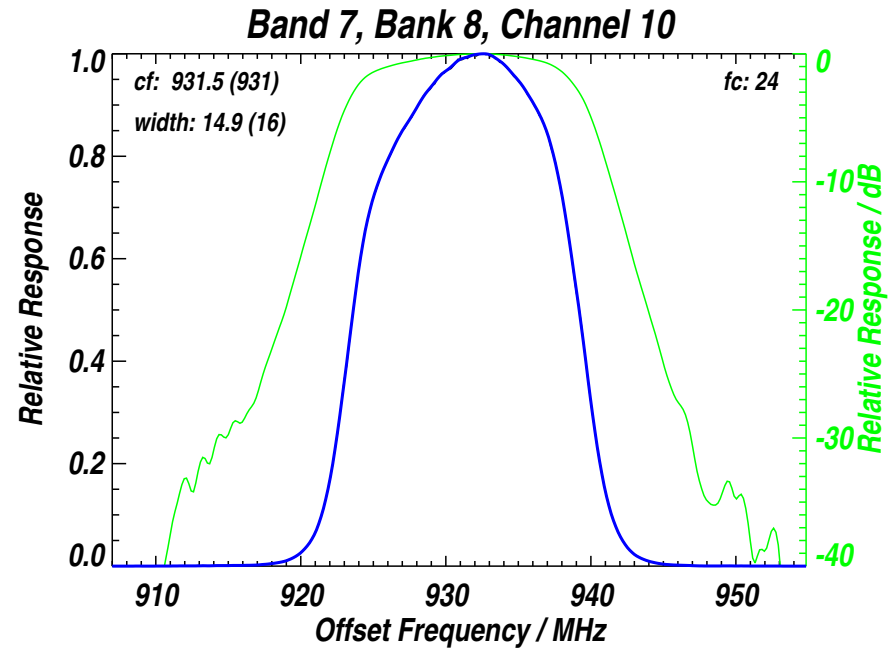
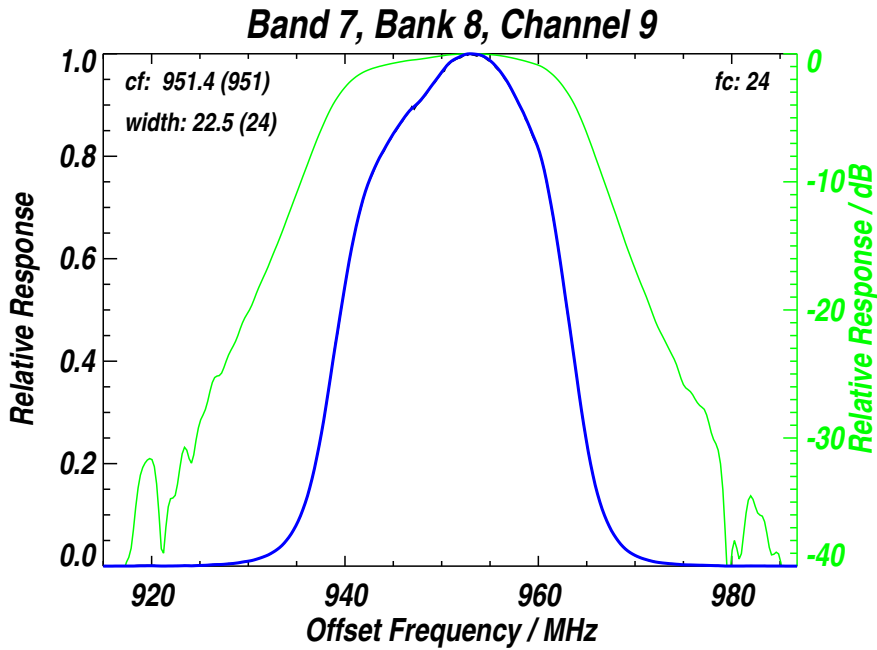


Figure H.206: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 9 to 12. See text for additional details.

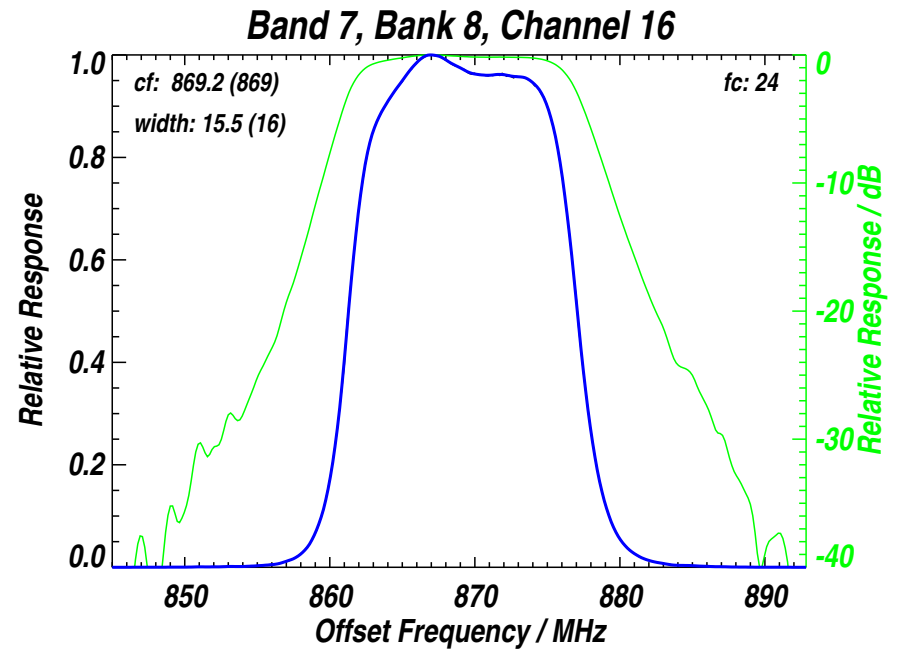
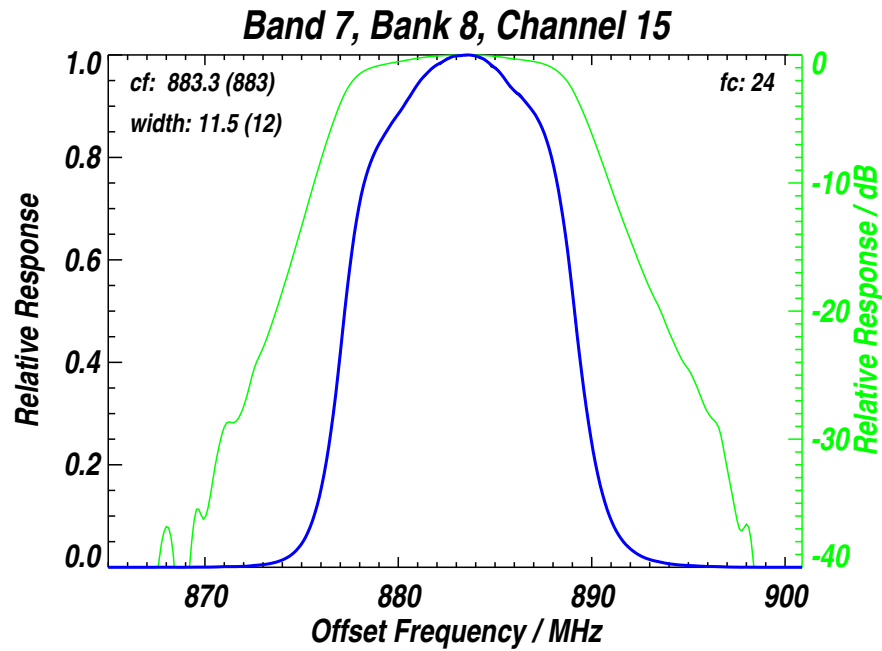
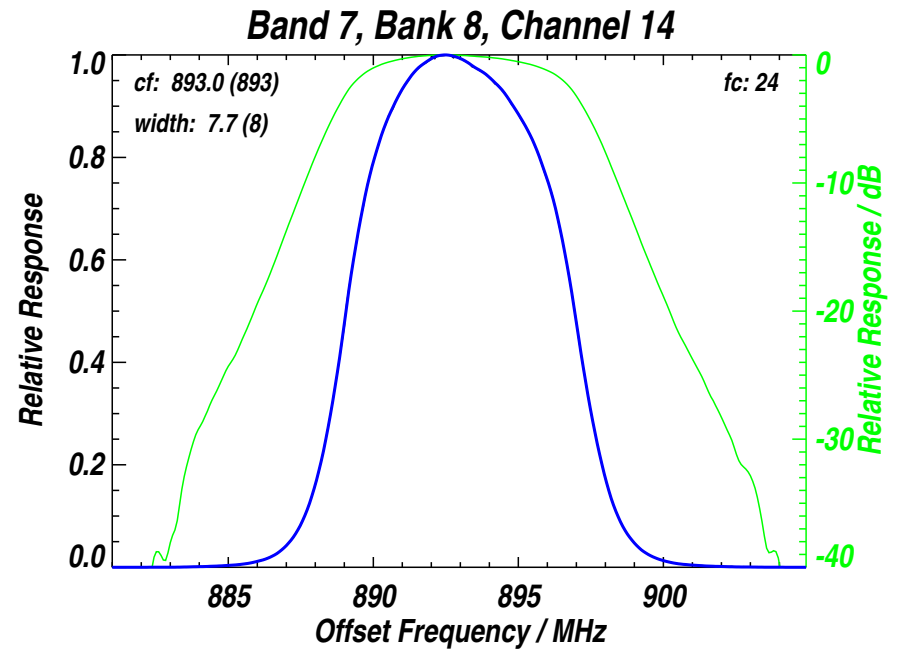
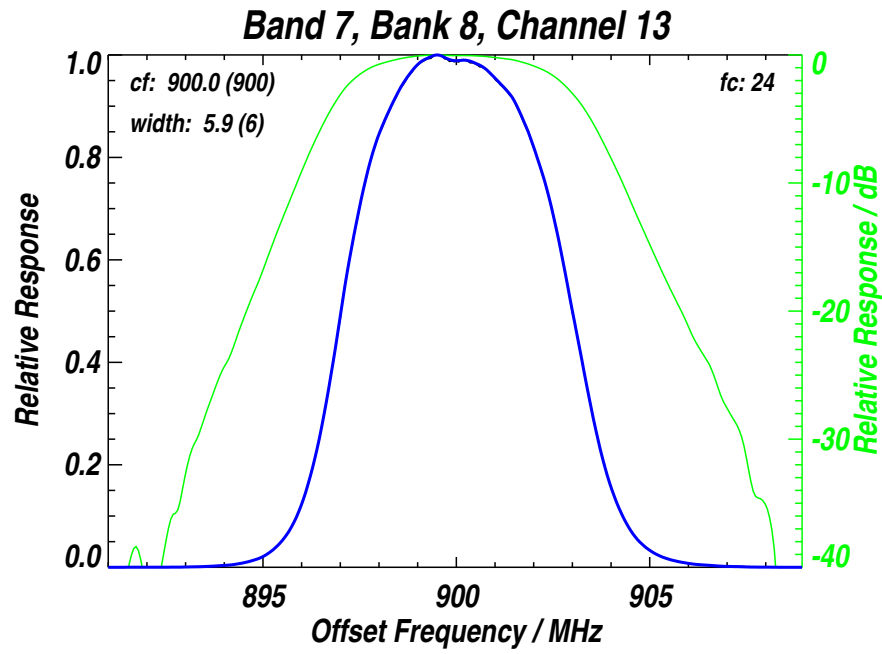


Figure H.207: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 13 to 16. See text for additional details.

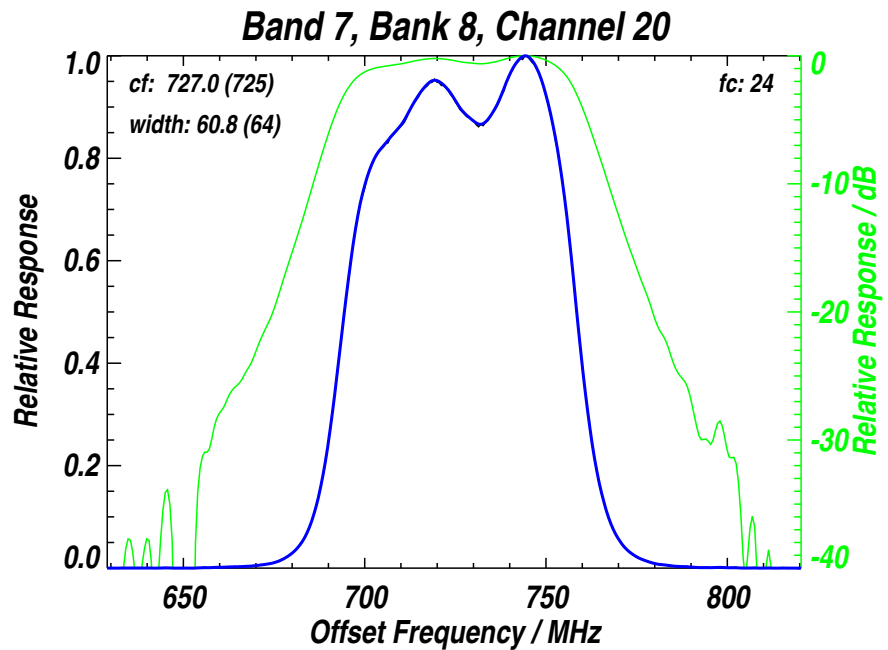
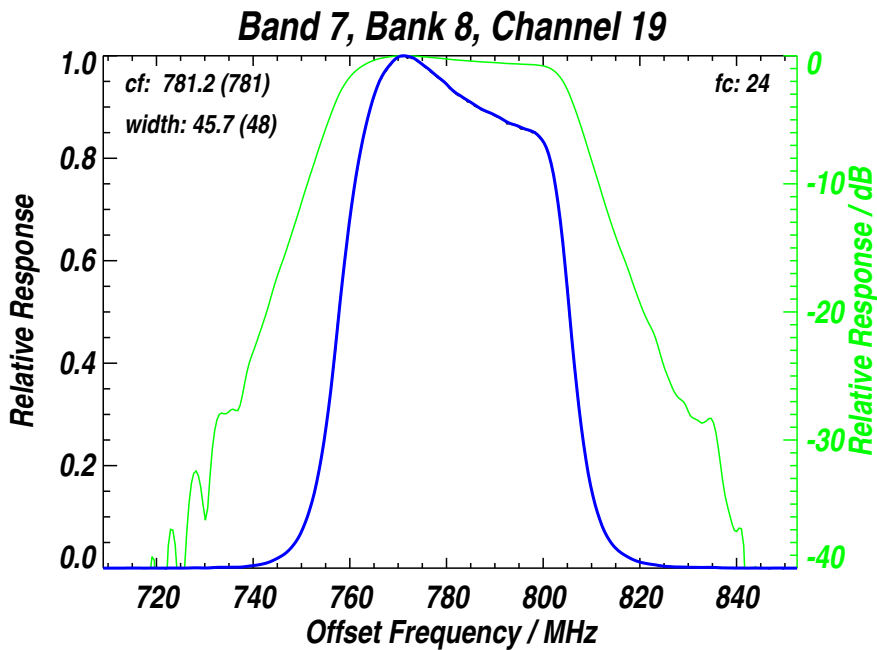
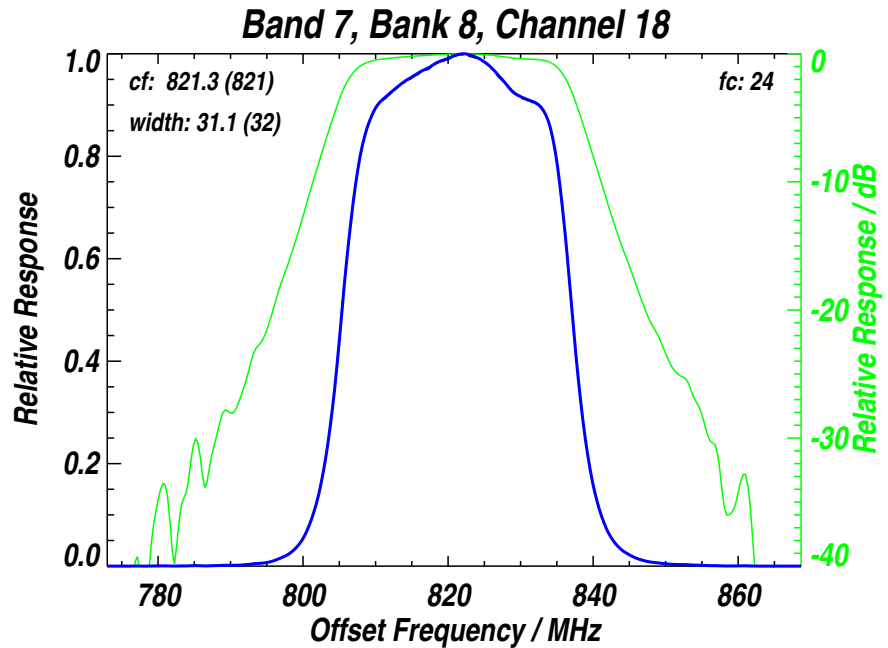
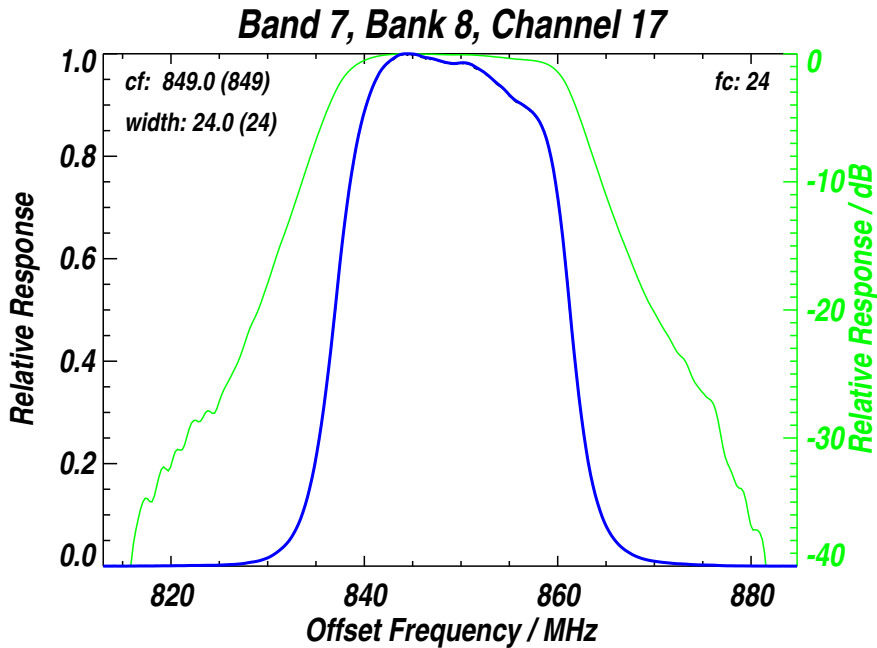


Figure H.208: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 17 to 20. See text for additional details.



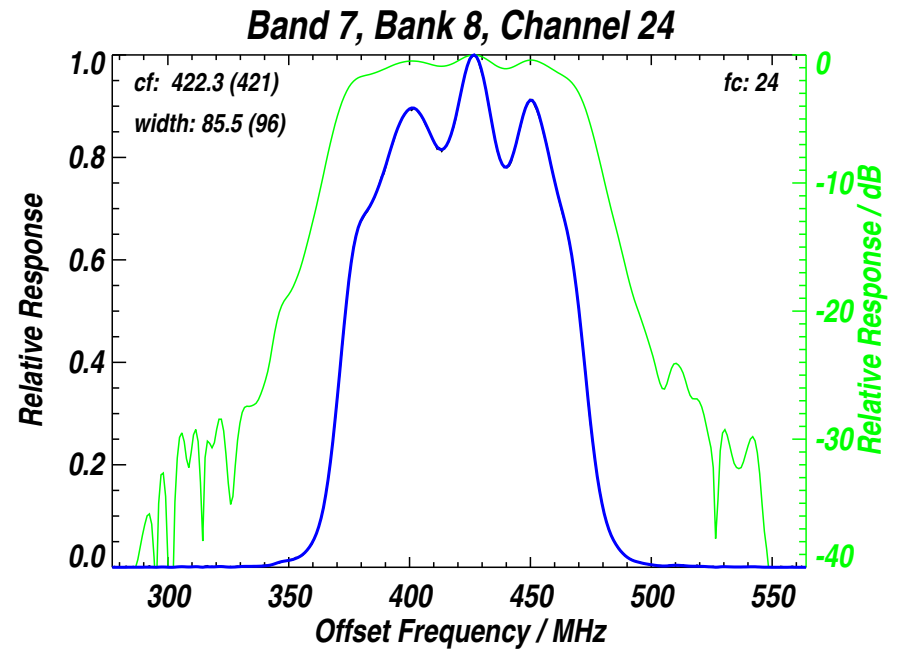
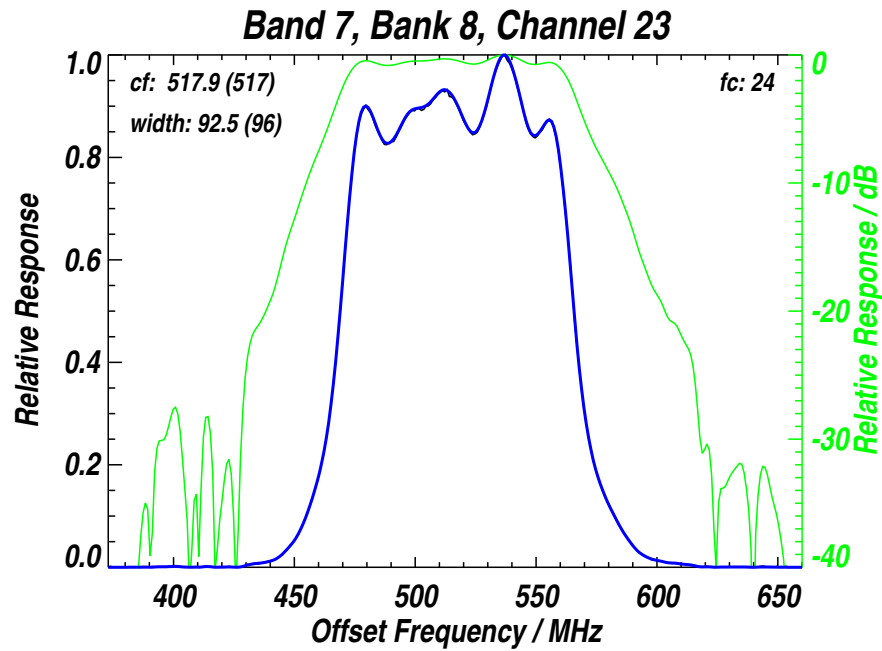
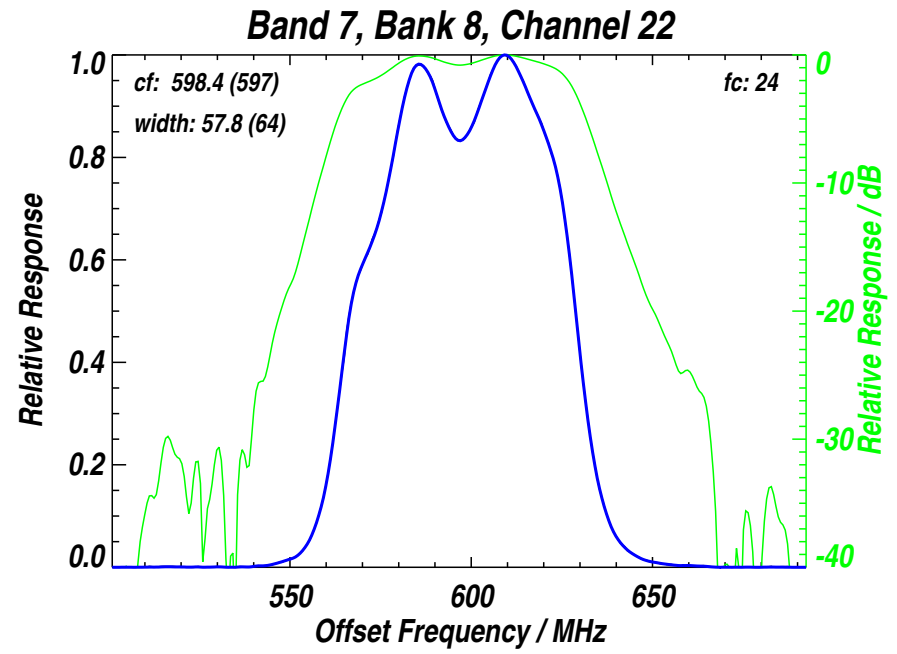
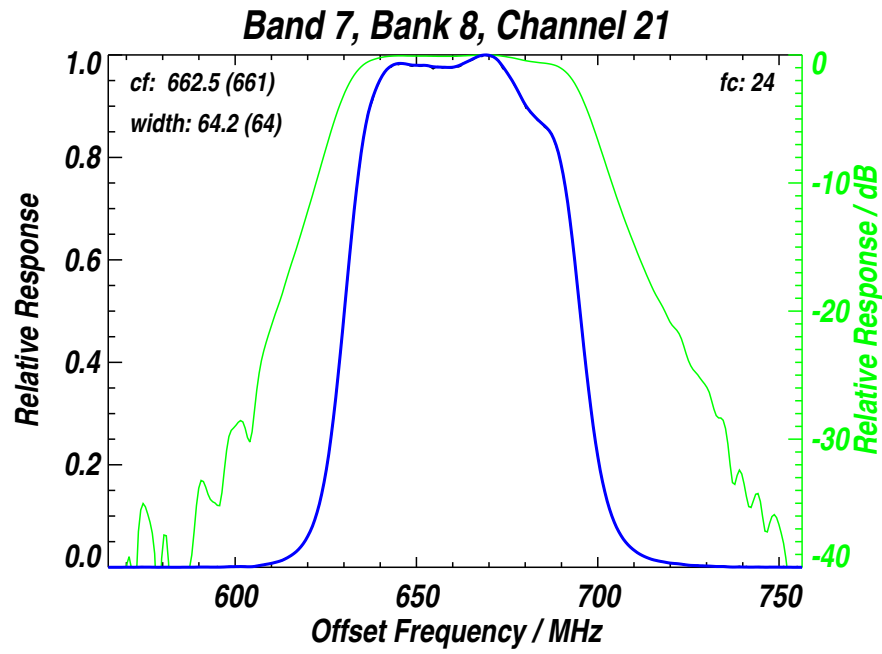
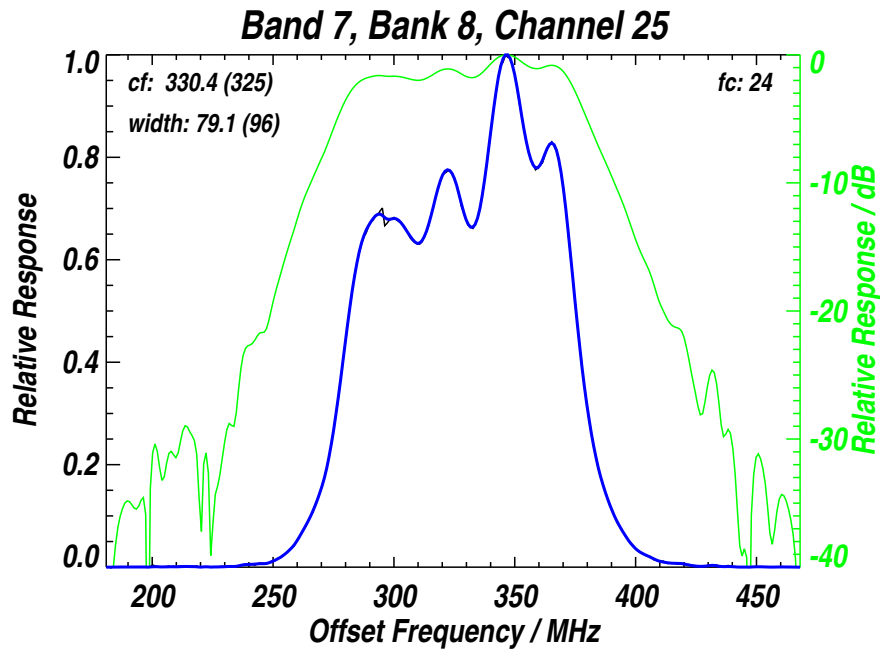


Figure H.209: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 7 (usb)**  
**Bank 8**  
**Origin = 242.704999998 GHz**

Figure H.210: Upper sideband front-end sweep data for Band 7 taken via Filterbank 8, channel 25. See text for additional details.

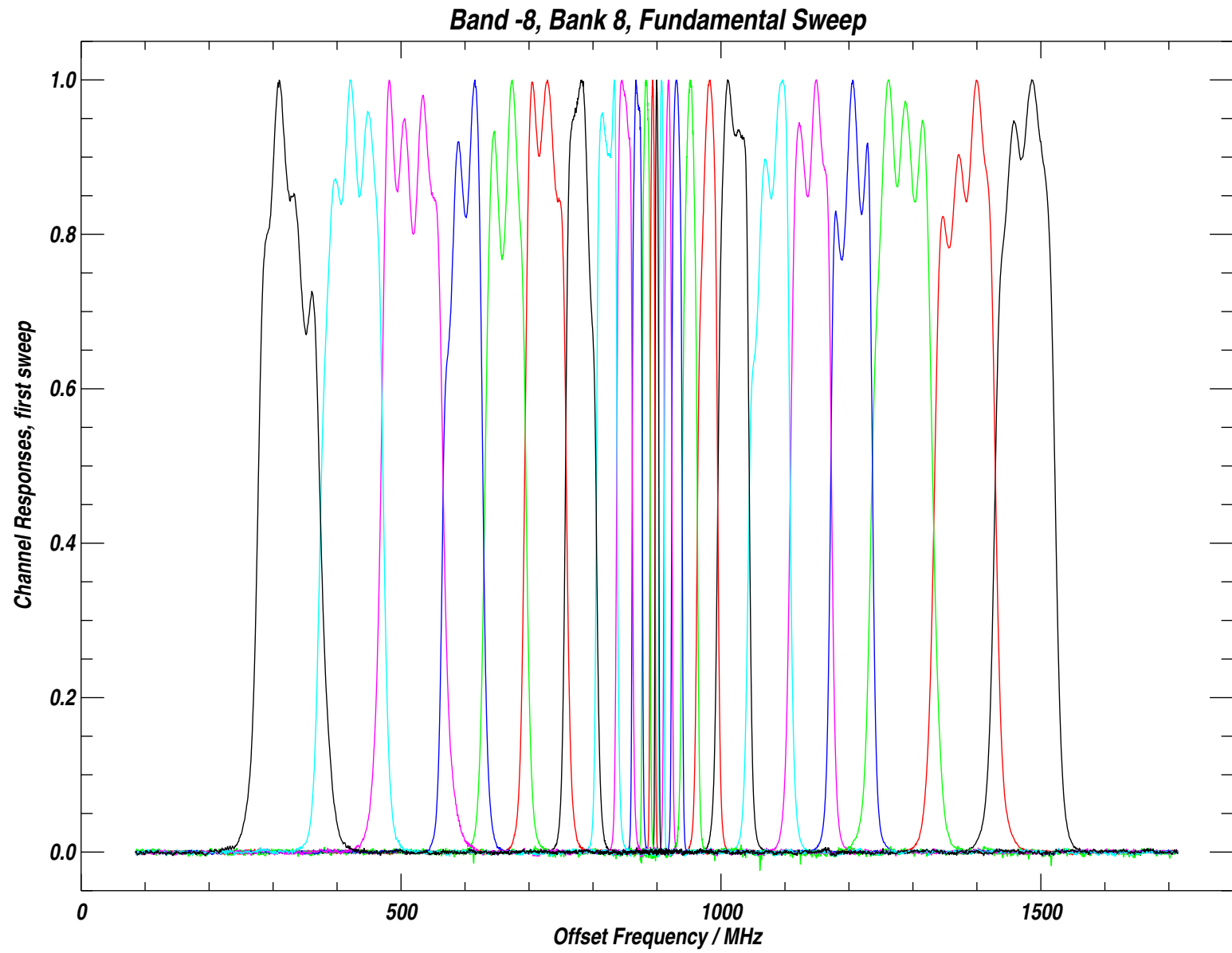


Figure H.211: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8. See text for additional details.

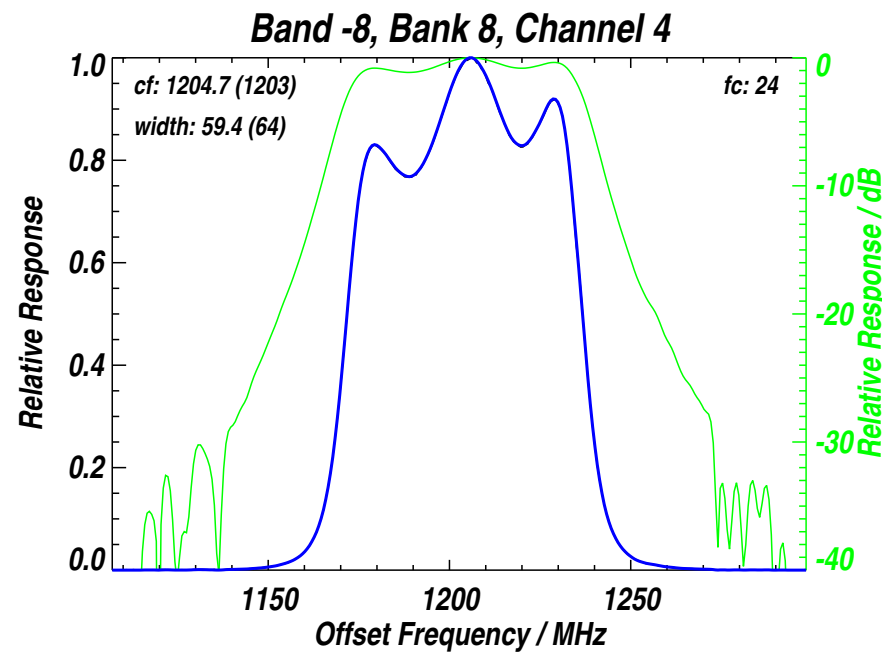
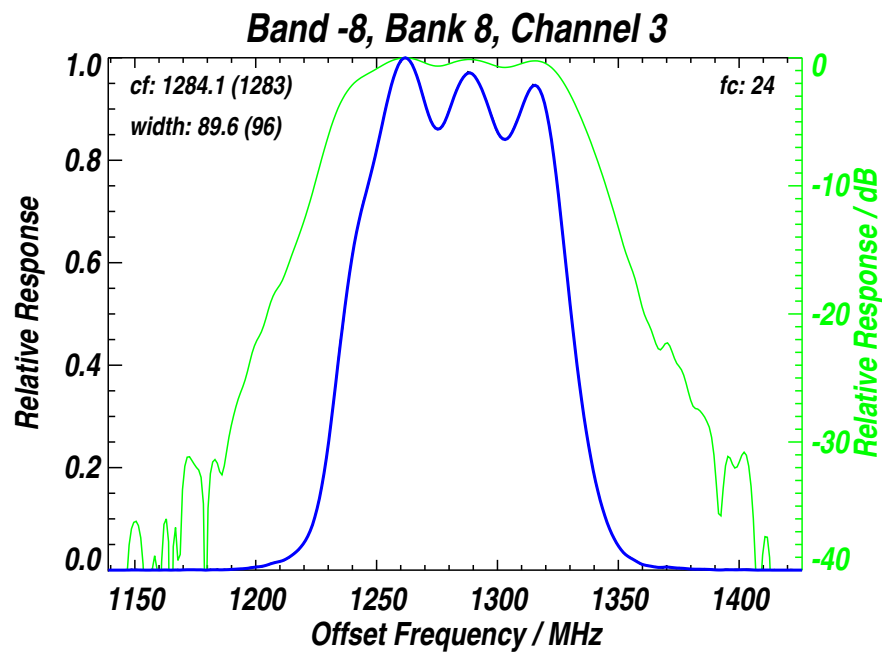
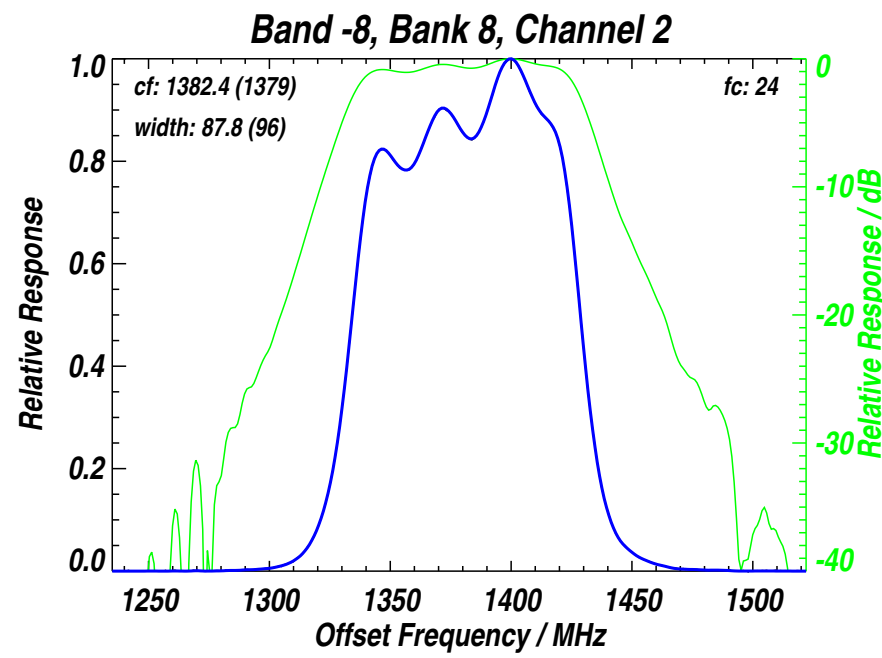
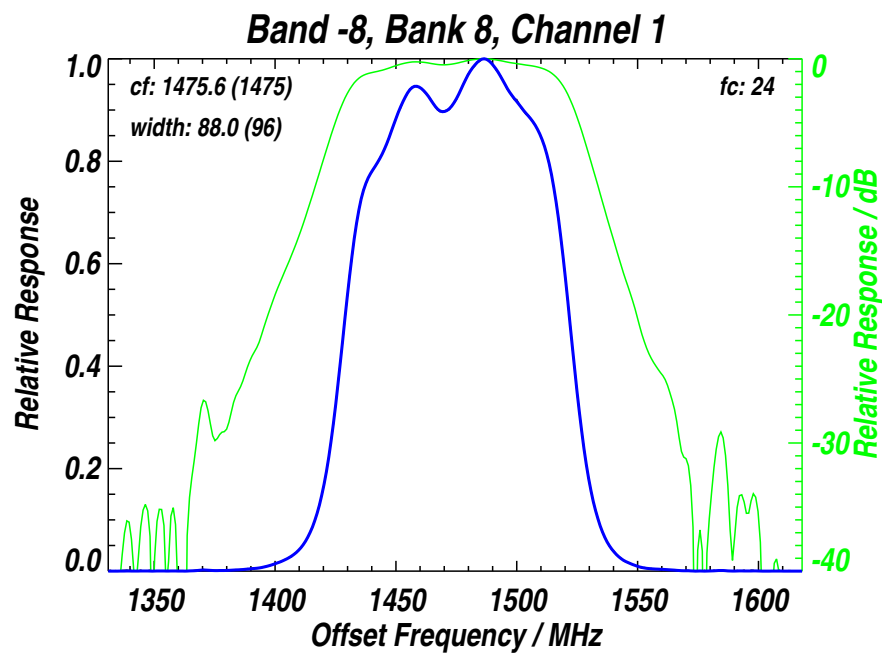


Figure H.212: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 1 to 4. See text for additional details.

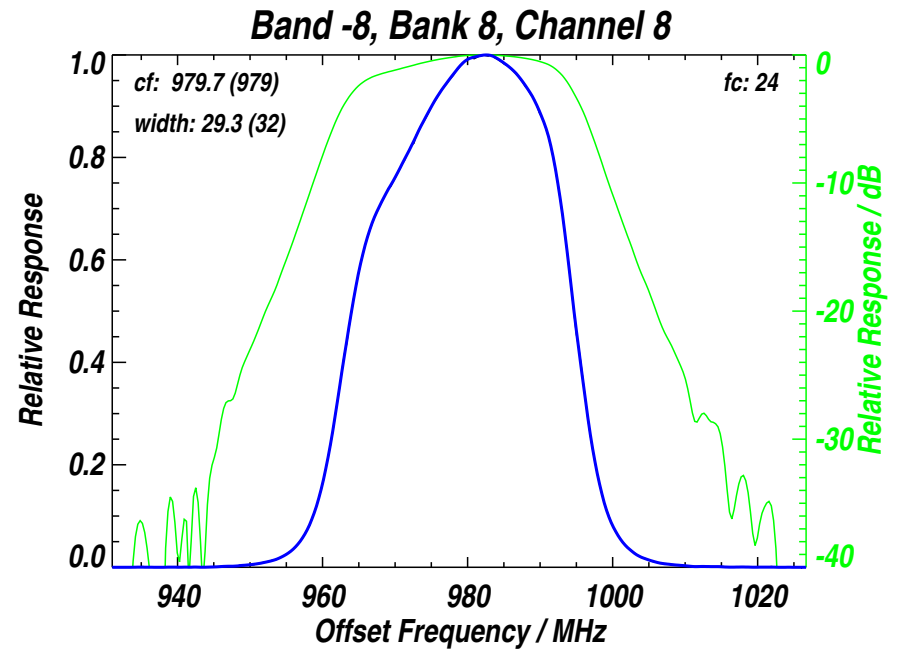
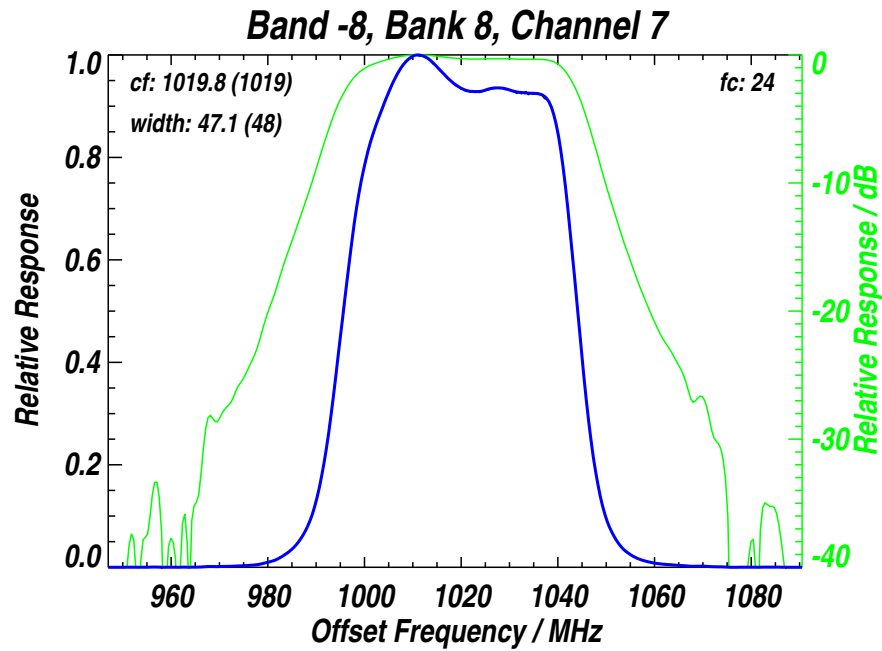
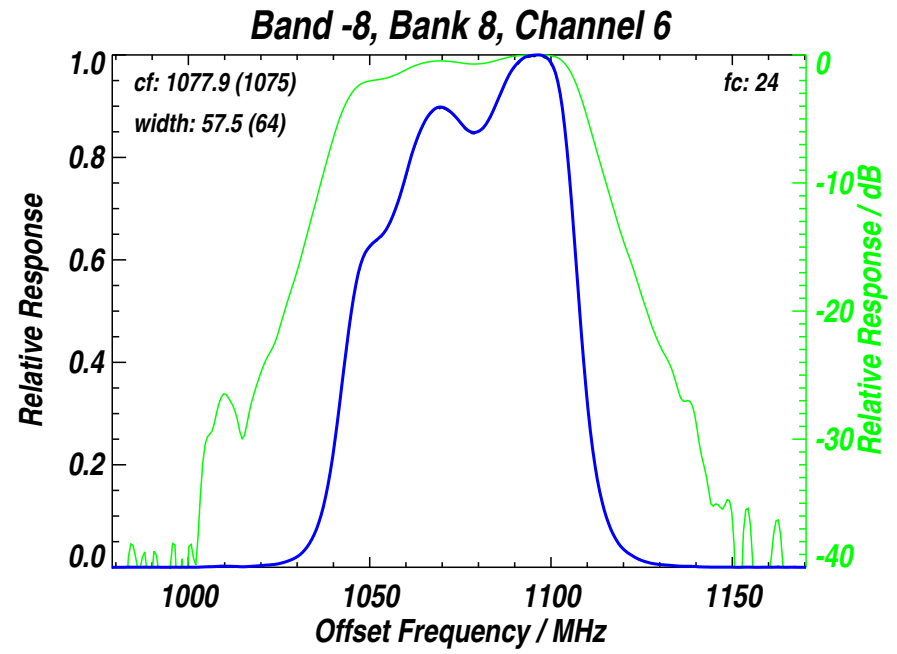
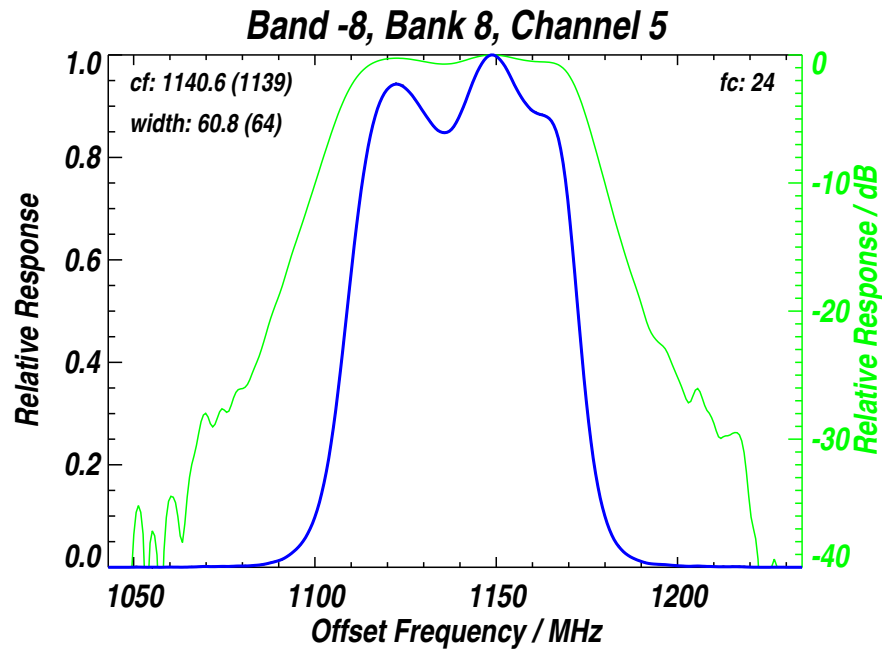


Figure H.213: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 5 to 8. See text for additional details.

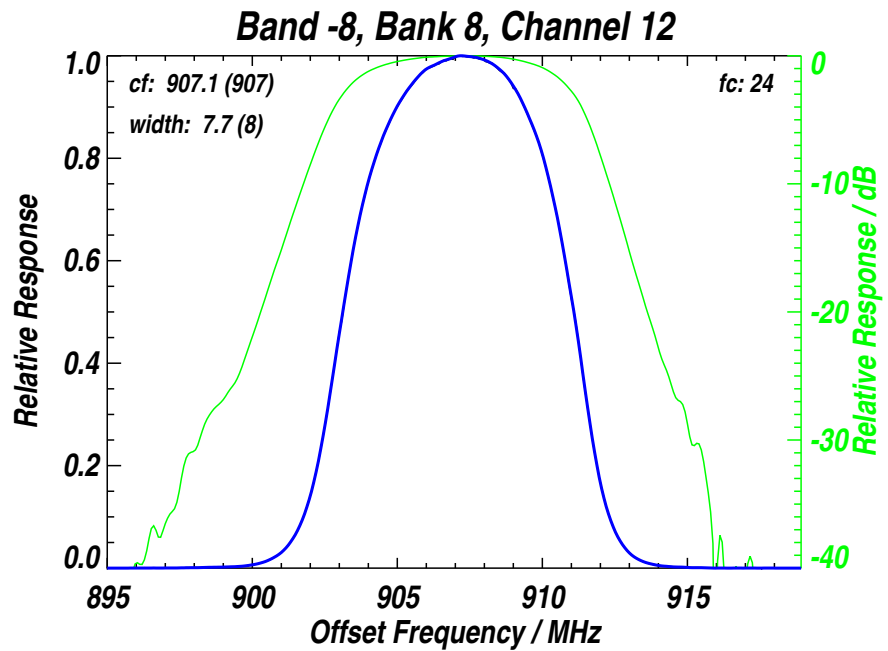
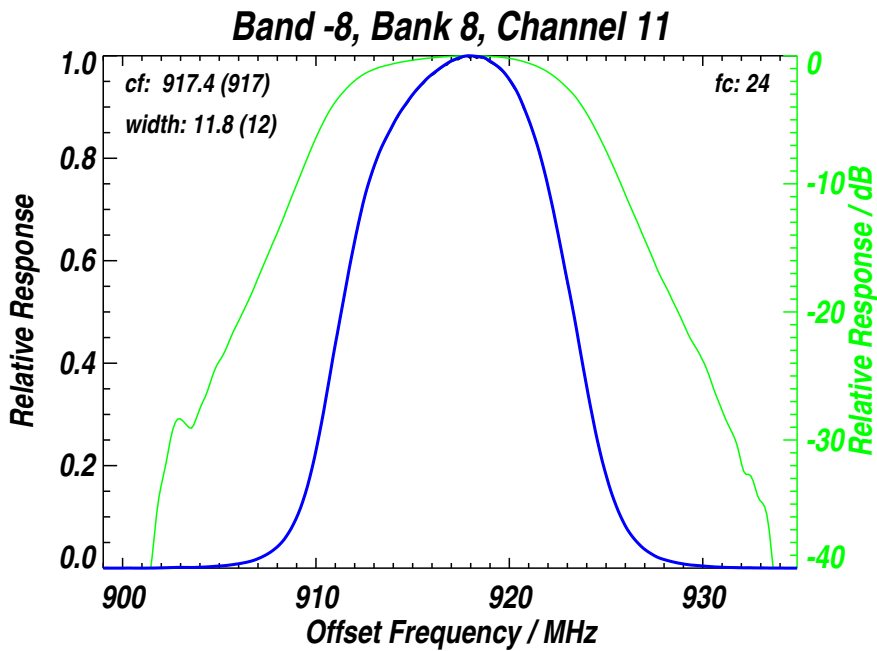
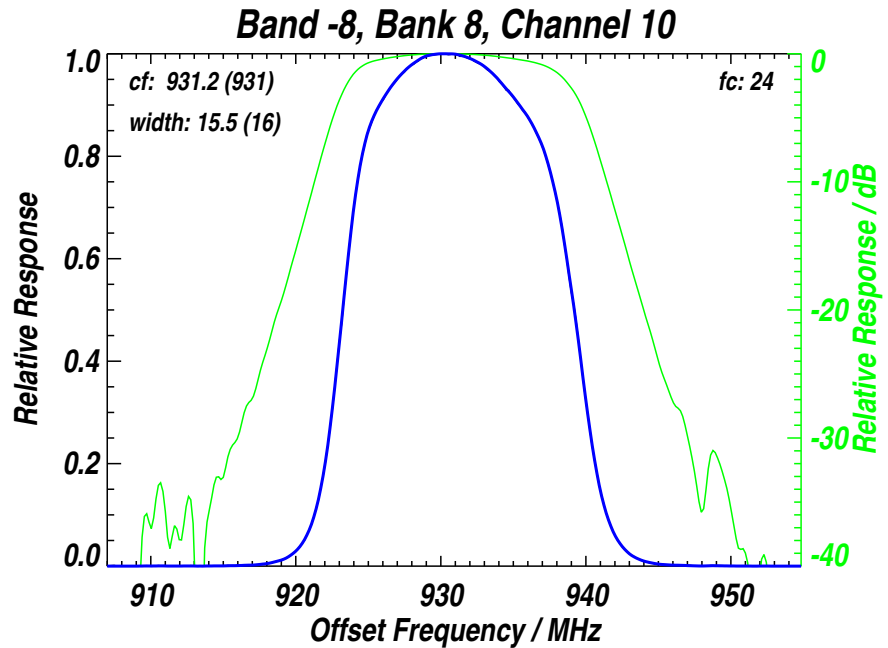
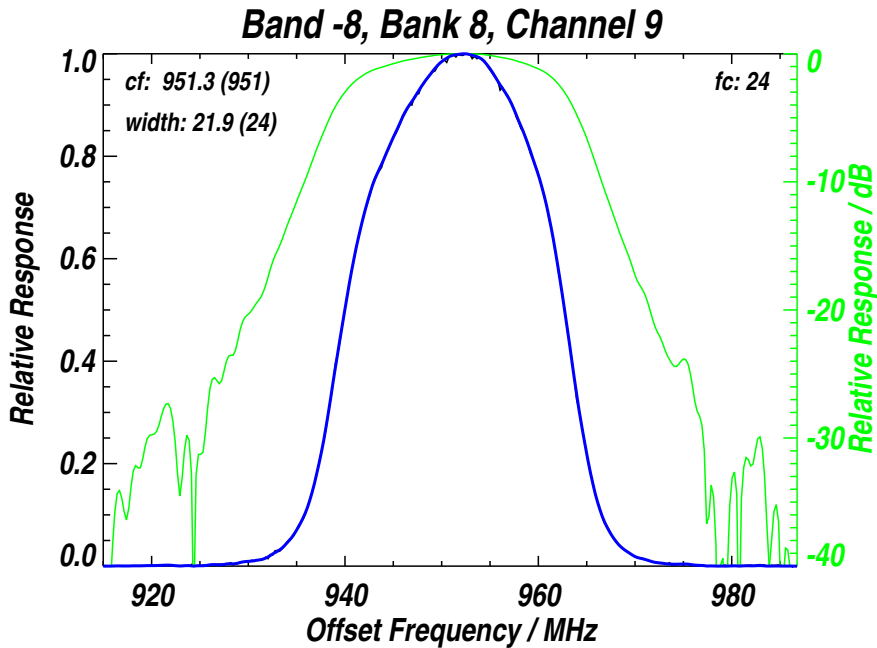


Figure H.214: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 9 to 12. See text for additional details.

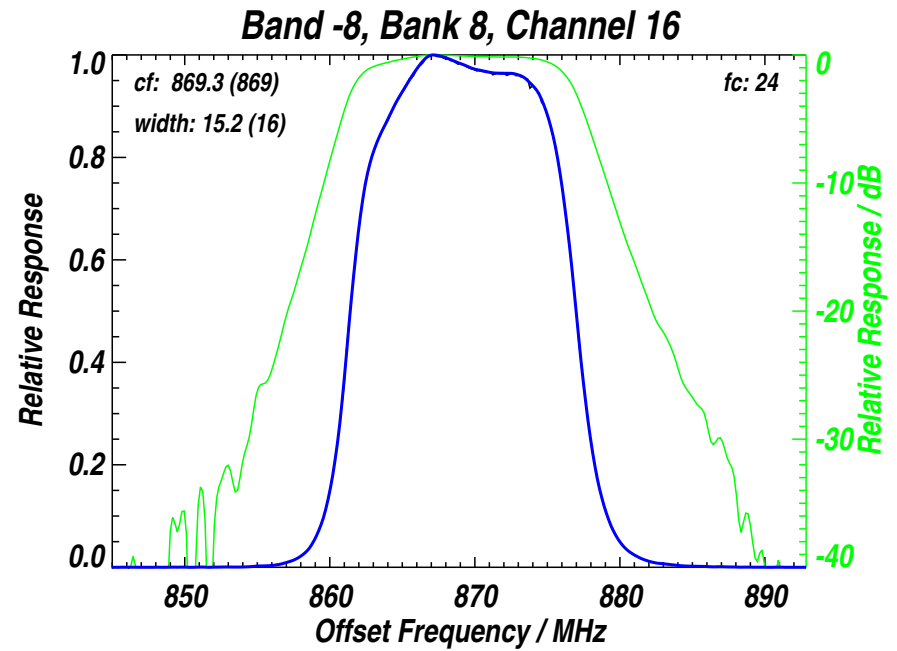
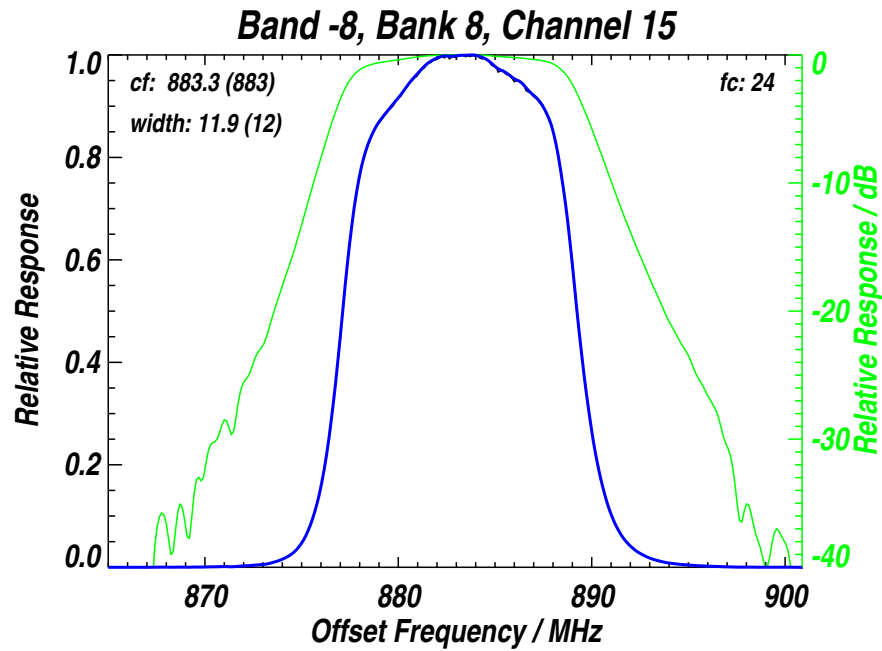
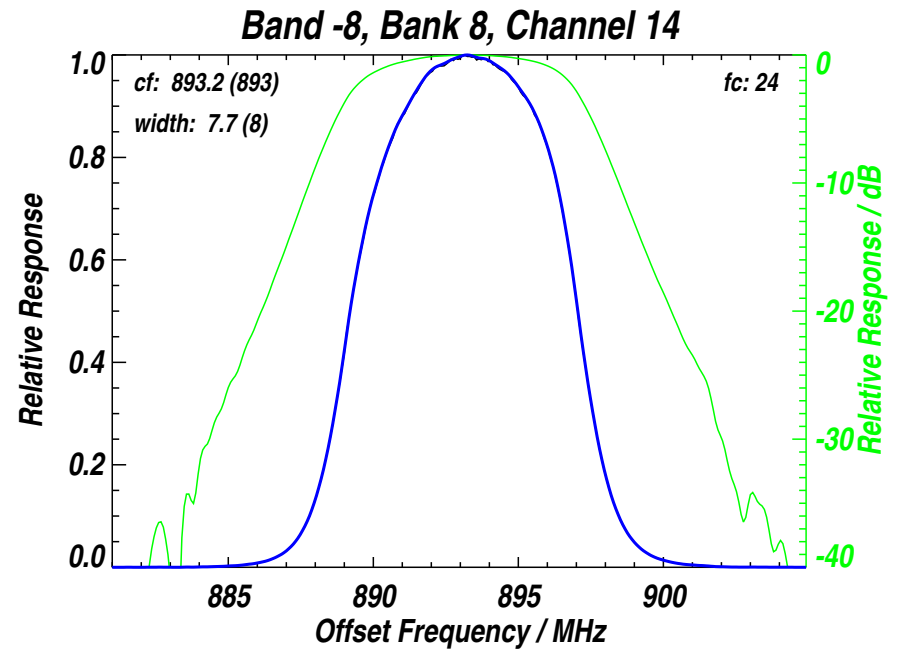
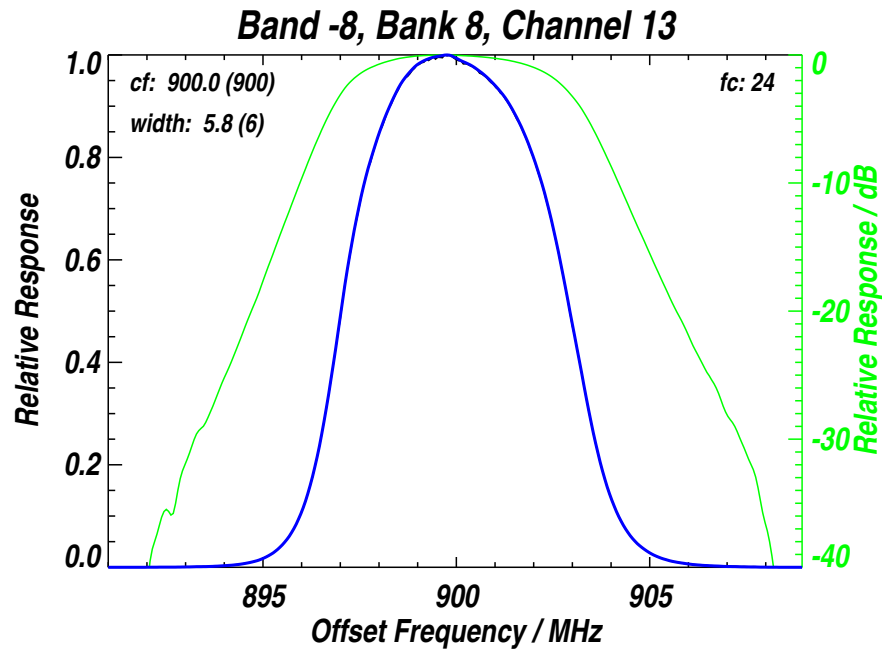


Figure H.215: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 13 to 16. See text for additional details.

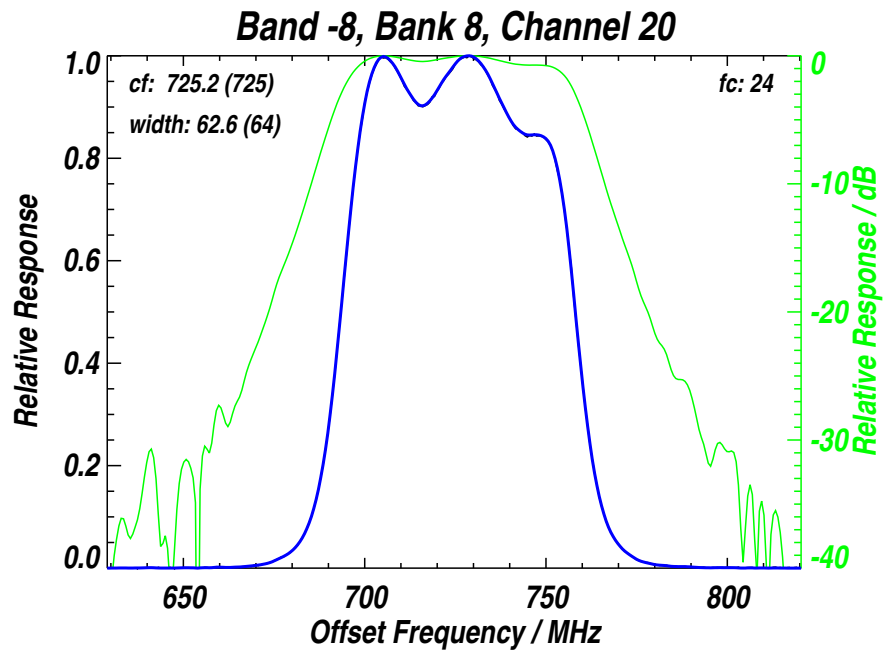
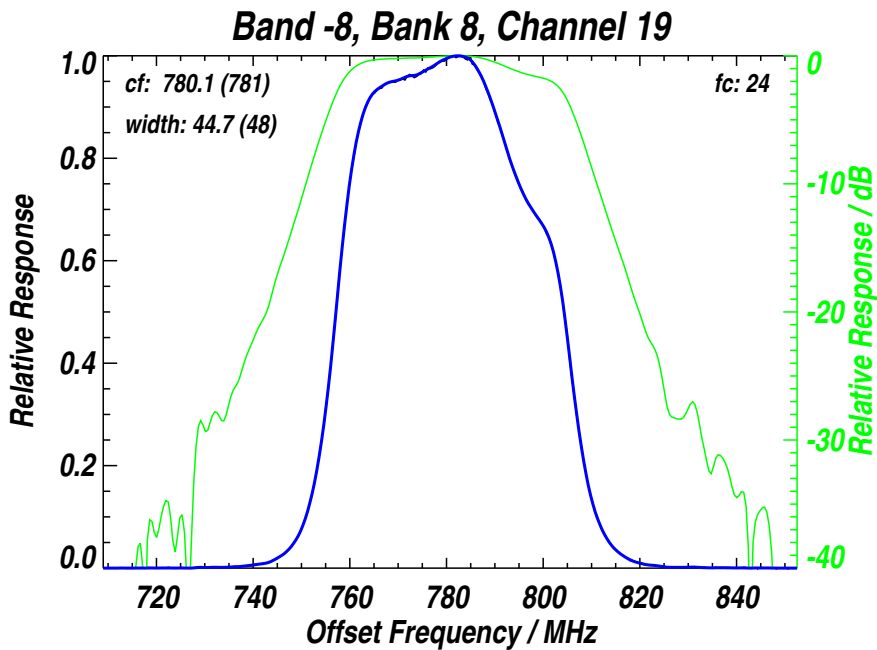
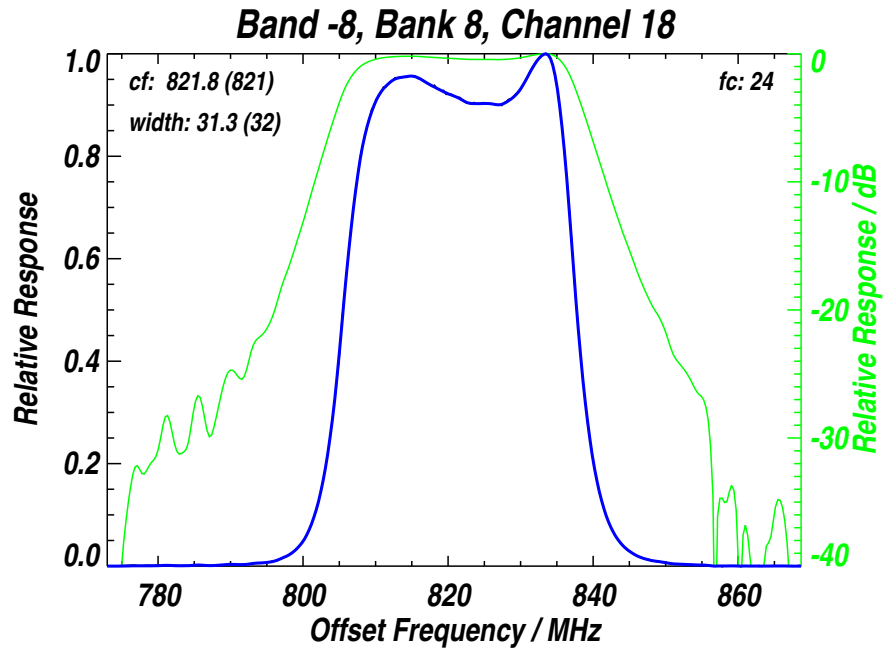
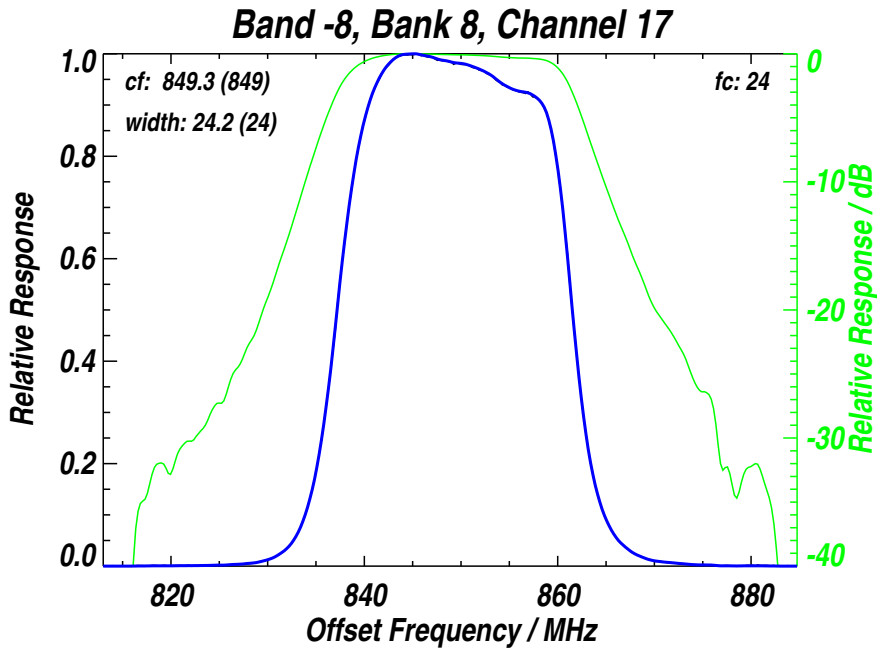


Figure H.216: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 17 to 20. See text for additional details.



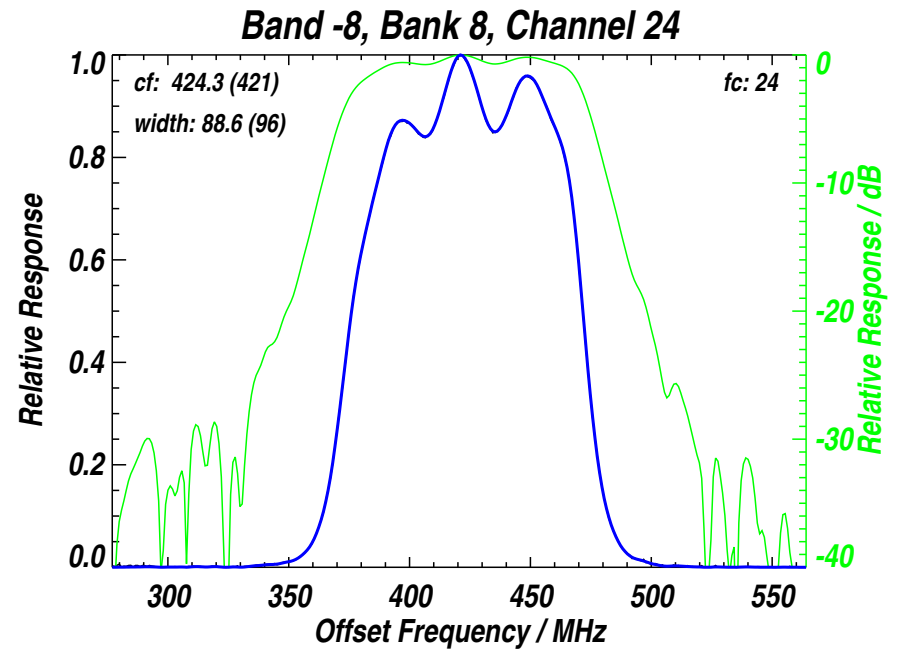
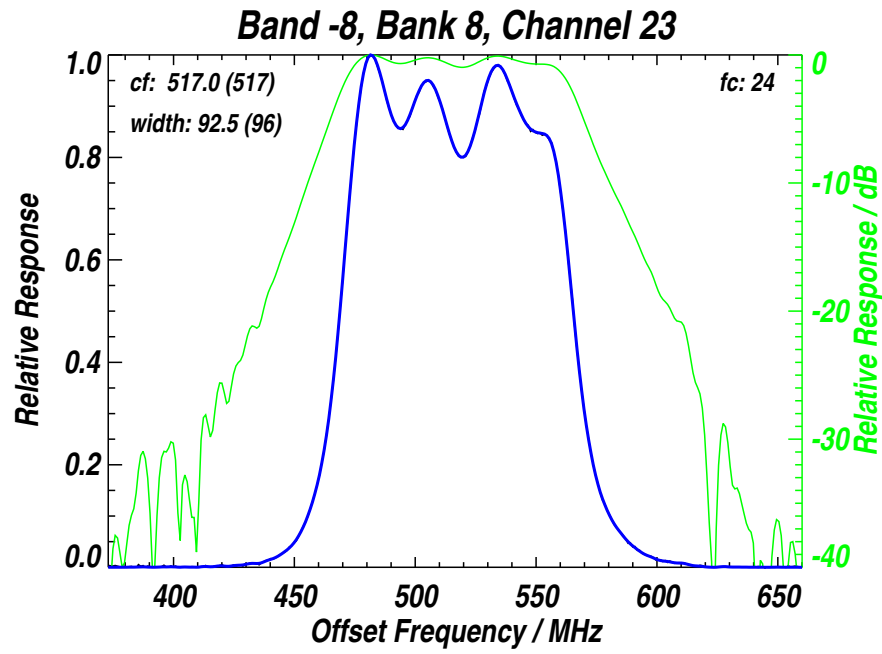
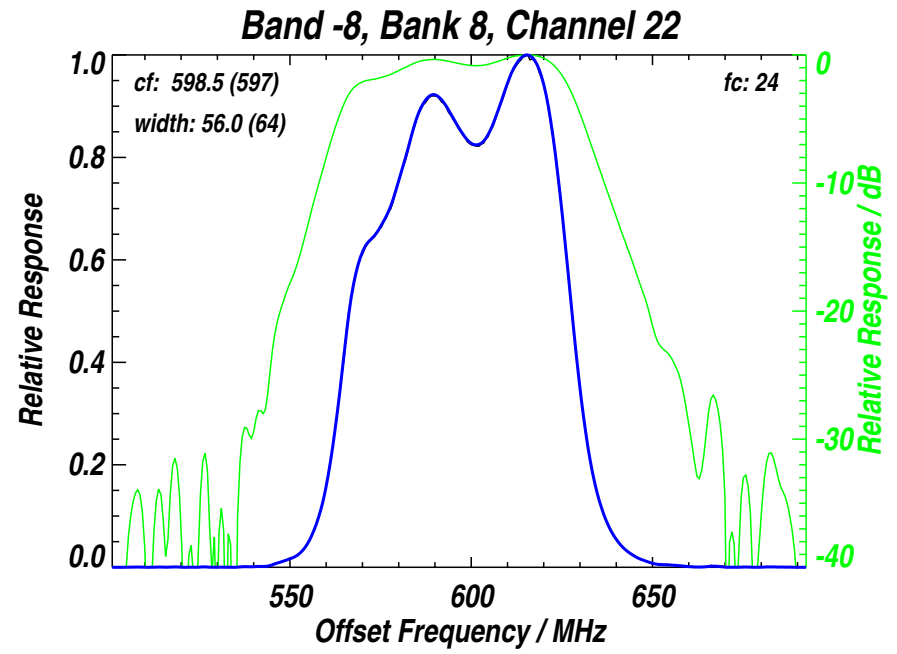
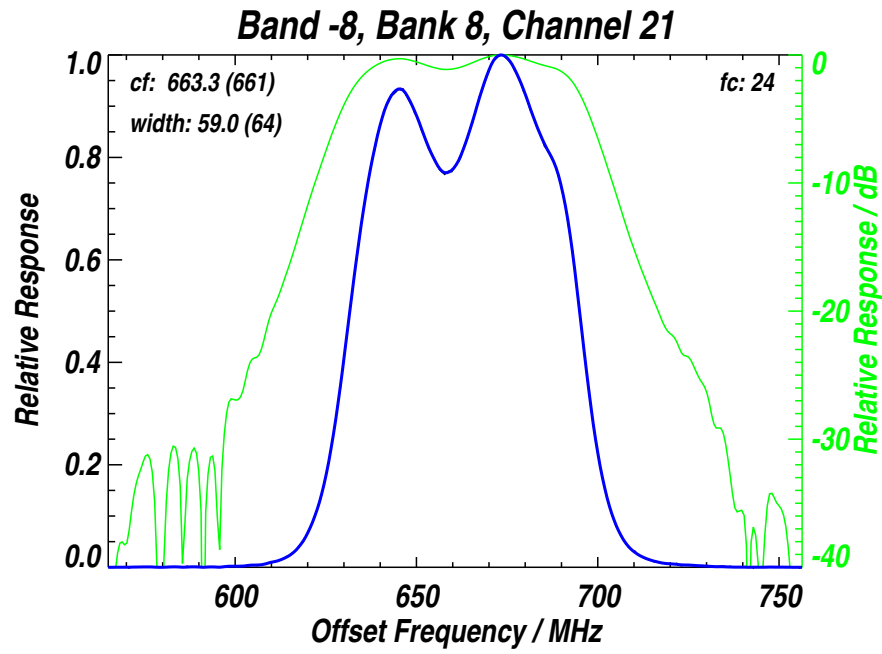
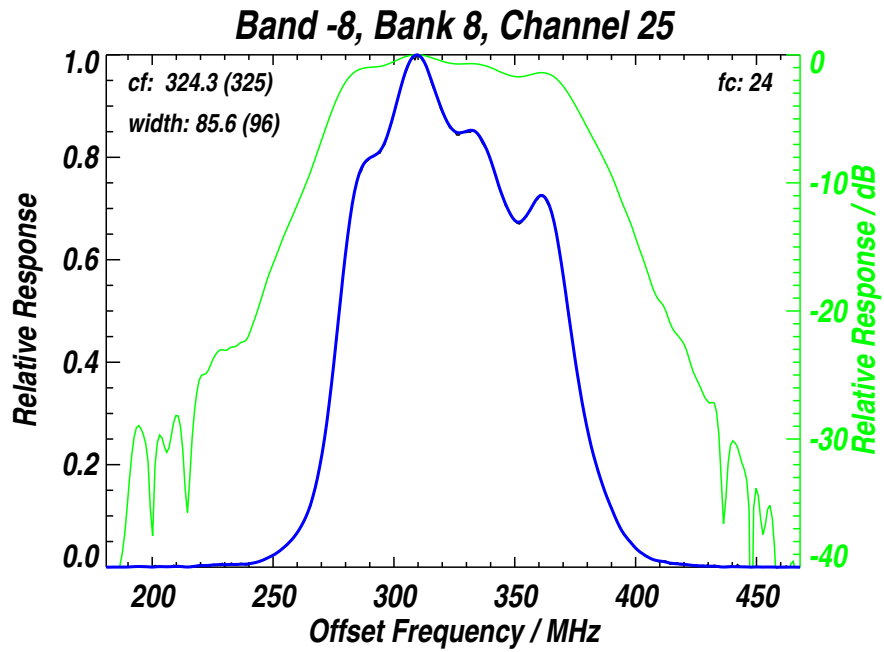


Figure H.217: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 8 (lsb)**  
**Bank 8**  
**Origin = 233.051428566 GHz**

Figure H.218: Lower sideband front-end sweep data for Band 8 taken via Filterbank 8, channel 25. See text for additional details.

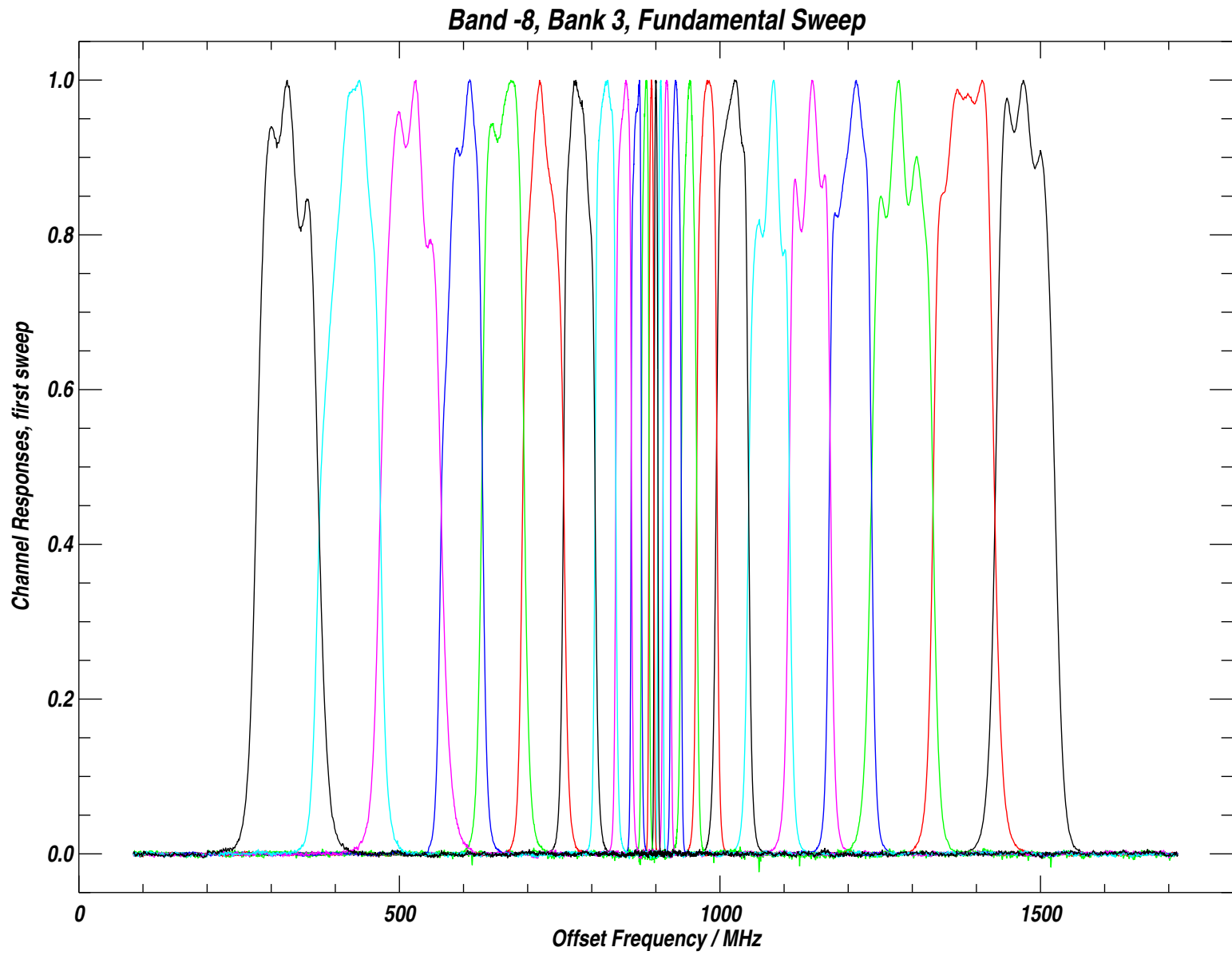


Figure H.219: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3. See text for additional details.

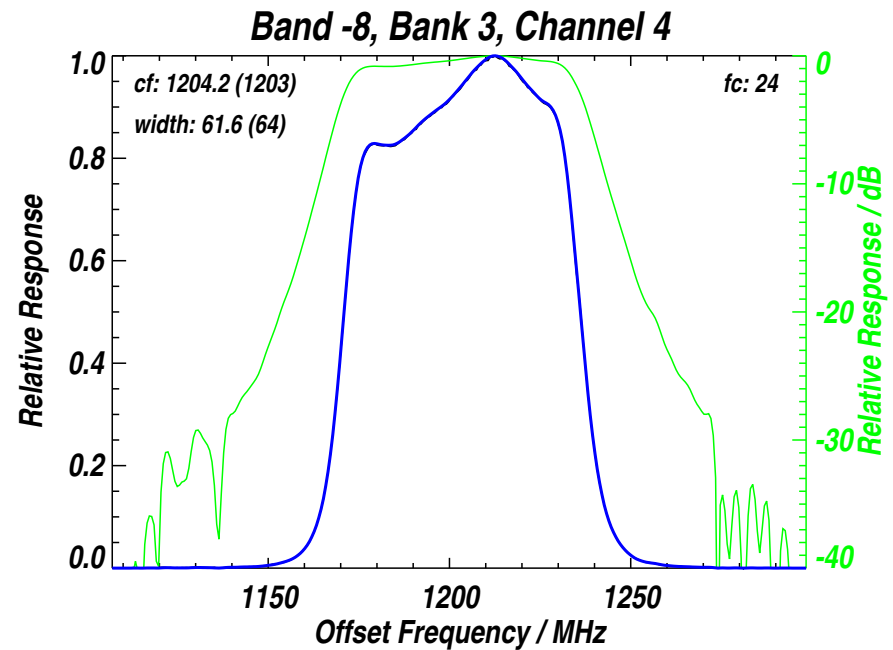
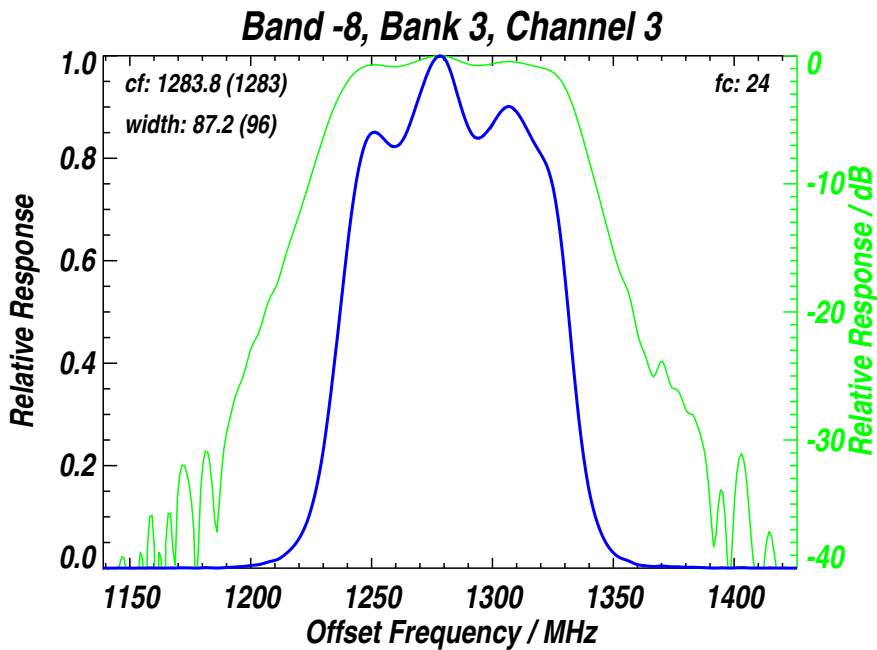
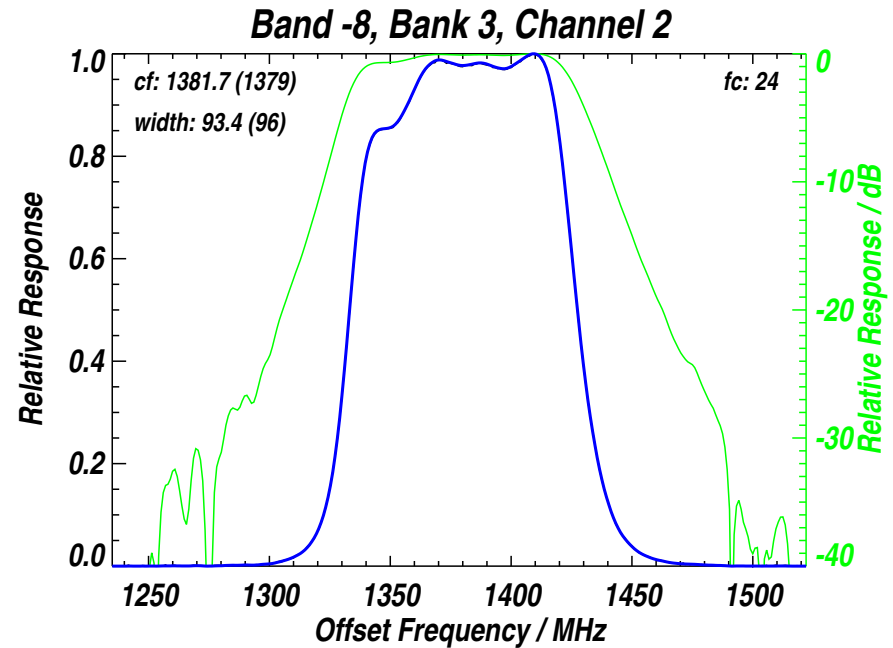
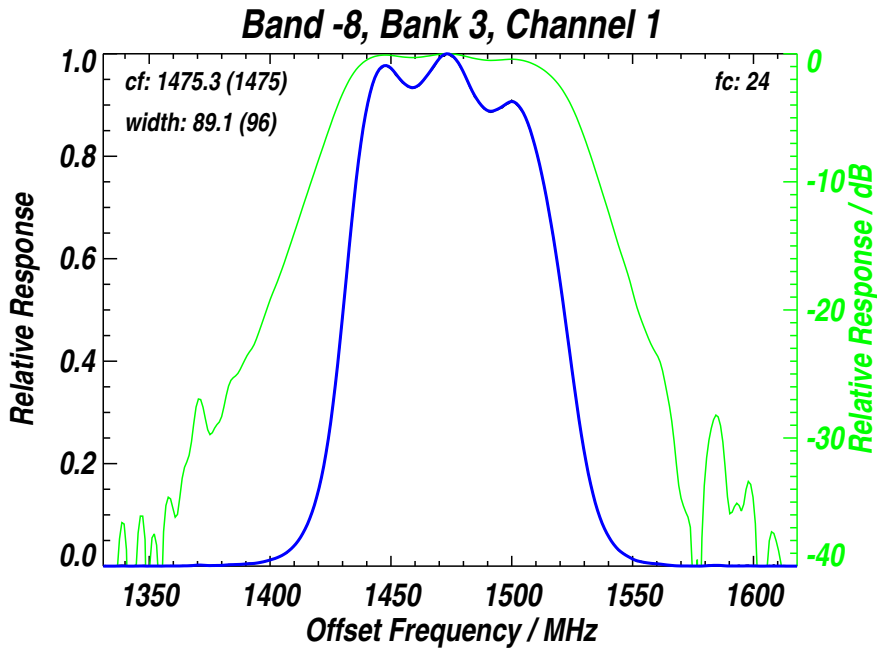


Figure H.220: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 1 to 4. See text for additional details.

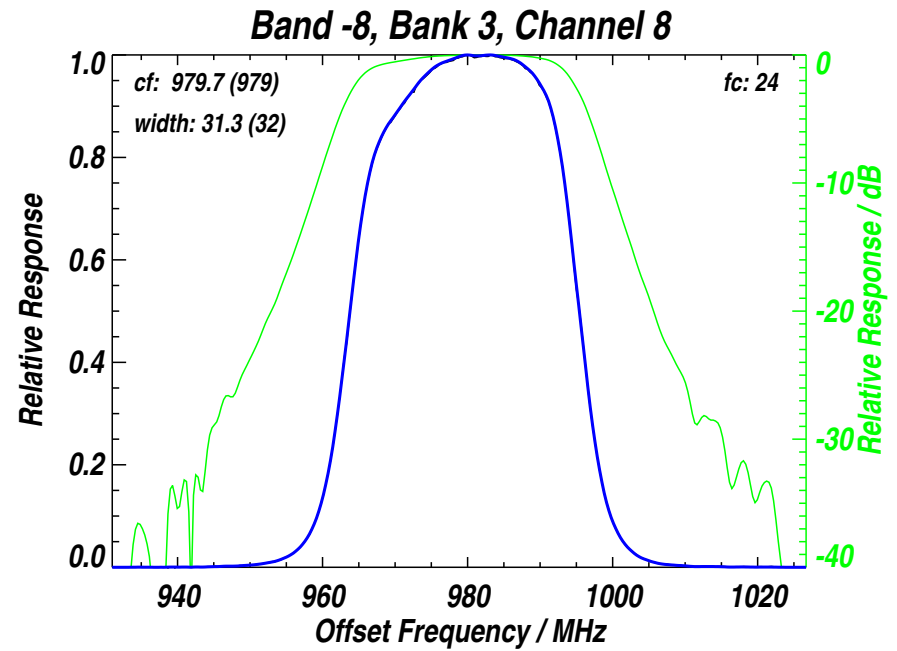
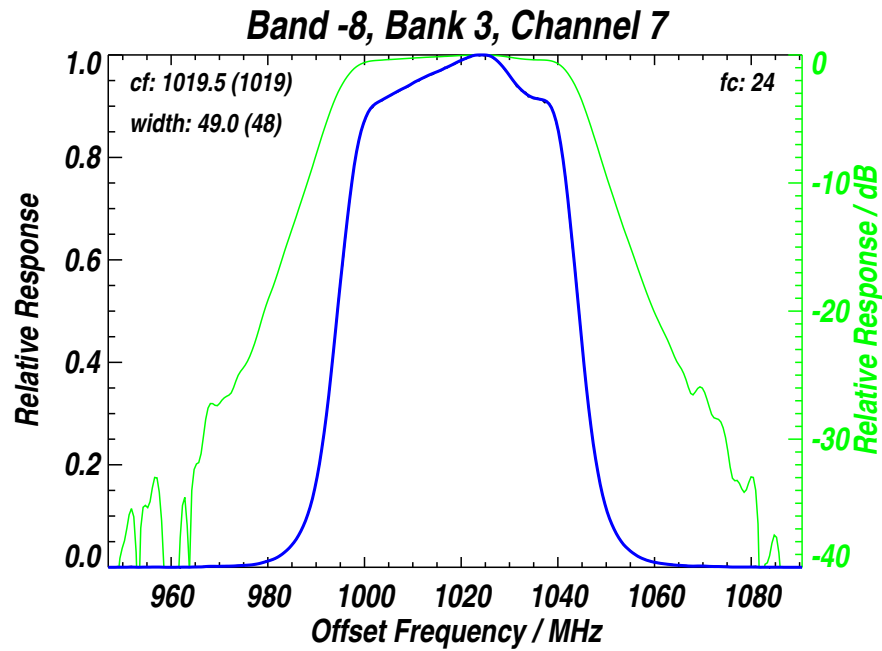
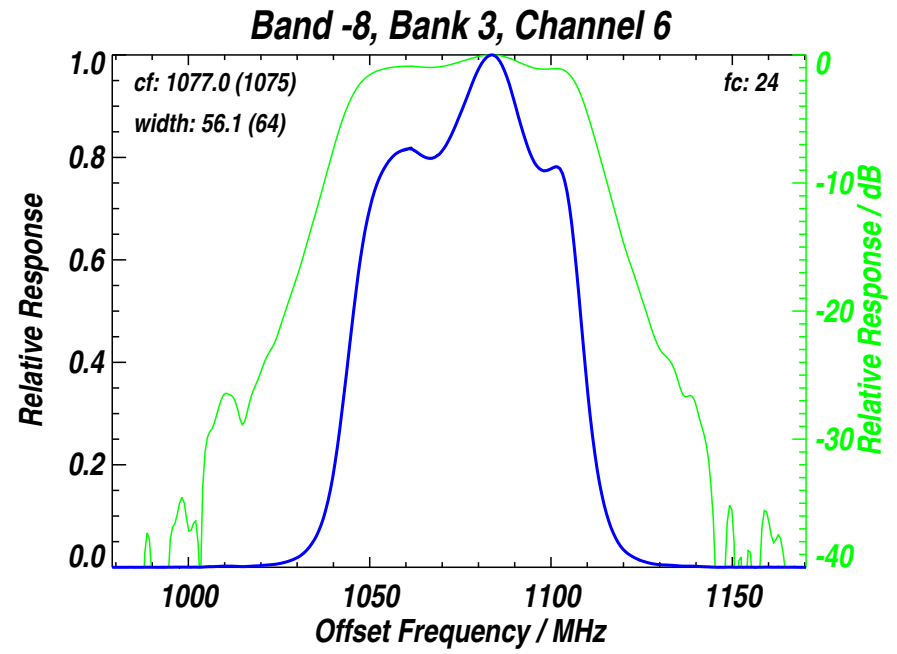
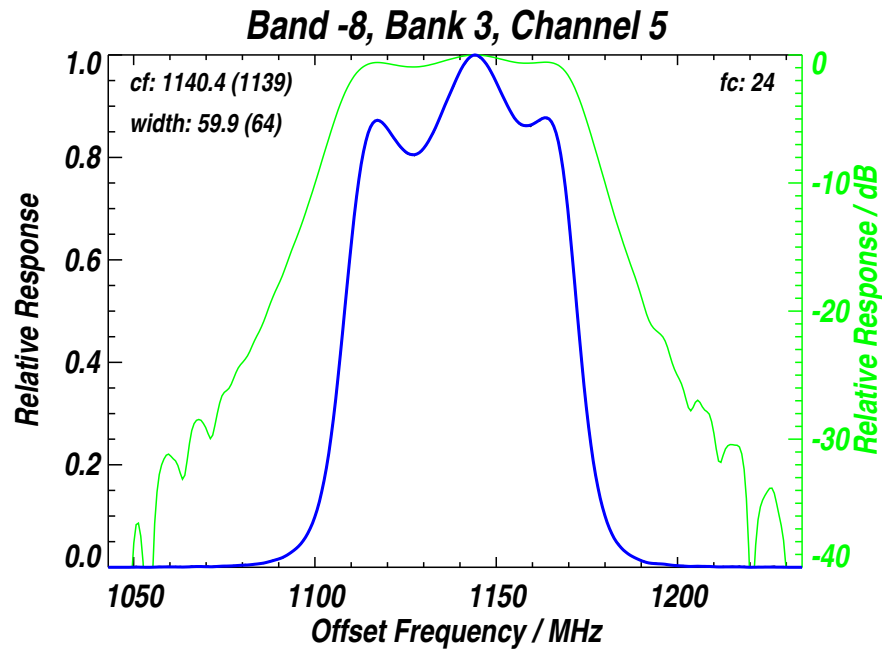


Figure H.221: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 5 to 8. See text for additional details.

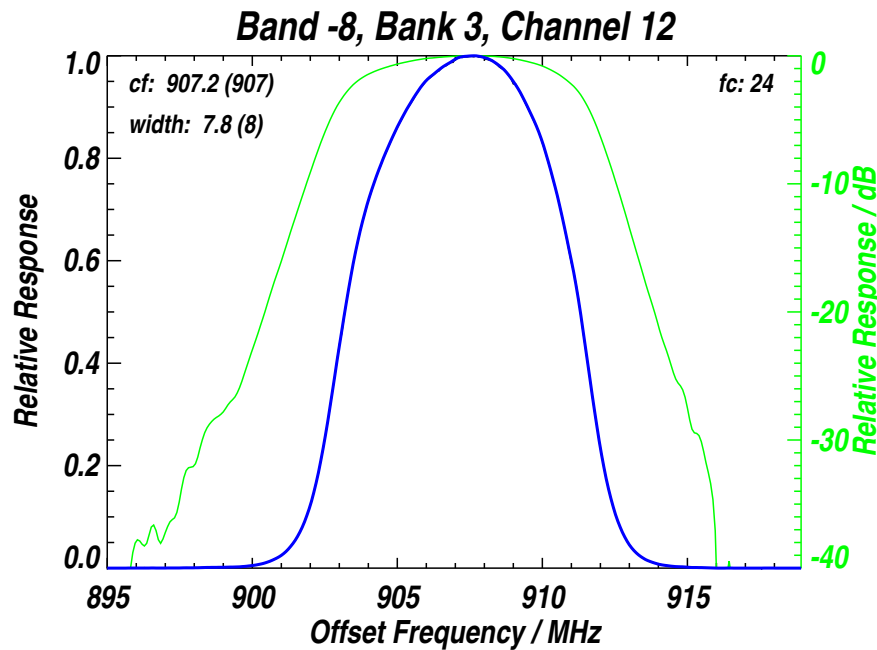
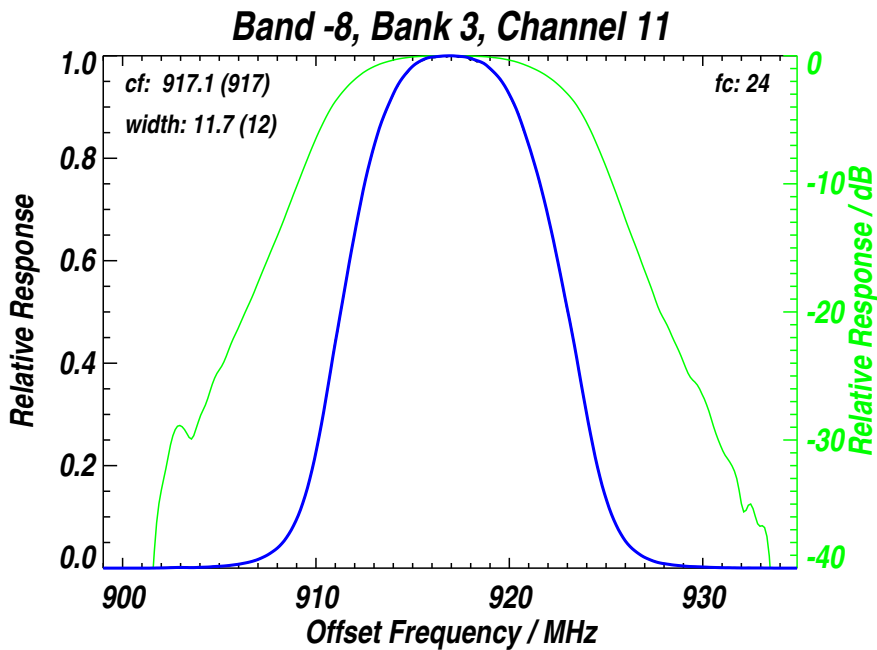
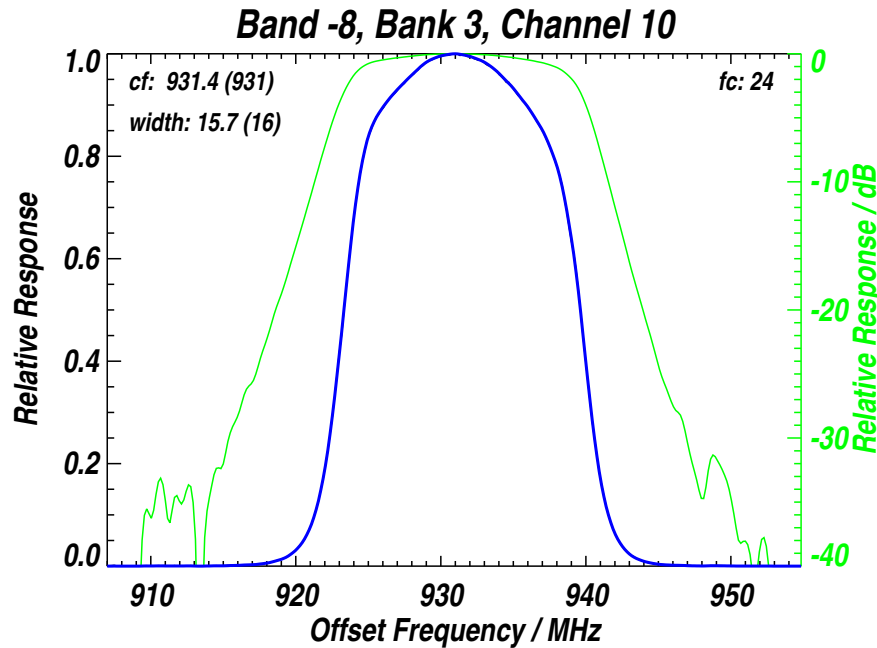
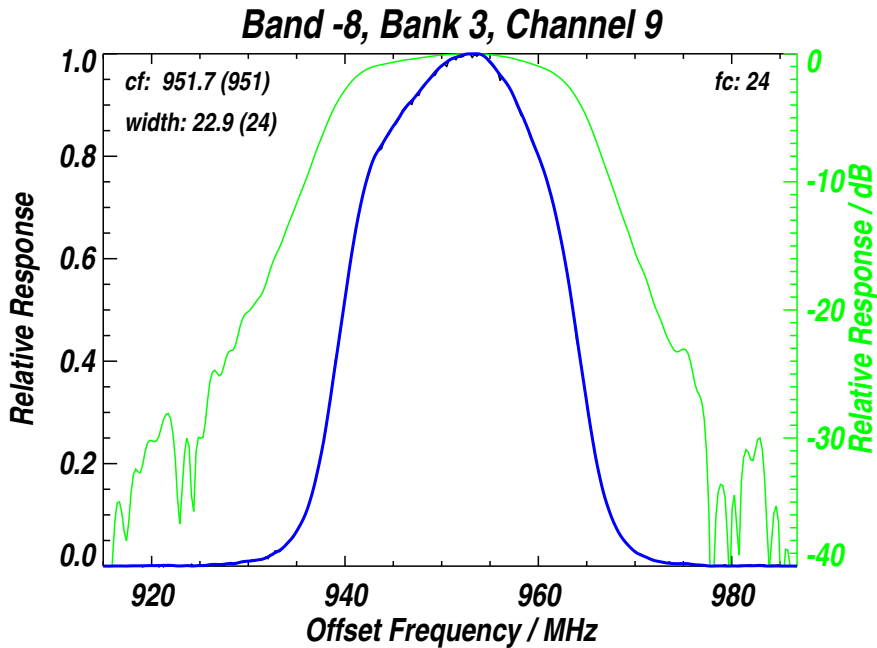


Figure H.222: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 9 to 12. See text for additional details.

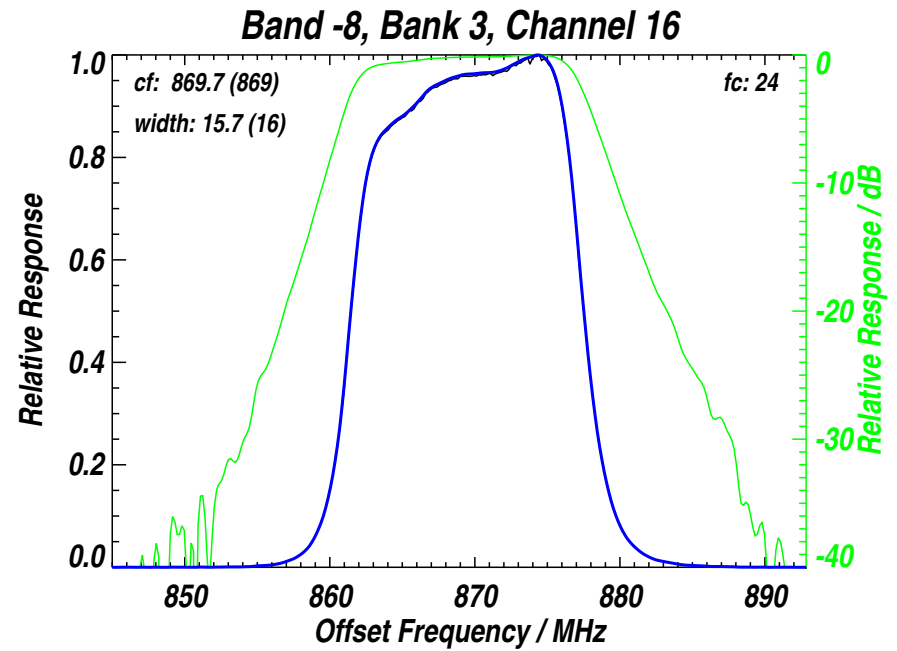
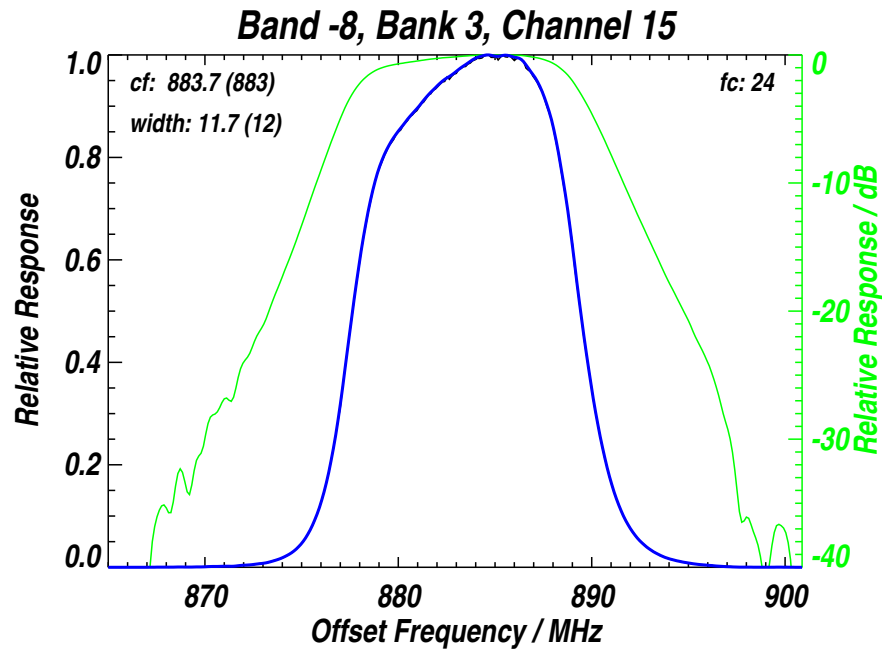
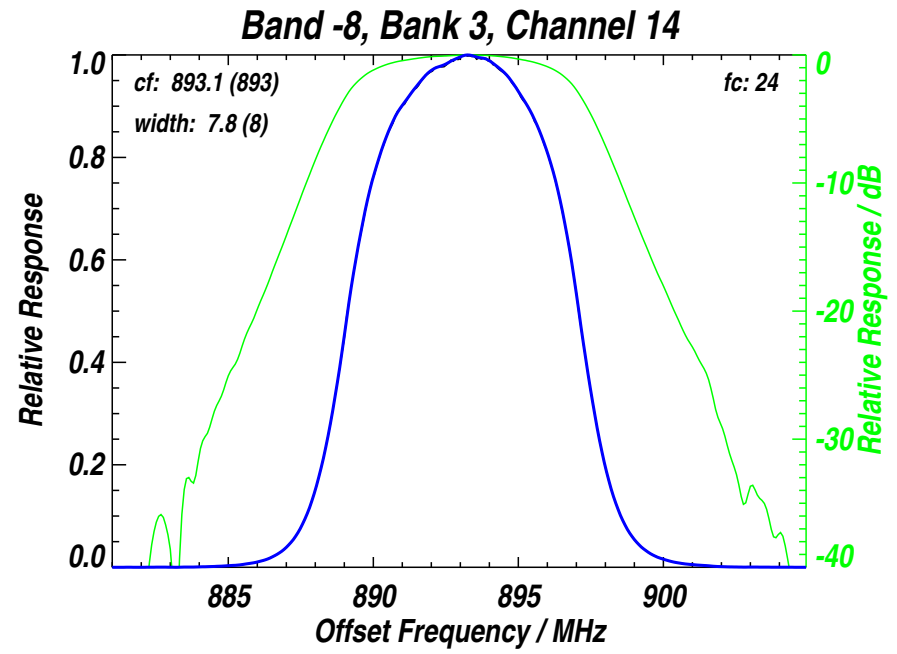
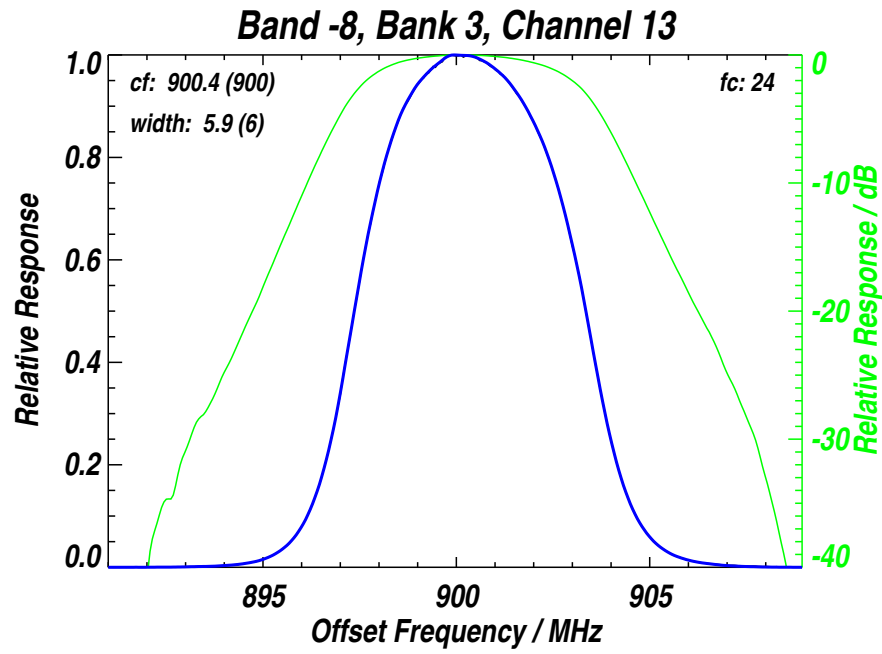


Figure H.223: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 13 to 16. See text for additional details.

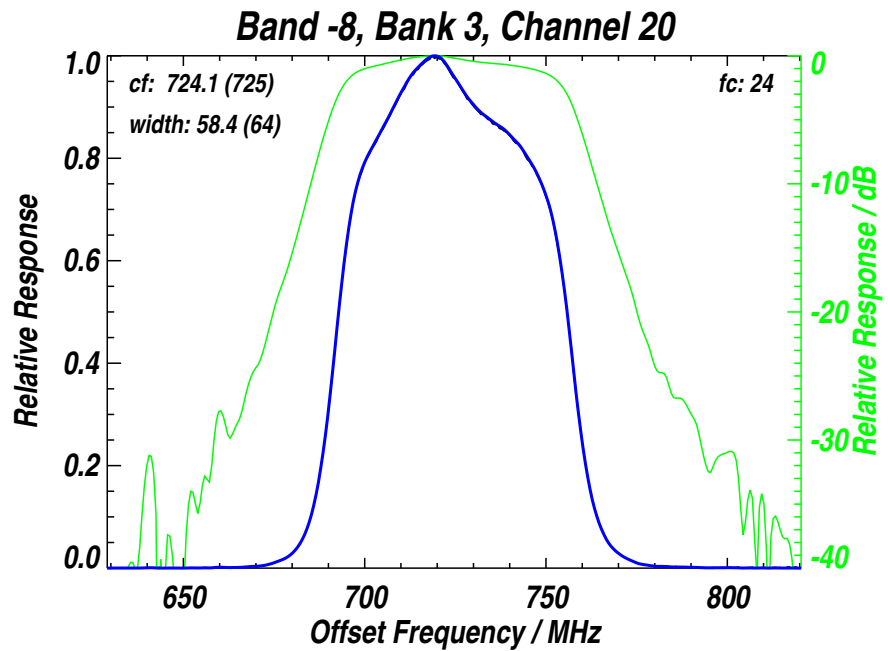
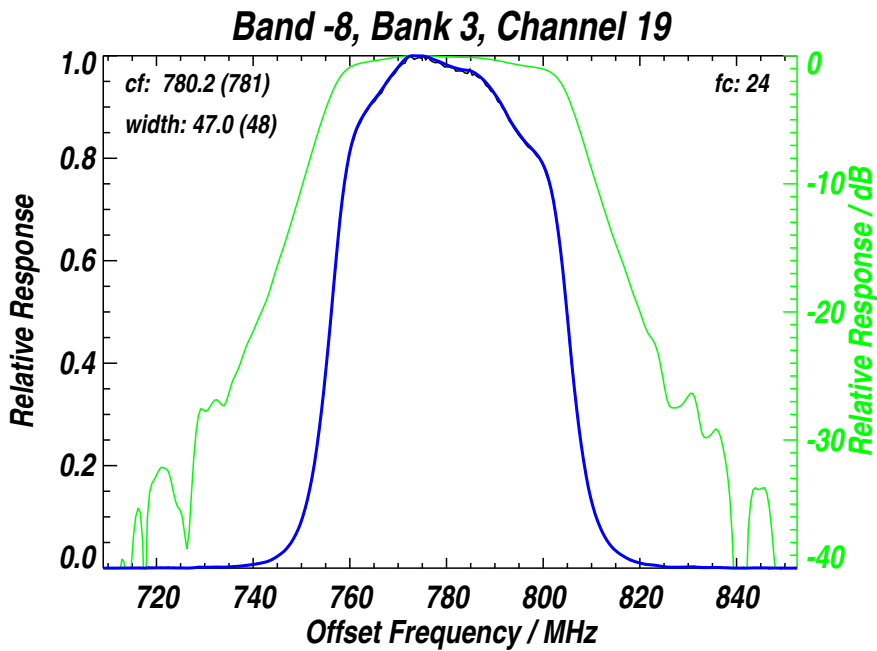
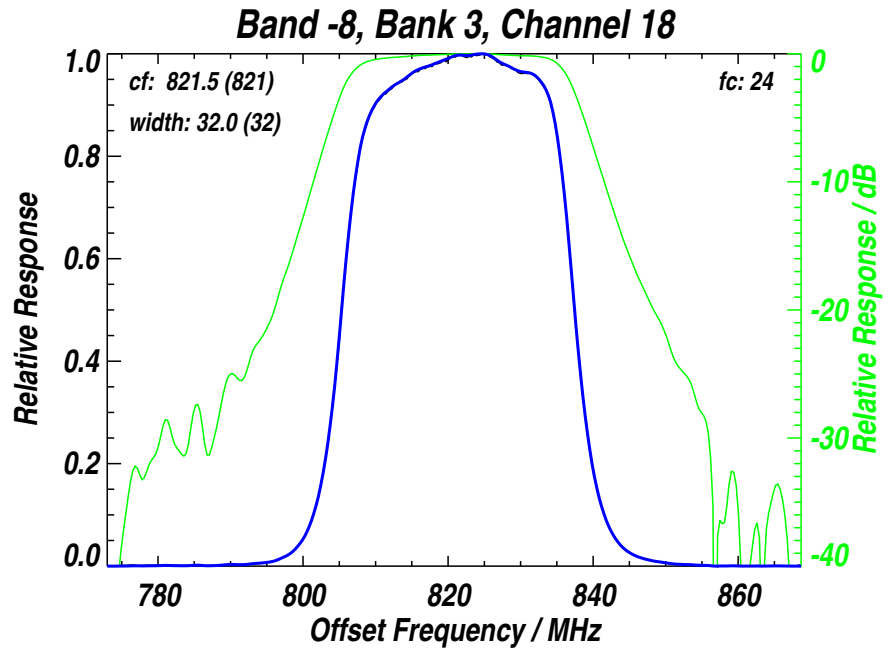
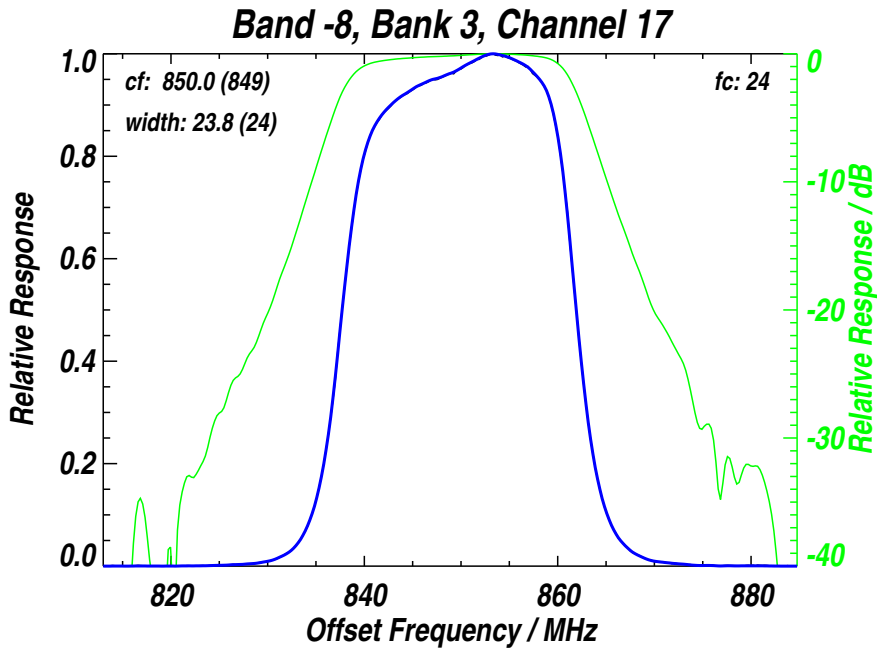


Figure H.224: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 17 to 20. See text for additional details.



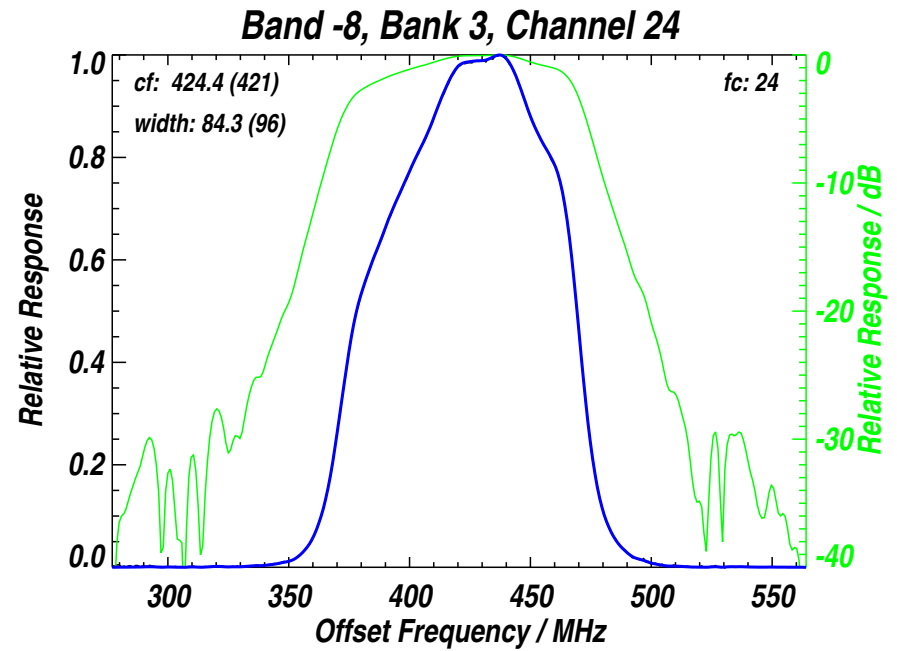
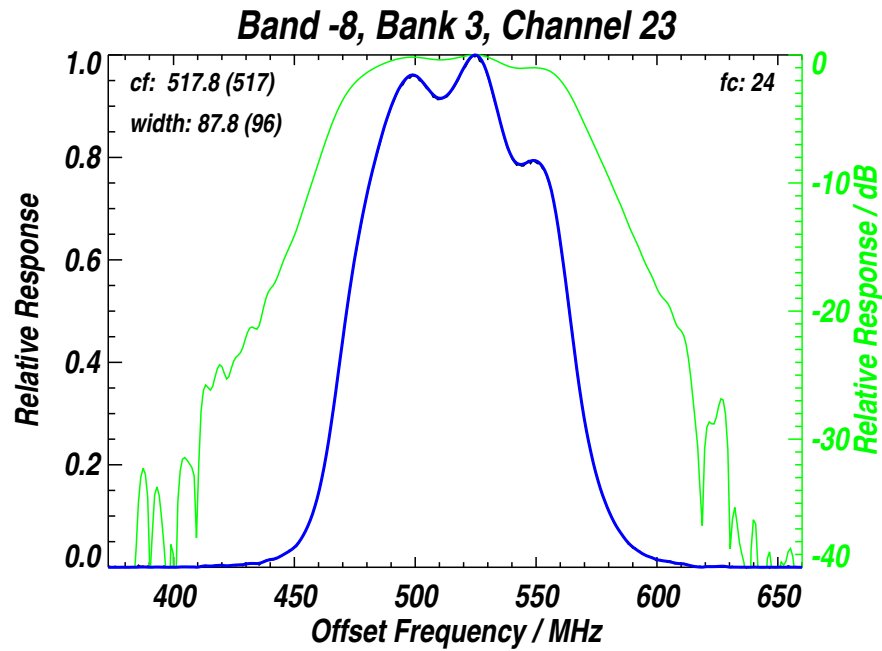
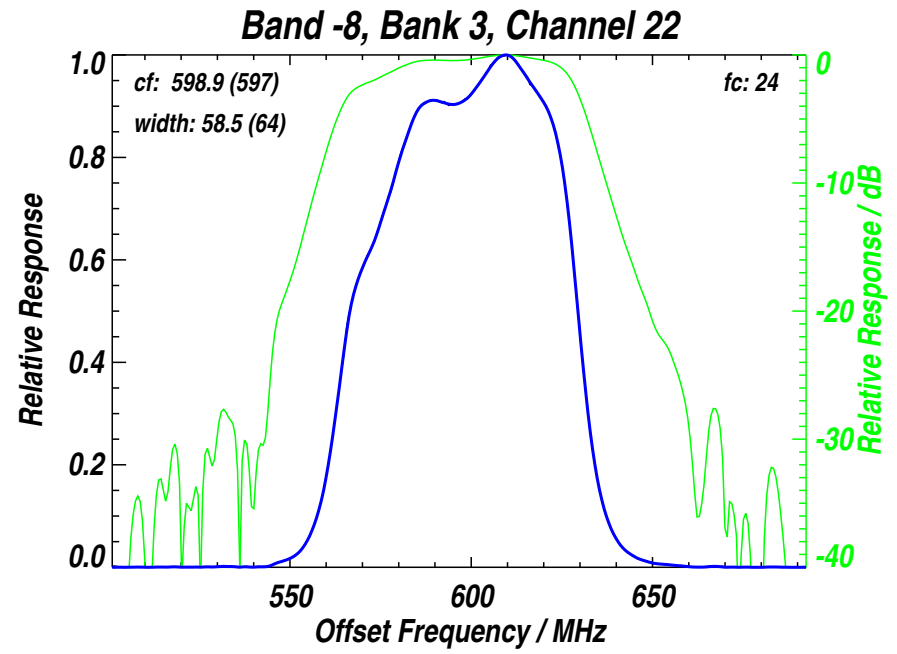
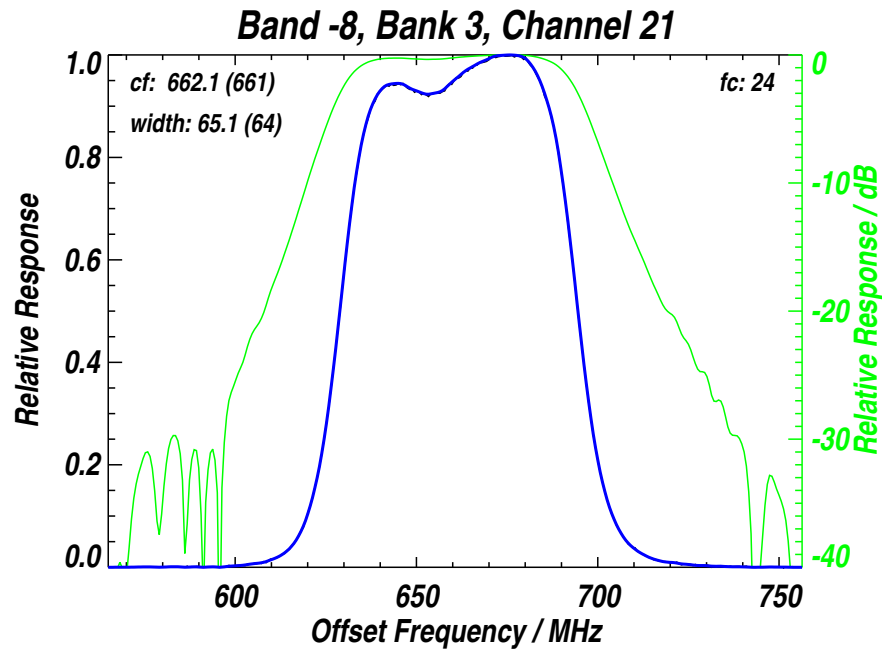
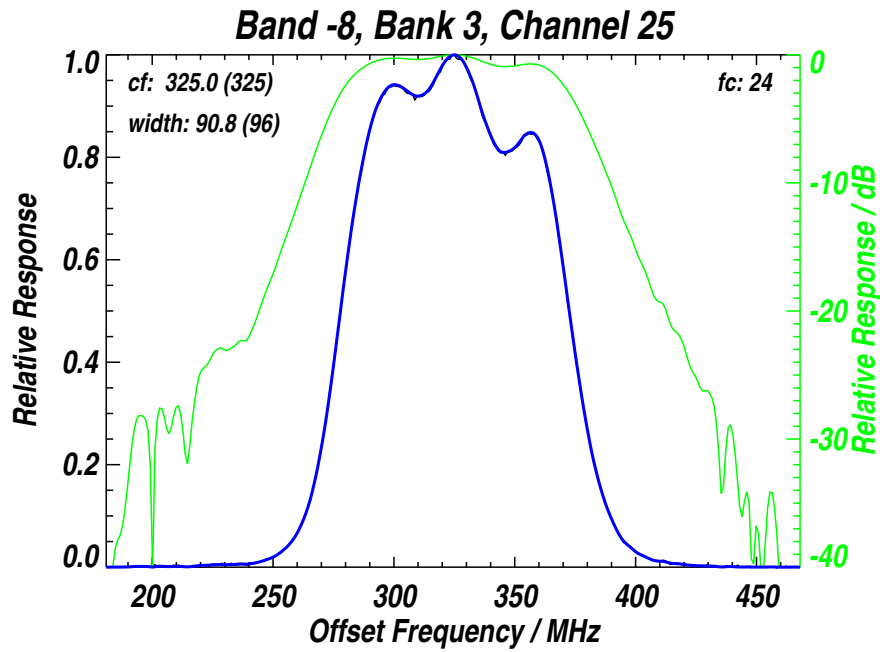


Figure H.225: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 8 (lsb)**  
**Bank 3**  
**Origin = 233.051428566 GHz**

Figure H.226: Lower sideband front-end sweep data for Band 8 taken via Filterbank 3, channel 25. See text for additional details.

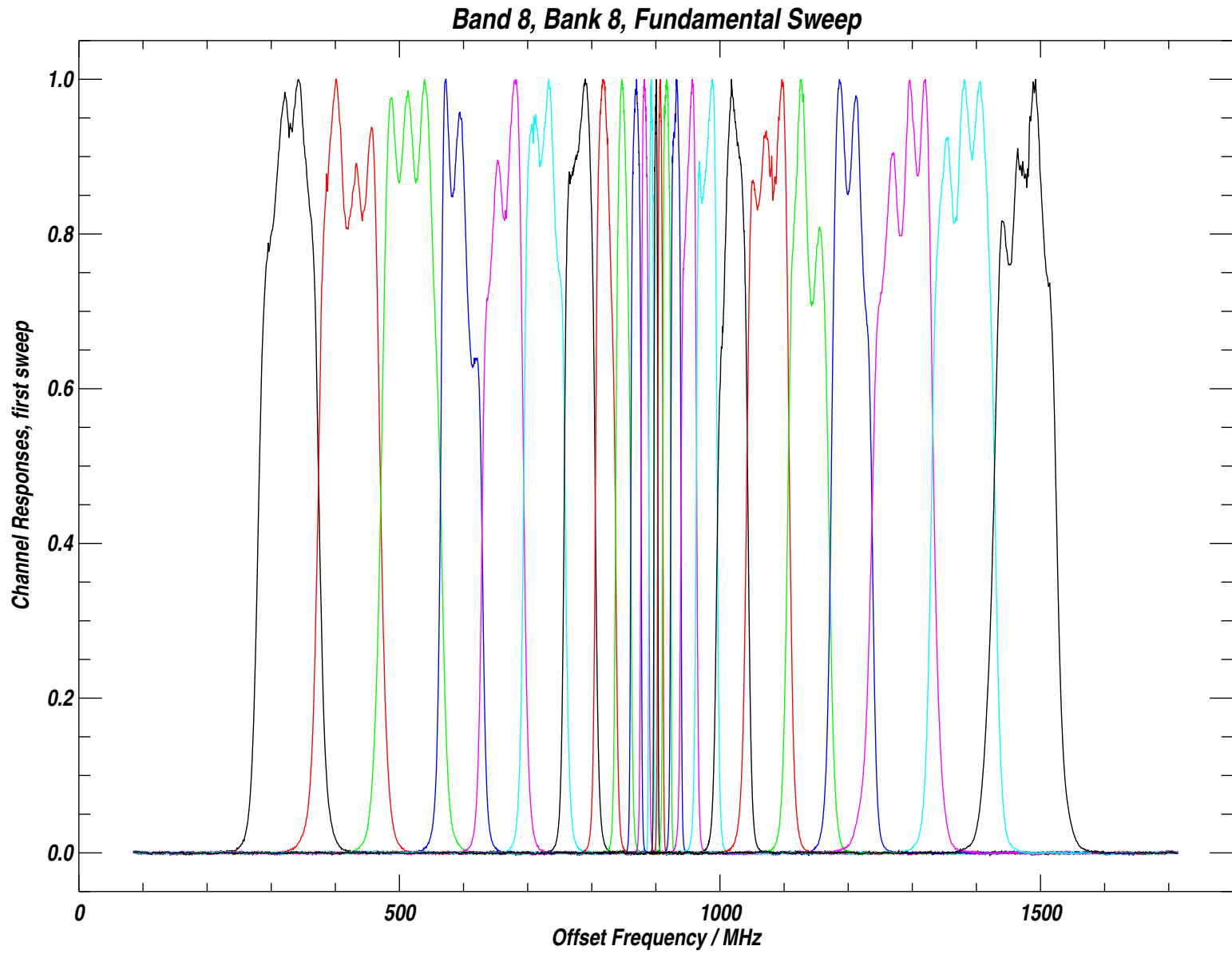


Figure H.227: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8. See text for additional details.

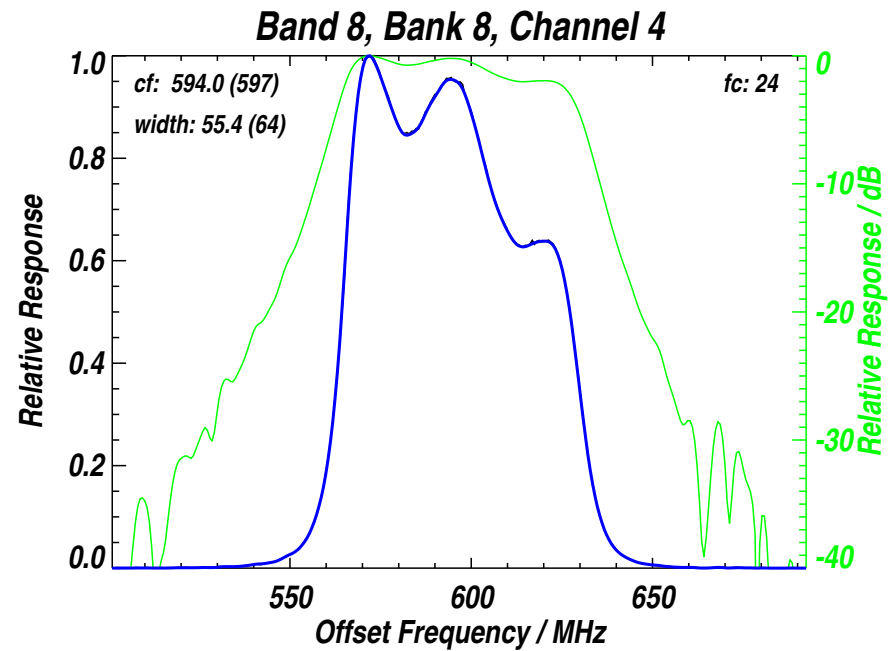
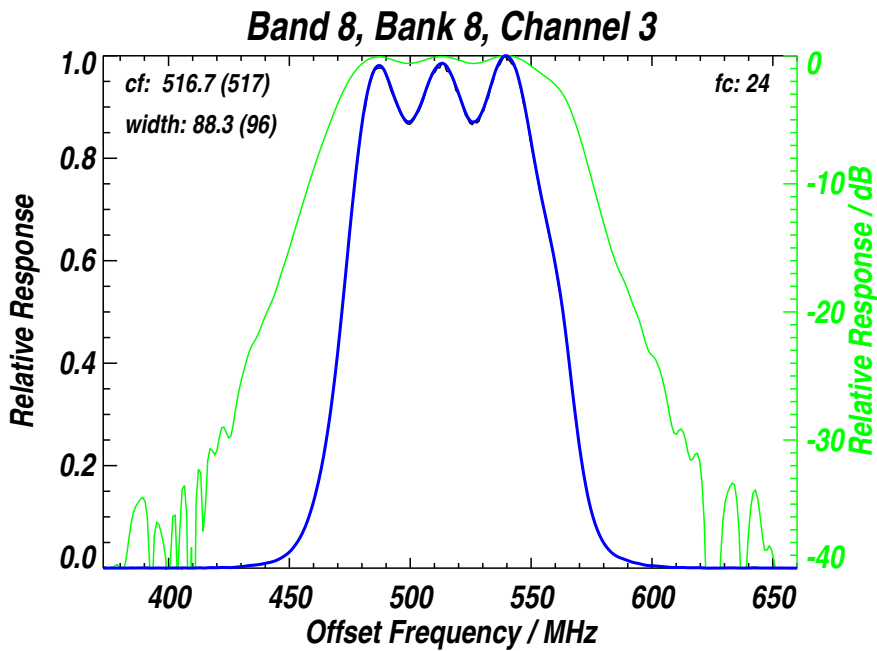
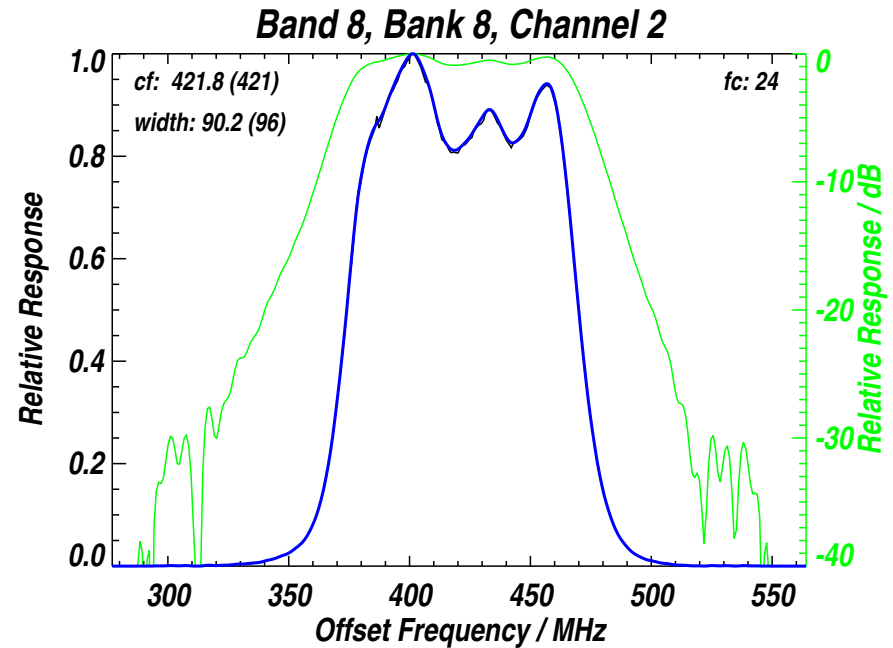
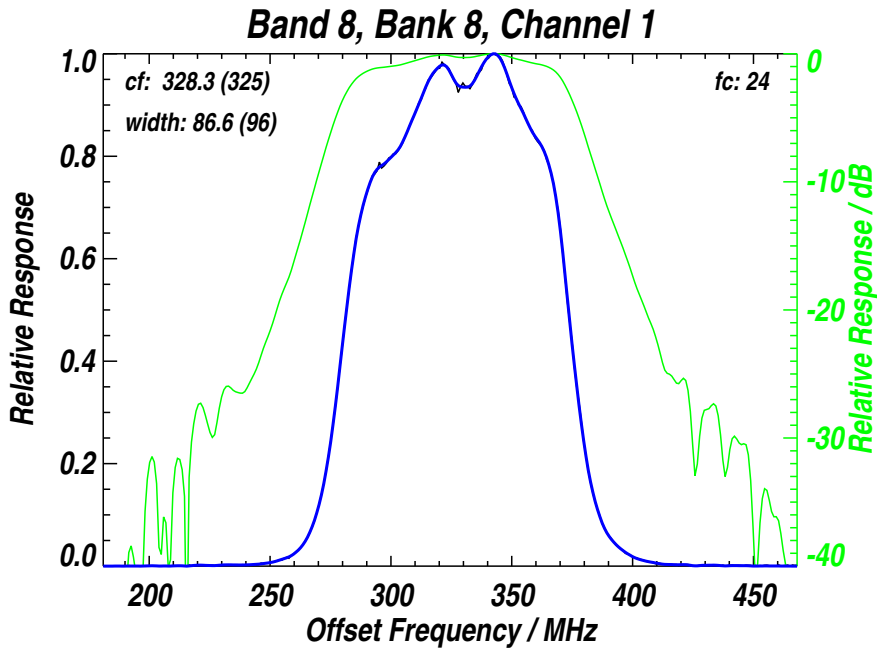


Figure H.228: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 1 to 4. See text for additional details.

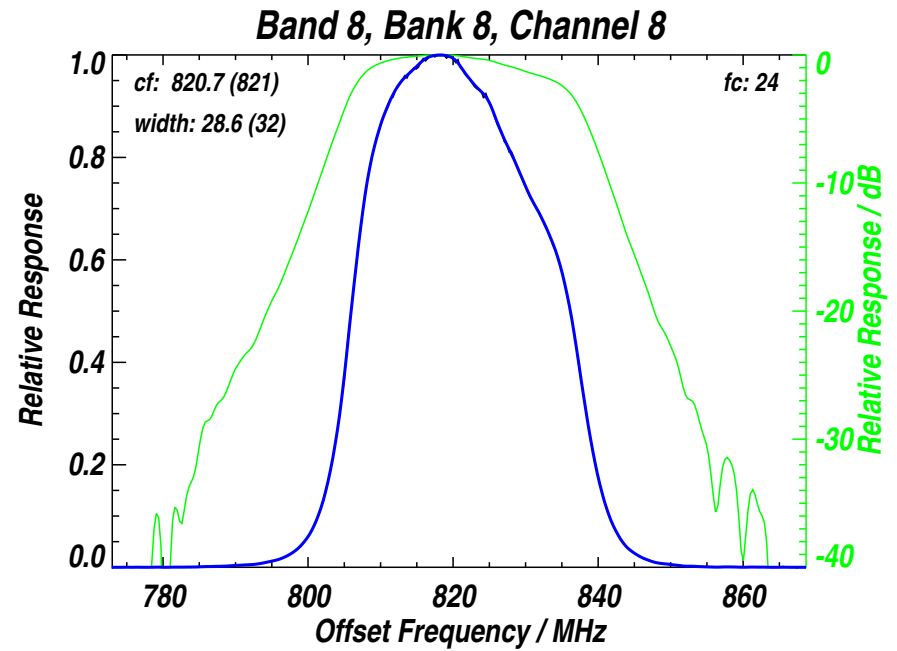
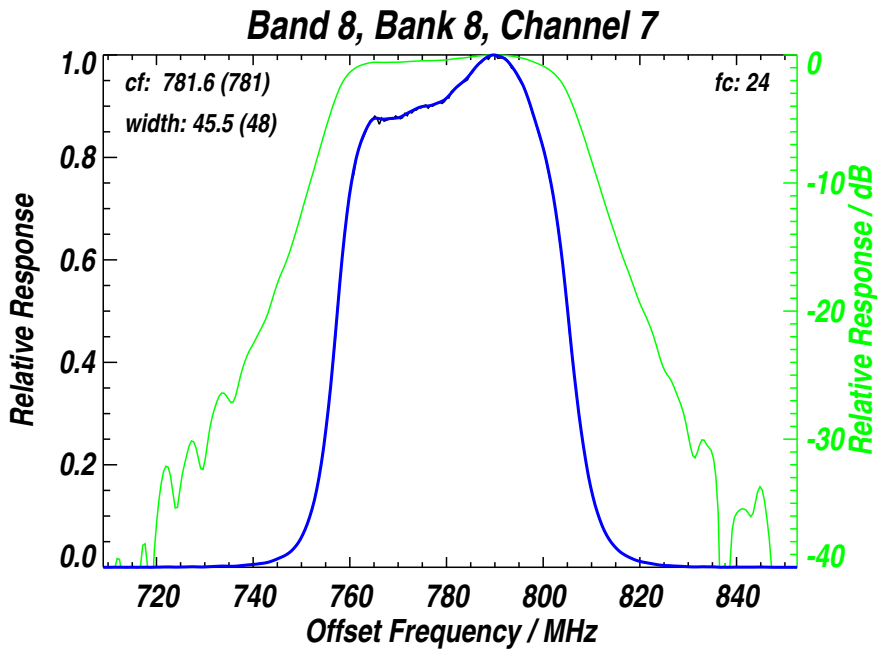
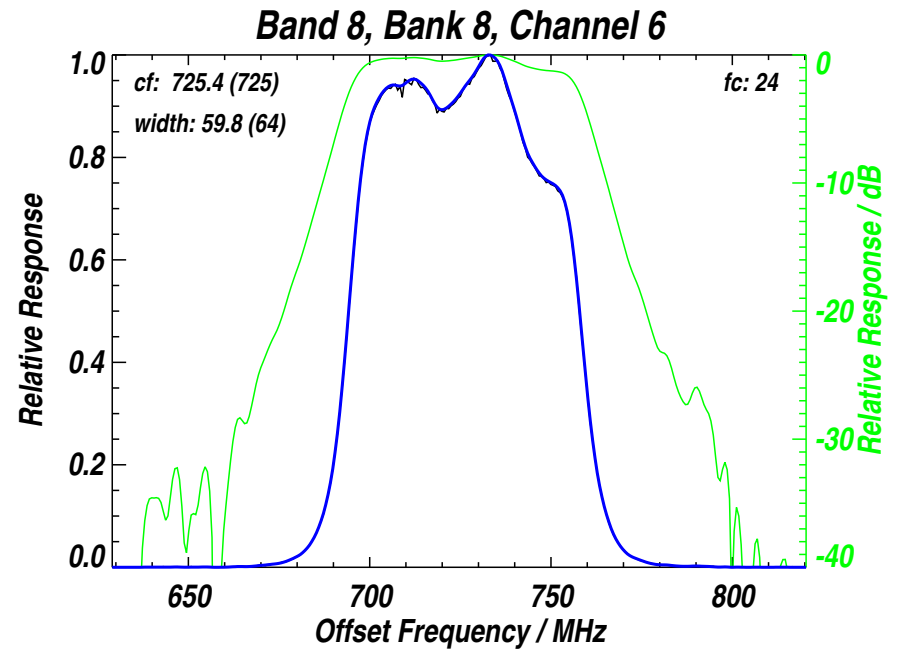
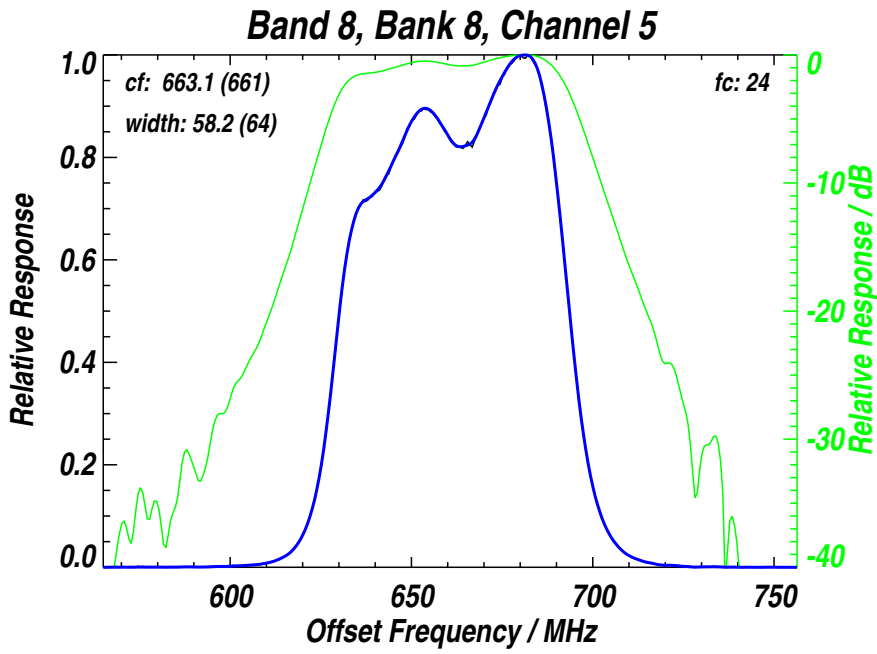


Figure H.229: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 5 to 8. See text for additional details.

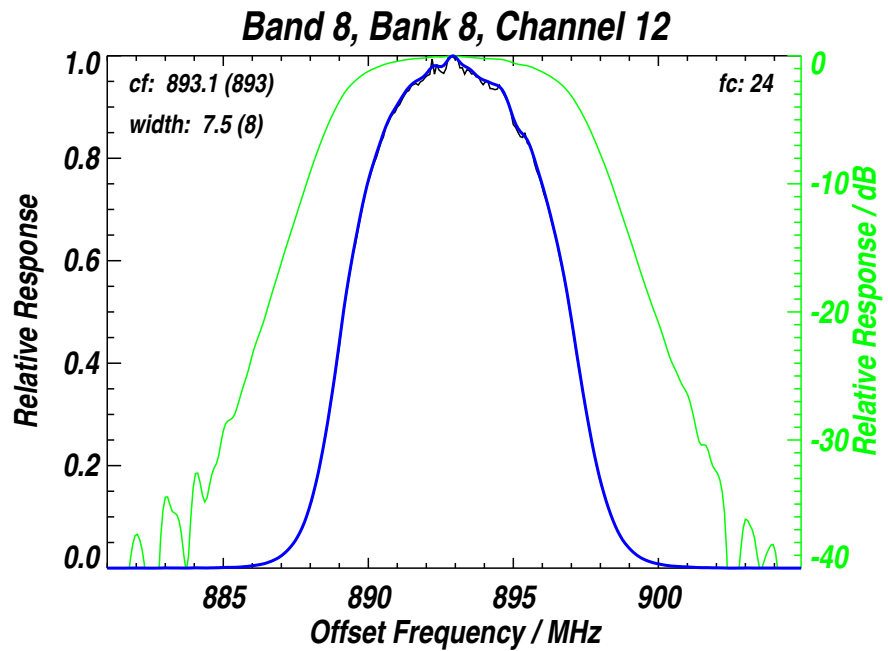
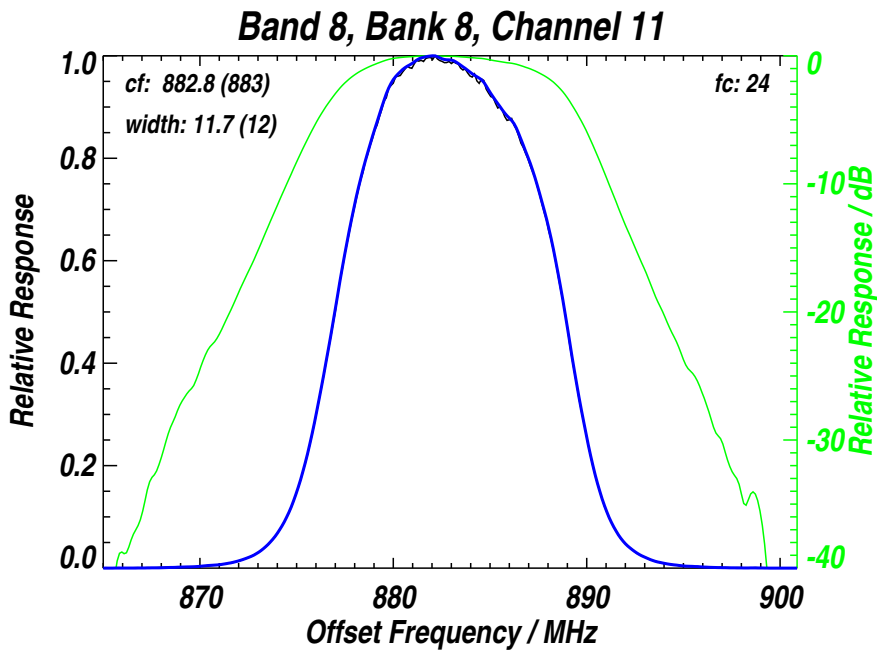
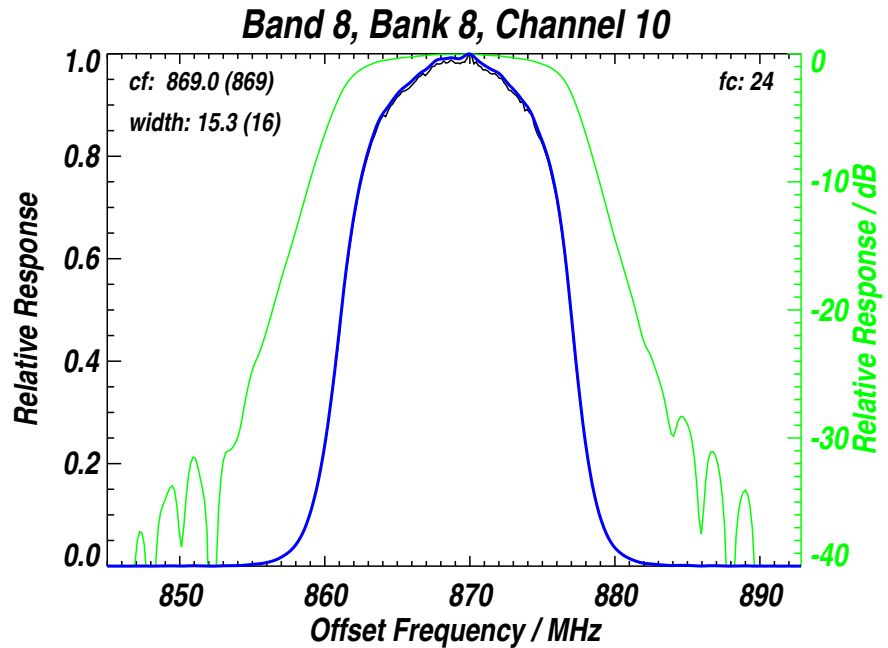
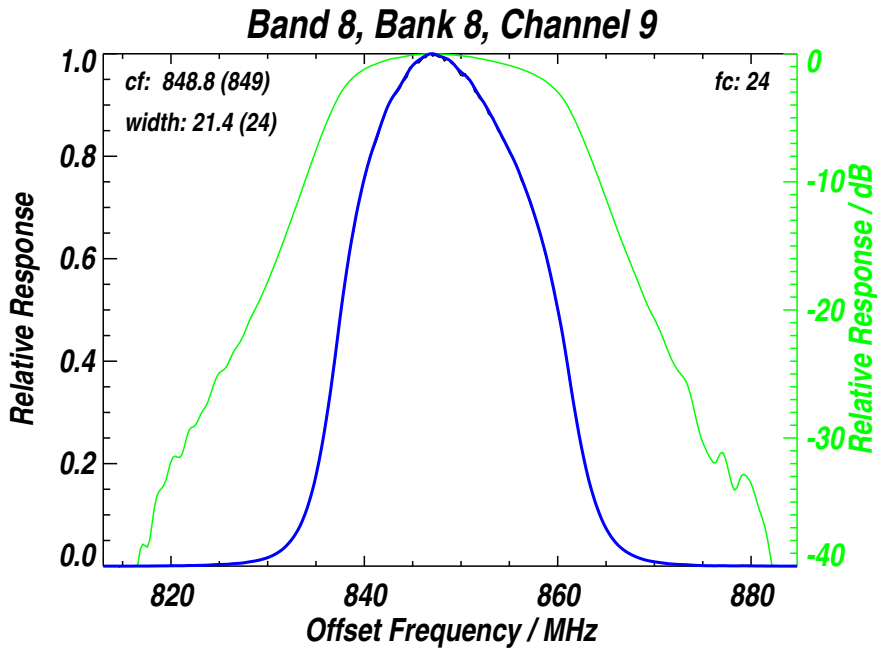


Figure H.230: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 9 to 12. See text for additional details.

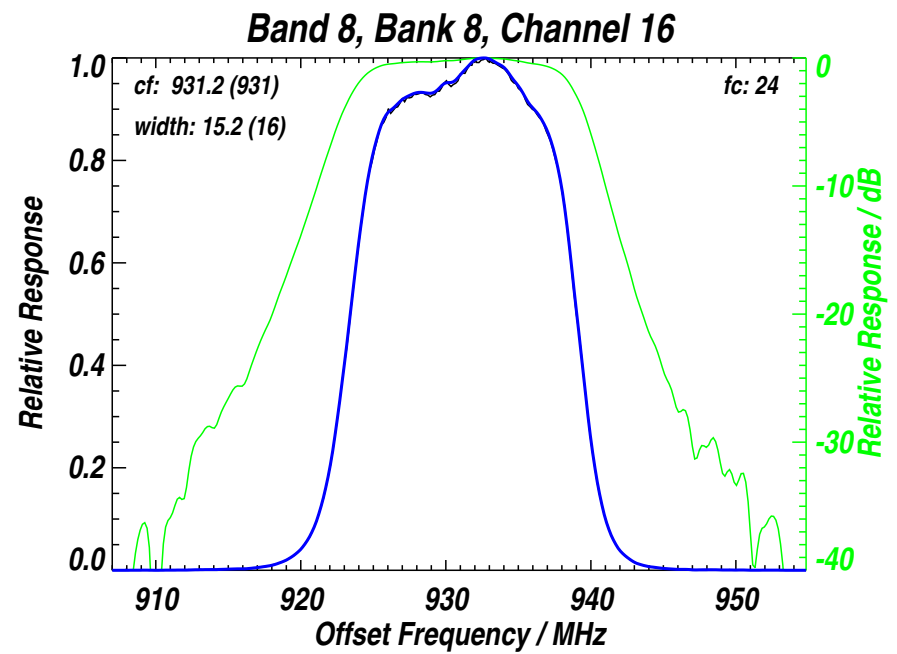
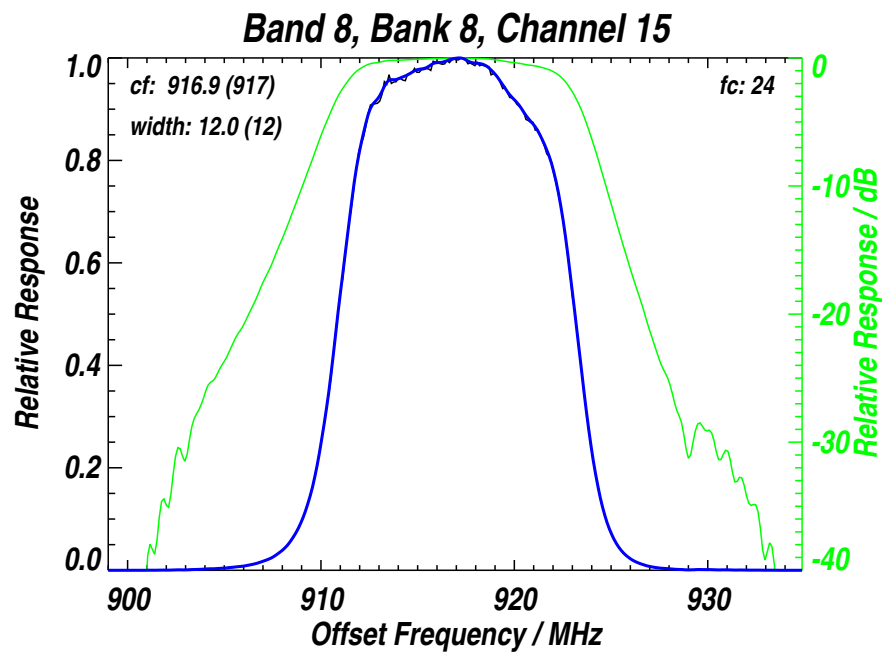
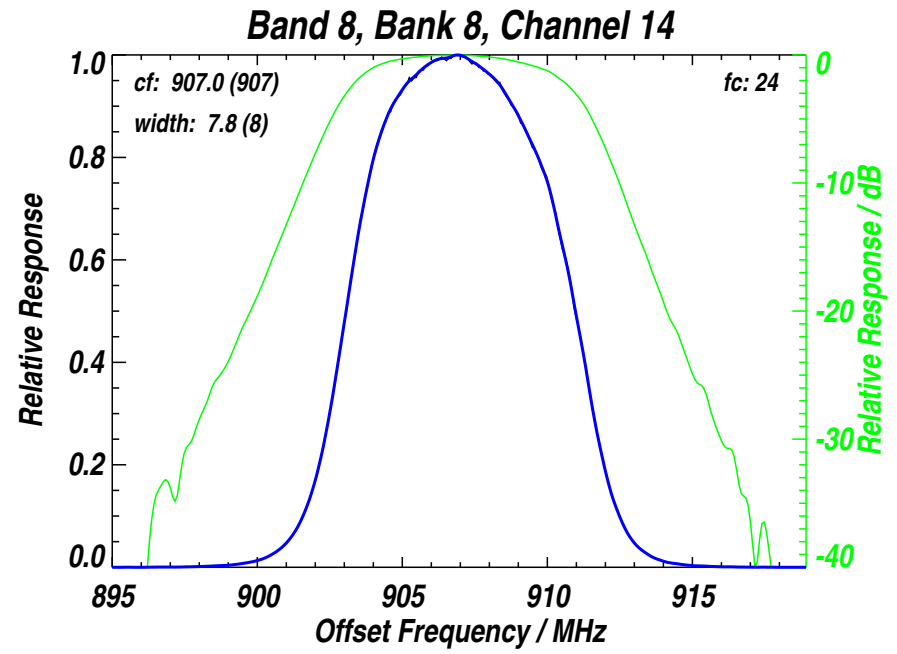
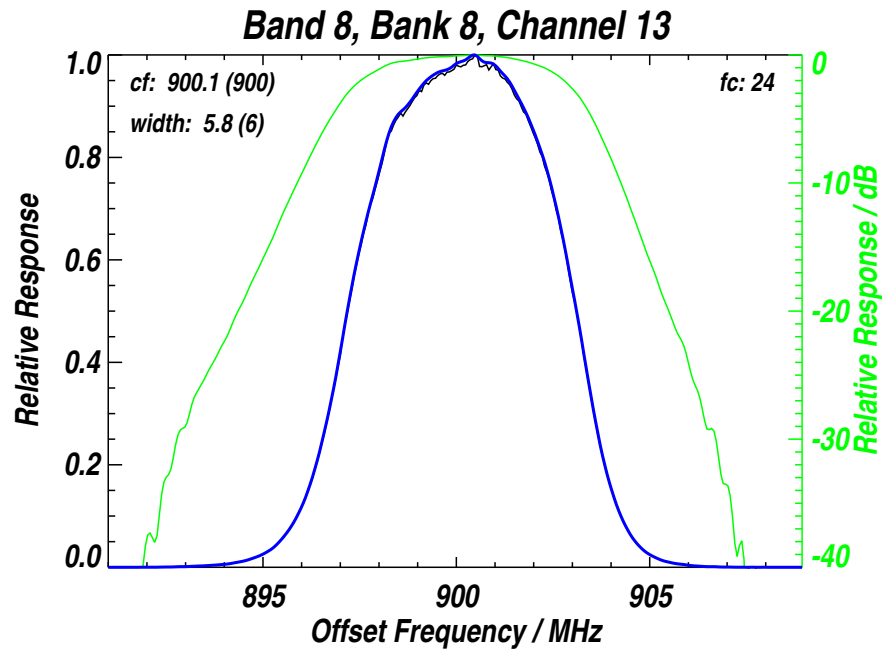


Figure H.231: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 13 to 16. See text for additional details.

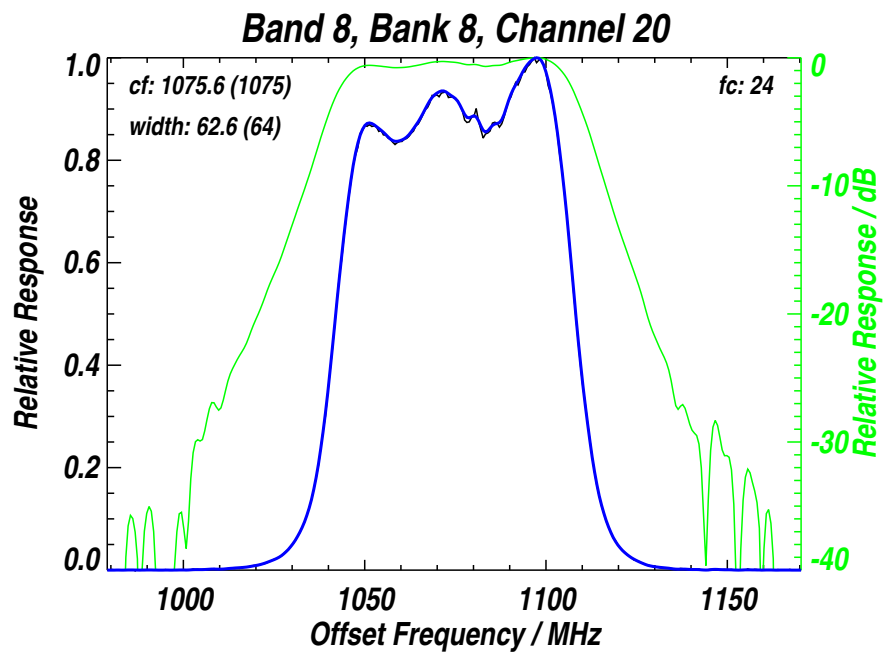
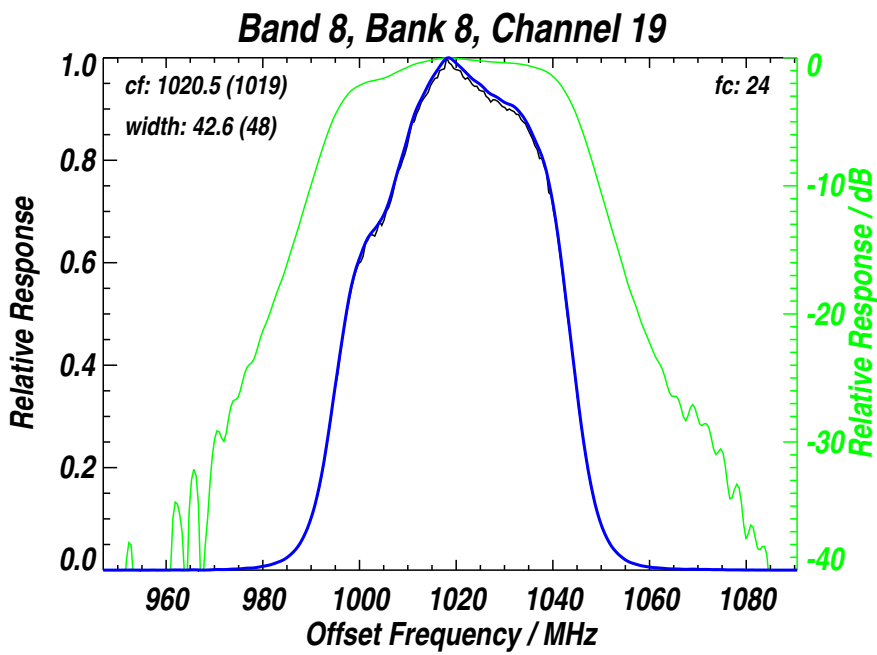
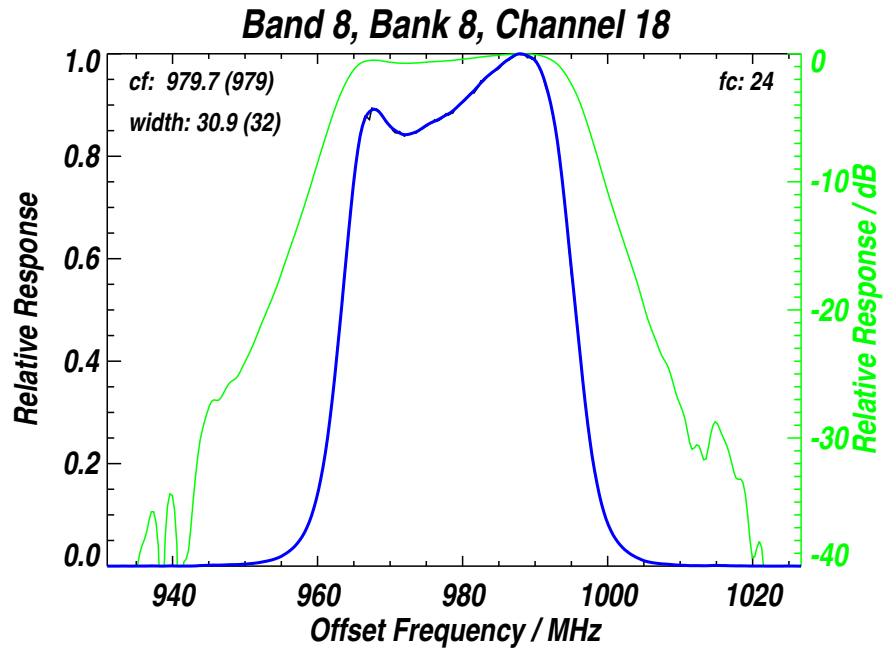
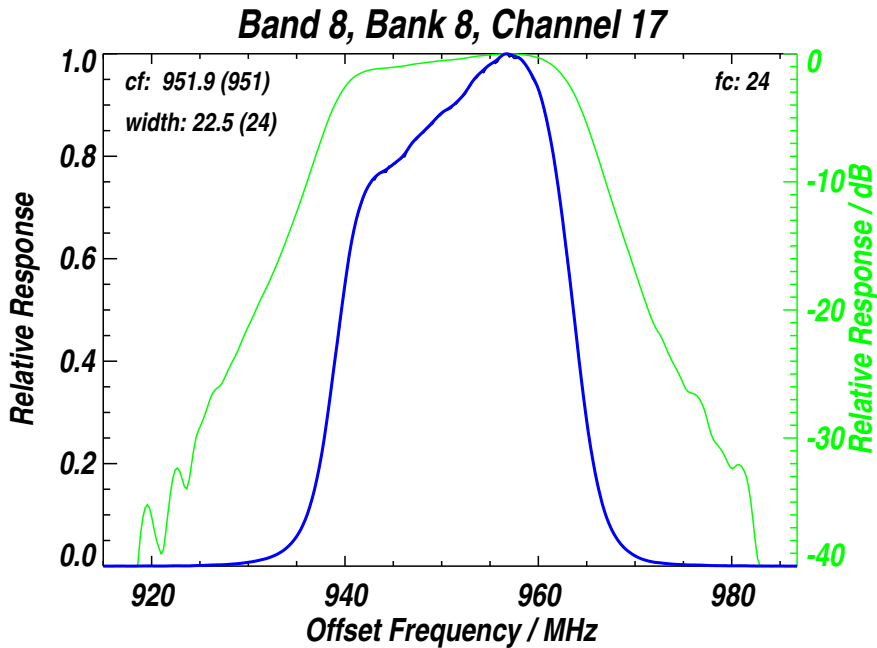


Figure H.232: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 17 to 20. See text for additional details.



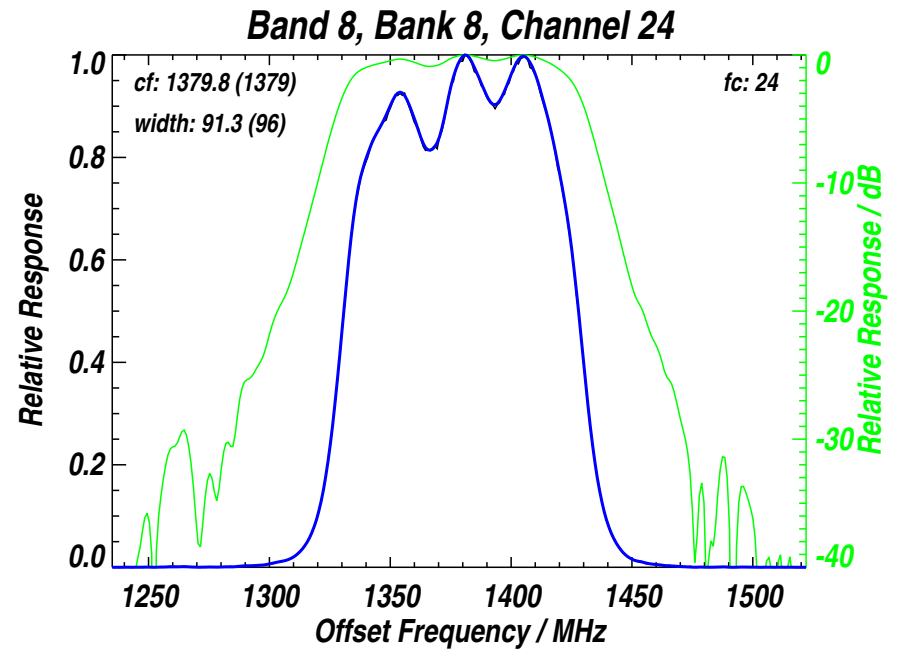
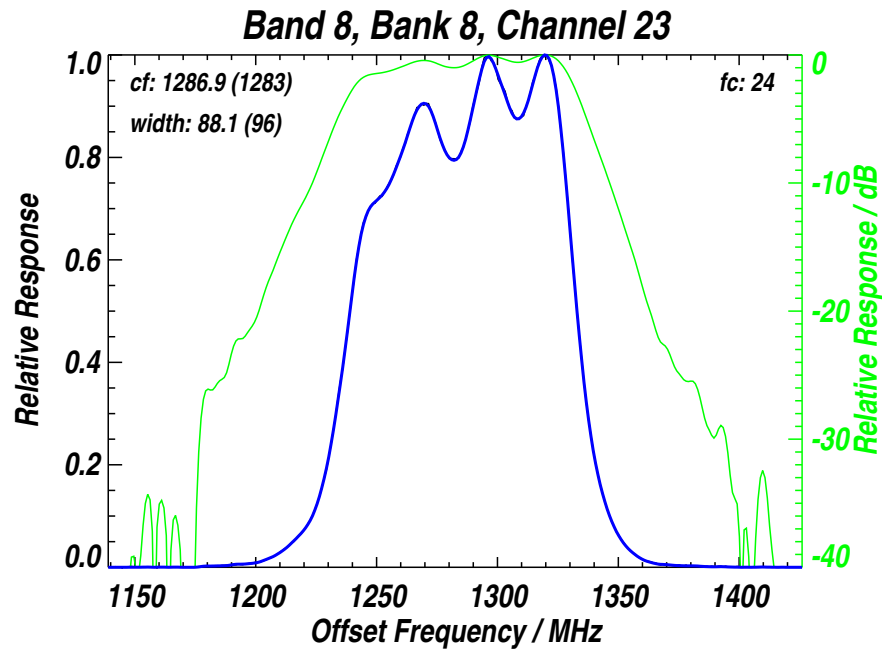
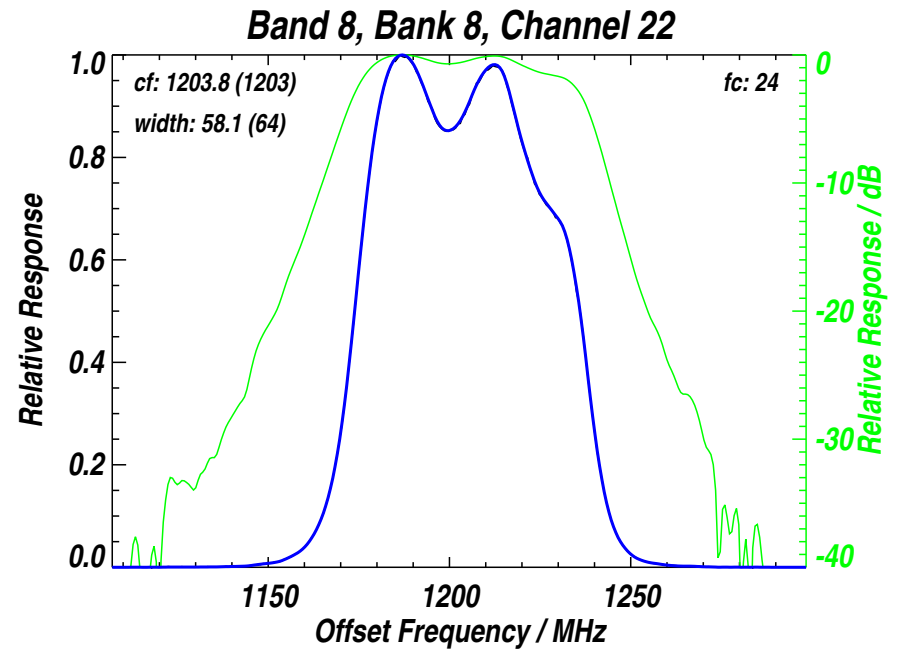
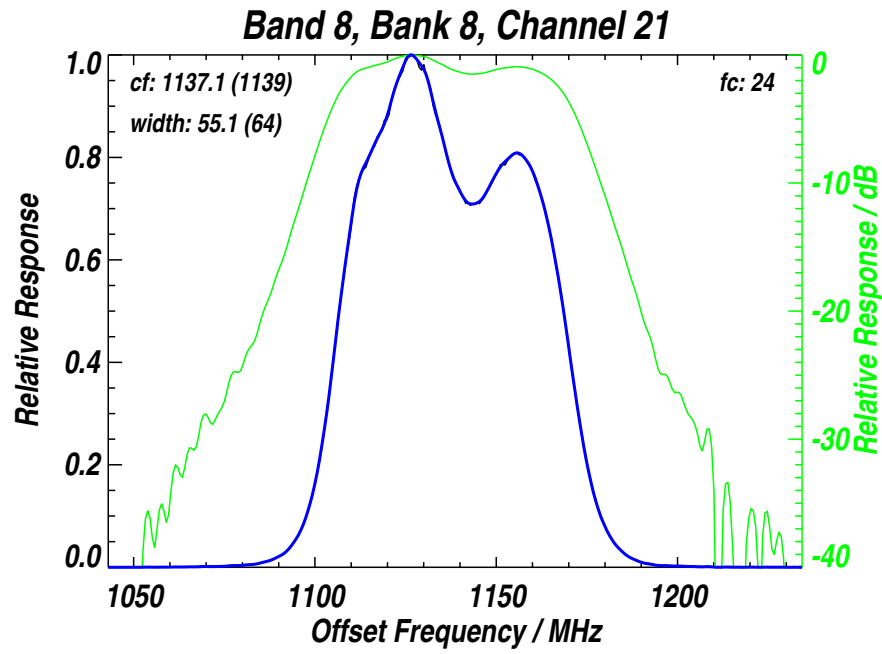
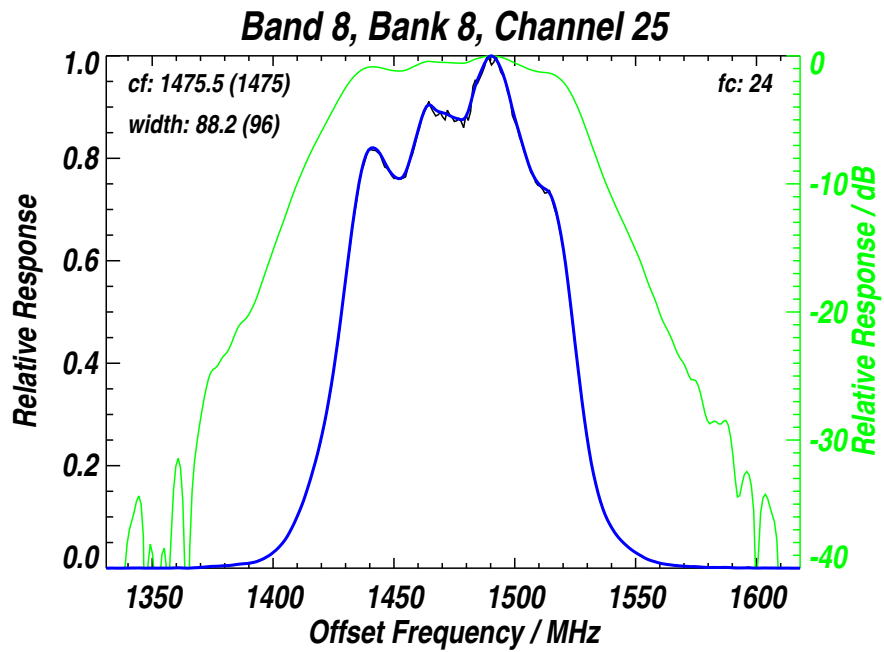


Figure H.233: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 8 (usb)**  
**Bank 8**  
**Origin = 244.468571436 GHz**

Figure H.234: Upper sideband front-end sweep data for Band 8 taken via Filterbank 8, channel 25. See text for additional details.

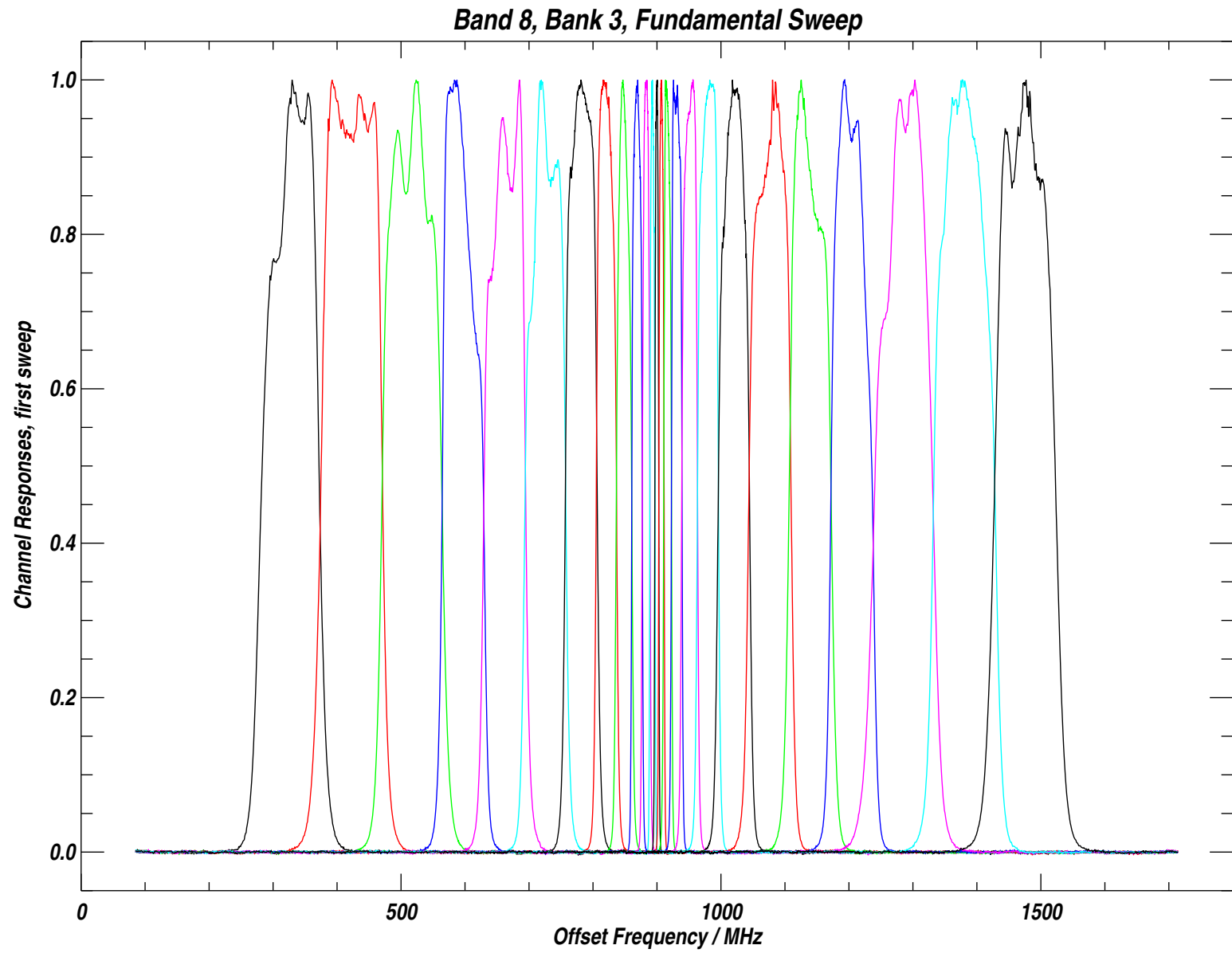


Figure H.235: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3. See text for additional details.

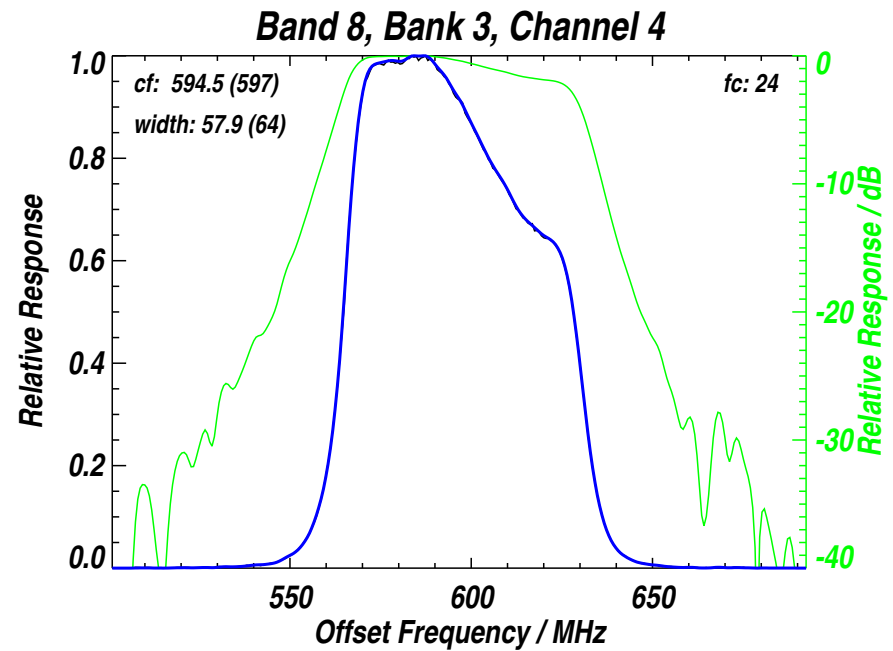
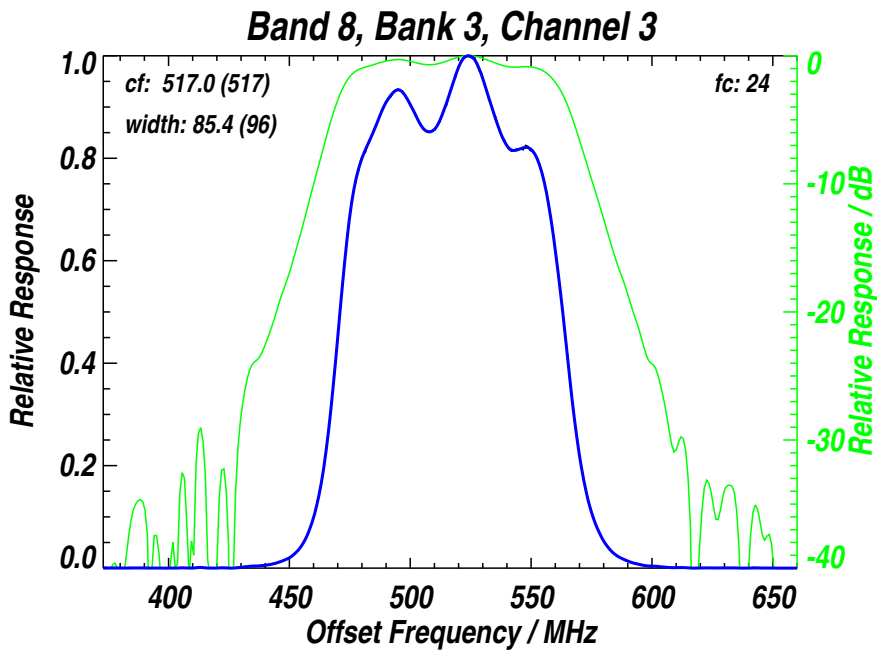
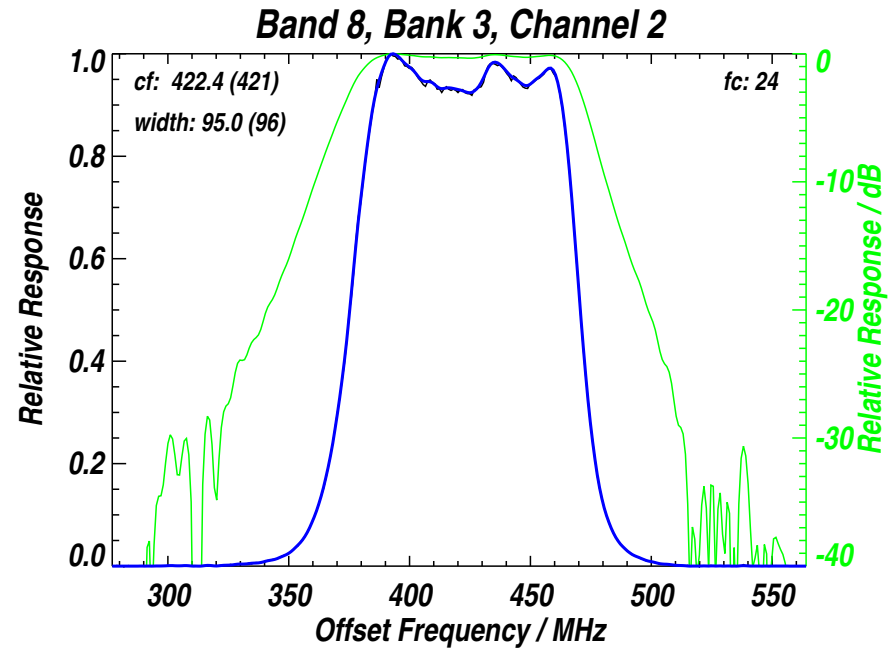
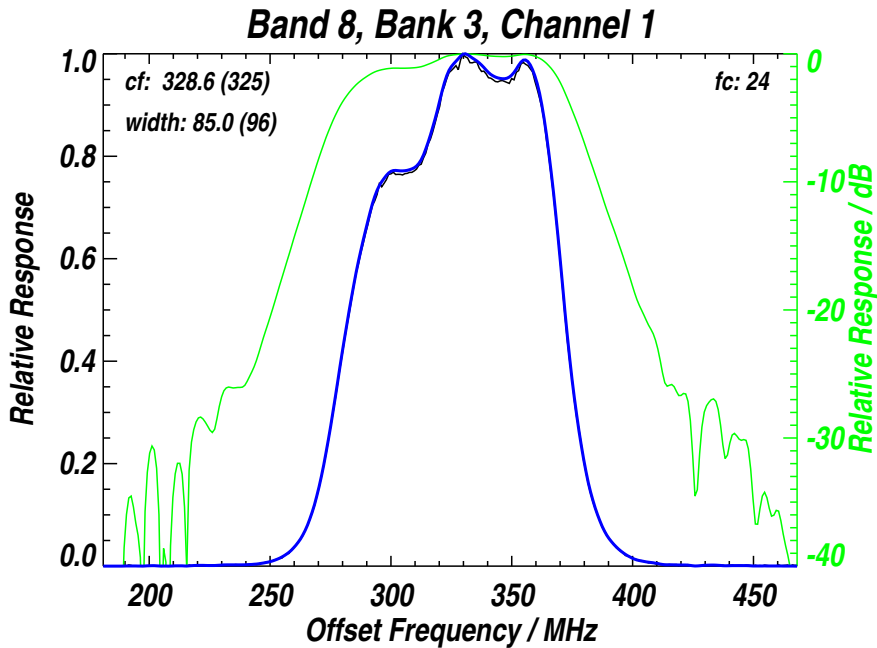


Figure H.236: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 1 to 4. See text for additional details.

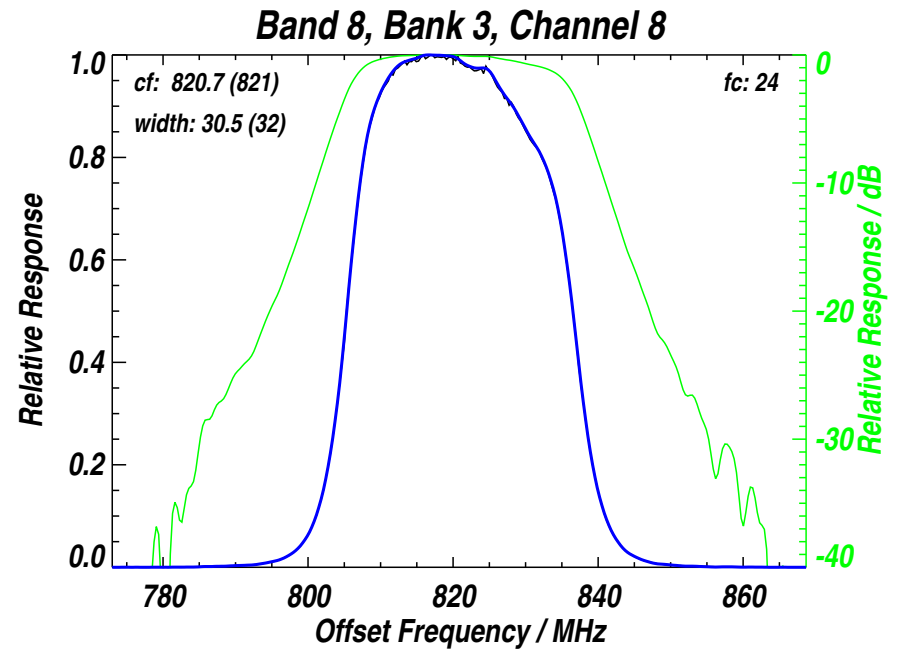
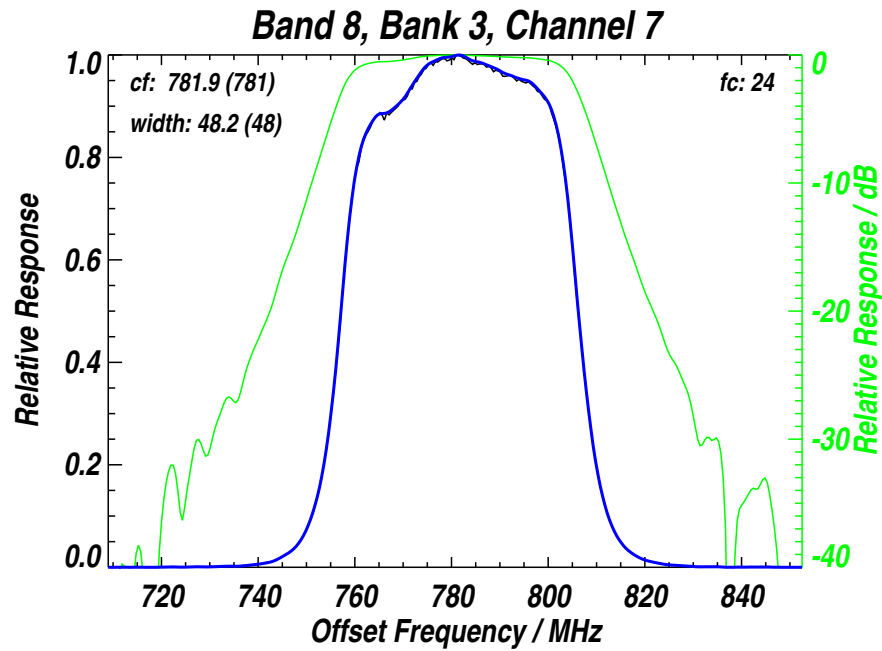
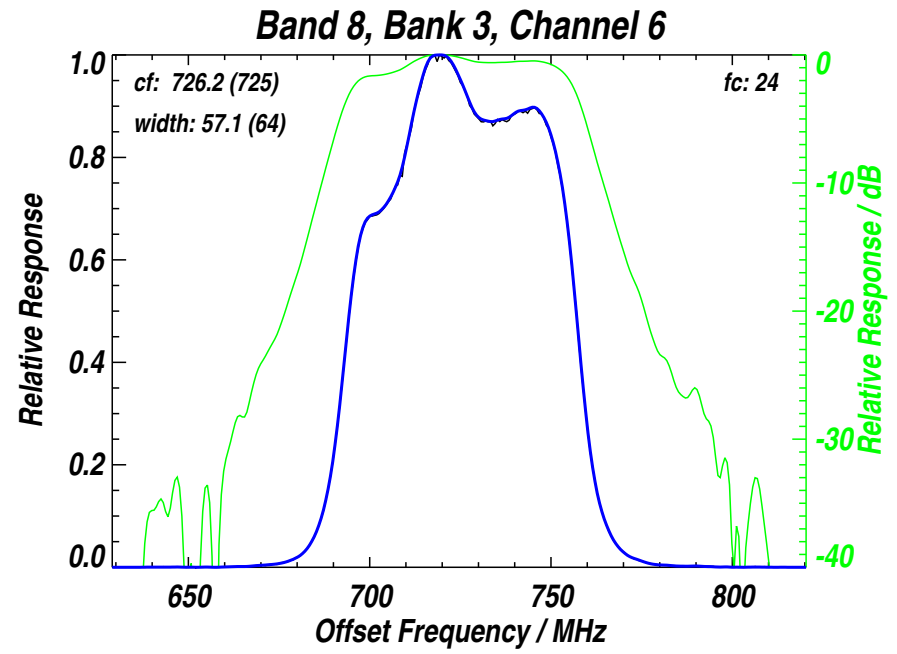
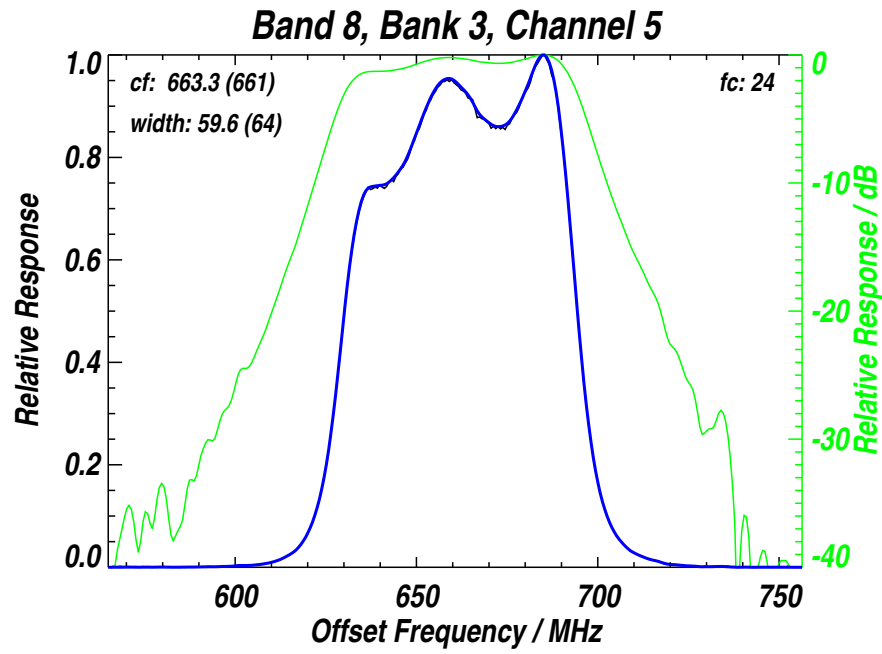


Figure H.237: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 5 to 8. See text for additional details.

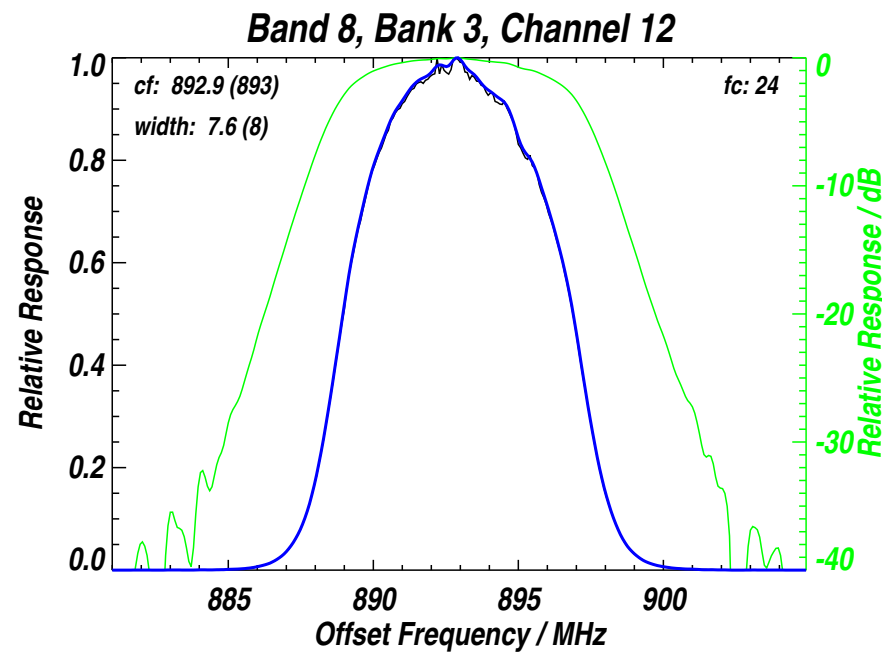
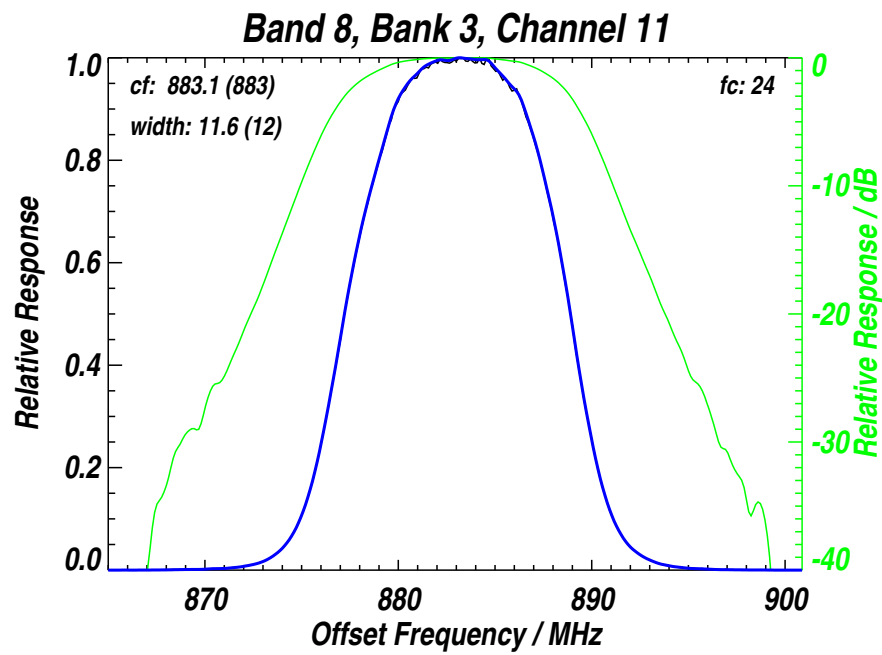
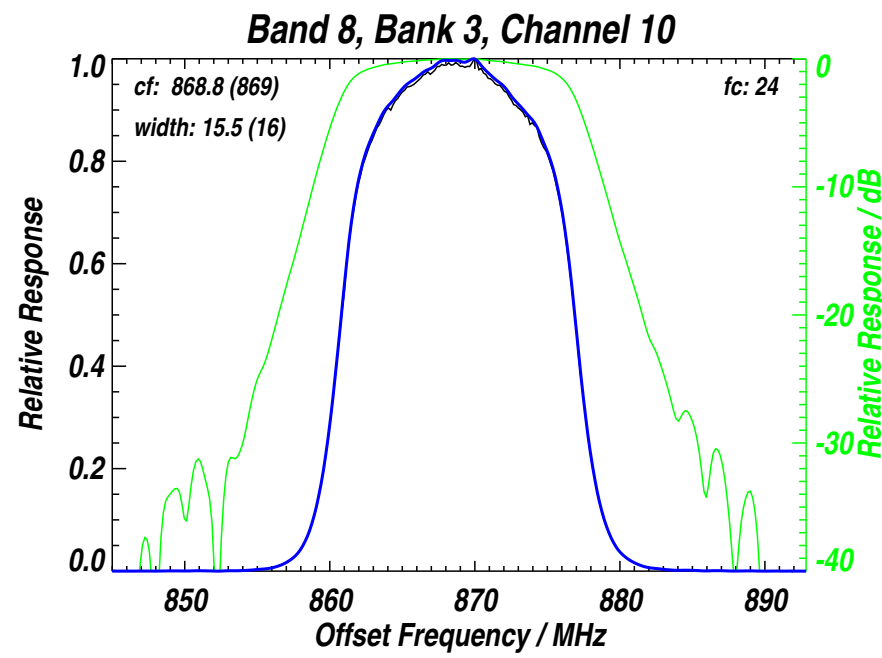
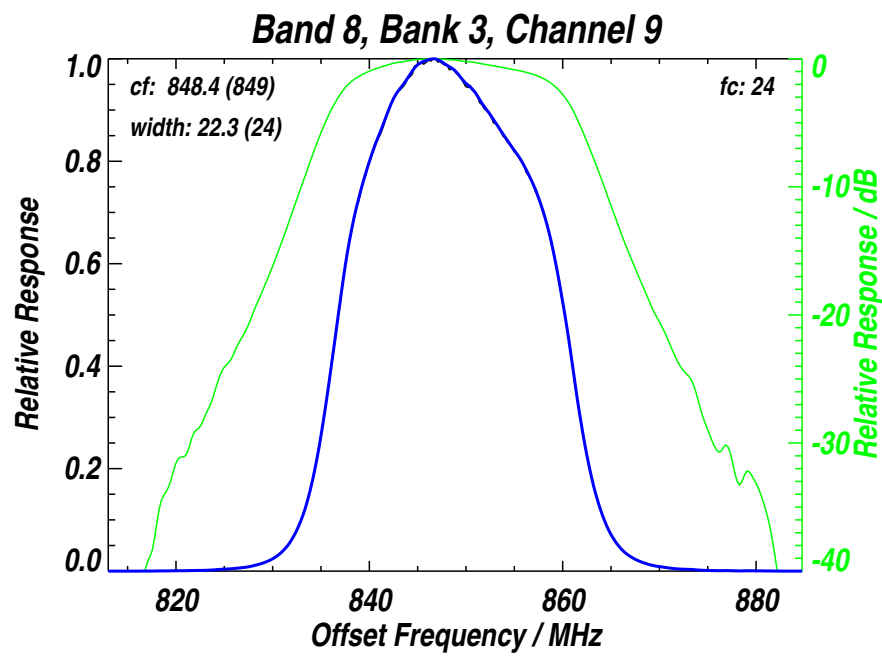


Figure H.238: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 9 to 12. See text for additional details.

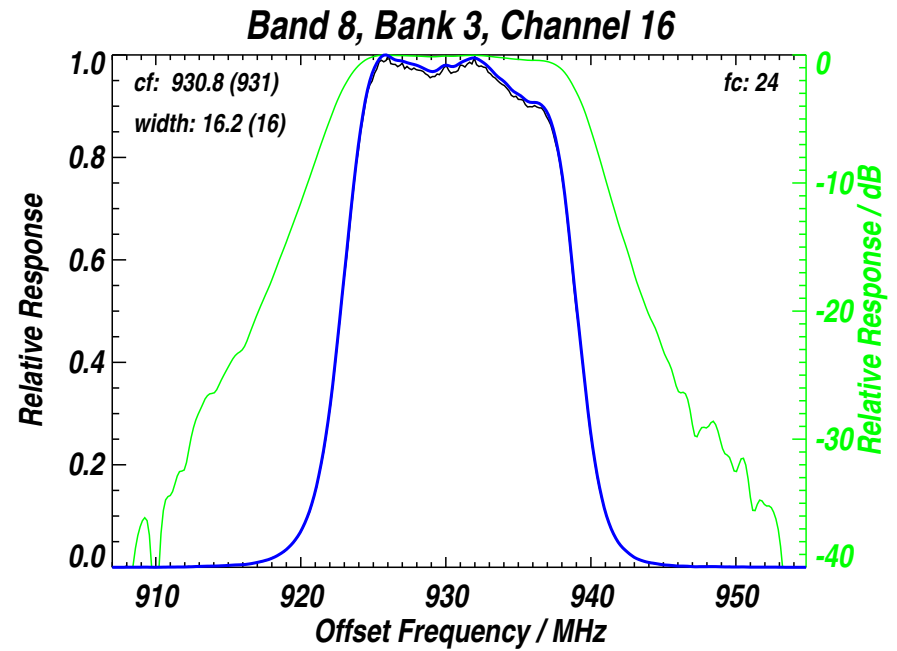
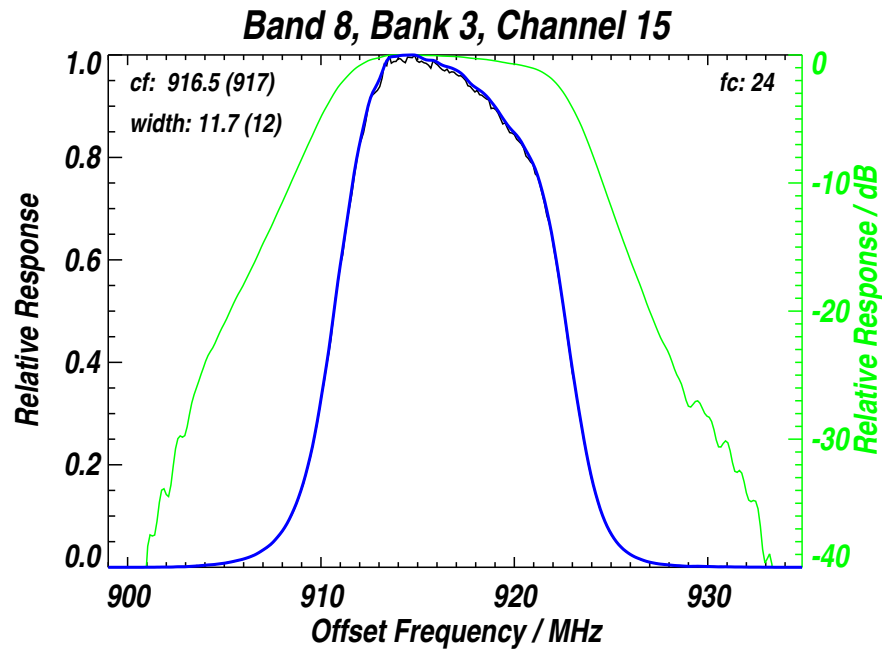
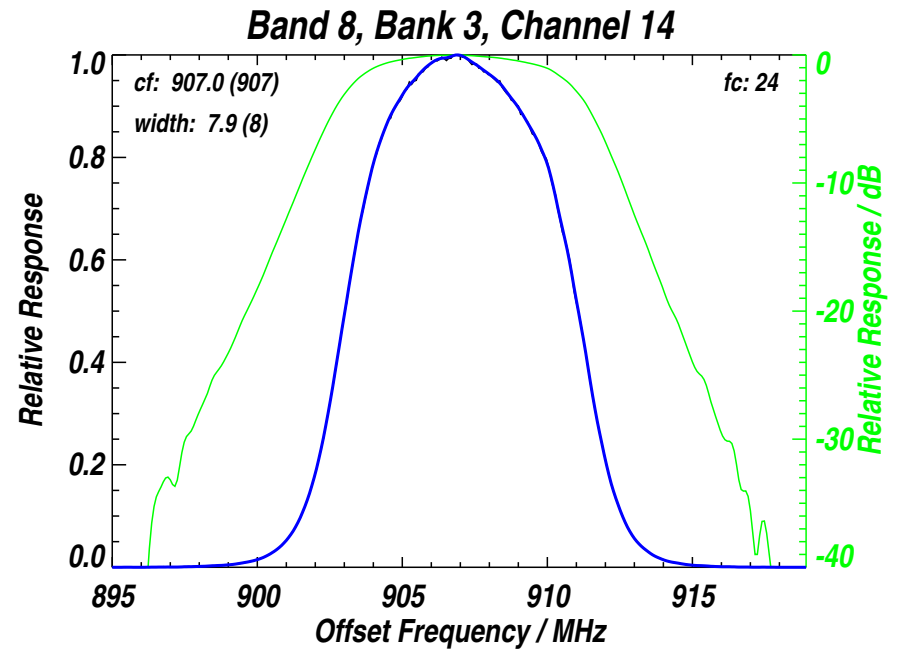
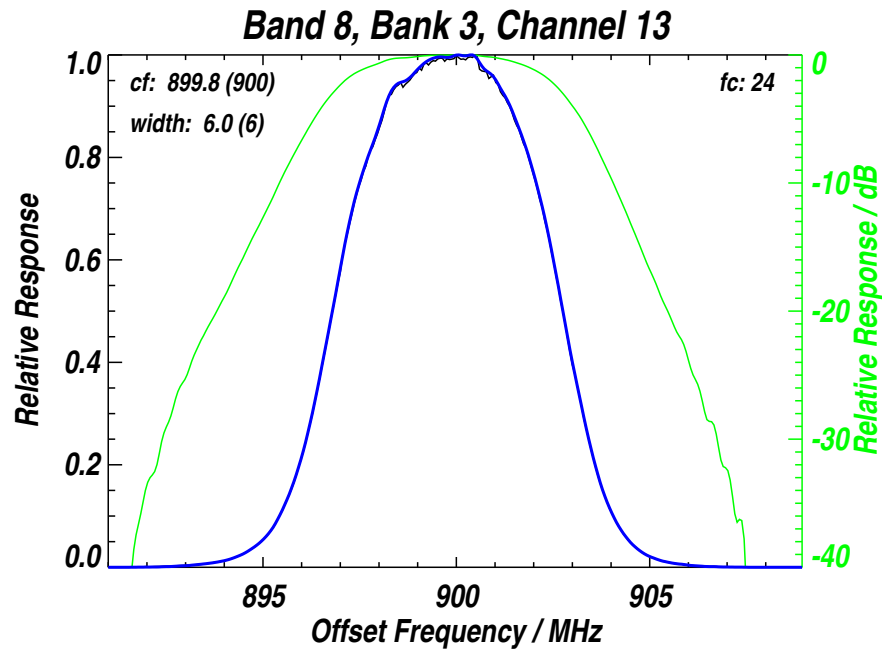


Figure H.239: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 13 to 16. See text for additional details.

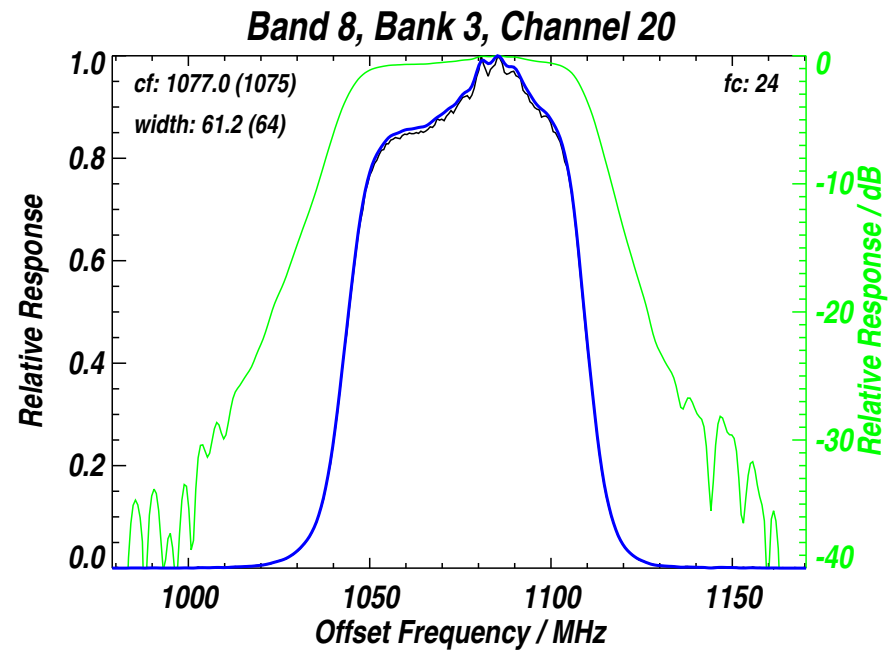
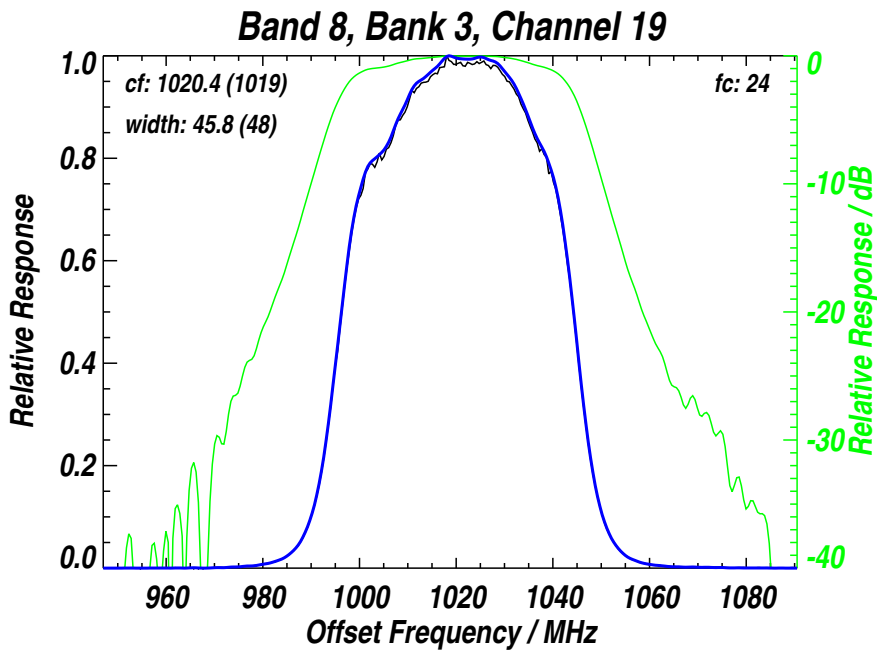
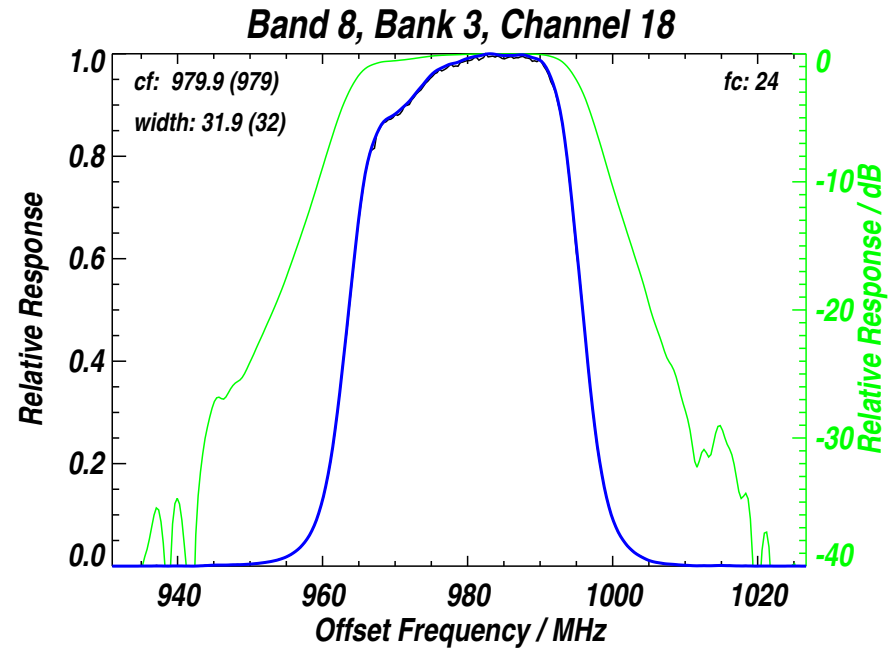
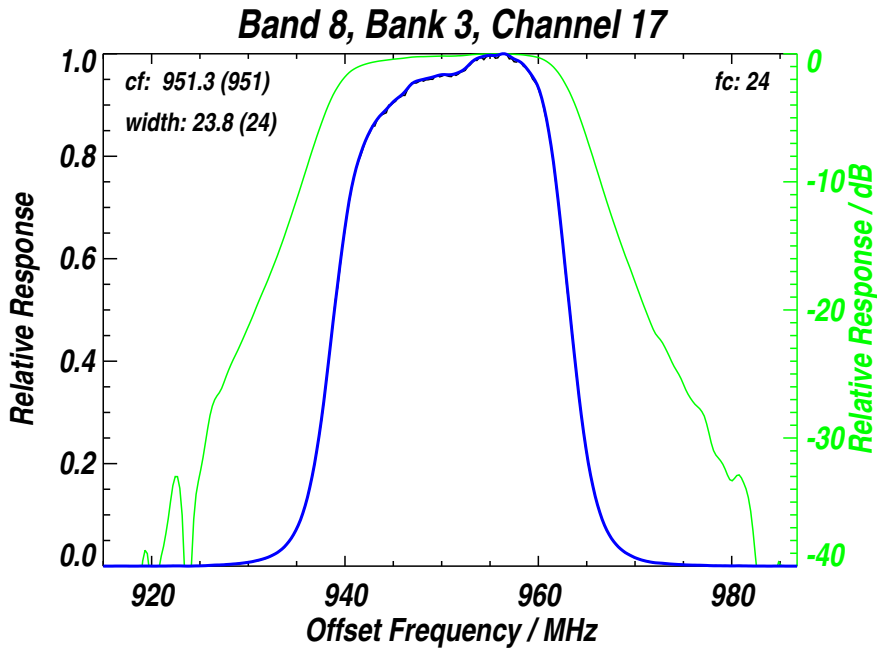


Figure H.240: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 17 to 20. See text for additional details.



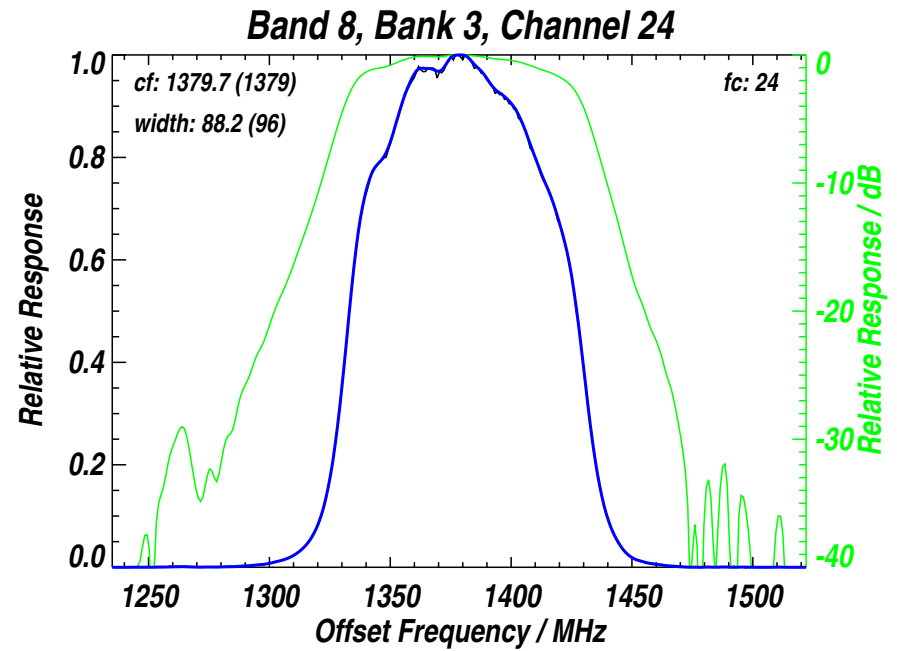
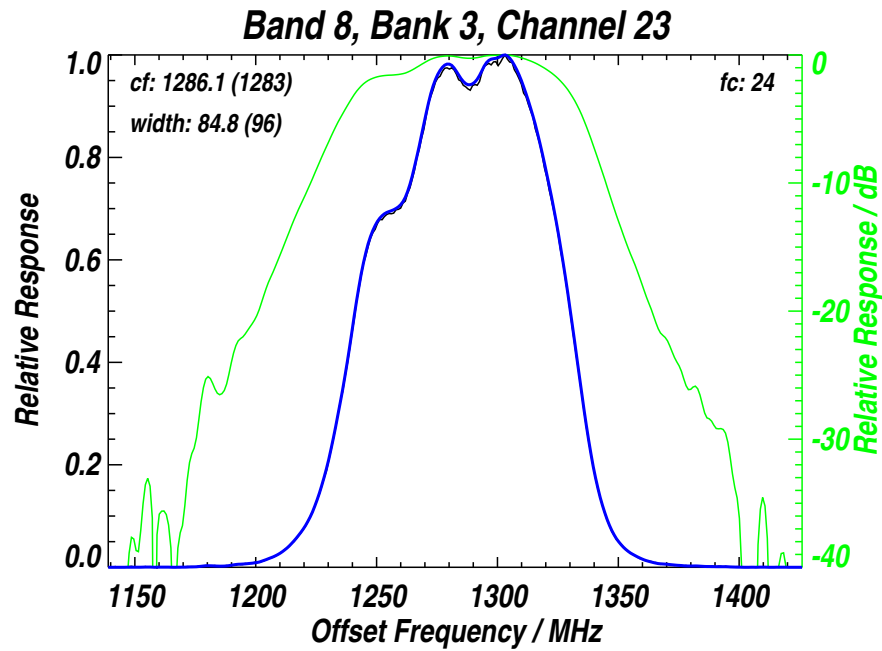
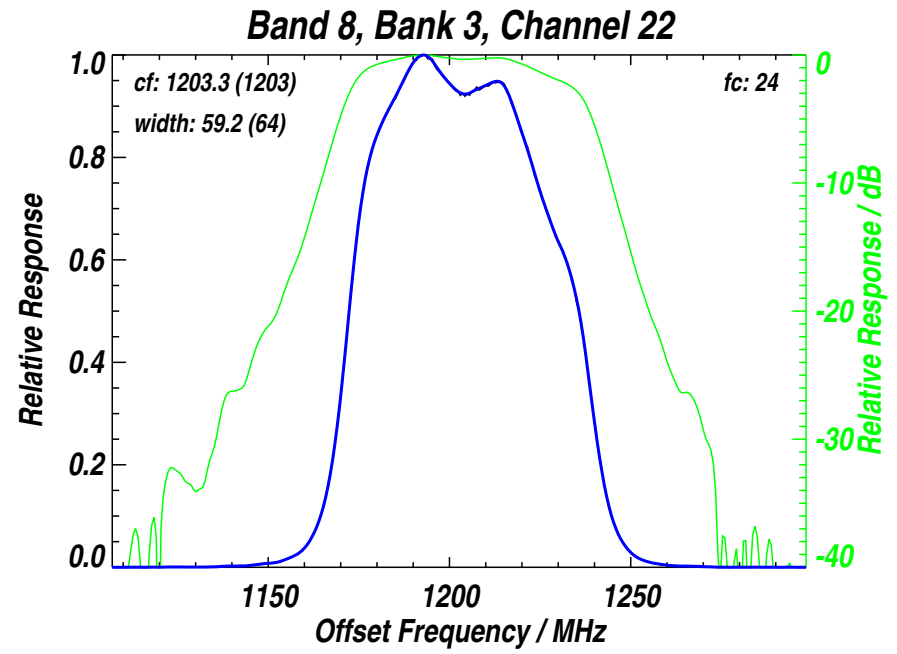
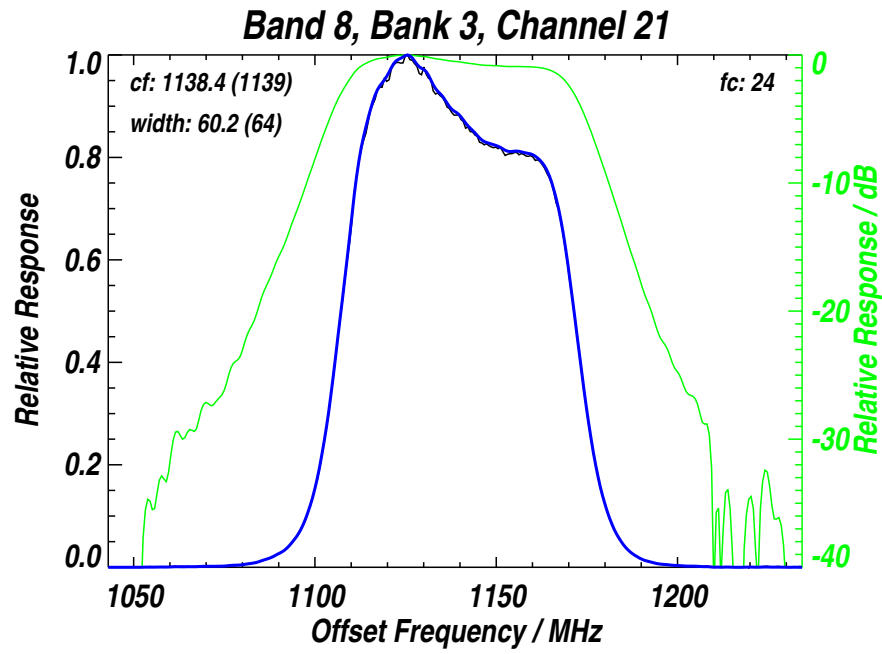
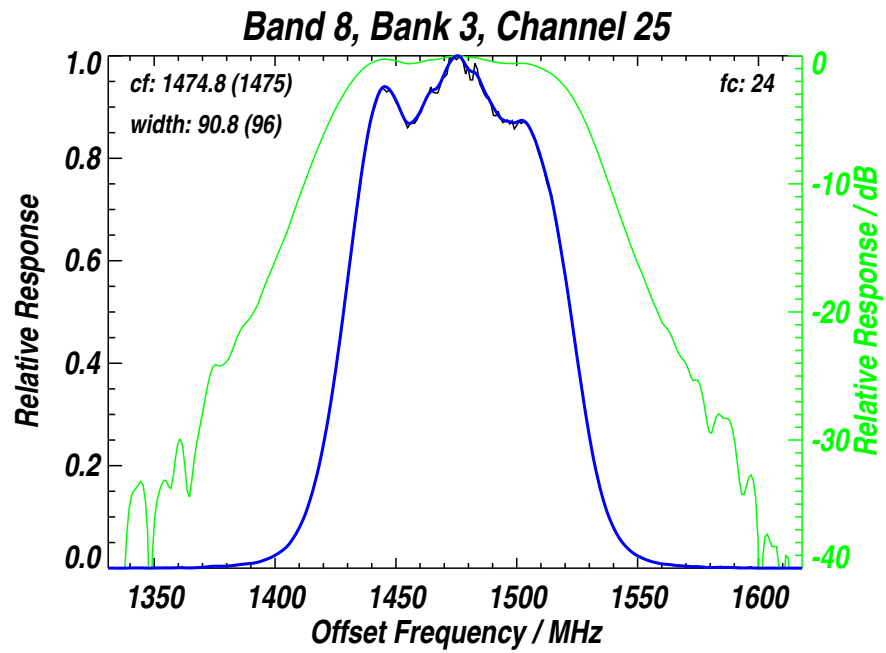


Figure H.241: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 8 (usb)**  
**Bank 3**  
**Origin = 244.468571436 GHz**

Figure H.242: Upper sideband front-end sweep data for Band 8 taken via Filterbank 3, channel 25. See text for additional details.

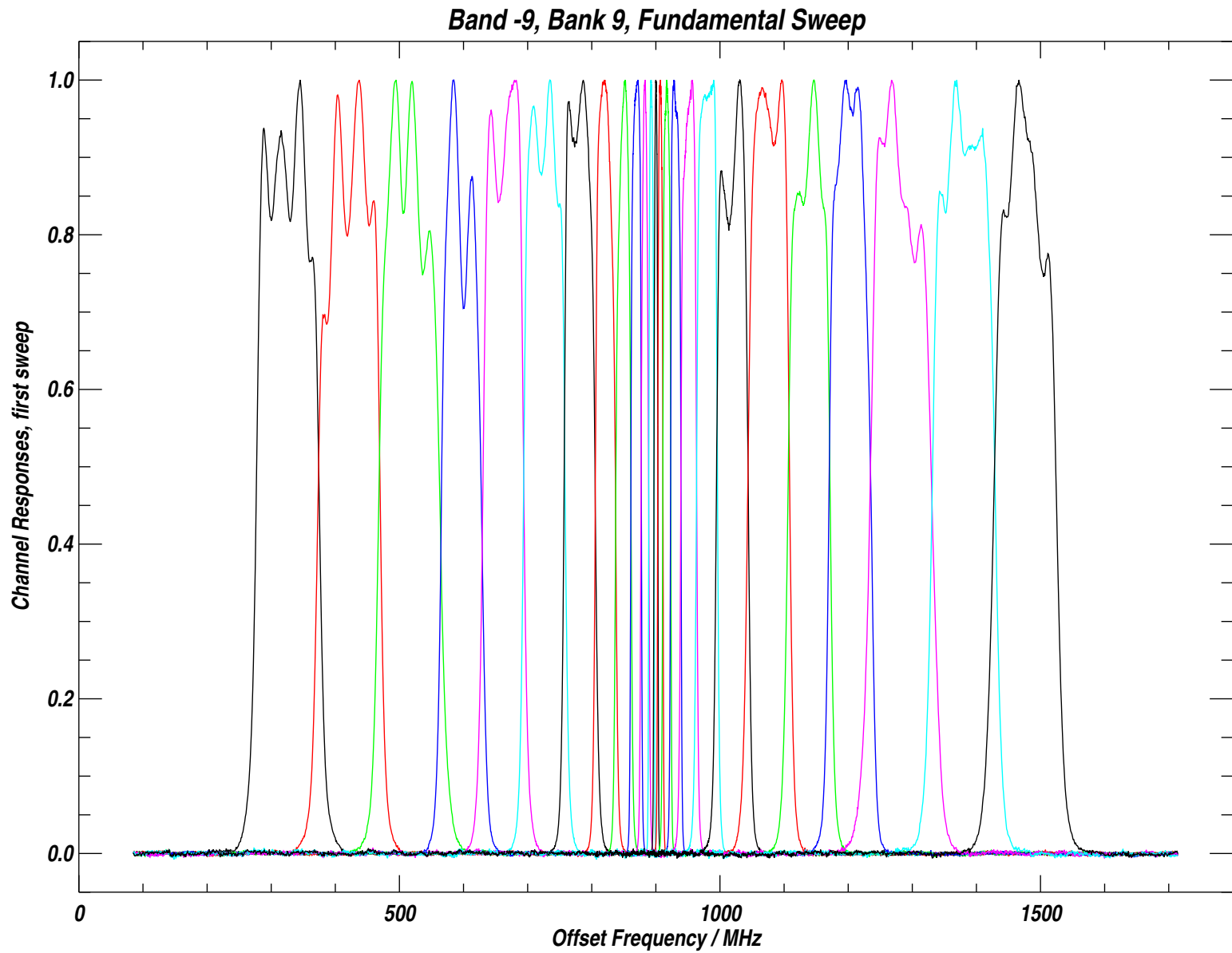


Figure H.243: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9. See text for additional details.

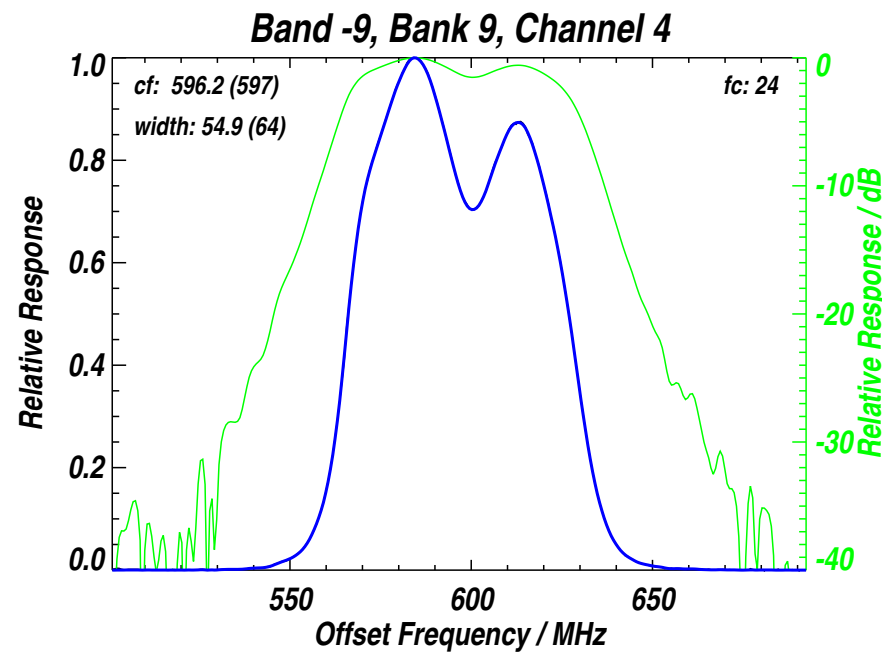
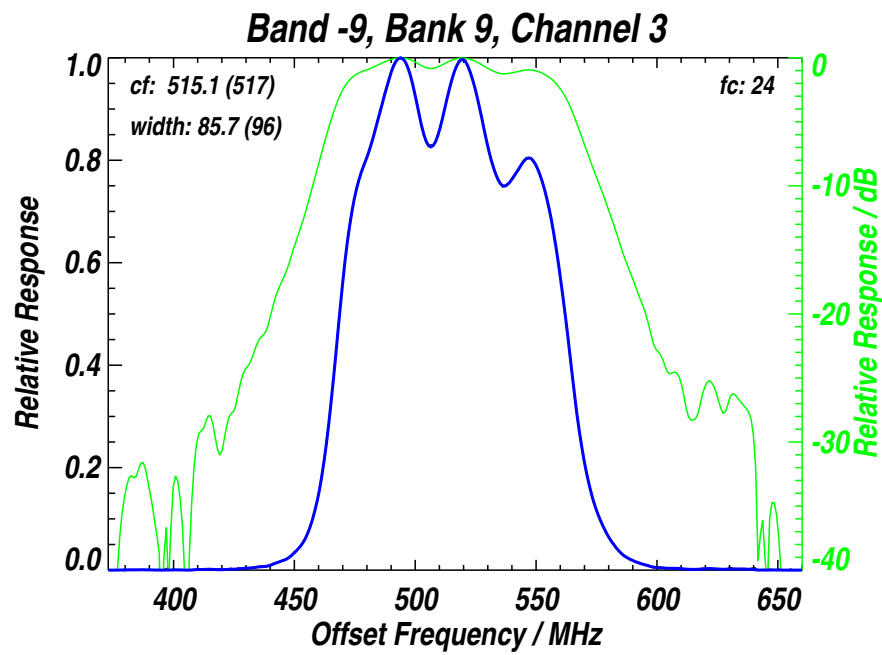
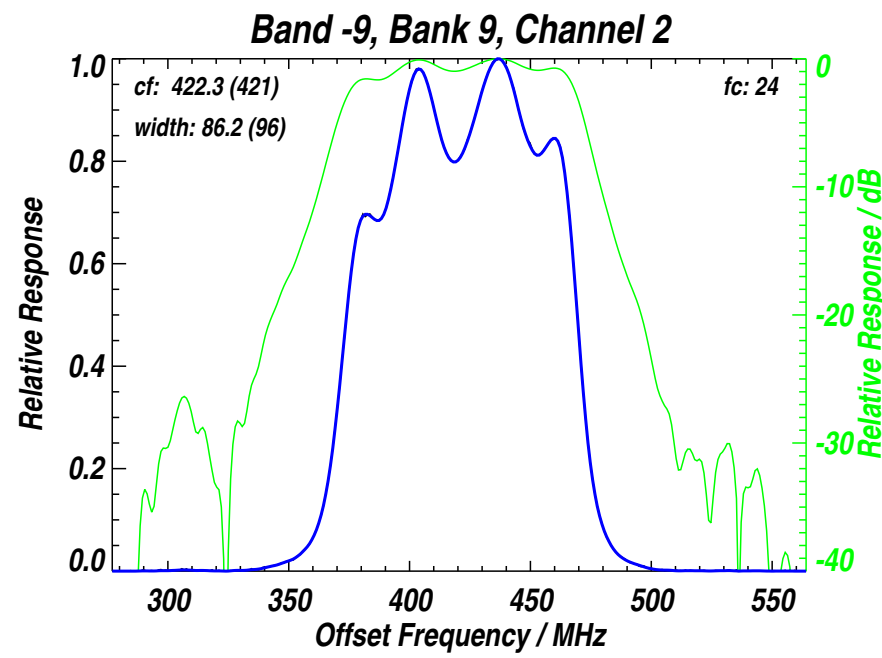
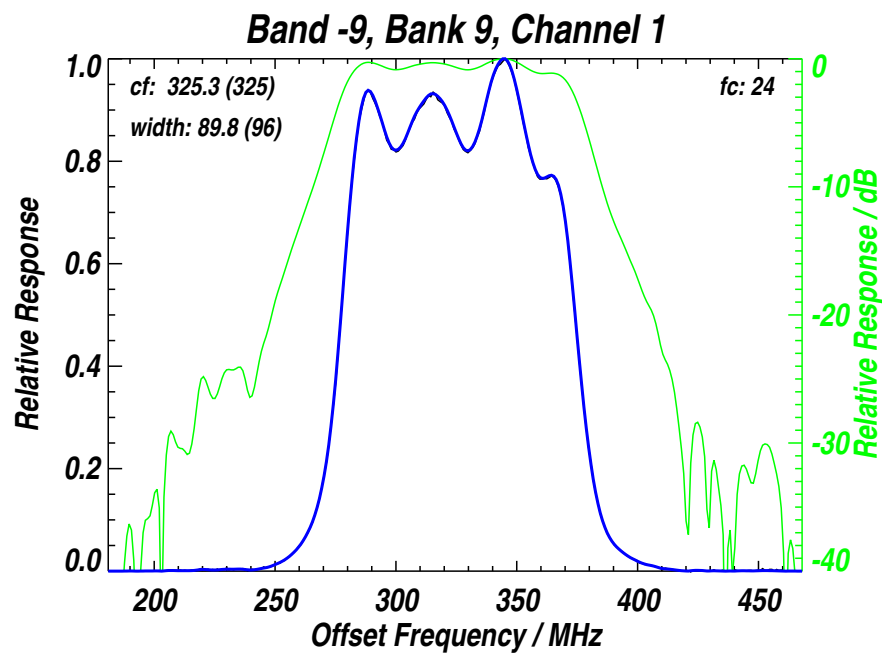


Figure H.244: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 1 to 4. See text for additional details.

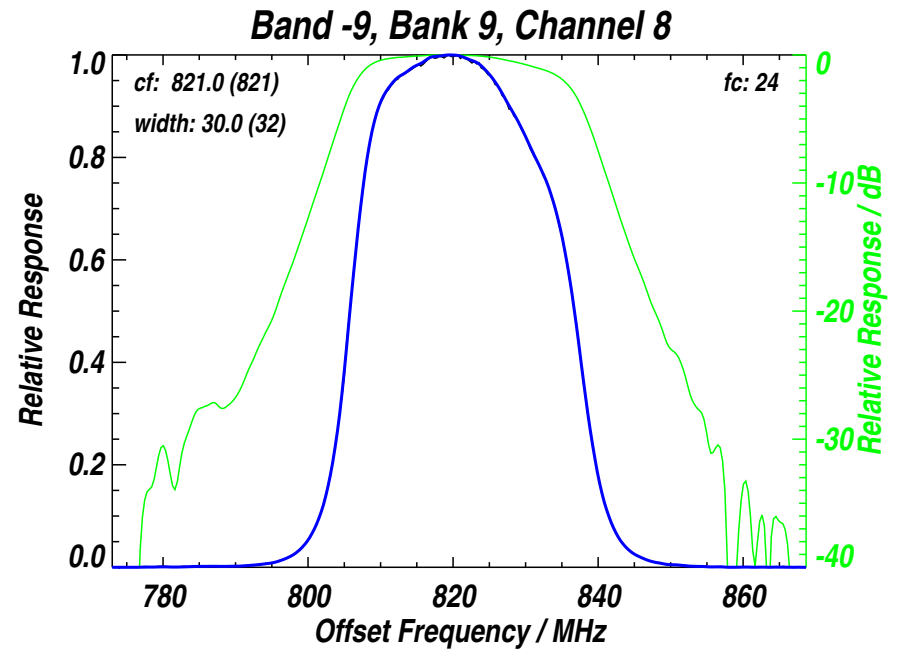
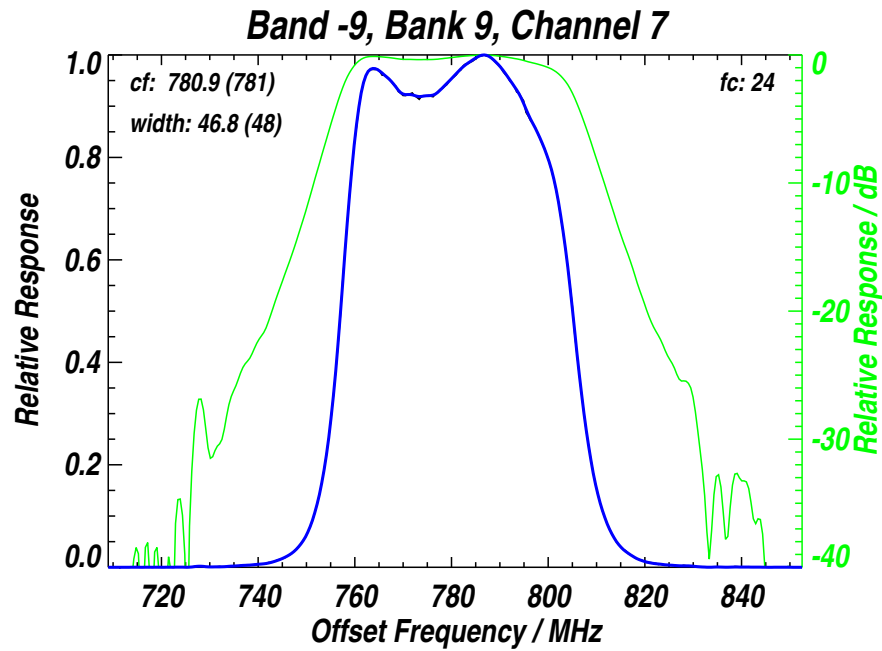
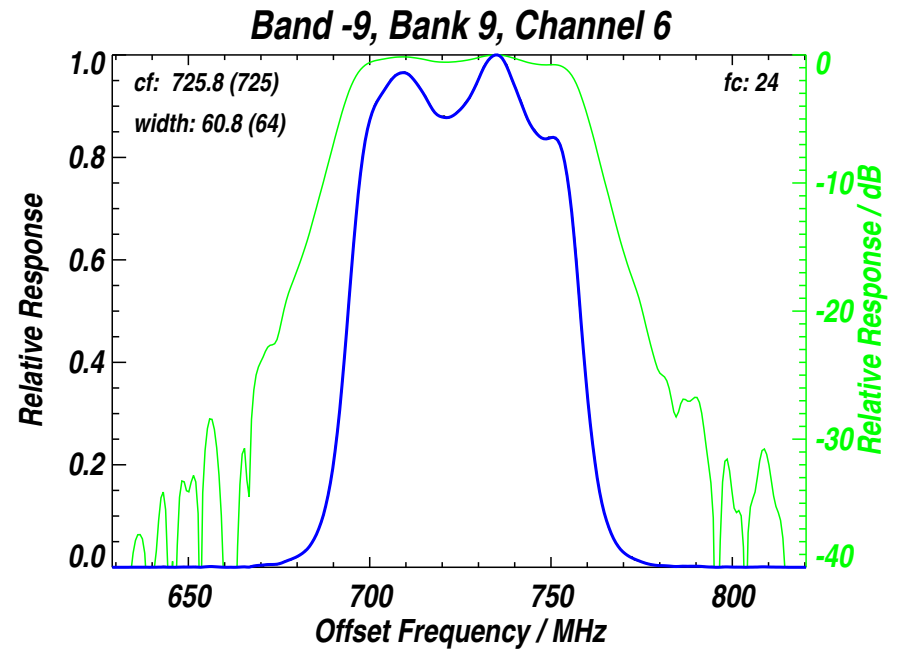
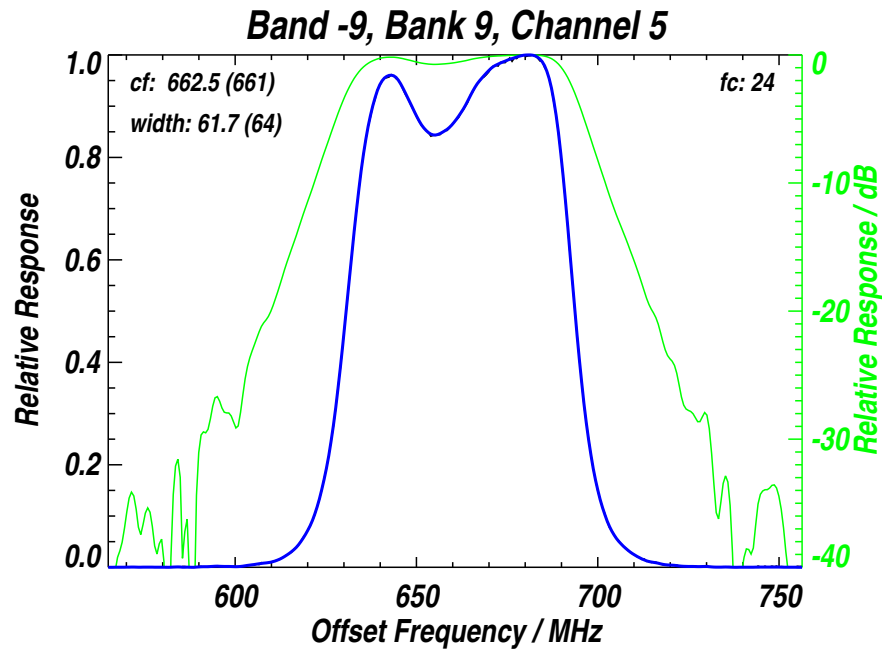


Figure H.245: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 5 to 8. See text for additional details.

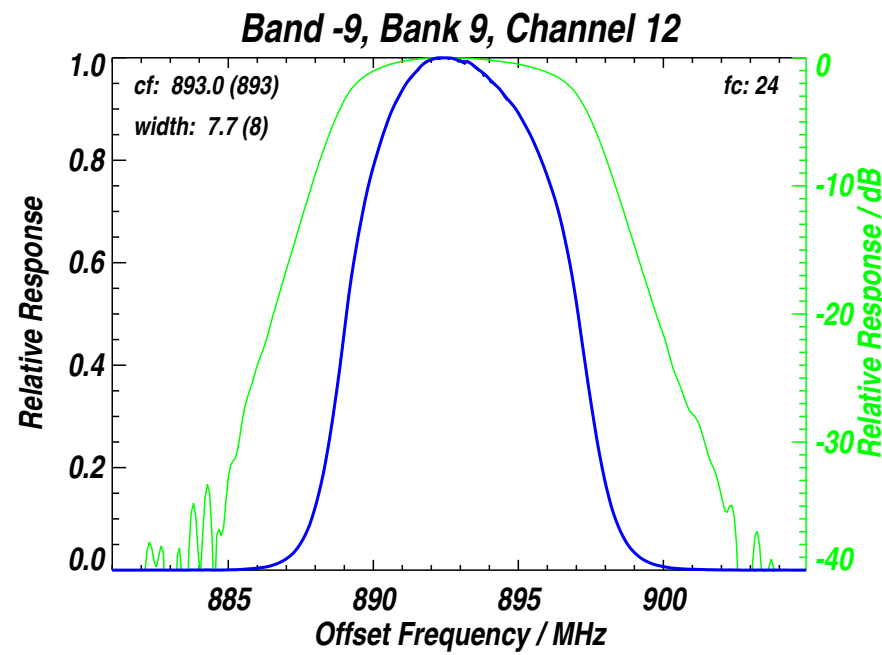
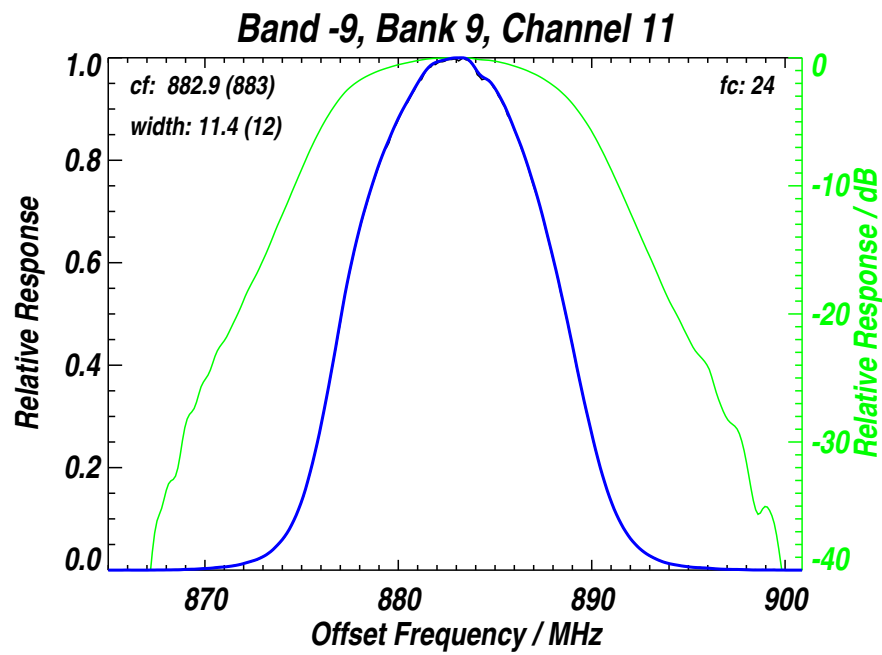
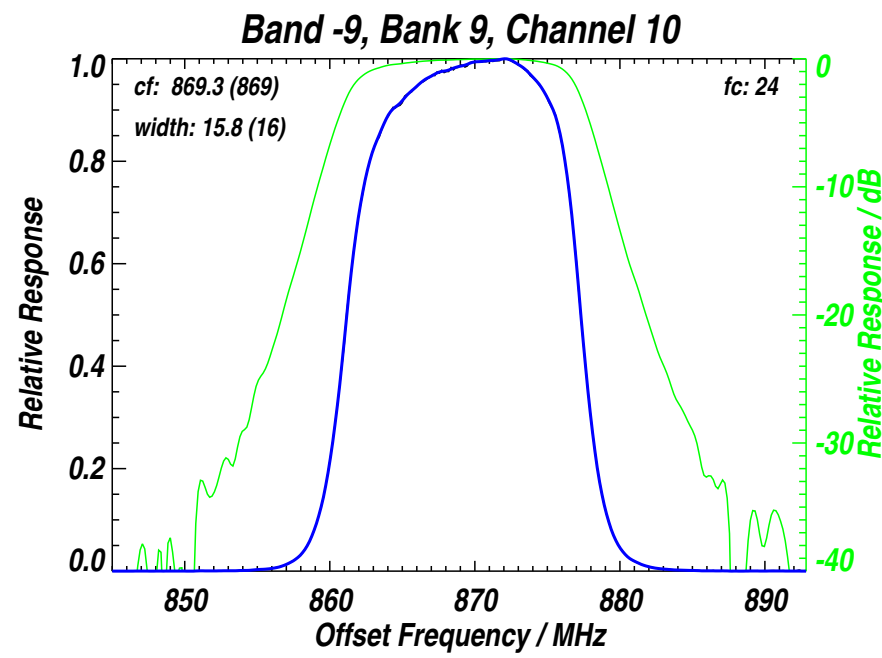
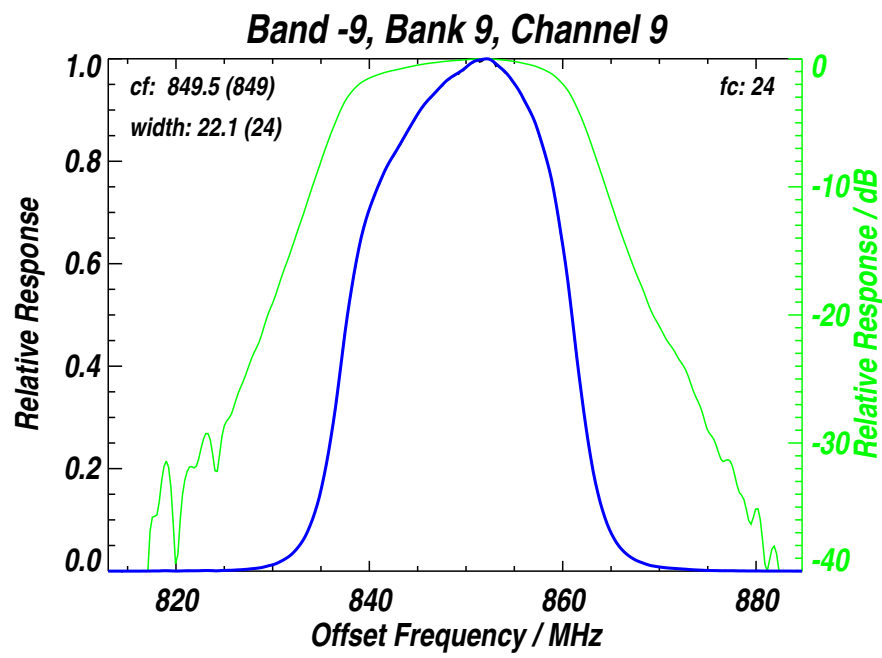


Figure H.246: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 9 to 12. See text for additional details.

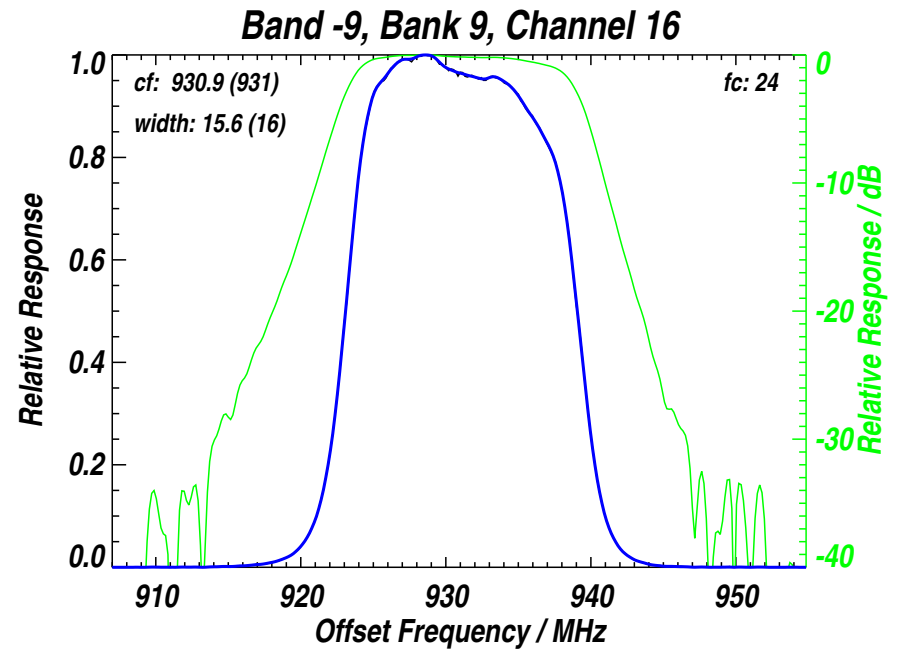
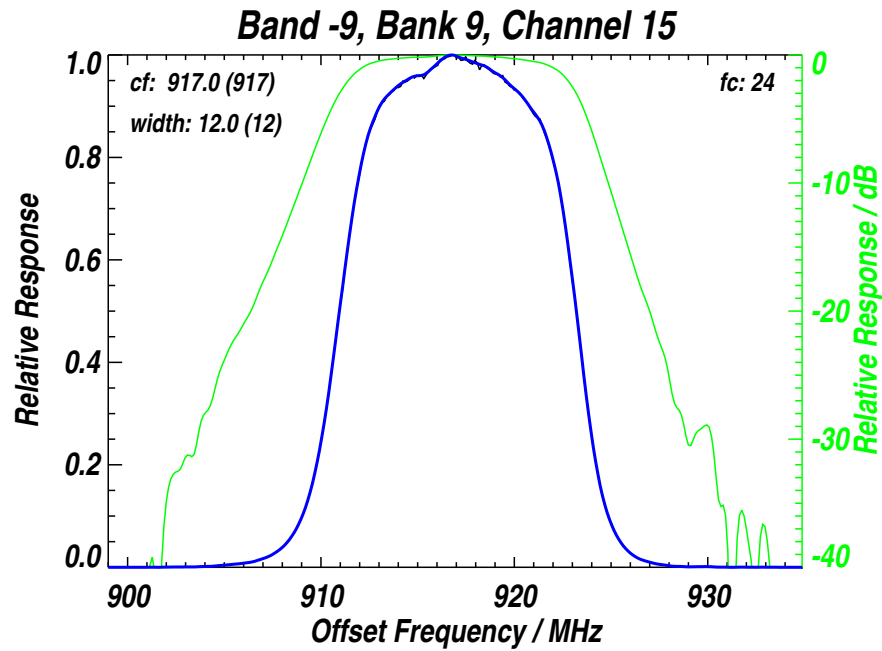
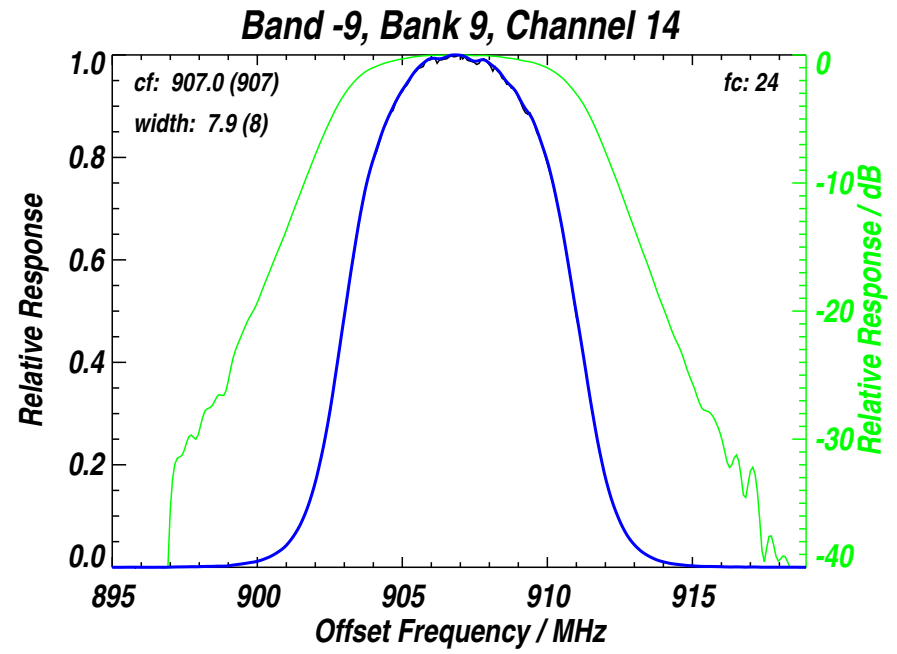
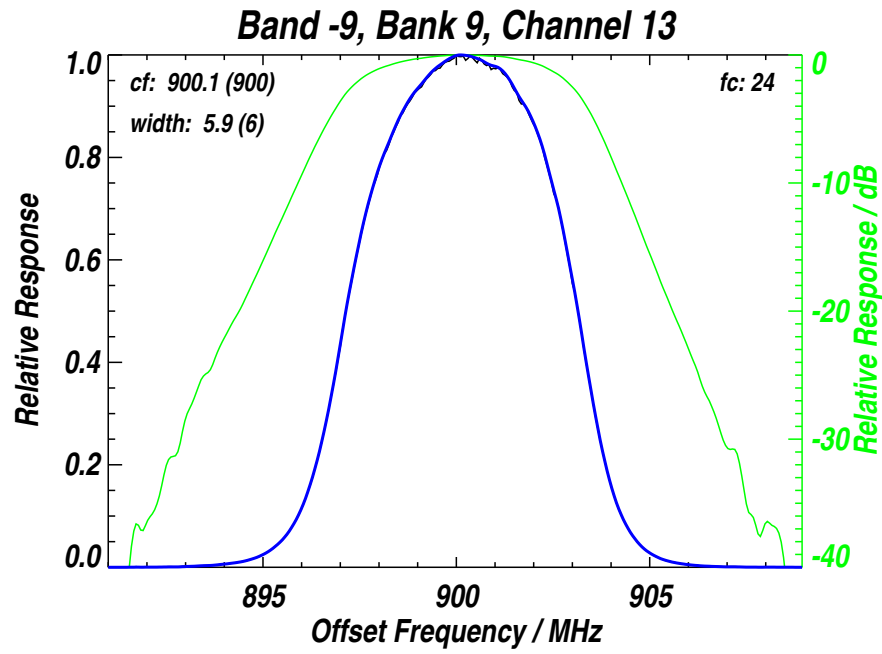


Figure H.247: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 13 to 16. See text for additional details.

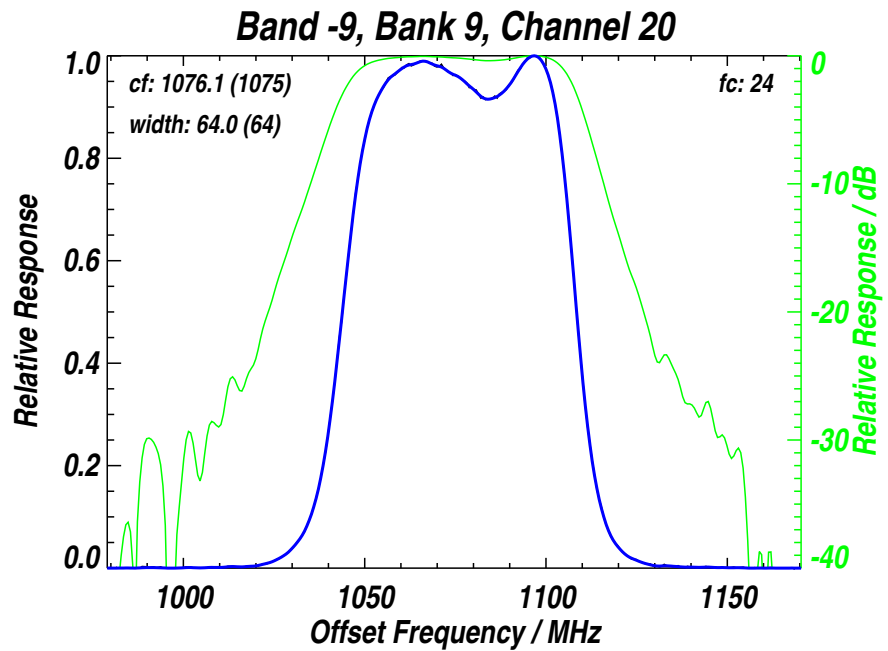
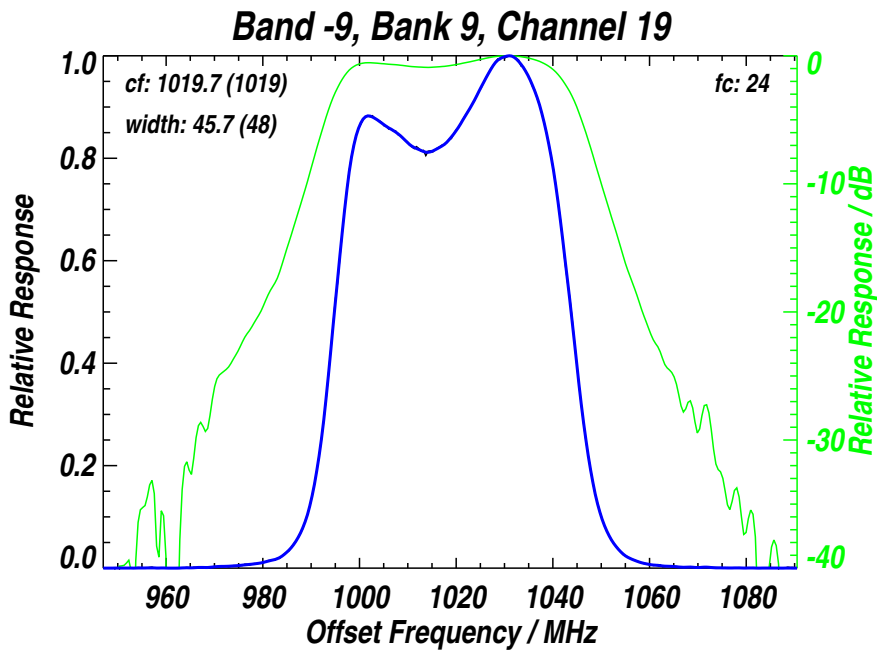
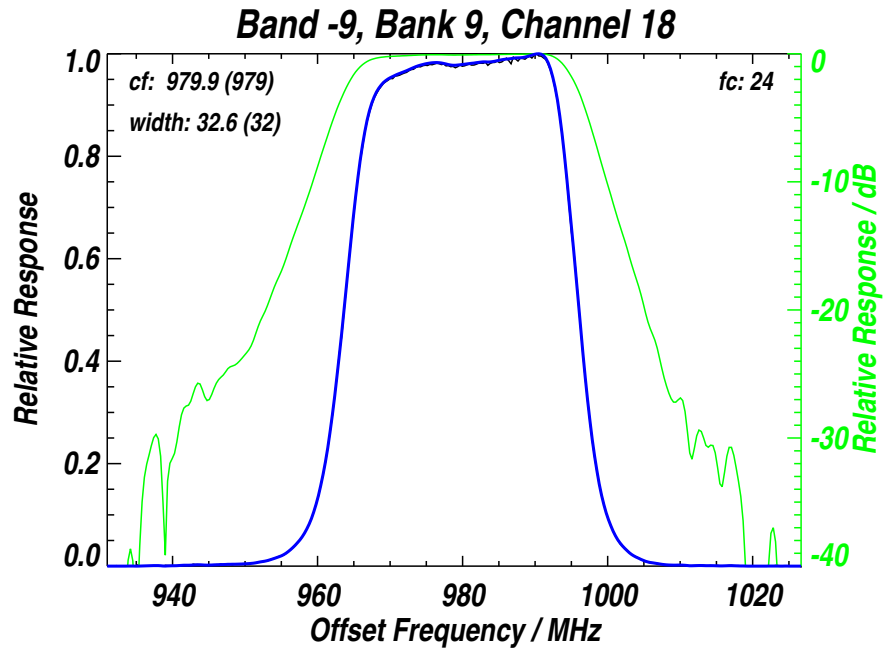
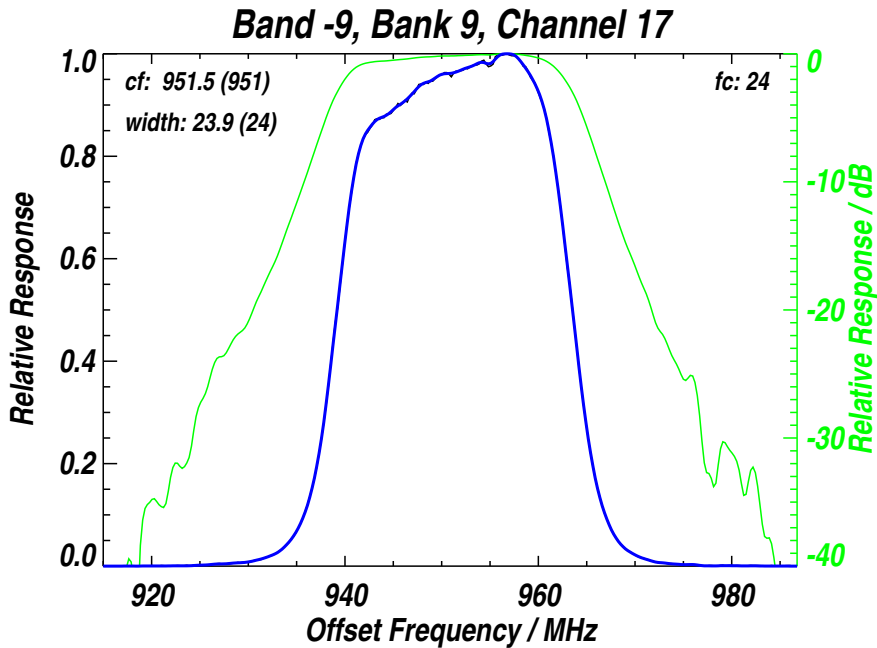


Figure H.248: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 17 to 20. See text for additional details.



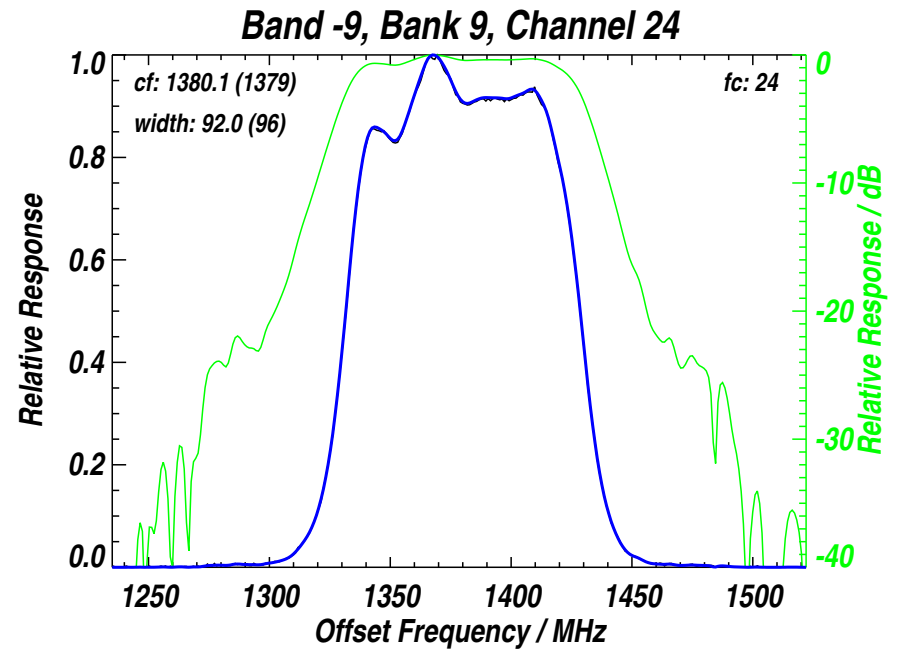
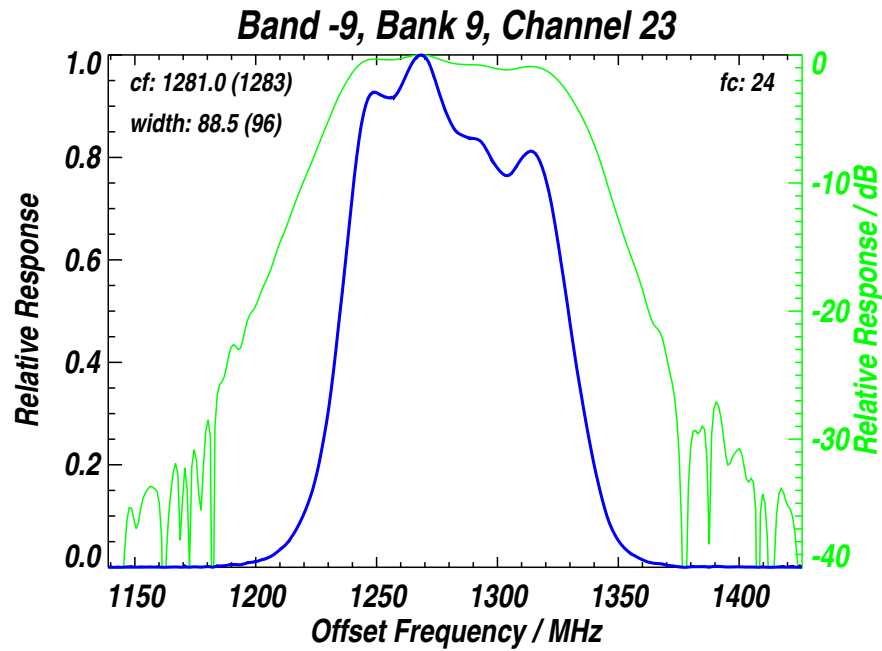
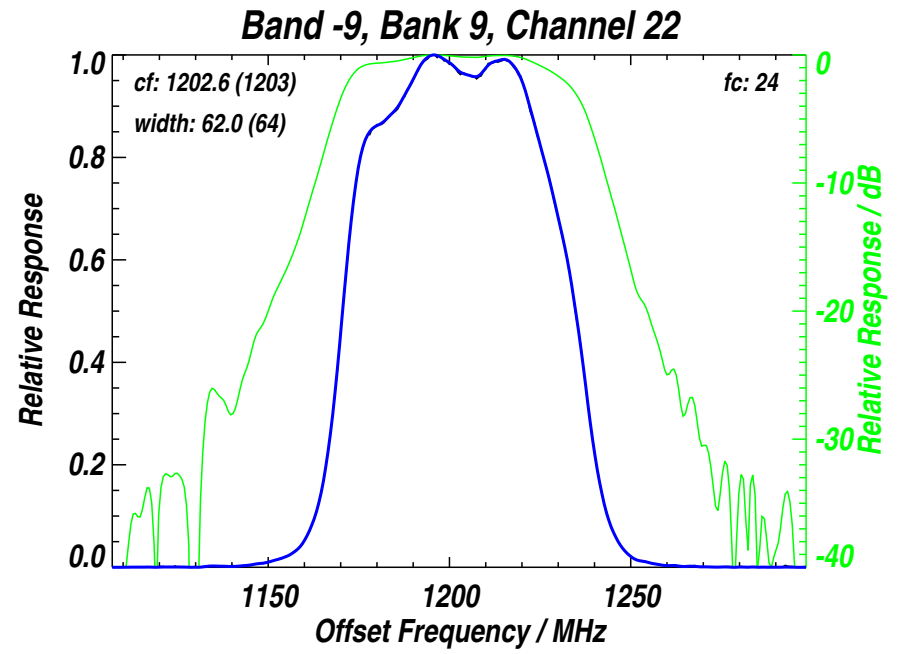
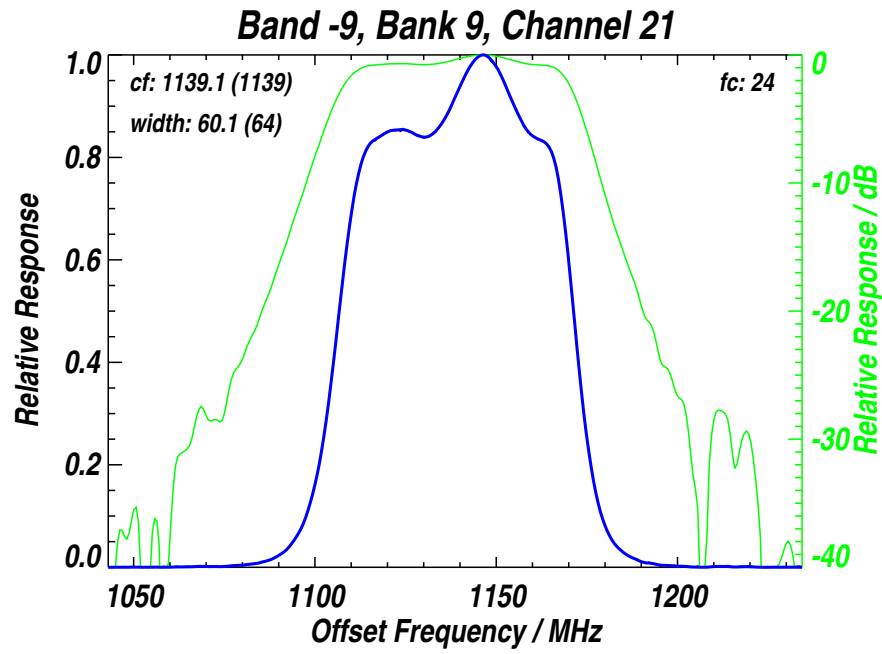
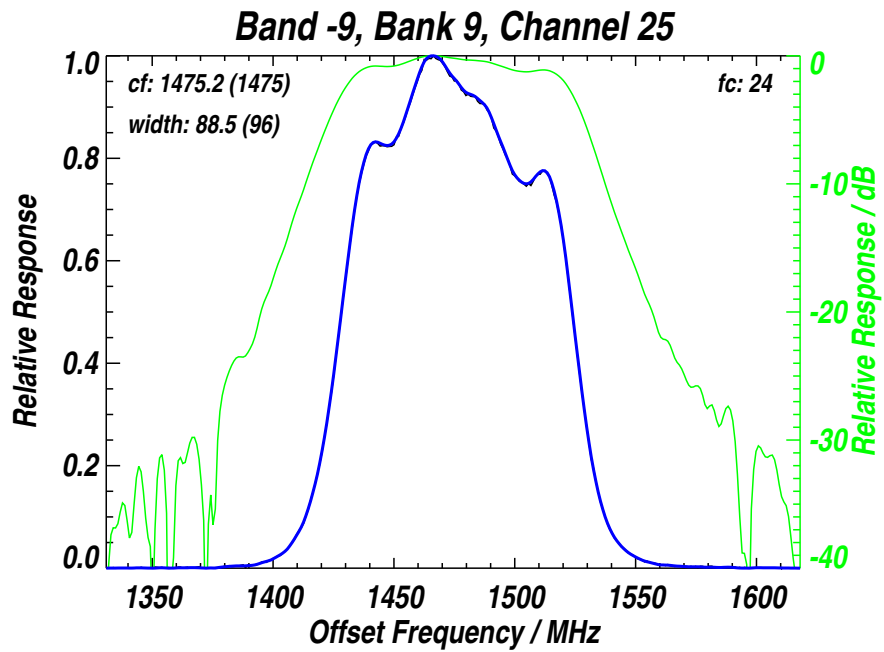


Figure H.249: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 21 to 24. See text for additional details.



**Band 9 (lsb)**  
**Bank 9**  
**Origin = 229.643333316 GHz**

Figure H.250: Lower sideband front-end sweep data for Band 9 taken via Filterbank 9, channel 25. See text for additional details.

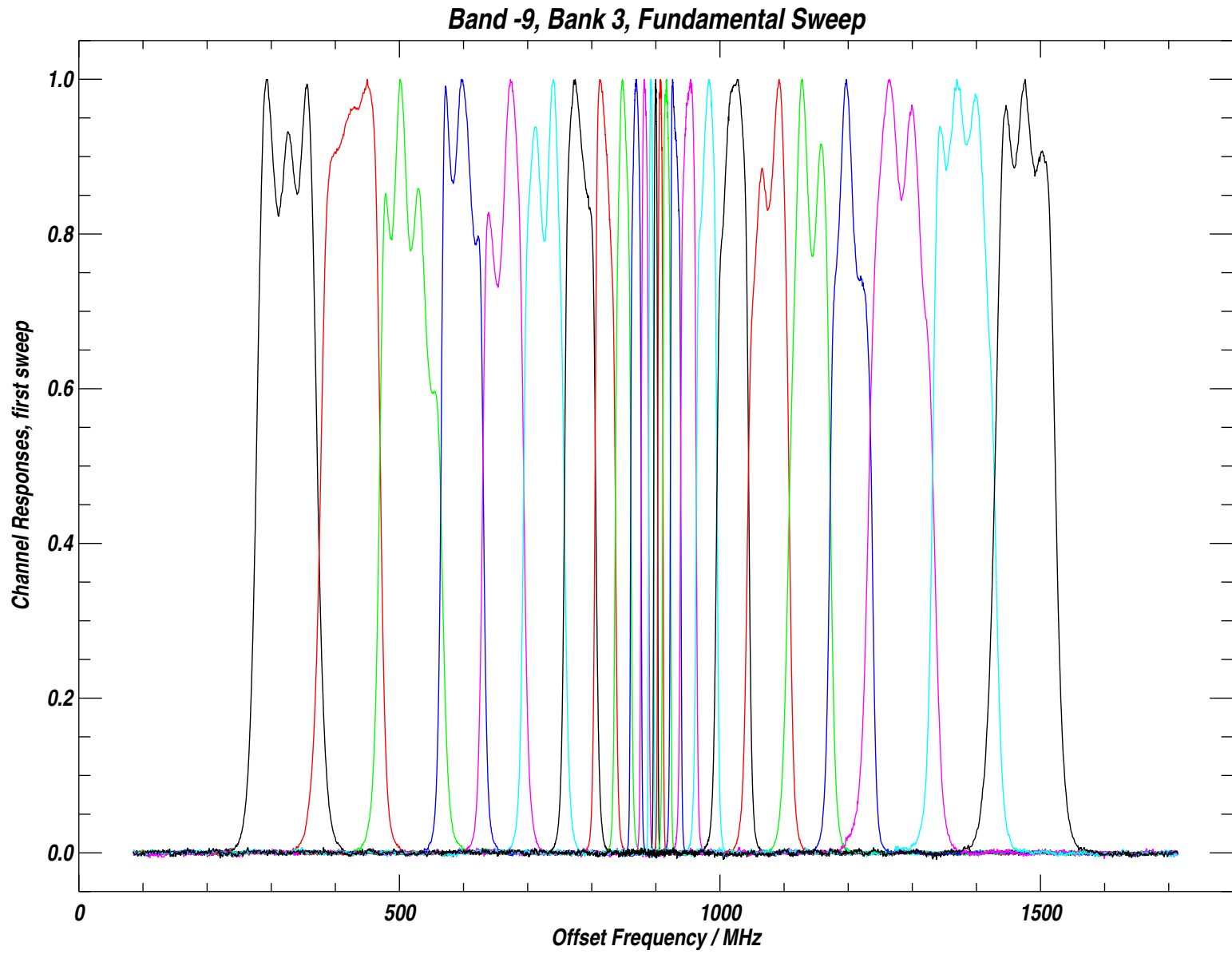


Figure H.251: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3. See text for additional details.

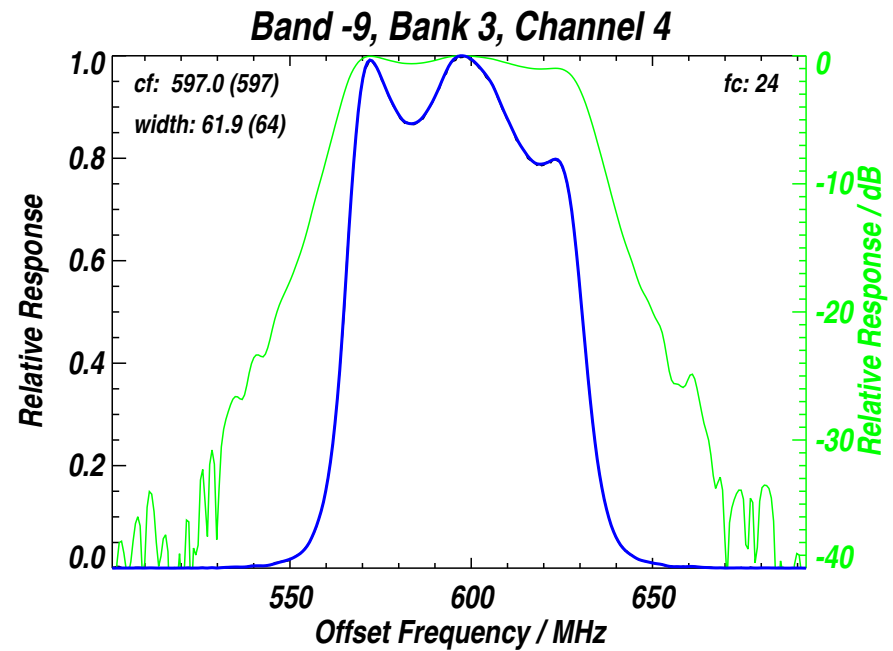
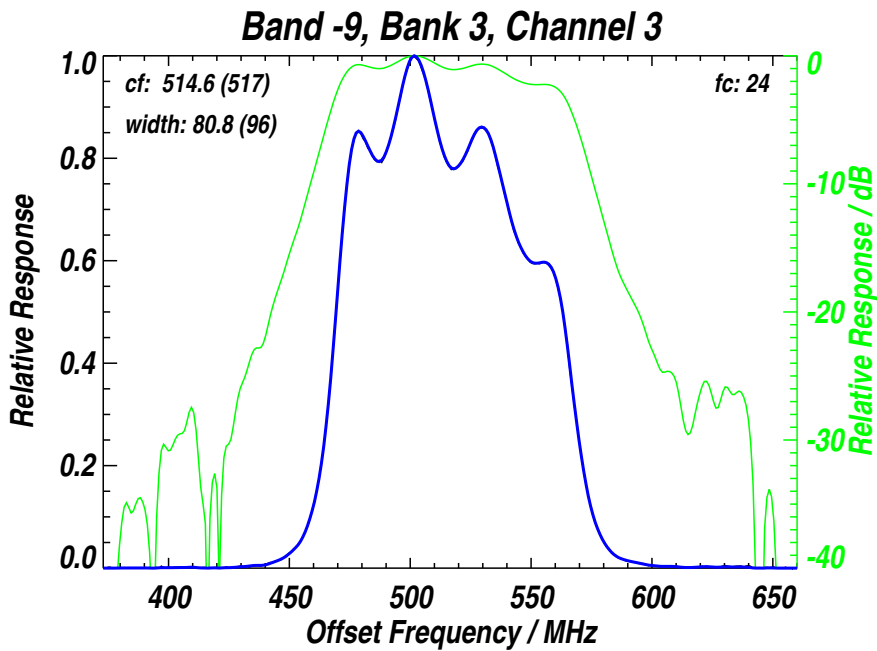
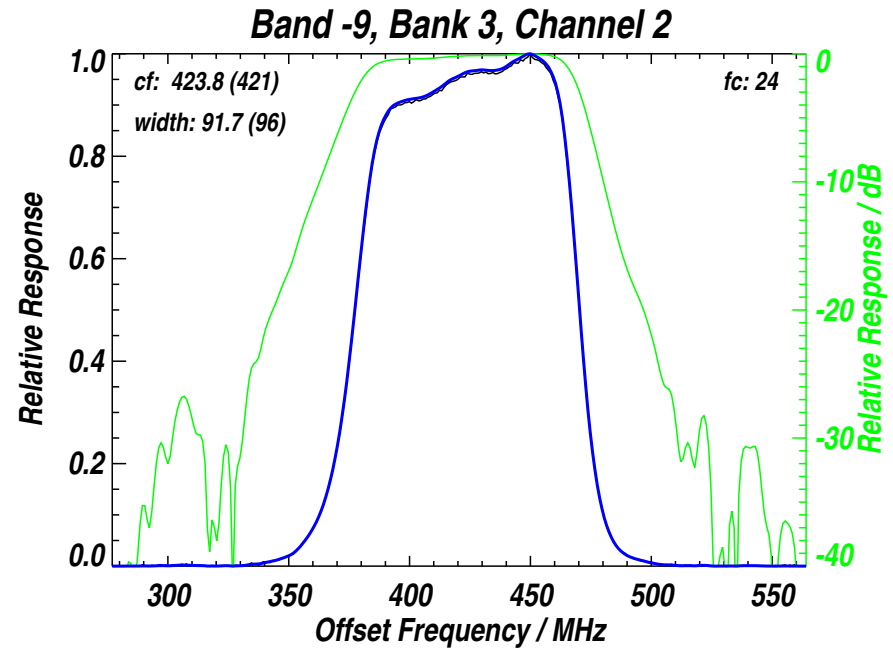
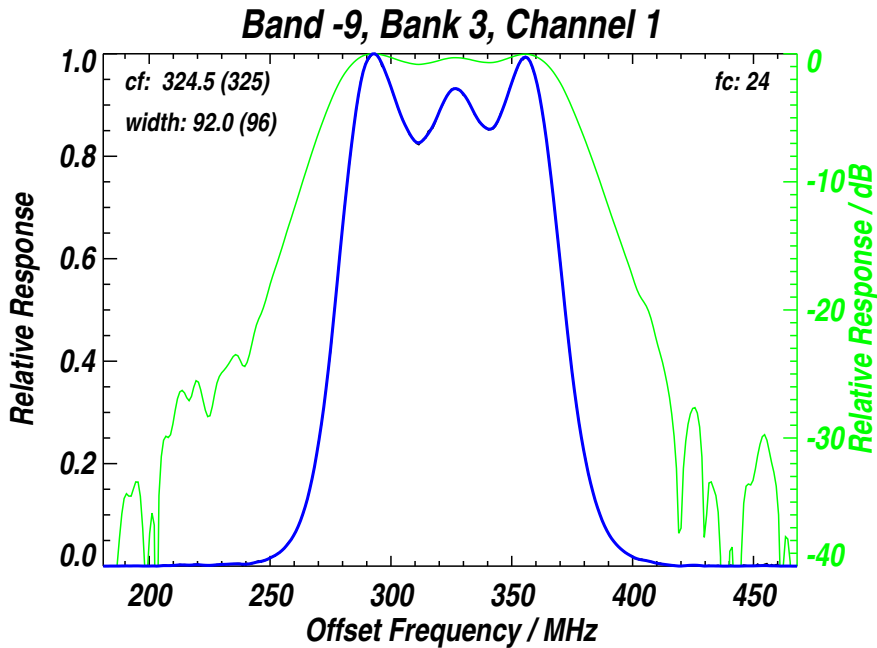


Figure H.252: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 1 to 4. See text for additional details.

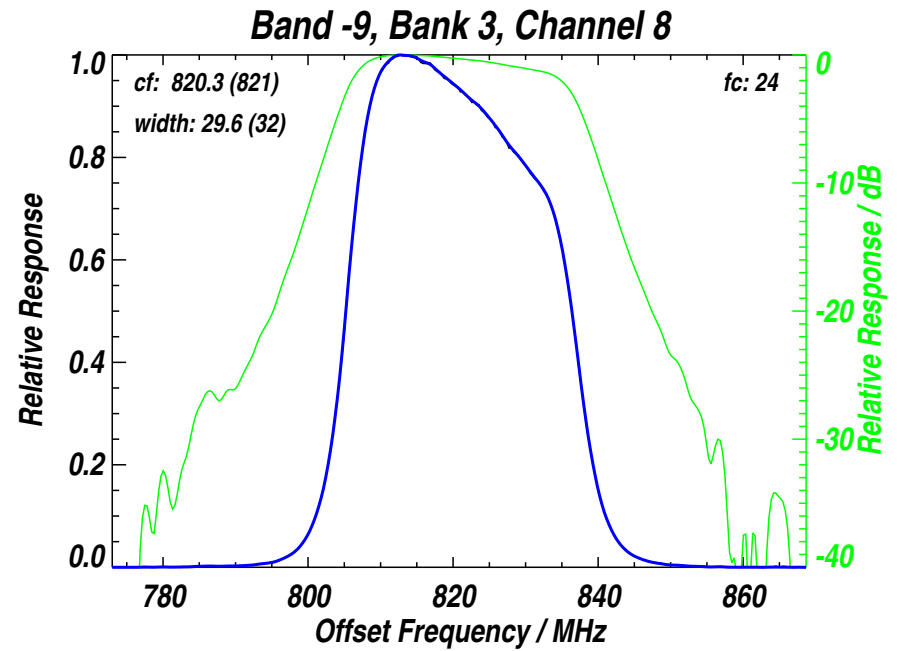
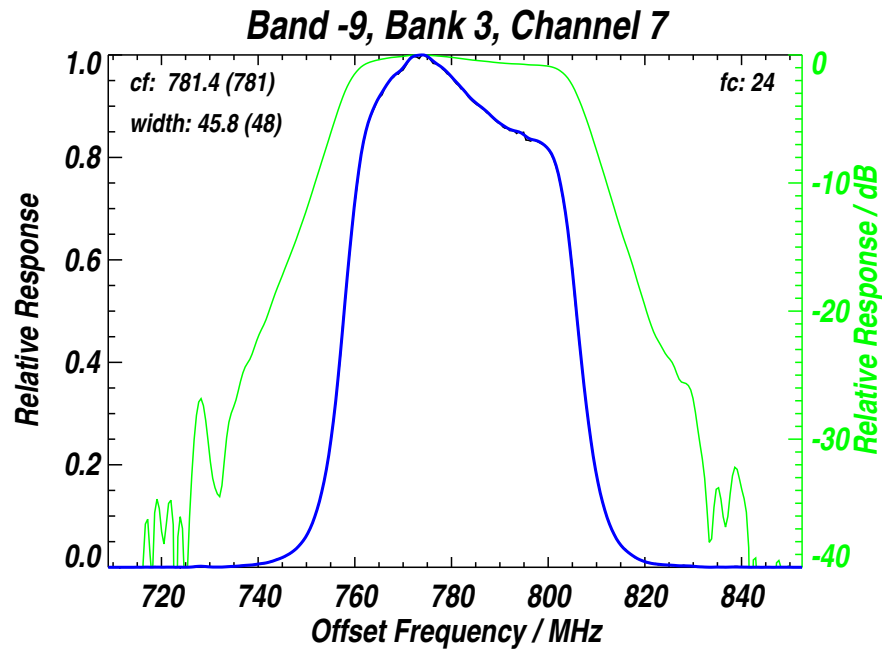
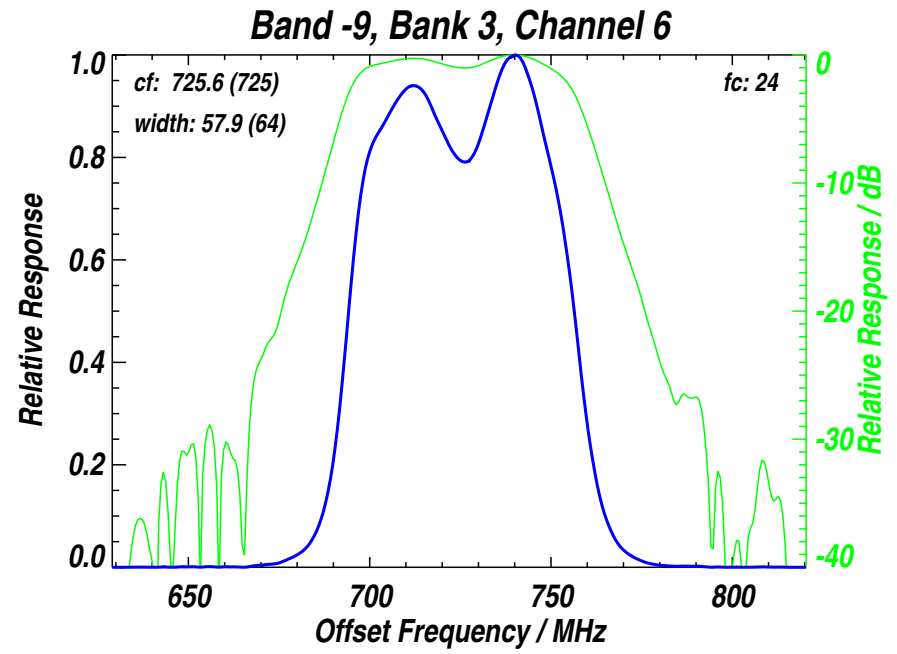
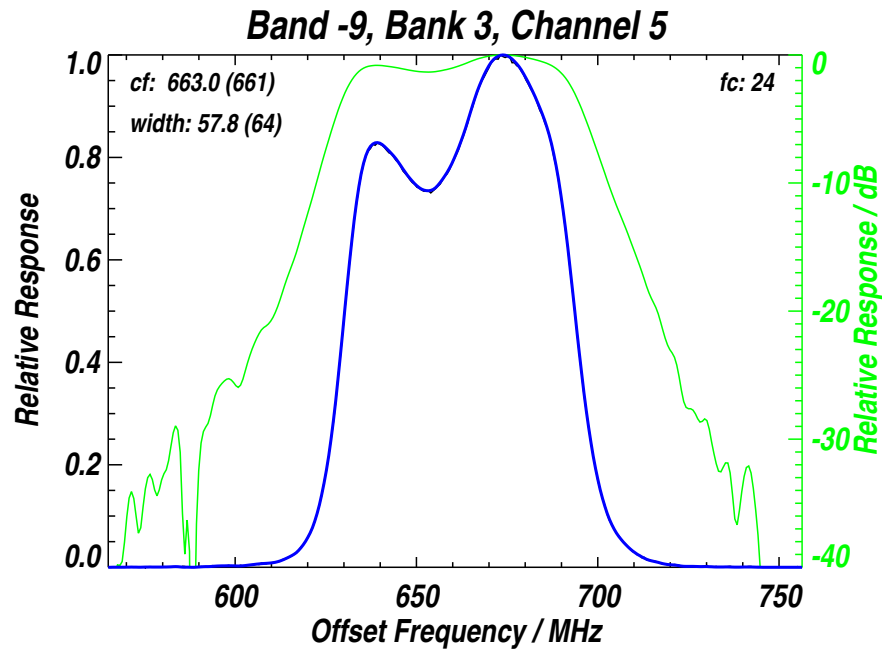


Figure H.253: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 5 to 8. See text for additional details.

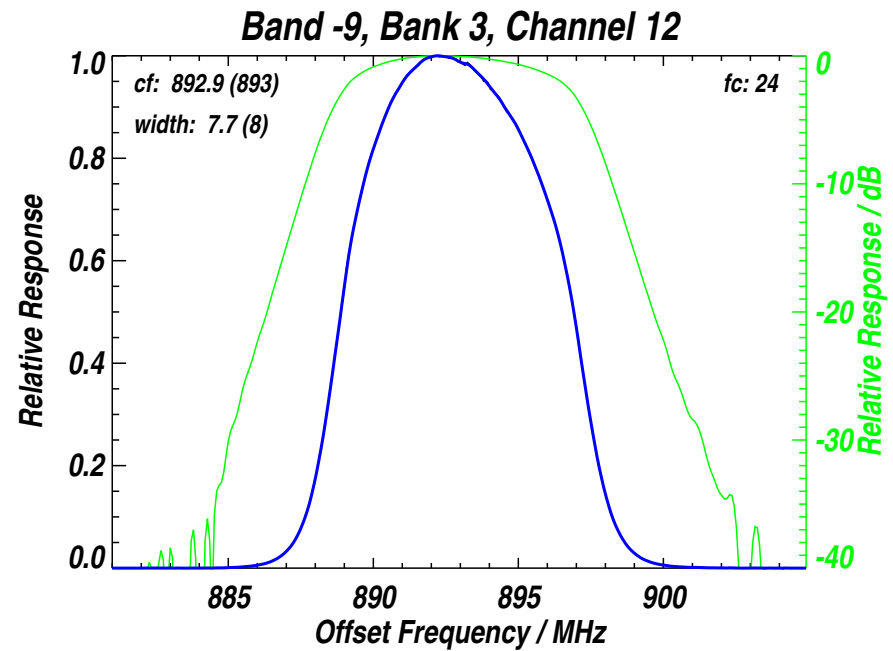
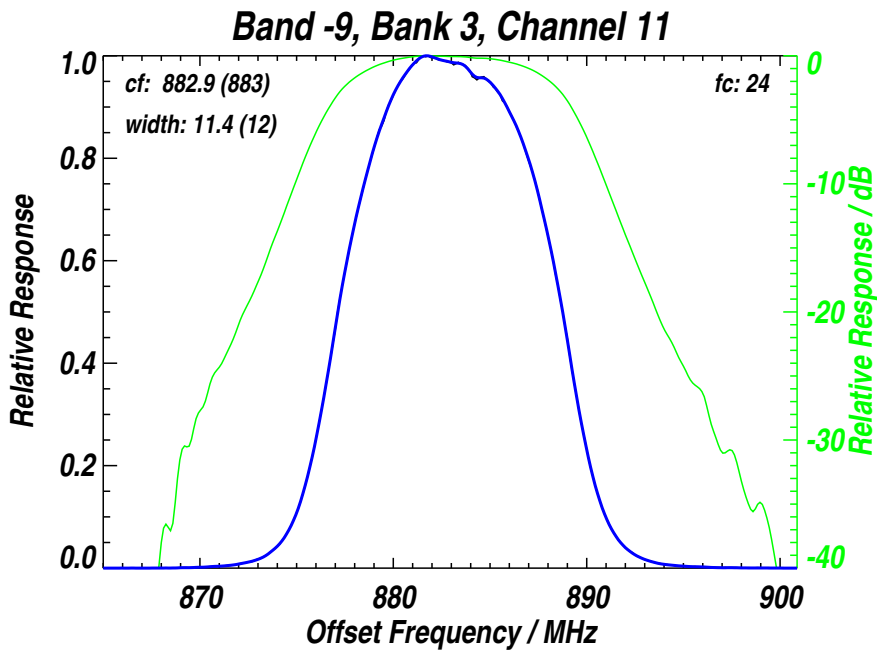
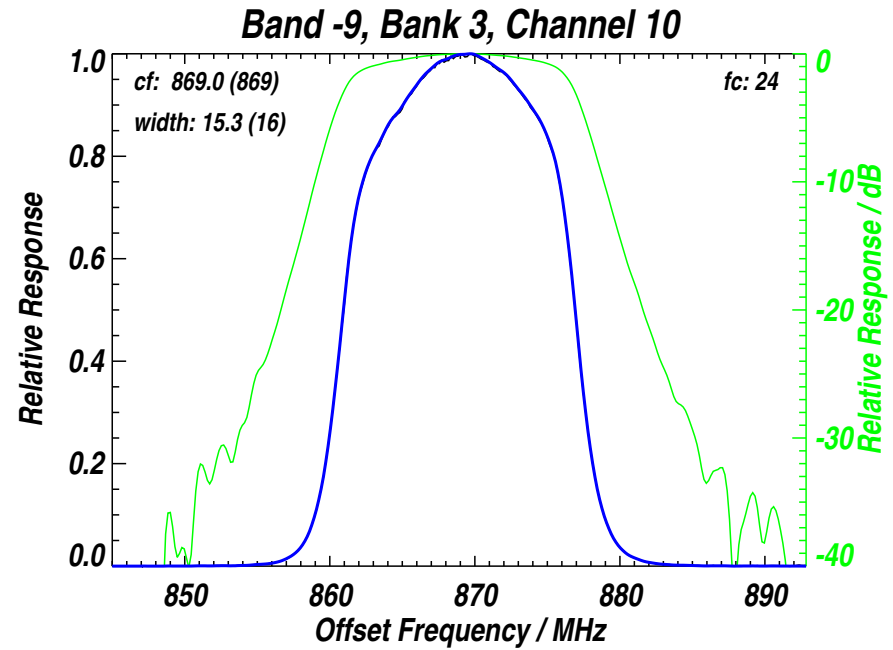
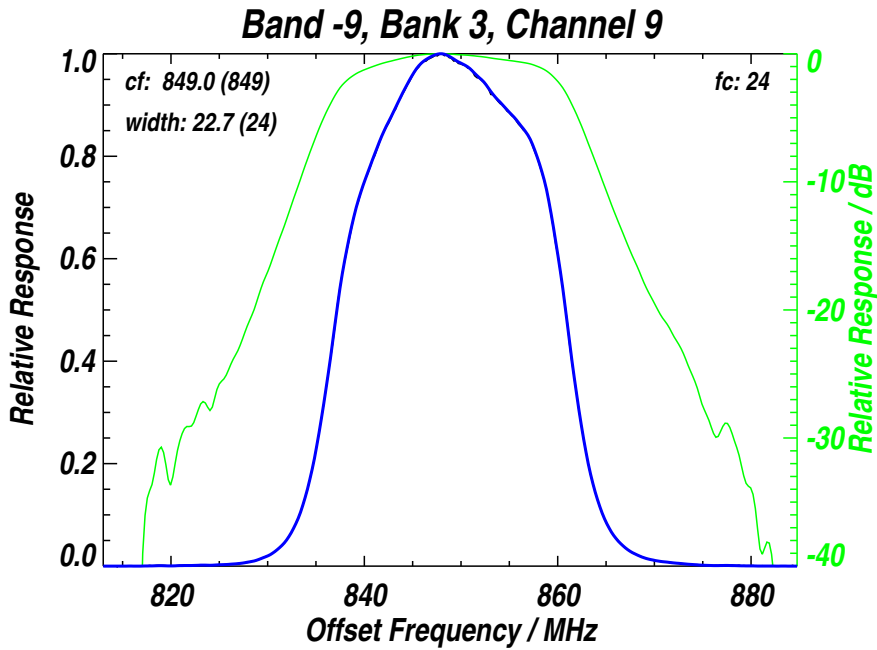


Figure H.254: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 9 to 12. See text for additional details.

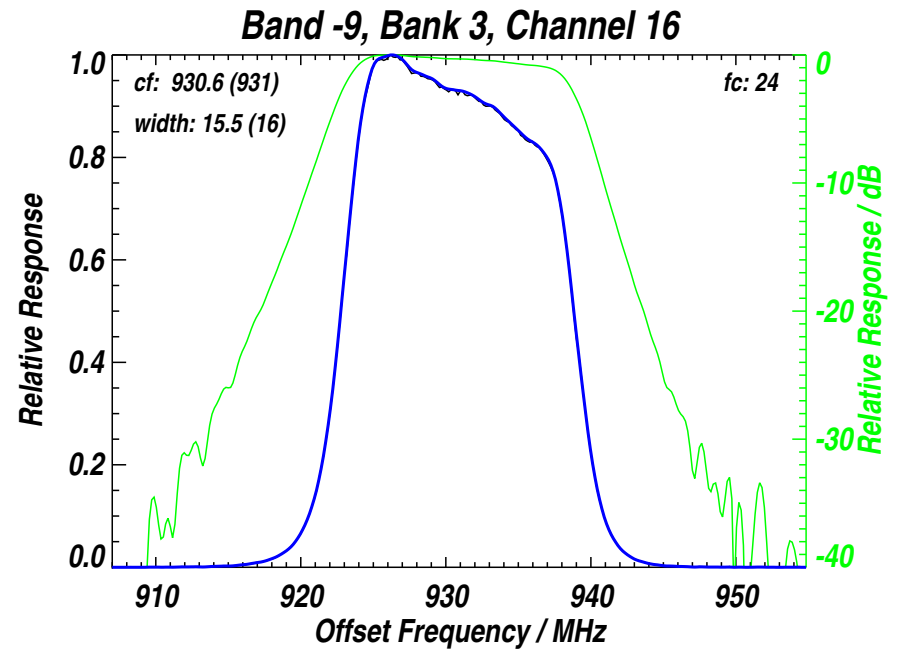
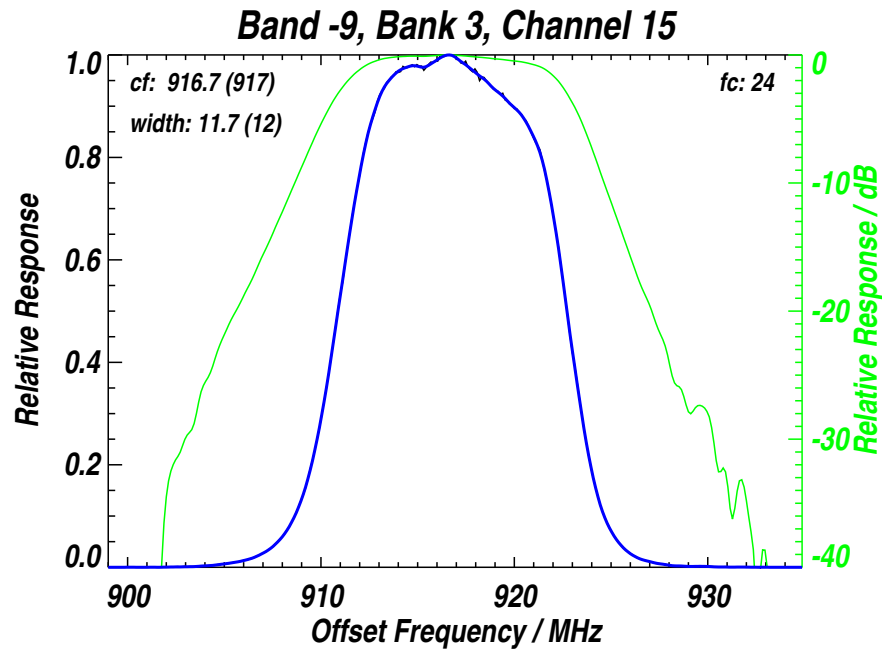
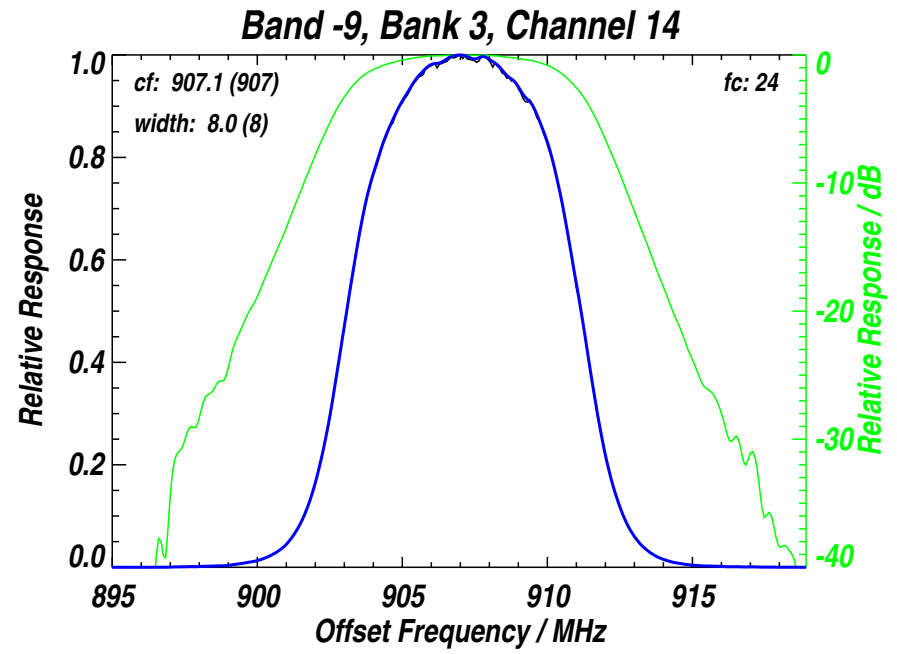
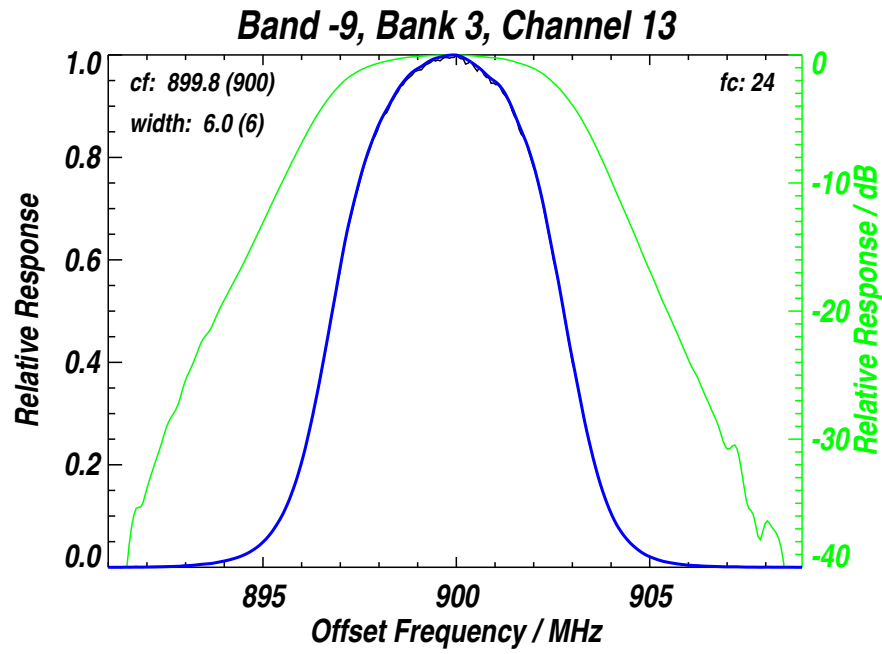


Figure H.255: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 13 to 16. See text for additional details.

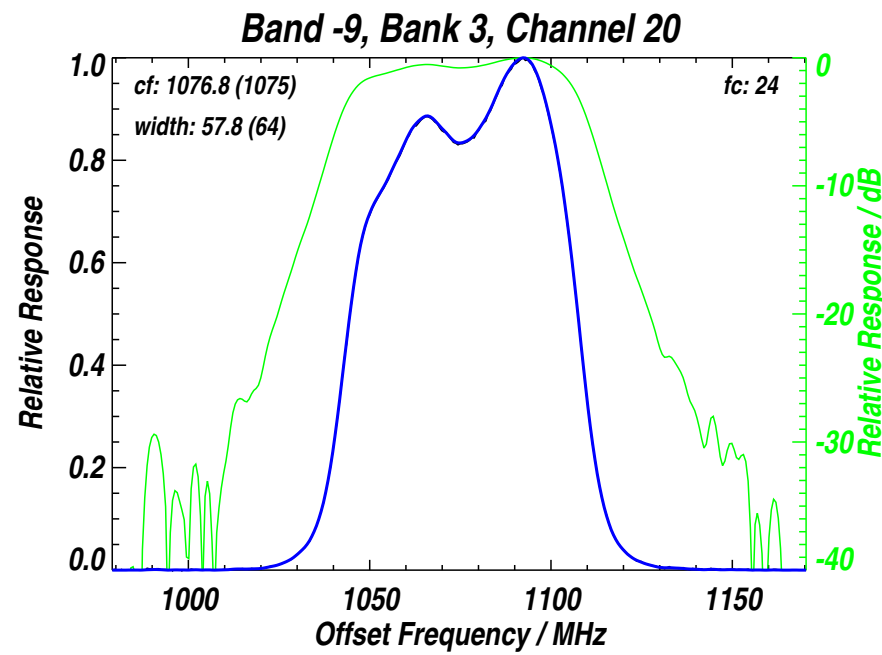
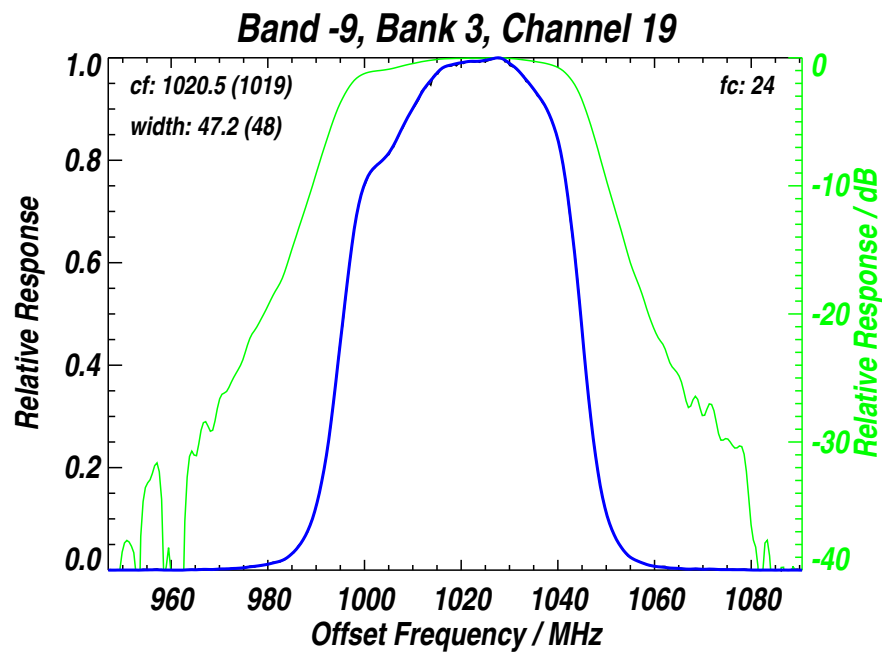
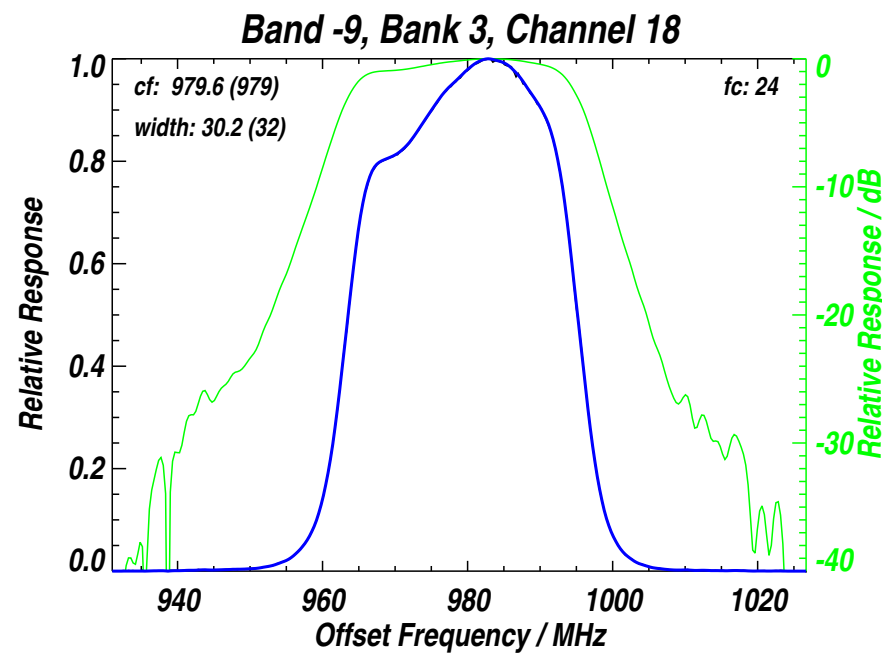
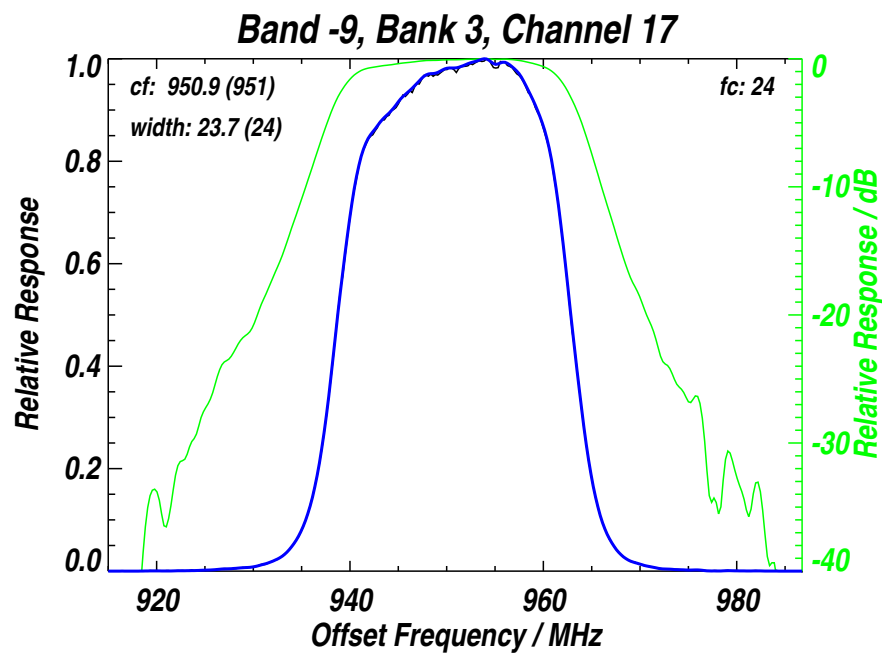


Figure H.256: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 17 to 20. See text for additional details.



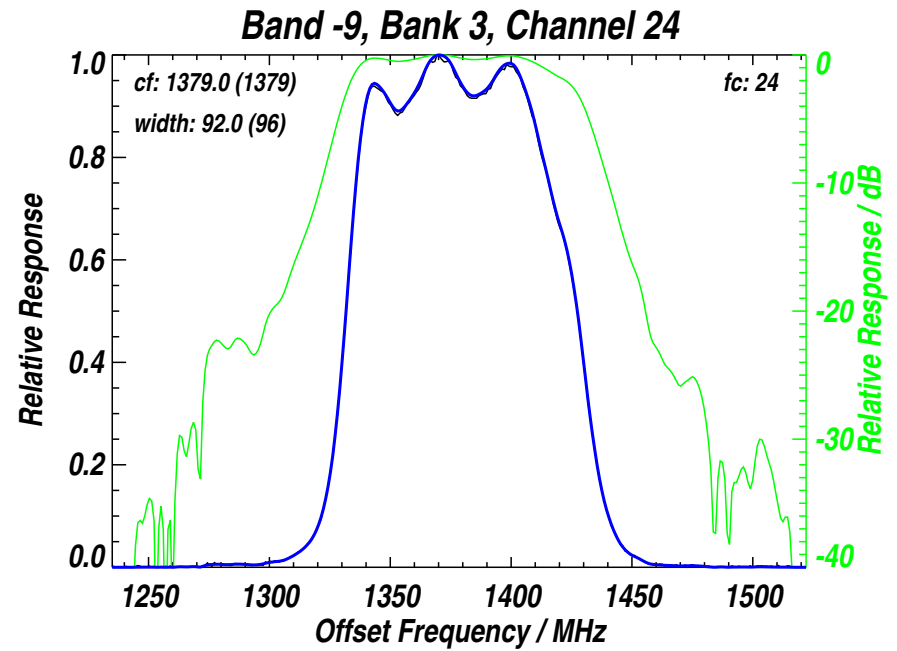
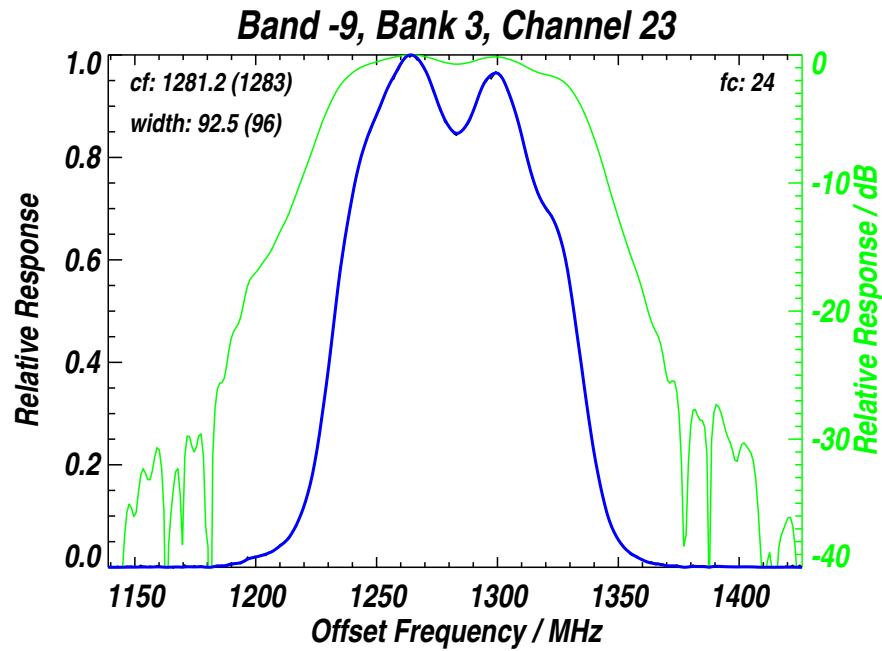
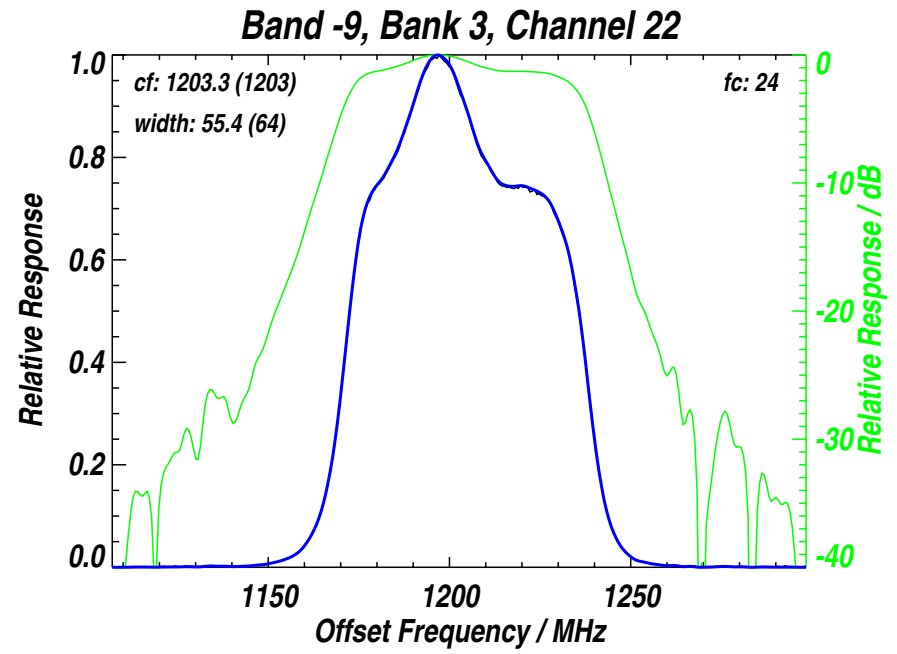
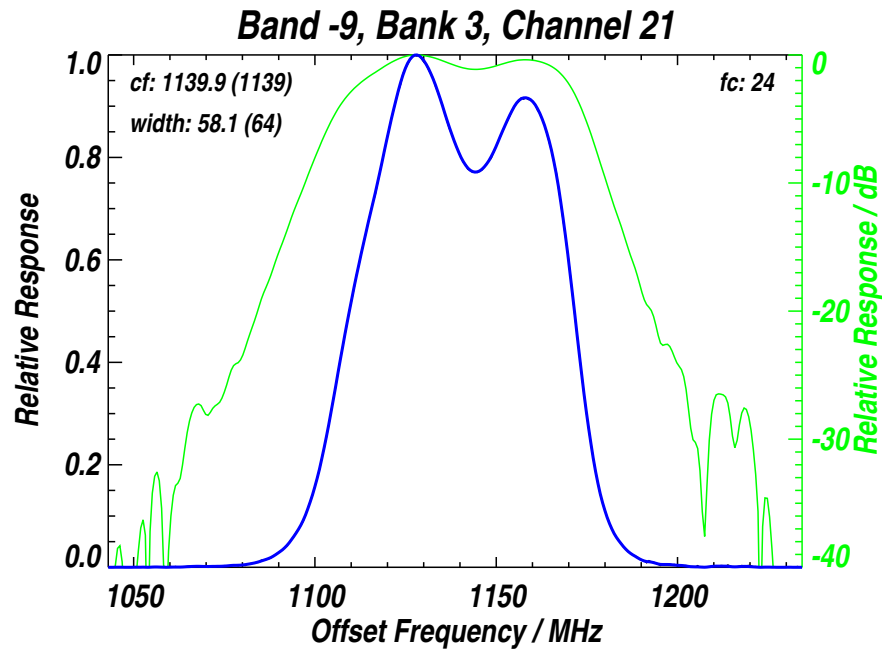
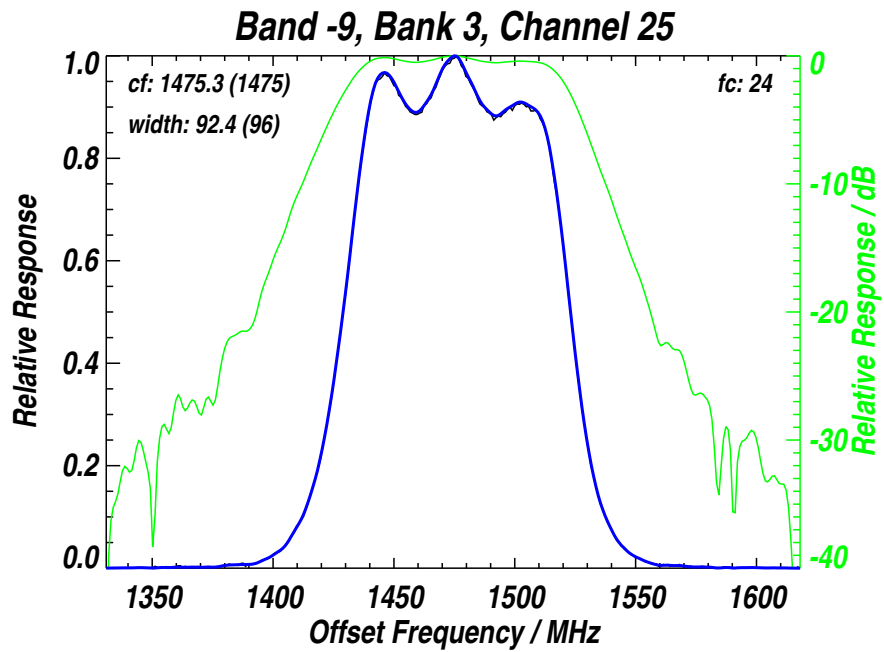


Figure H.257: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 9 (lsb)**  
**Bank 3**  
**Origin = 229.643333316 GHz**

Figure H.258: Lower sideband front-end sweep data for Band 9 taken via Filterbank 3, channel 25. See text for additional details.

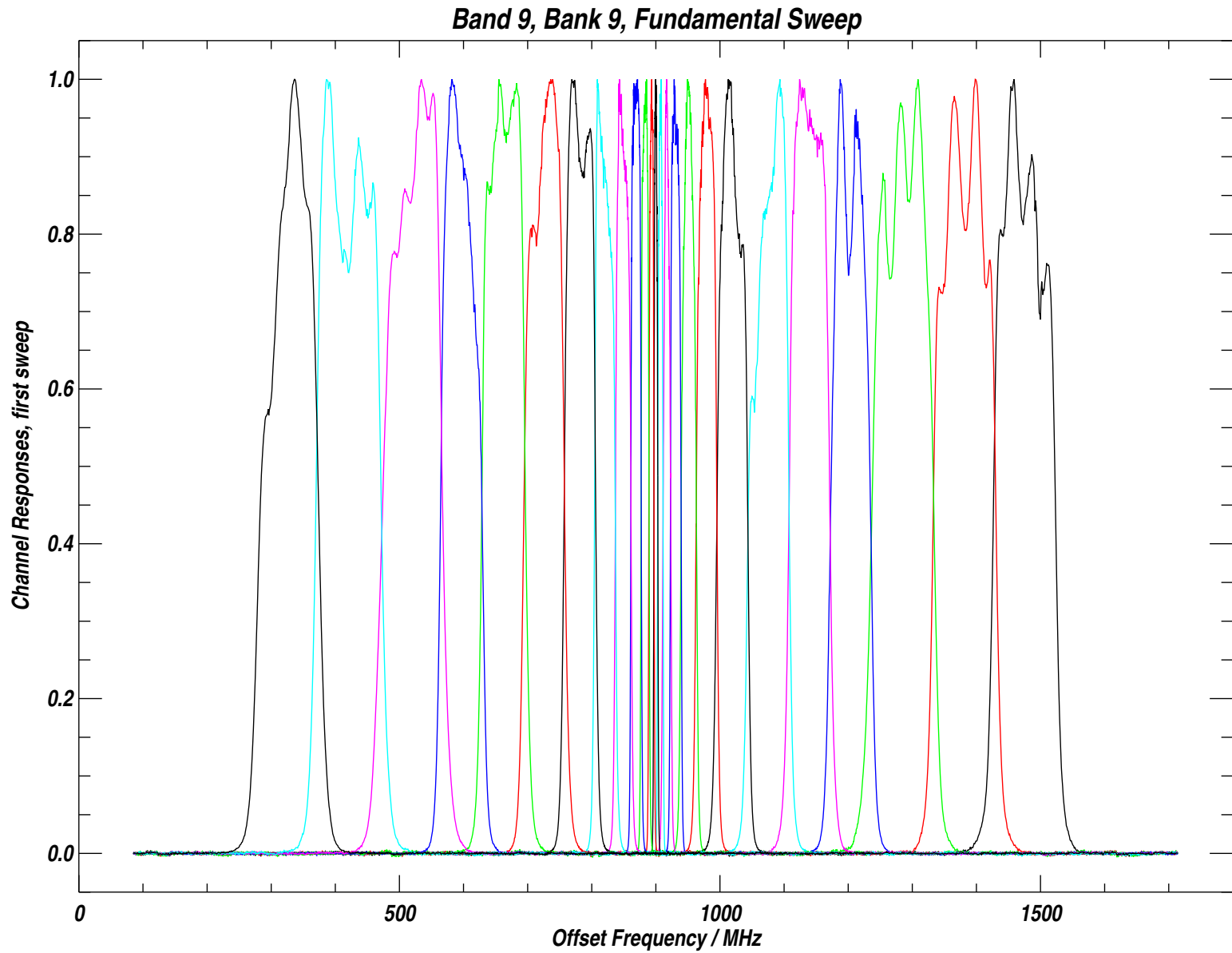


Figure H.259: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9. See text for additional details.

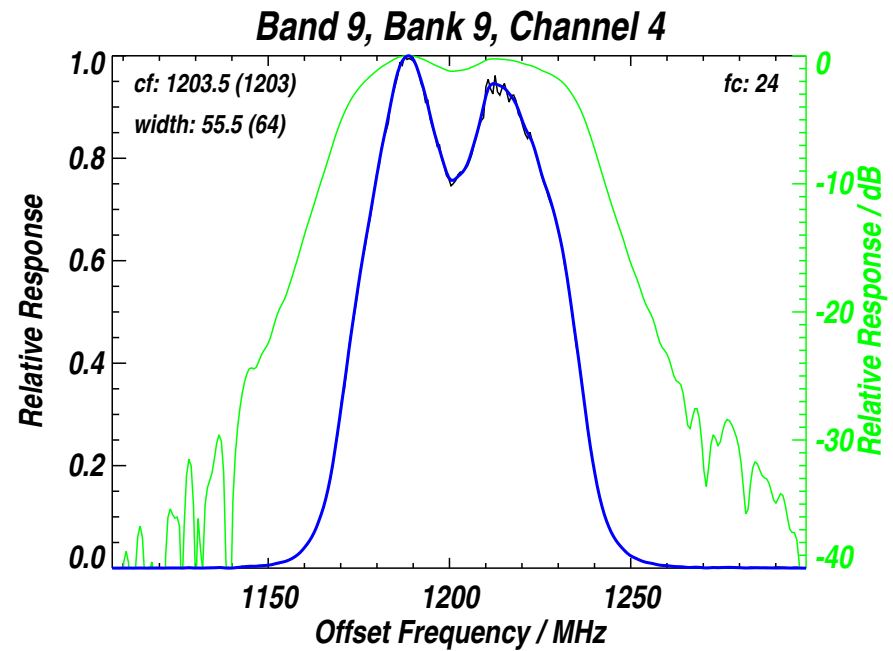
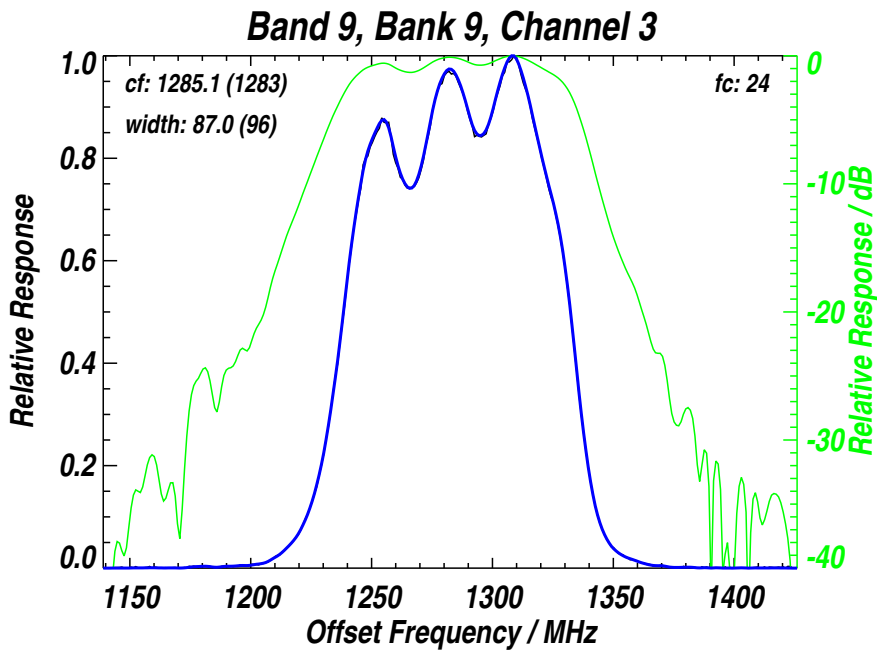
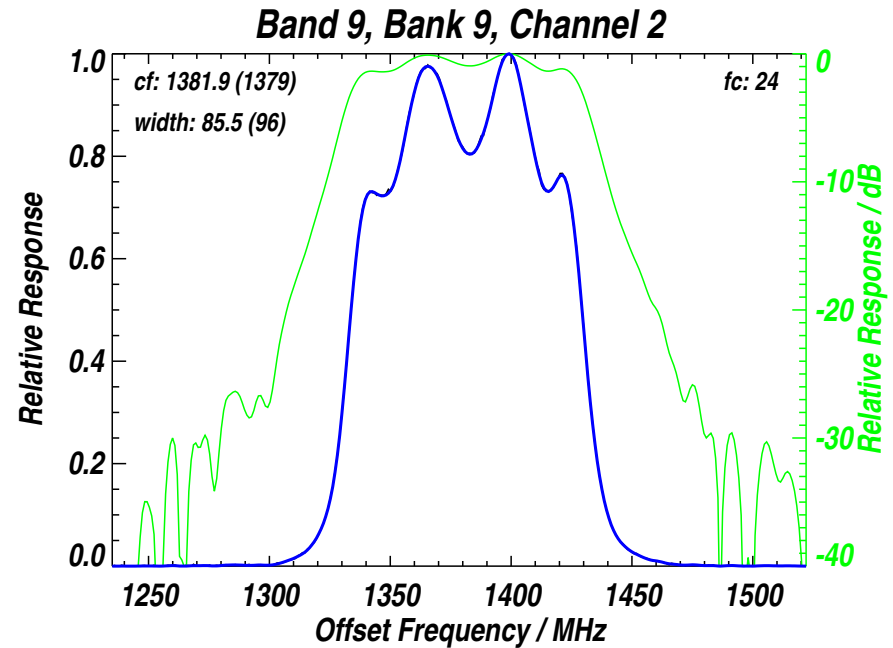
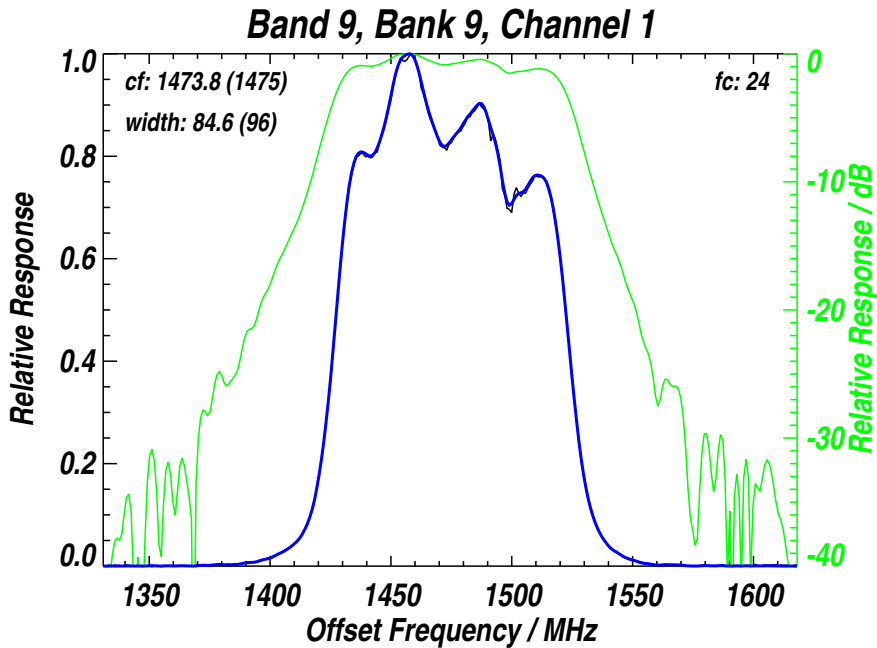


Figure H.260: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 1 to 4. See text for additional details.

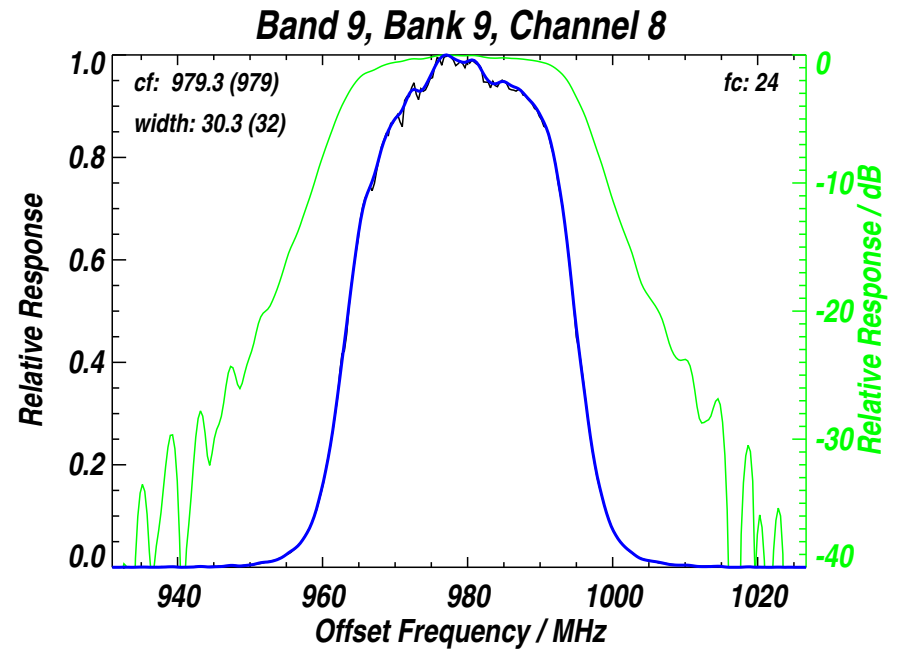
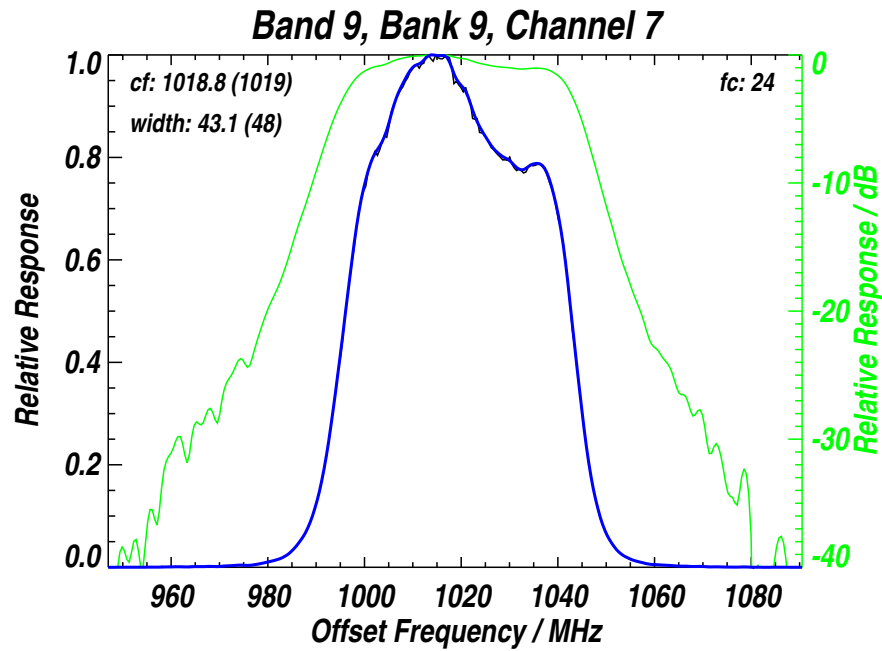
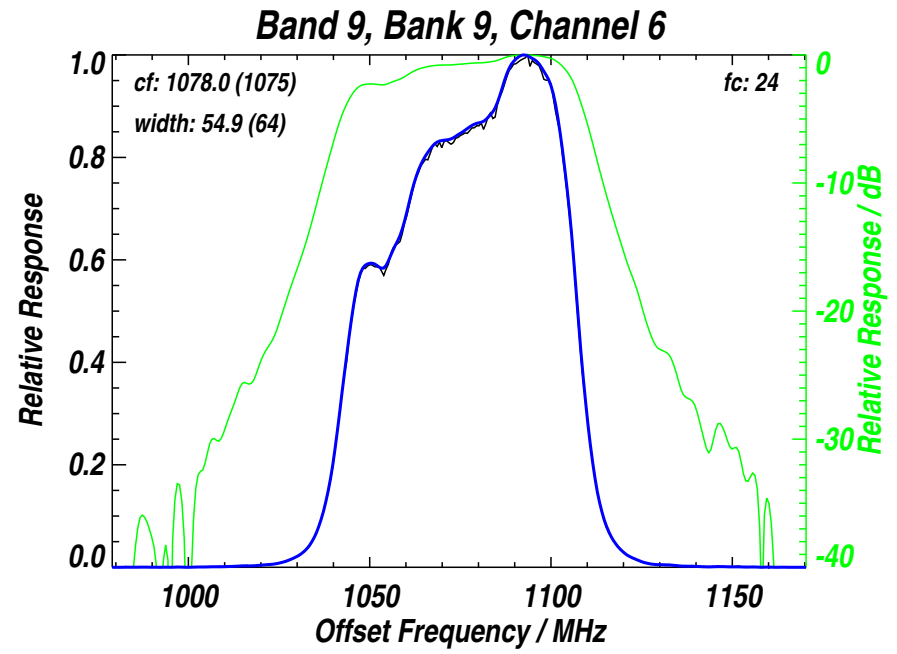
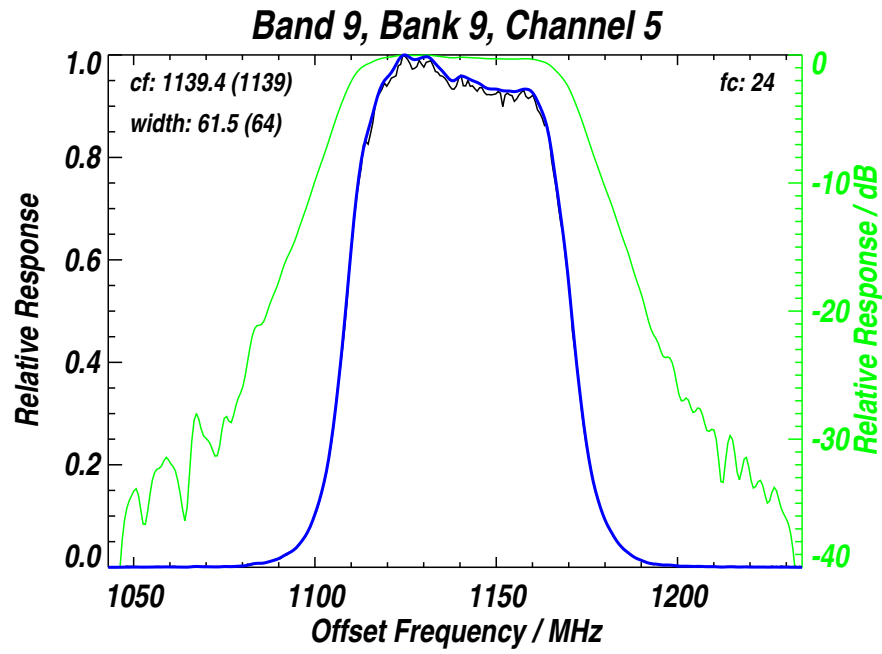


Figure H.261: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 5 to 8. See text for additional details.

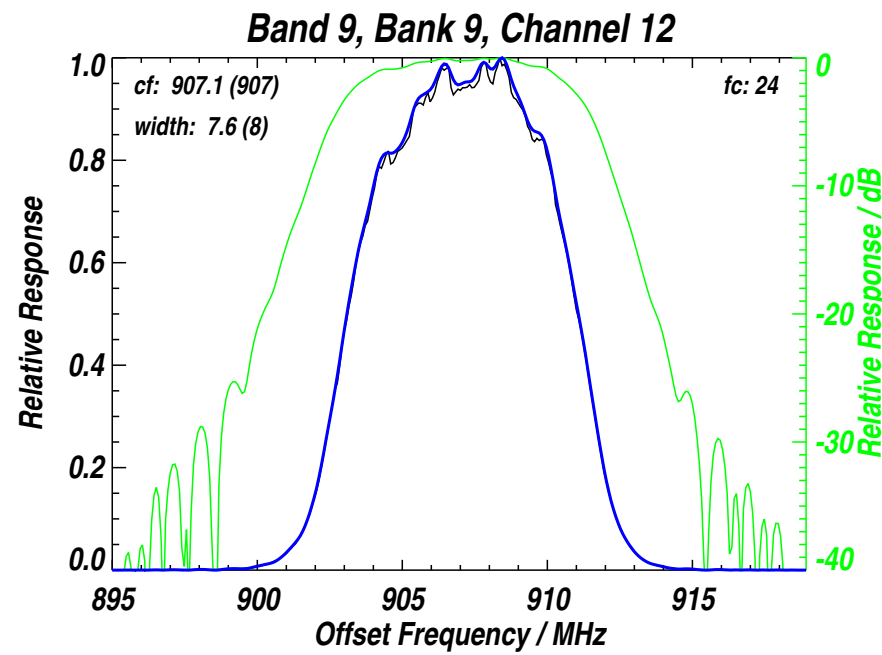
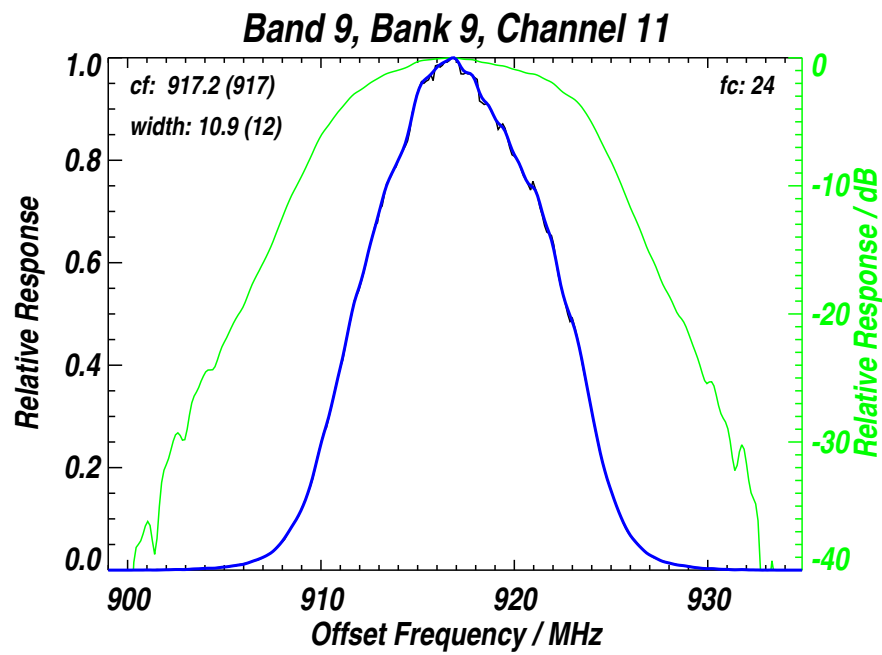
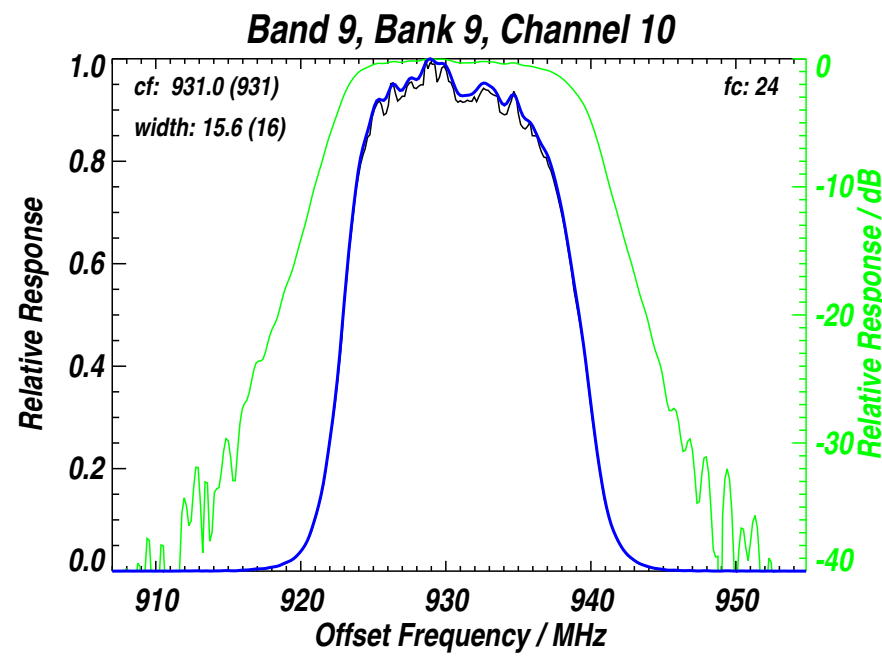
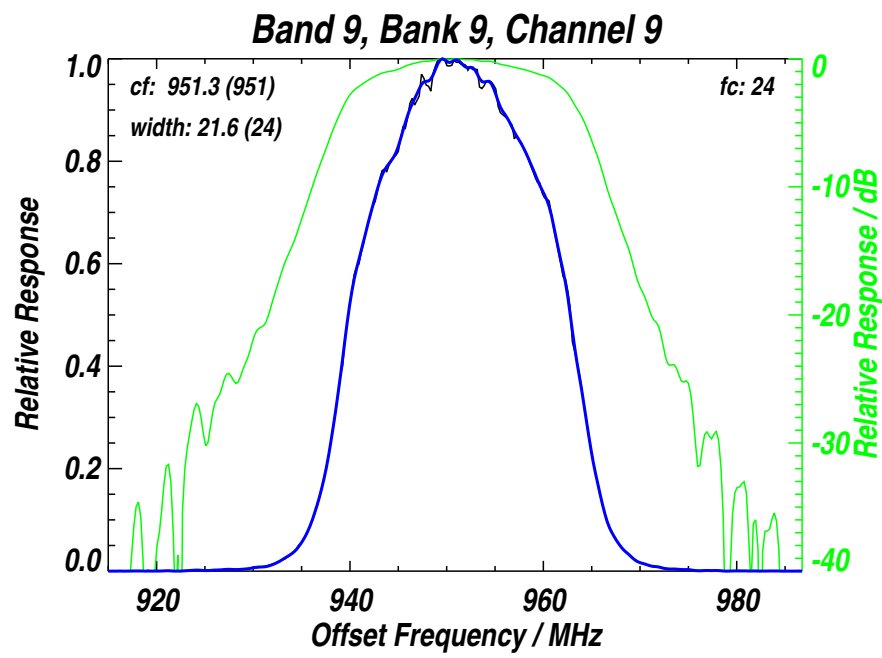


Figure H.262: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 9 to 12. See text for additional details.

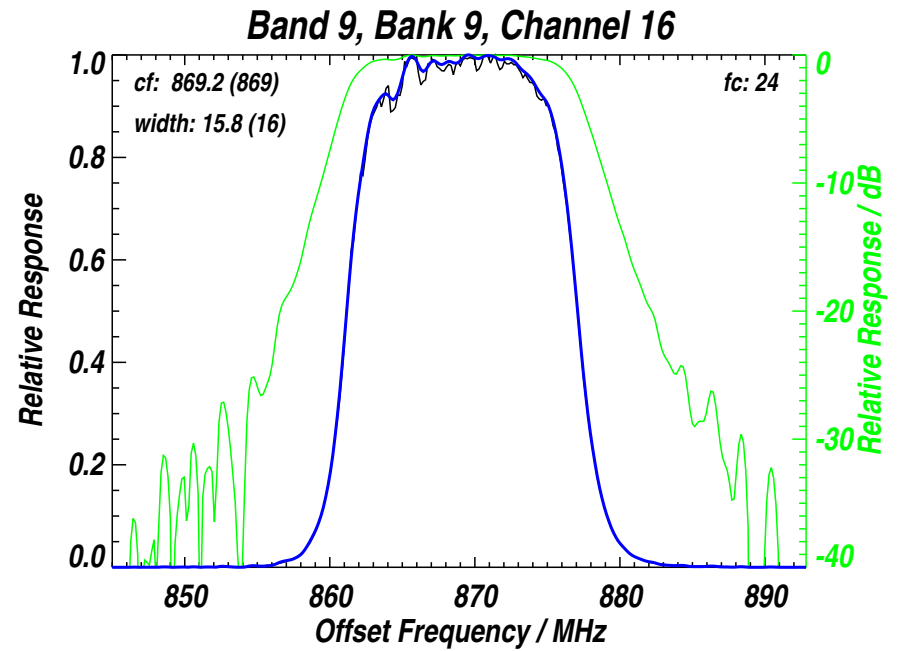
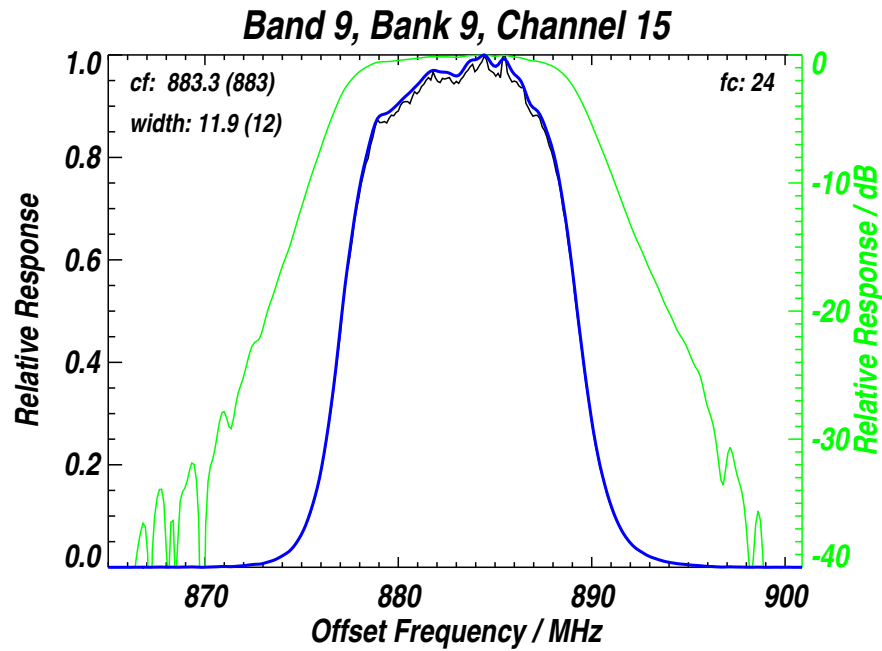
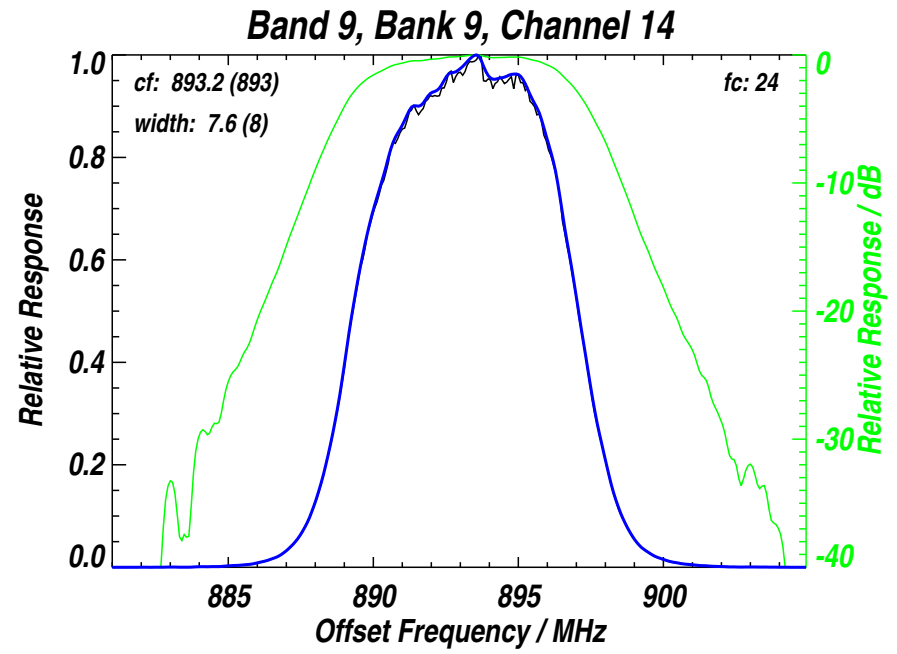
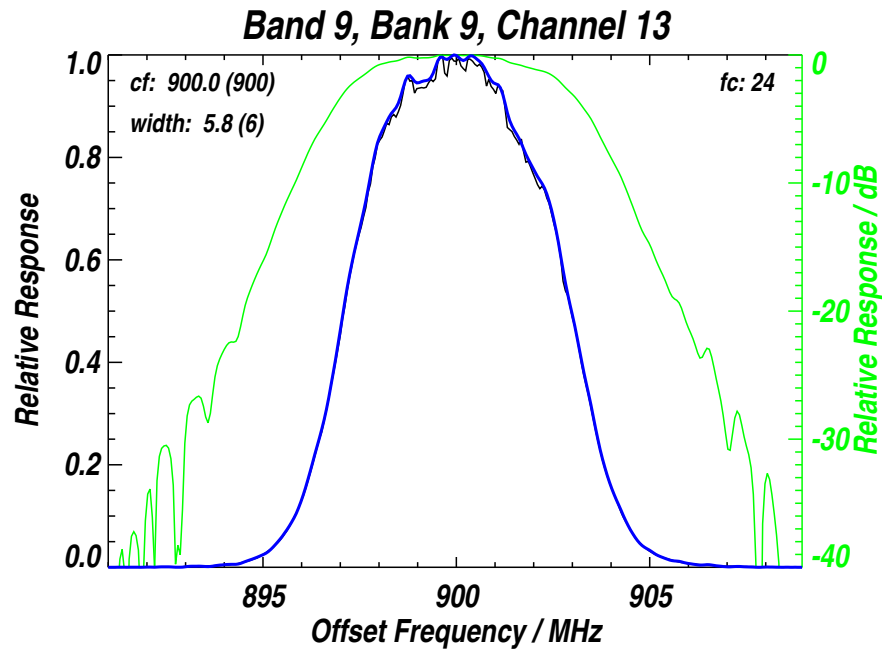


Figure H.263: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 13 to 16. See text for additional details.

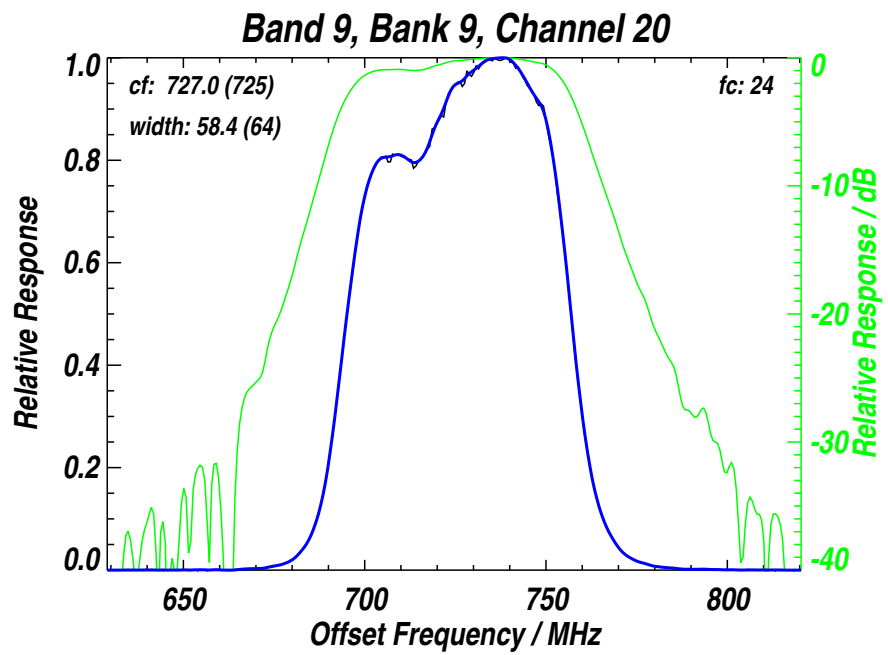
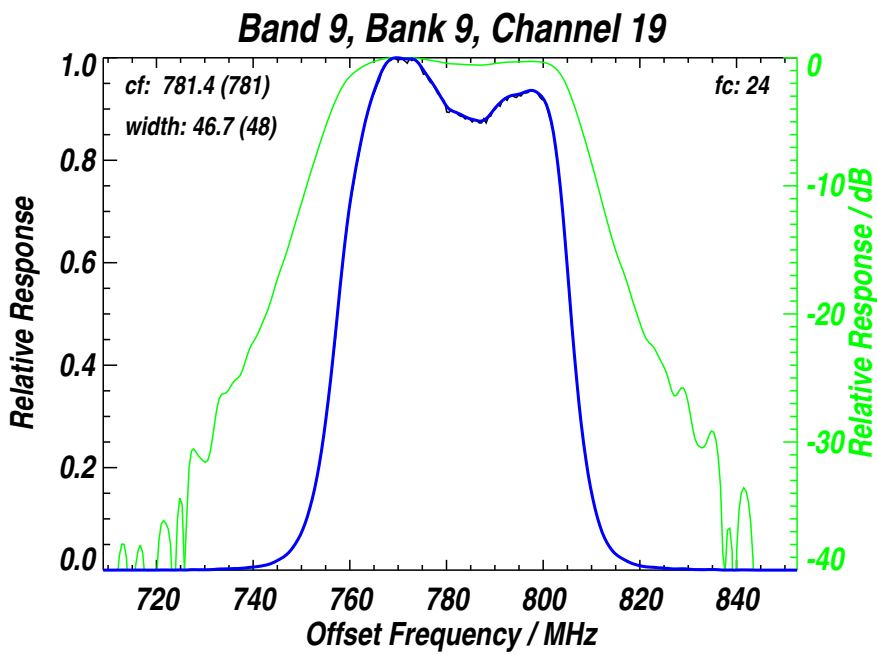
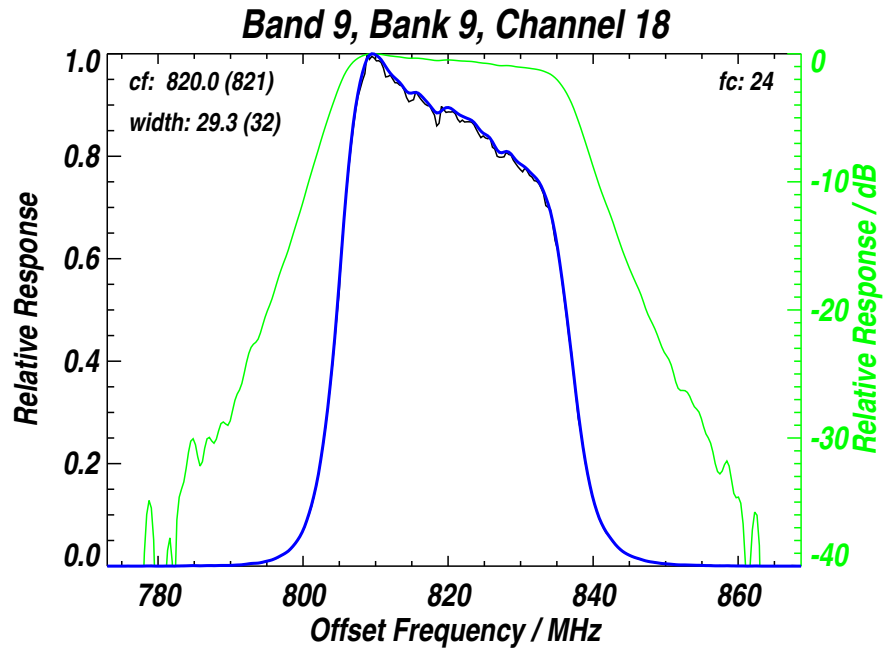
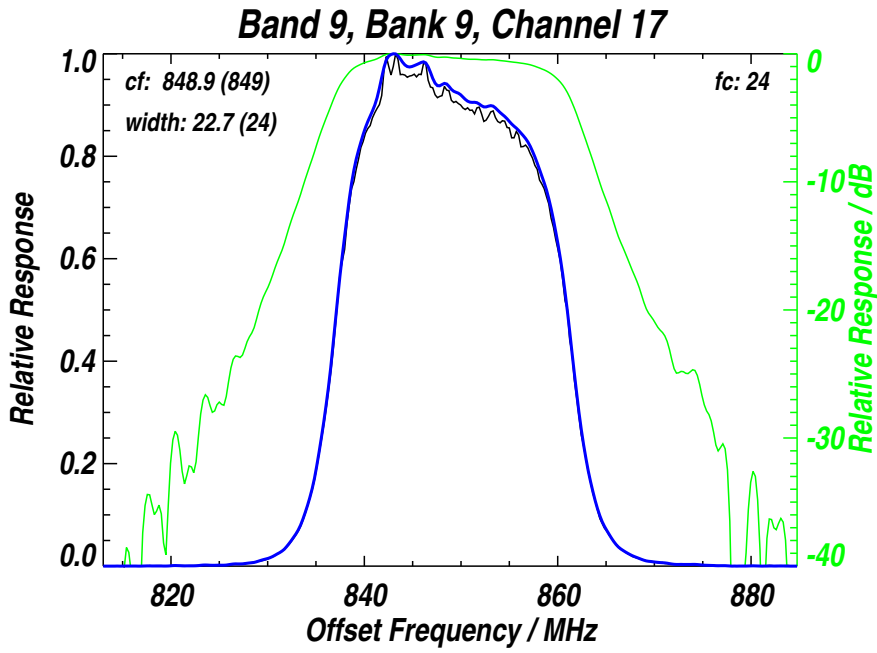


Figure H.264: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 17 to 20. See text for additional details.



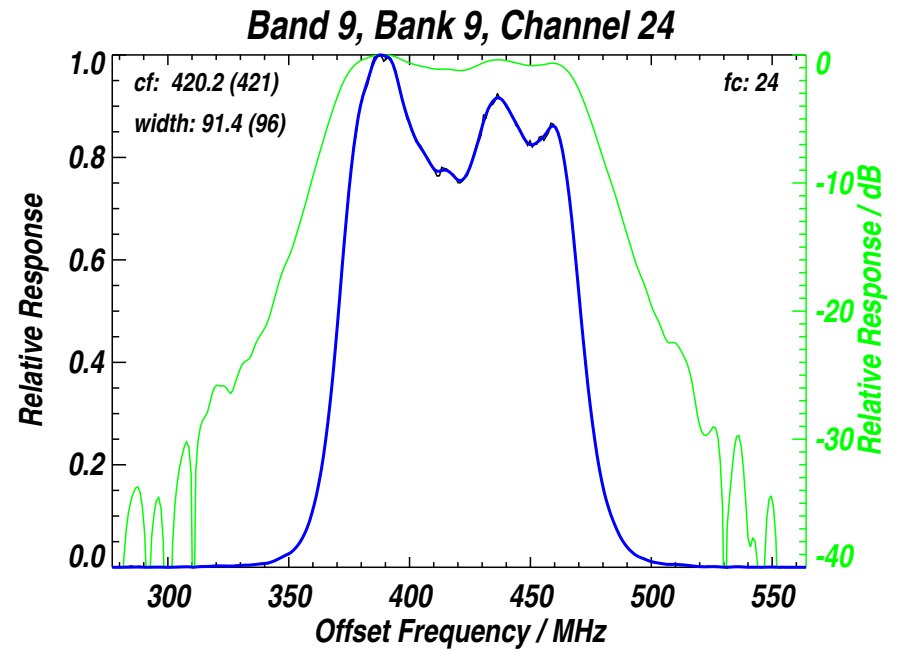
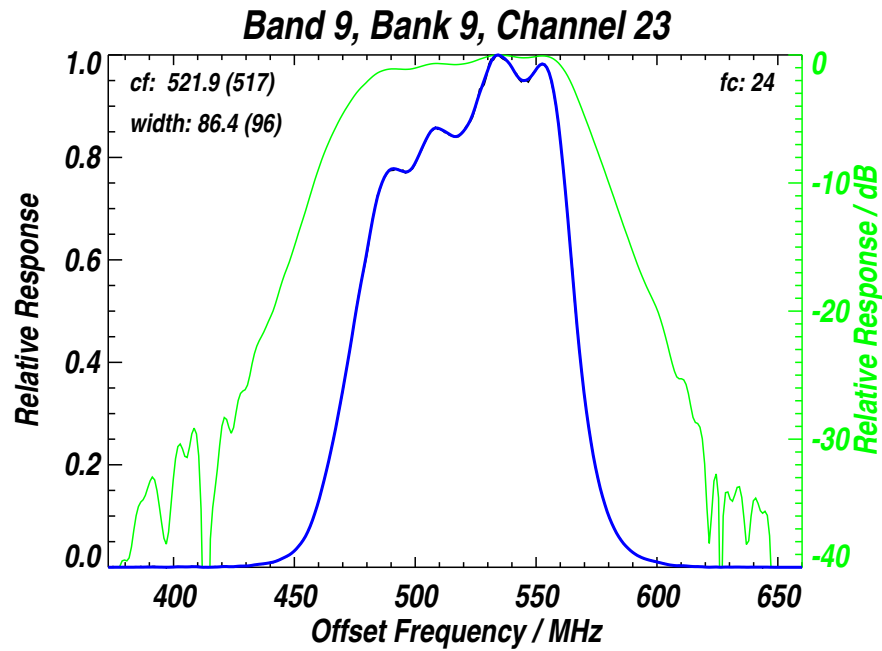
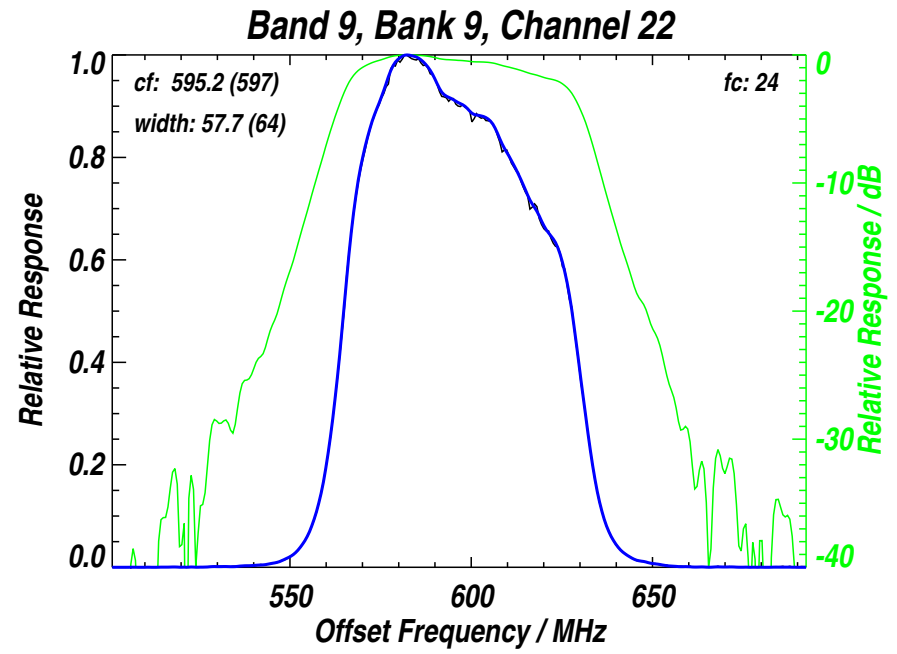
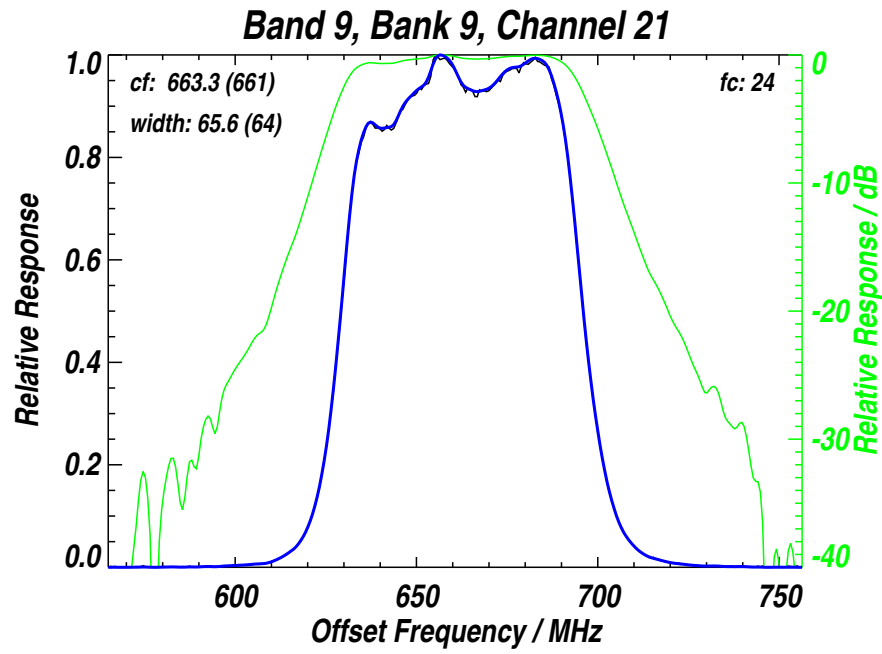
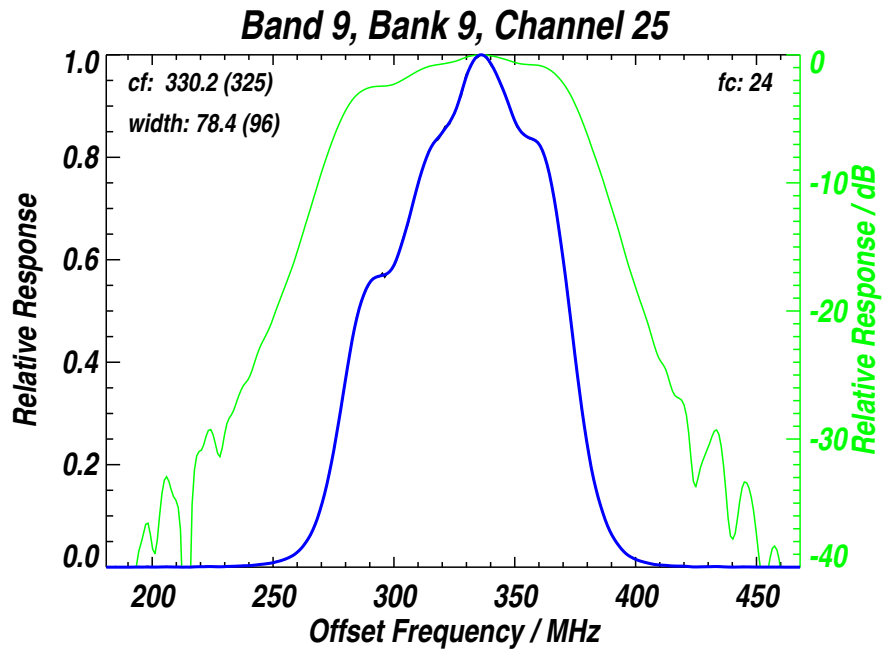


Figure H.265: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channels 21 to 24. See text for additional details.



**Band 9 (usb)**  
**Bank 9**  
**Origin = 247.876666668 GHz**

Figure H.266: Upper sideband front-end sweep data for Band 9 taken via Filterbank 9, channel 25. See text for additional details.

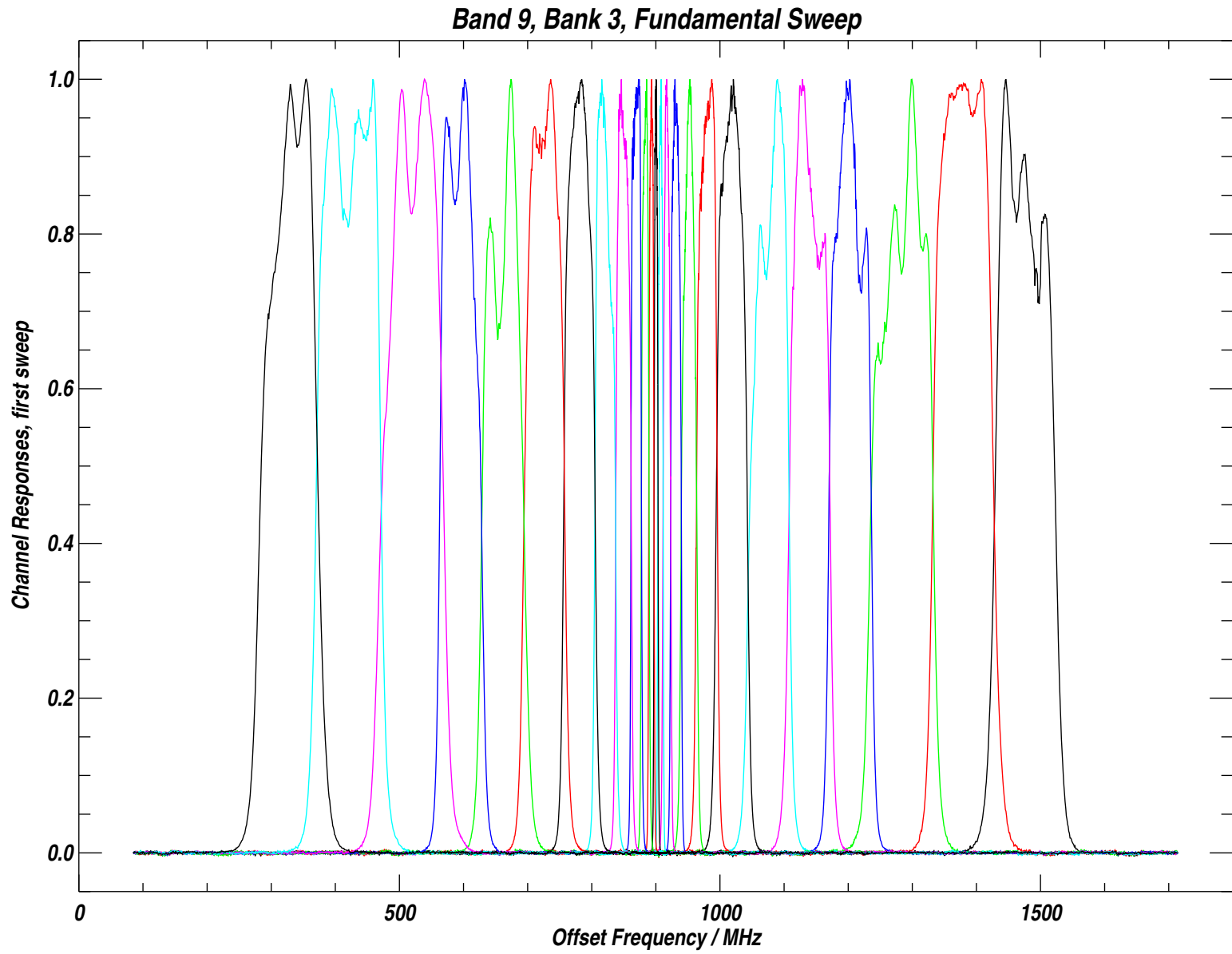


Figure H.267: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3. See text for additional details.

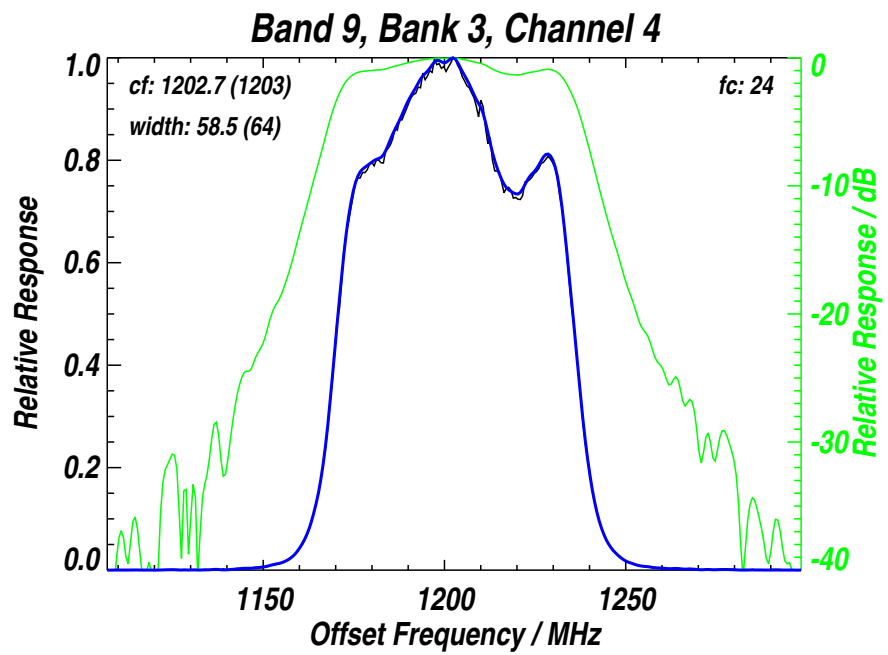
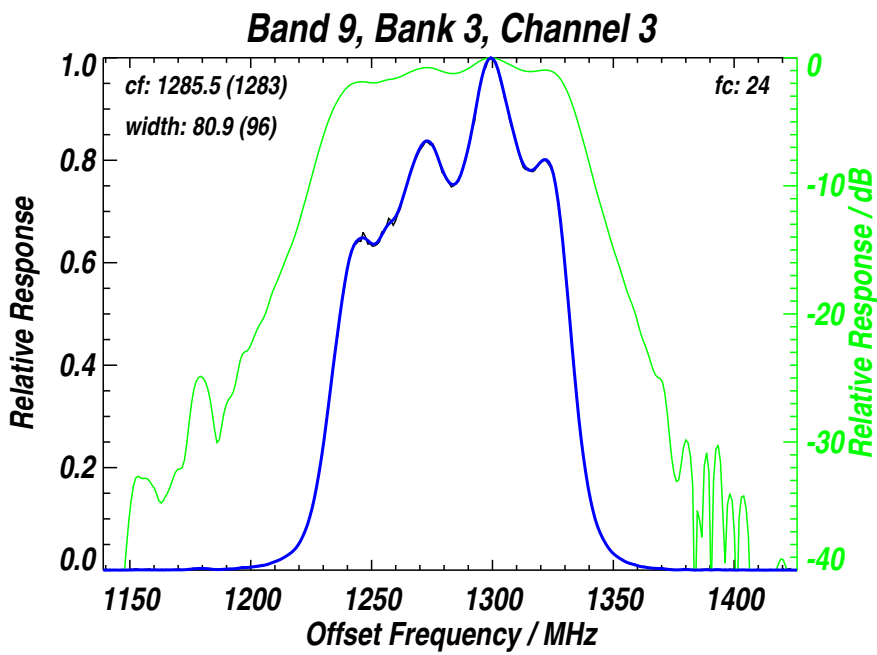
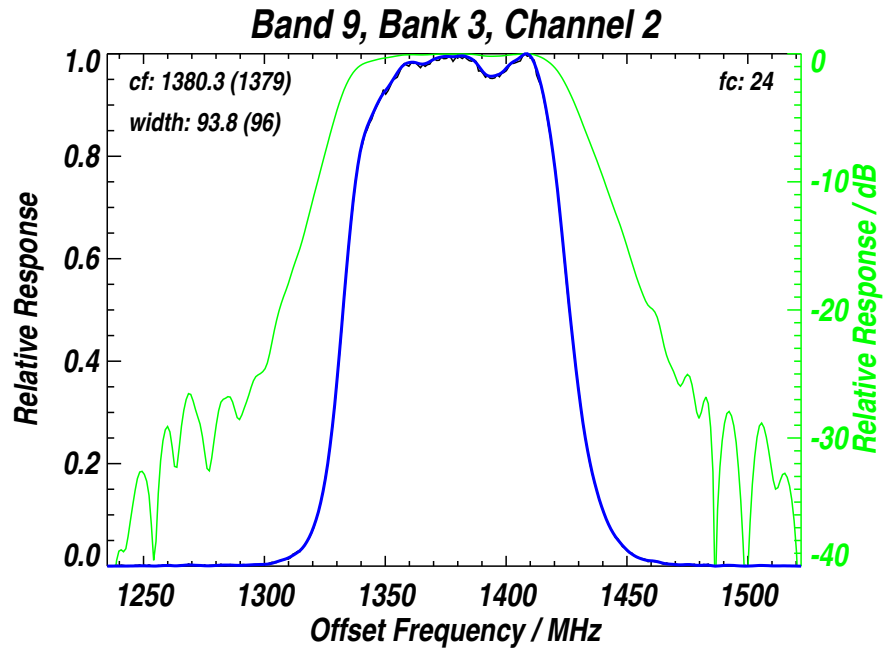
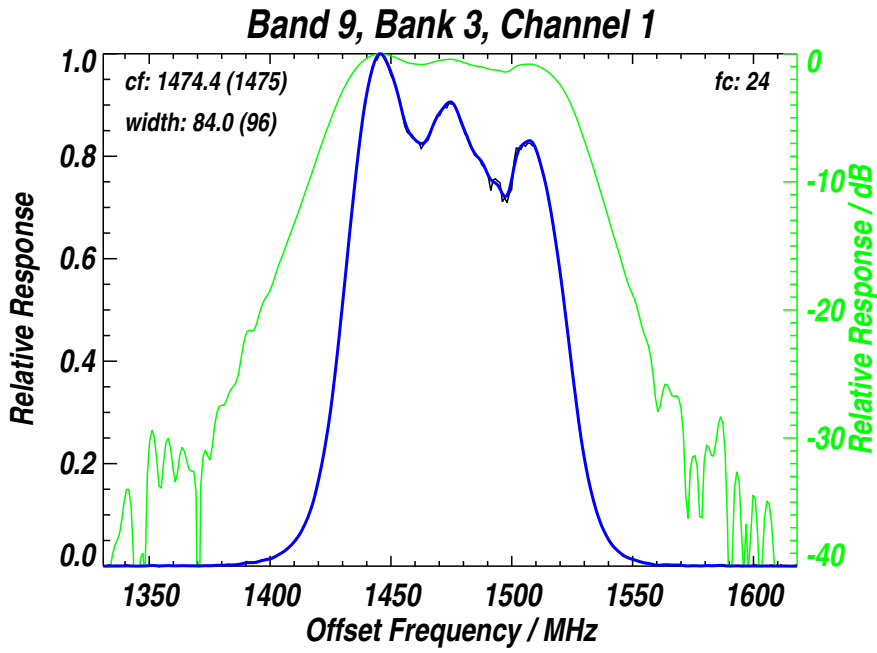


Figure H.268: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 1 to 4. See text for additional details.

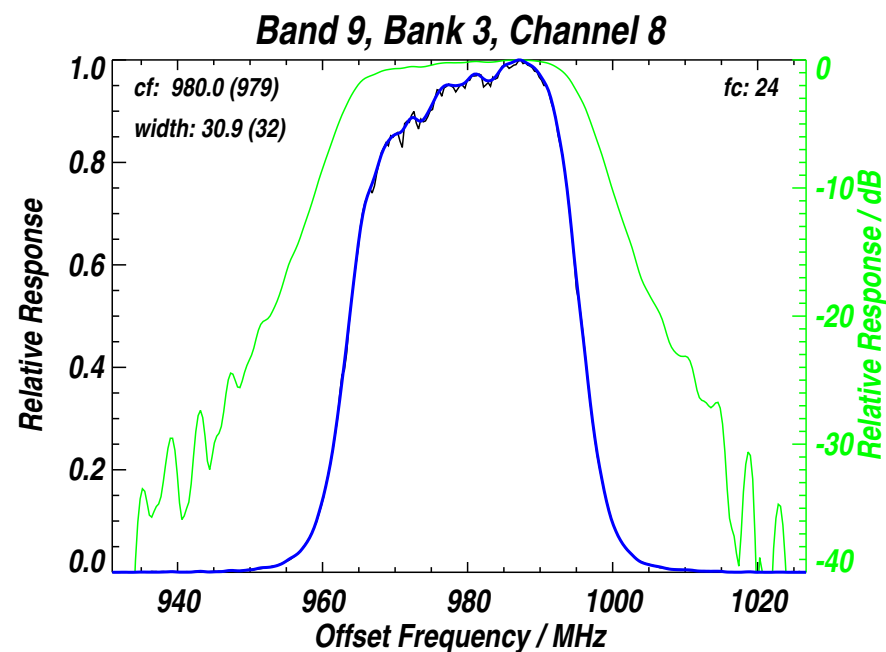
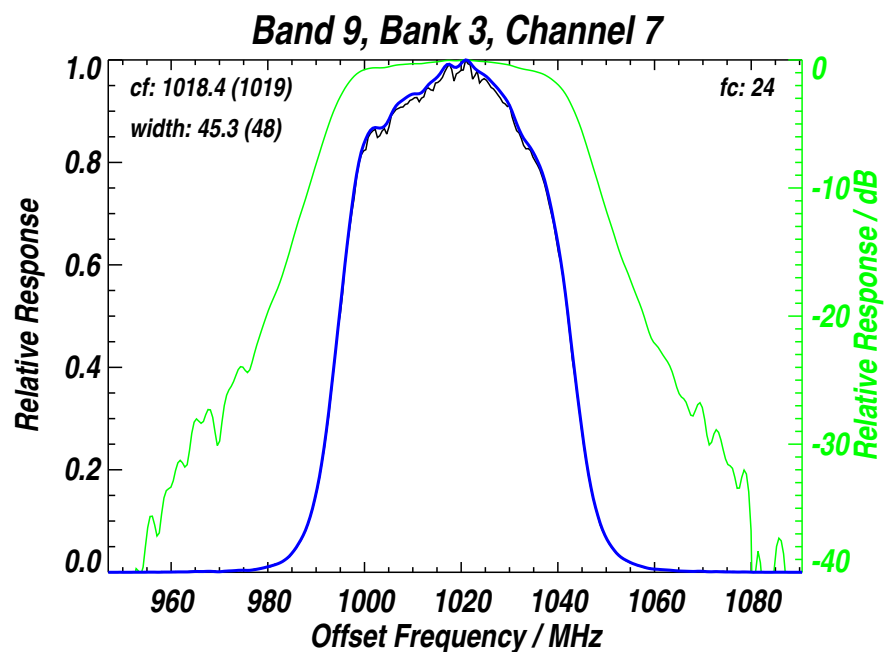
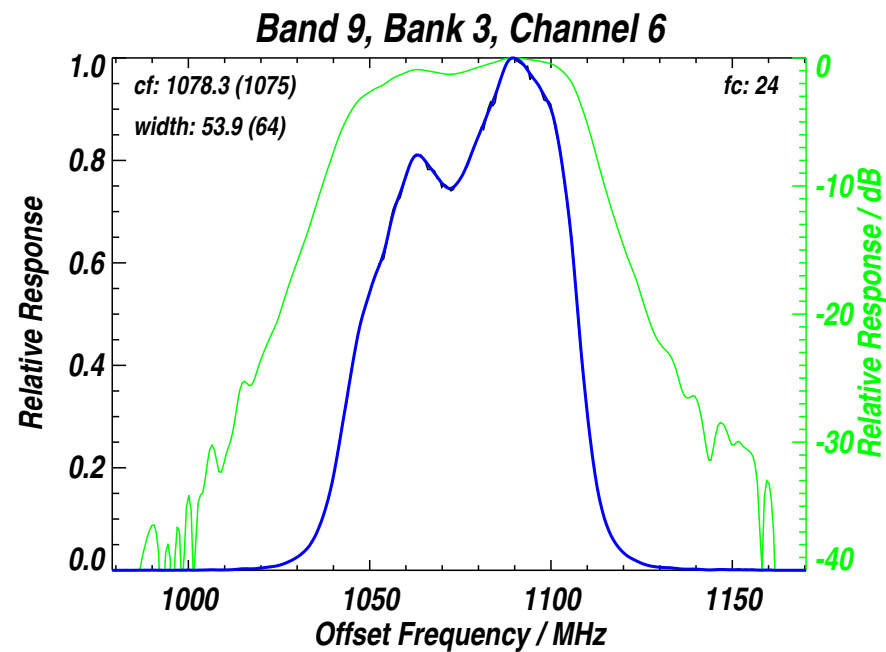
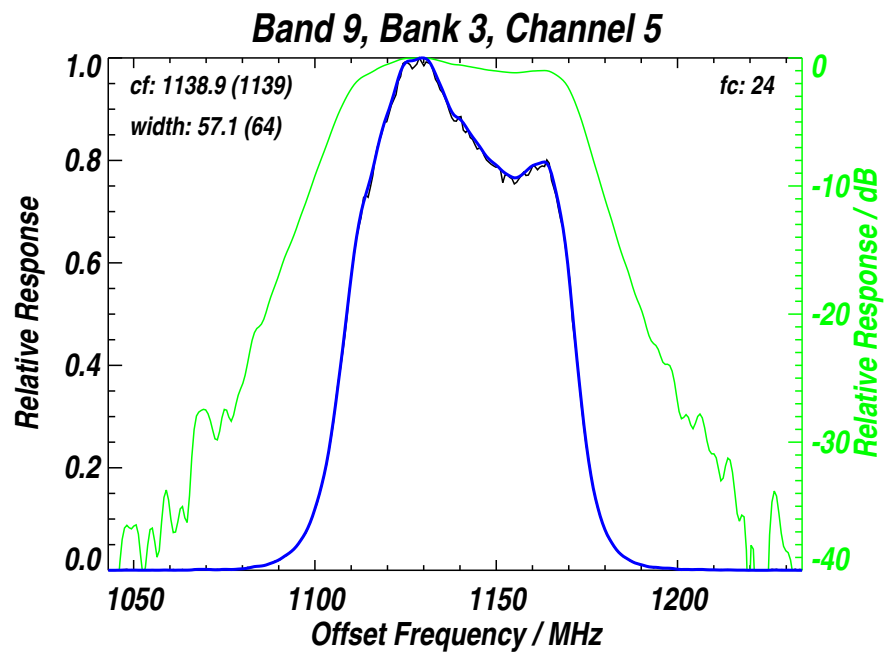


Figure H.269: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 5 to 8. See text for additional details.

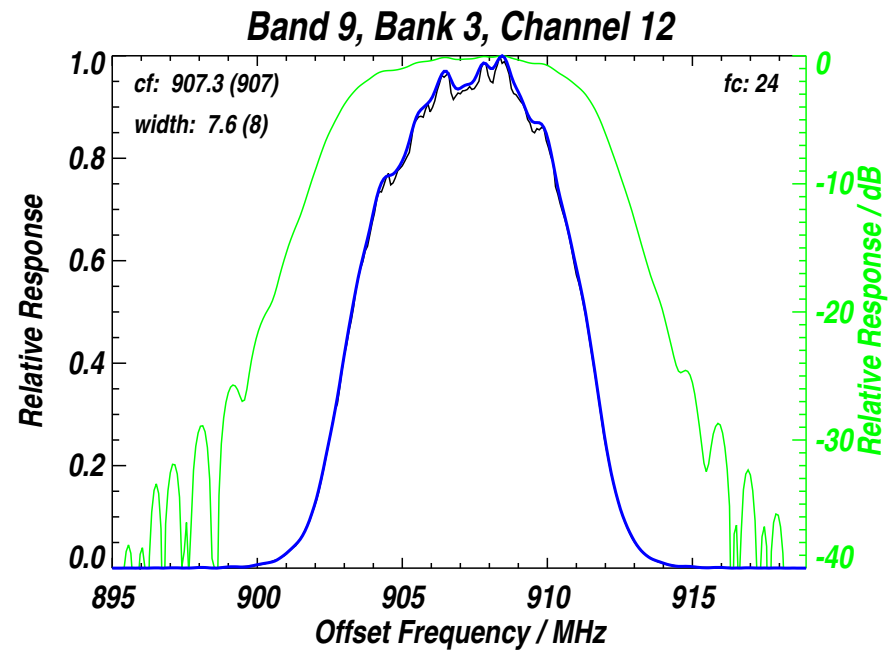
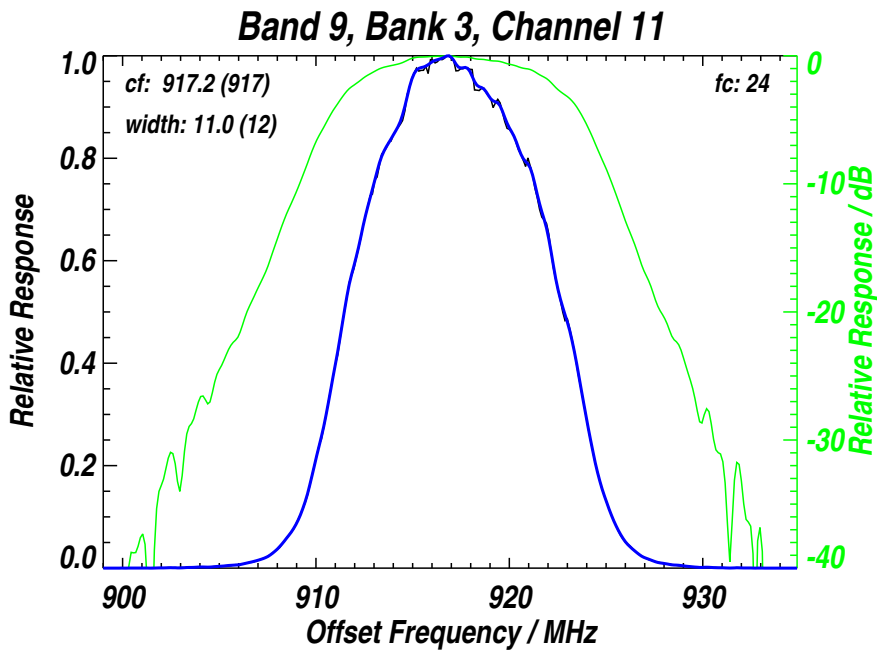
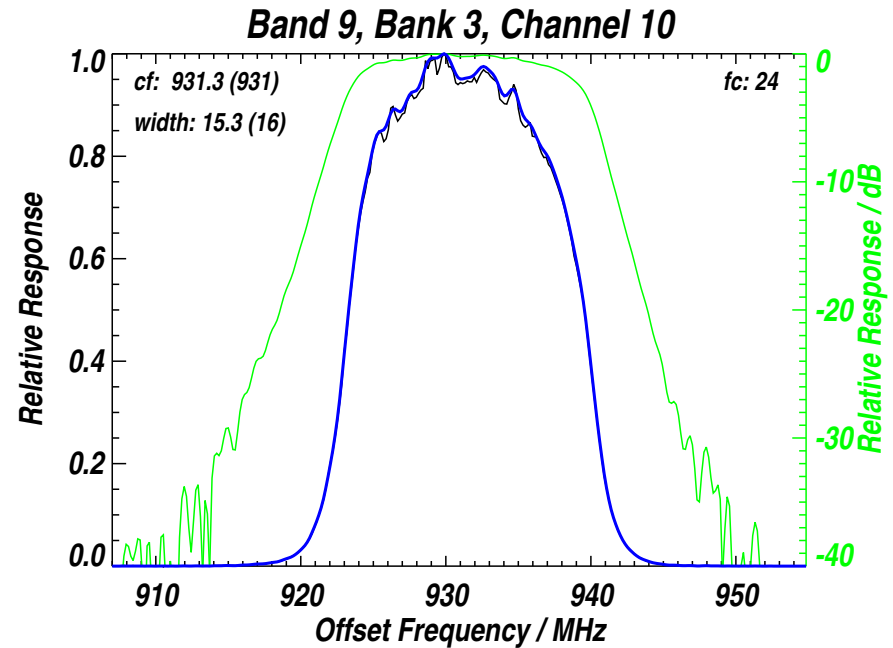
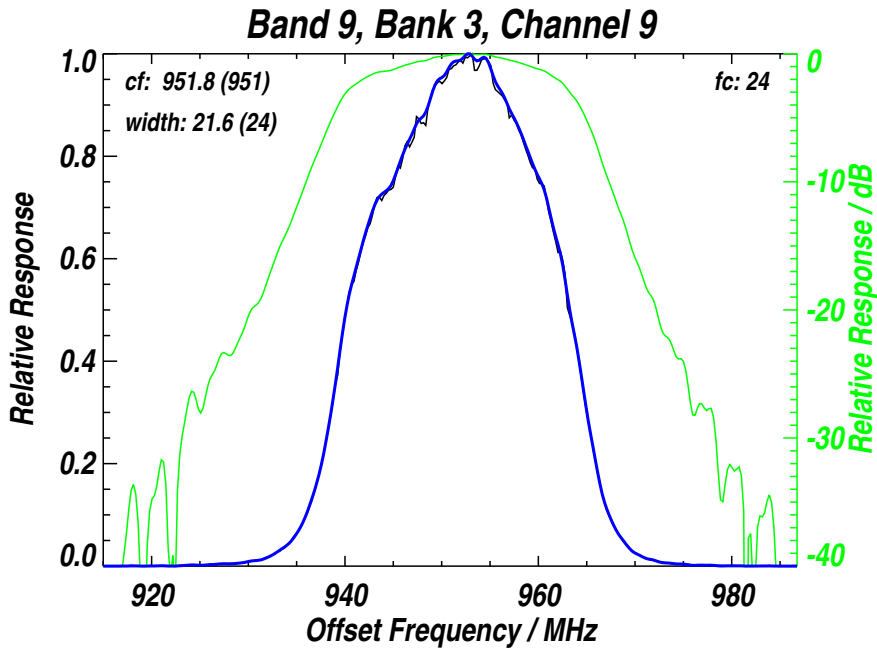


Figure H.270: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 9 to 12. See text for additional details.

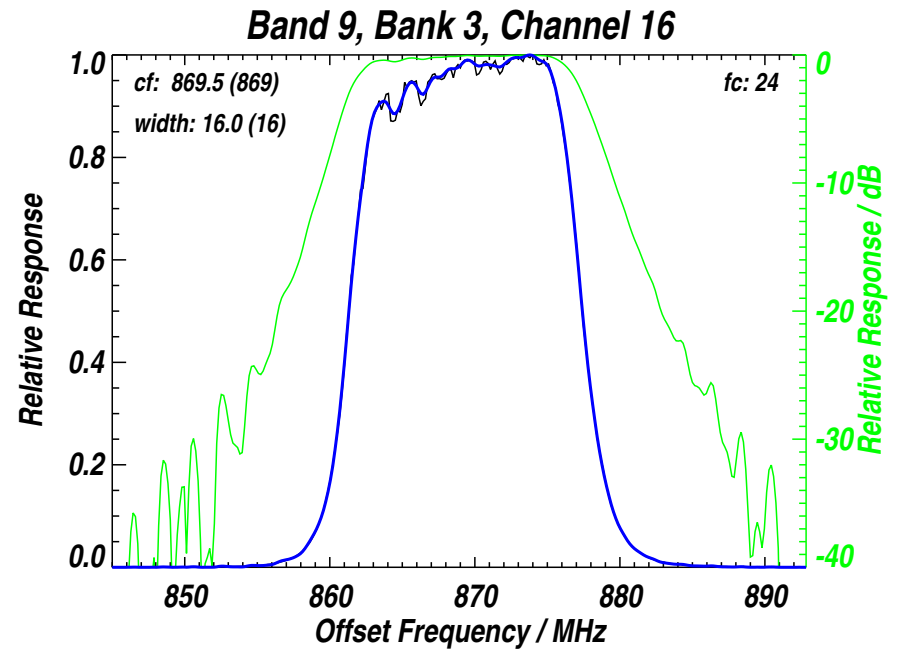
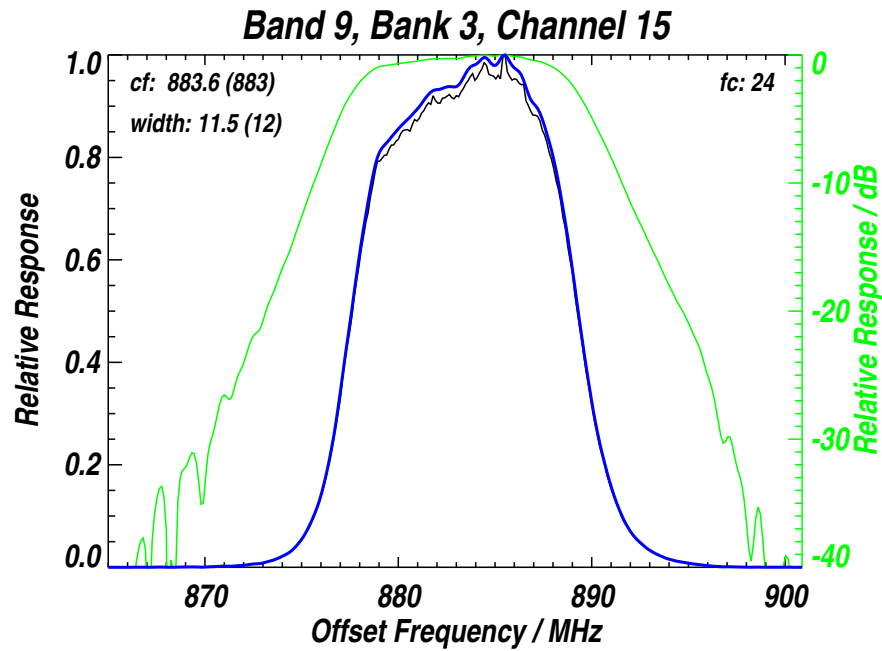
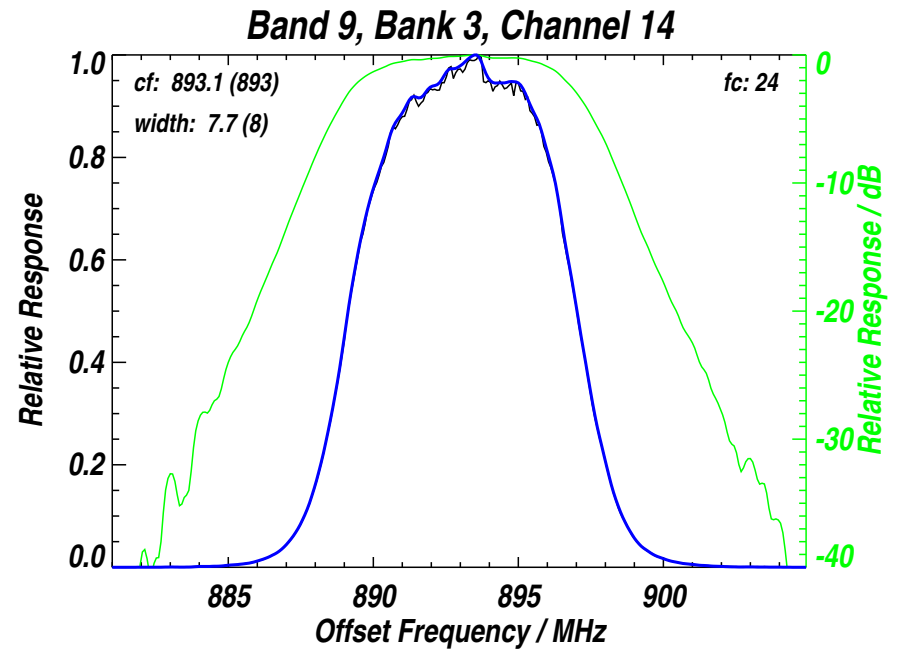
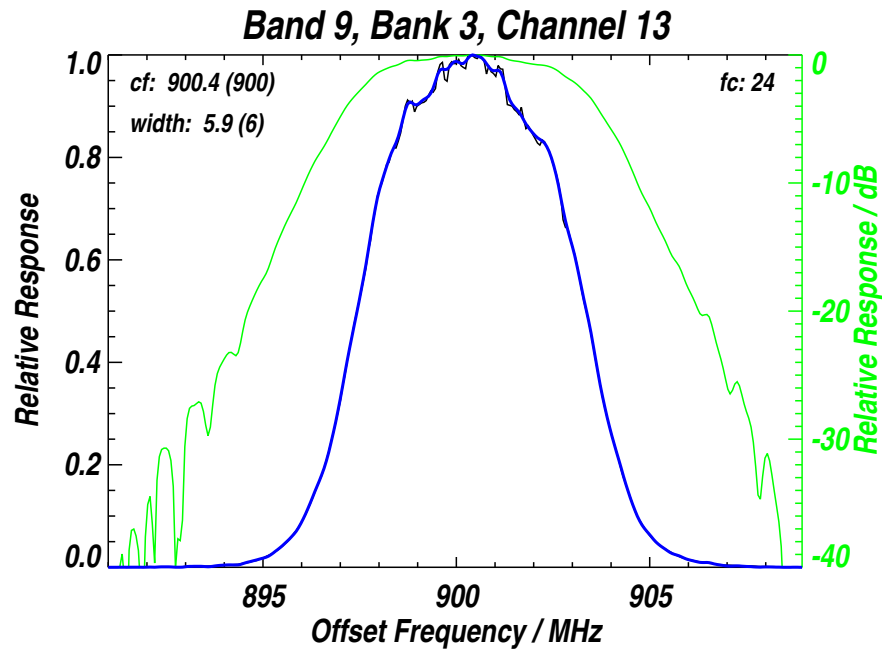


Figure H.271: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 13 to 16. See text for additional details.

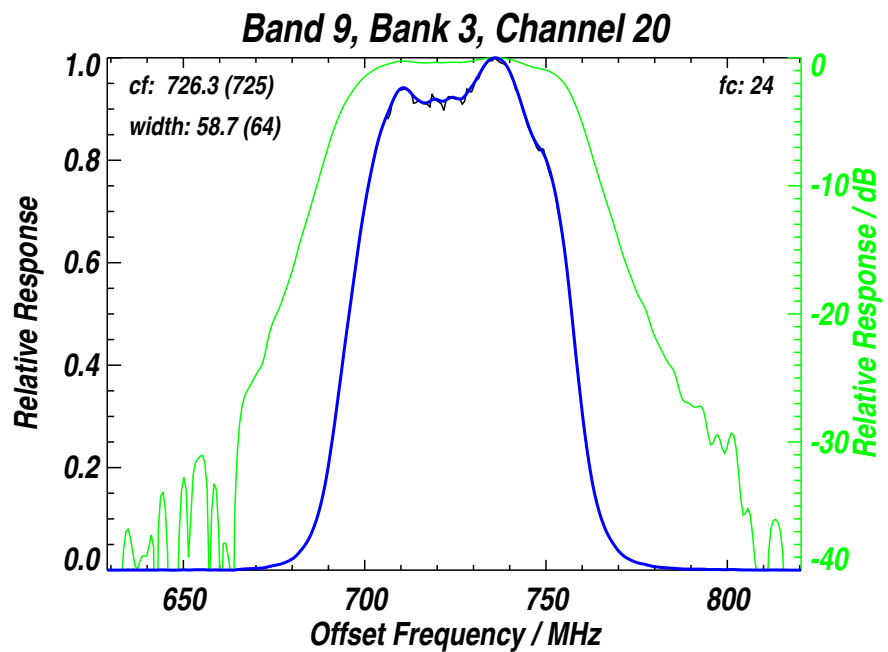
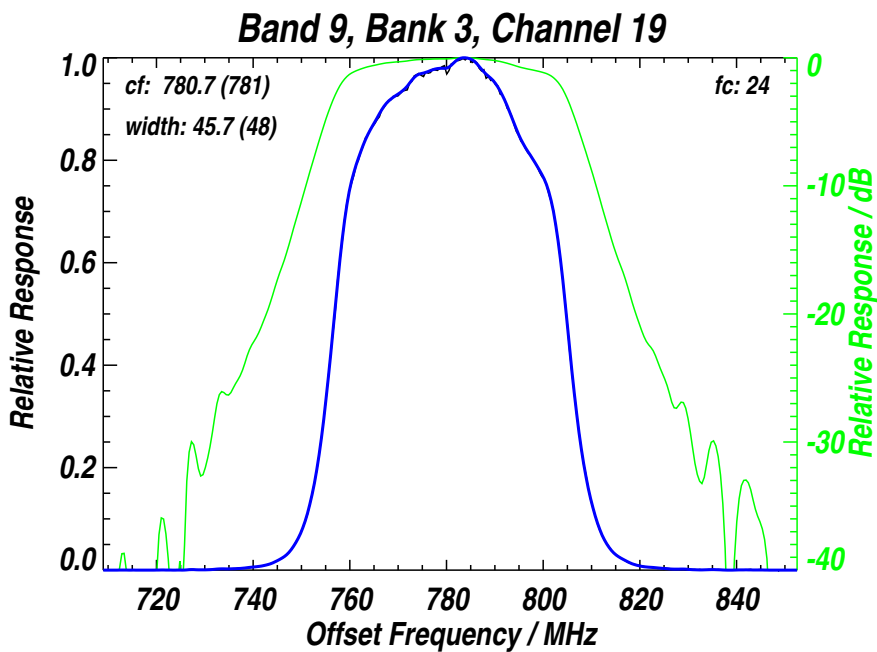
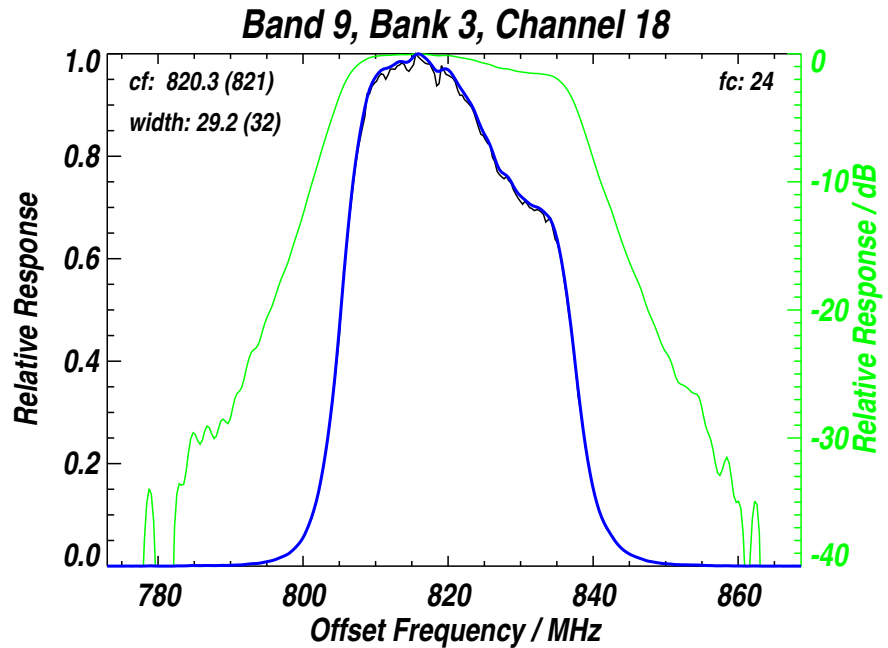
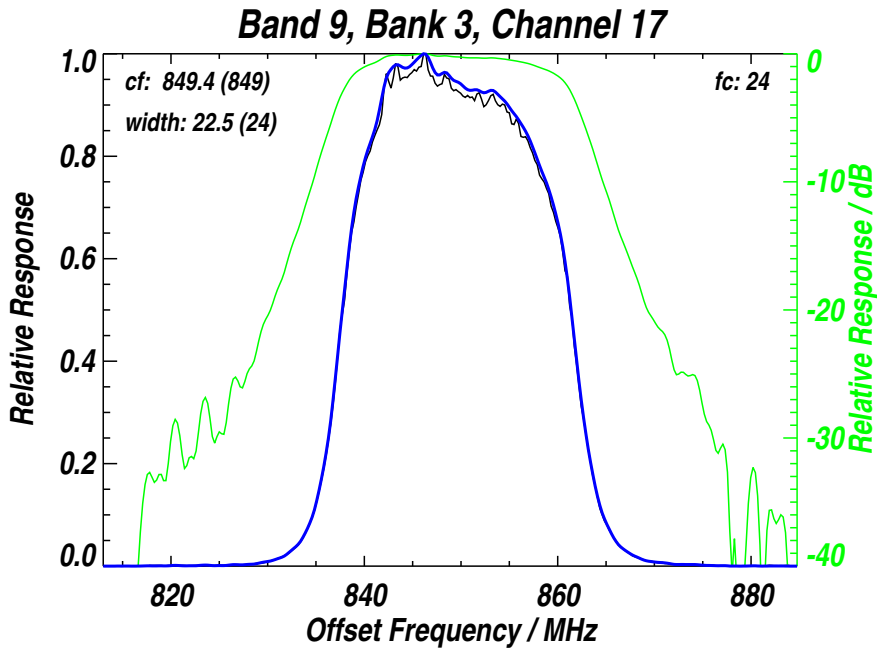


Figure H.272: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 17 to 20. See text for additional details.



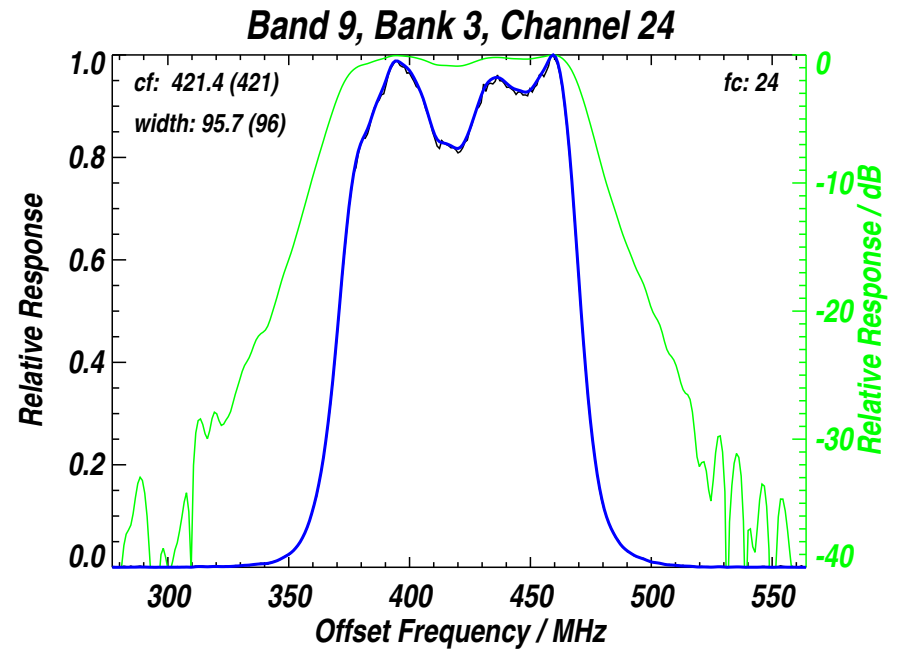
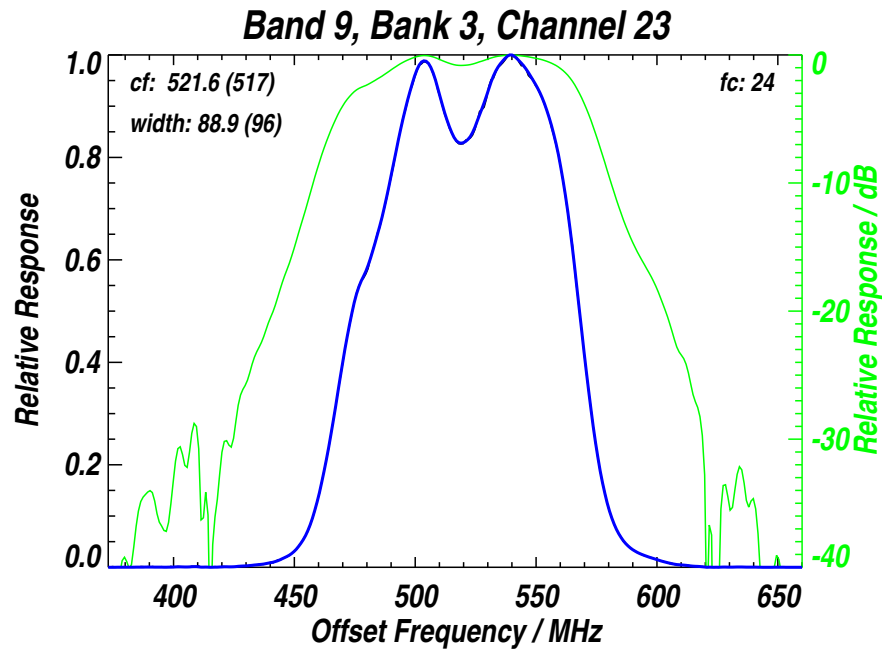
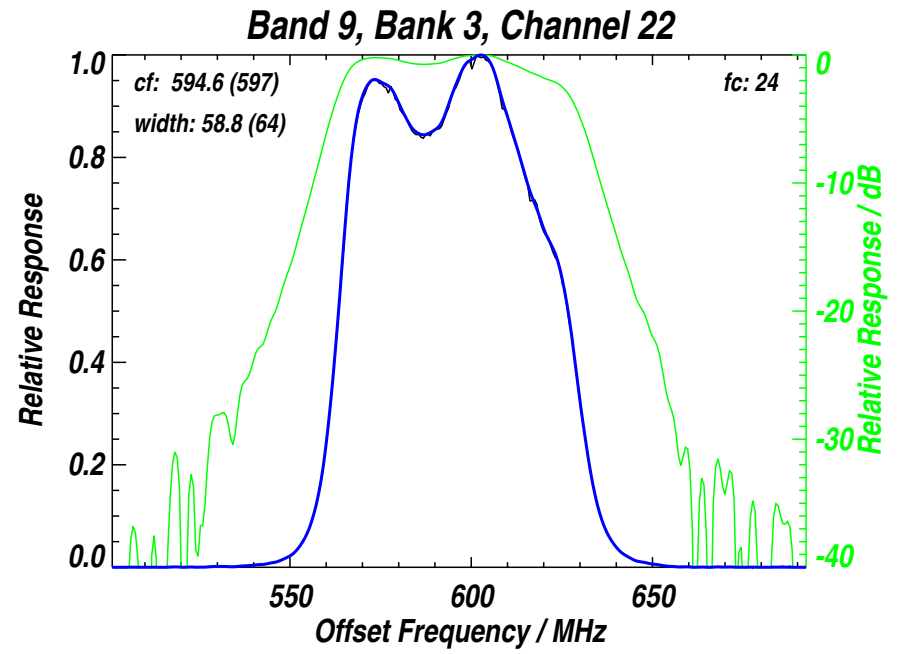
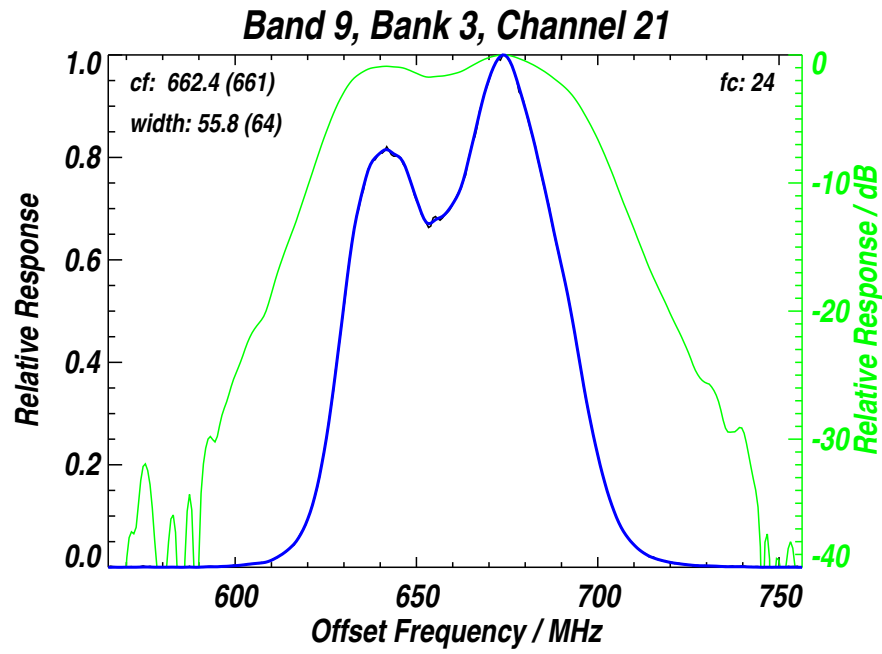
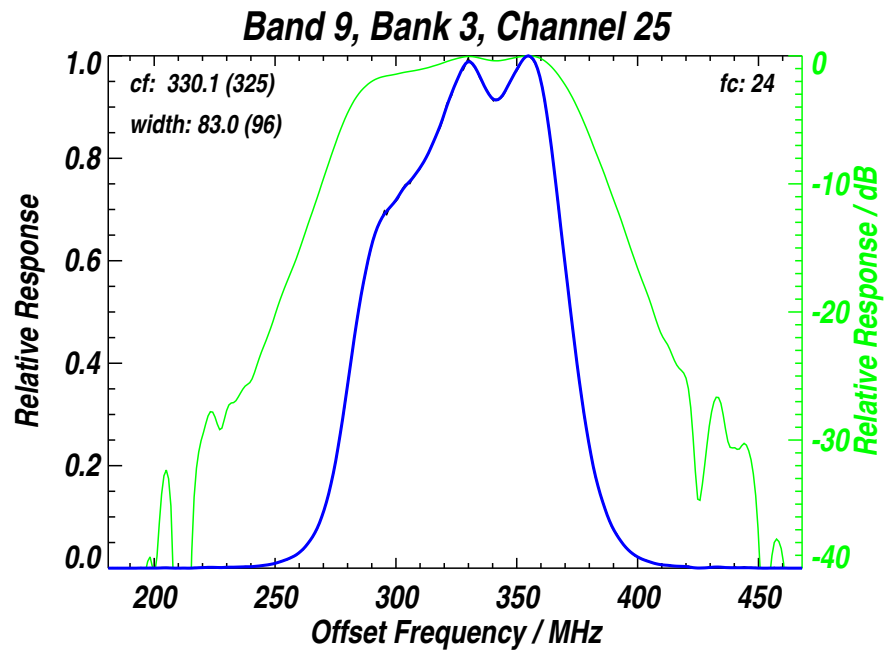


Figure H.273: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channels 21 to 24. See text for additional details.



**Band 9 (usb)**  
**Bank 3**  
**Origin = 247.876666668 GHz**

Figure H.274: Upper sideband front-end sweep data for Band 9 taken via Filterbank 3, channel 25. See text for additional details.

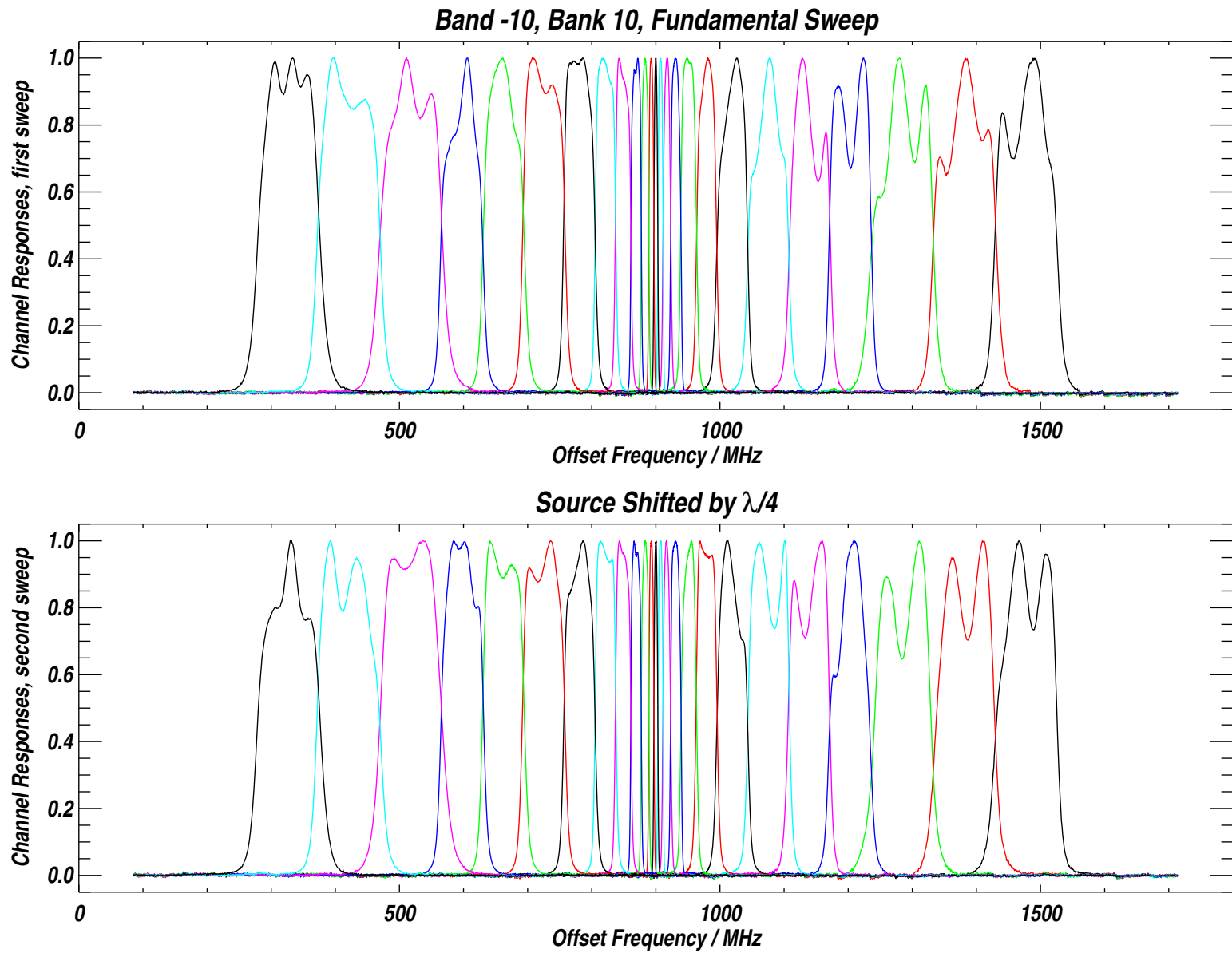


Figure H.275: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10. See text for additional details.

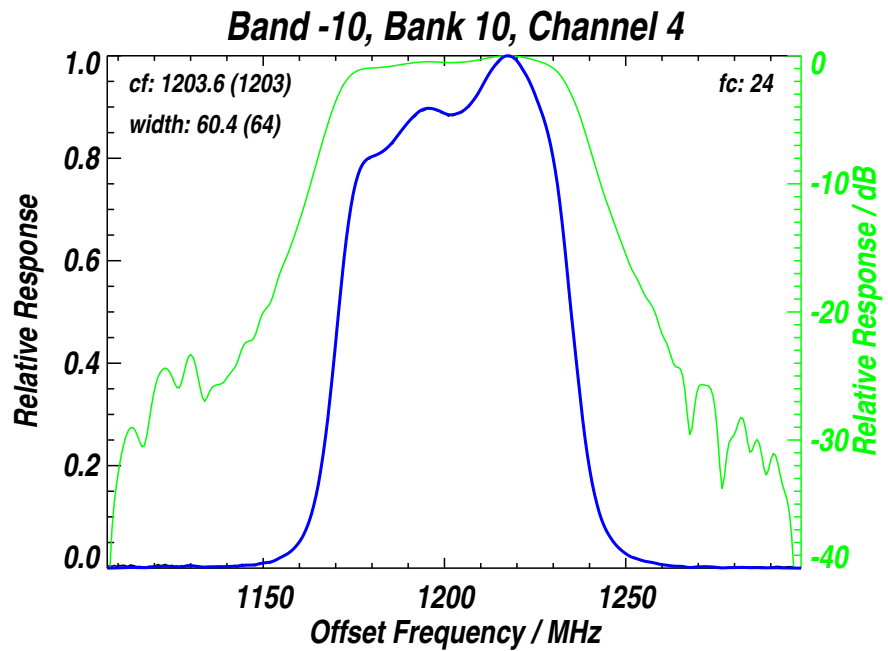
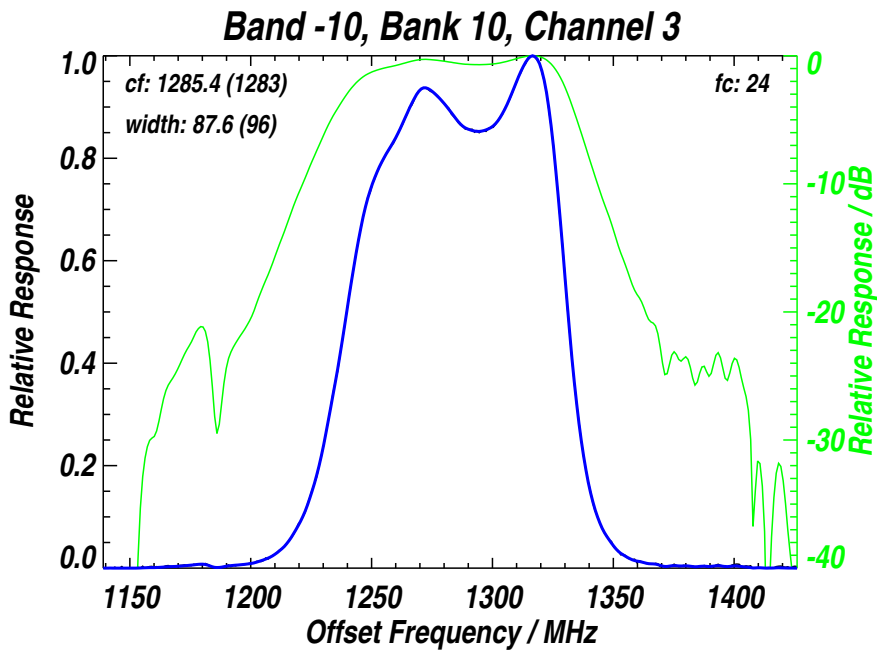
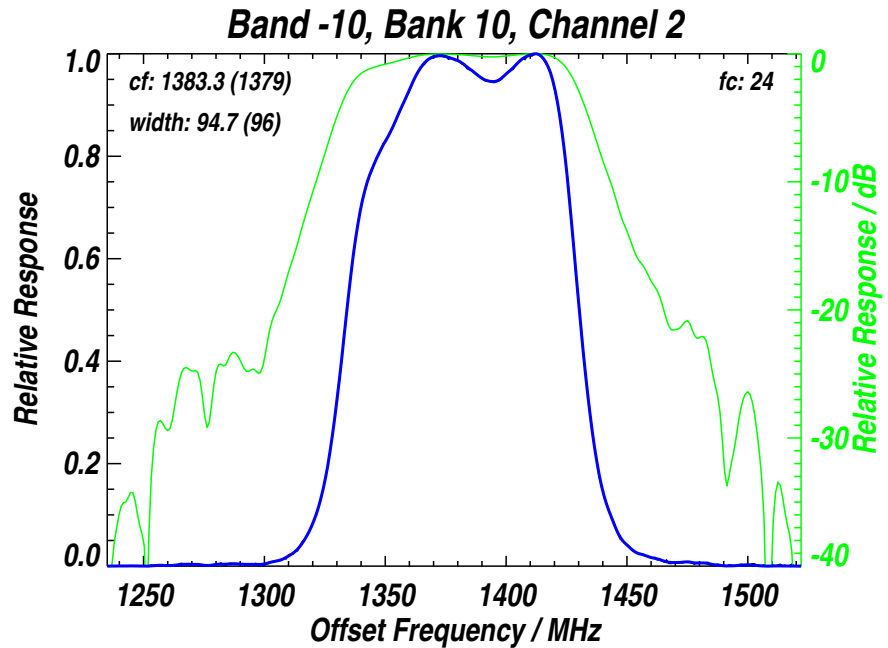
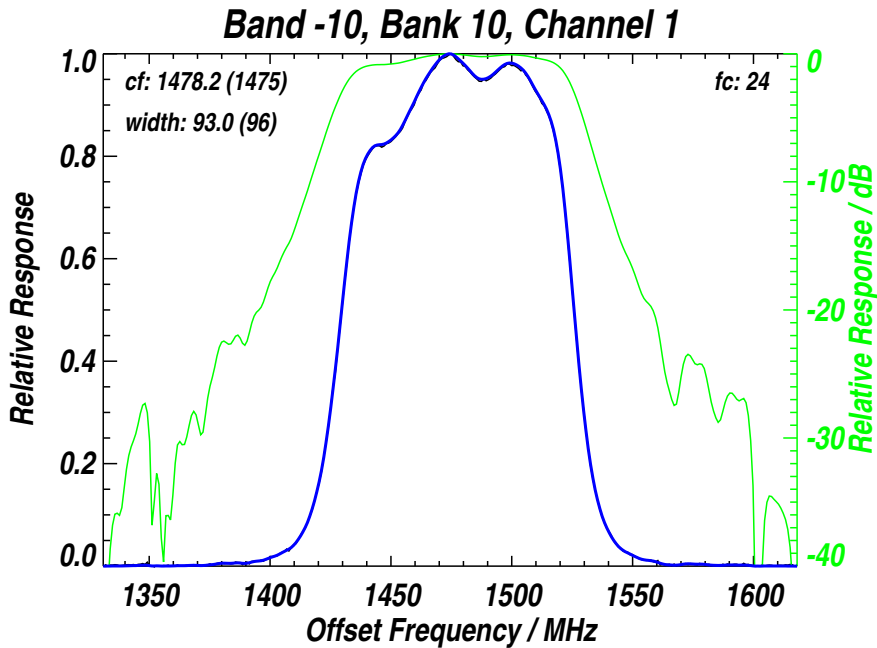


Figure H.276: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 1 to 4. See text for additional details.

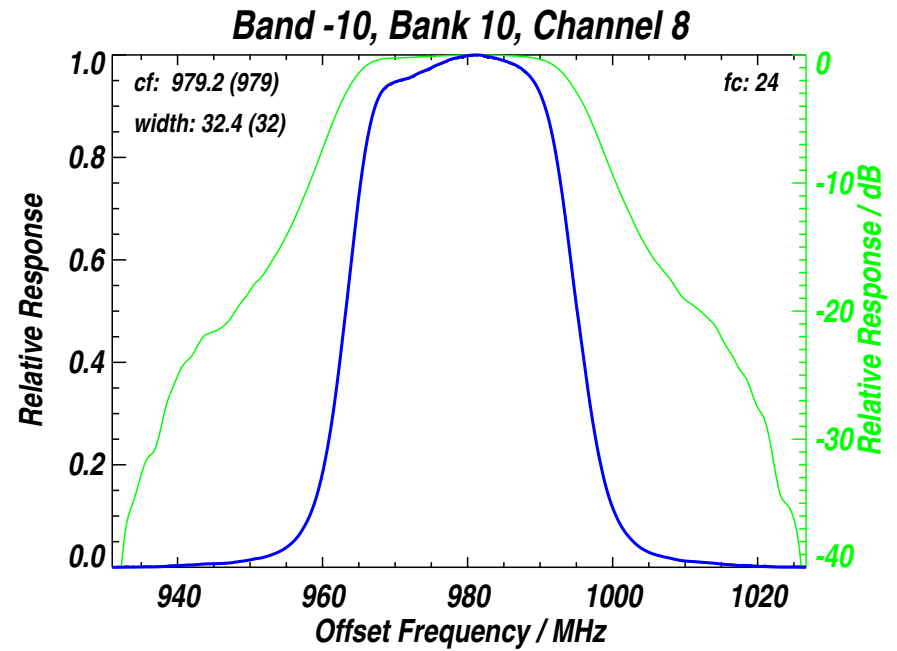
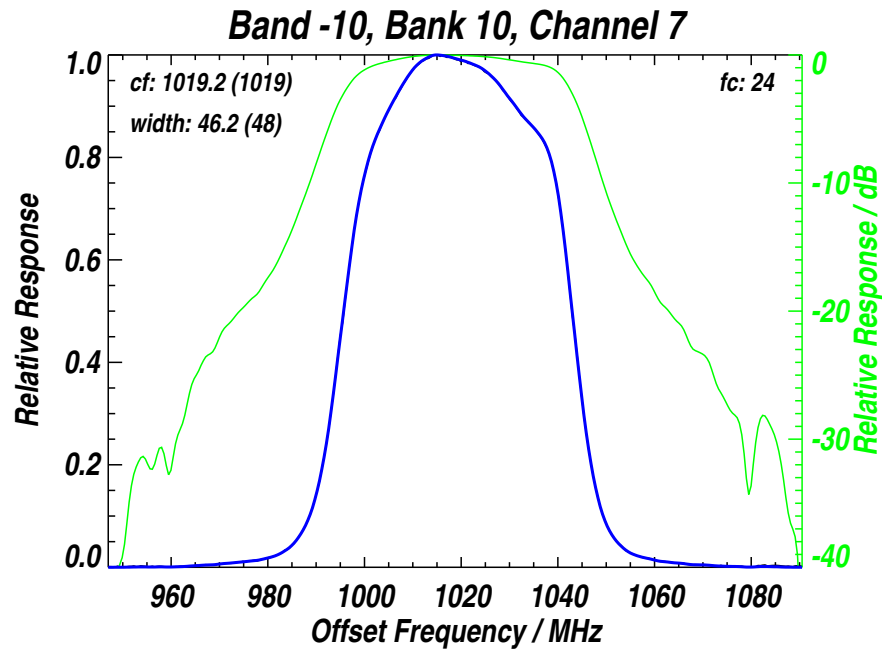
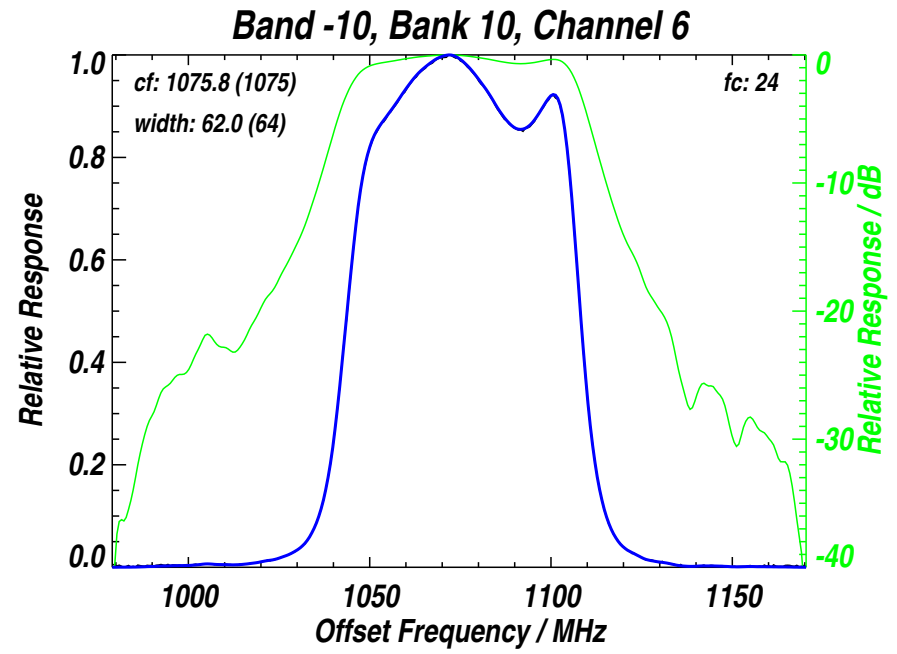
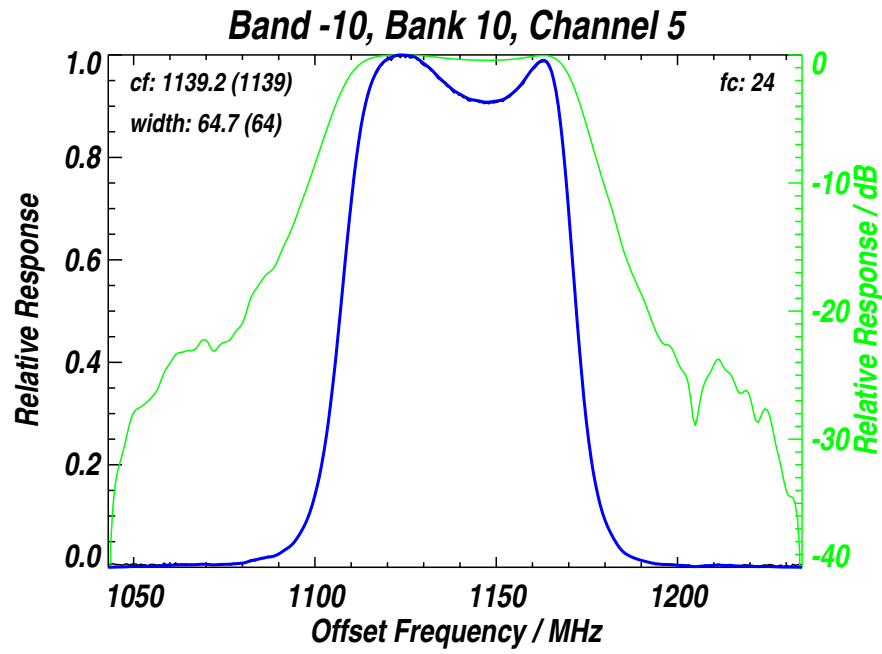


Figure H.277: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 5 to 8. See text for additional details.

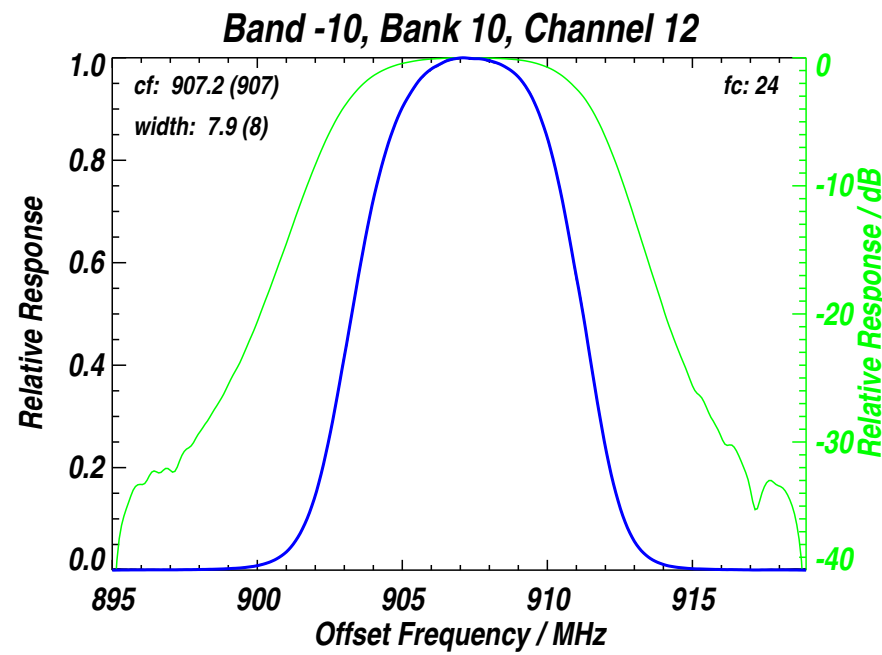
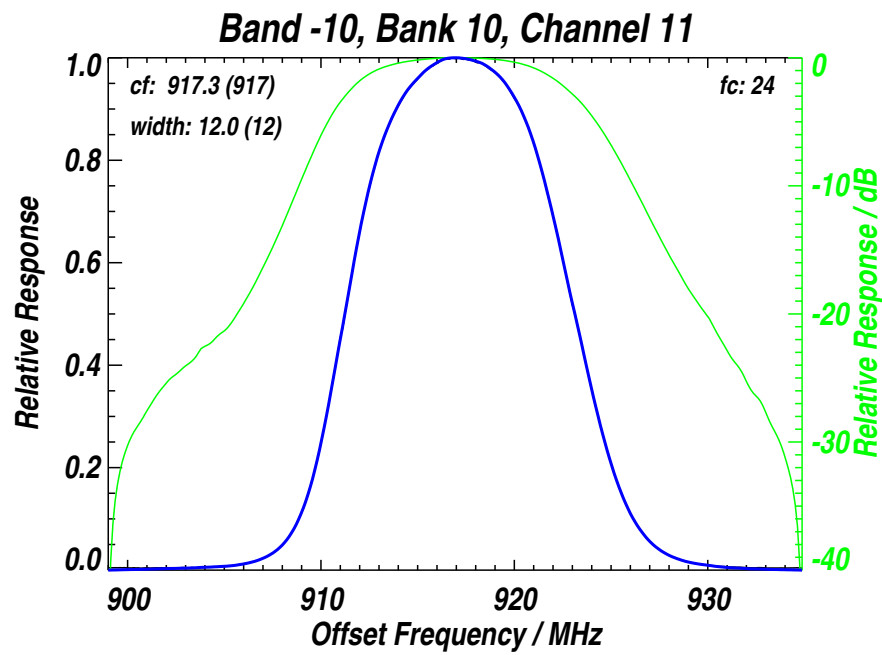
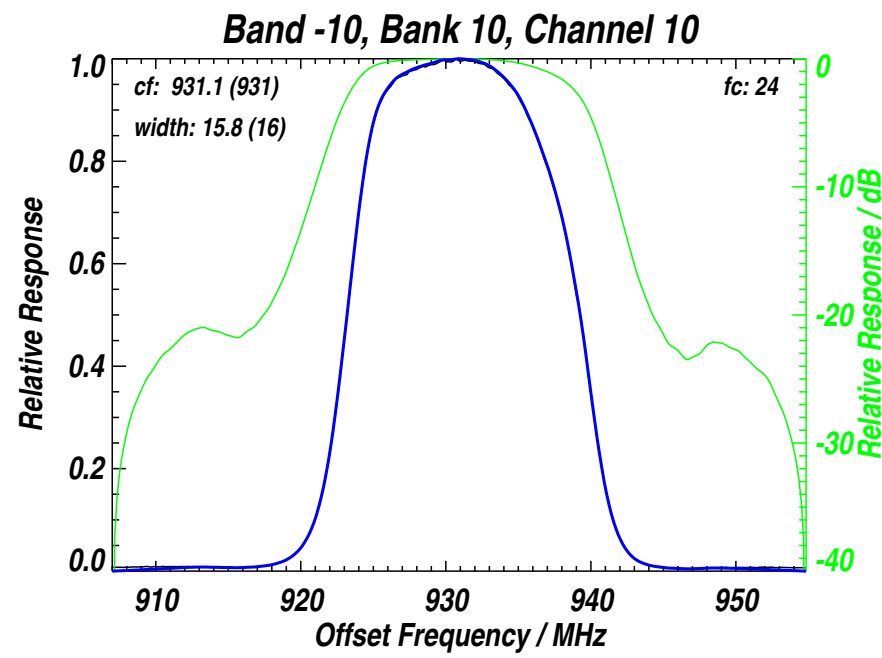
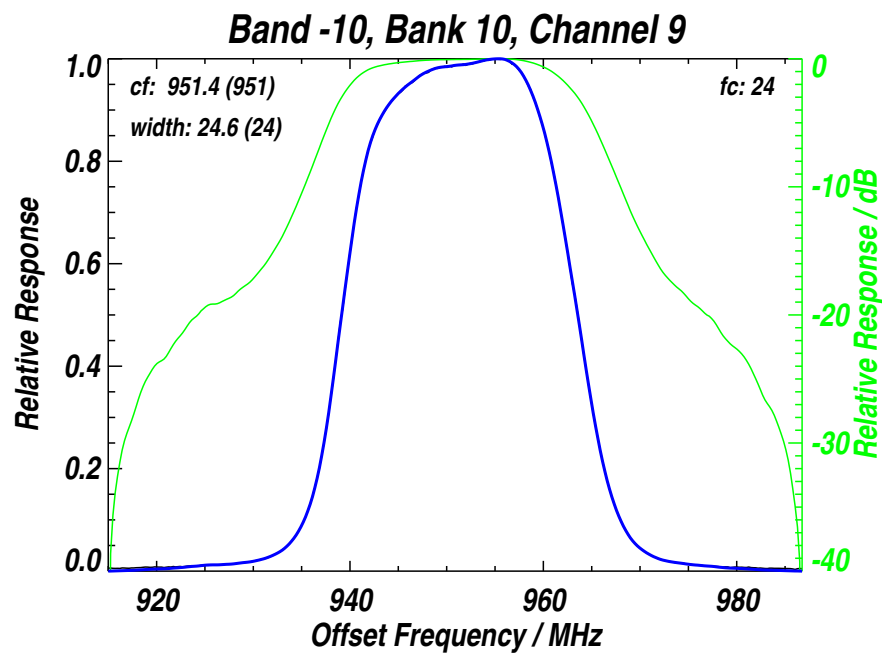


Figure H.278: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 9 to 12. See text for additional details.

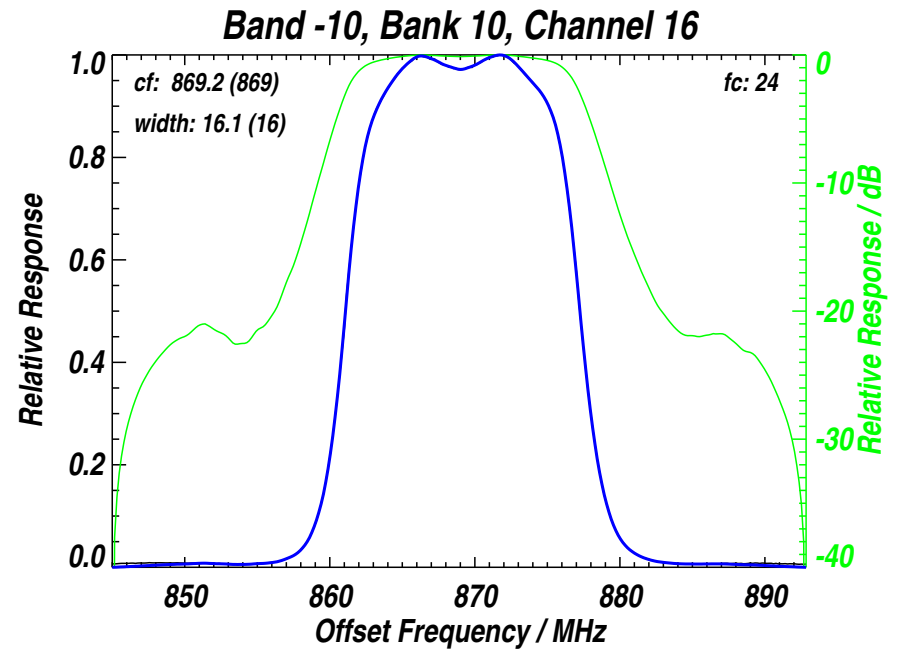
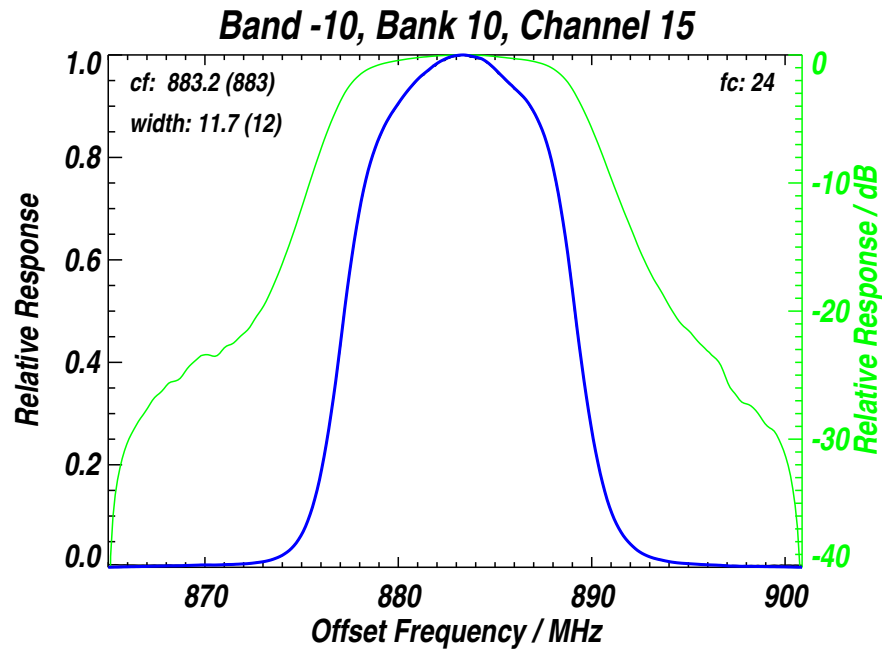
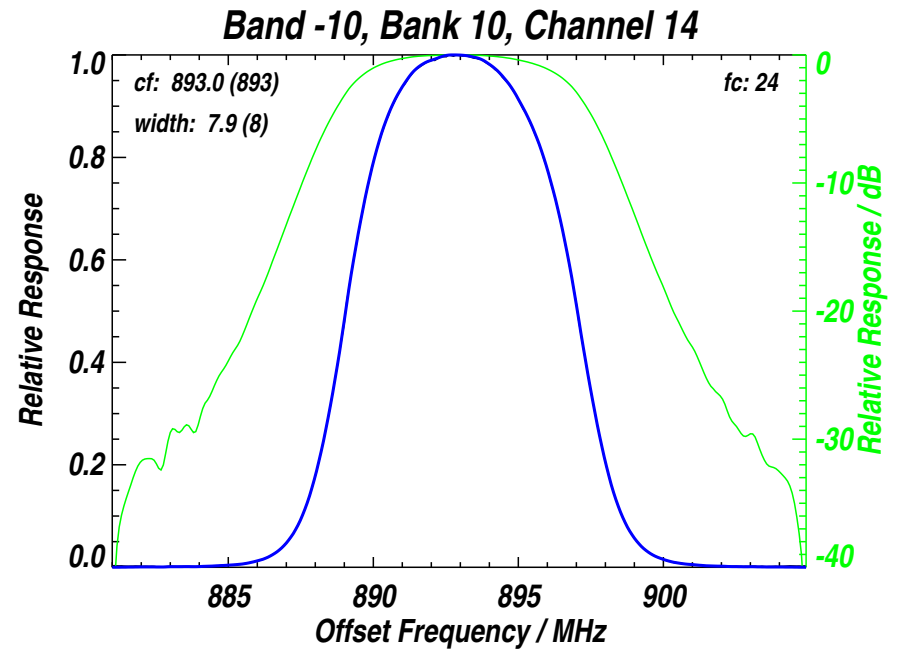
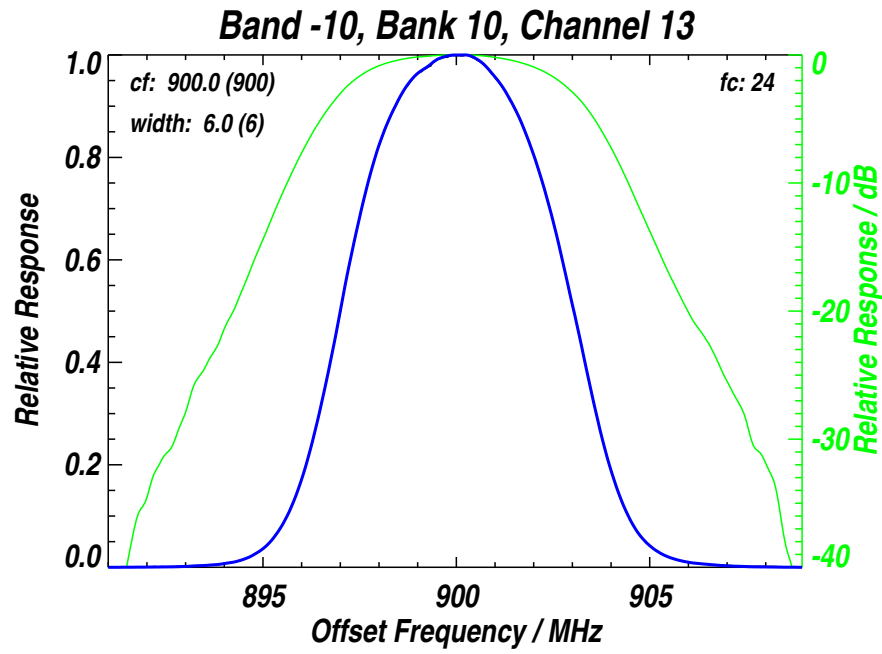


Figure H.279: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 13 to 16. See text for additional details.

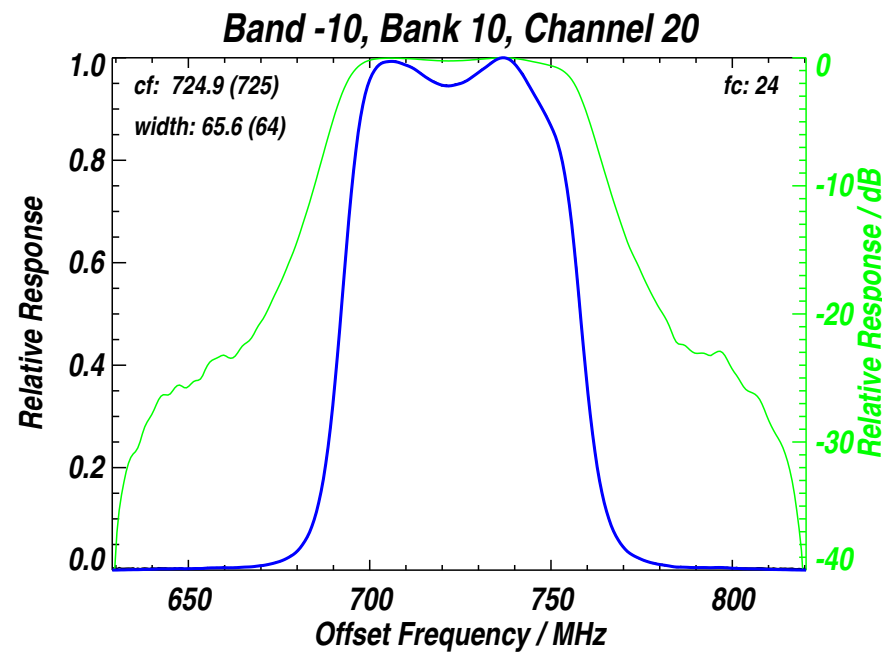
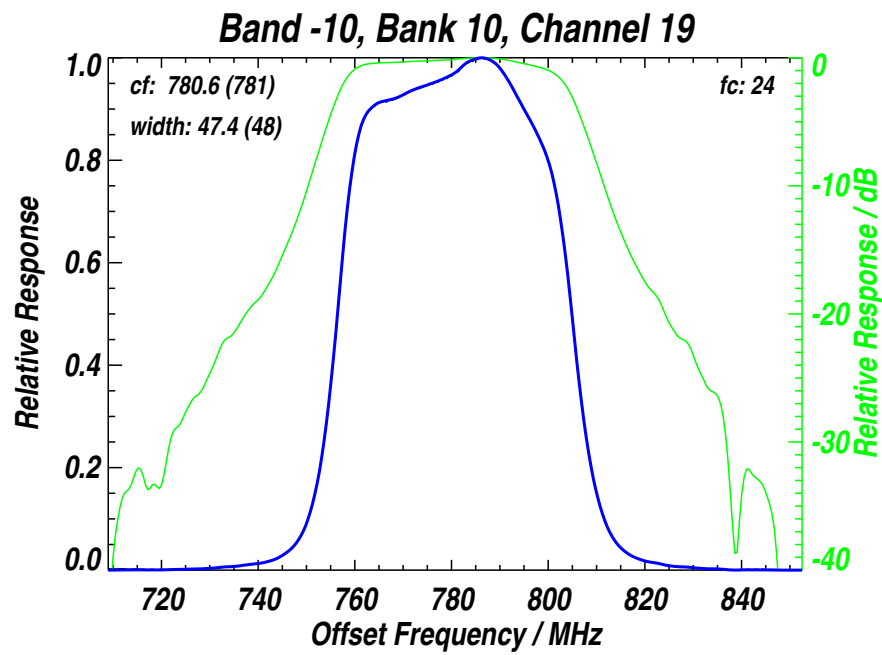
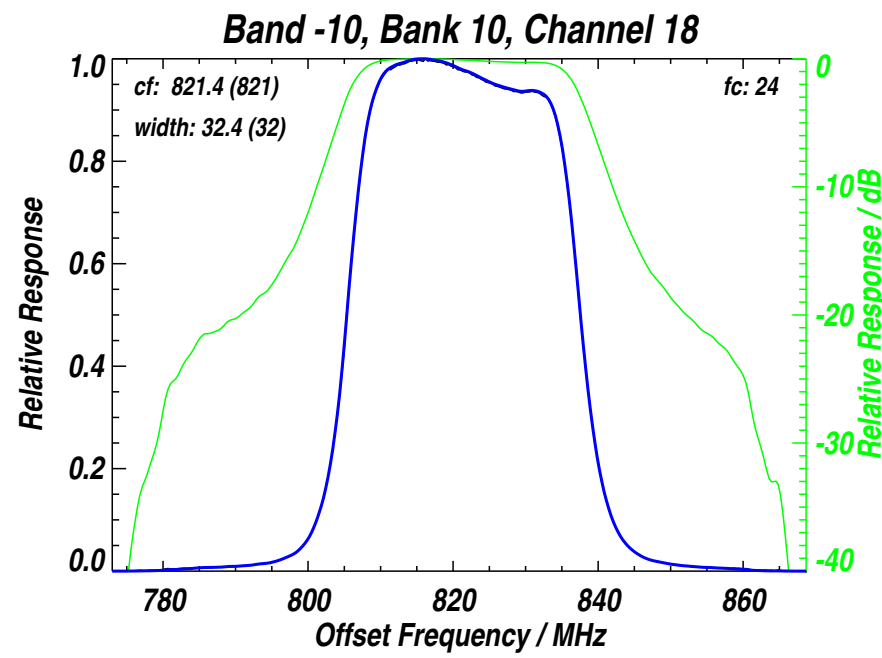
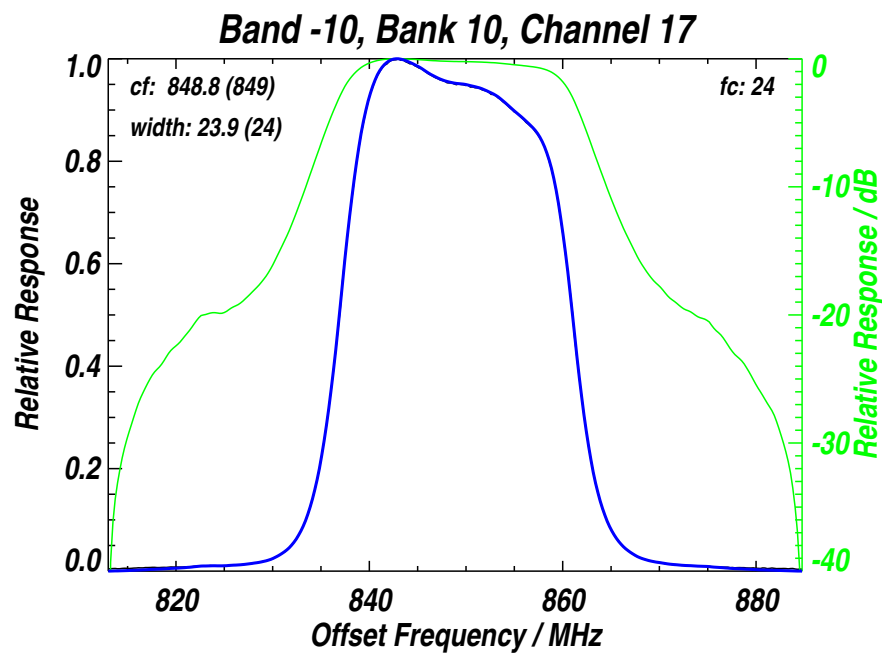


Figure H.280: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 17 to 20. See text for additional details.



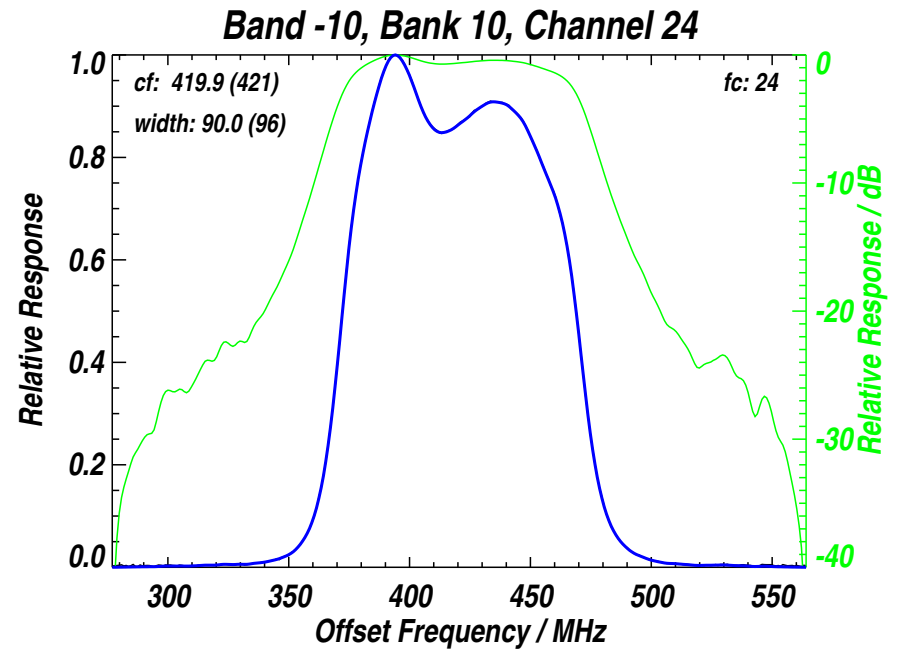
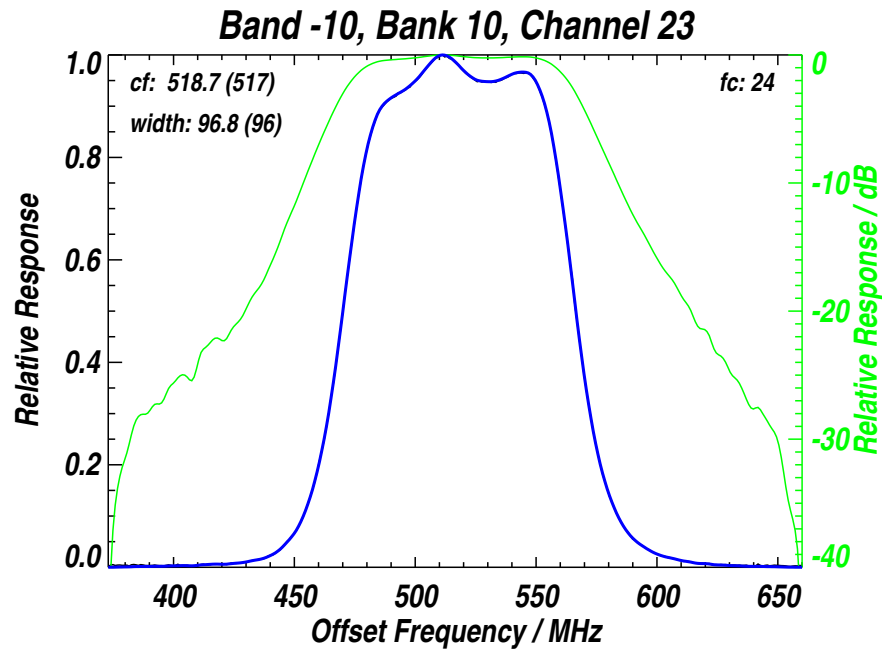
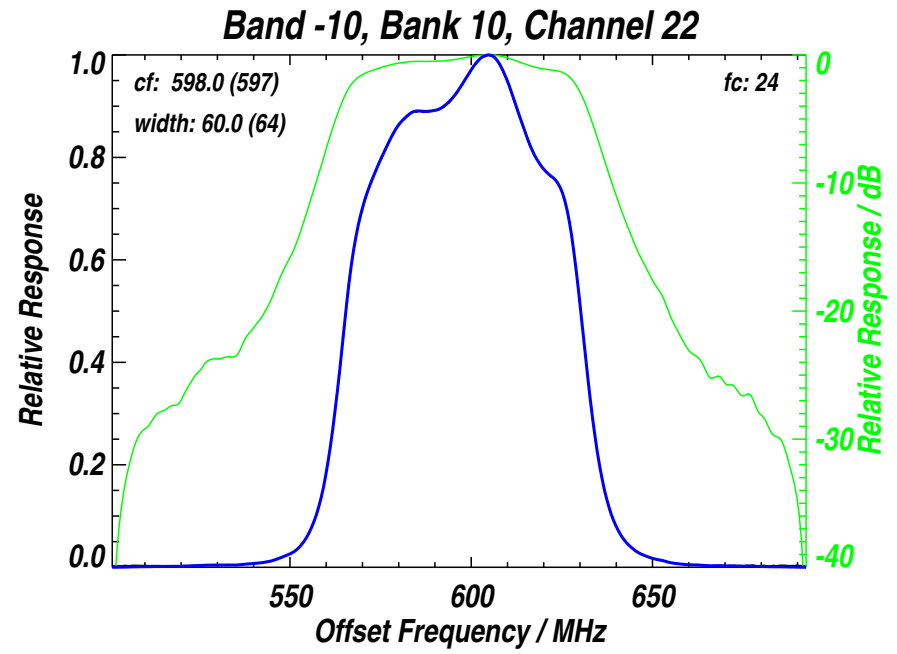
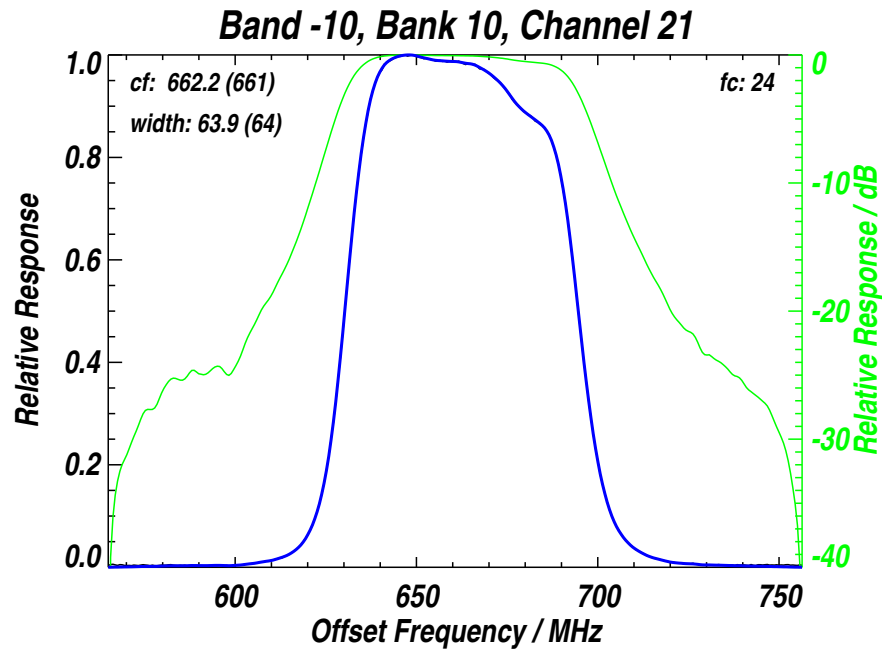
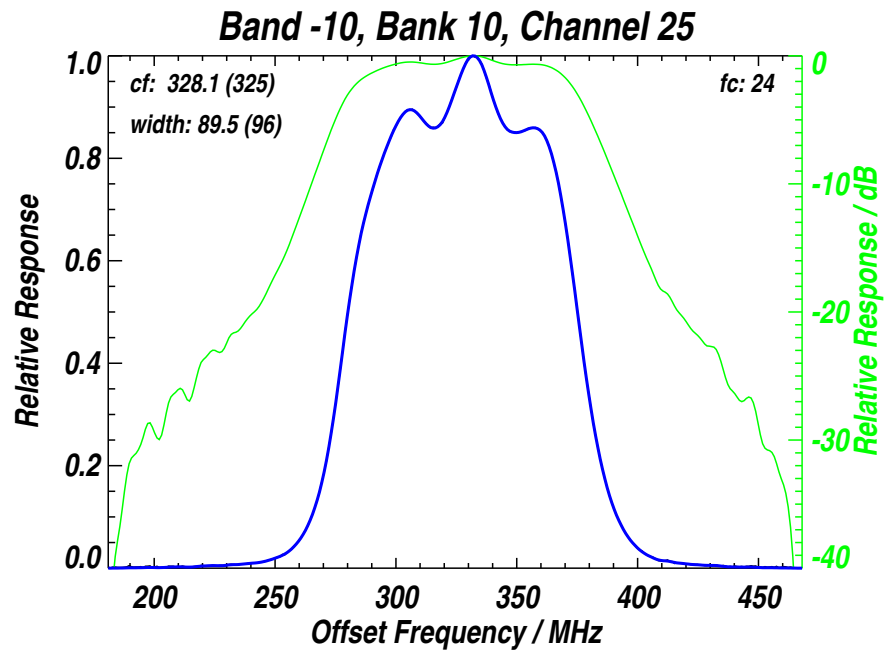


Figure H.281: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 21 to 24. See text for additional details.



**Band 10 (lsb)**  
**Bank 10**  
**Origin = 635.373750018 GHz**

Figure H.282: Lower sideband front-end sweep data for Band 10 taken via Filterbank 10, channel 25. See text for additional details.

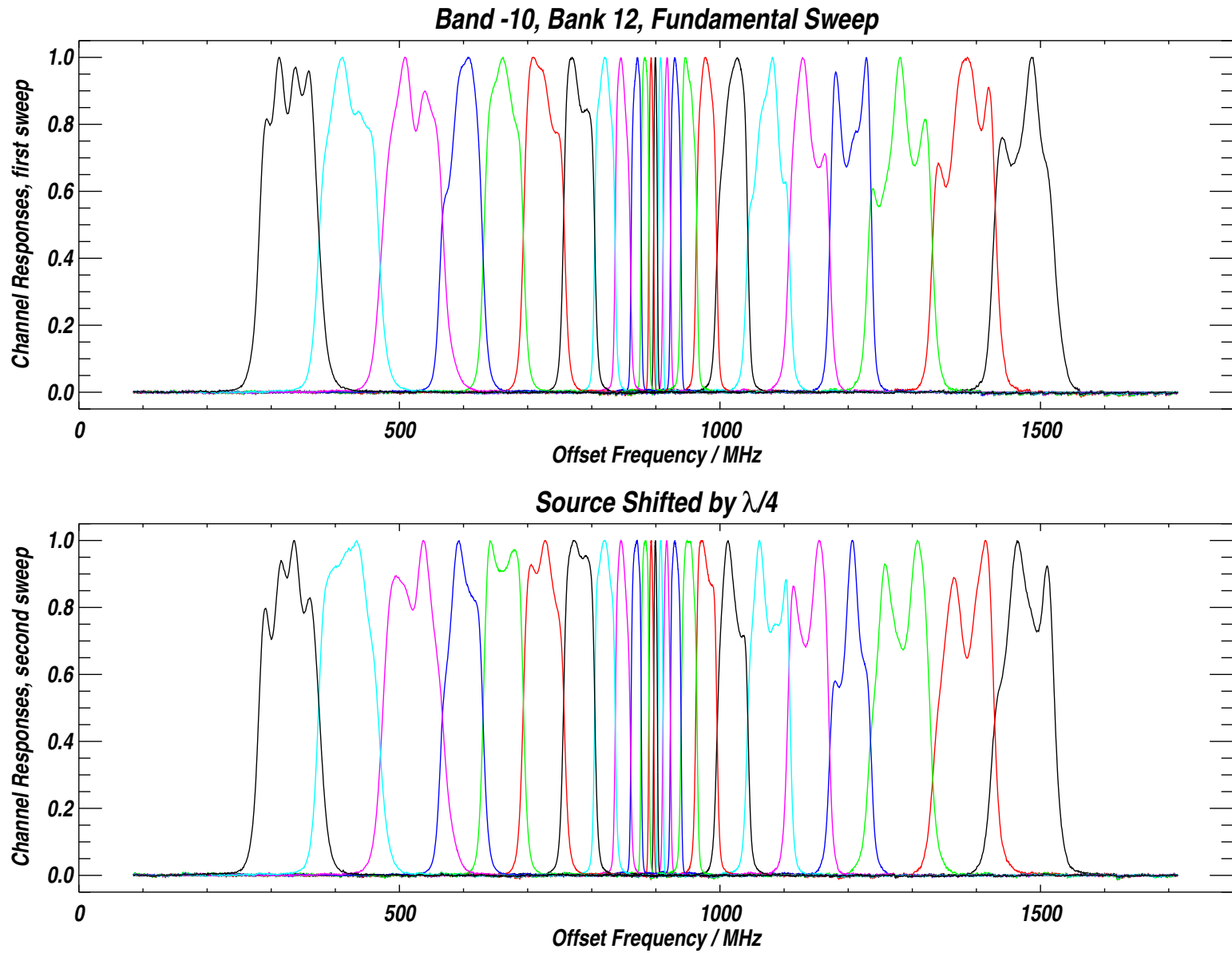


Figure H.283: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12. See text for additional details.

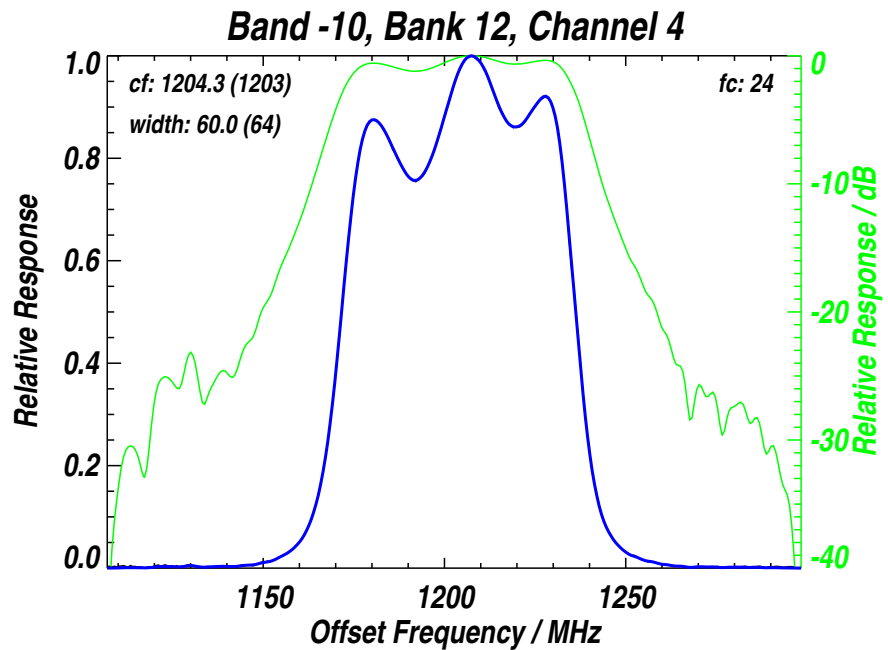
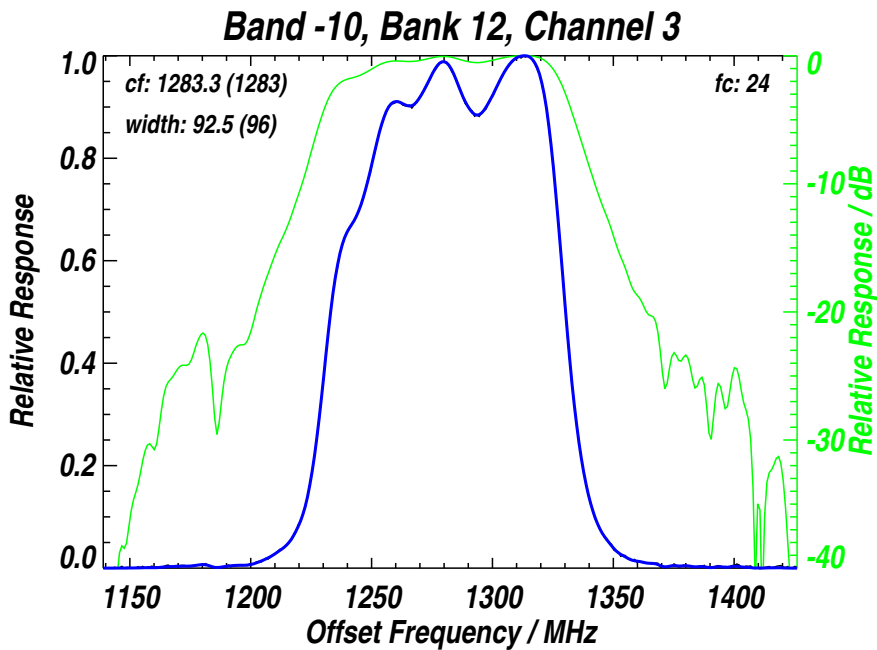
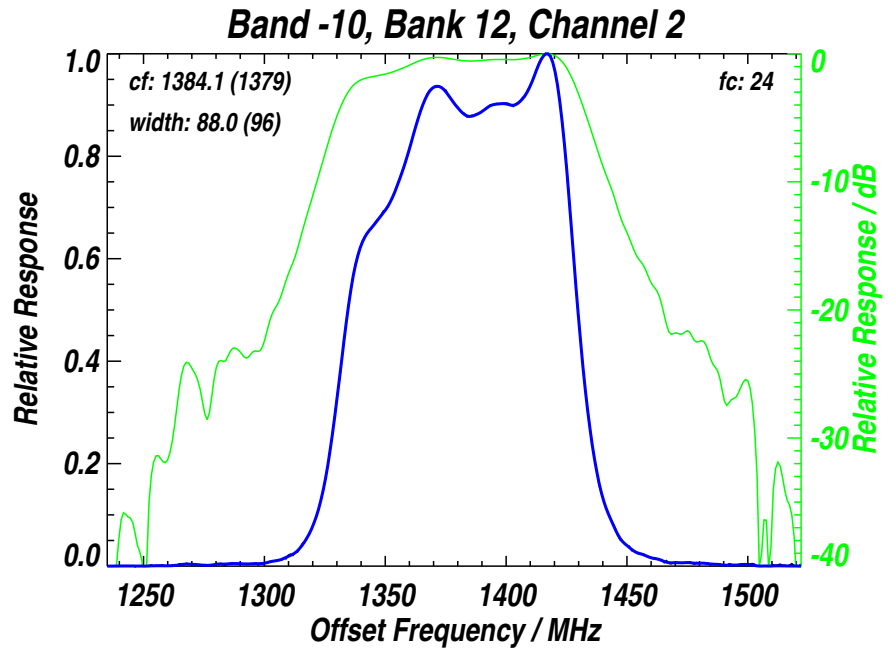
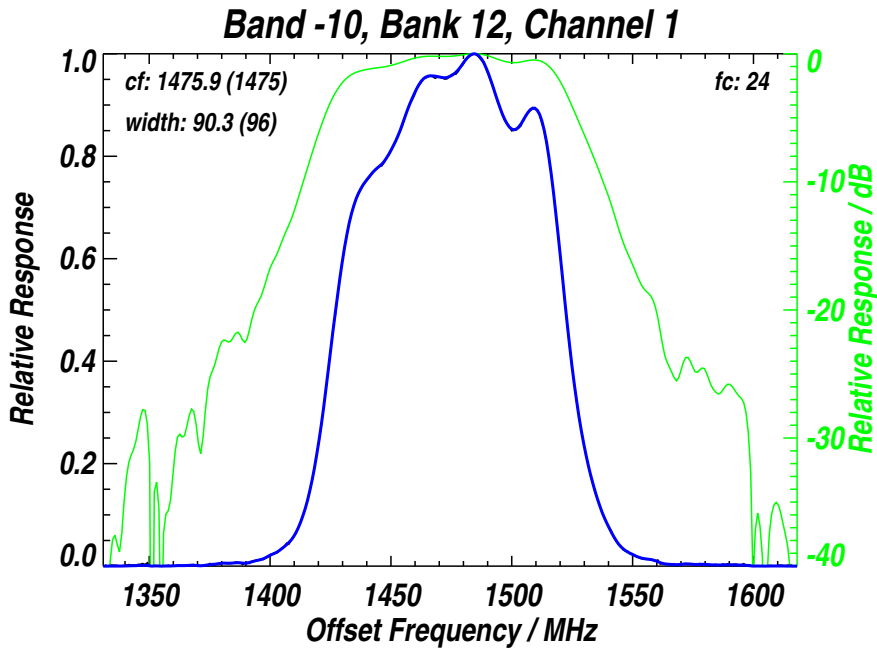


Figure H.284: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 1 to 4. See text for additional details.

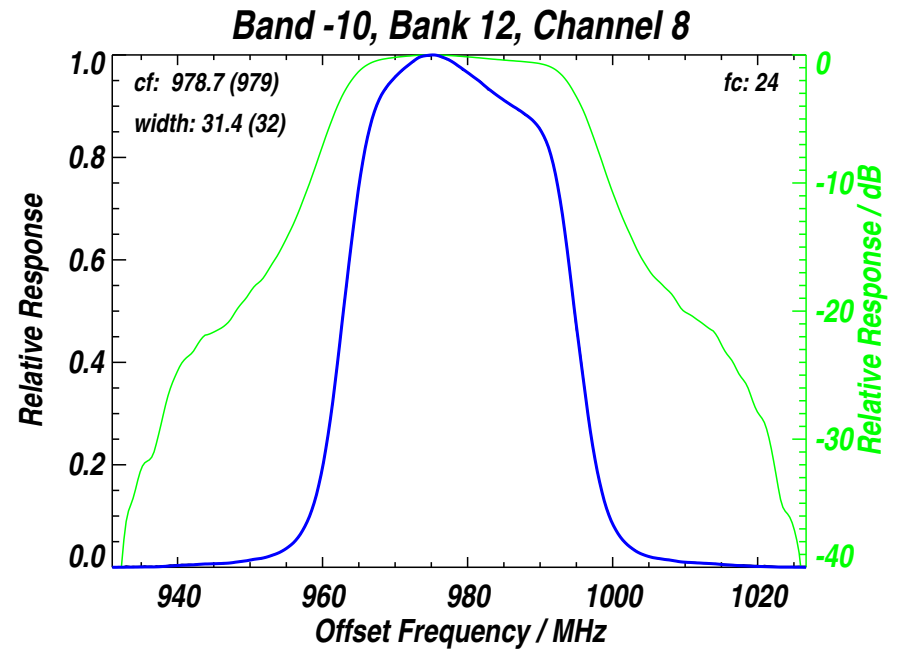
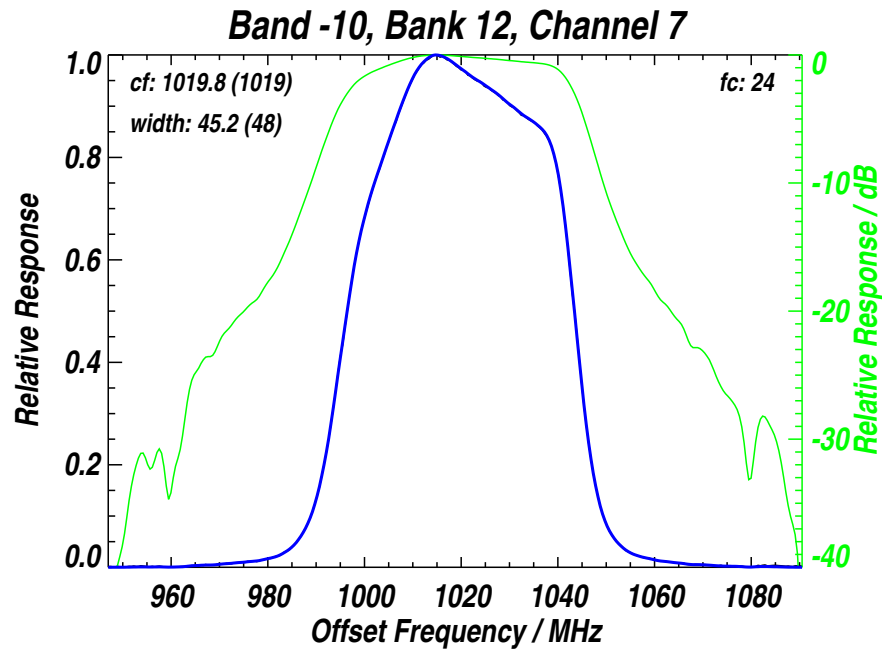
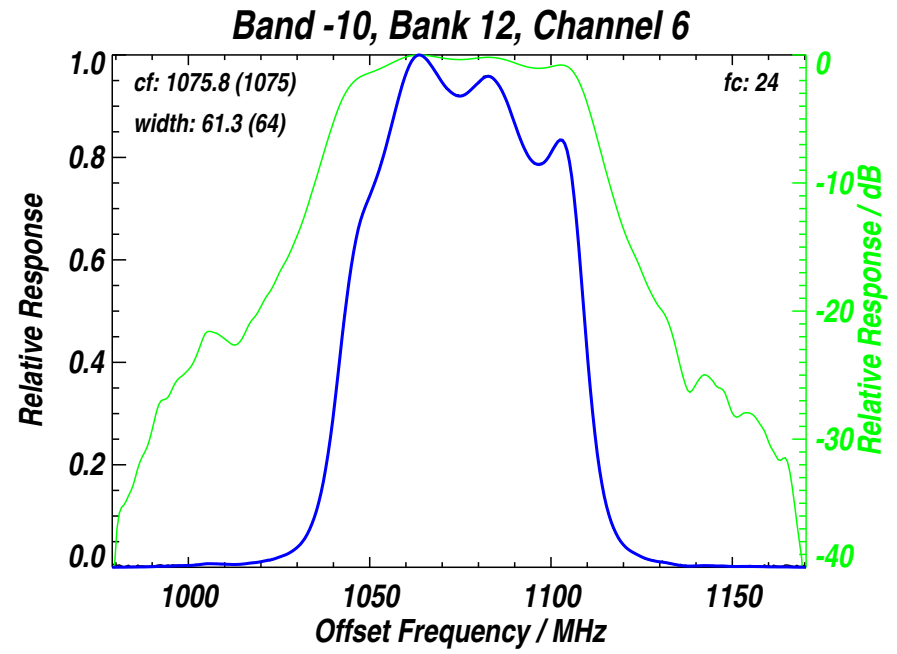
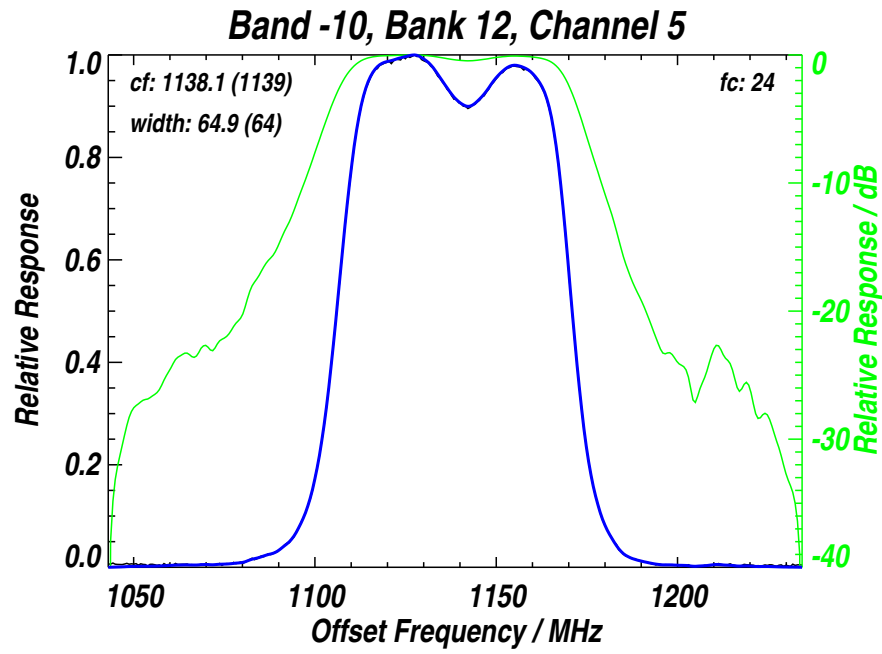


Figure H.285: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 5 to 8. See text for additional details.

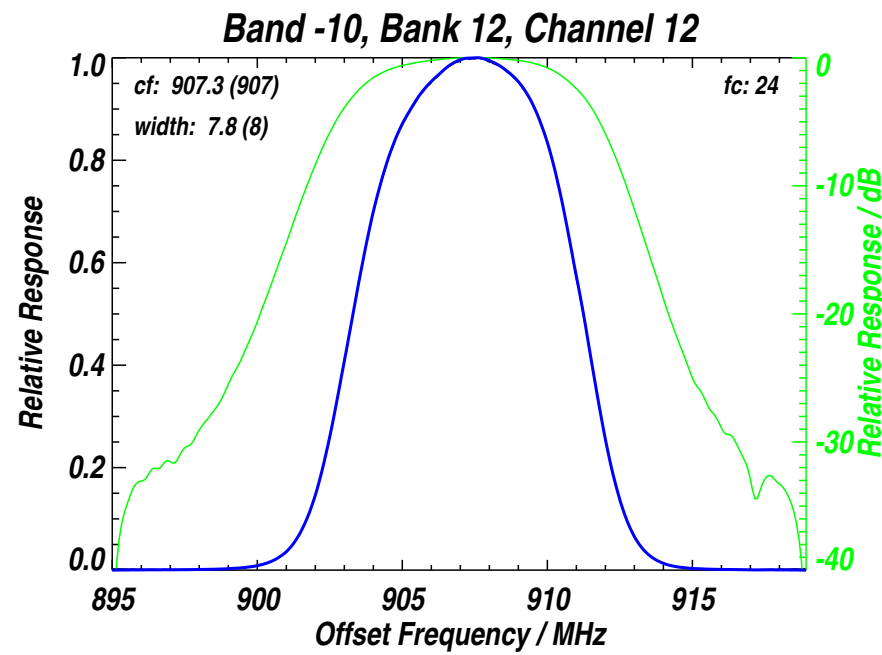
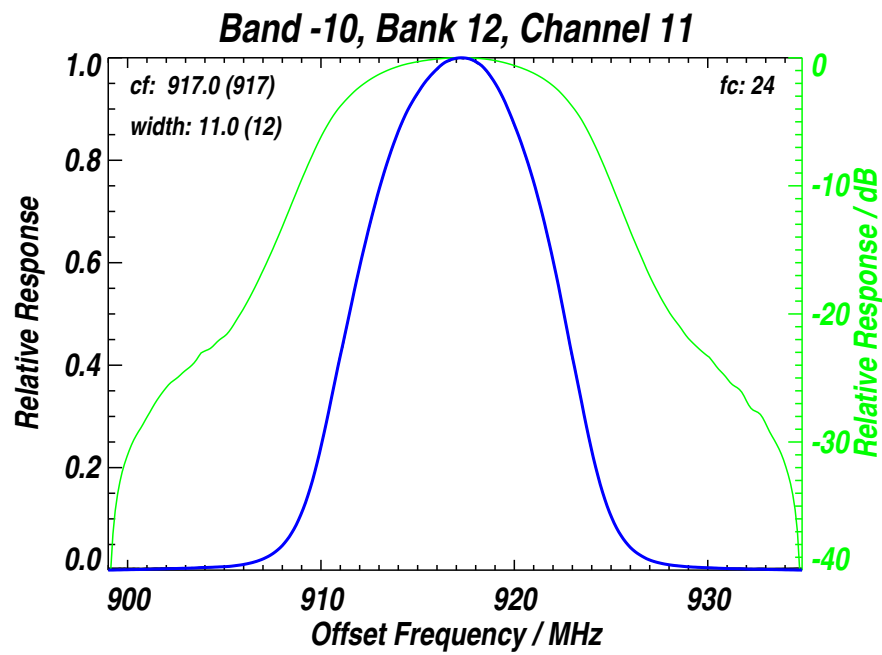
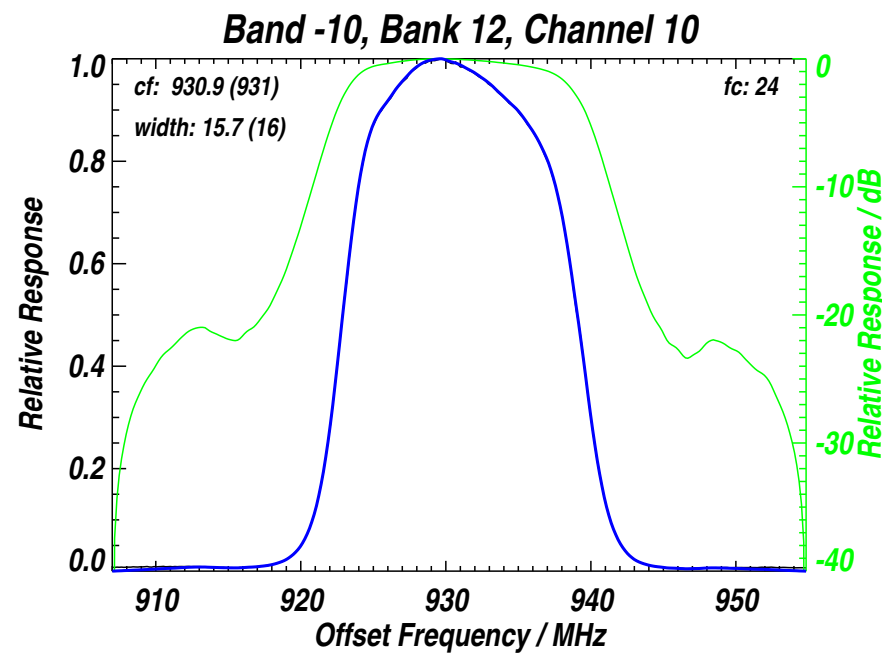
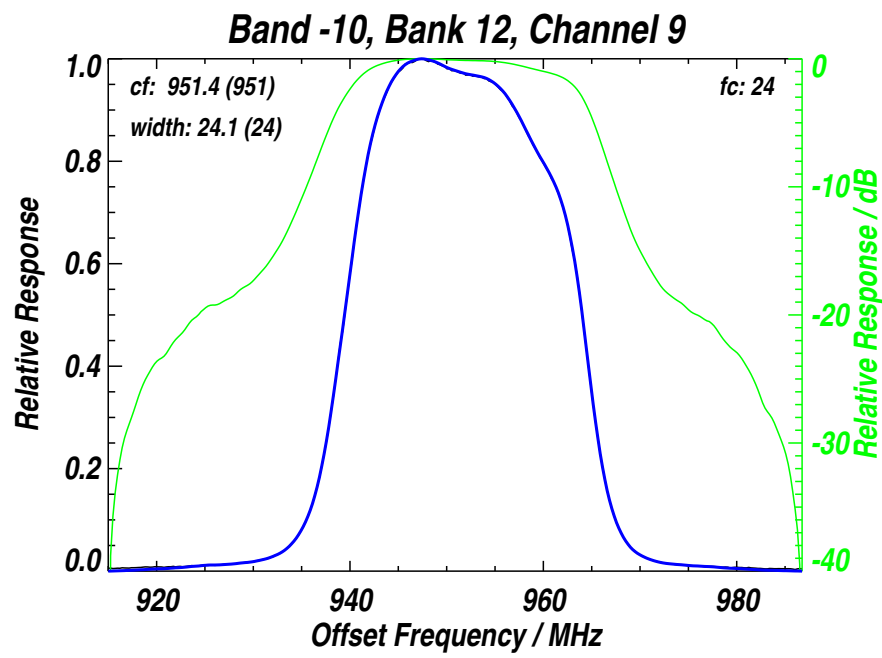


Figure H.286: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 9 to 12. See text for additional details.

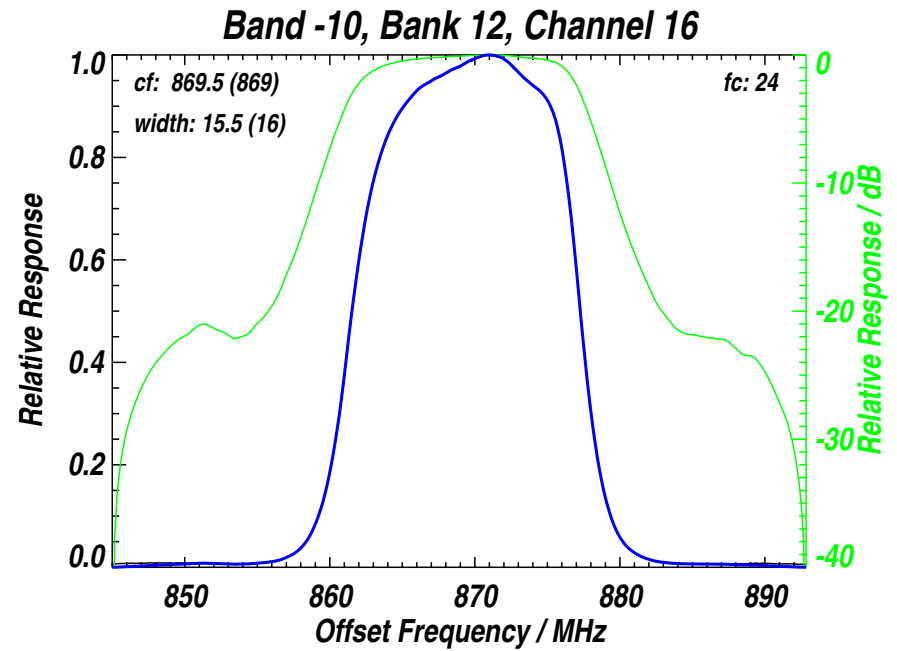
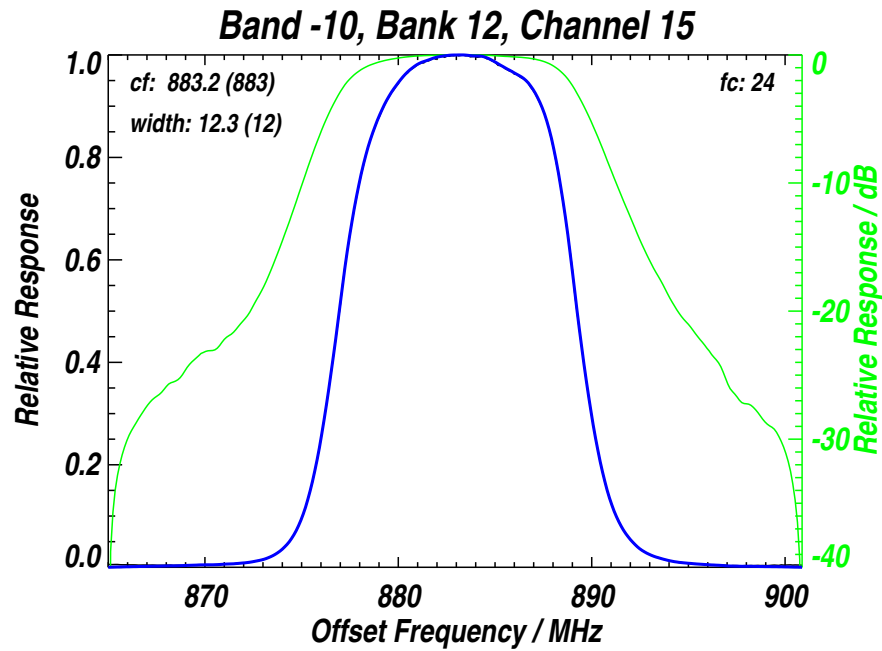
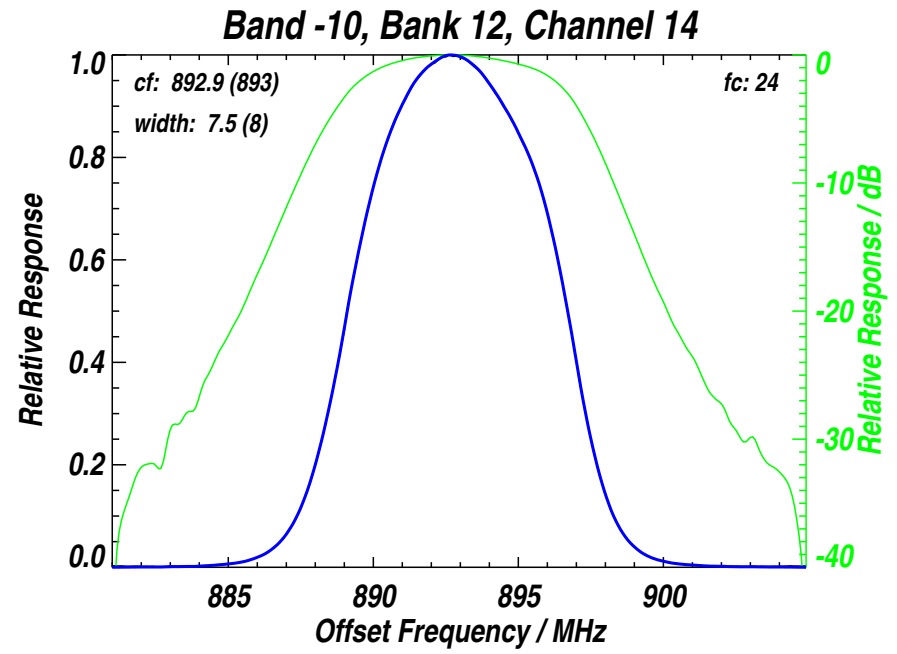
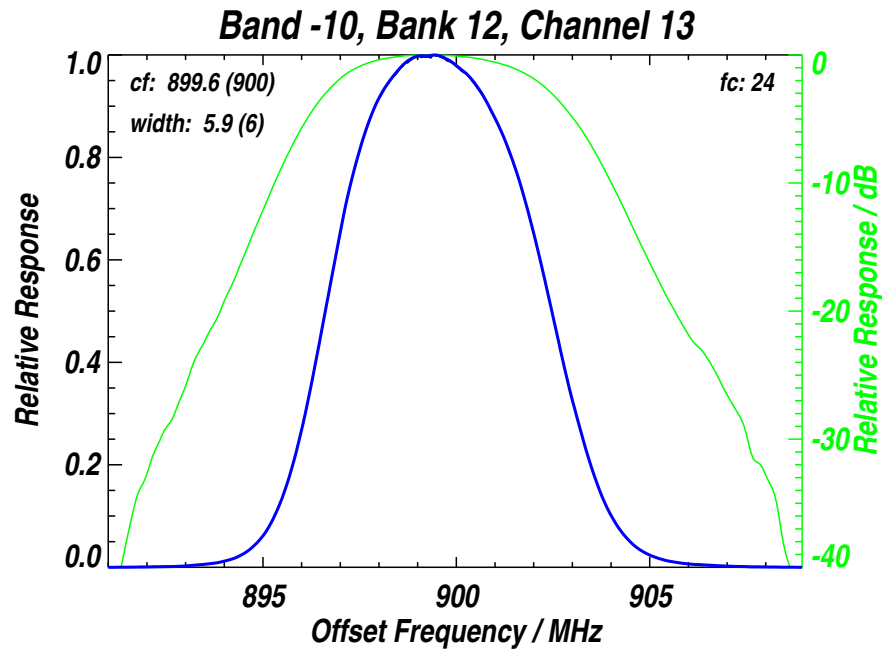


Figure H.287: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 13 to 16. See text for additional details.

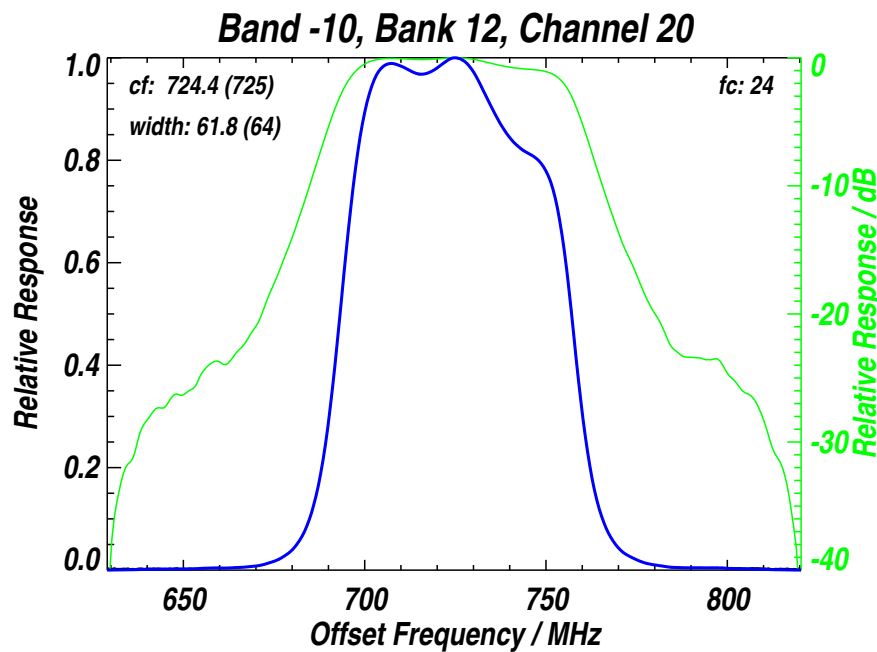
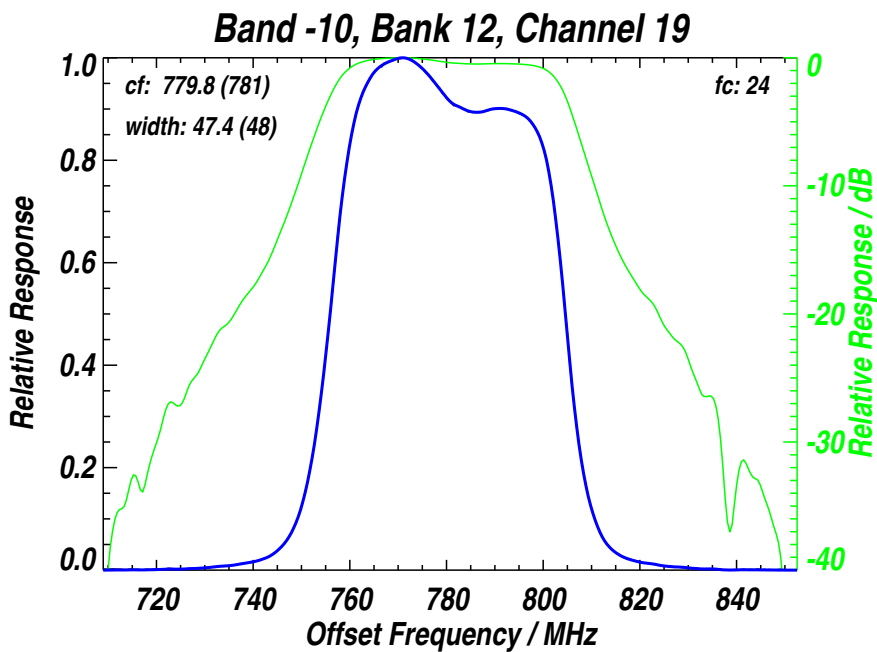
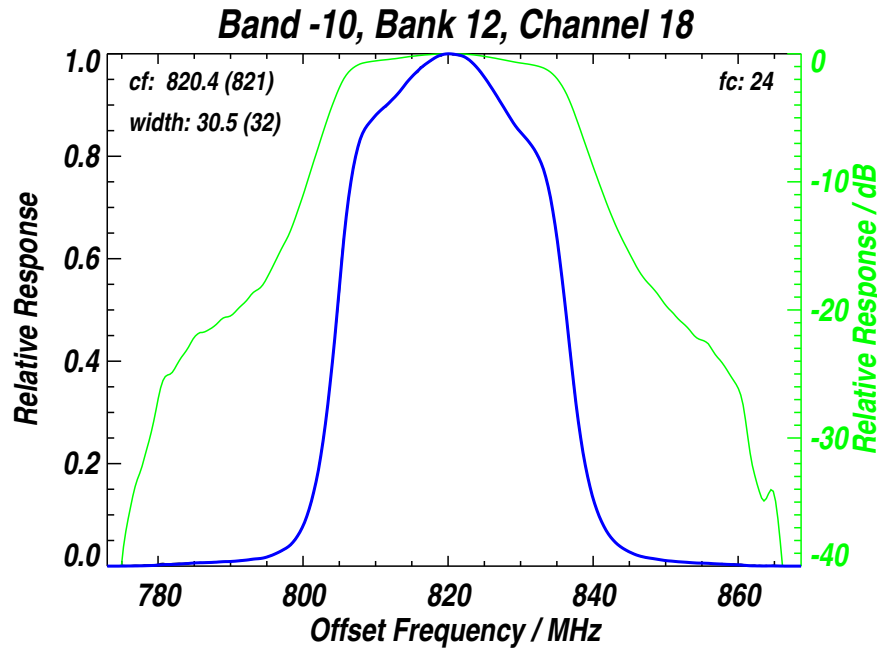
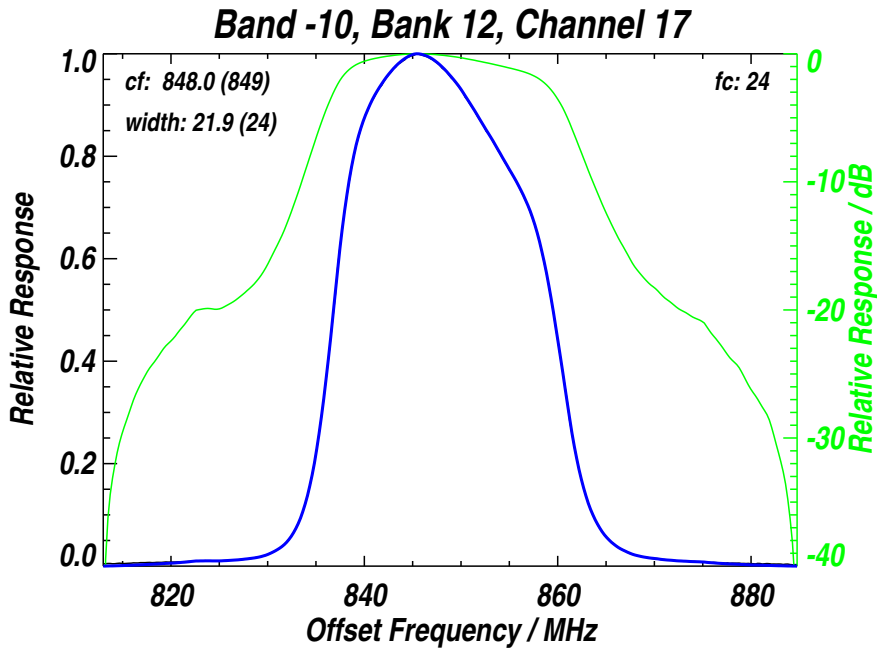


Figure H.288: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 17 to 20. See text for additional details.



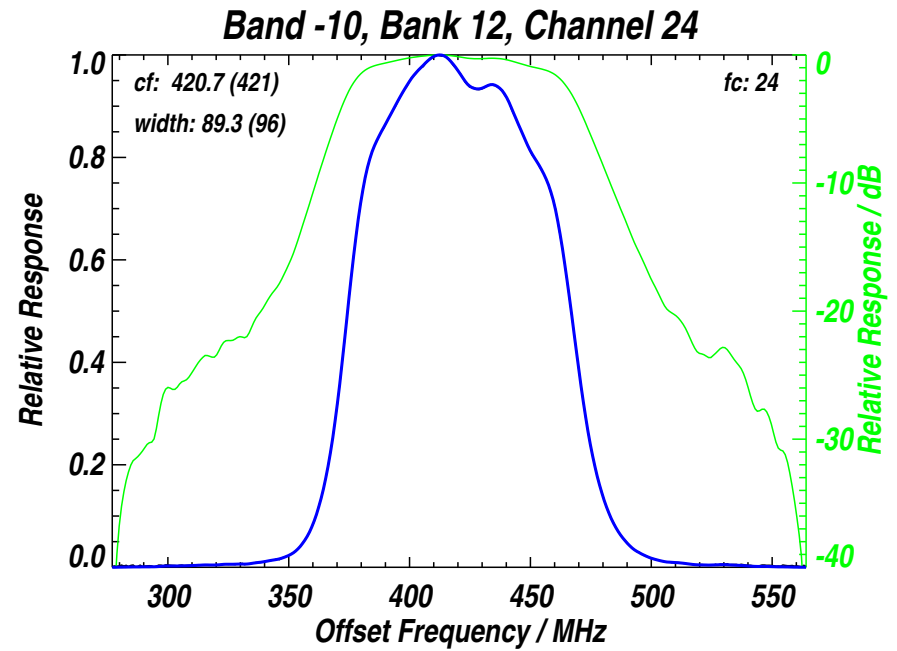
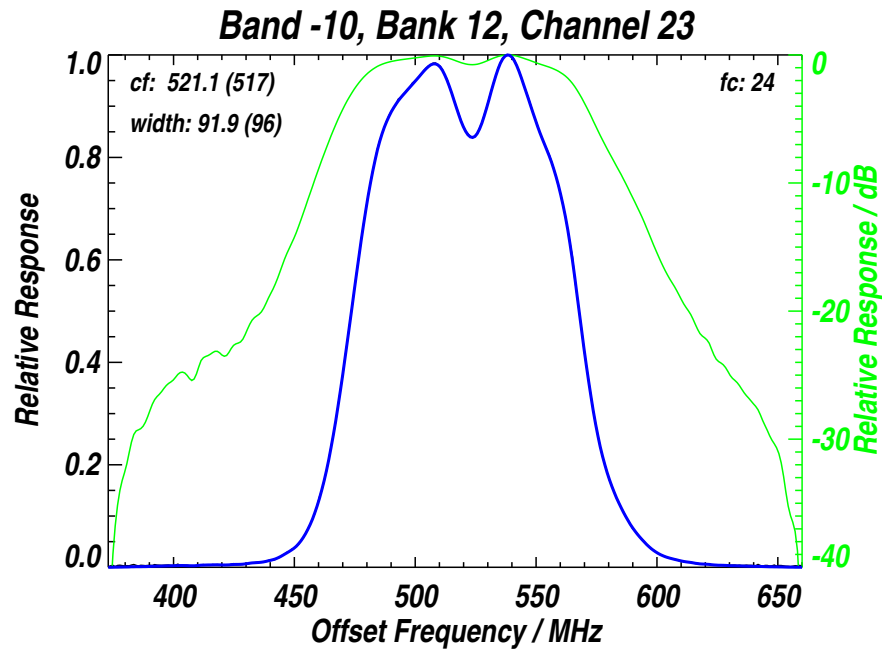
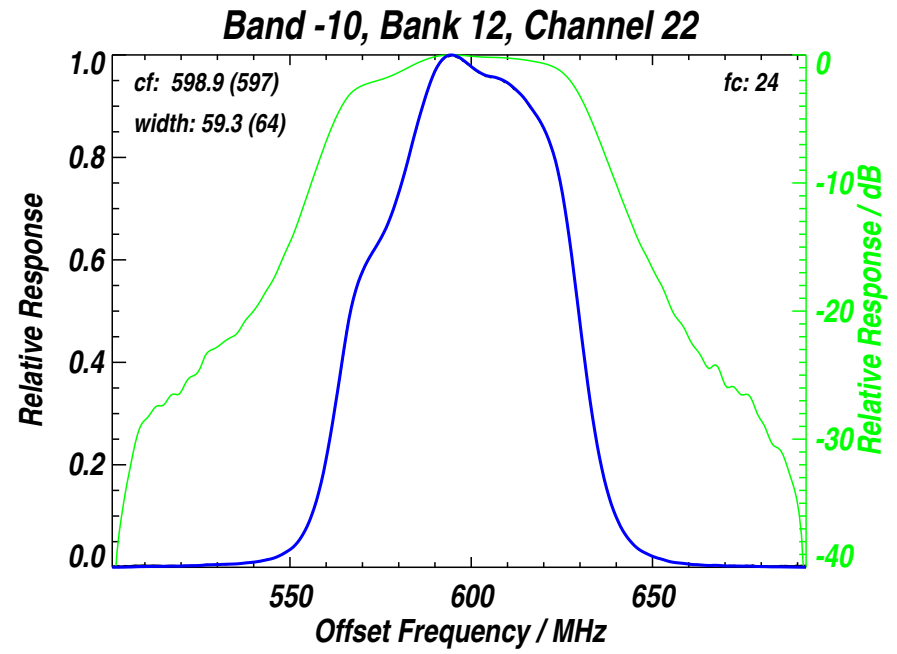
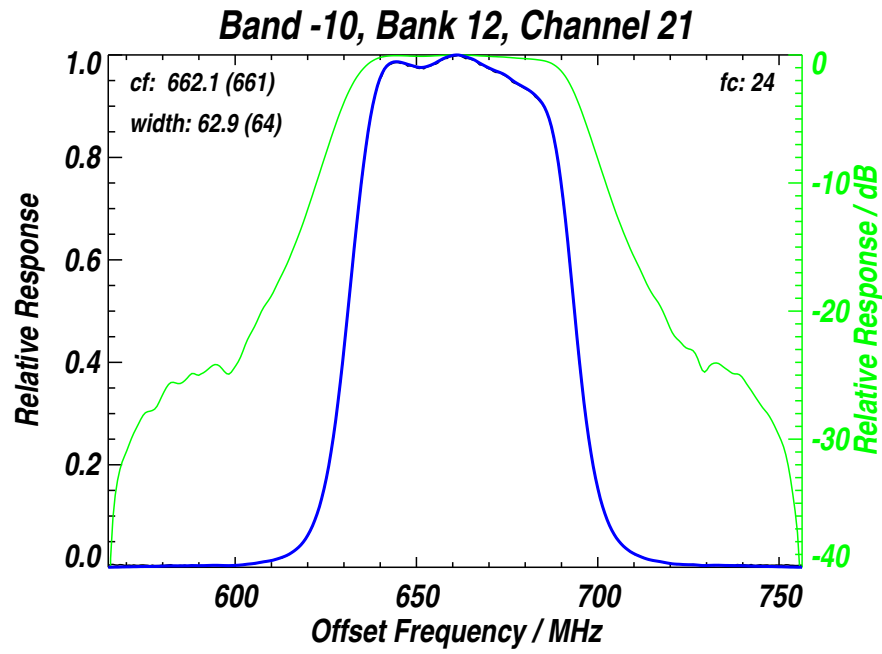
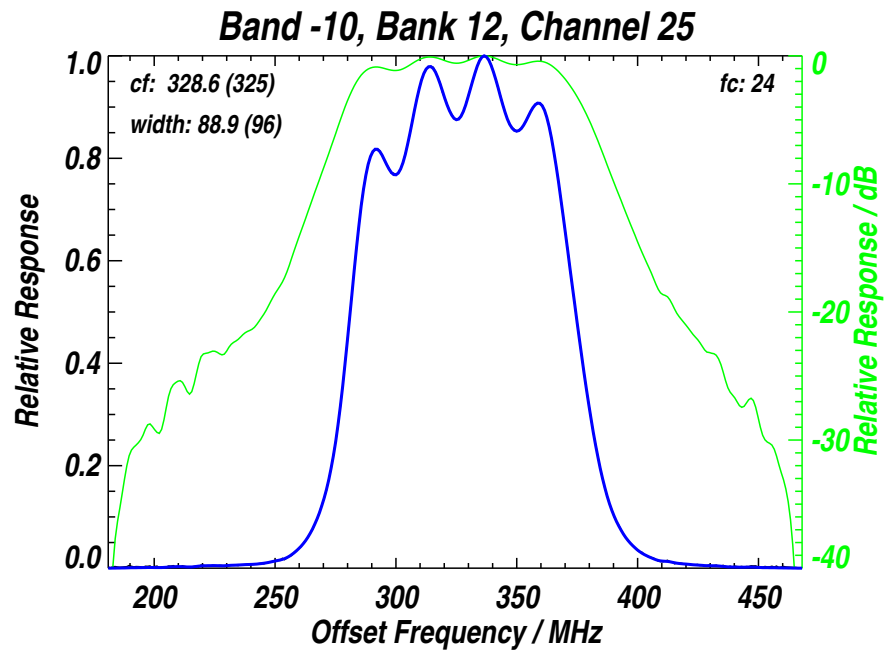


Figure H.289: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 10 (lsb)**  
**Bank 12**  
**Origin = 635.373750018 GHz**

Figure H.290: Lower sideband front-end sweep data for Band 10 taken via Filterbank 12, channel 25. See text for additional details.

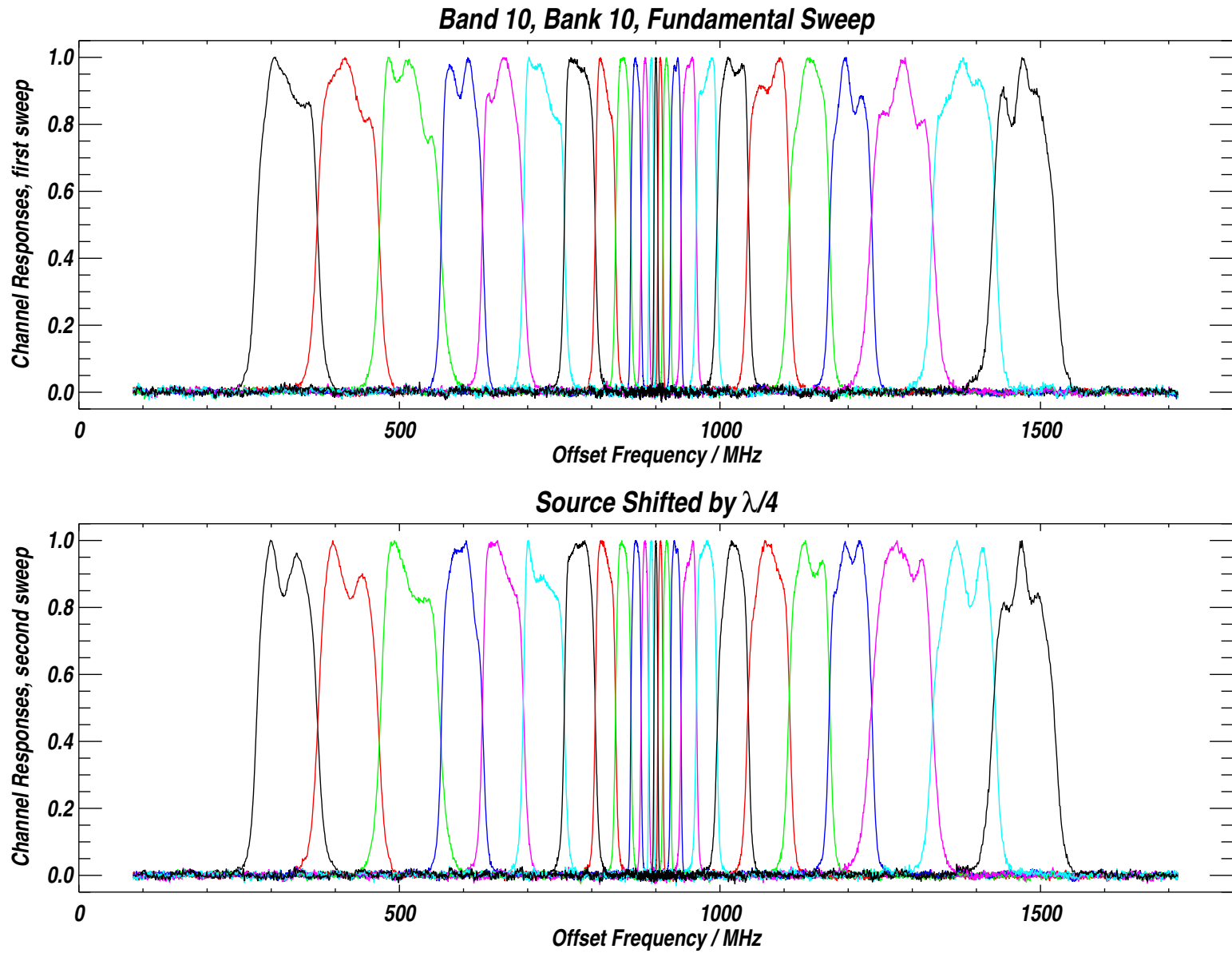


Figure H.291: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10. See text for additional details.

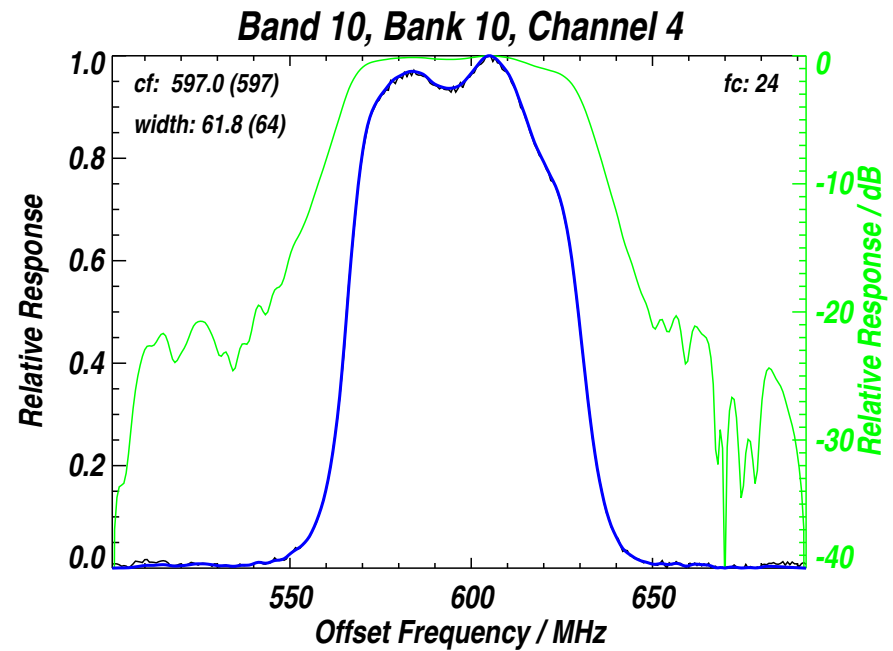
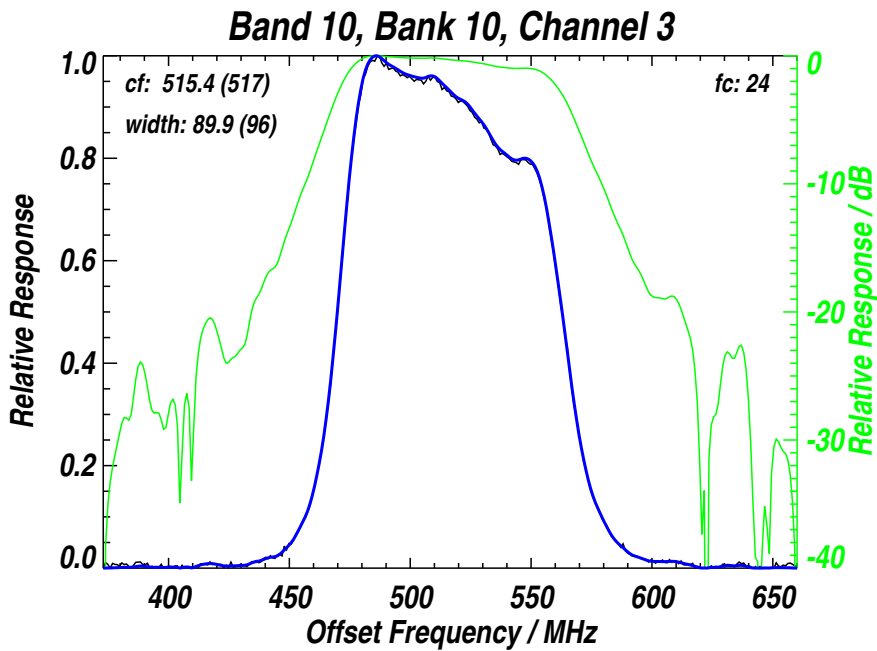
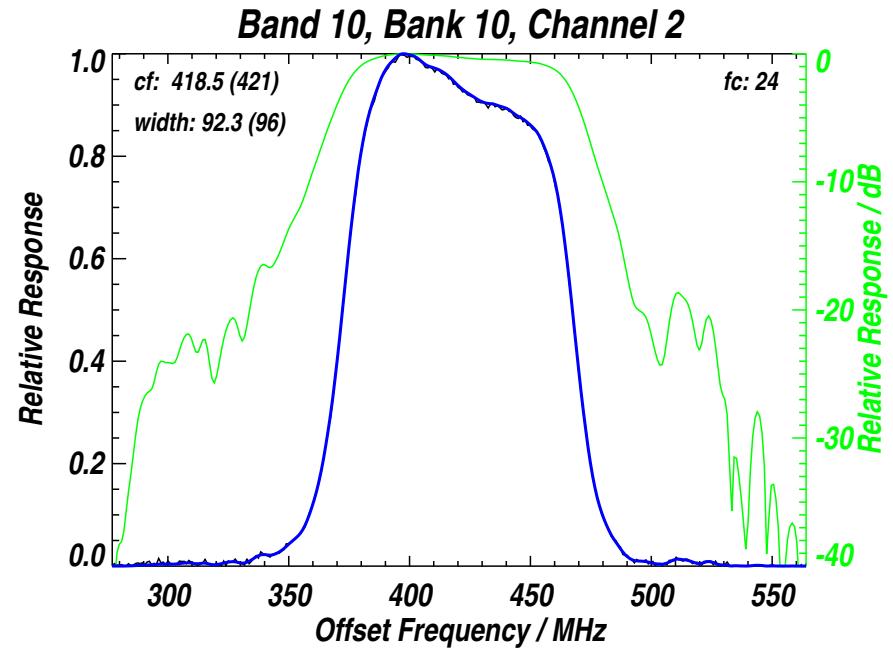
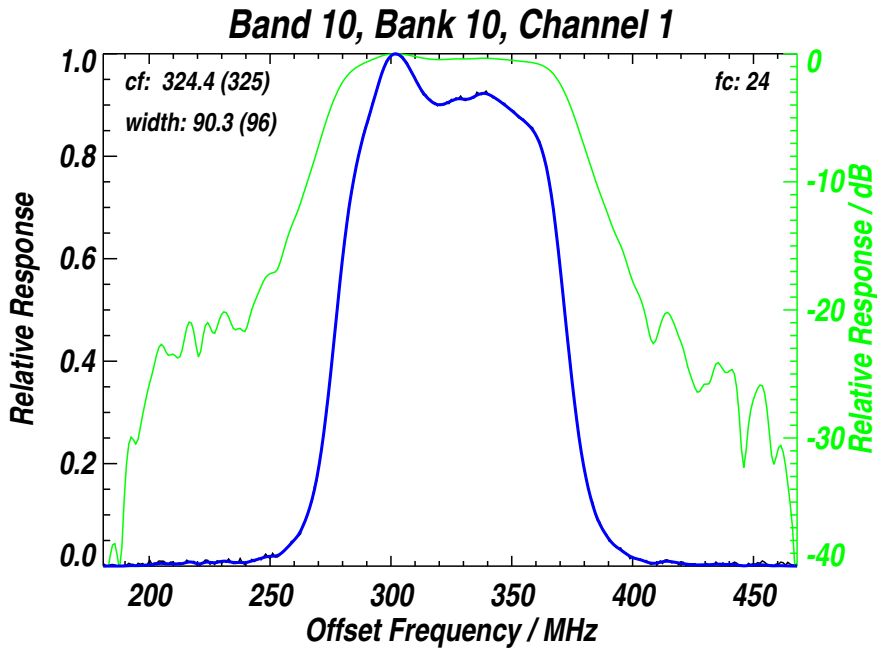


Figure H.292: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 1 to 4. See text for additional details.

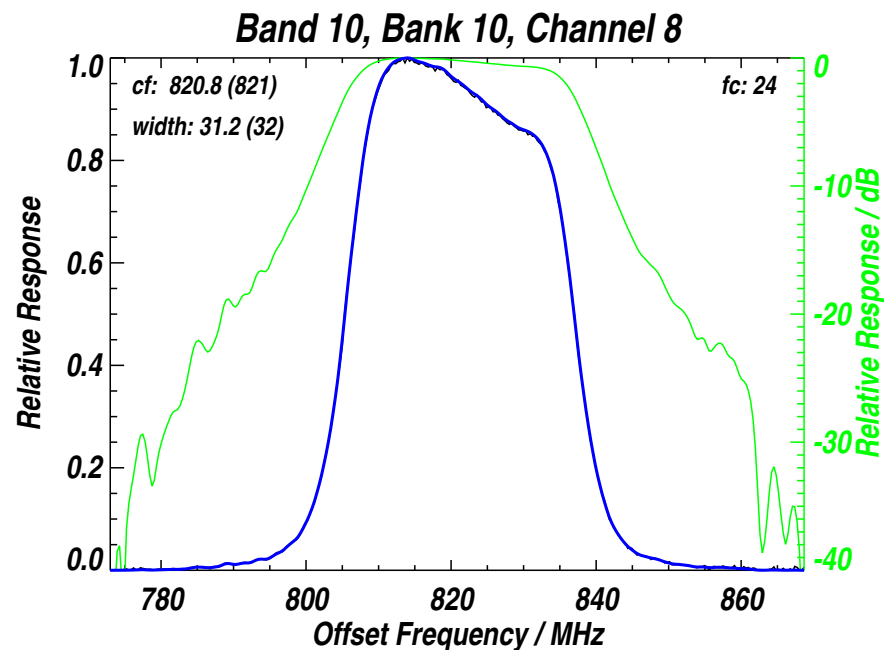
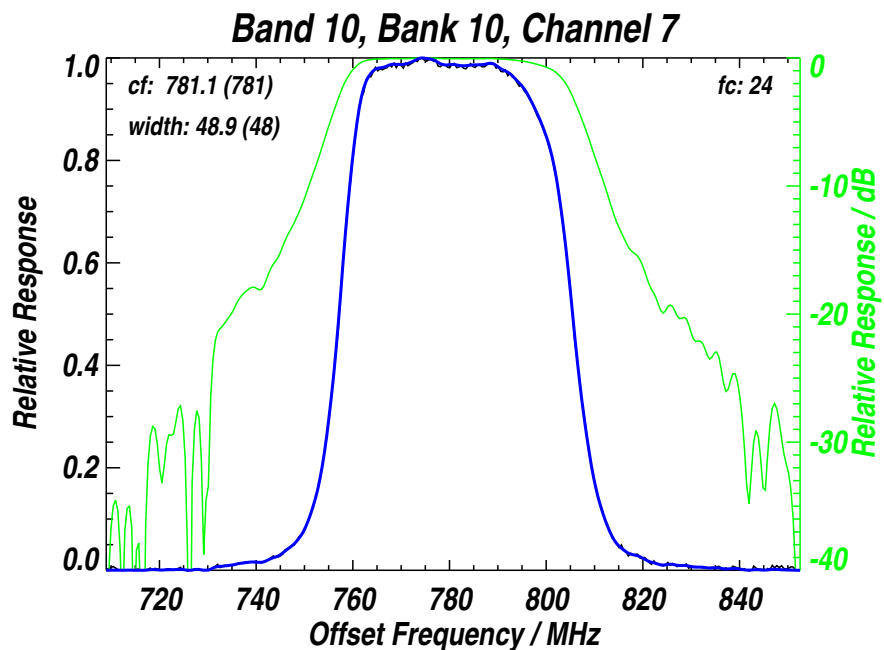
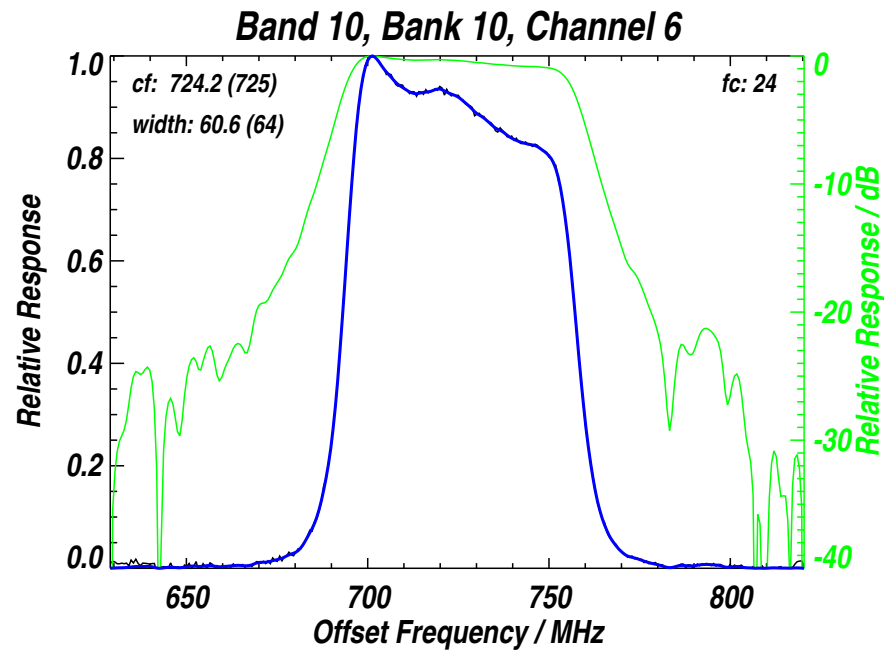
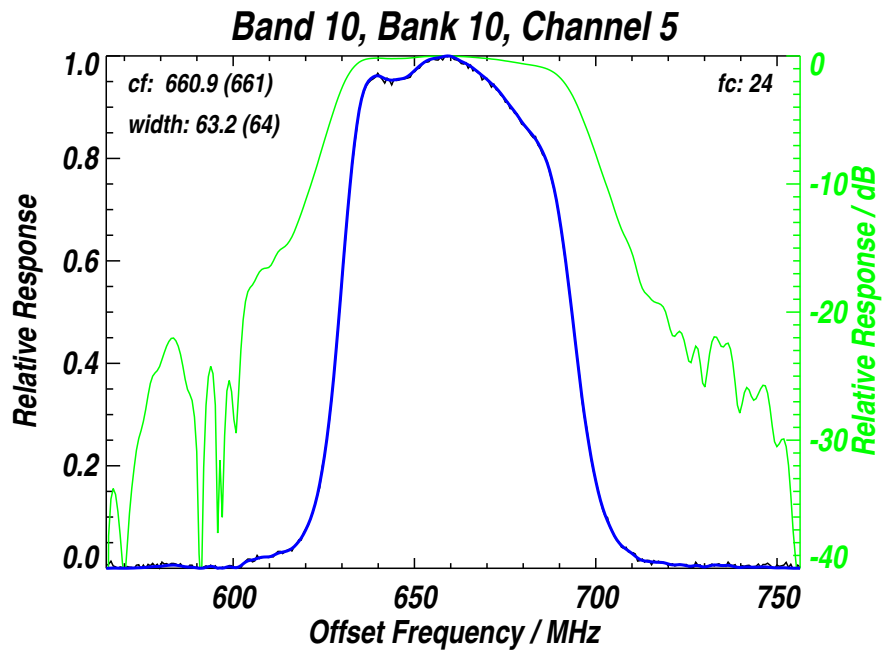


Figure H.293: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 5 to 8. See text for additional details.

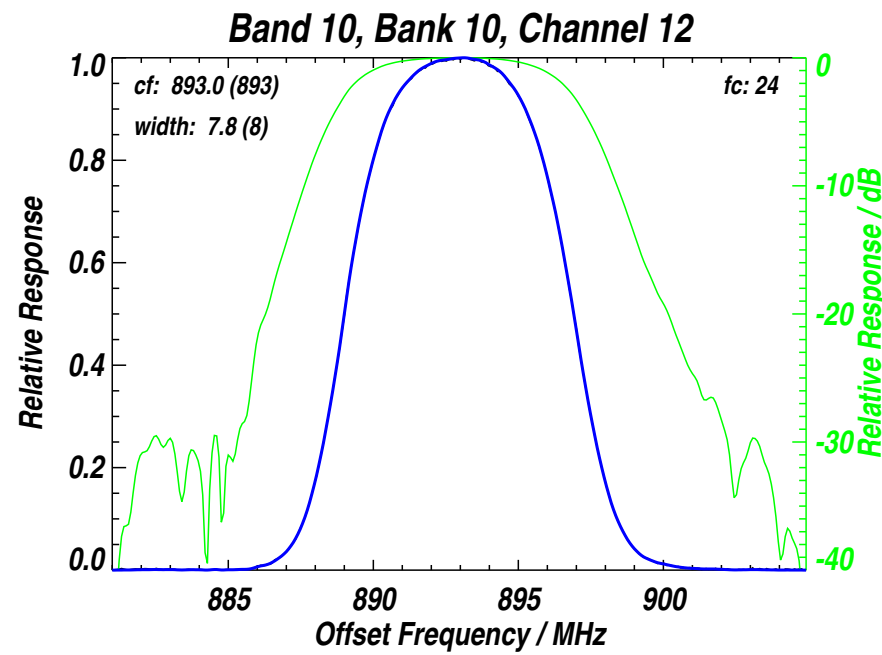
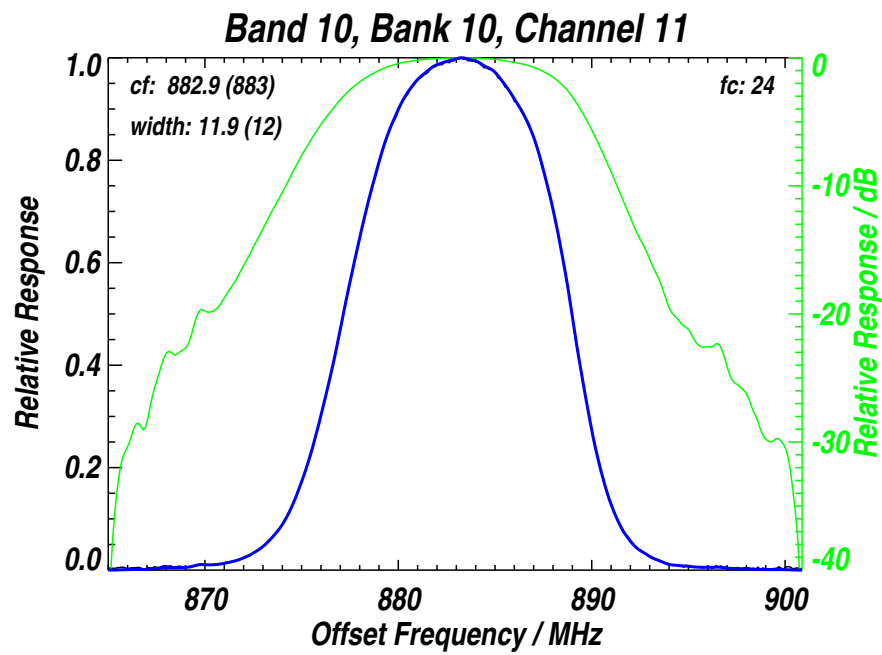
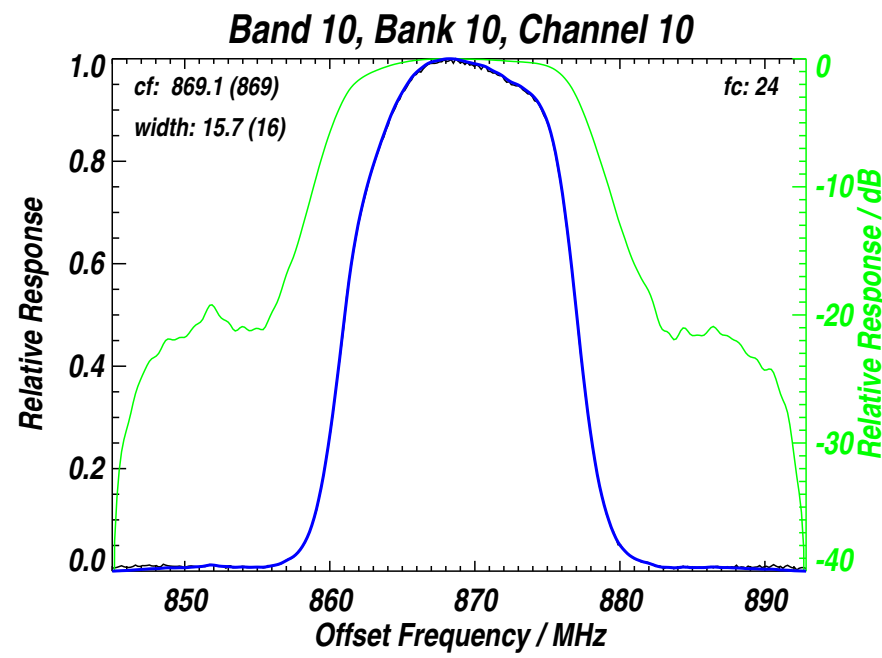
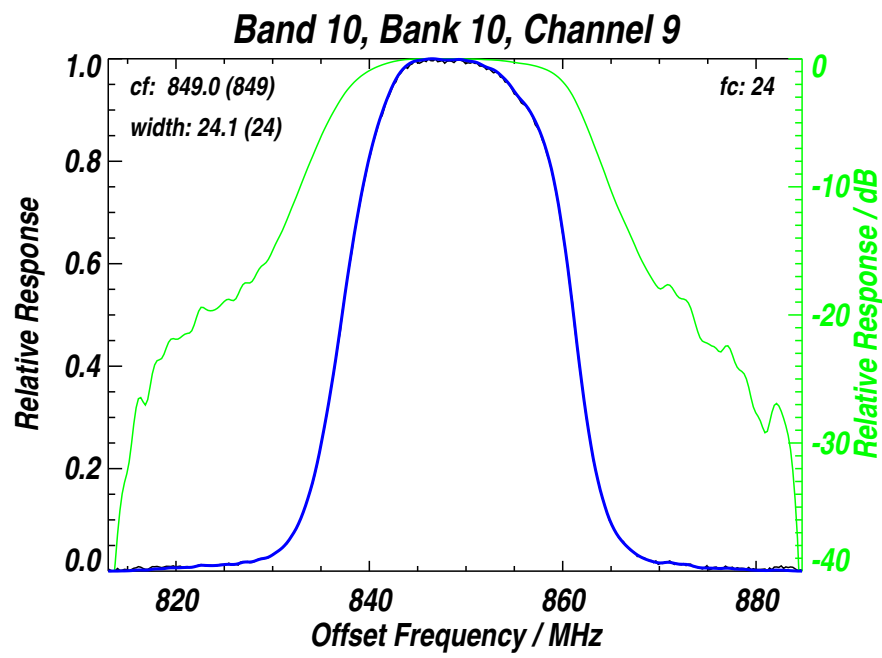


Figure H.294: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 9 to 12. See text for additional details.

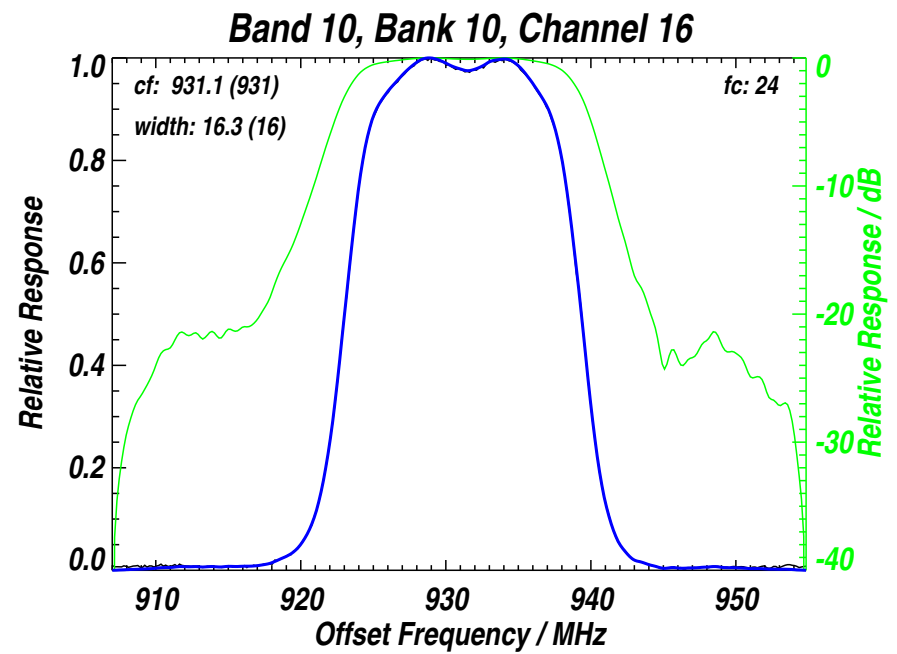
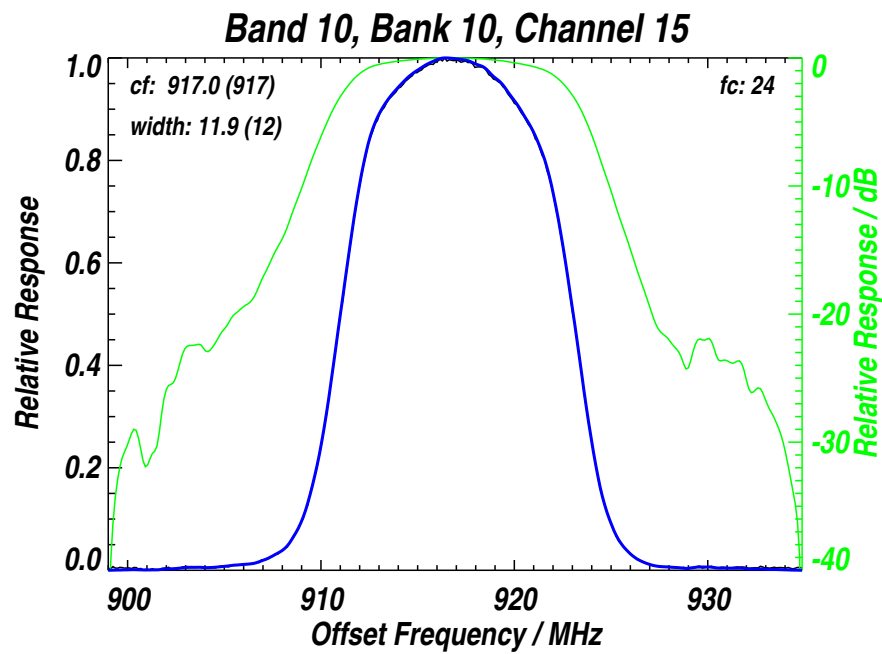
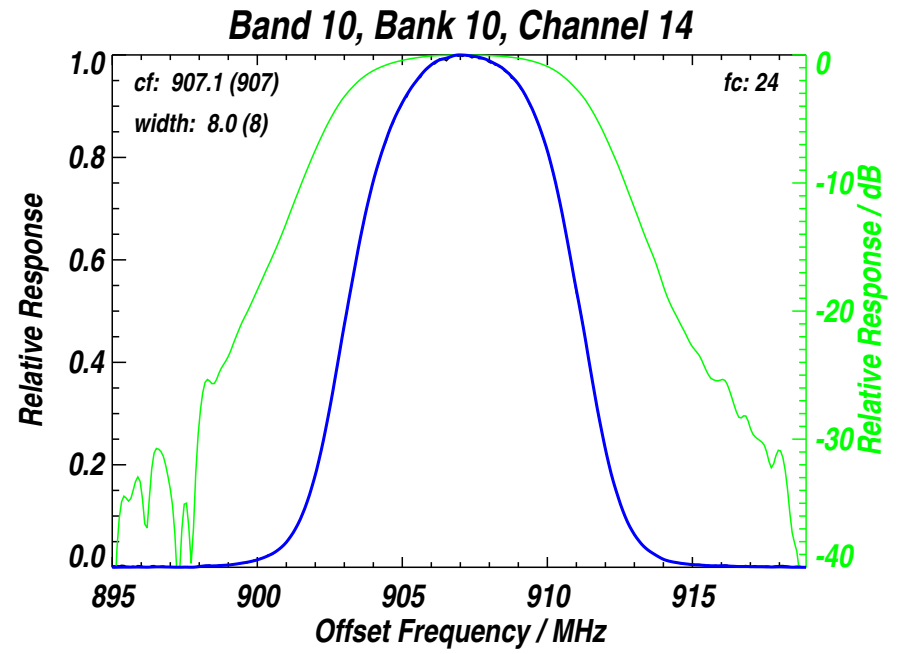
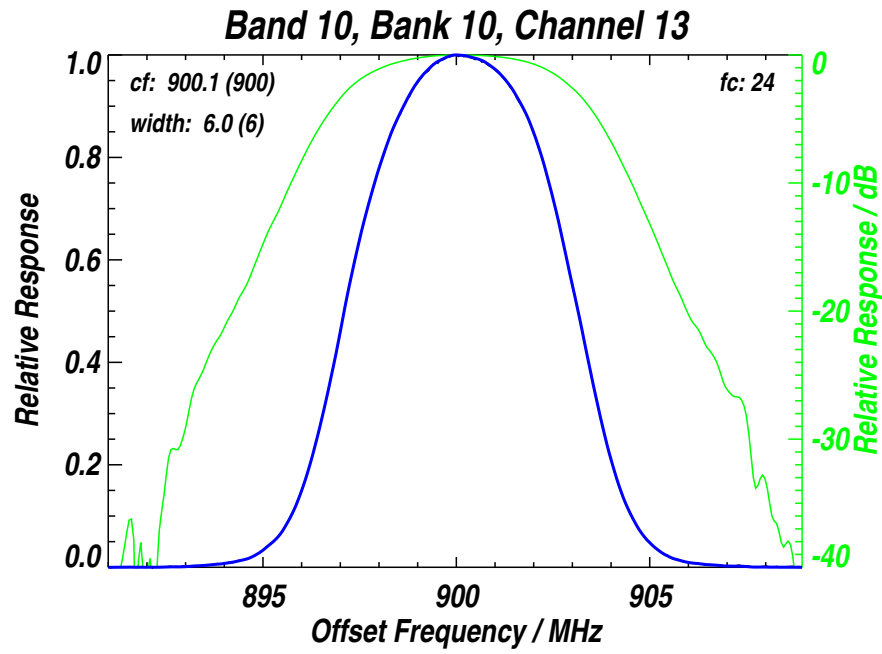


Figure H.295: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 13 to 16. See text for additional details.

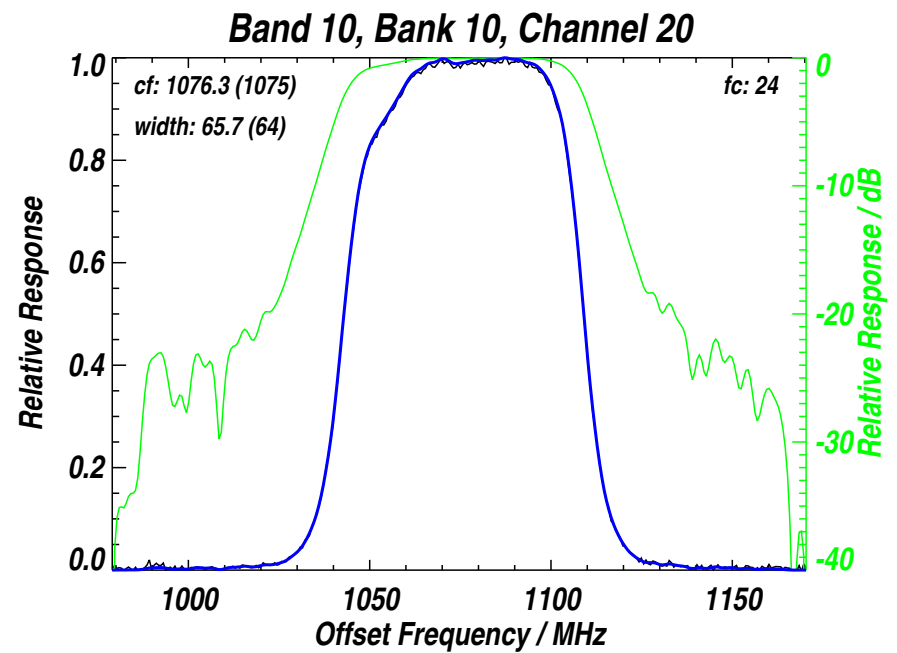
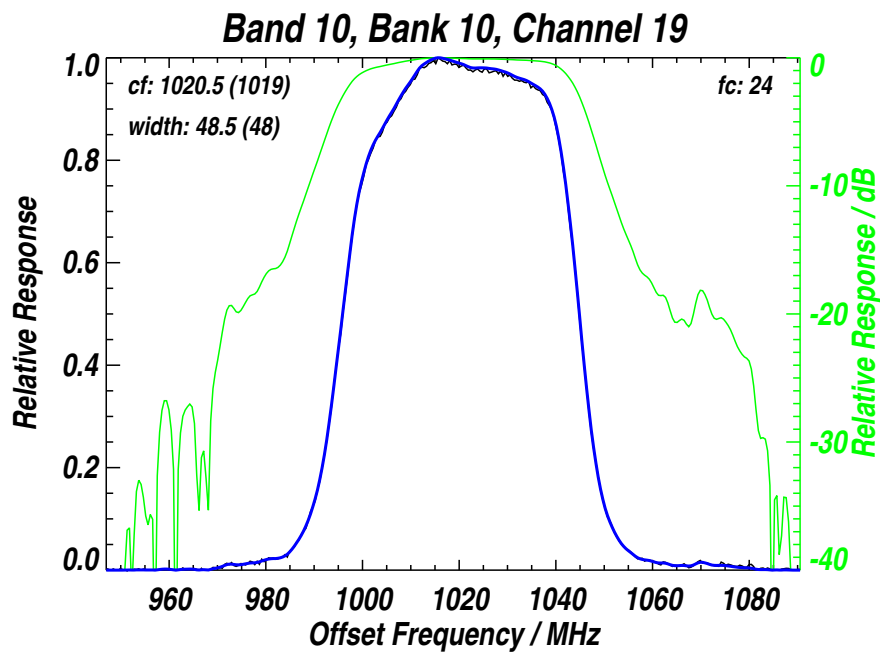
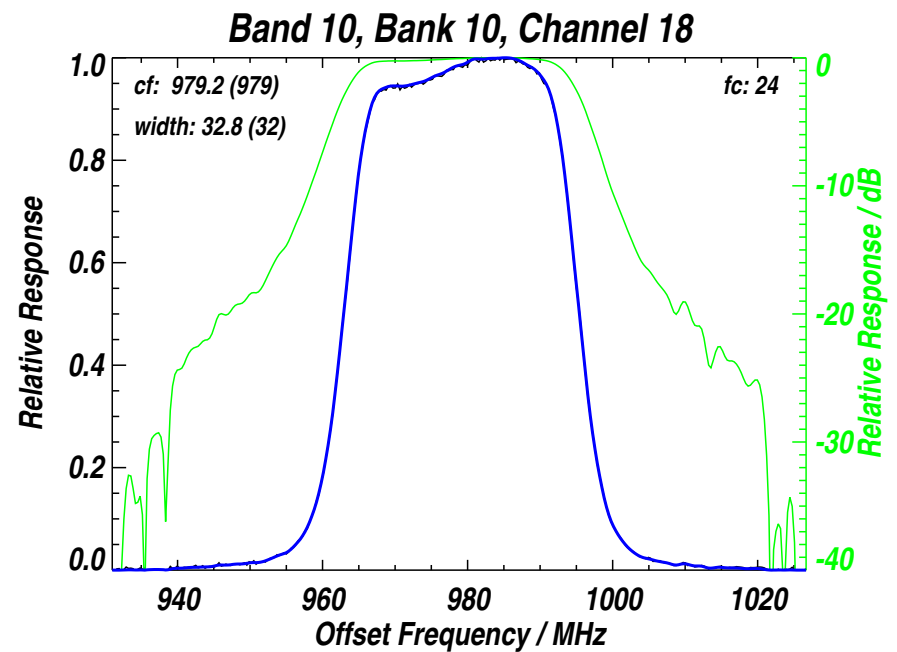
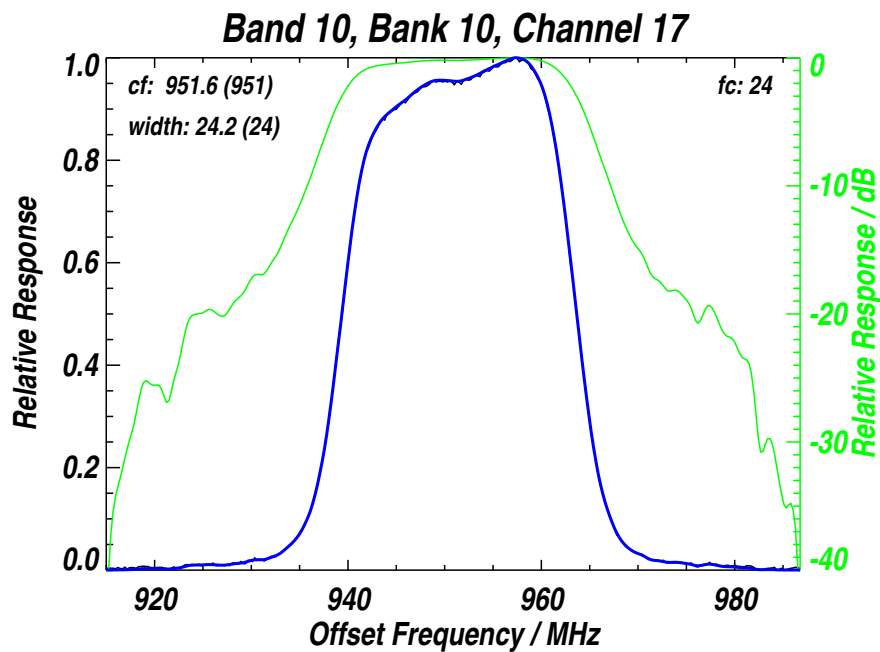


Figure H.296: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 17 to 20. See text for additional details.



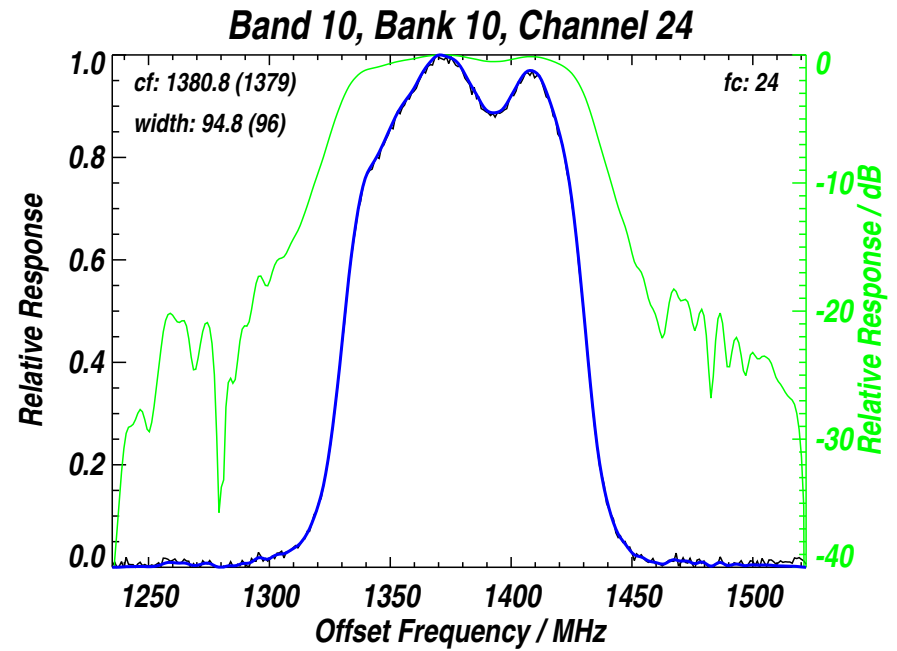
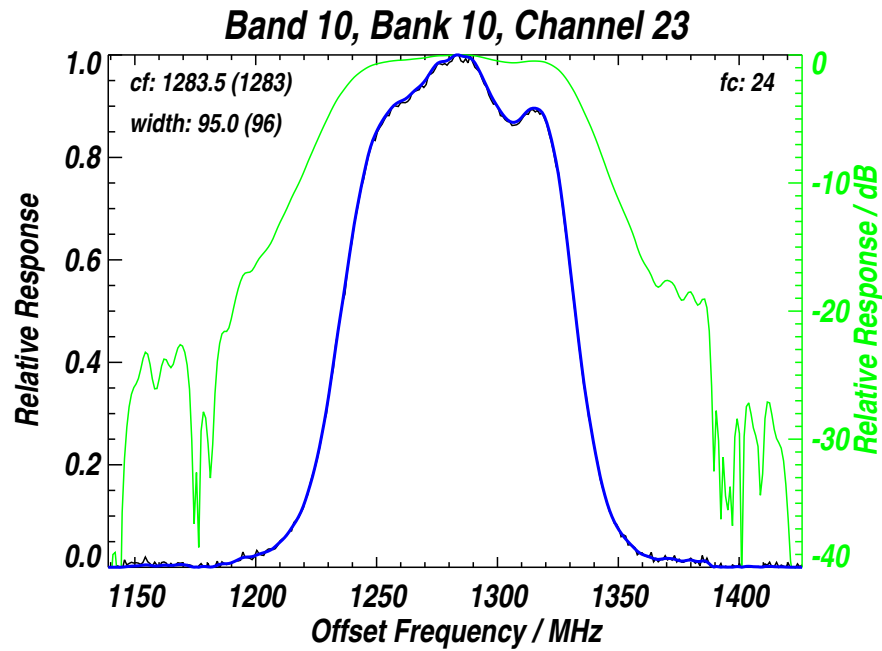
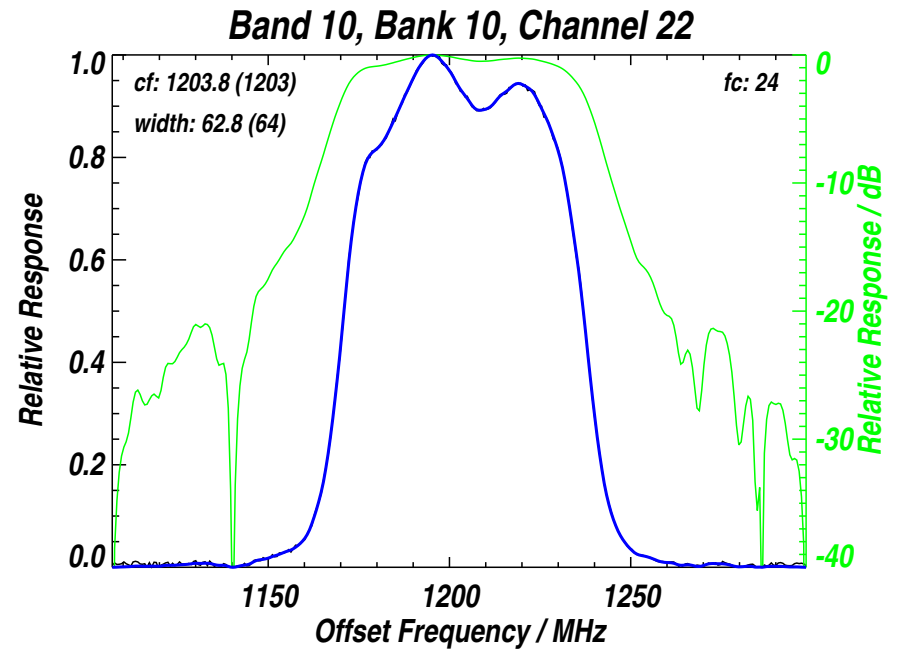
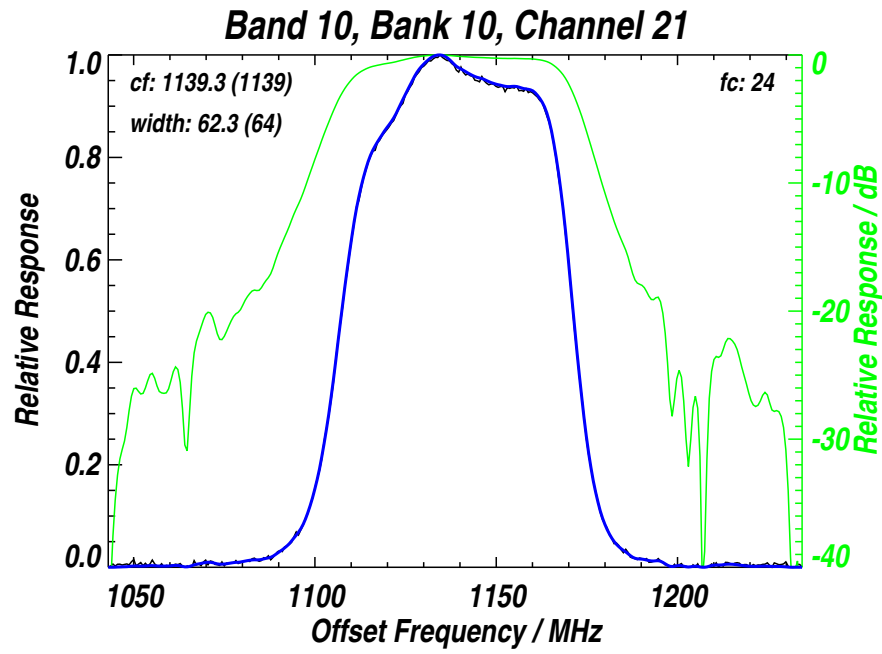
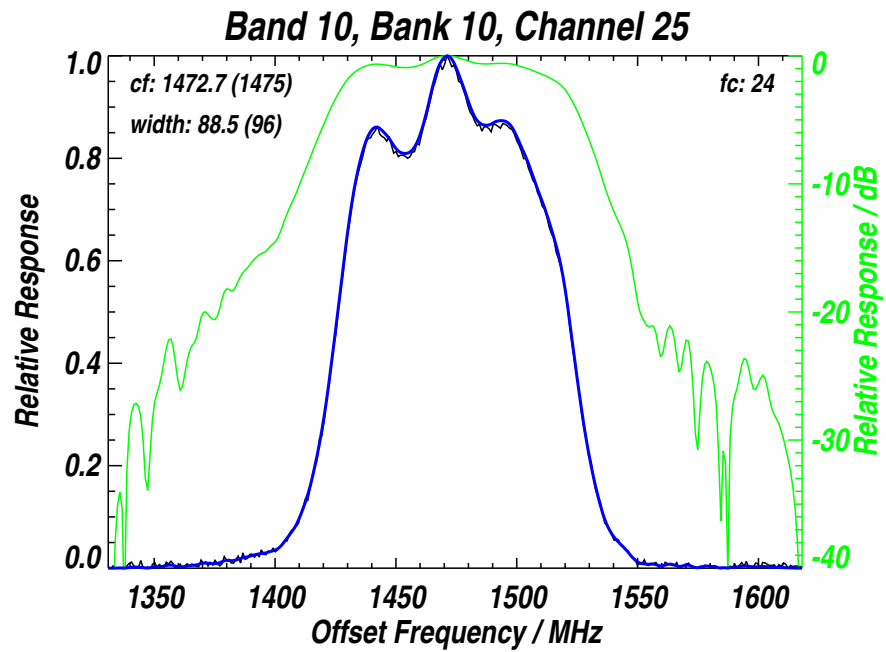


Figure H.297: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channels 21 to 24. See text for additional details.



**Band 10 (usb)**  
**Bank 10**  
**Origin = 648.566249982 GHz**

Figure H.298: Upper sideband front-end sweep data for Band 10 taken via Filterbank 10, channel 25. See text for additional details.

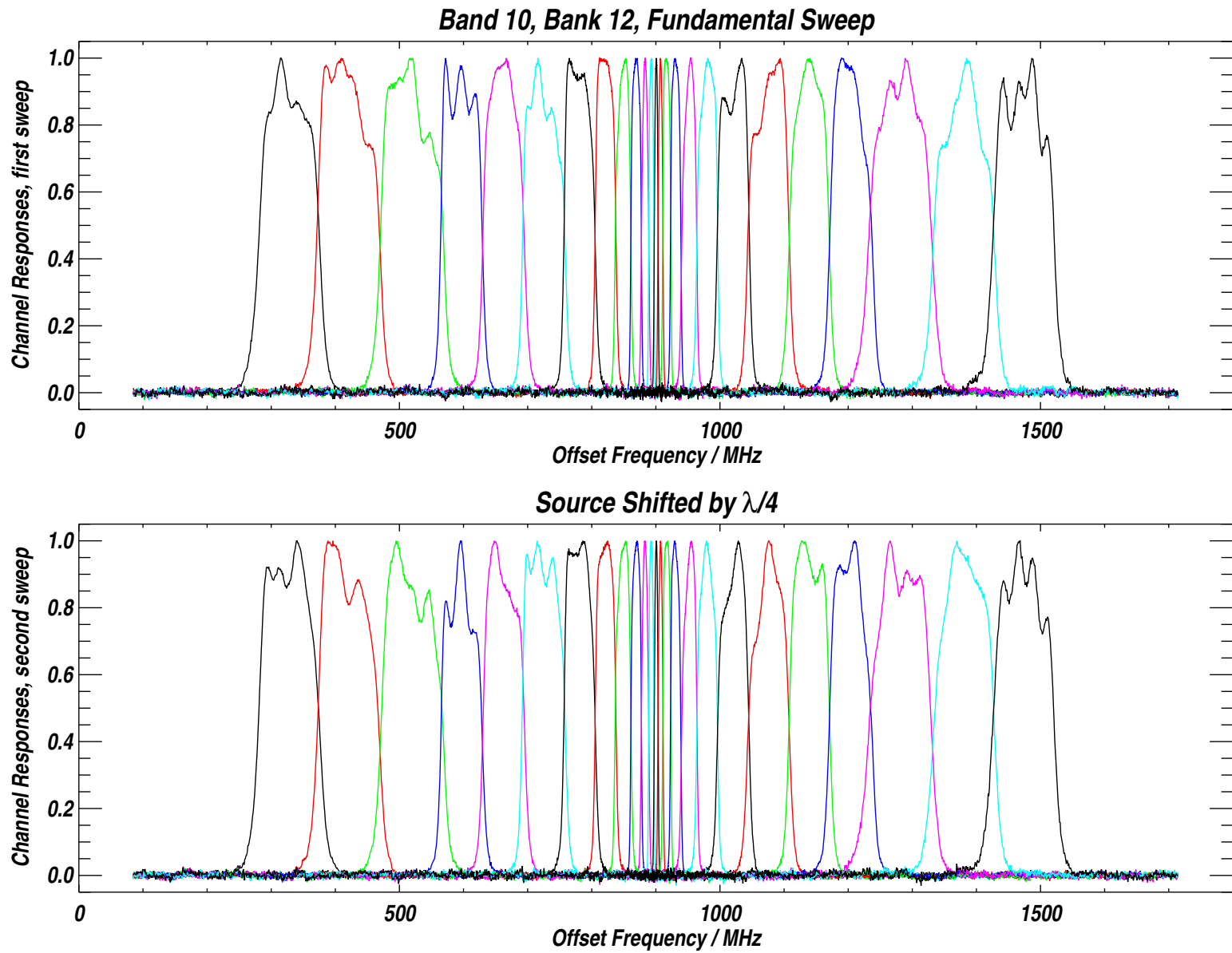


Figure H.299: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12. See text for additional details.

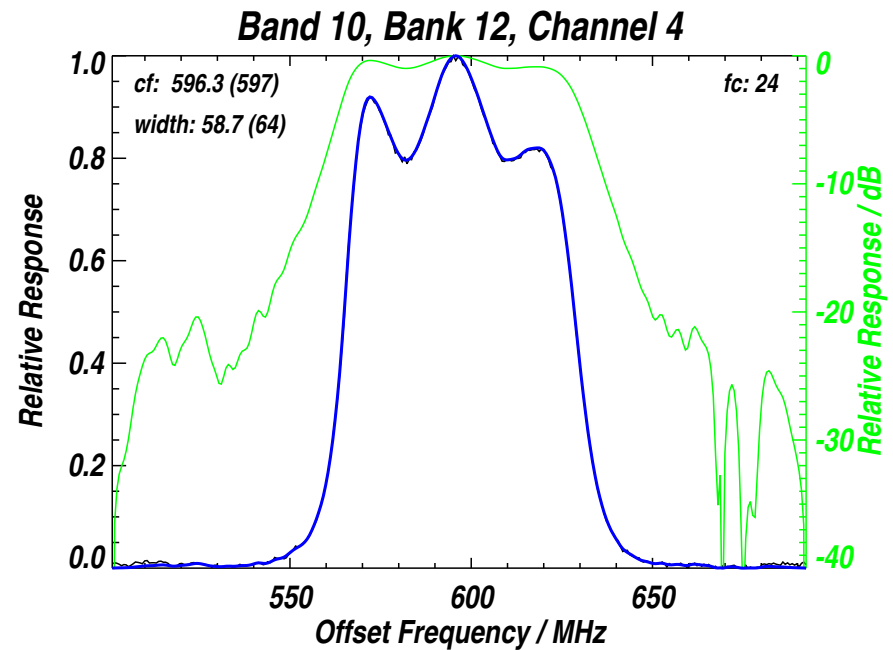
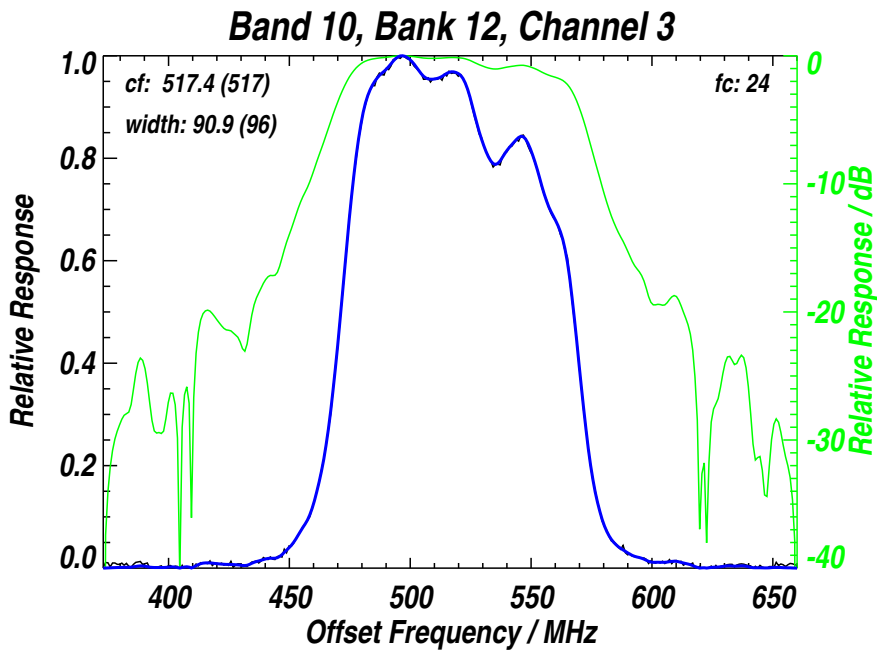
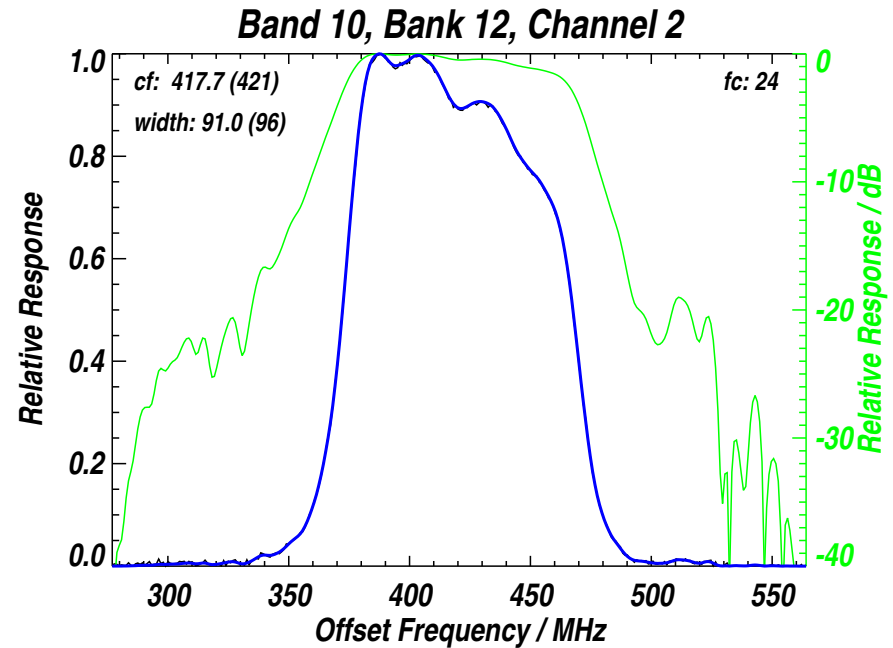
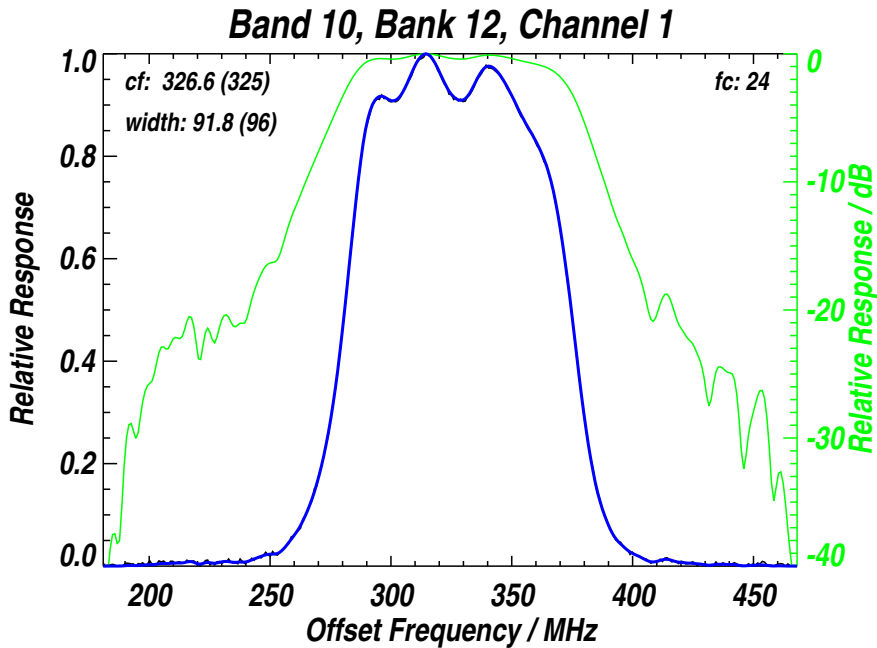


Figure H.300: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 1 to 4. See text for additional details.

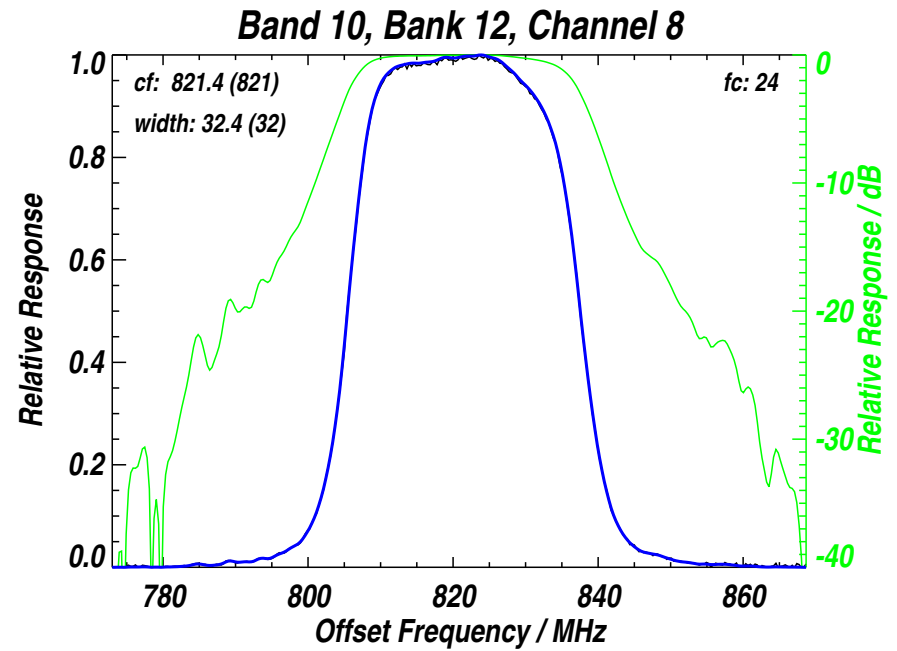
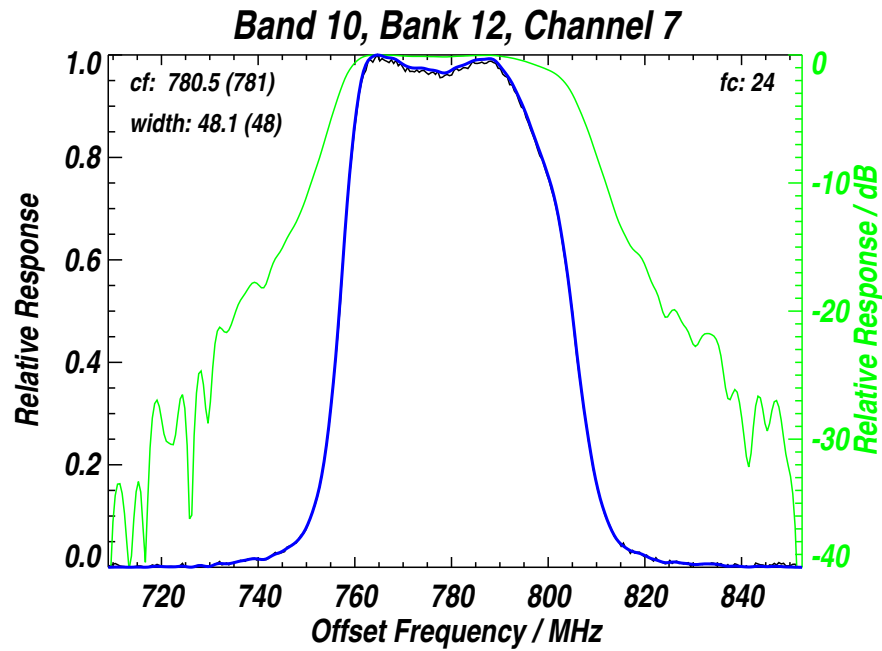
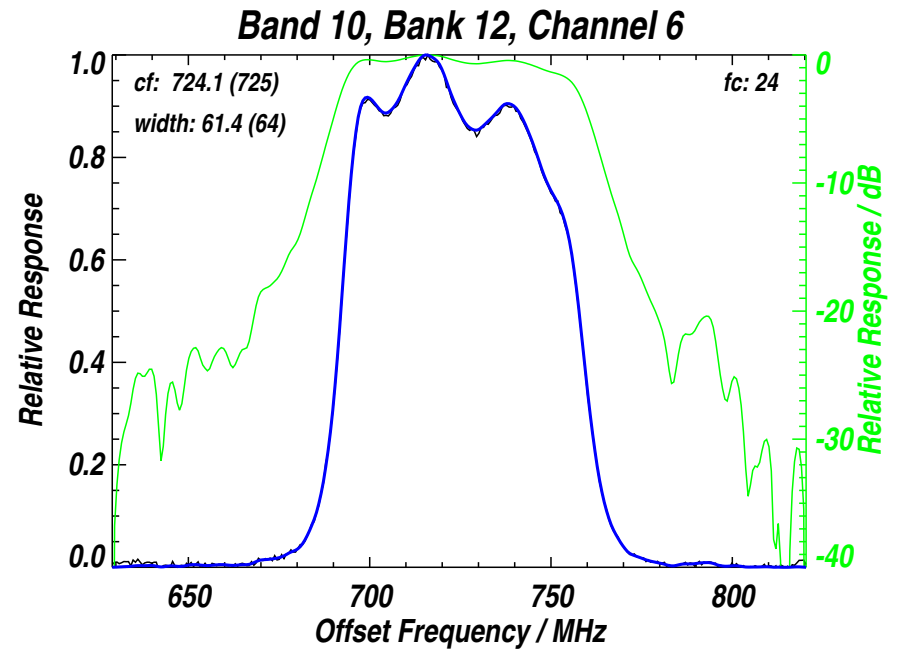
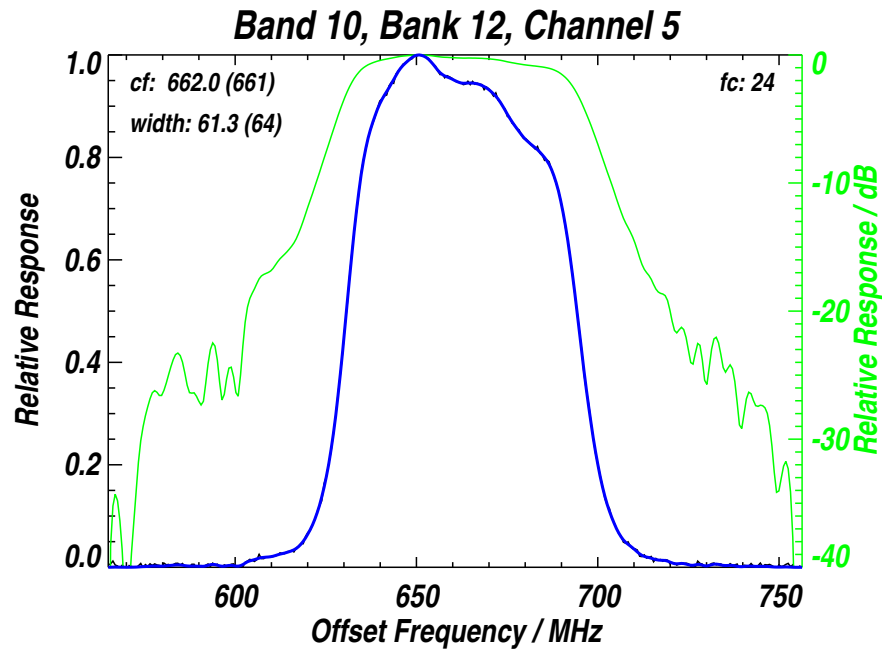


Figure H.301: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 5 to 8. See text for additional details.

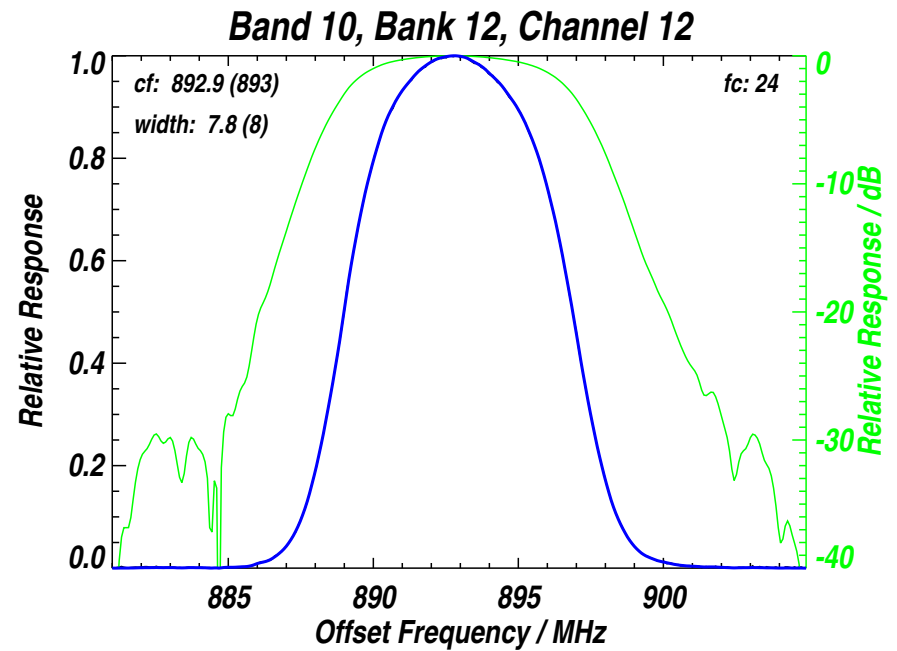
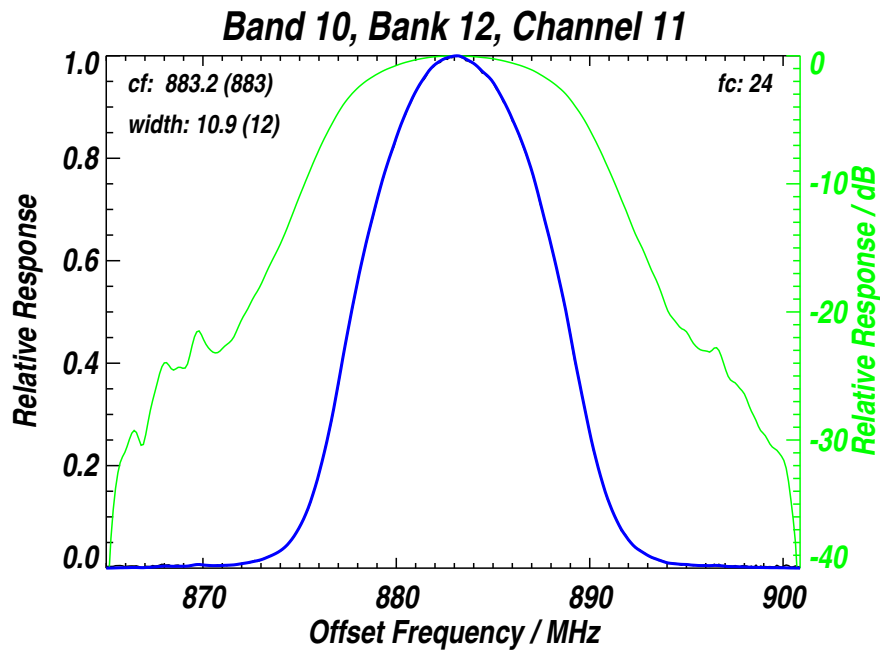
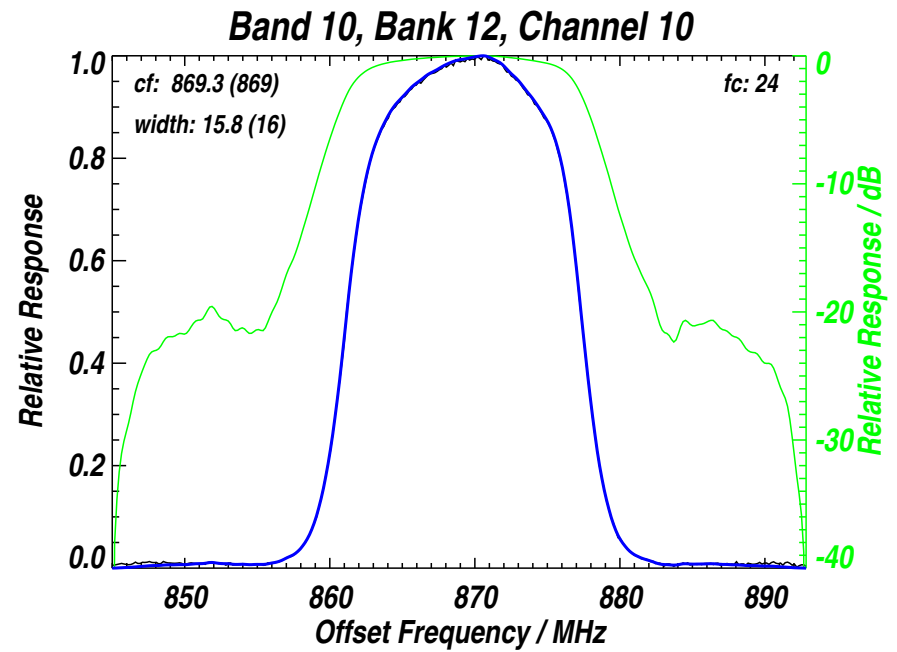
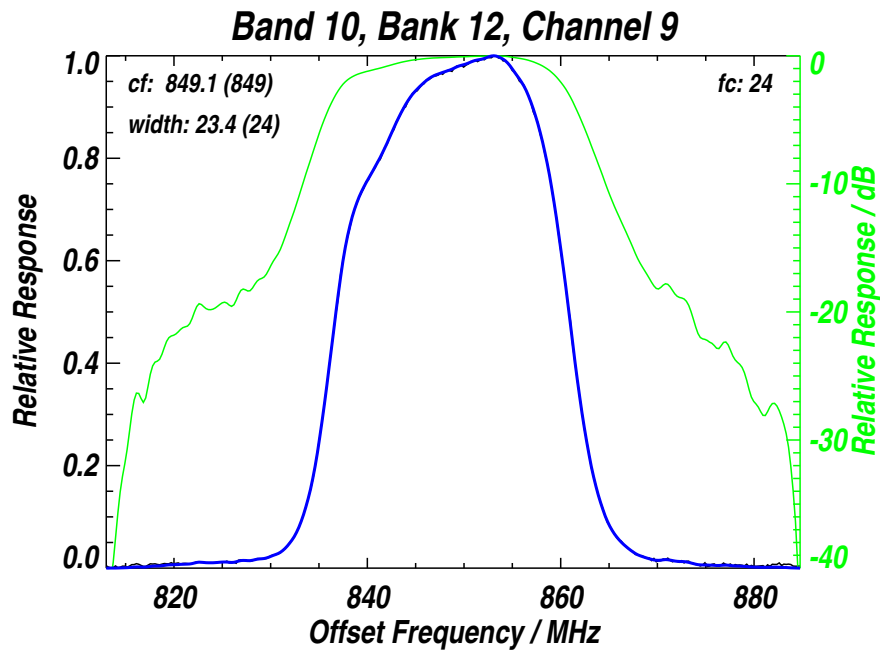


Figure H.302: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 9 to 12. See text for additional details.

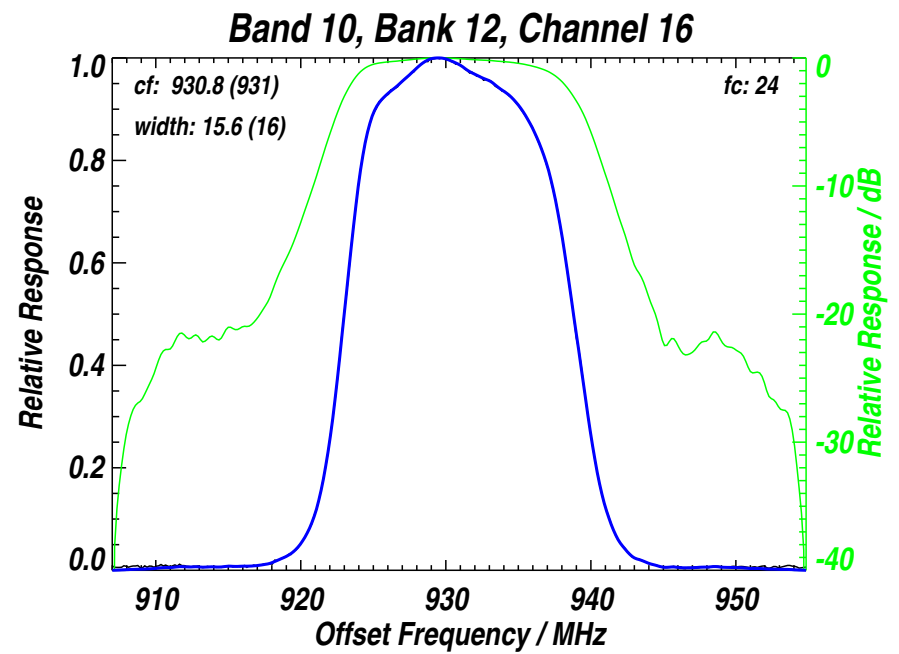
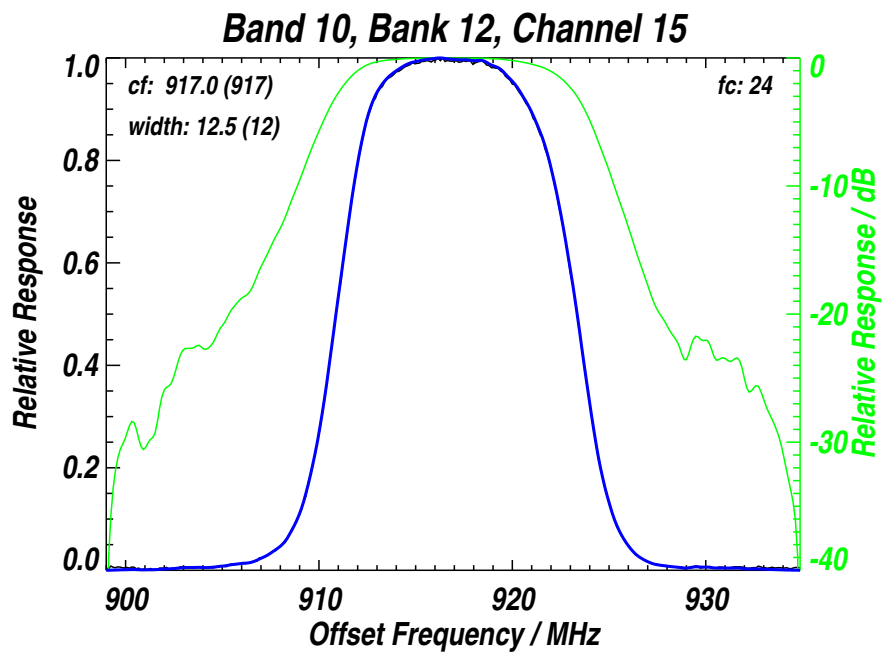
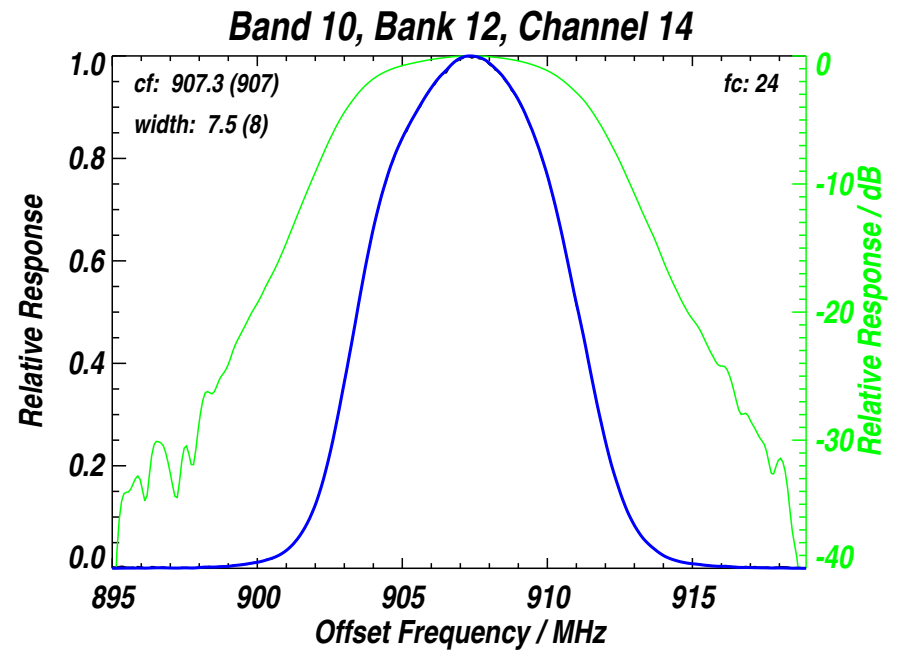
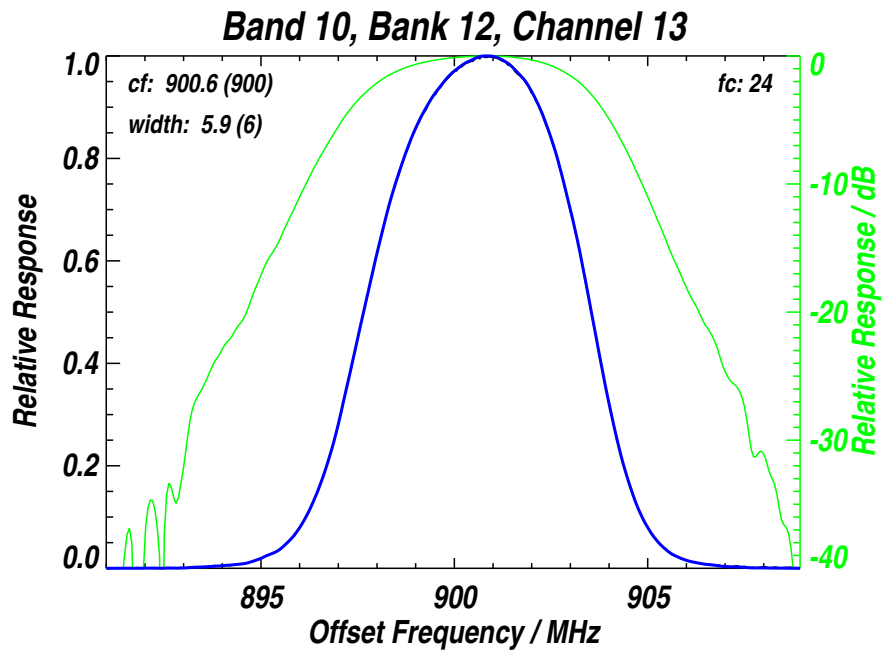


Figure H.303: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 13 to 16. See text for additional details.

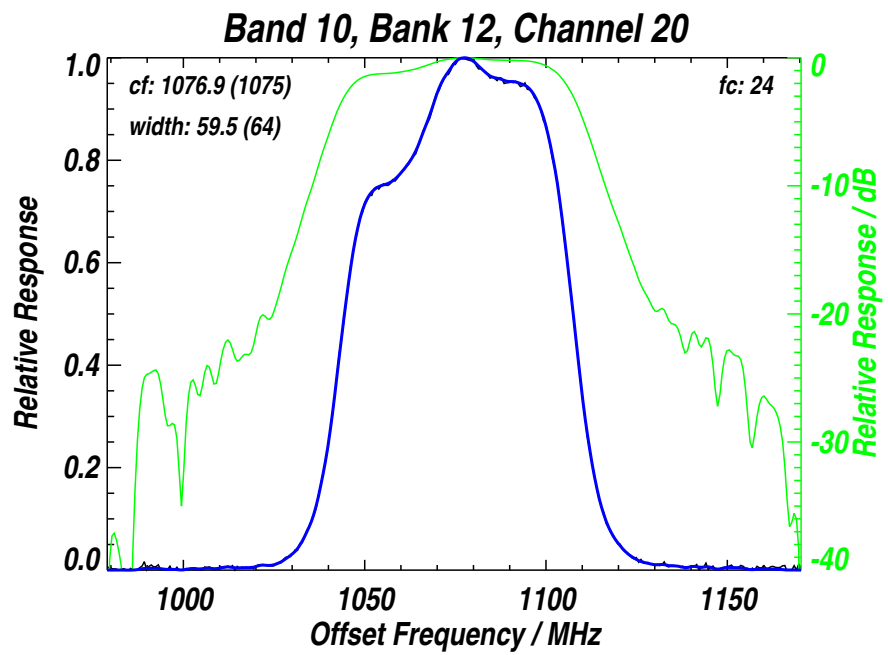
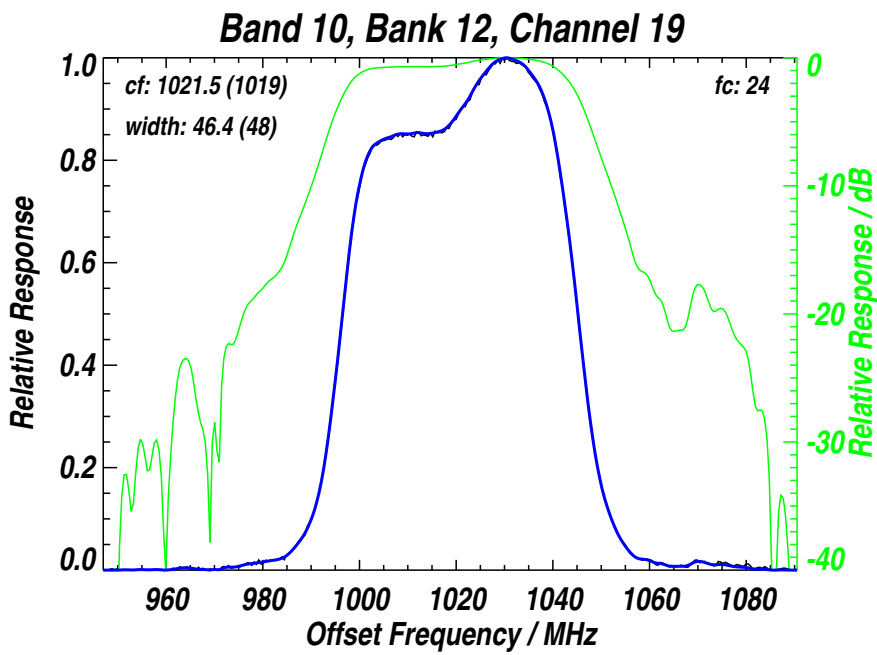
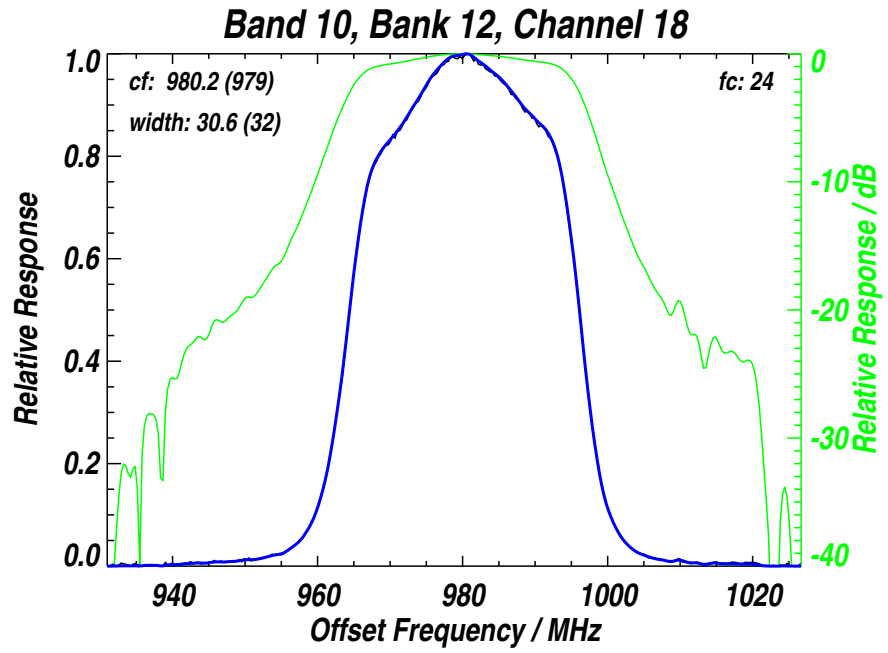
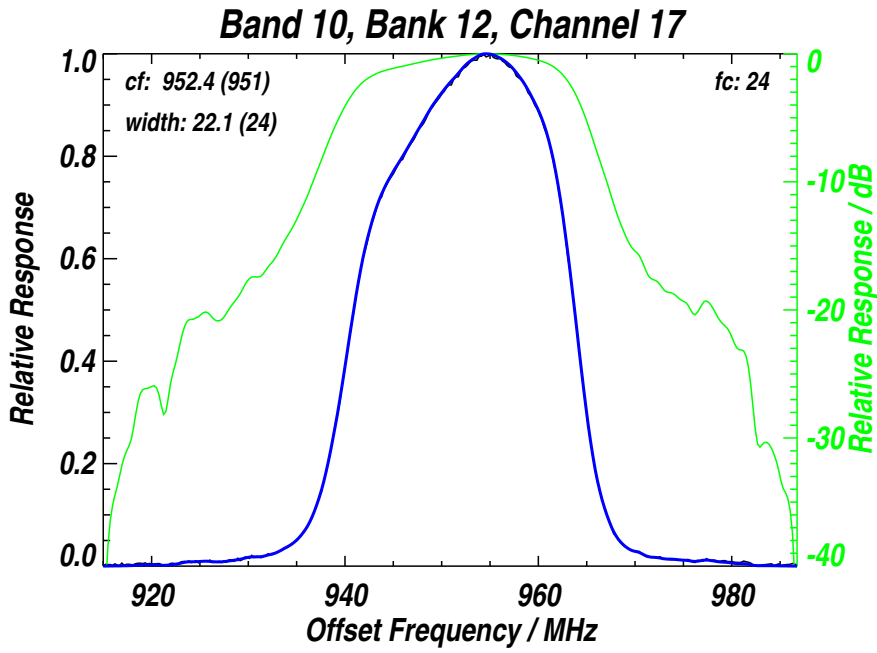


Figure H.304: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 17 to 20. See text for additional details.



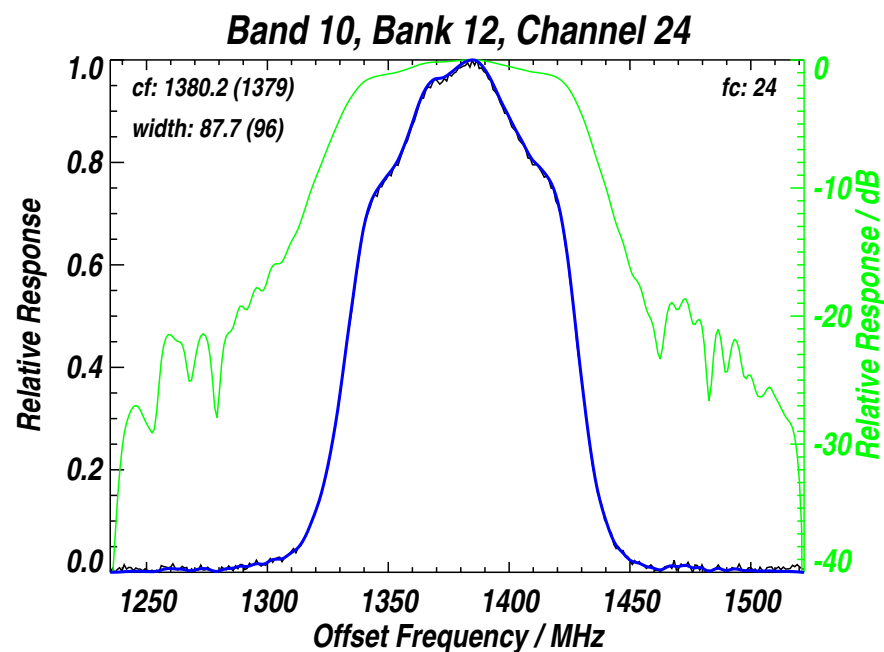
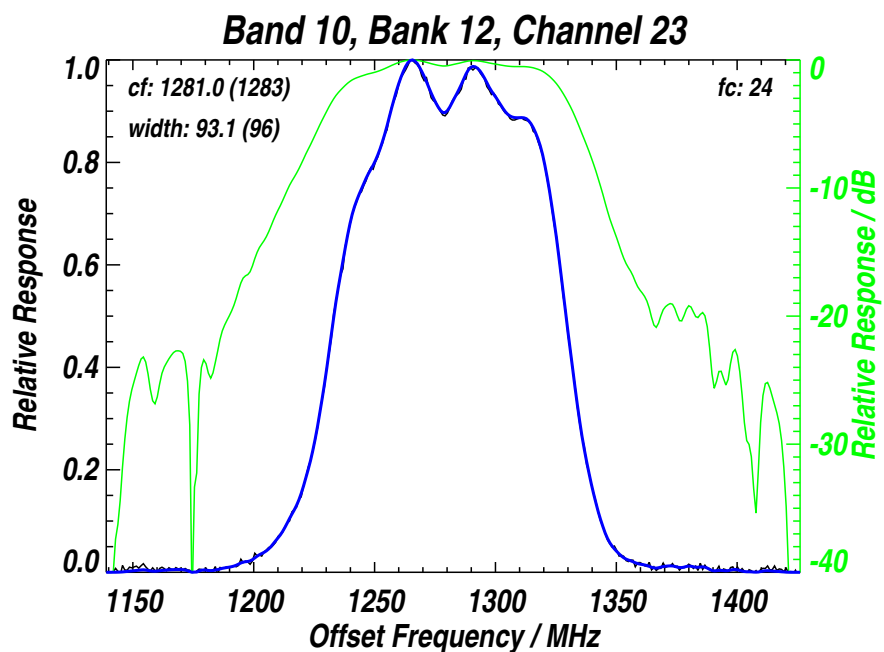
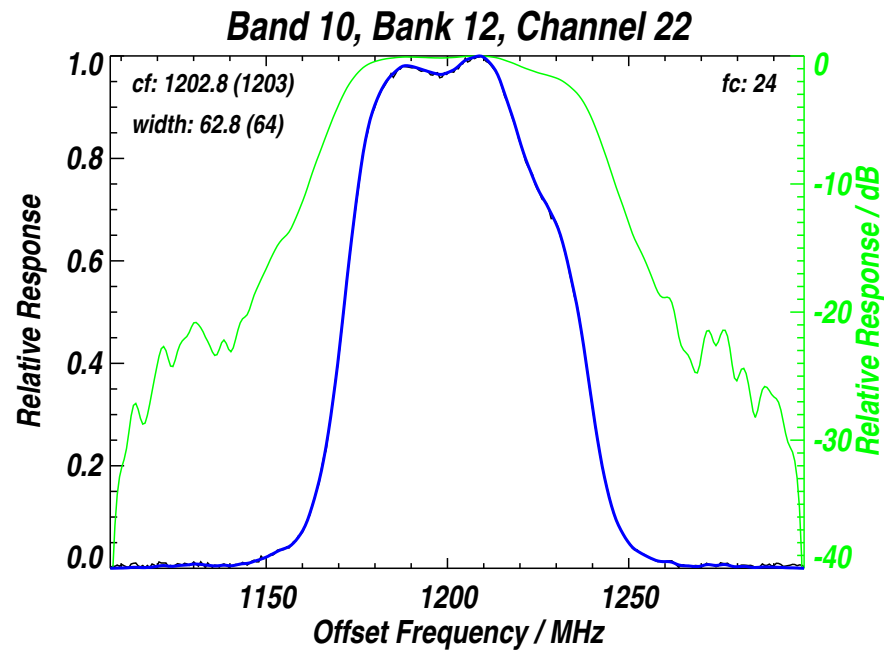
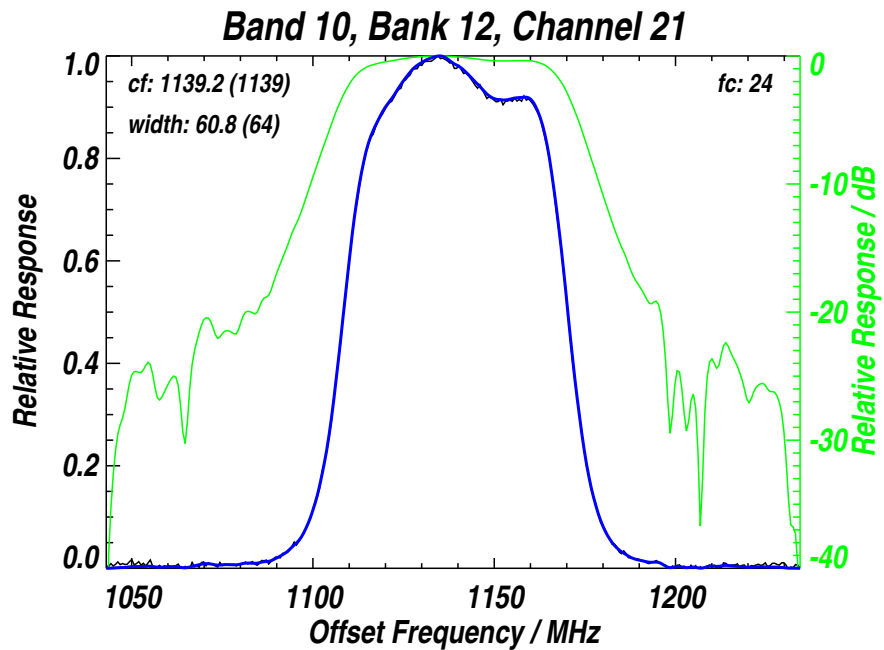
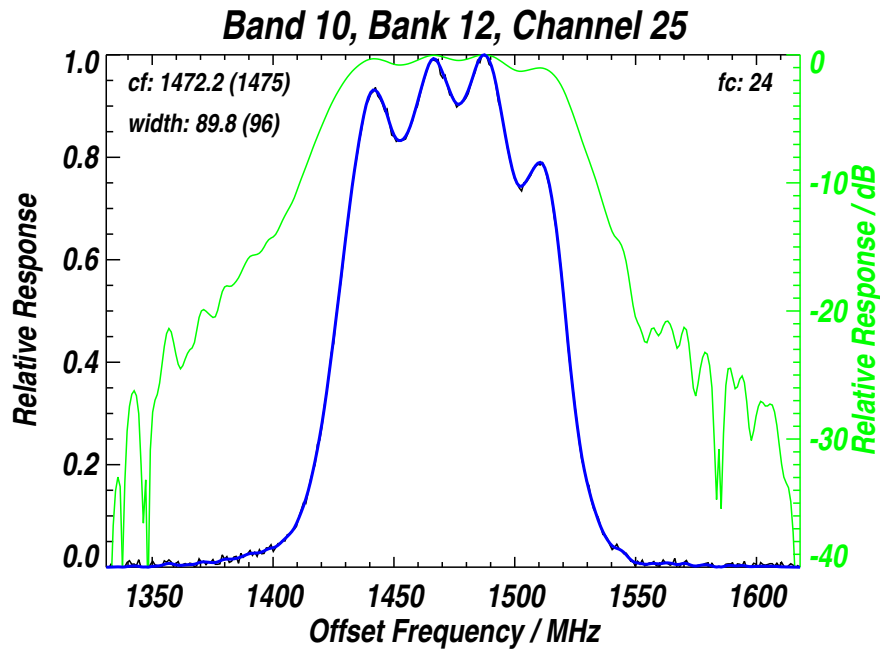


Figure H.305: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 10 (usb)**  
**Bank 12**  
**Origin = 648.566249982 GHz**

Figure H.306: Upper sideband front-end sweep data for Band 10 taken via Filterbank 12, channel 25. See text for additional details.

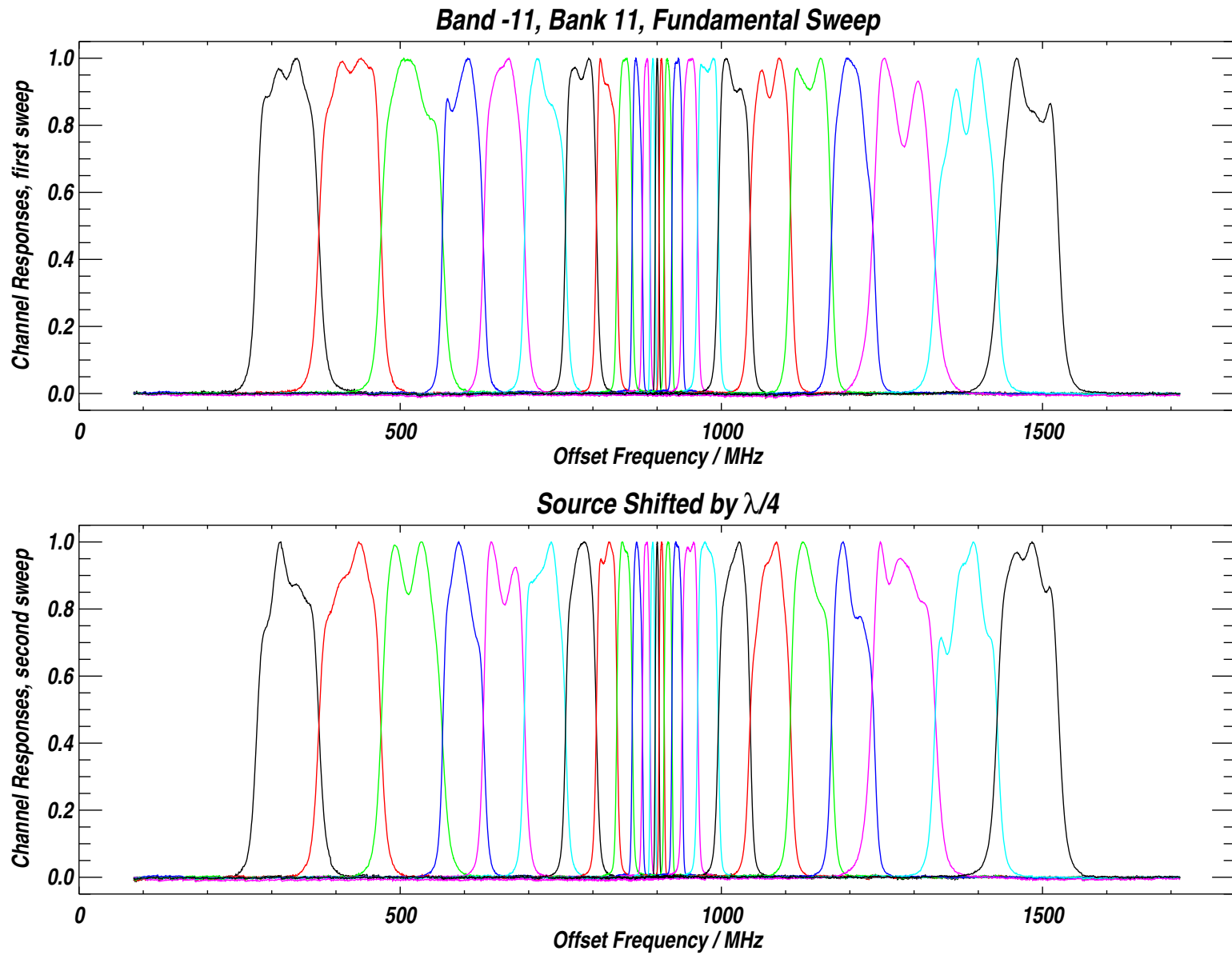


Figure H.307: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11. See text for additional details.

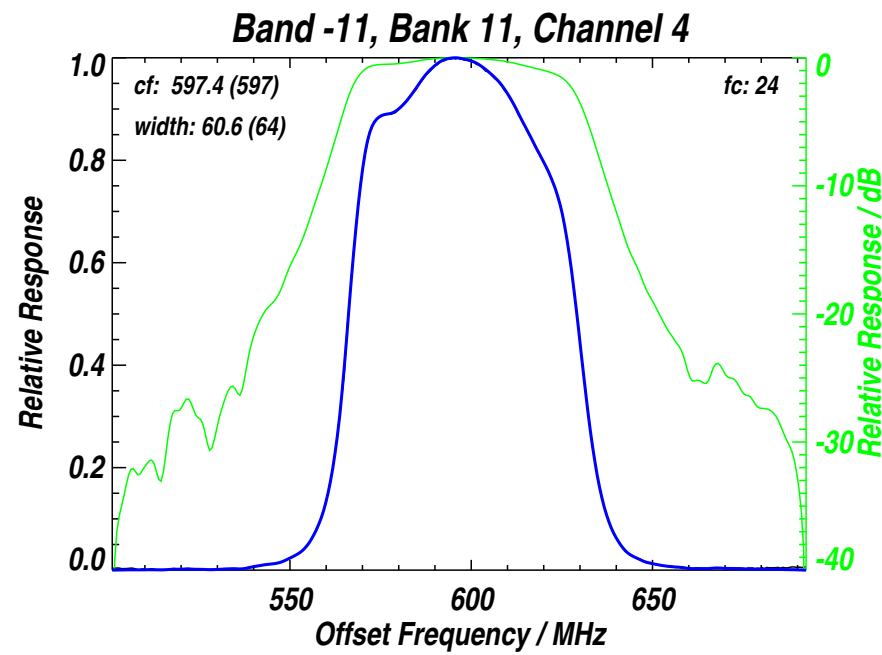
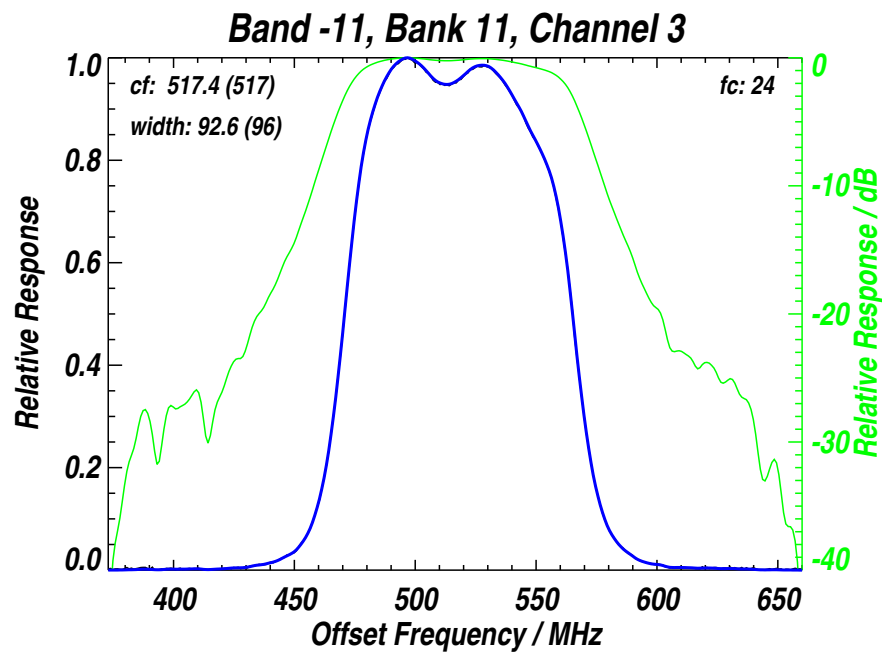
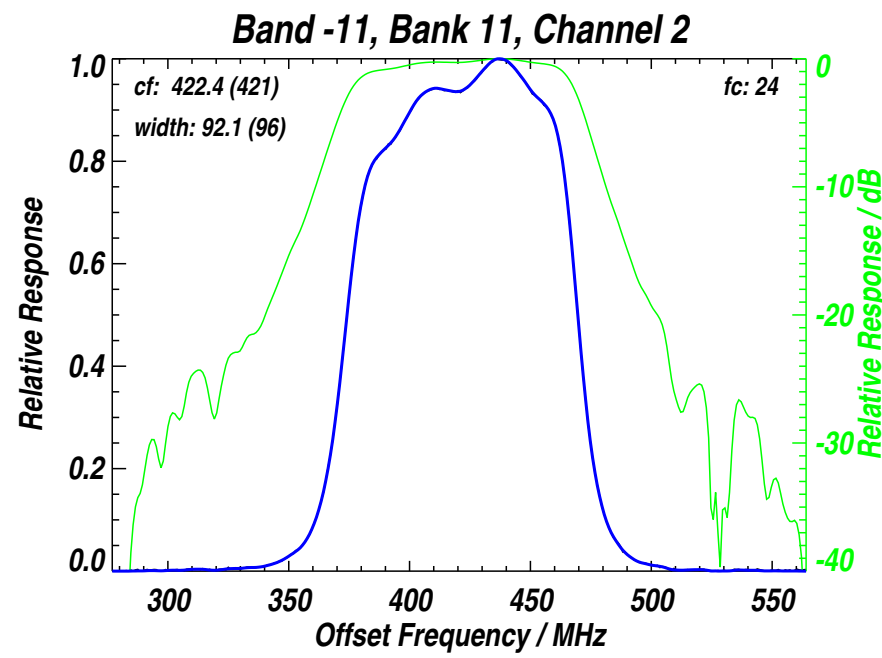
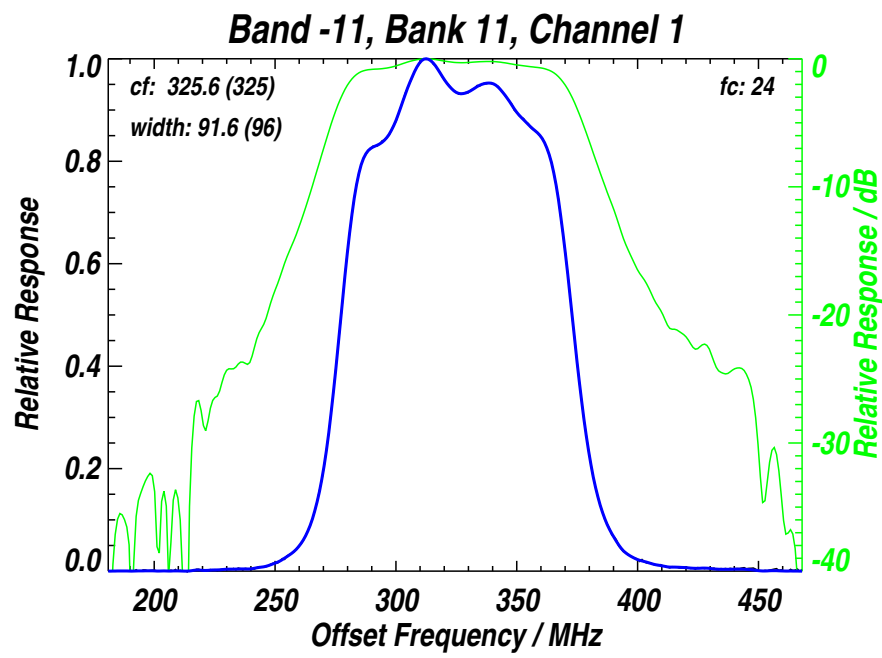


Figure H.308: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 1 to 4. See text for additional details.

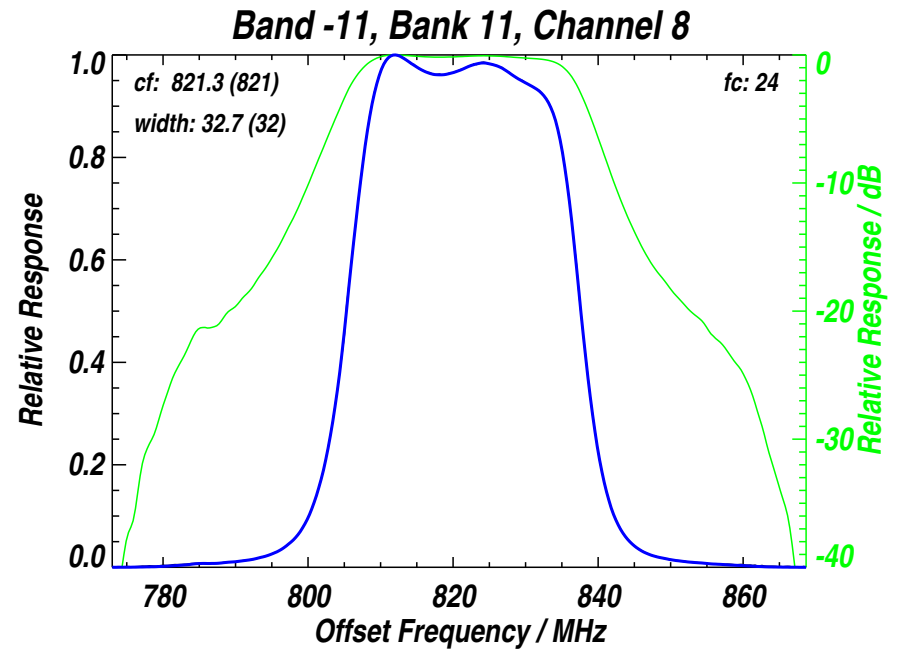
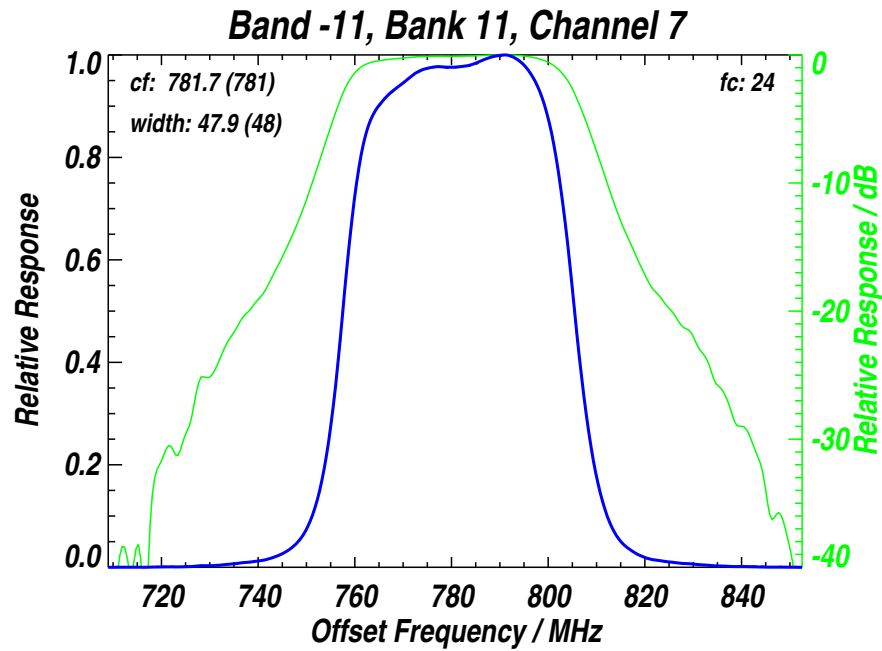
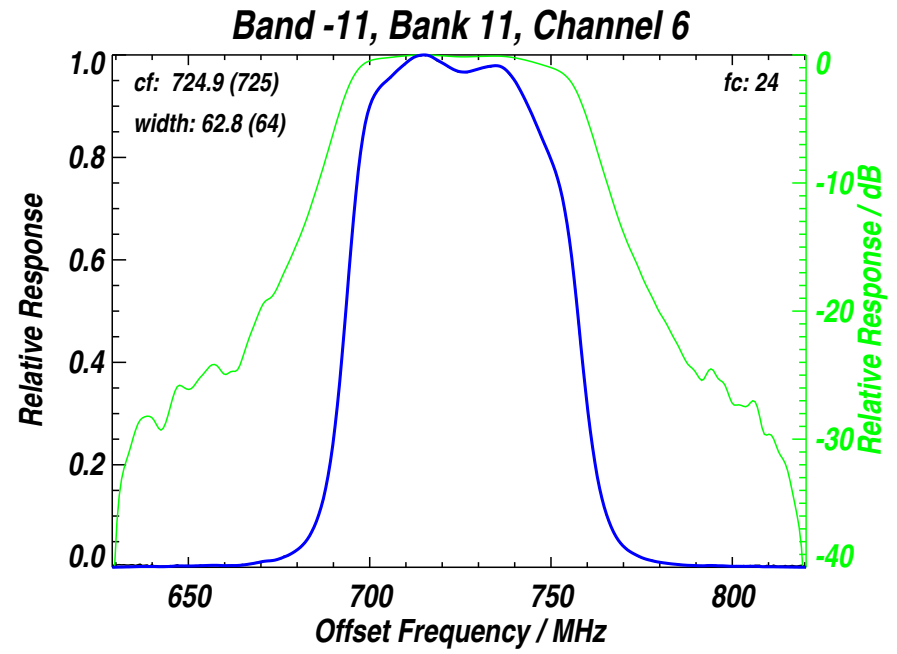
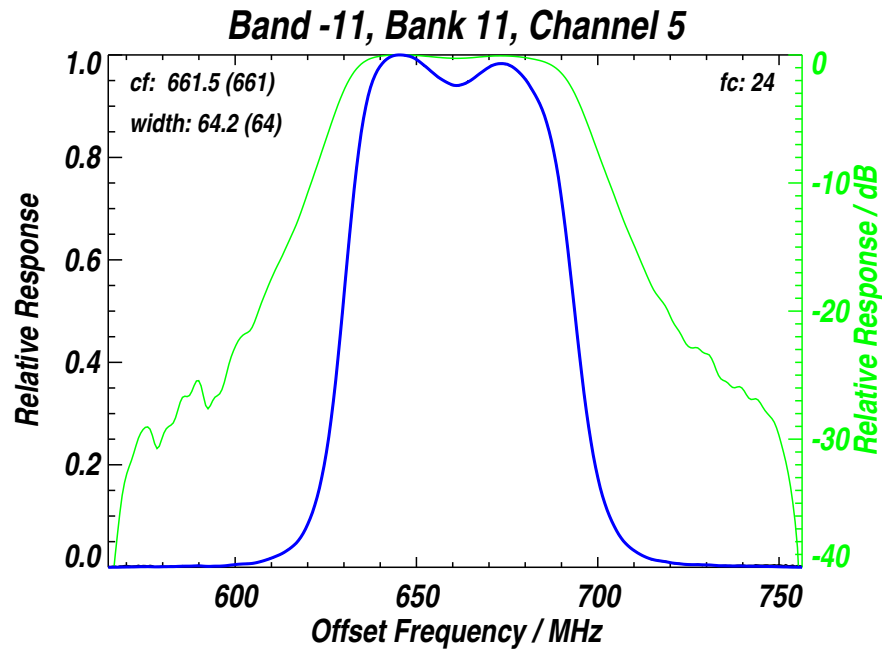


Figure H.309: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 5 to 8. See text for additional details.

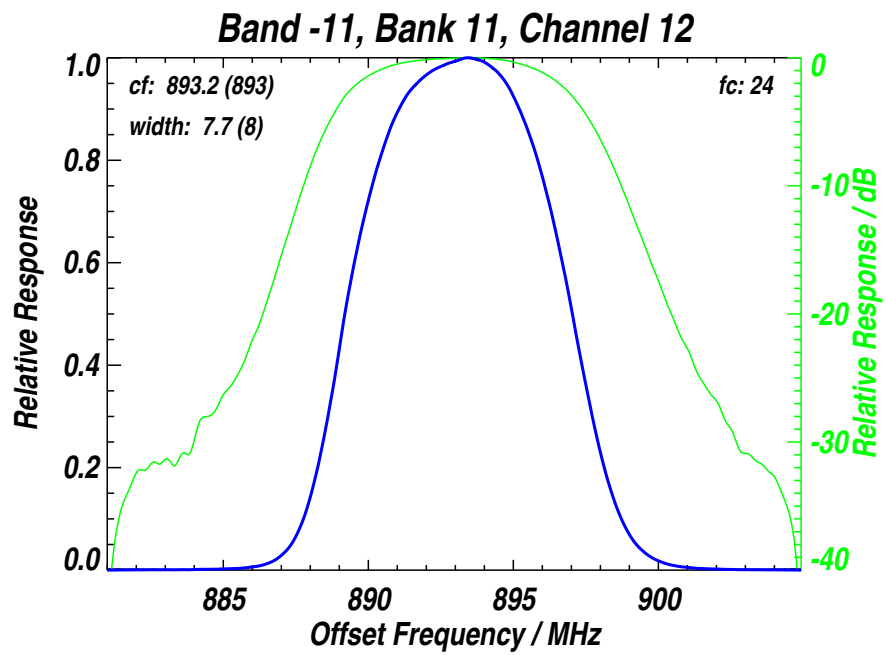
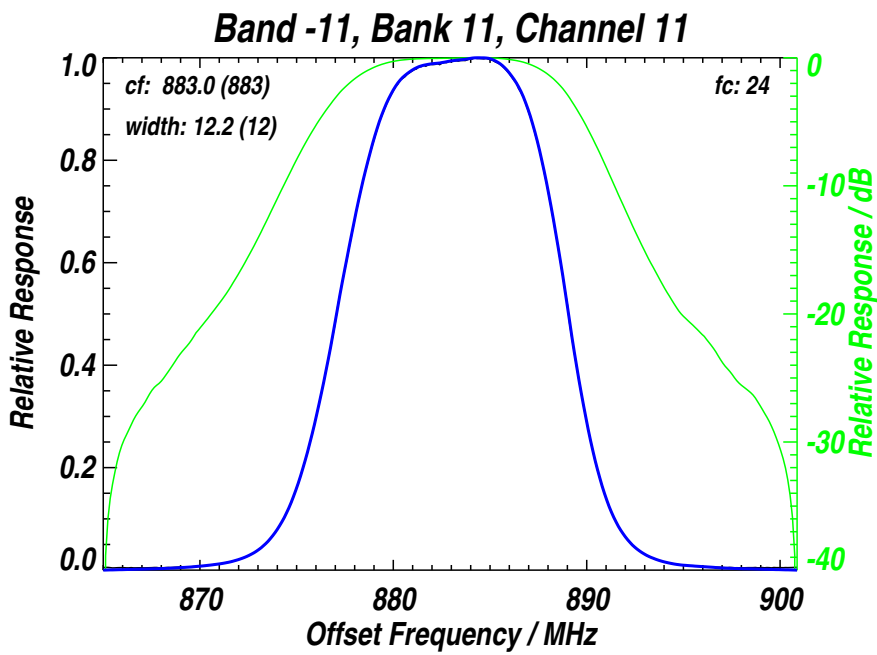
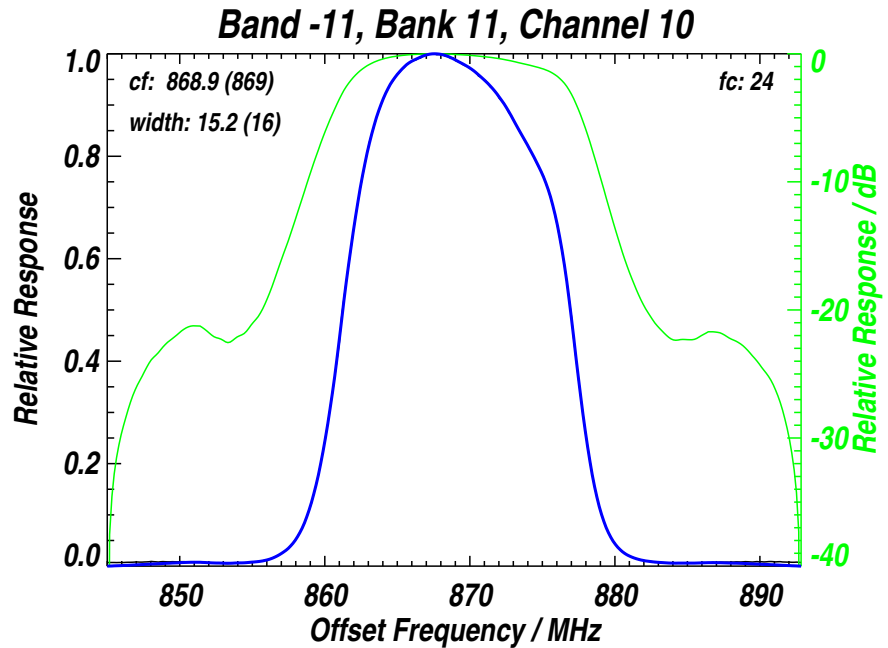
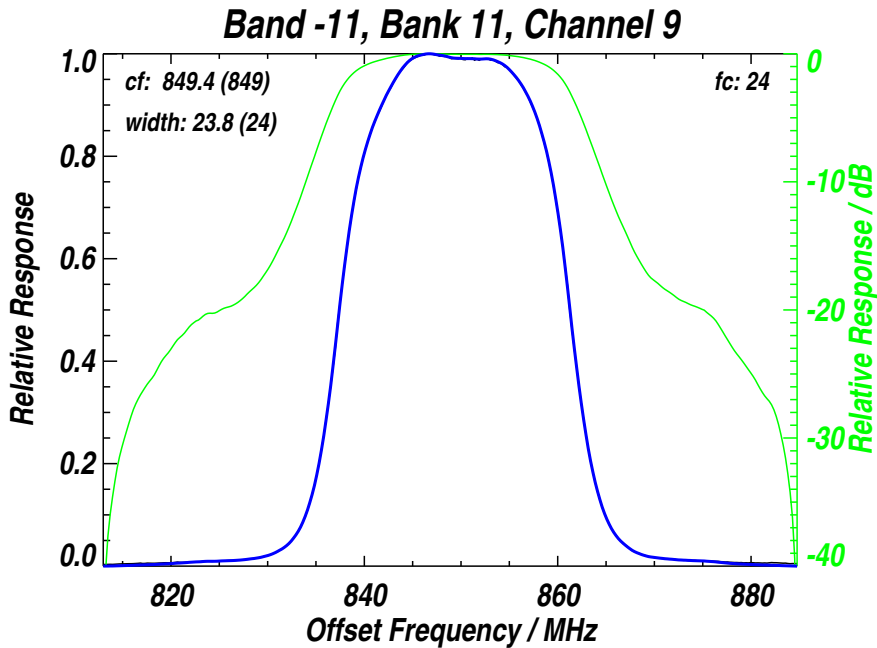


Figure H.310: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 9 to 12. See text for additional details.

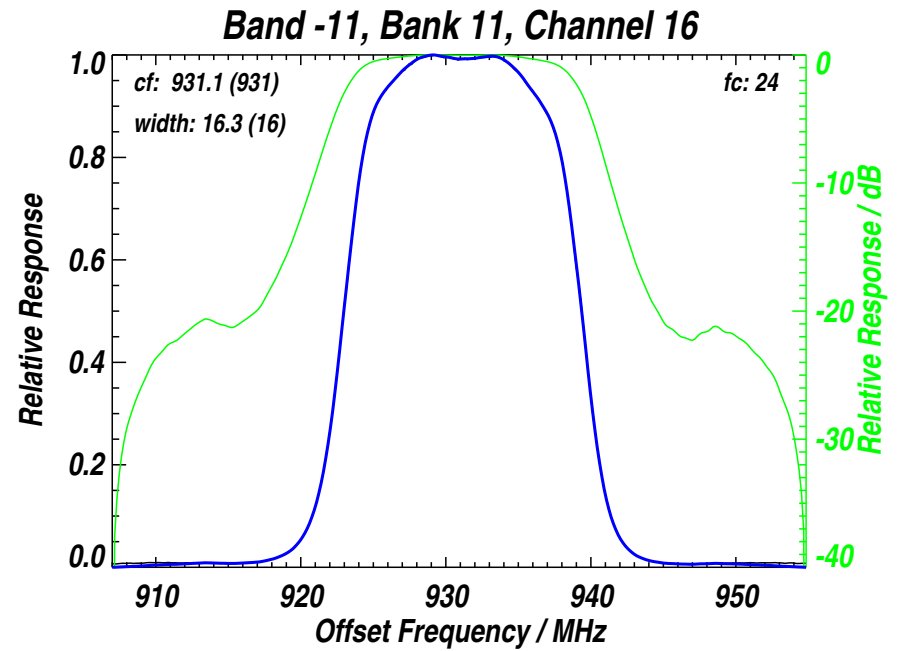
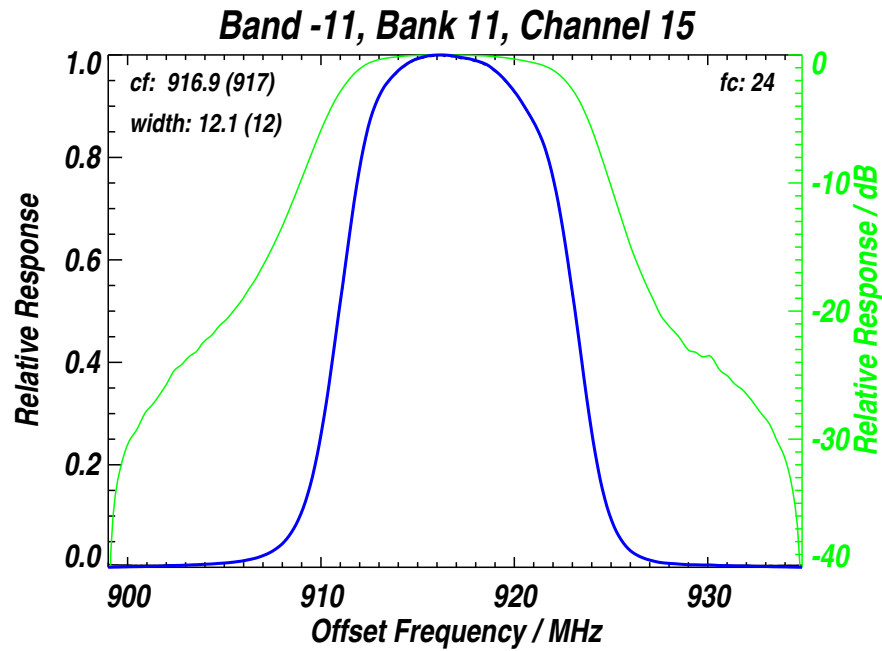
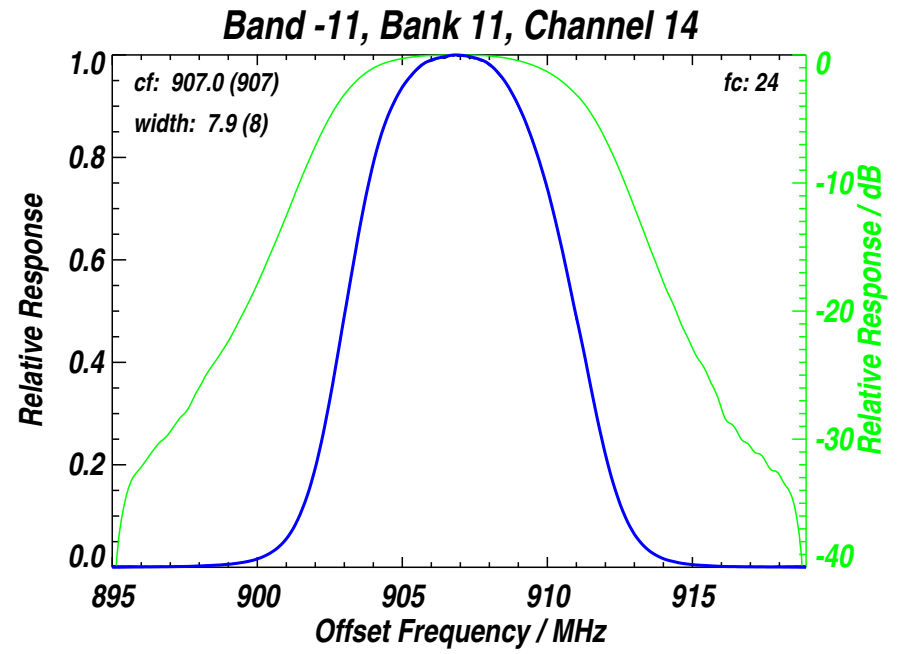
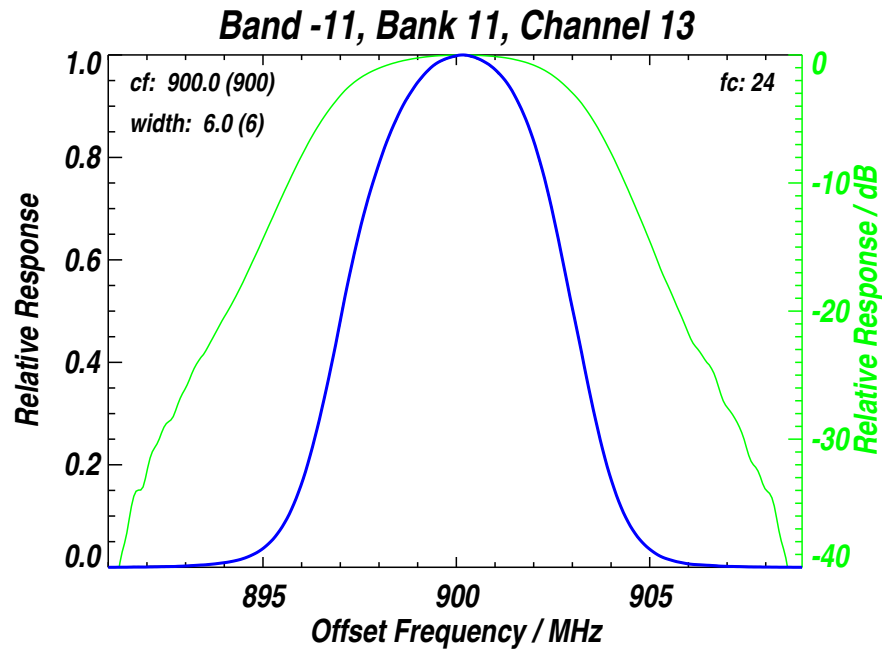


Figure H.311: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 13 to 16. See text for additional details.

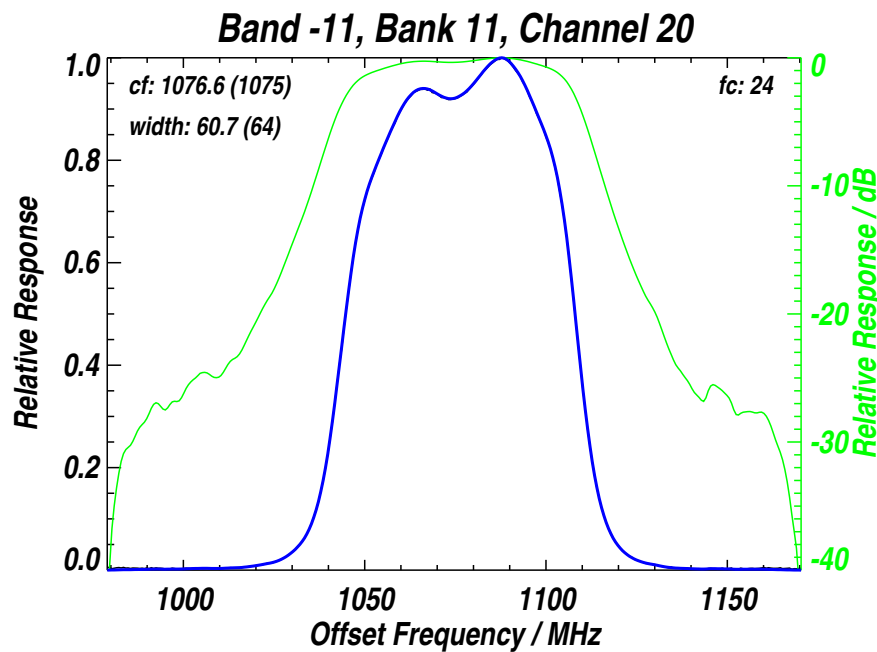
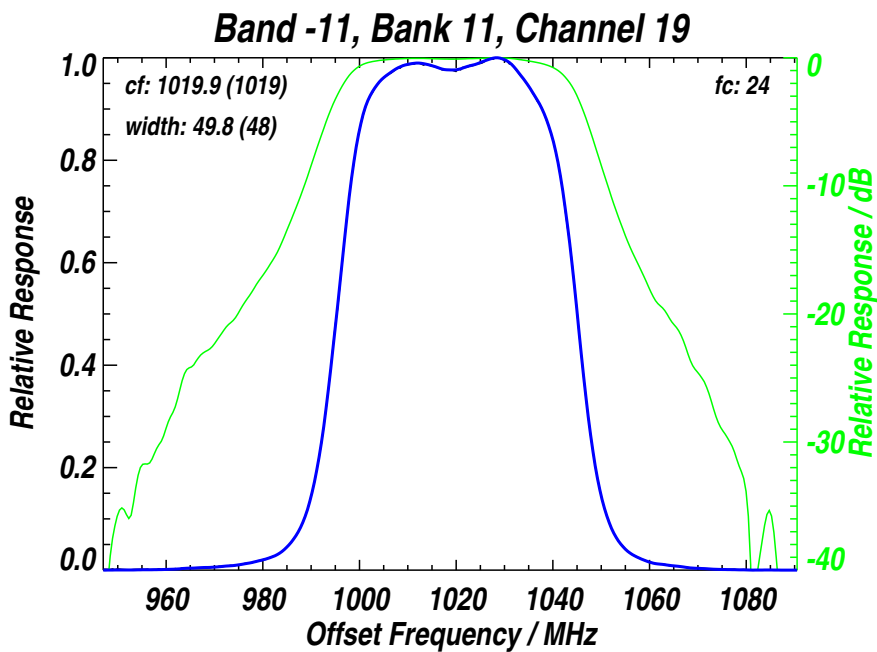
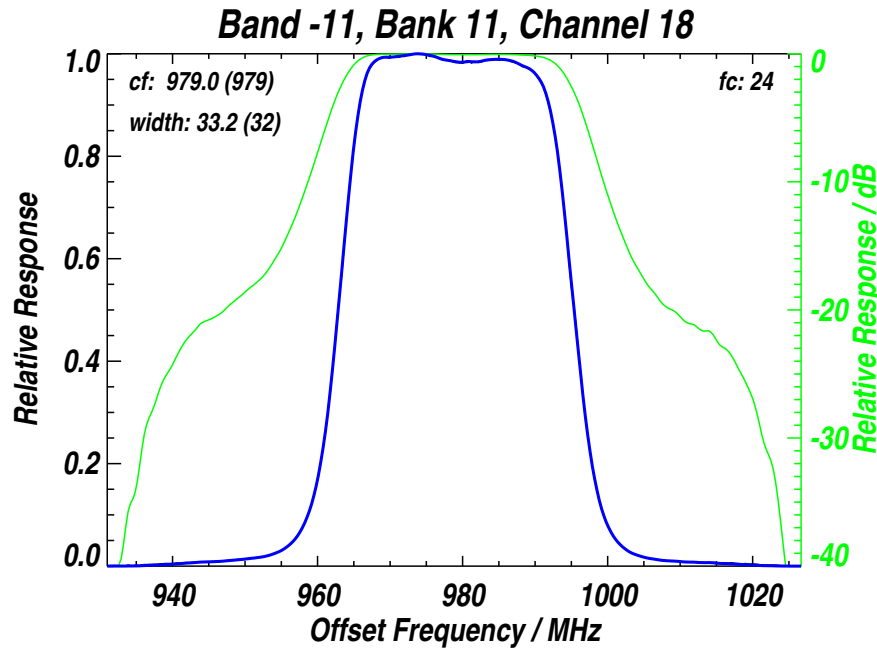
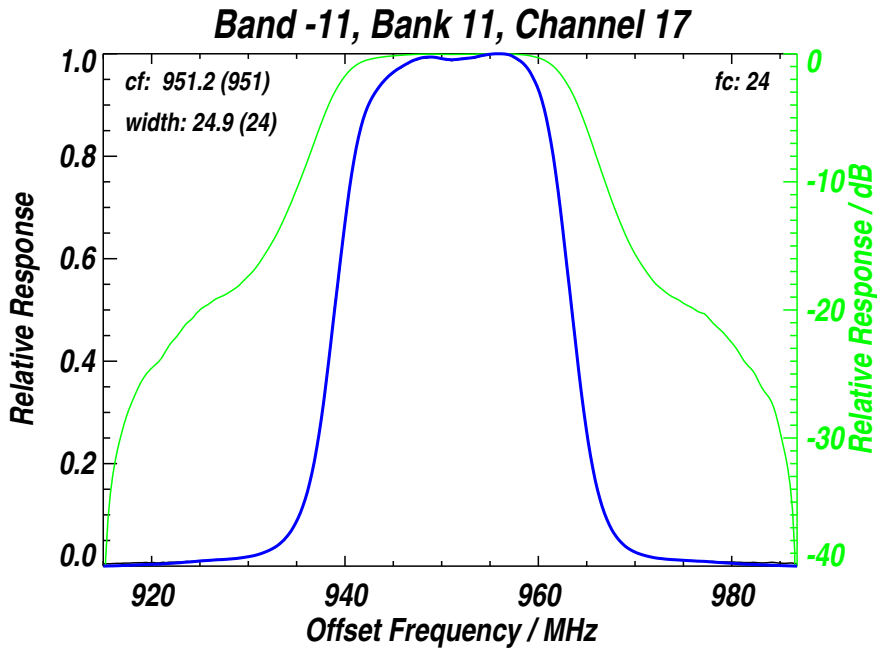


Figure H.312: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 17 to 20. See text for additional details.



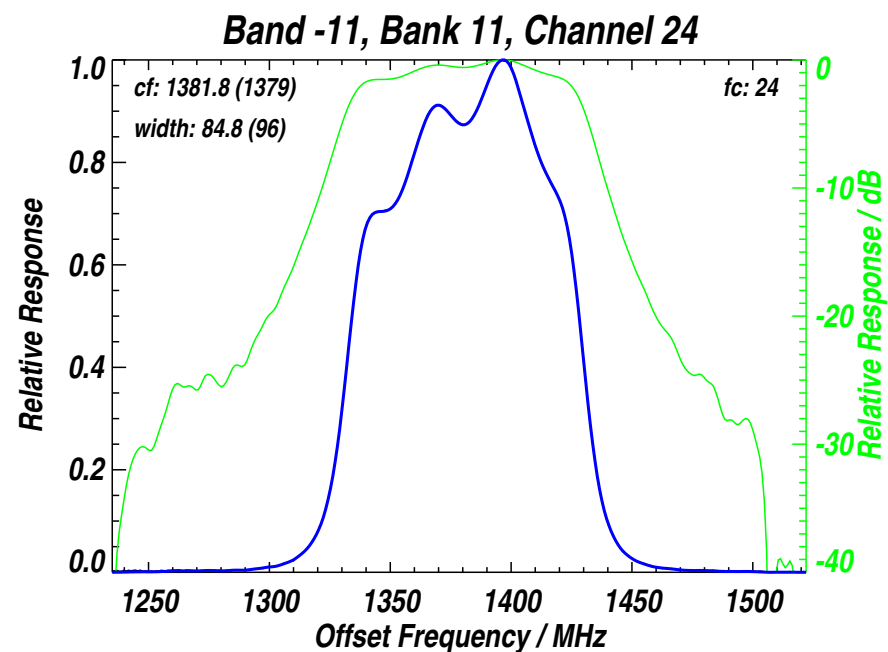
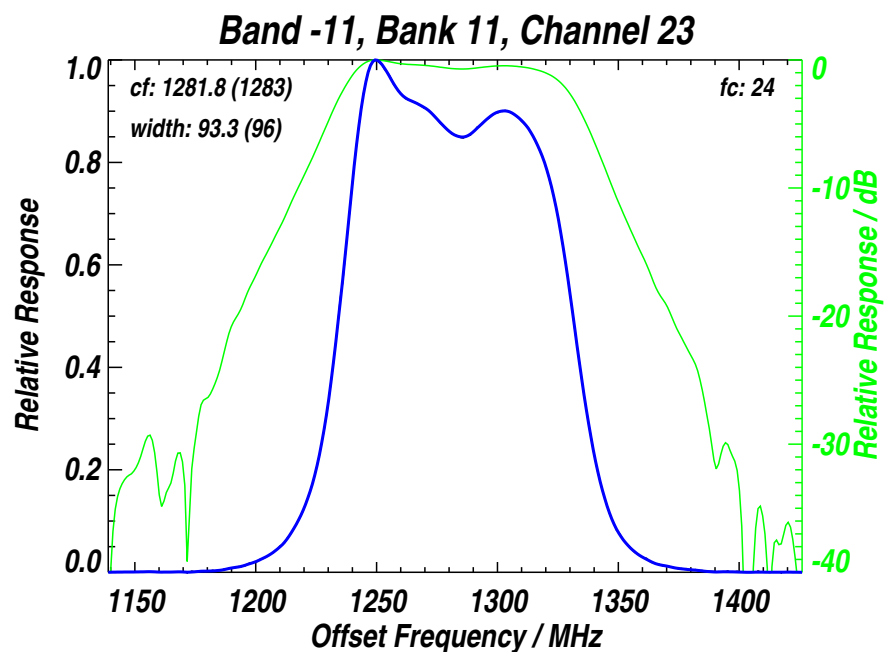
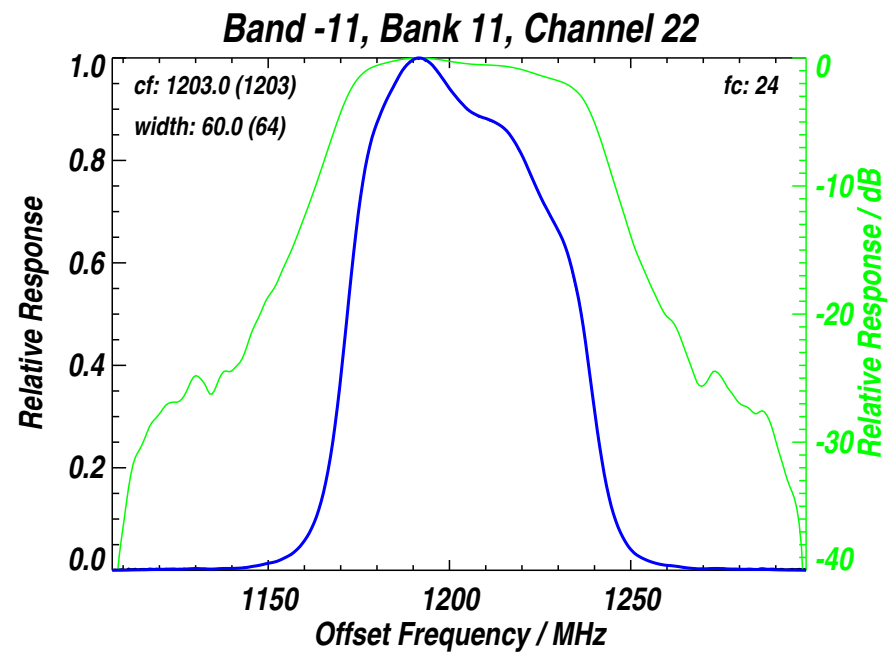
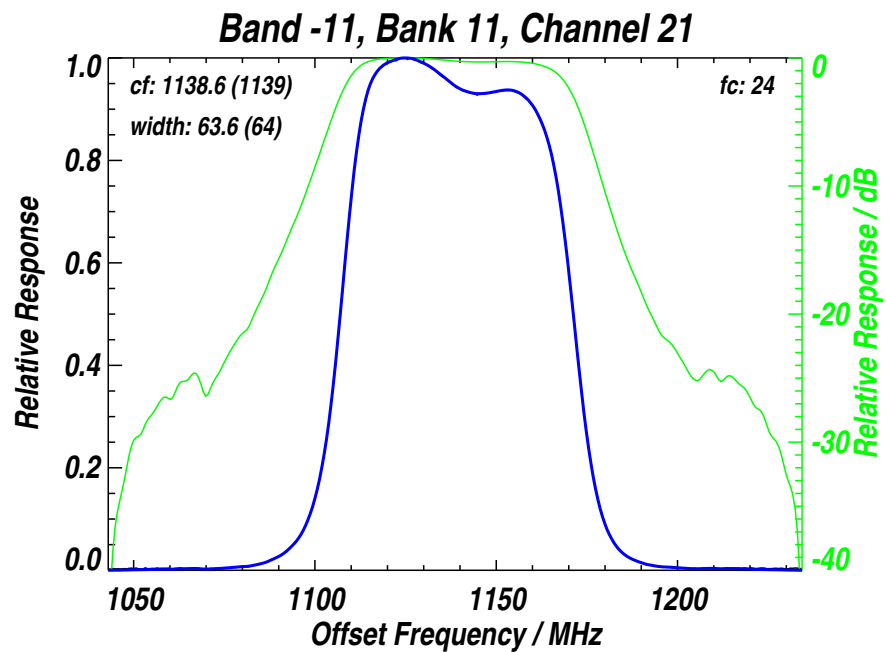
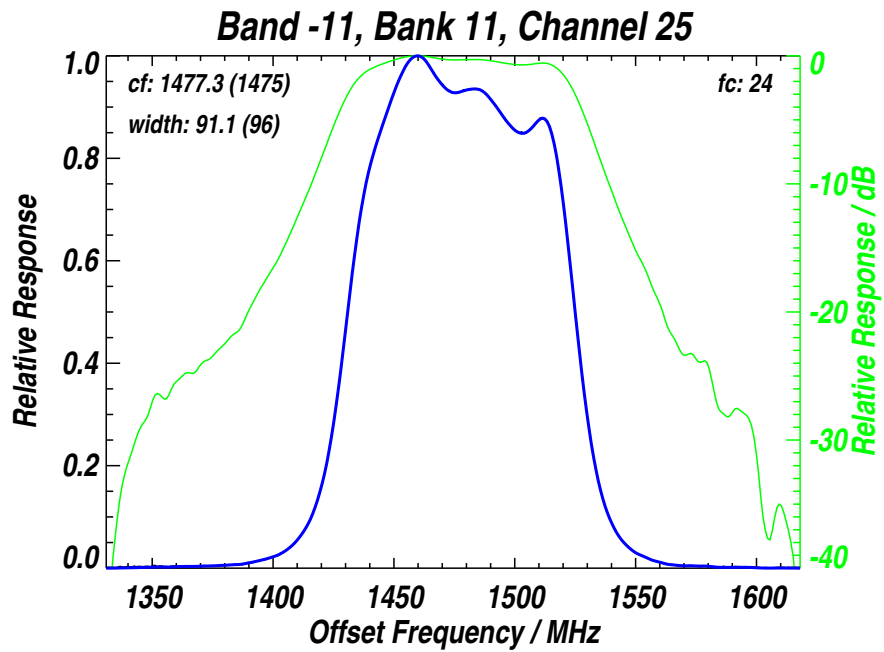


Figure H.313: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 21 to 24. See text for additional details.



**Band 11 (lsb)**  
**Bank 11**  
**Origin = 634.646000016 GHz**

Figure H.314: Lower sideband front-end sweep data for Band 11 taken via Filterbank 11, channel 25. See text for additional details.

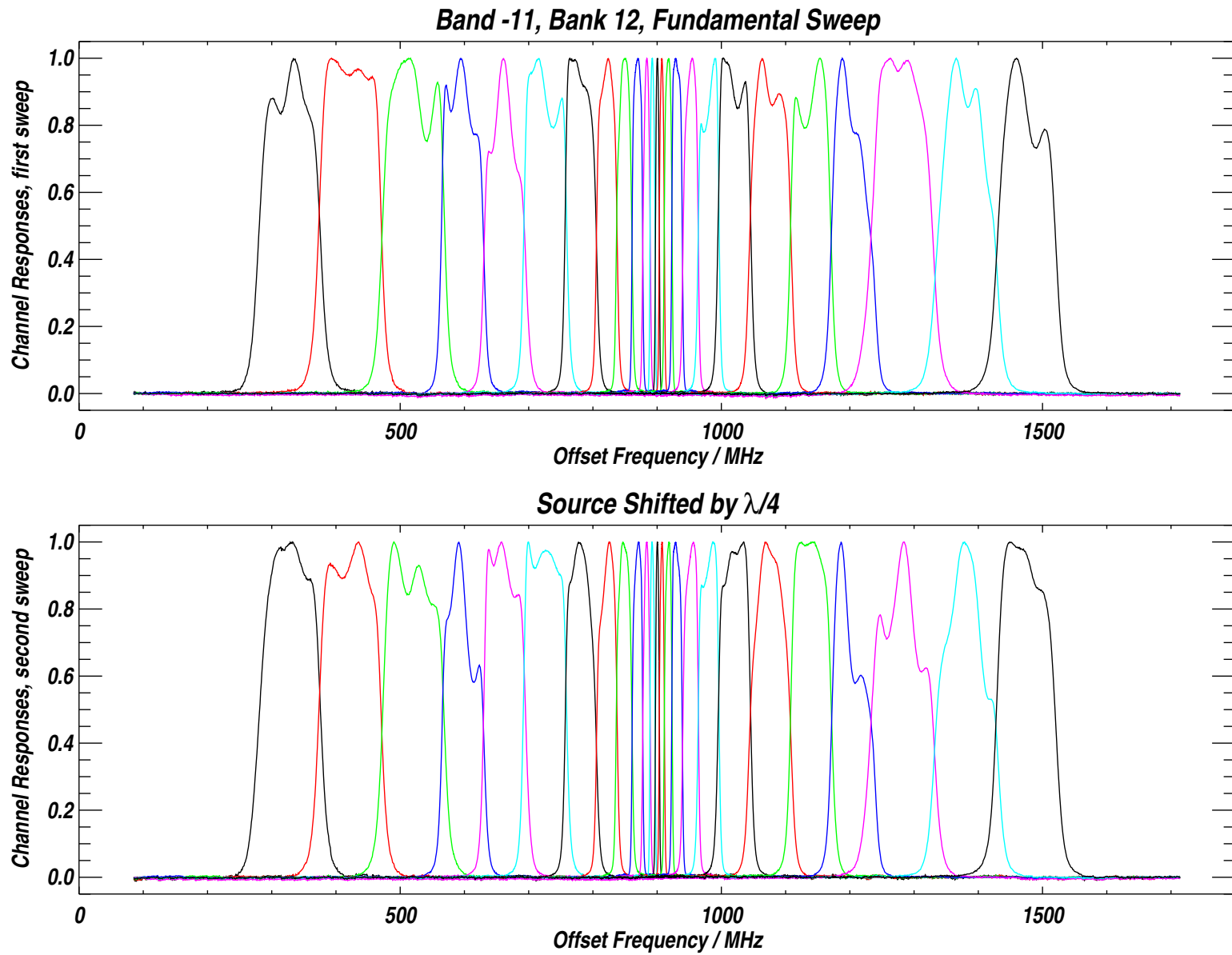


Figure H.315: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12. See text for additional details.

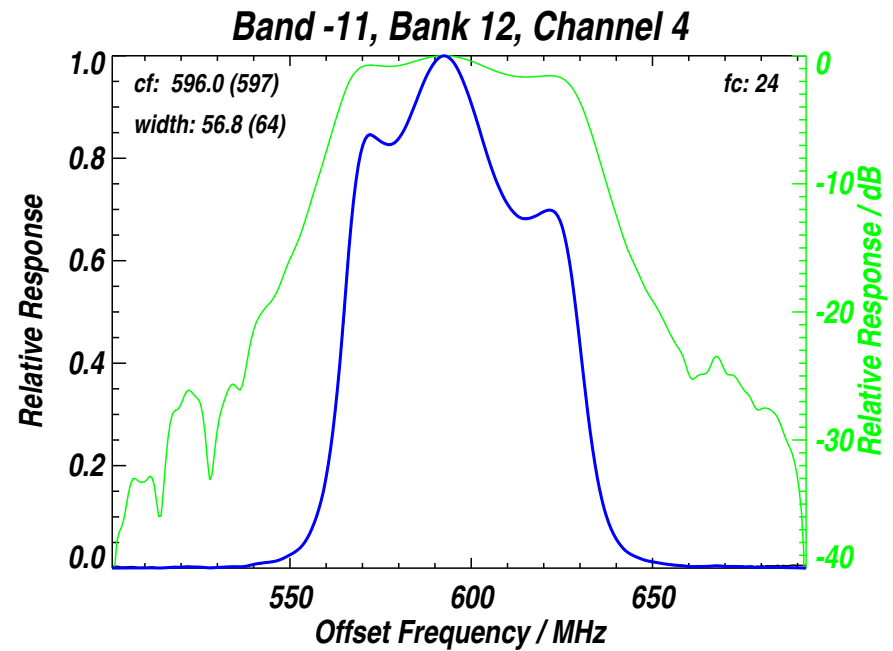
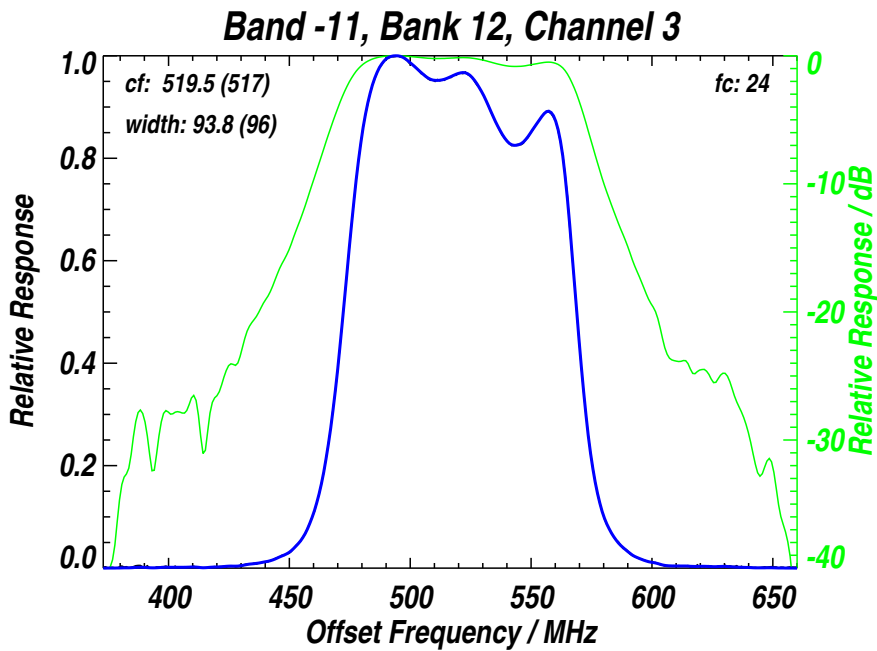
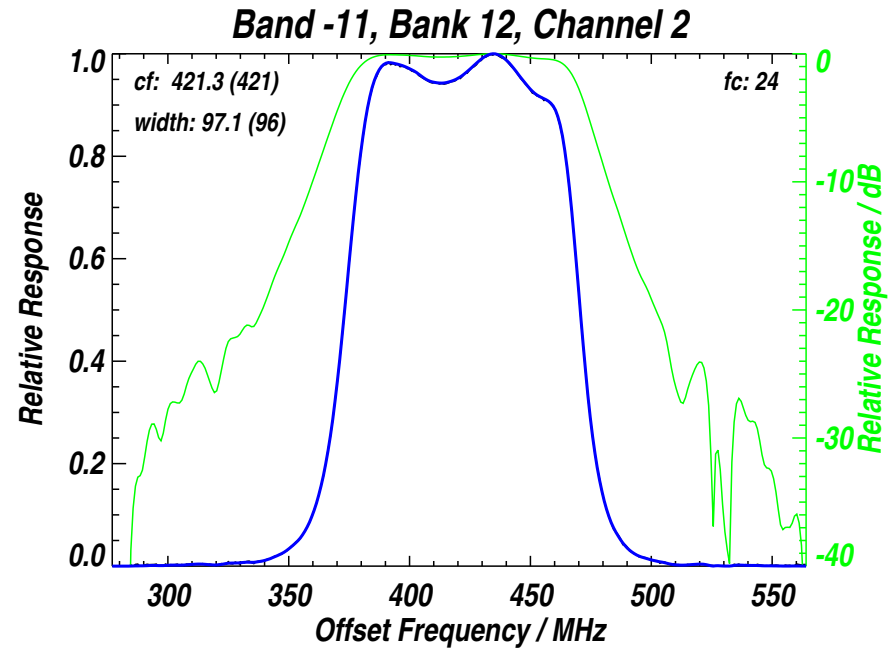
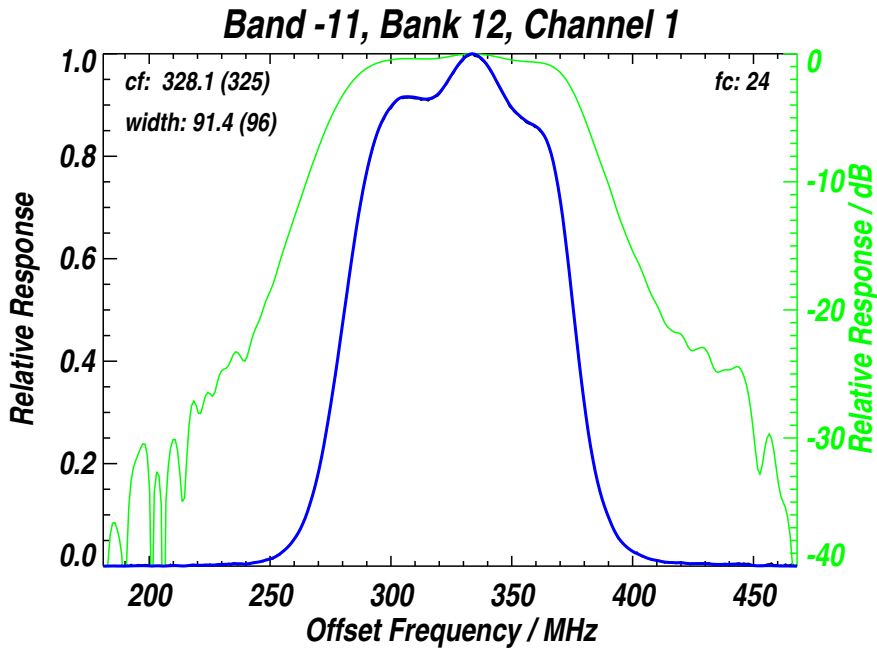


Figure H.316: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 1 to 4. See text for additional details.

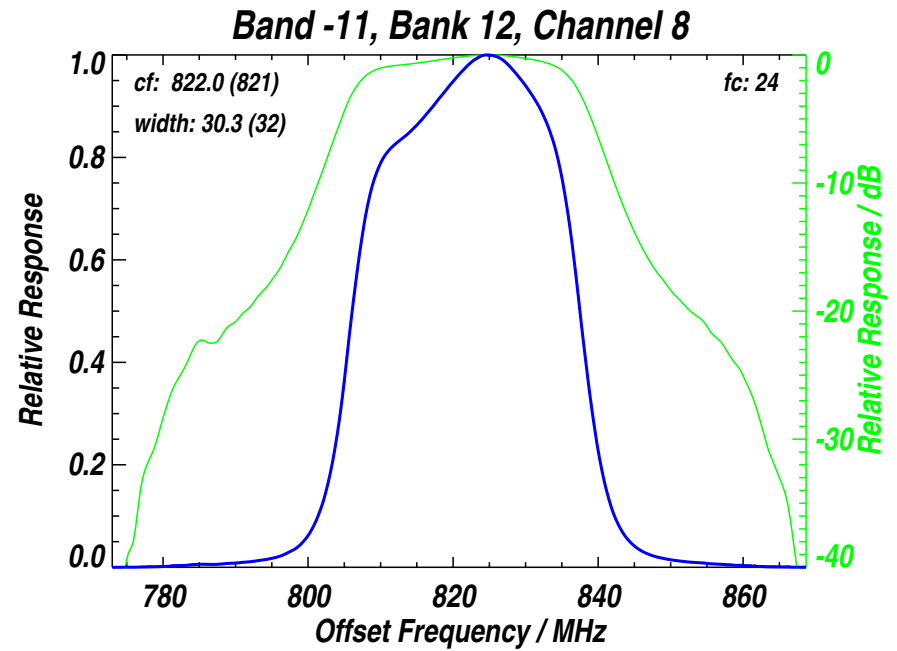
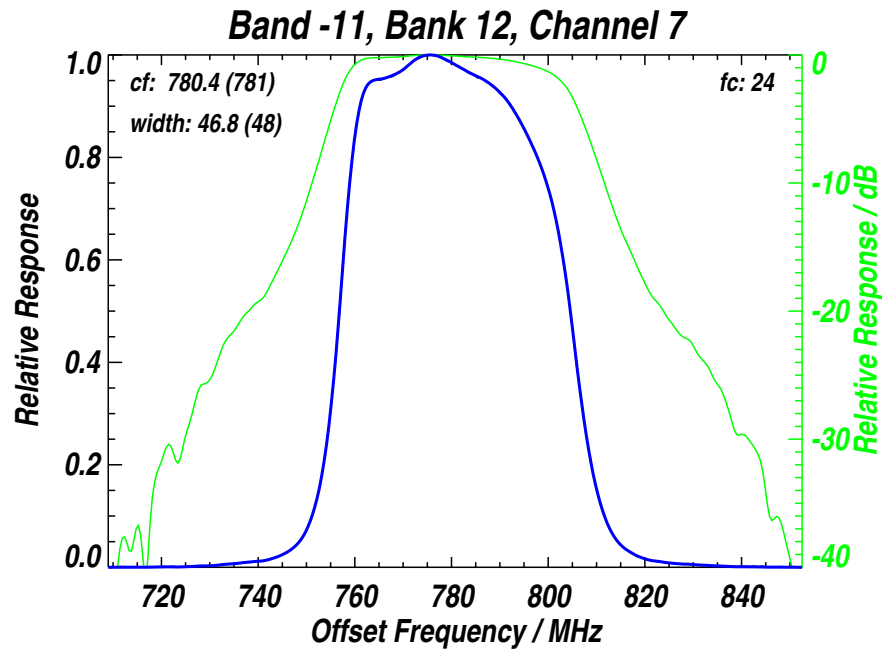
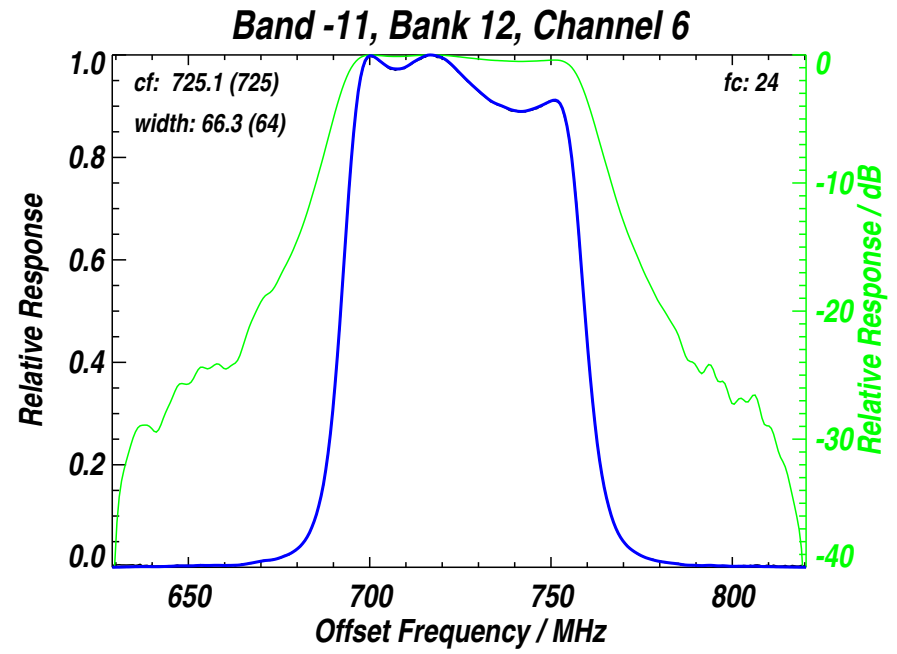
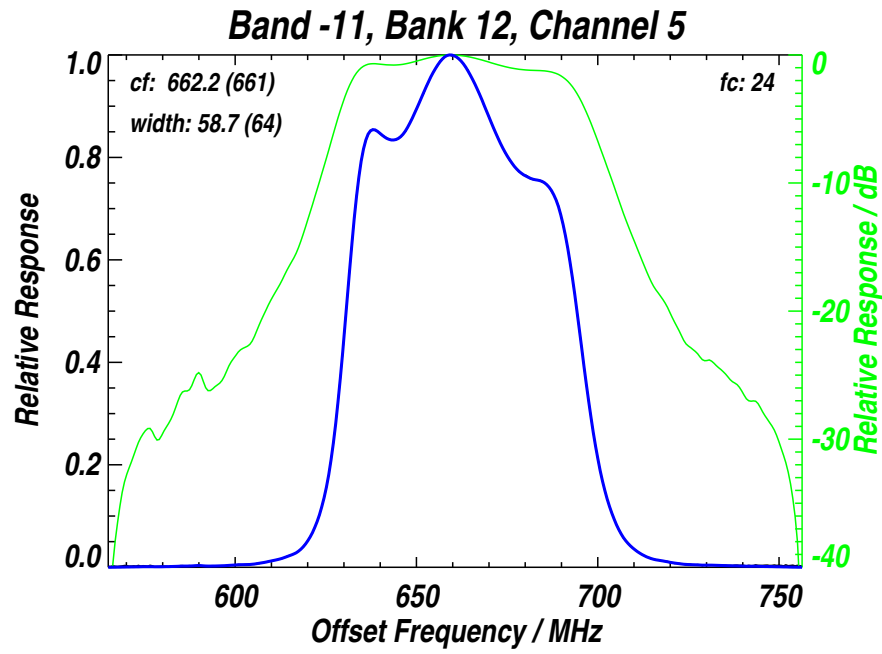


Figure H.317: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 5 to 8. See text for additional details.

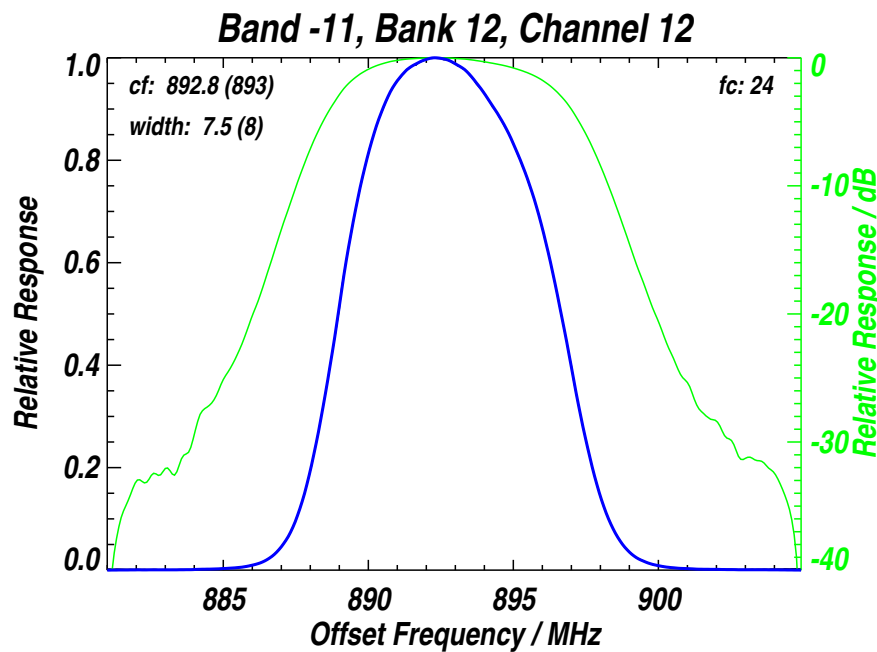
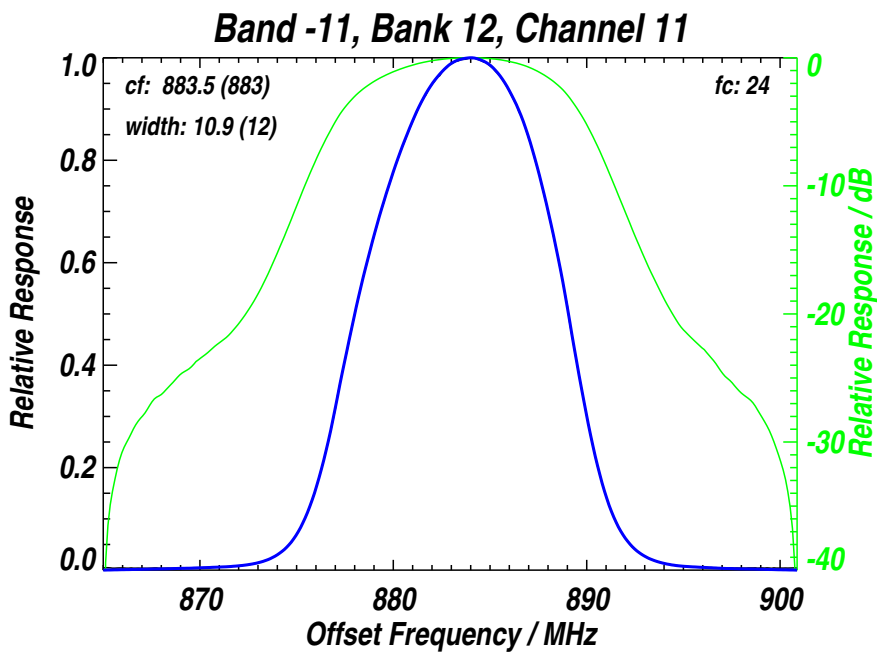
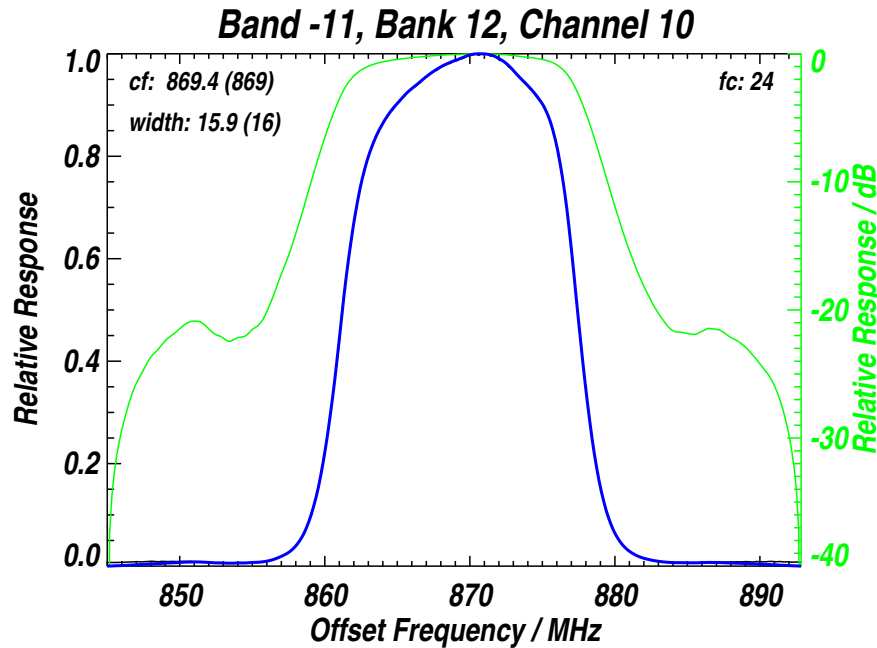
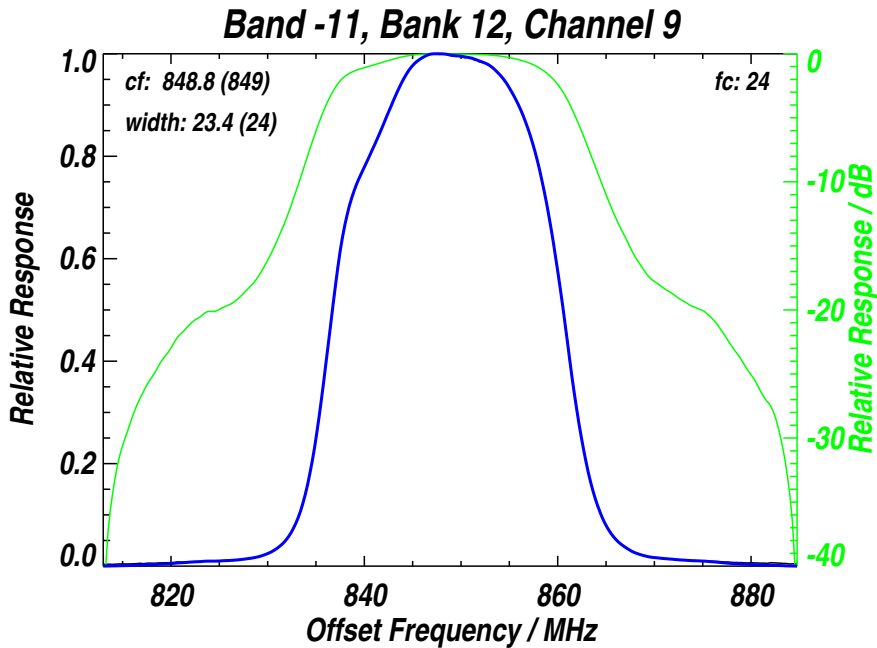


Figure H.318: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 9 to 12. See text for additional details.

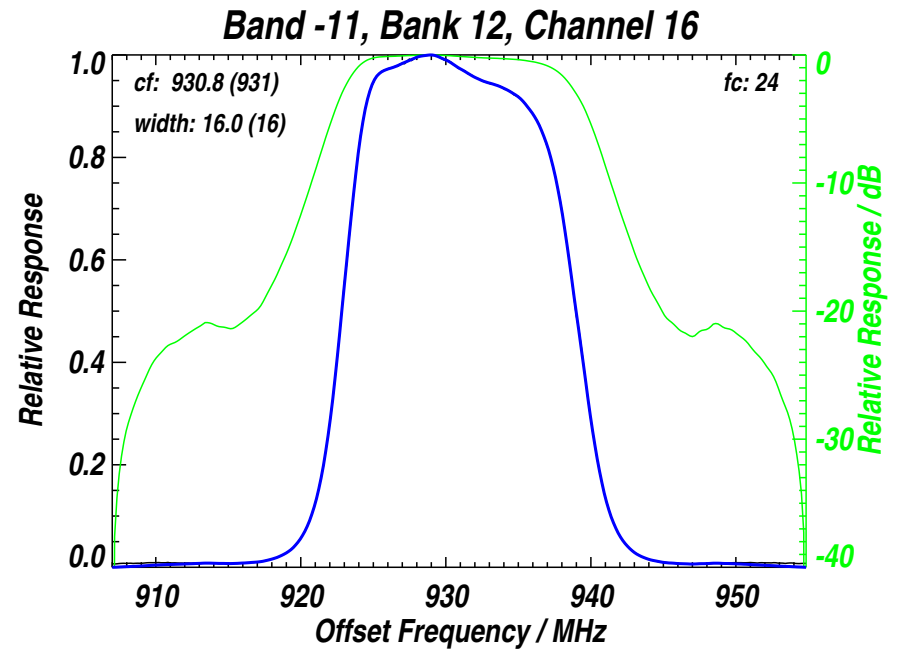
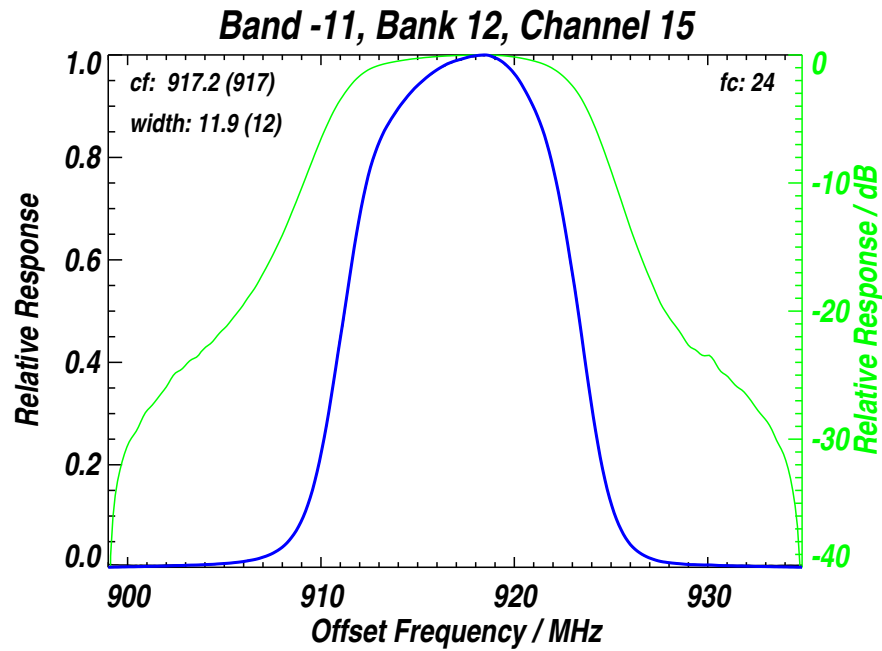
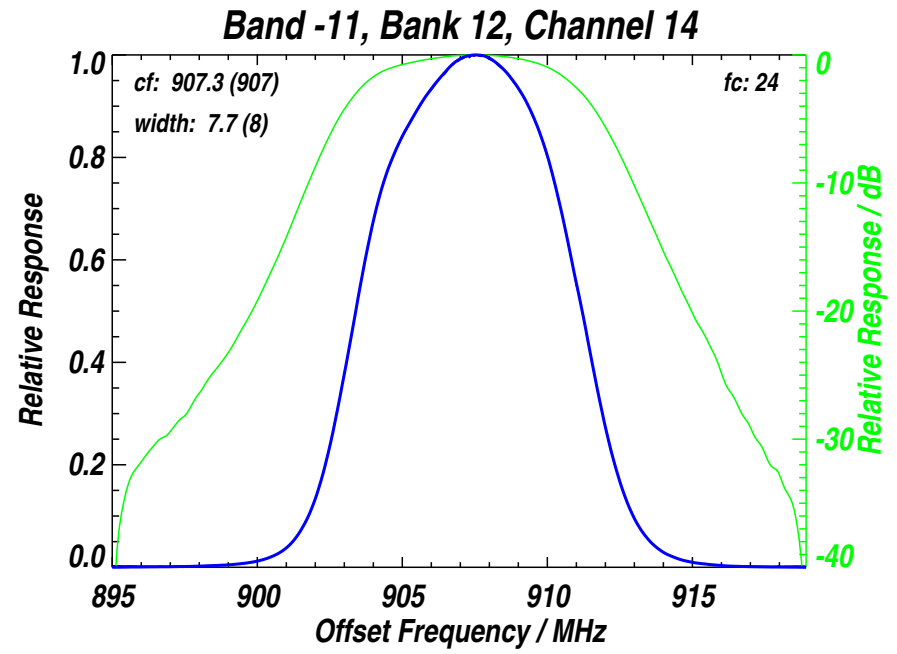
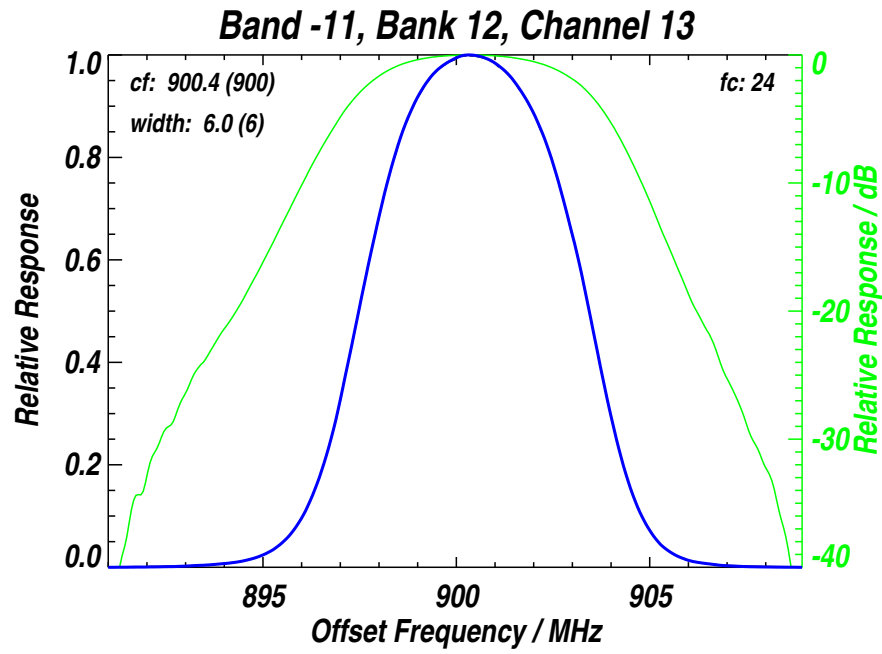


Figure H.319: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 13 to 16. See text for additional details.

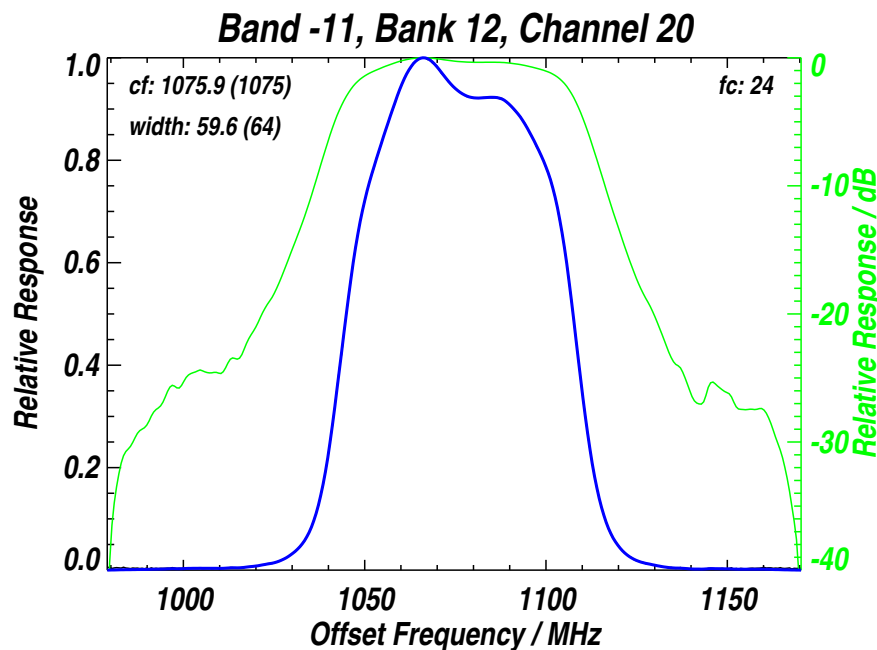
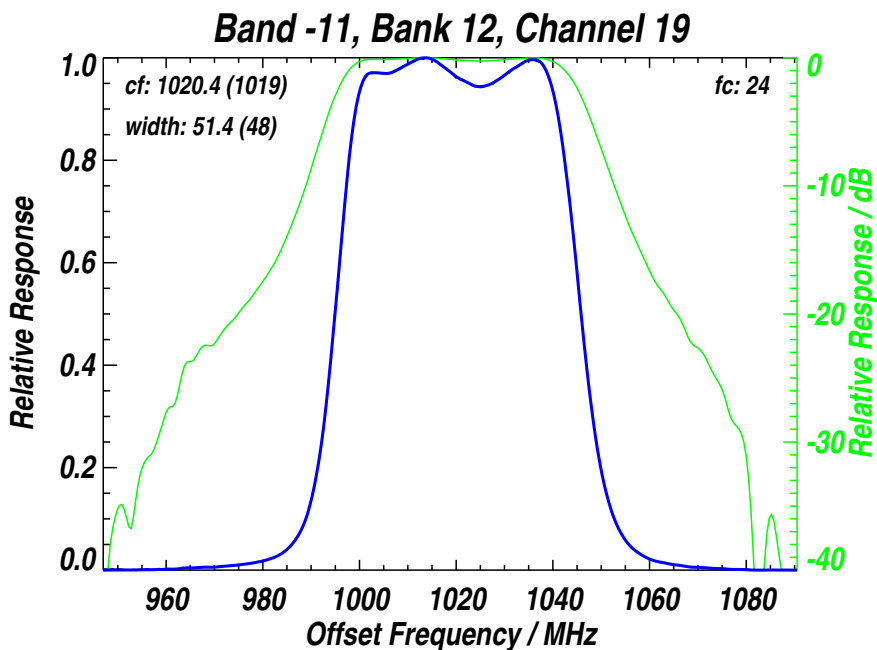
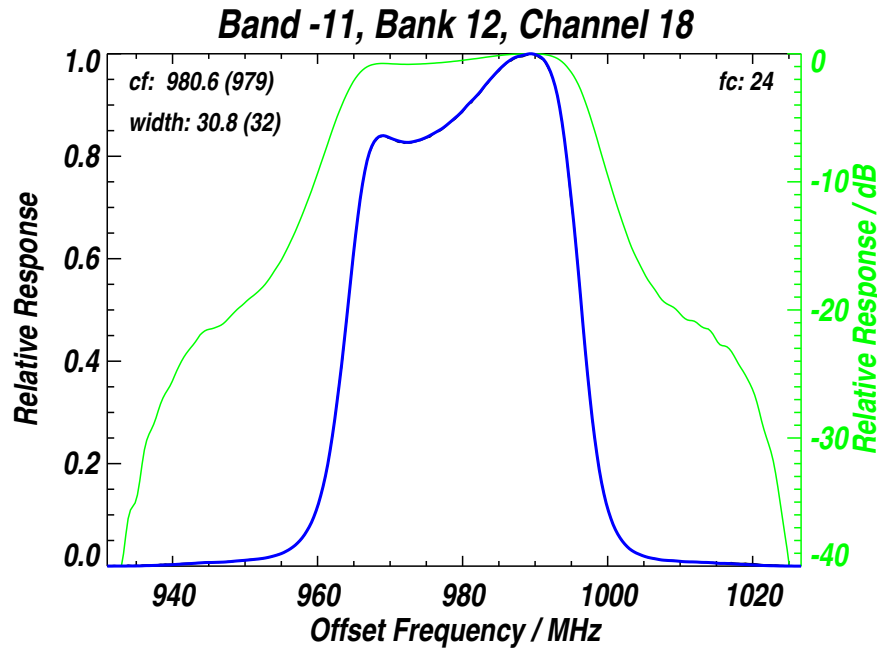
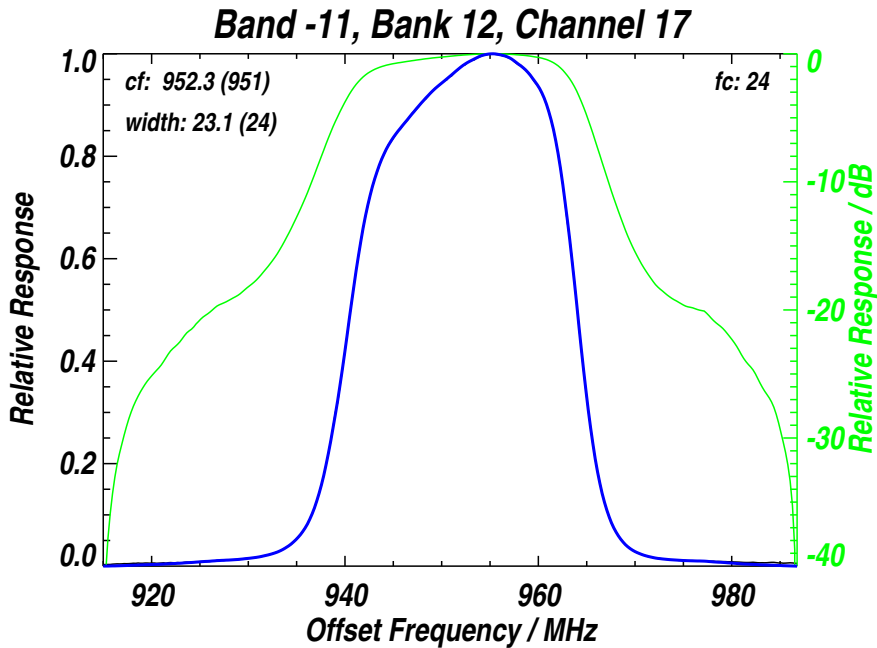


Figure H.320: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 17 to 20. See text for additional details.



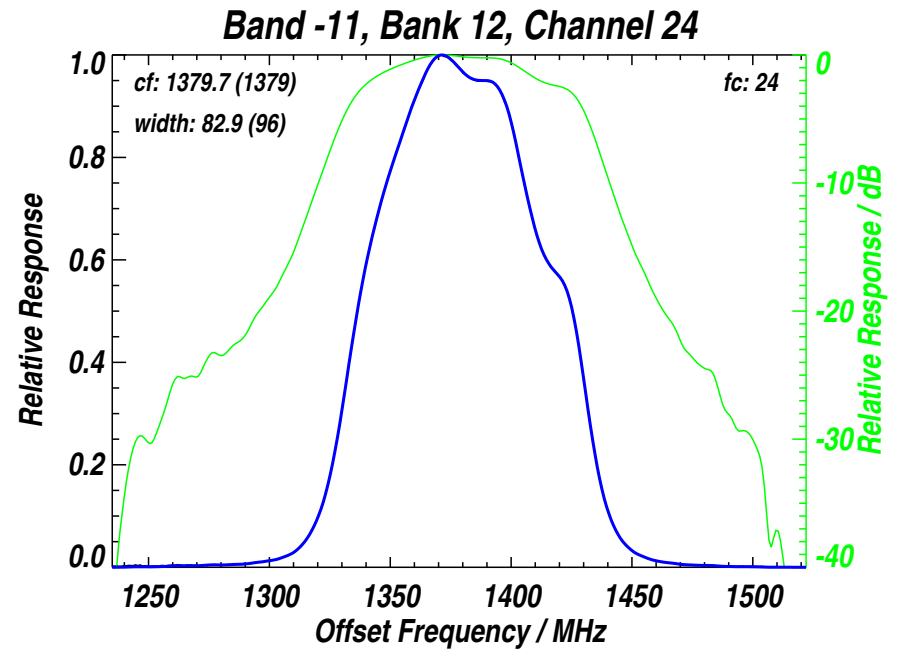
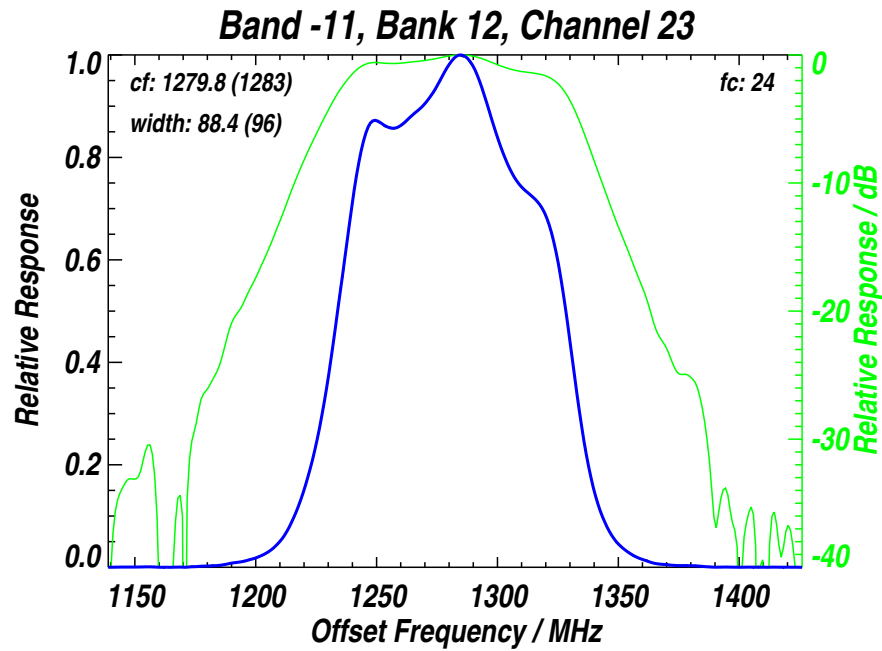
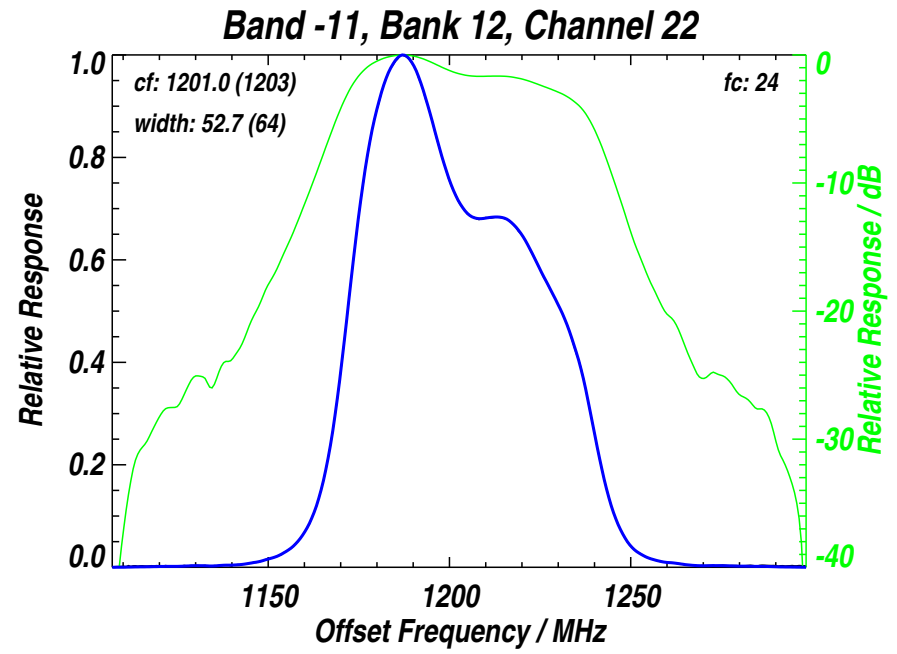
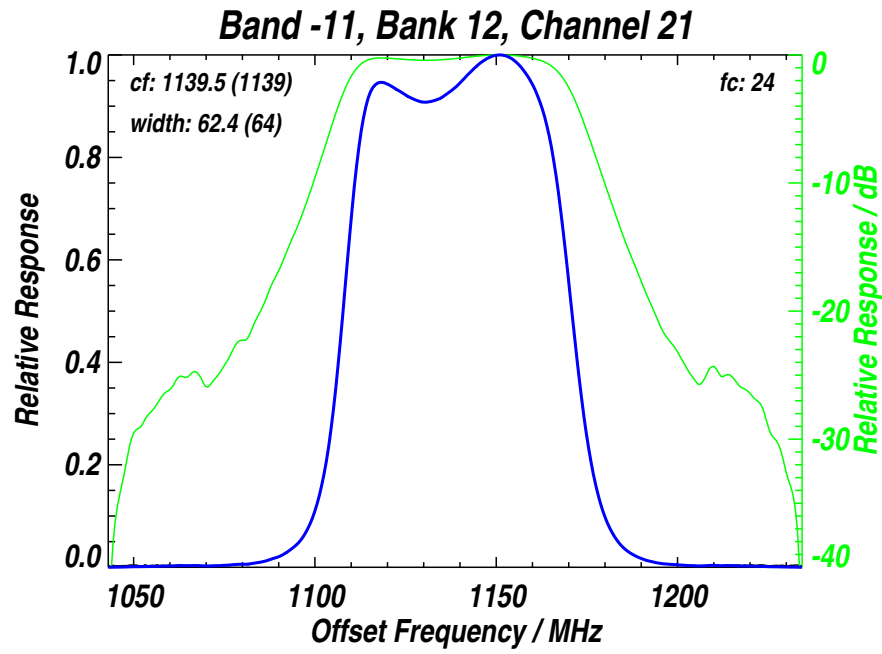
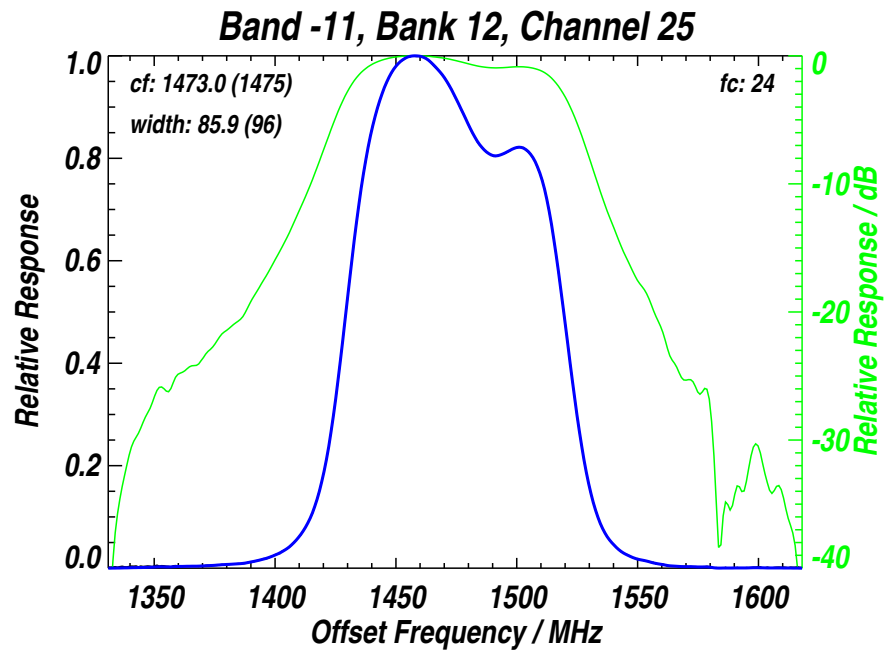


Figure H.321: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 11 (lsb)**  
**Bank 12**  
**Origin = 634.646000016 GHz**

Figure H.322: Lower sideband front-end sweep data for Band 11 taken via Filterbank 12, channel 25. See text for additional details.

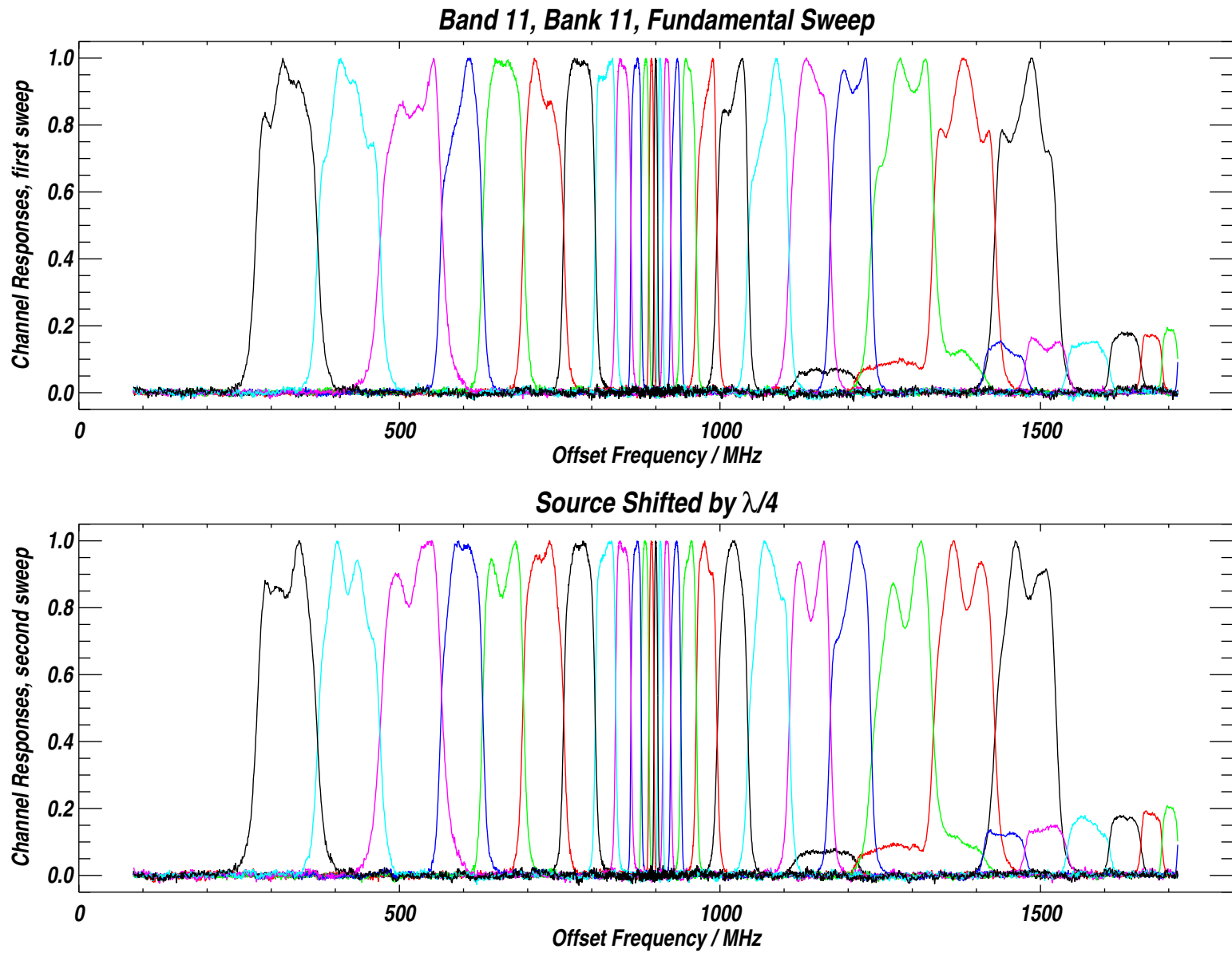


Figure H.323: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11. See text for additional details.

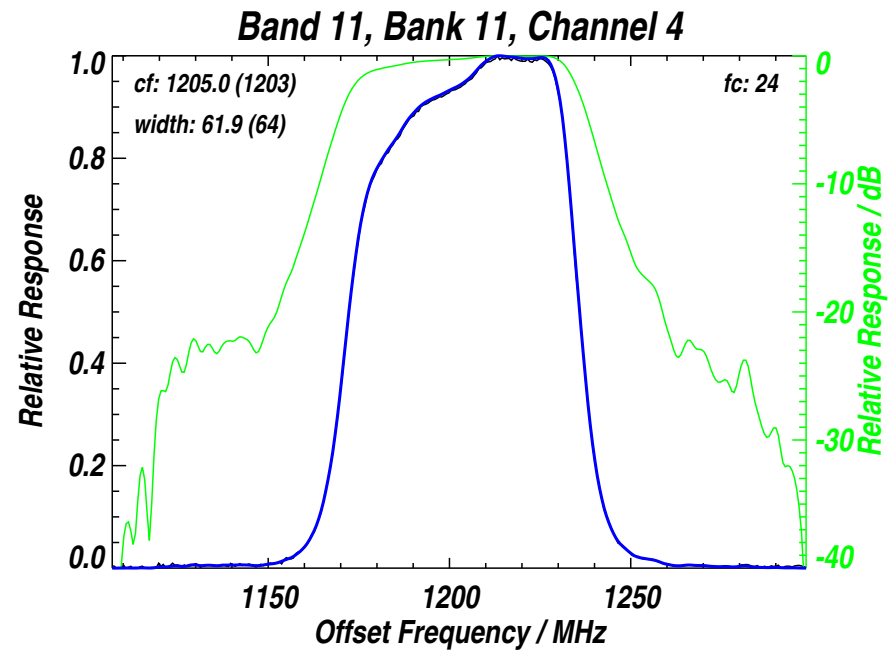
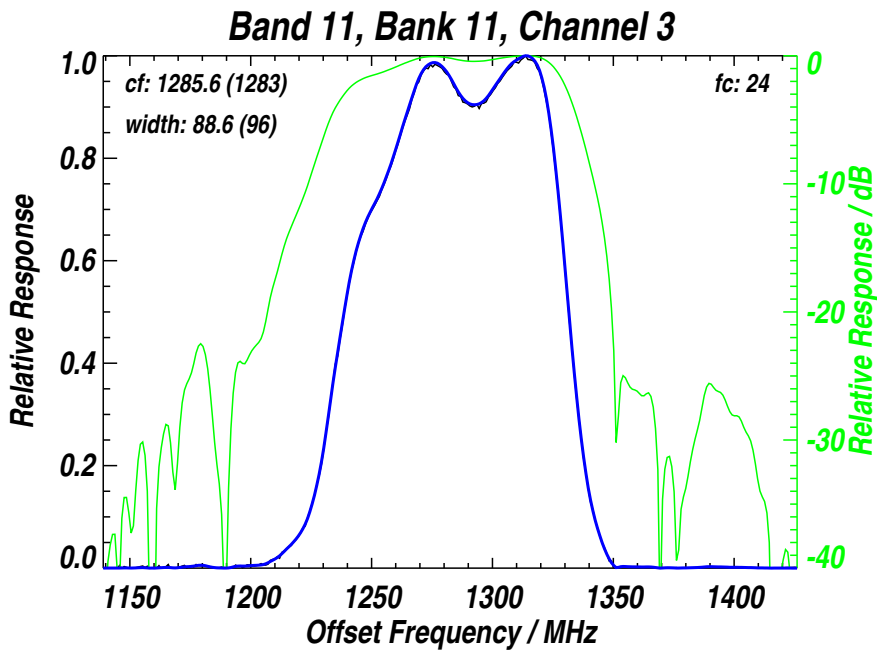
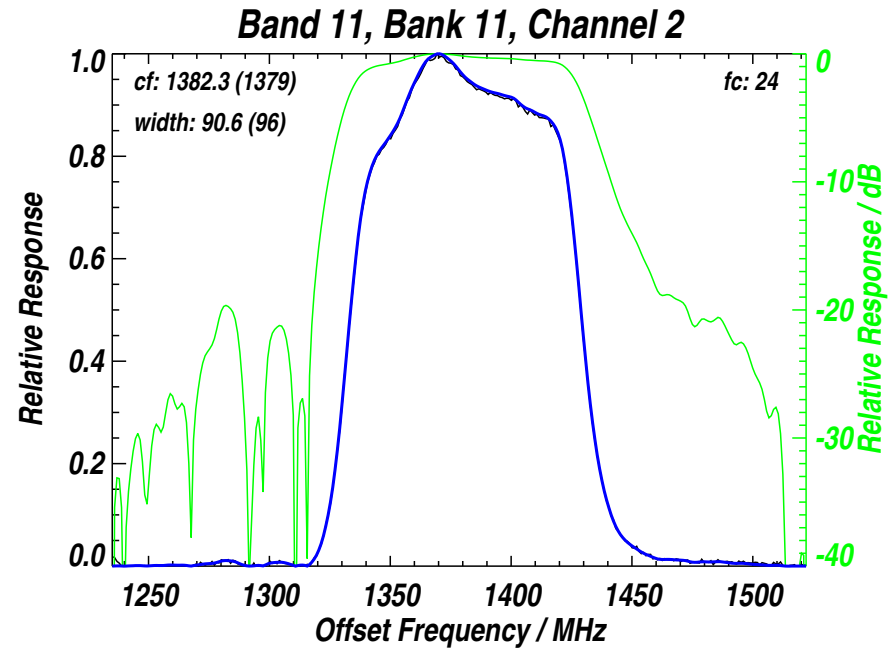
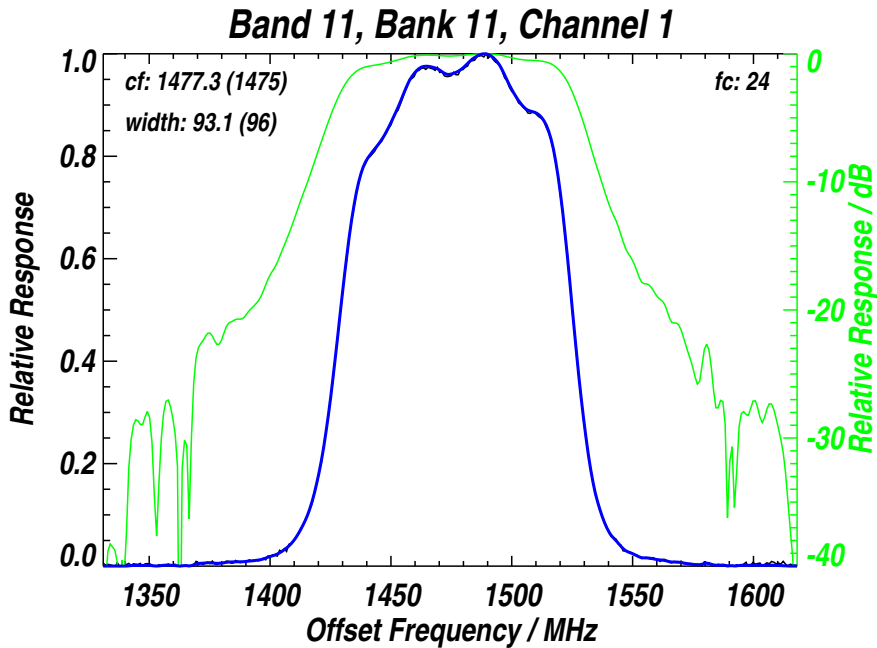


Figure H.324: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 1 to 4. See text for additional details.

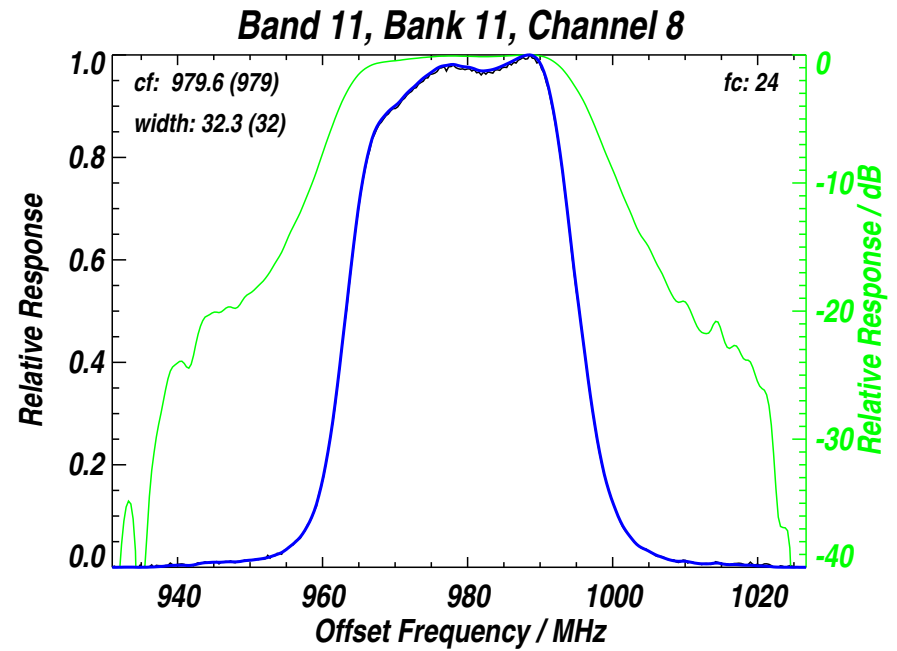
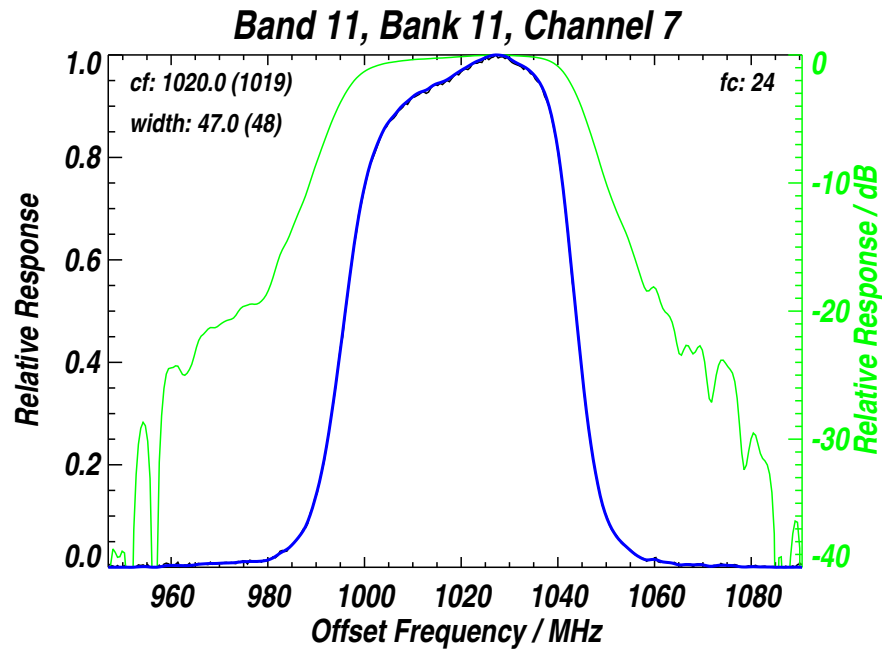
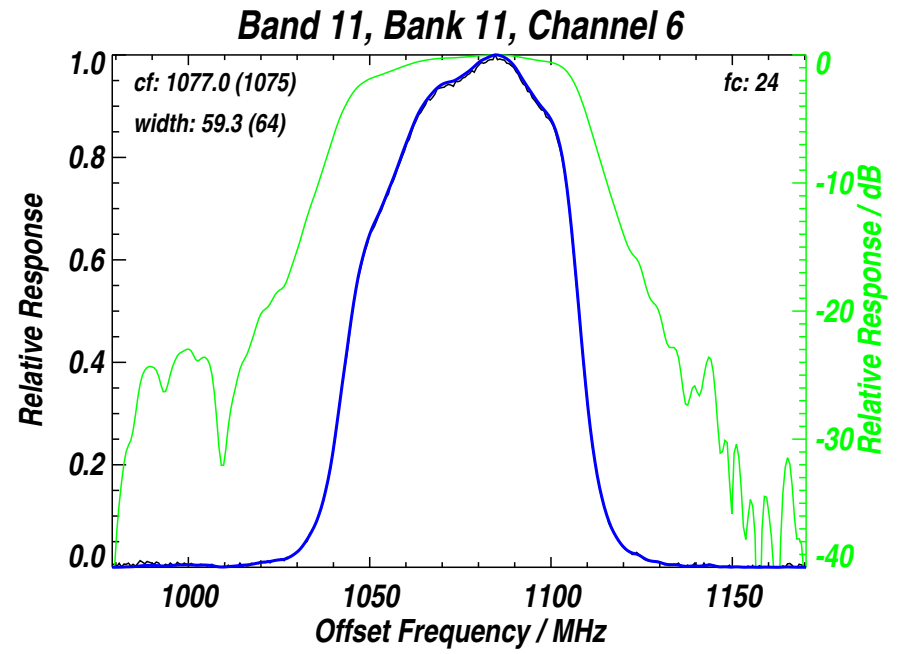
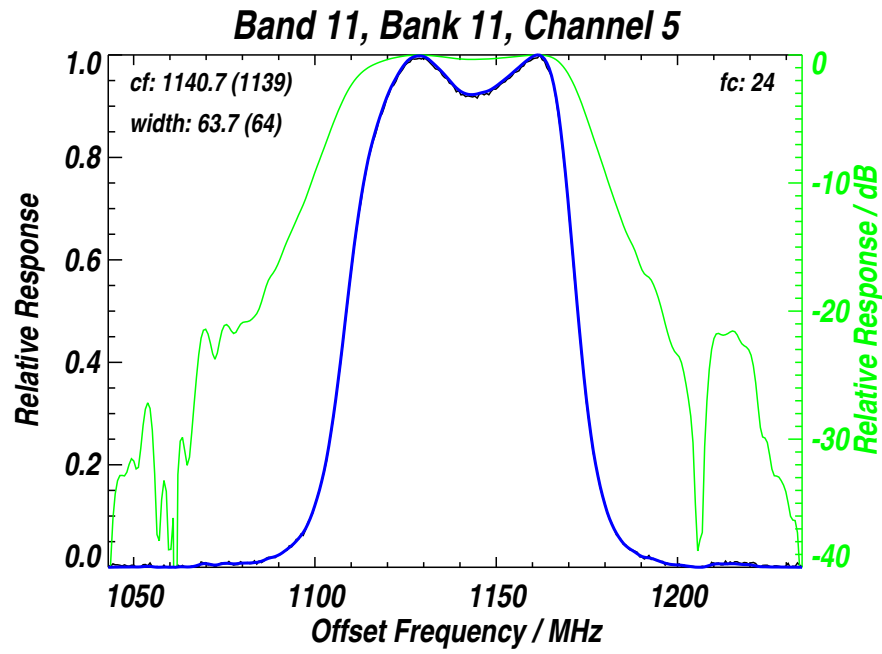


Figure H.325: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 5 to 8. See text for additional details.

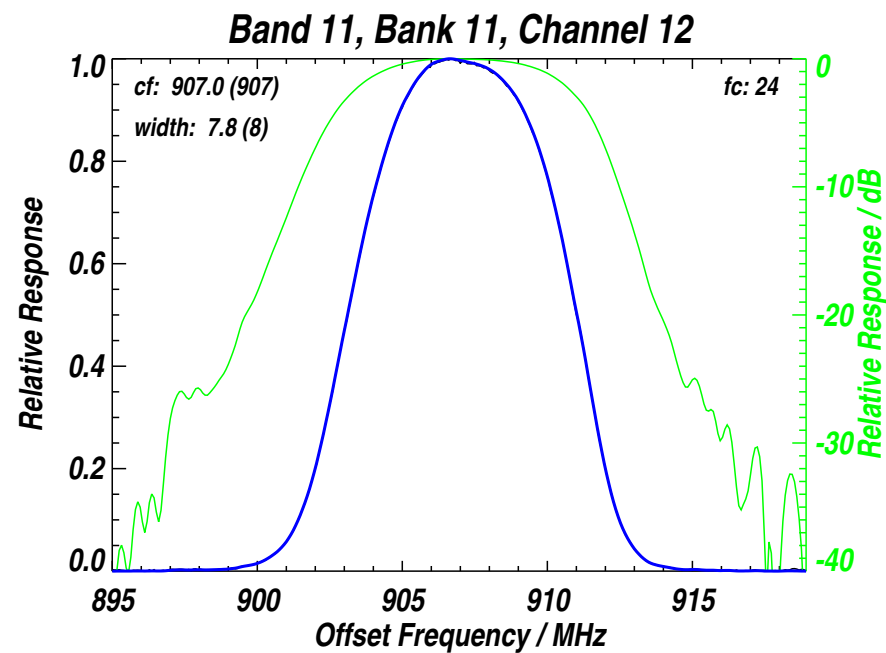
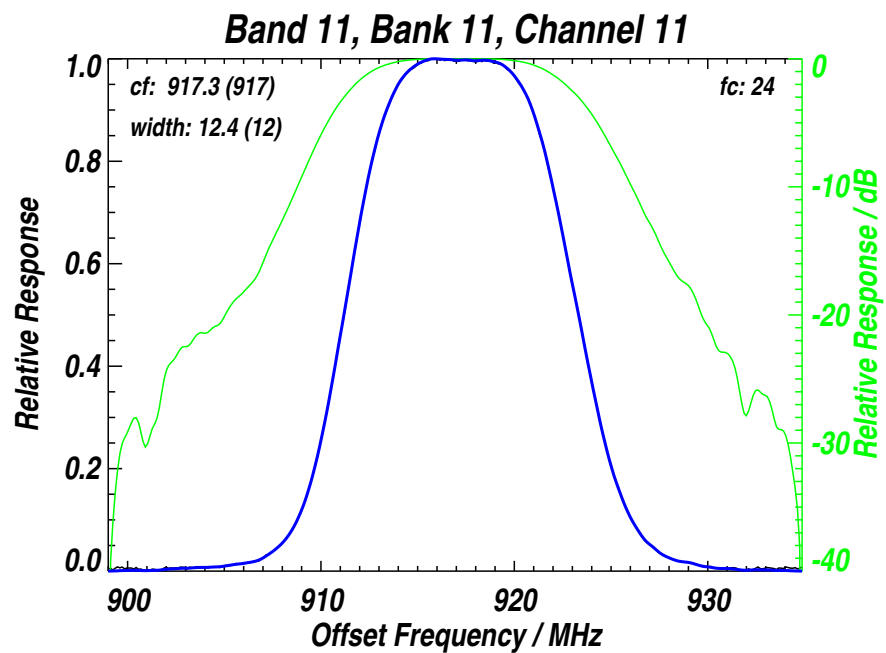
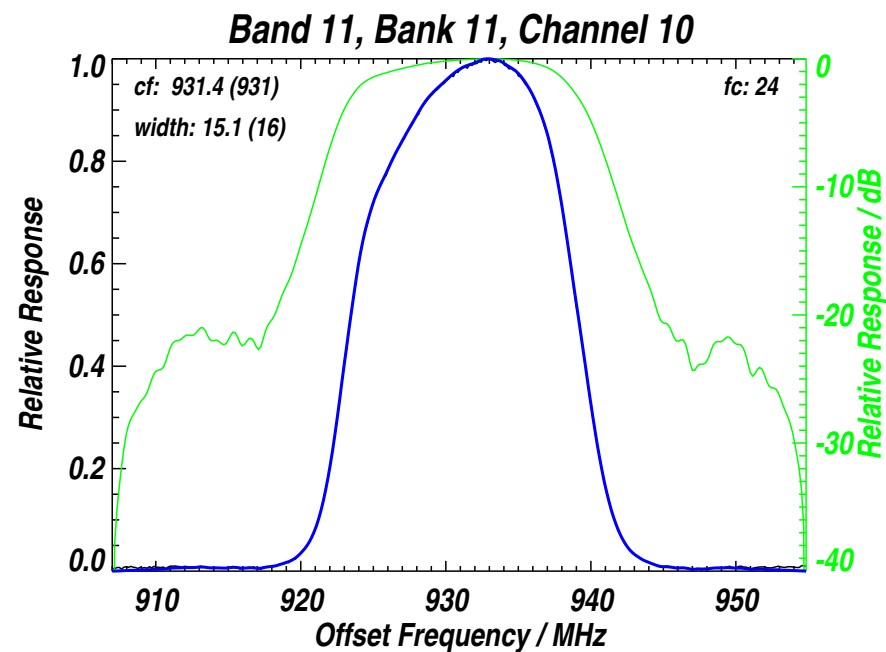
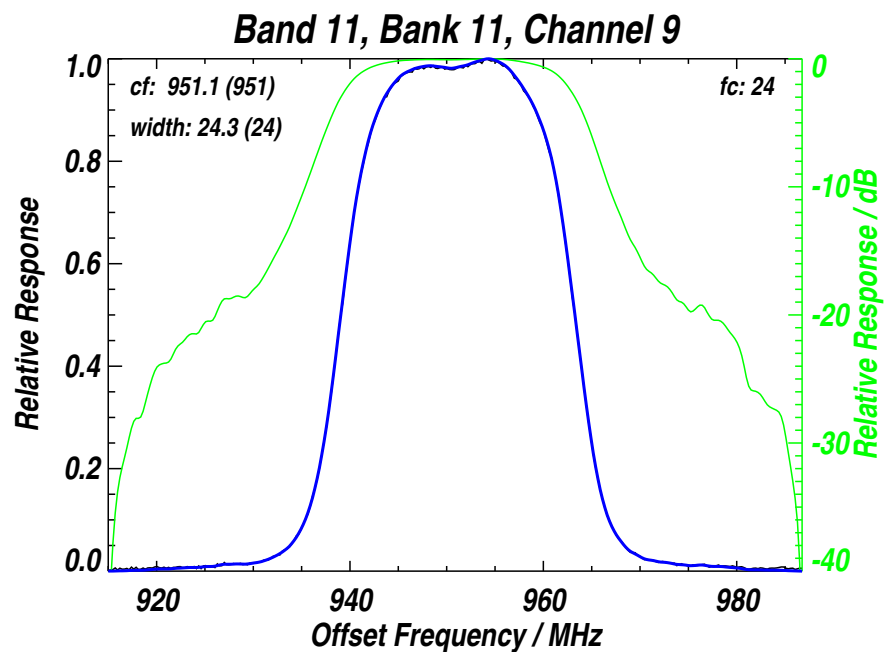


Figure H.326: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 9 to 12. See text for additional details.

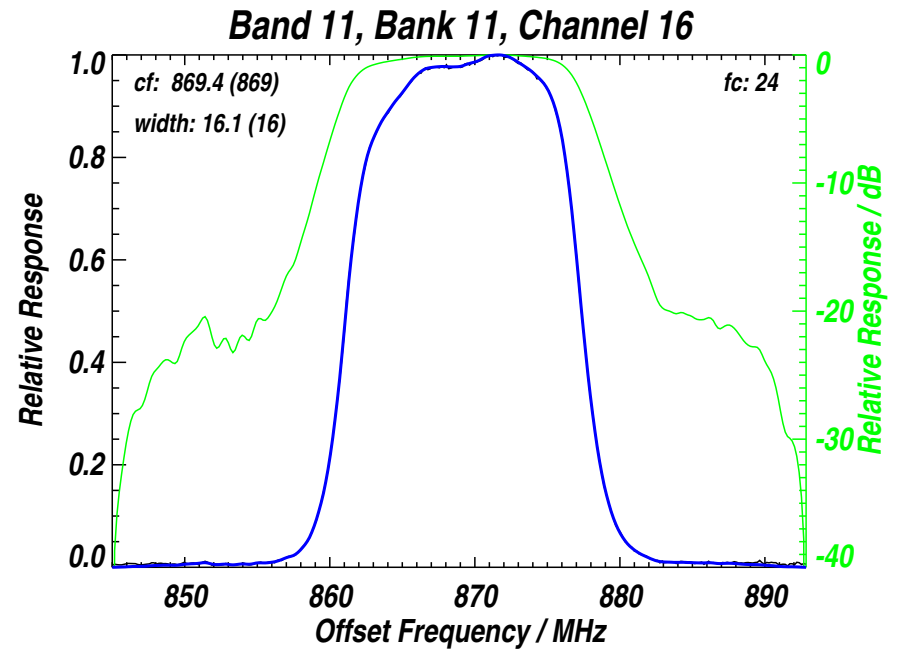
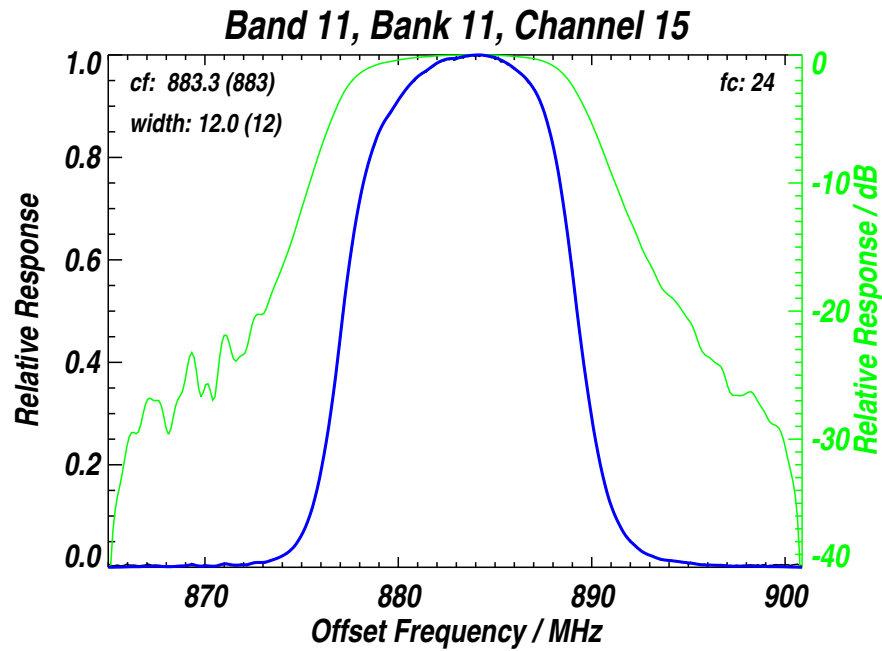
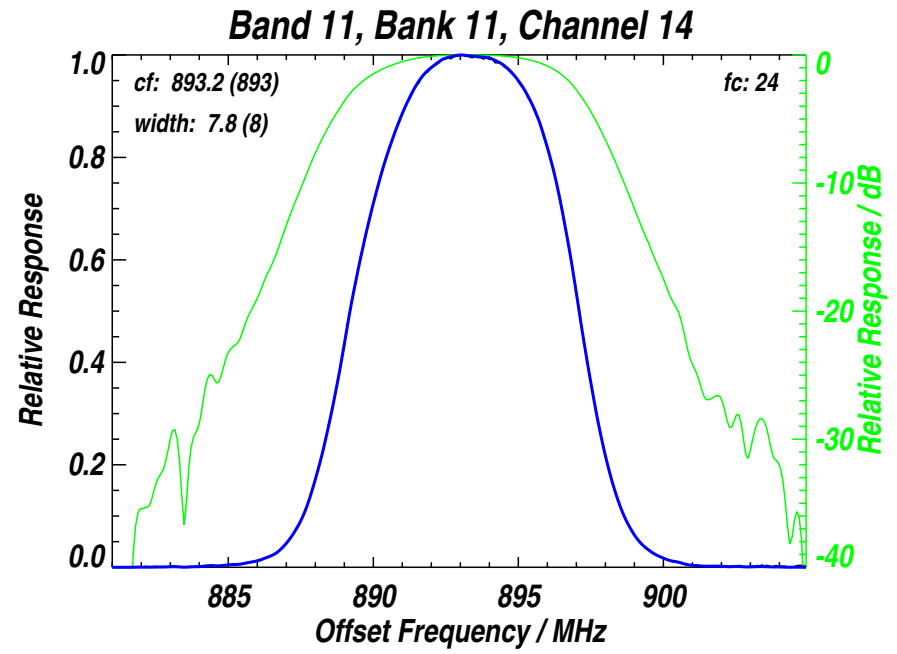
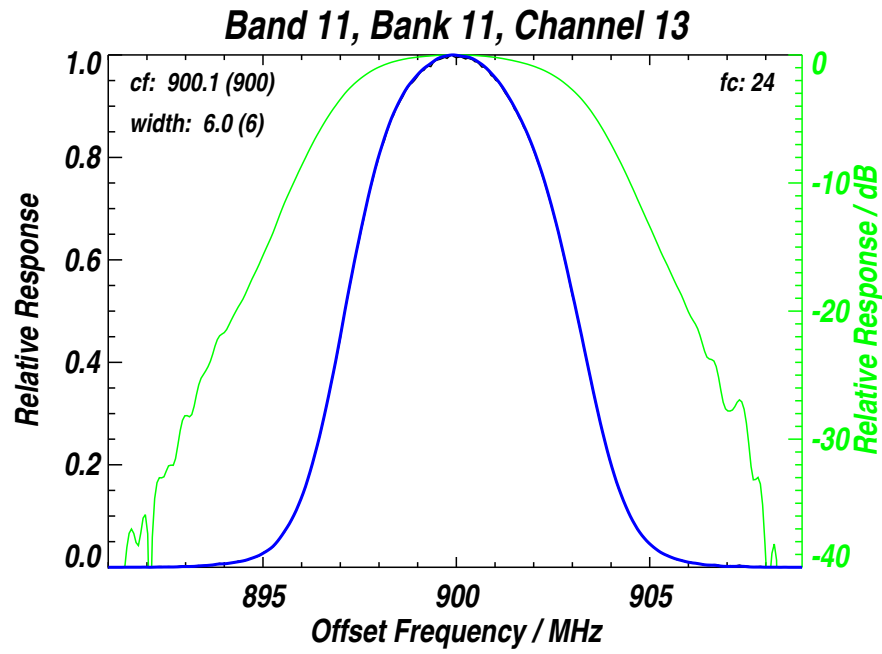


Figure H.327: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 13 to 16. See text for additional details.

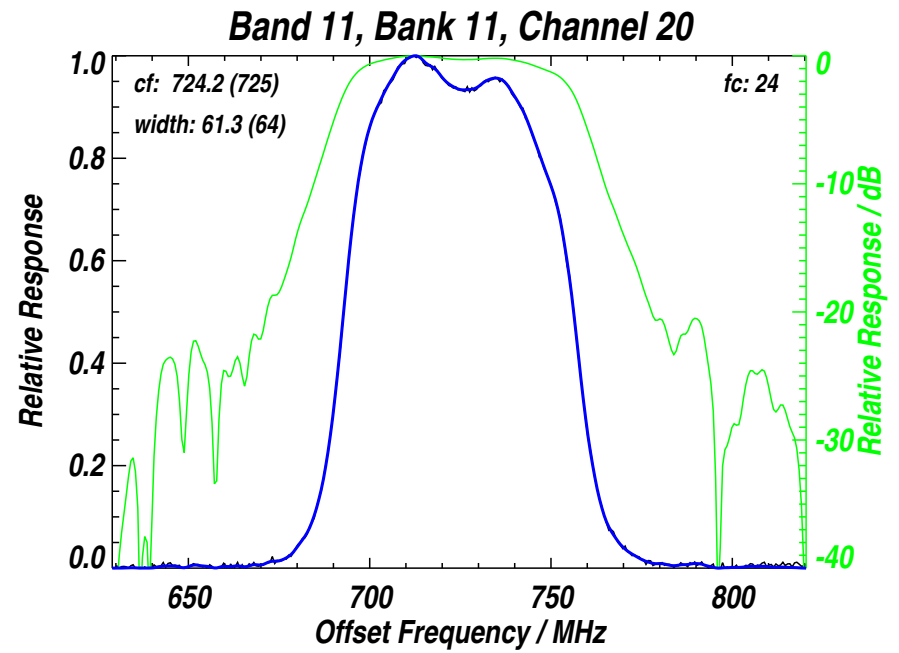
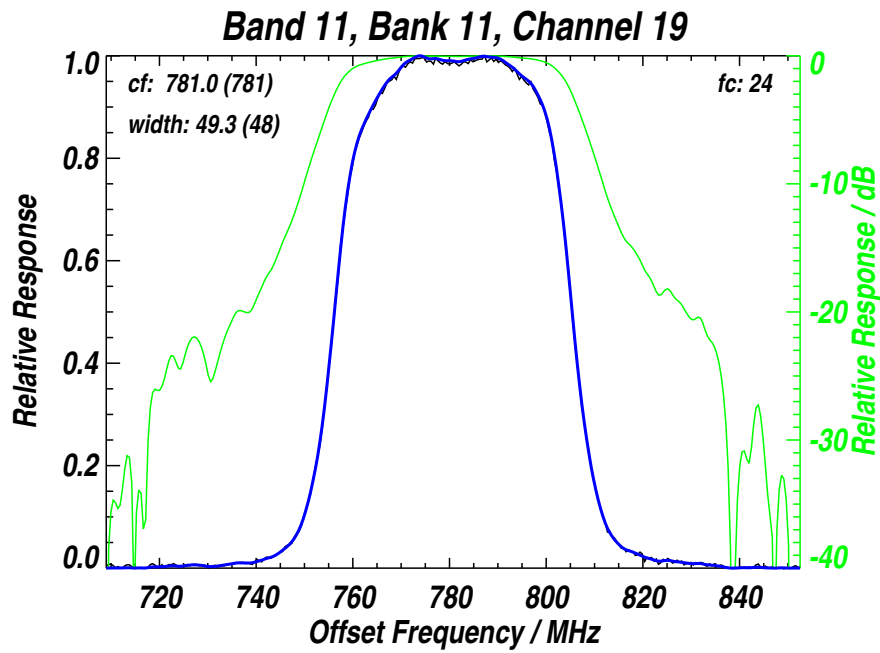
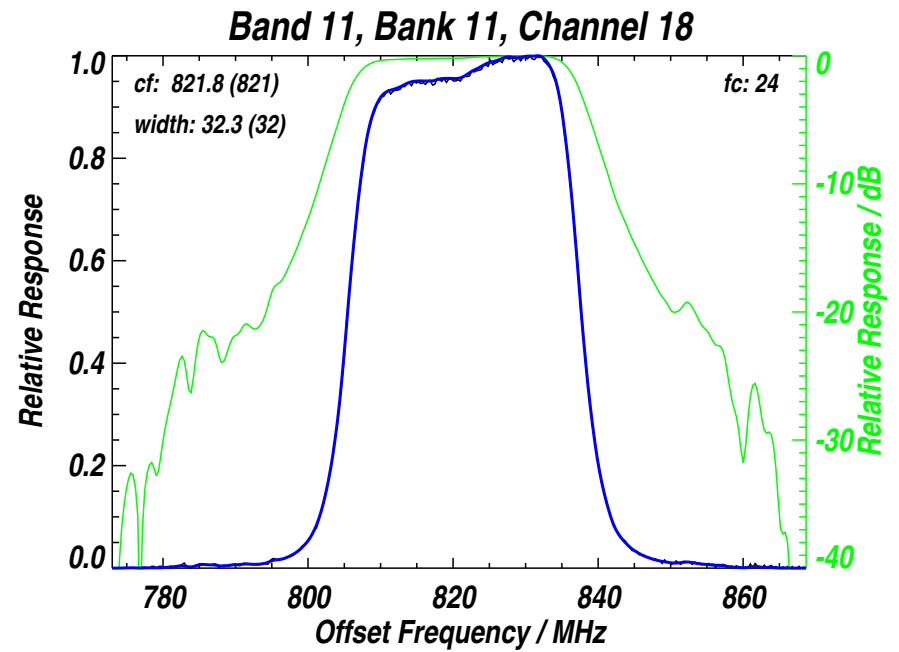
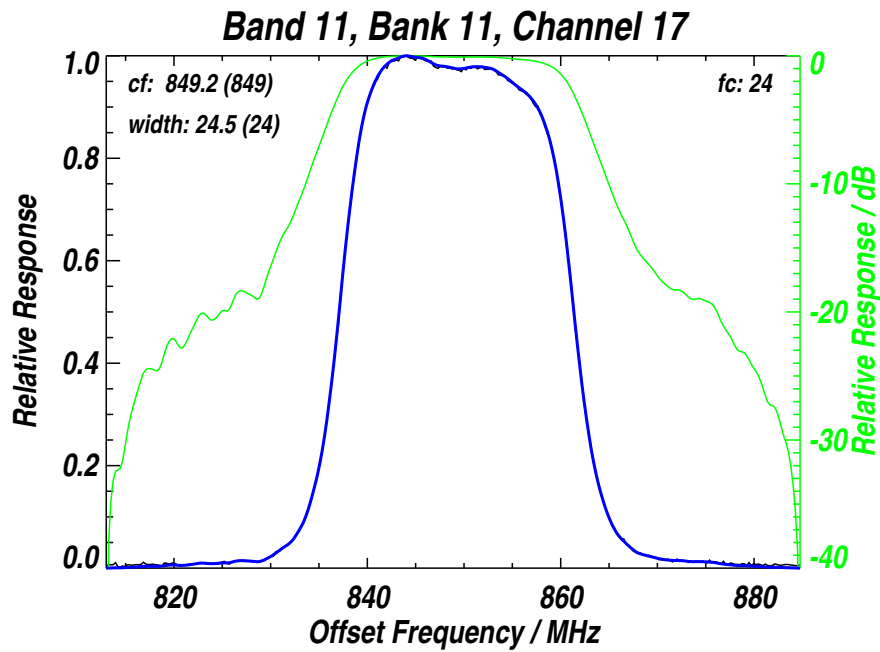


Figure H.328: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 17 to 20. See text for additional details.



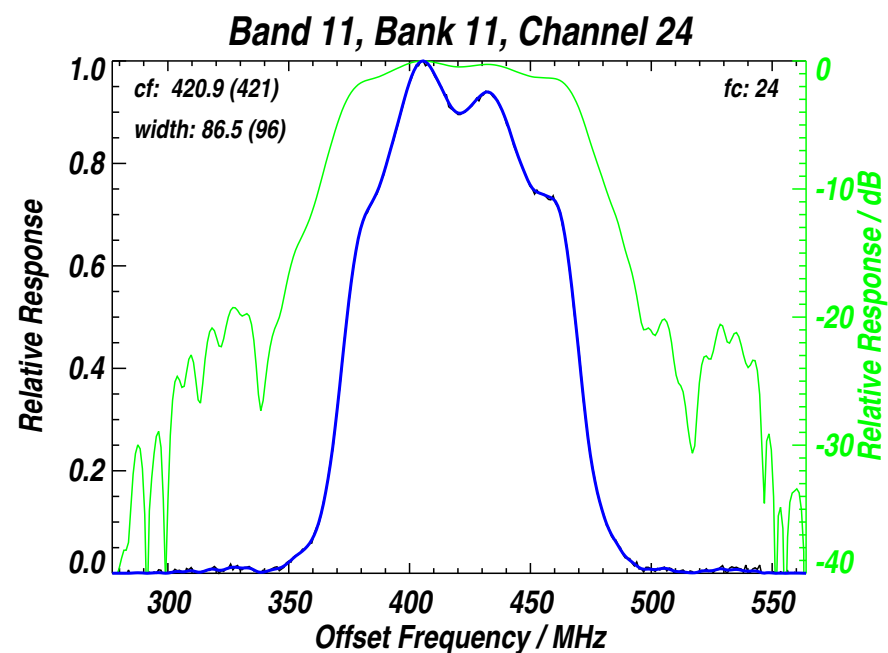
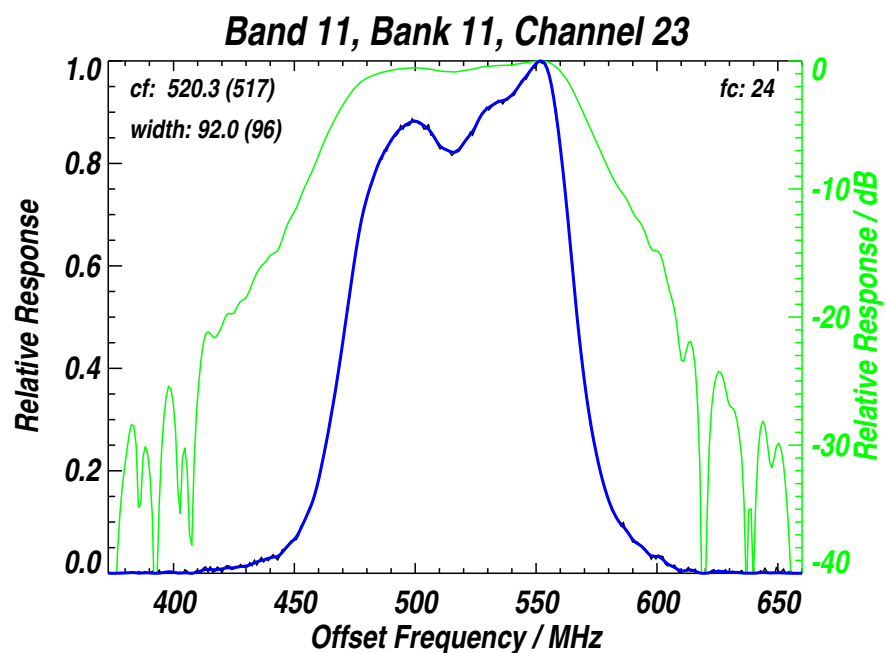
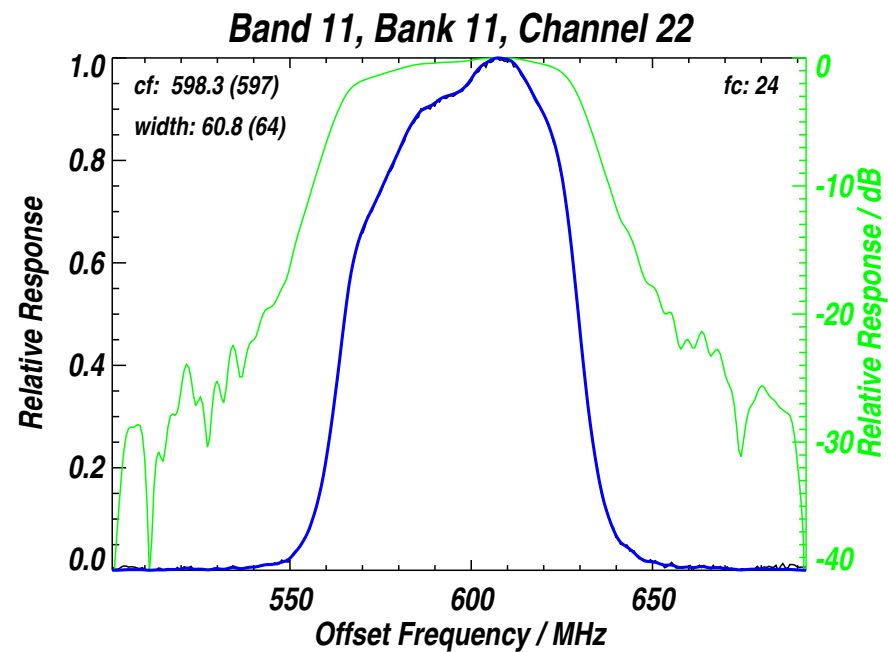
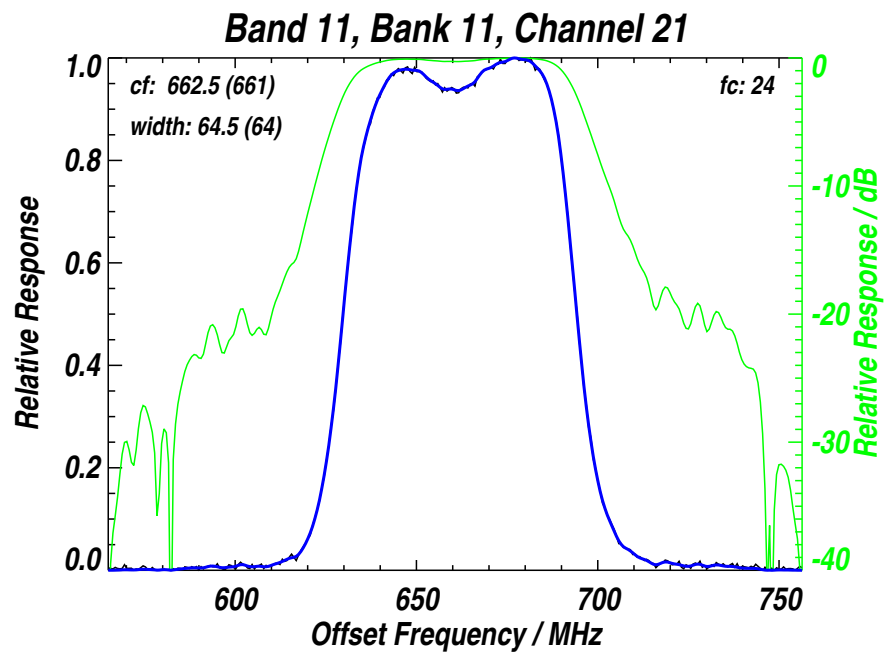
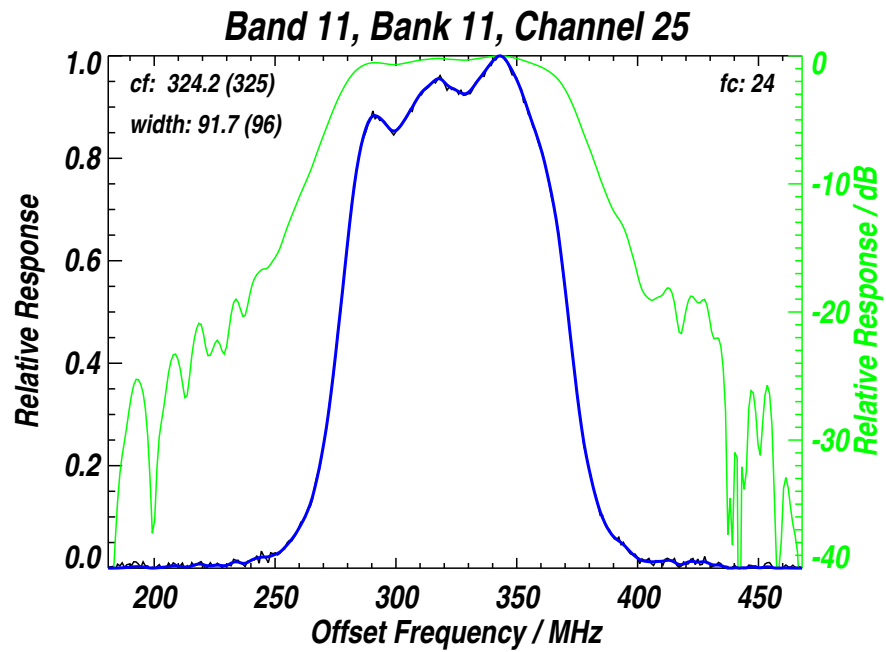


Figure H.329: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channels 21 to 24. See text for additional details.



**Band 11 (usb)**  
**Bank 11**  
**Origin = 649.293999984 GHz**

Figure H.330: Upper sideband front-end sweep data for Band 11 taken via Filterbank 11, channel 25. See text for additional details.

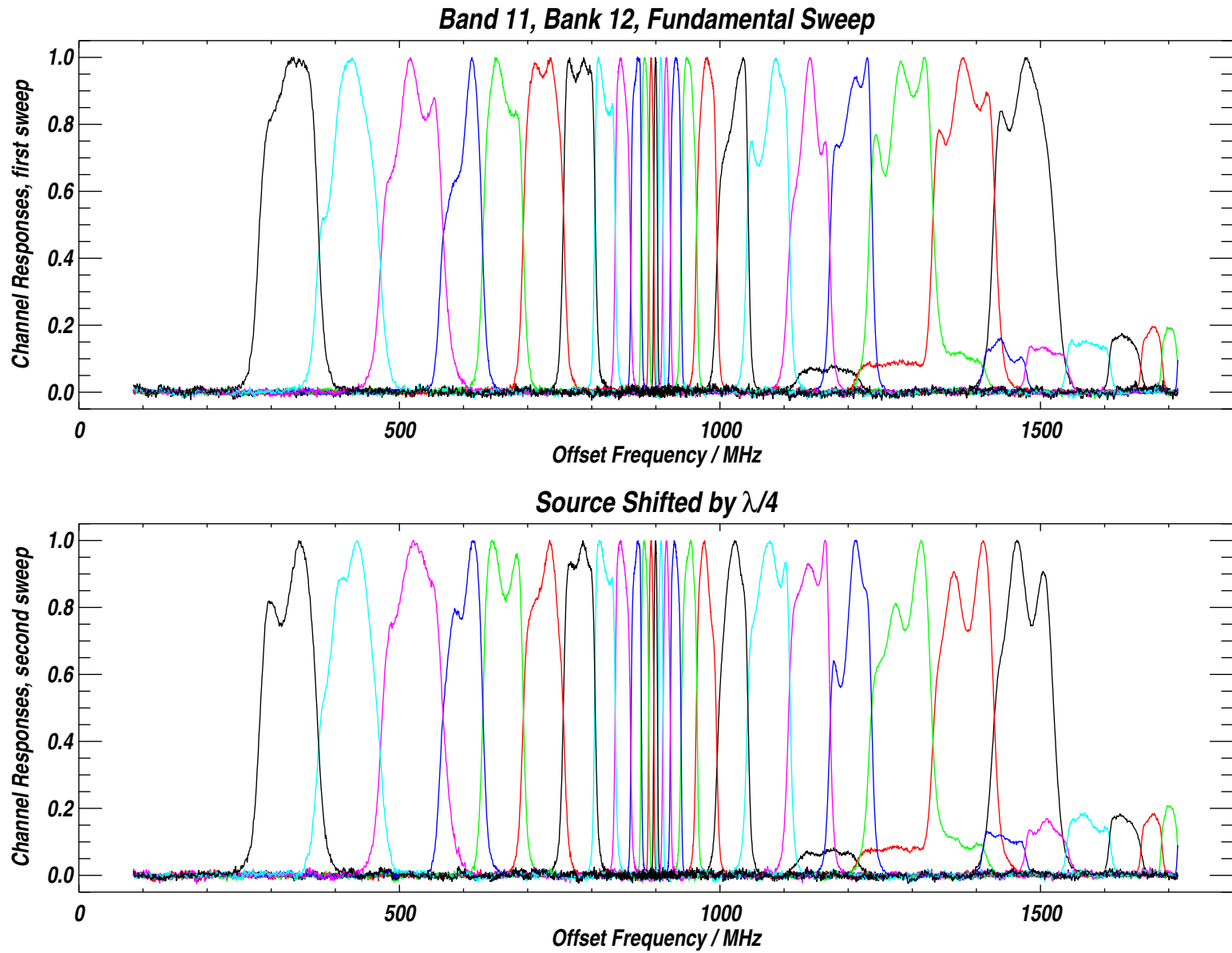


Figure H.331: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12. See text for additional details.

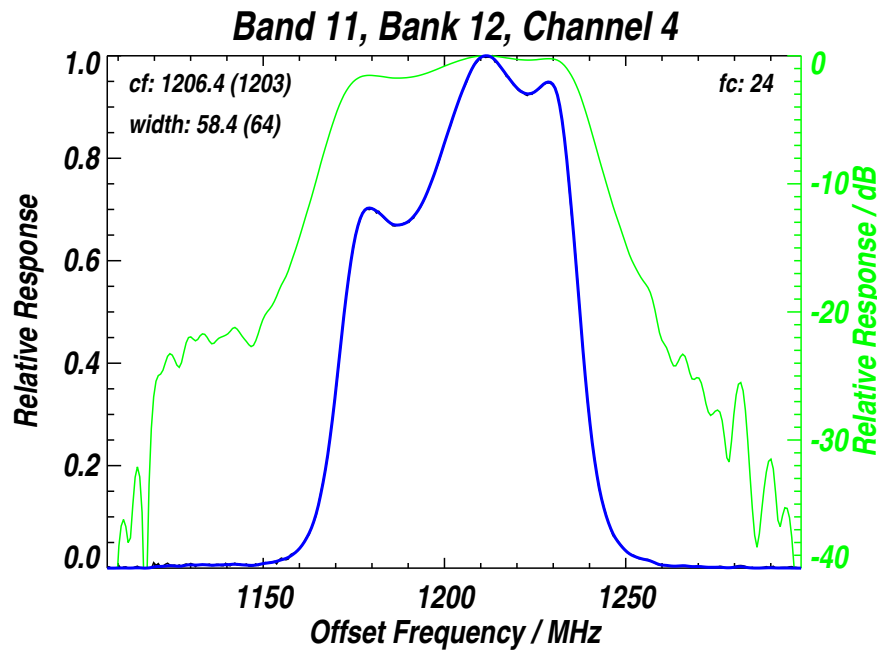
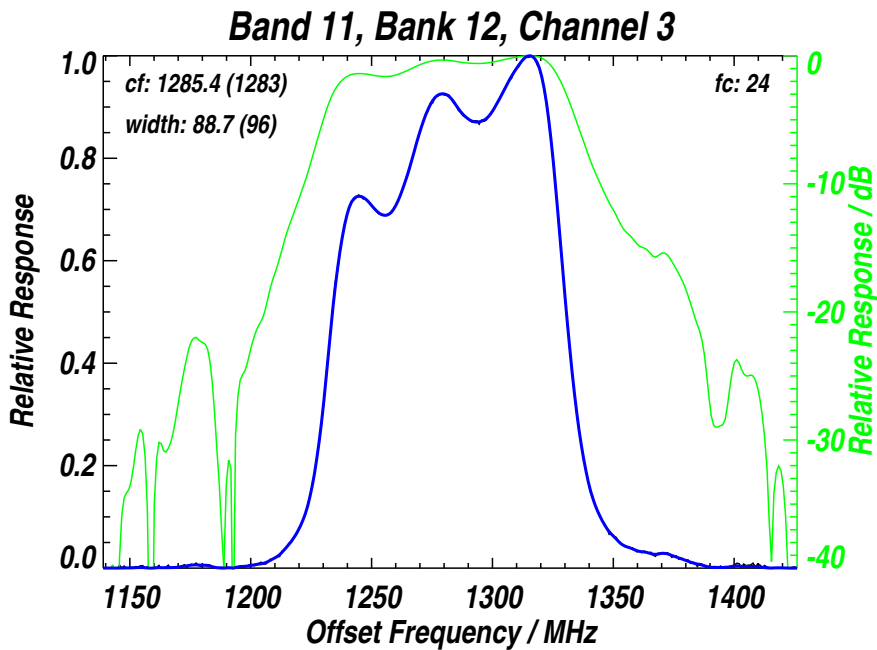
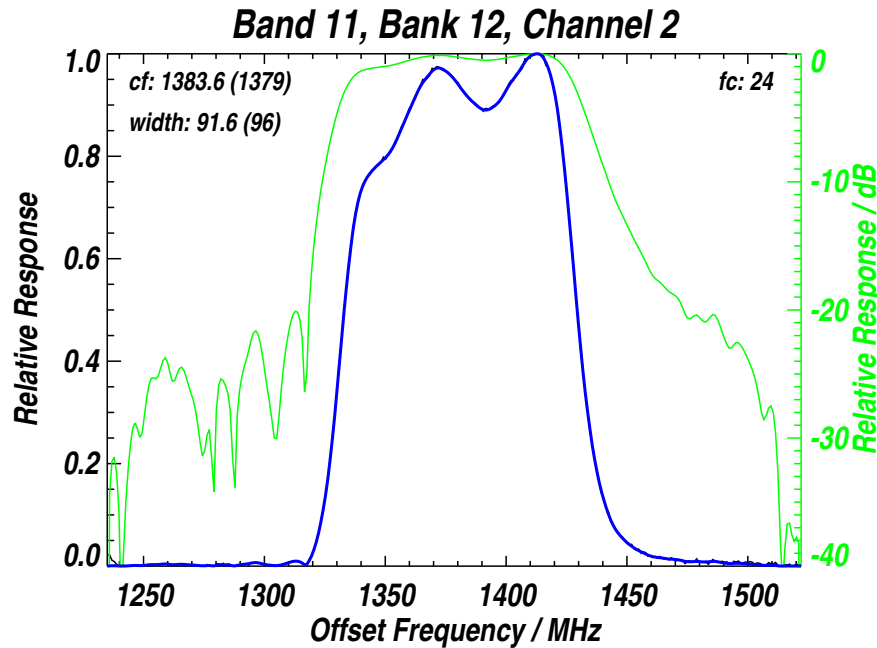
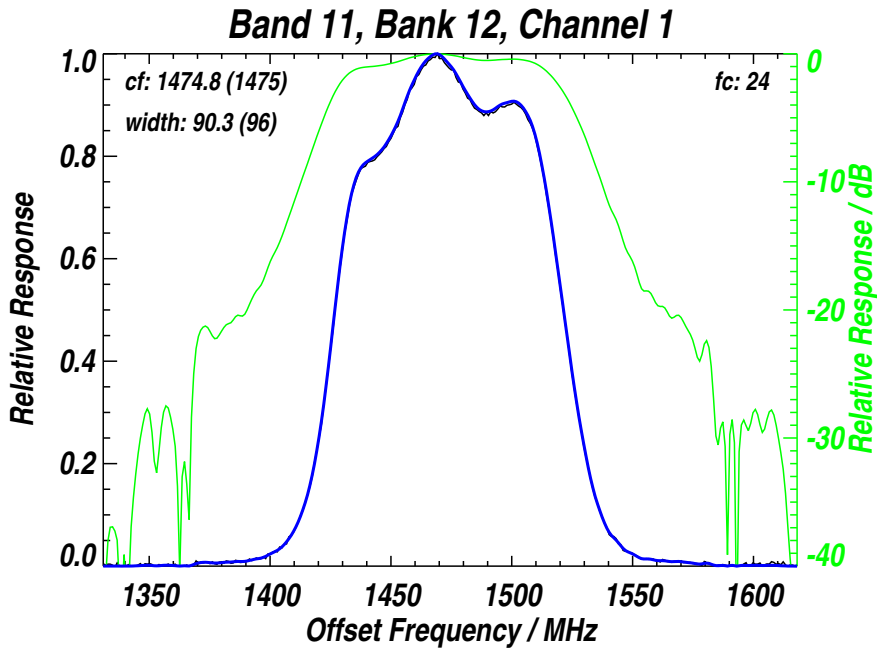


Figure H.332: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 1 to 4. See text for additional details.

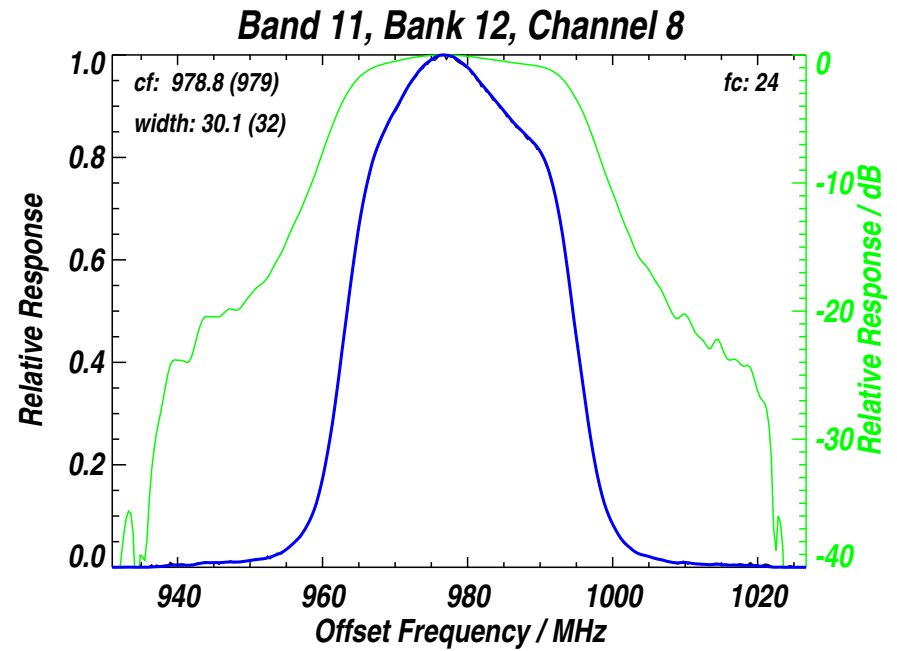
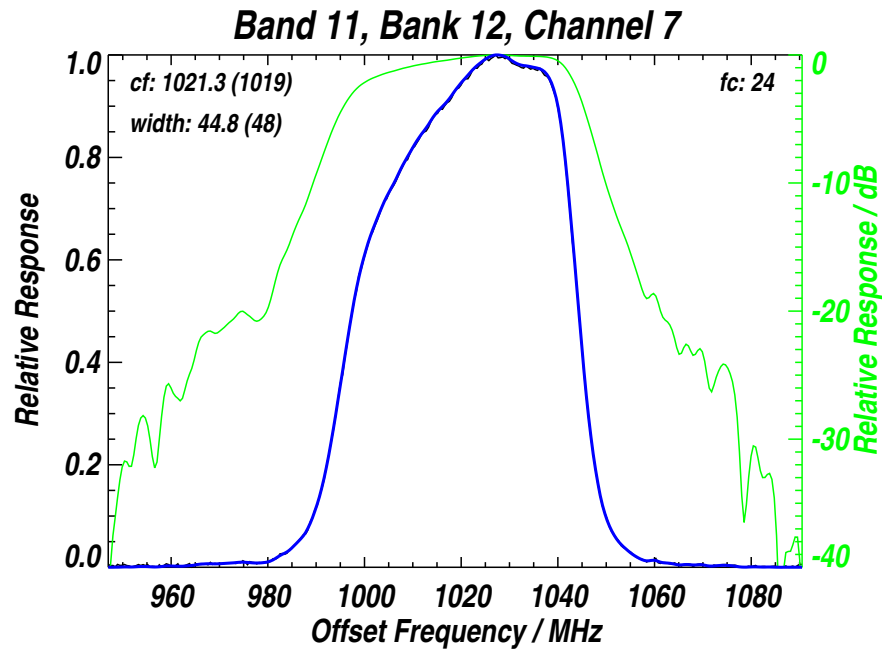
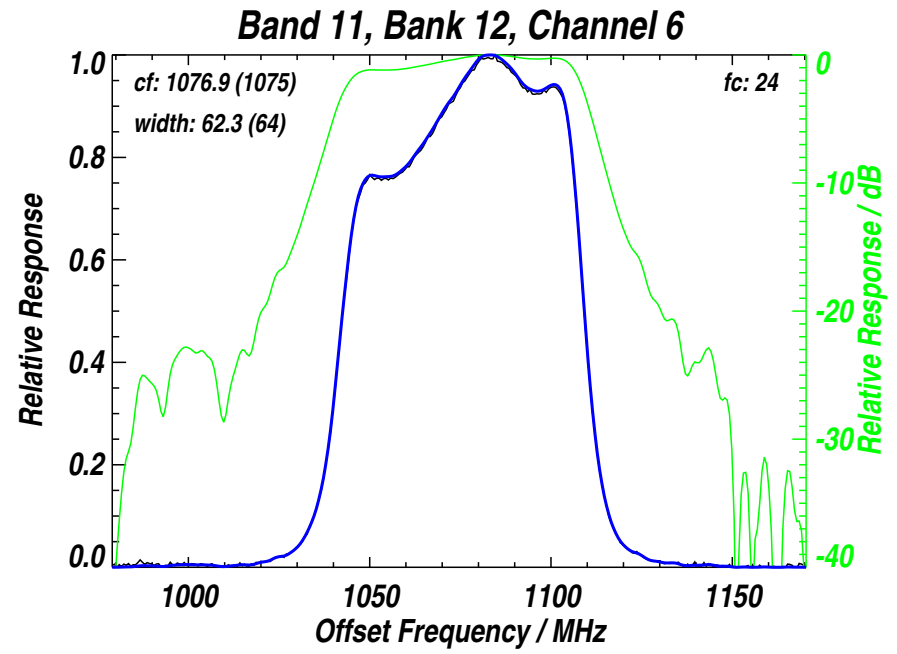
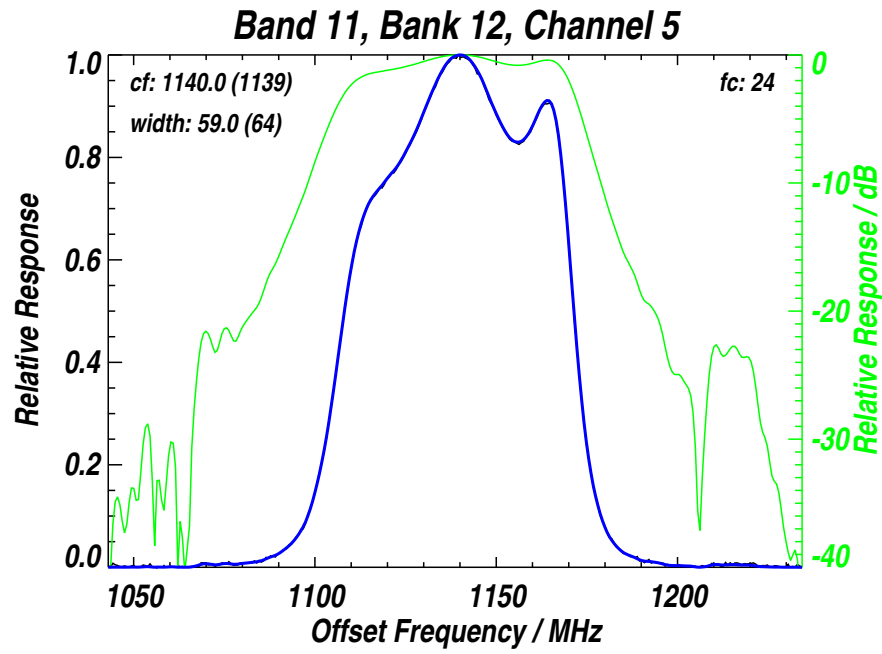


Figure H.333: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 5 to 8. See text for additional details.

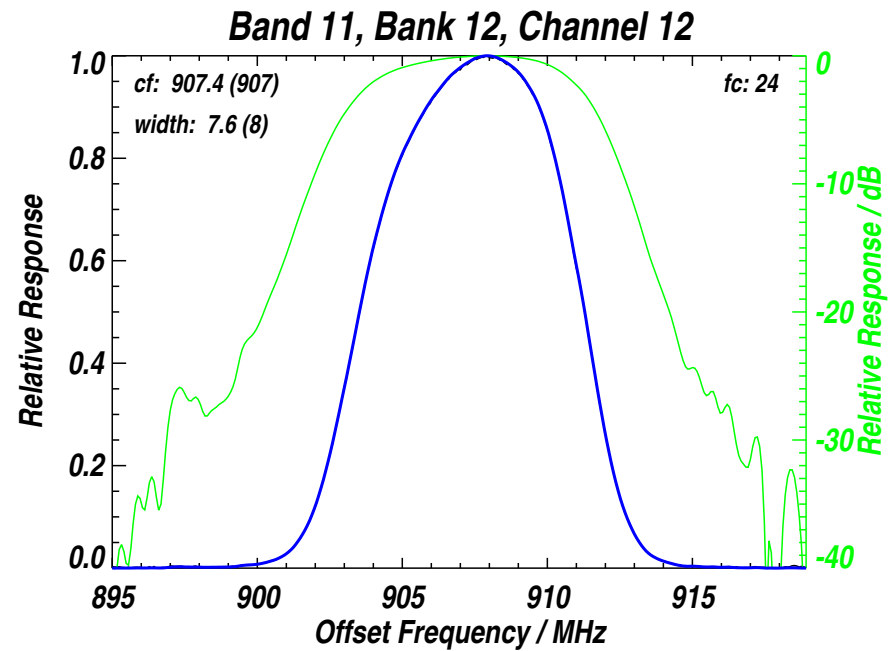
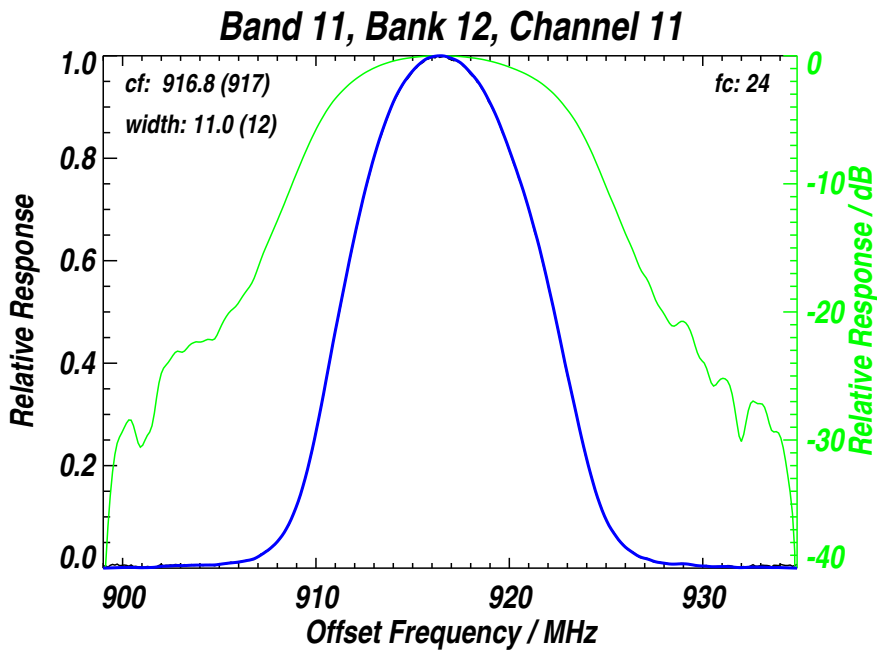
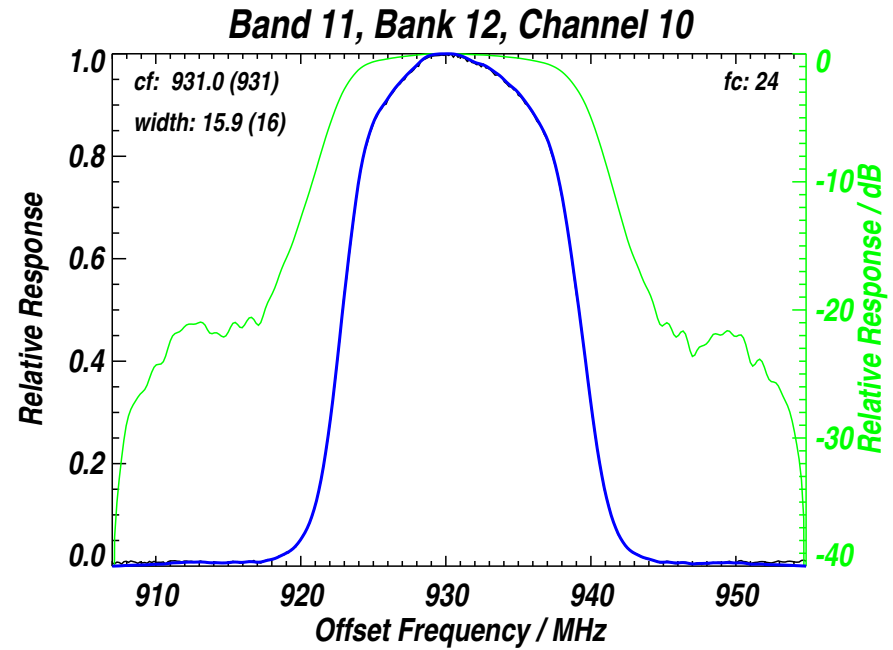
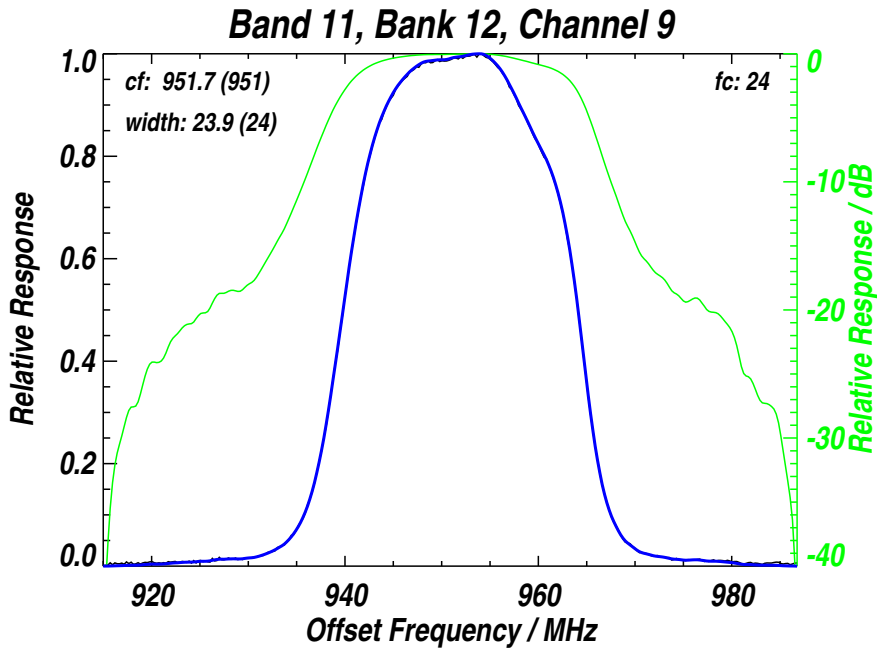


Figure H.334: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 9 to 12. See text for additional details.

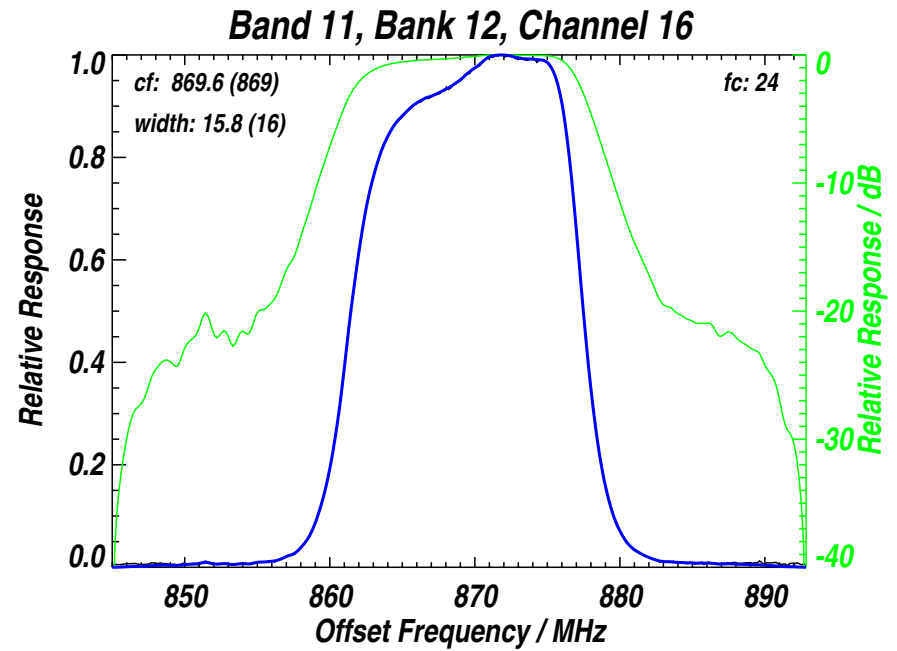
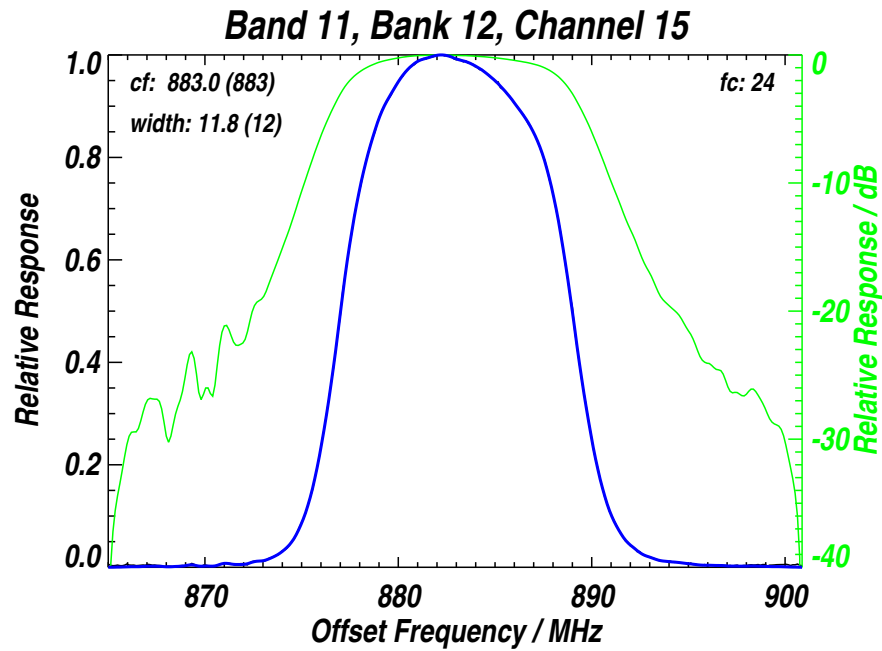
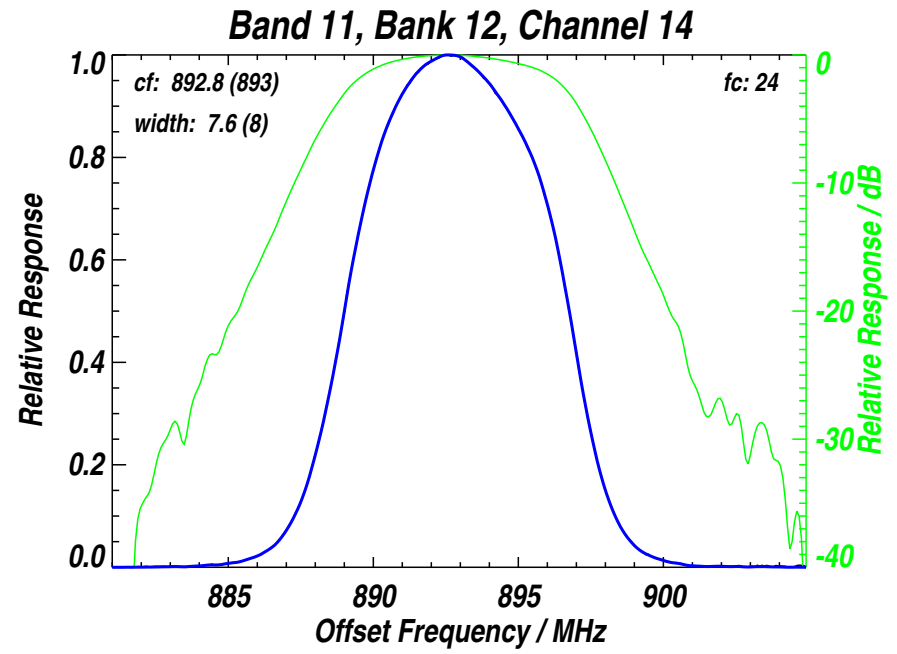
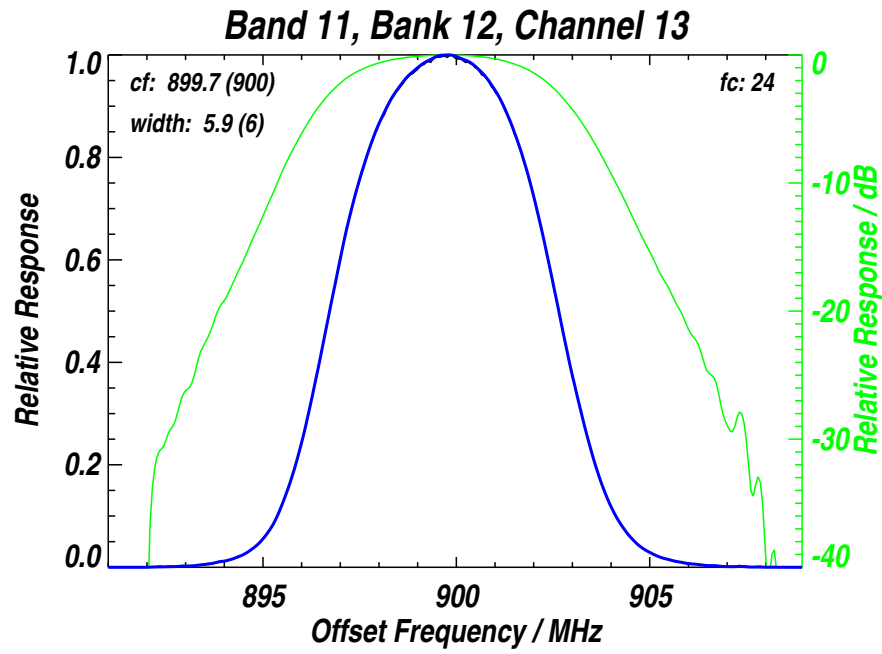


Figure H.335: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 13 to 16. See text for additional details.

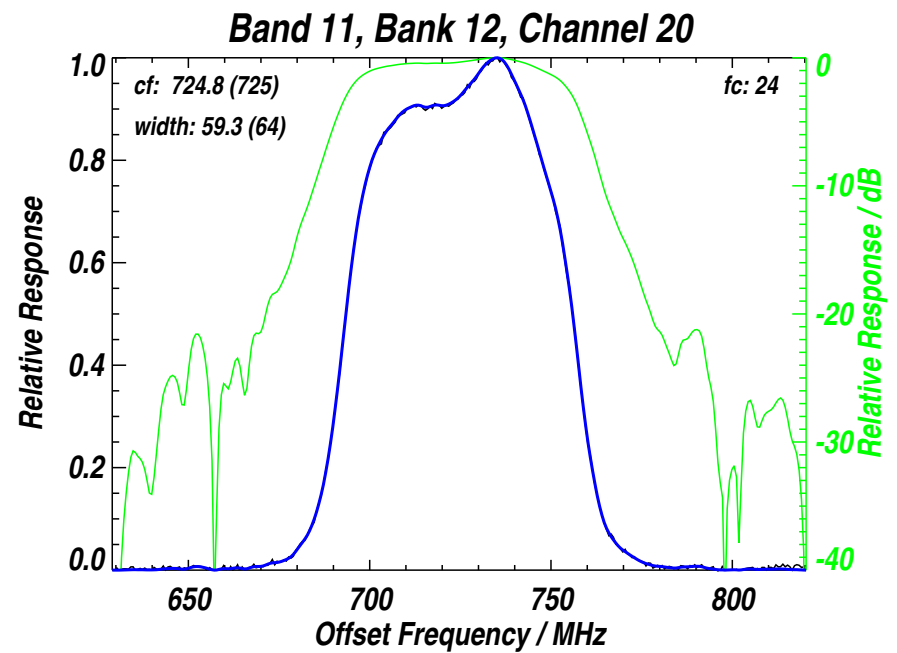
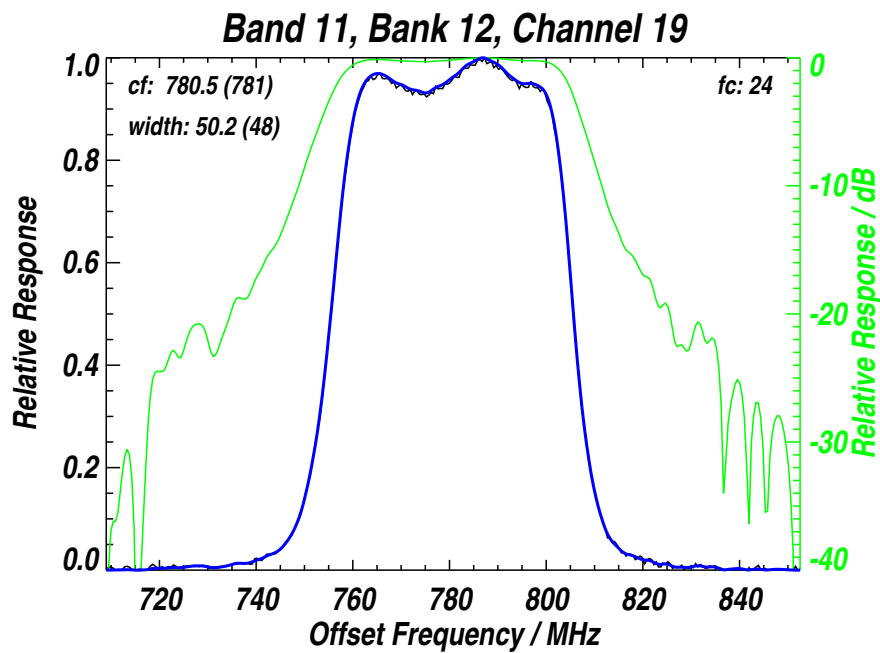
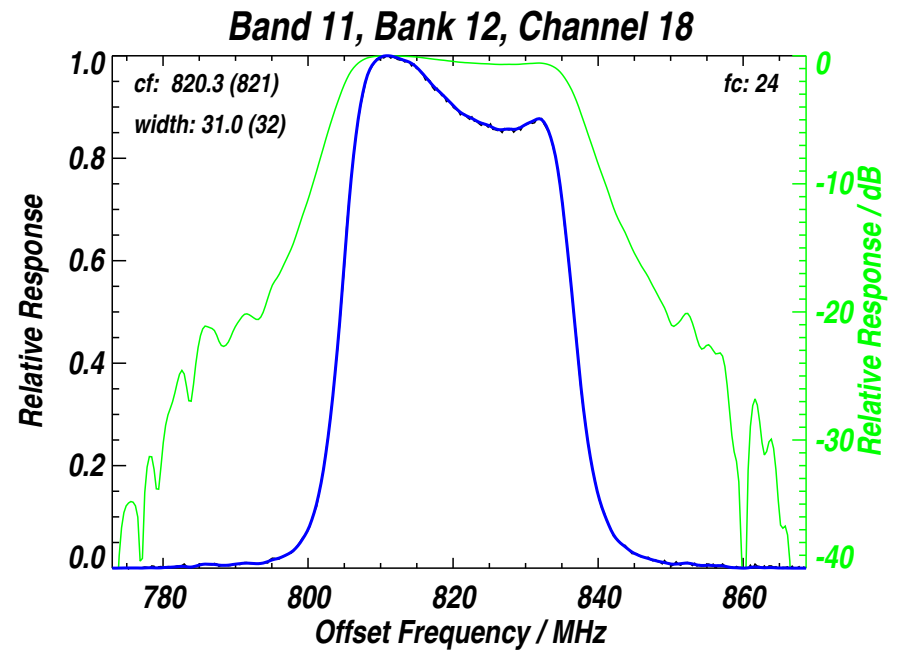
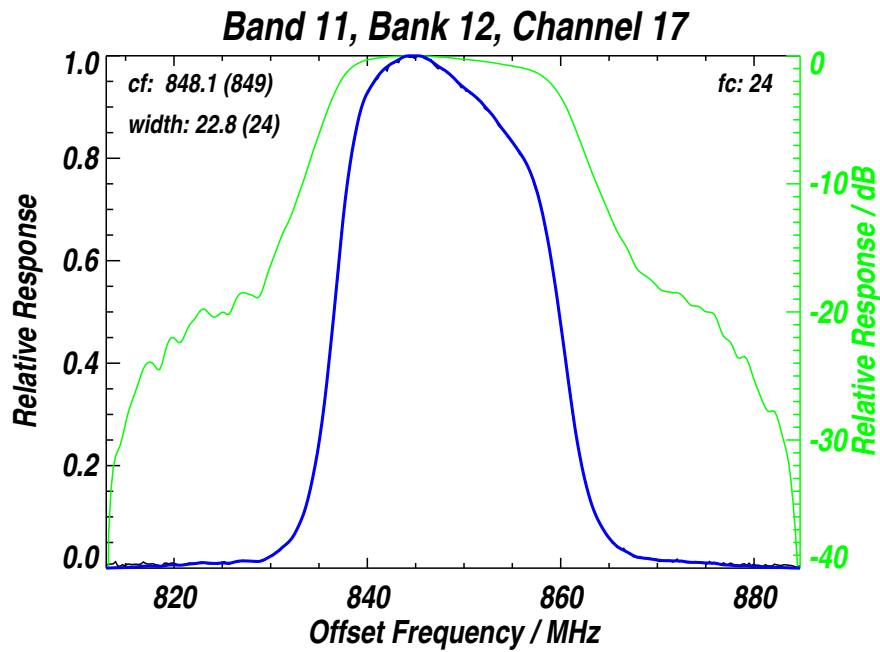


Figure H.336: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 17 to 20. See text for additional details.



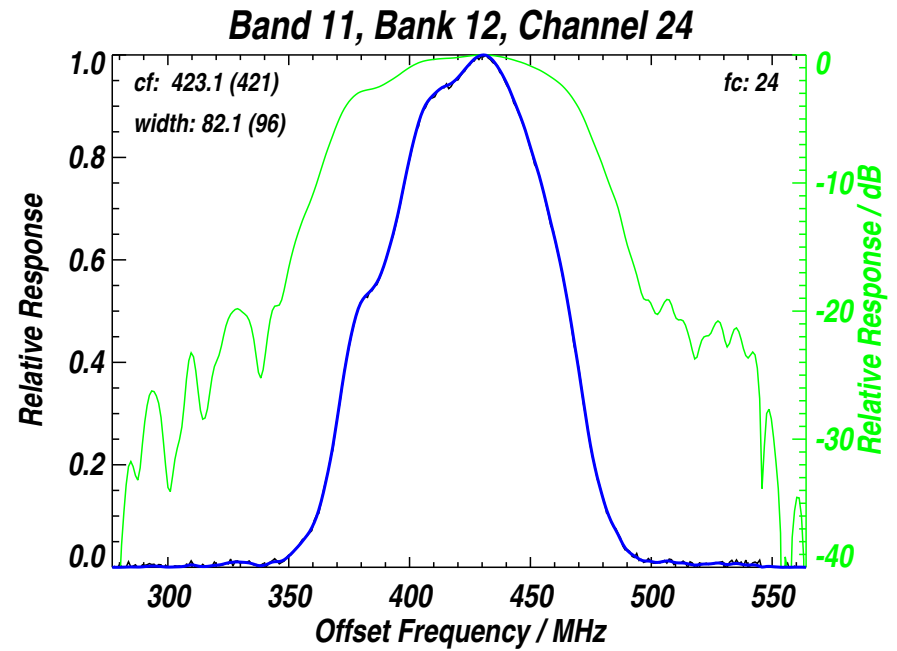
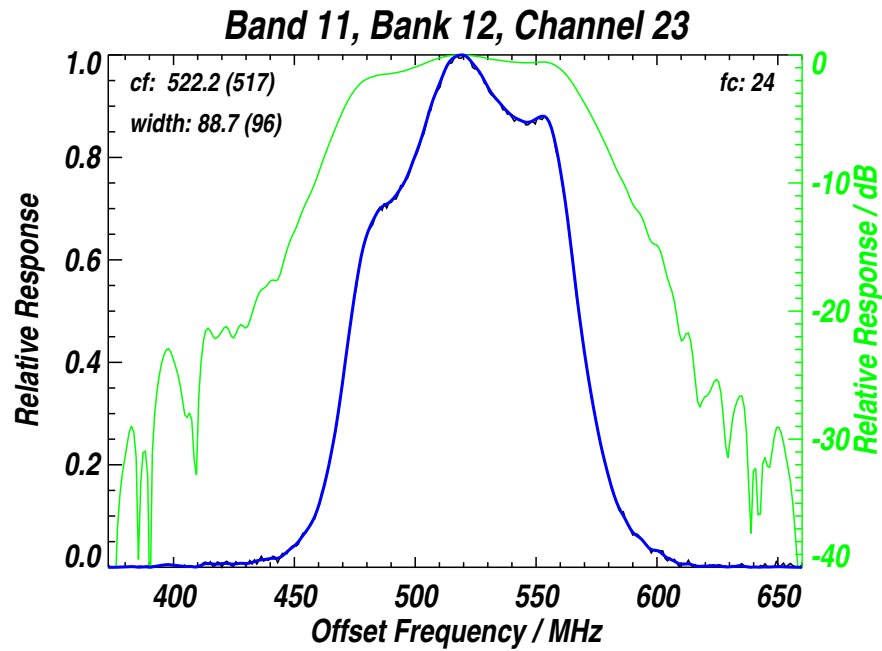
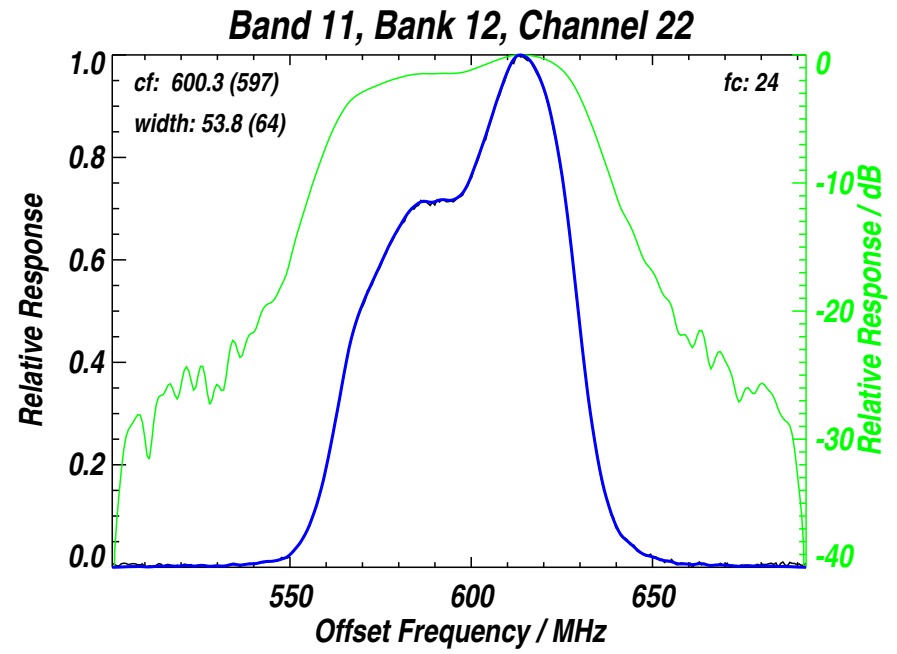
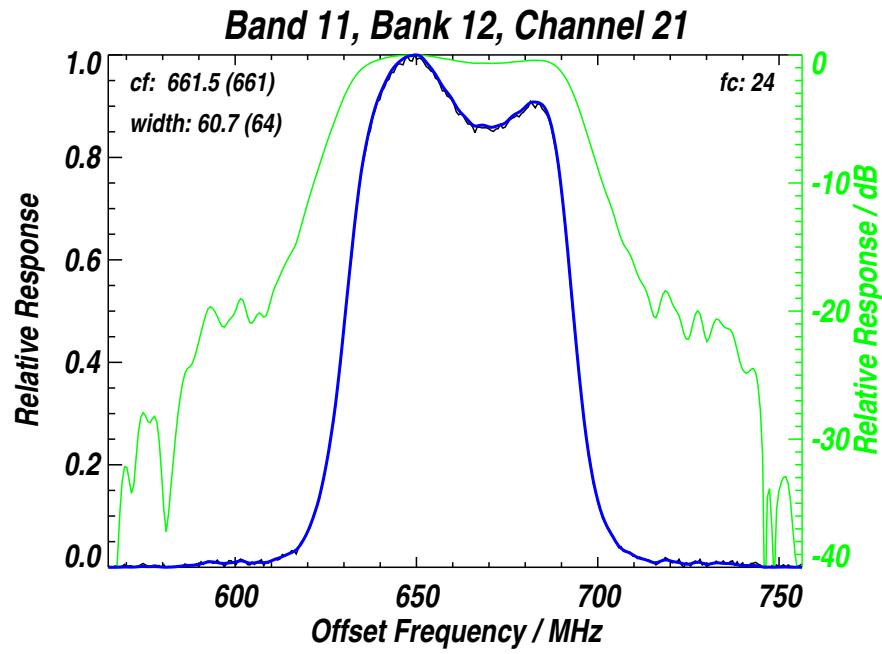
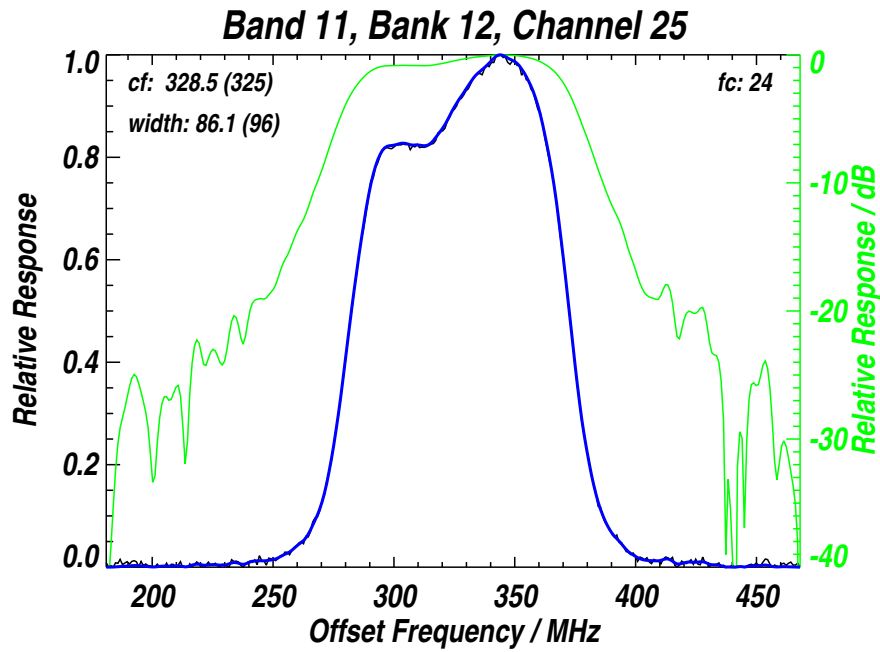


Figure H.337: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 11 (usb)**  
**Bank 12**  
**Origin = 649.293999984 GHz**

Figure H.338: Upper sideband front-end sweep data for Band 11 taken via Filterbank 12, channel 25. See text for additional details.

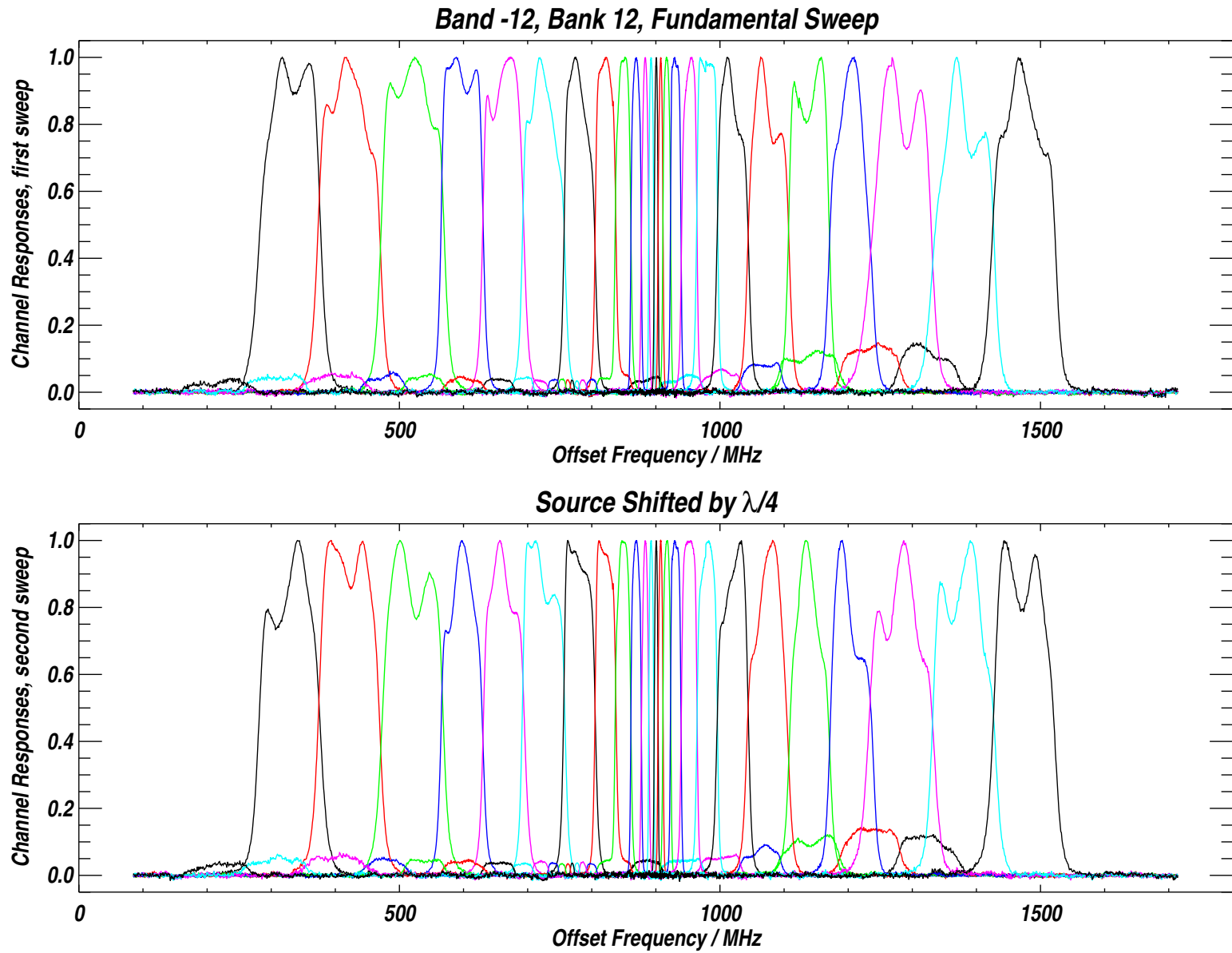


Figure H.339: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12. See text for additional details.

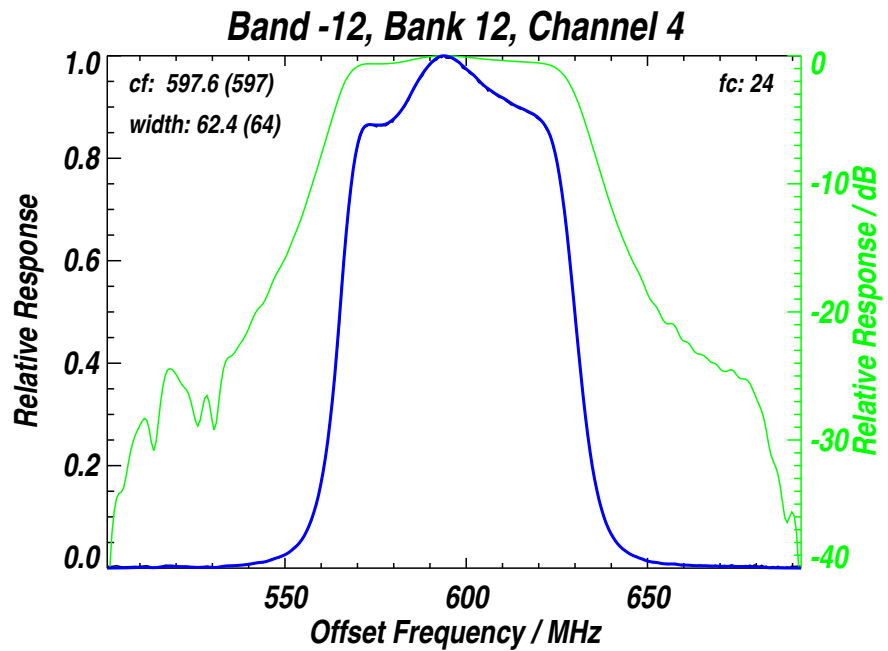
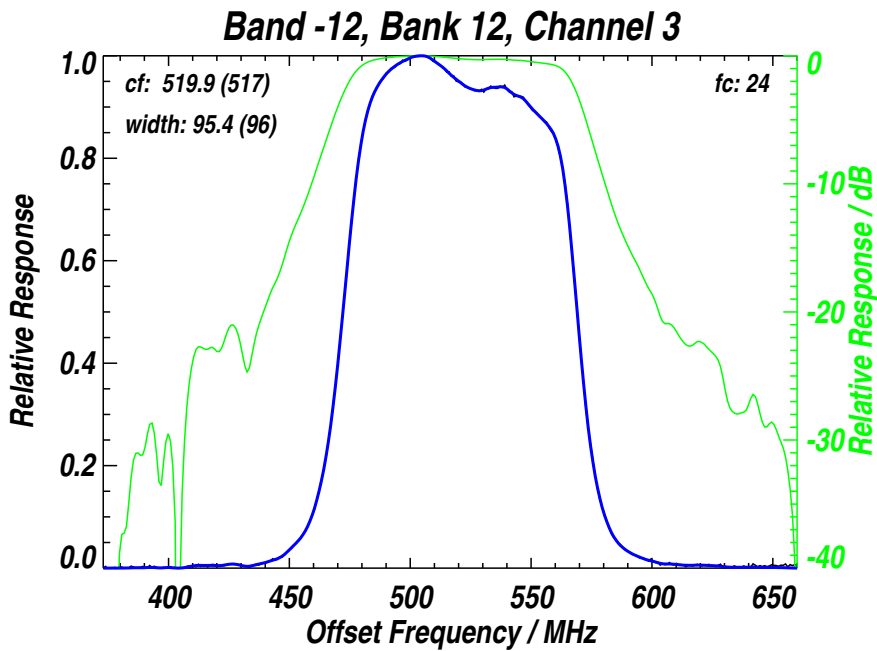
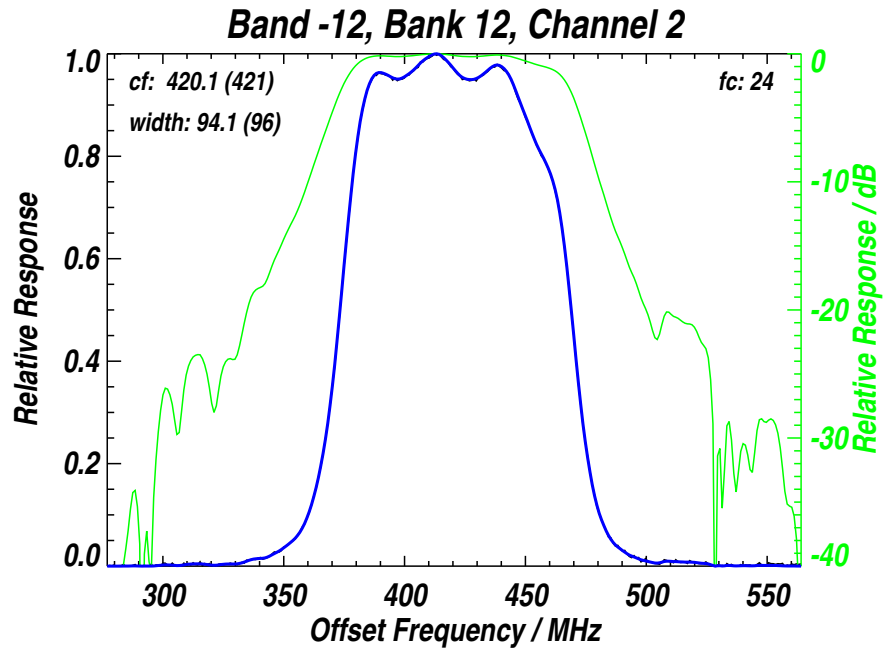
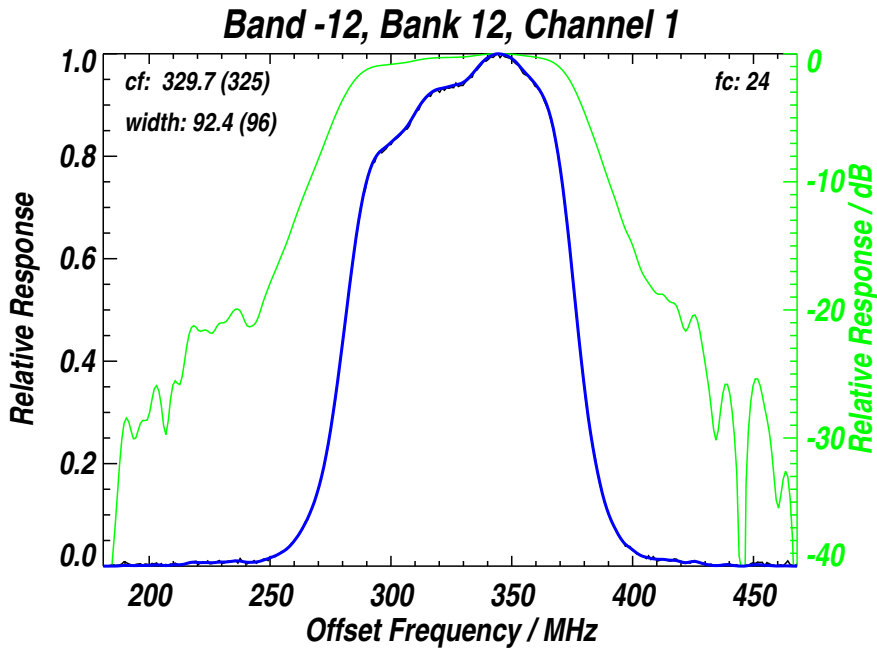


Figure H.340: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 1 to 4. See text for additional details.

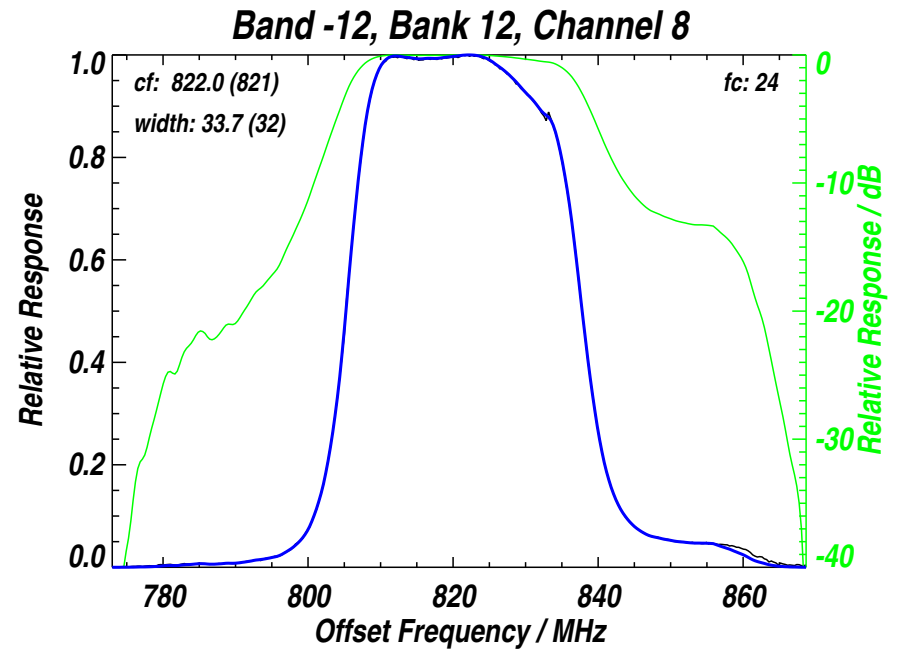
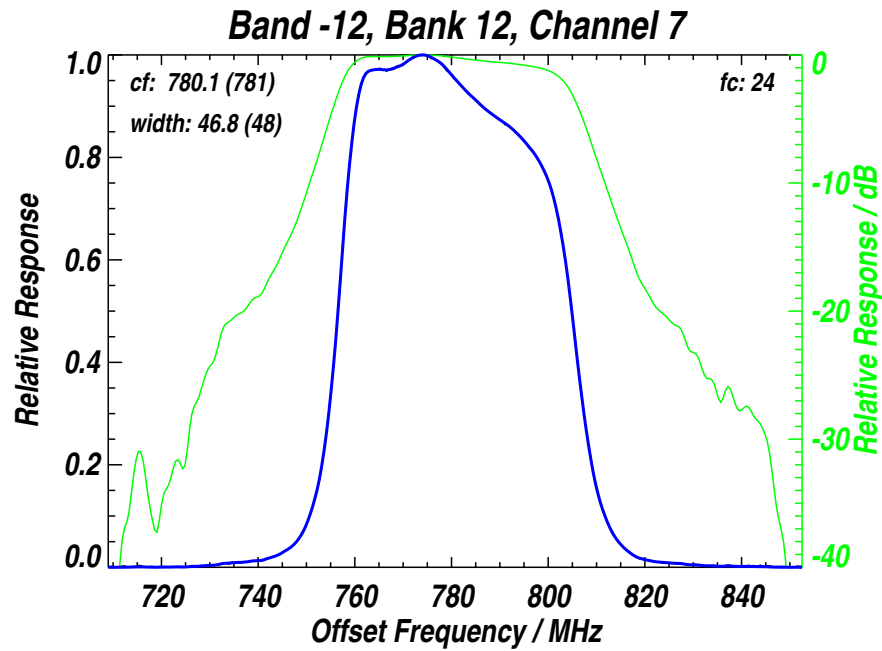
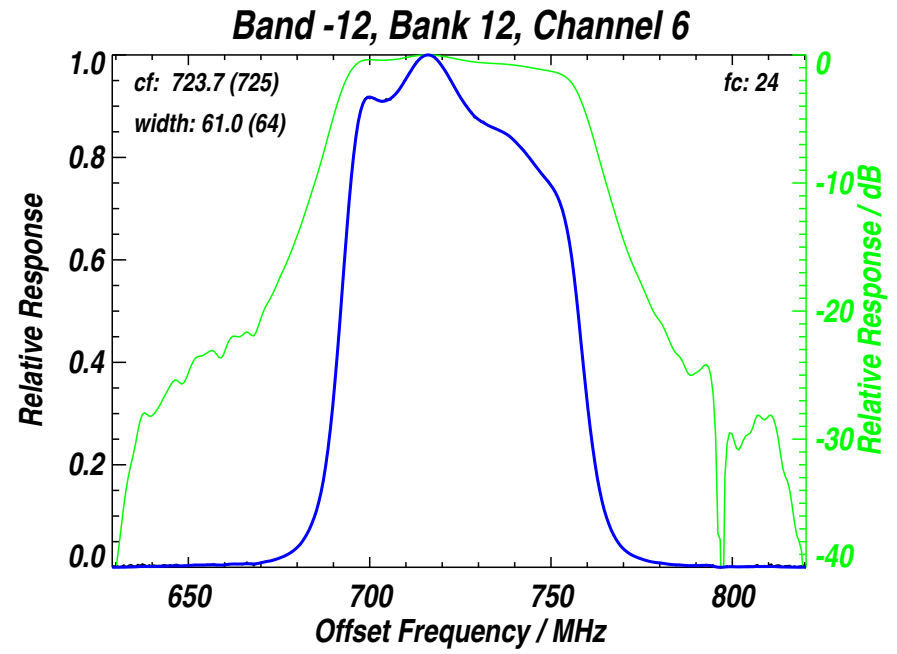
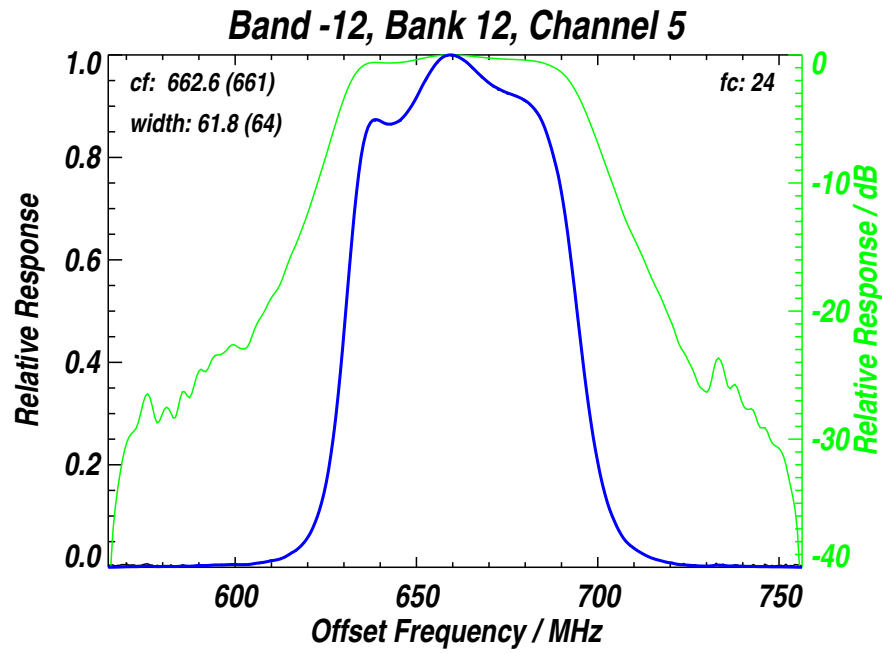


Figure H.341: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 5 to 8. See text for additional details.

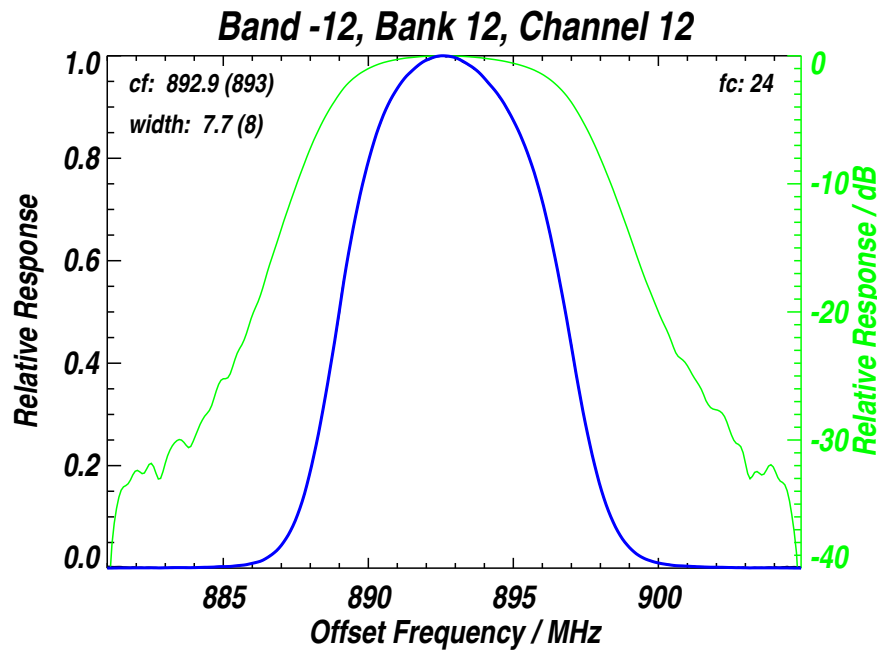
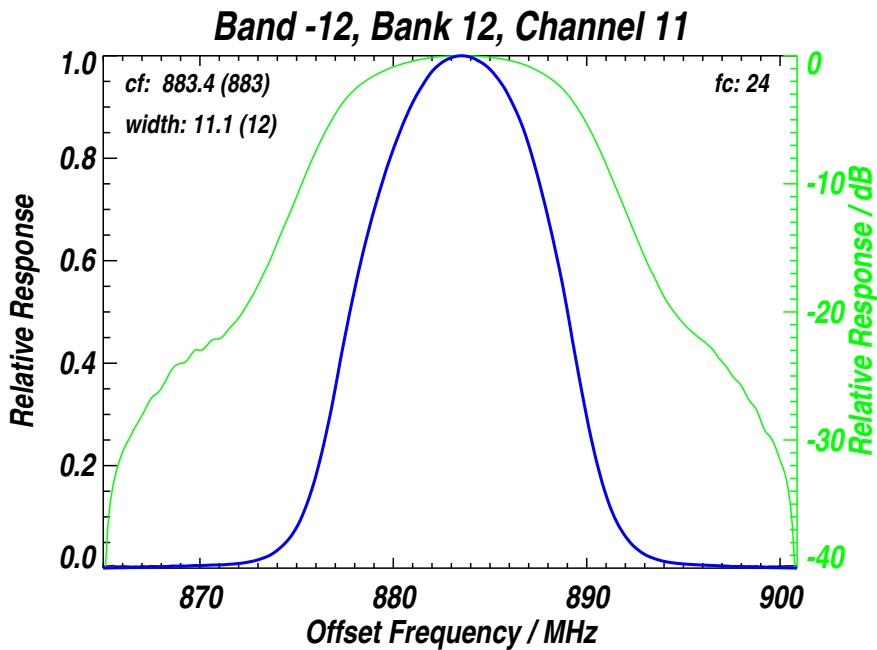
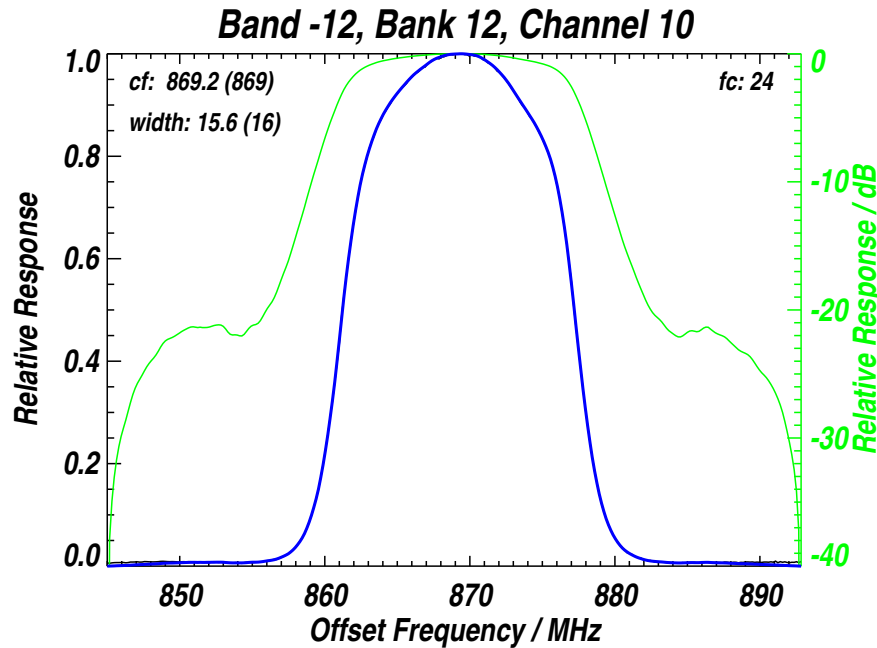
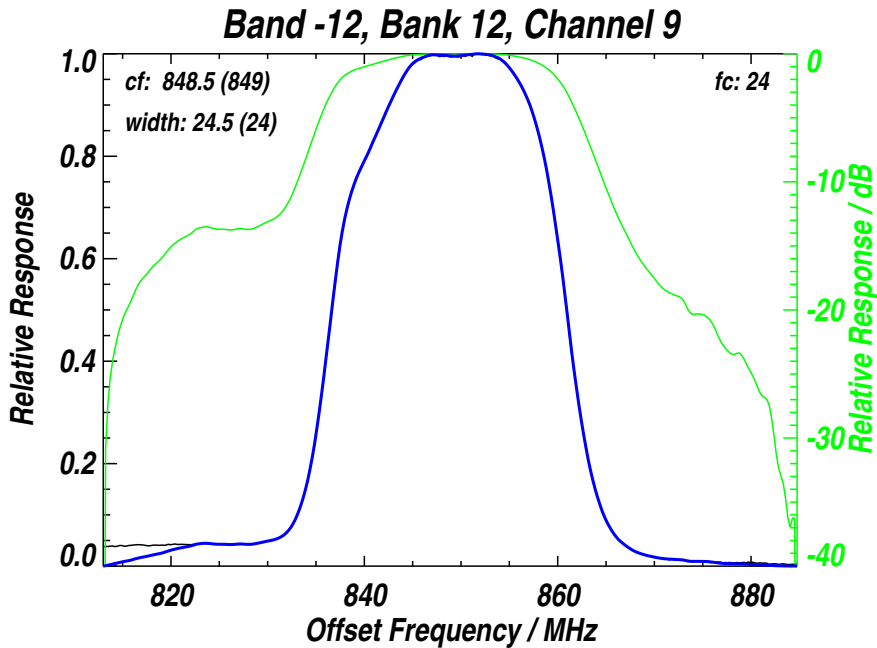


Figure H.342: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 9 to 12. See text for additional details.

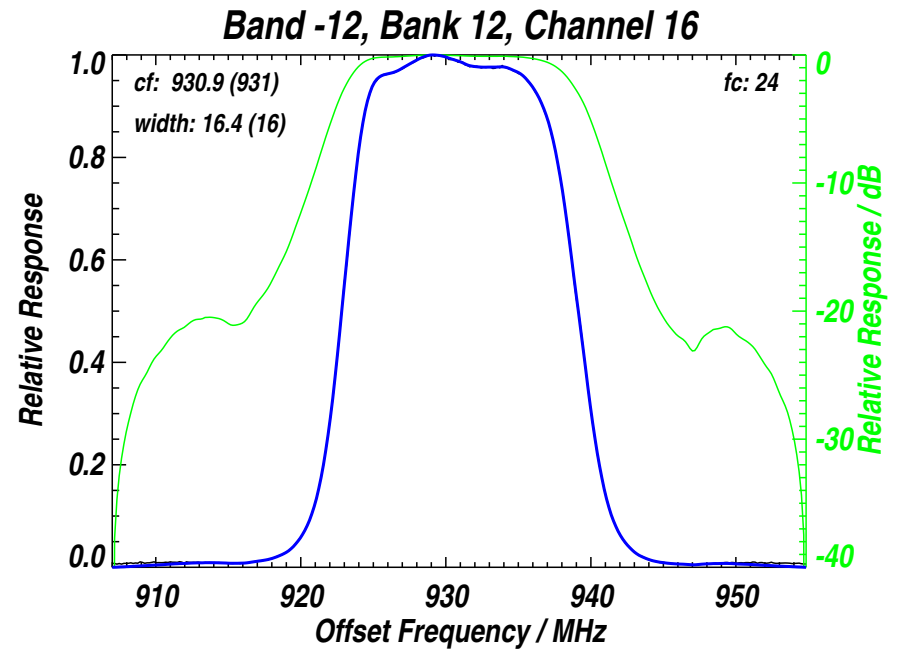
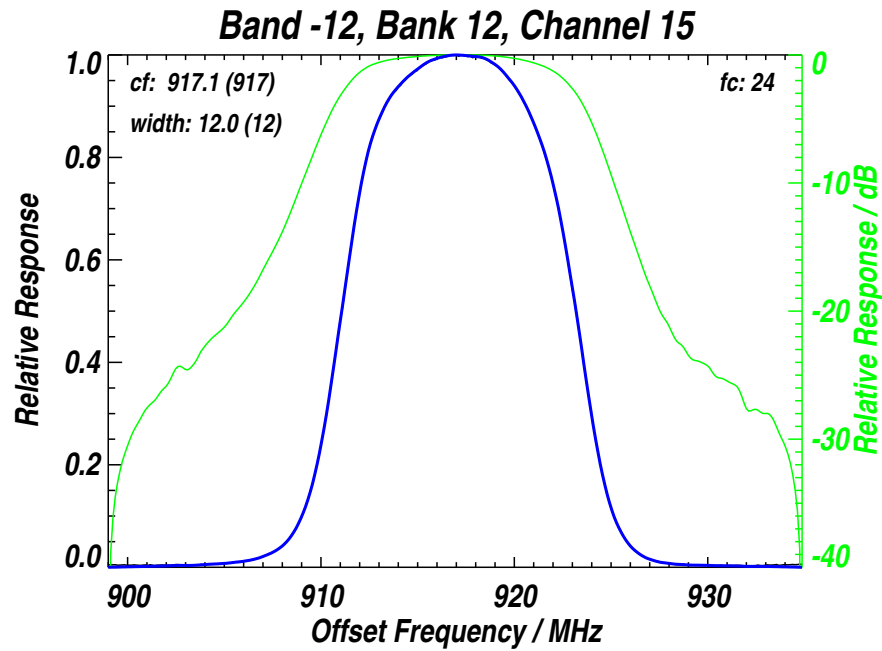
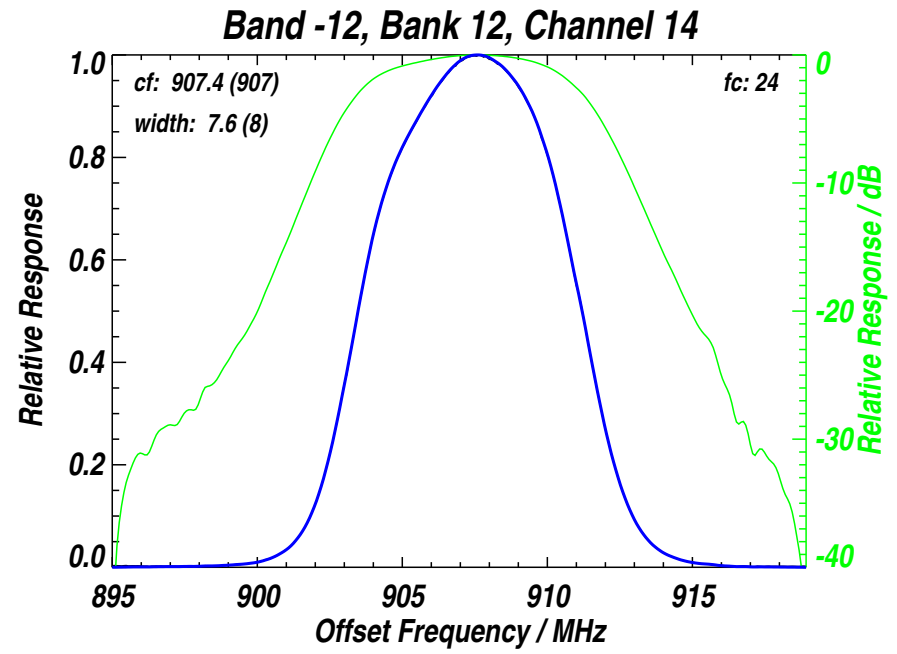
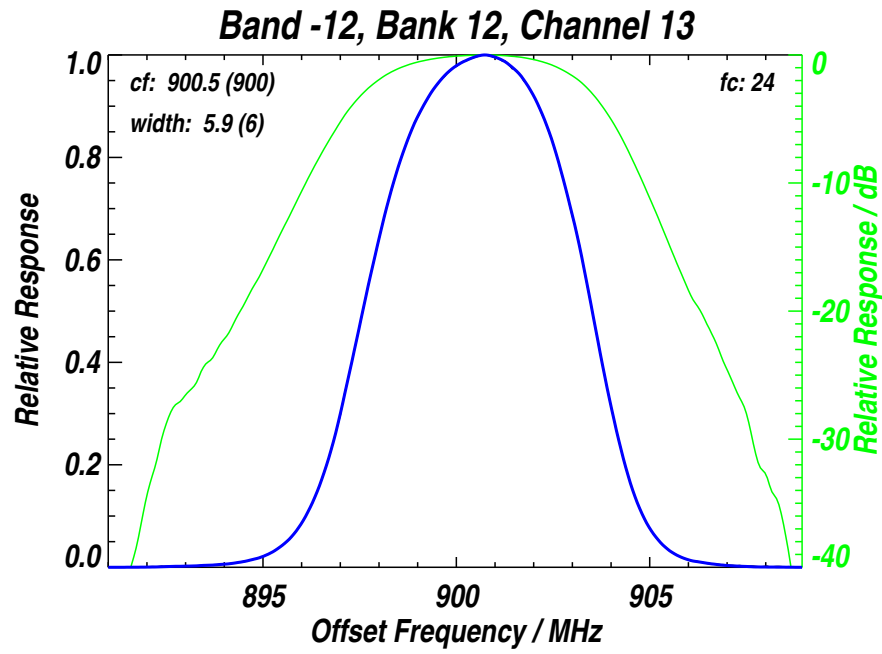


Figure H.343: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 13 to 16. See text for additional details.

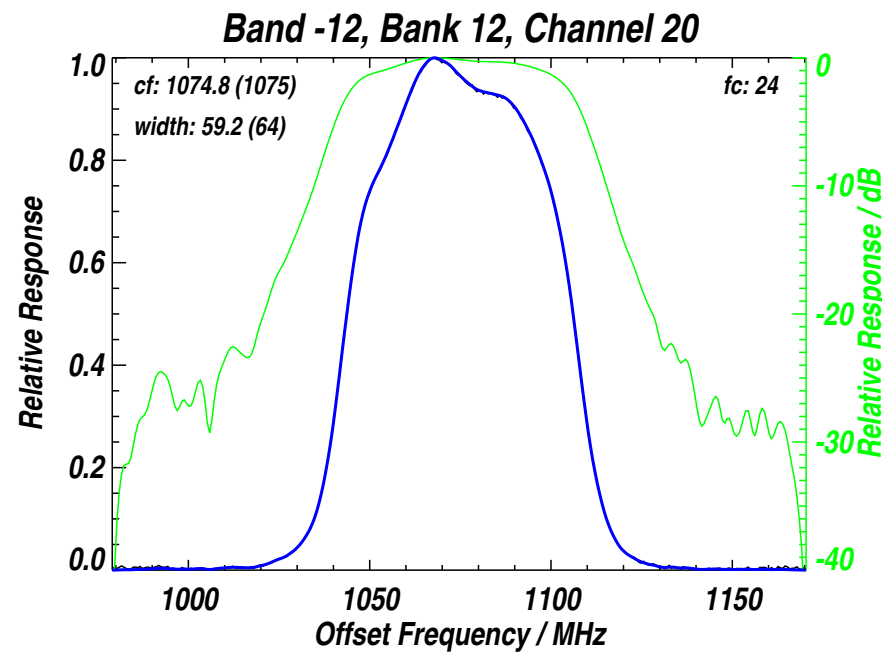
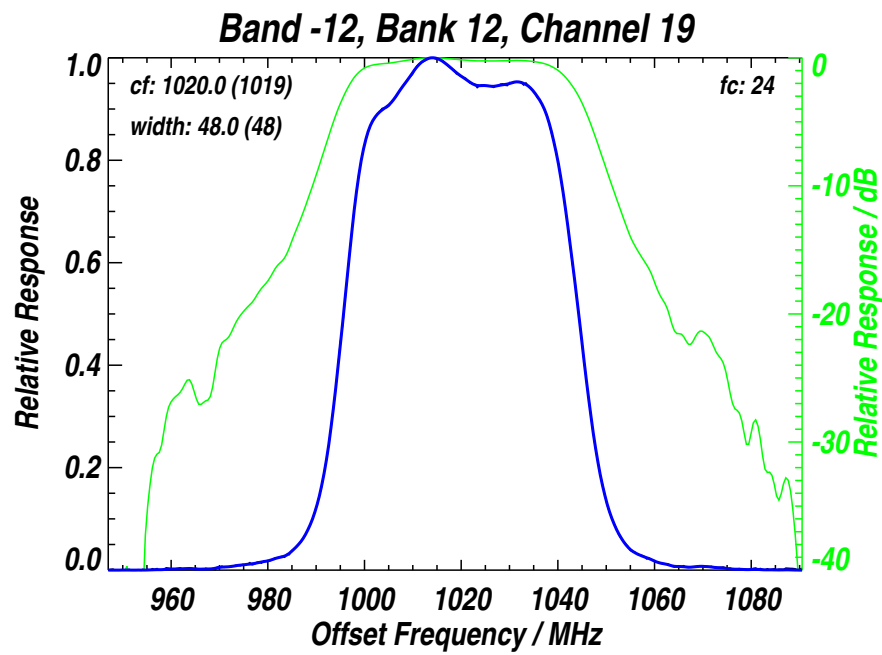
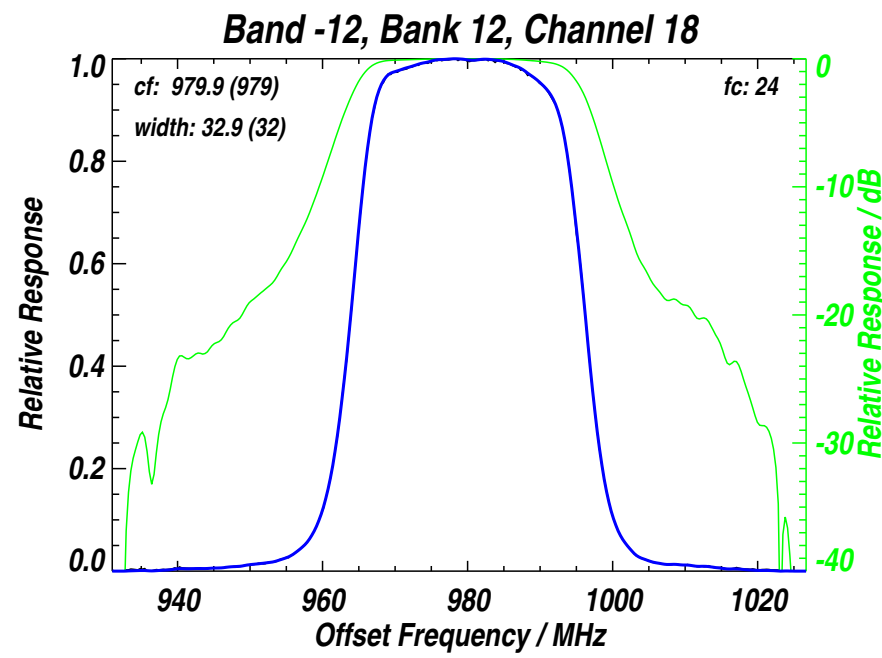
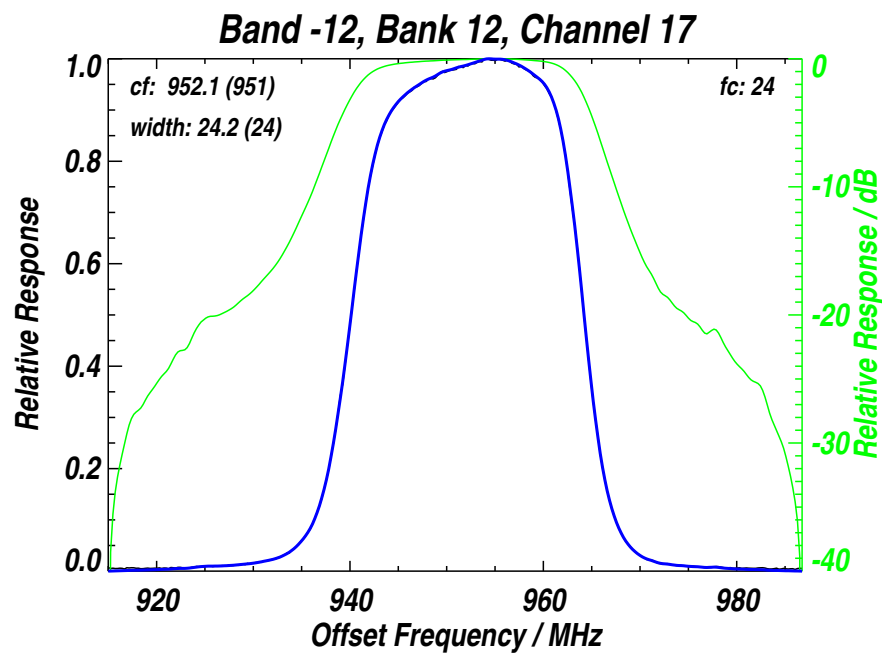


Figure H.344: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 17 to 20. See text for additional details.



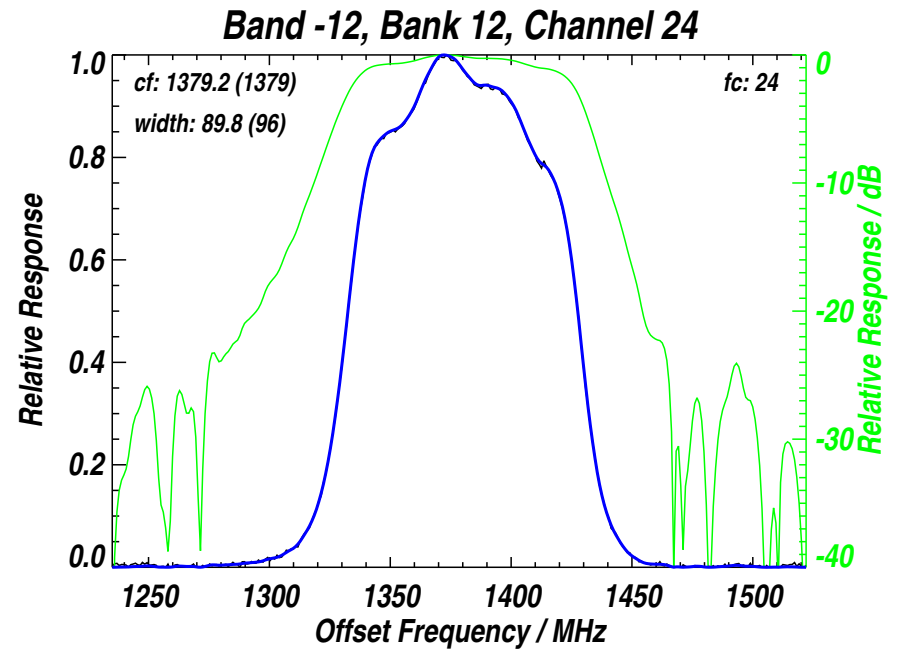
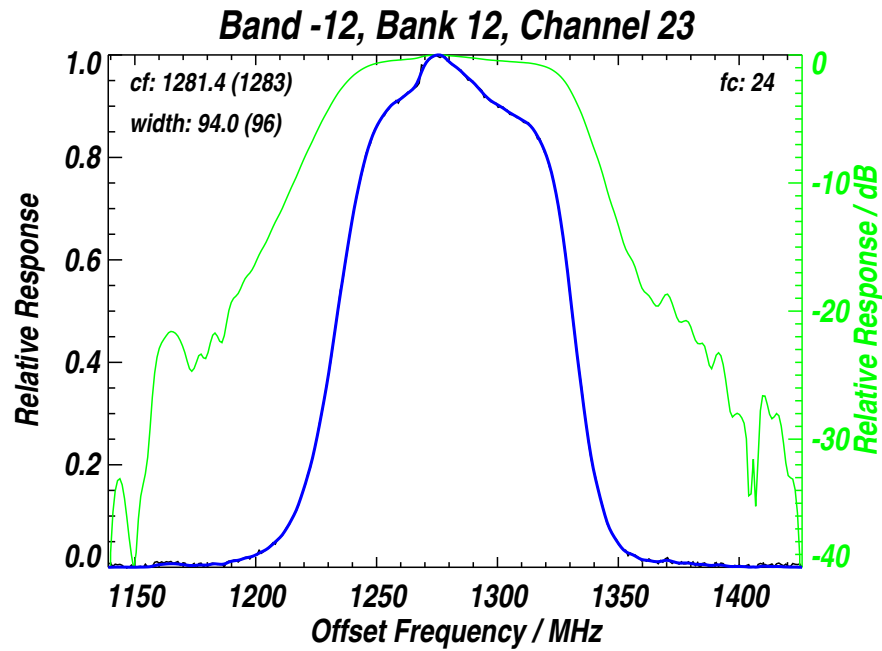
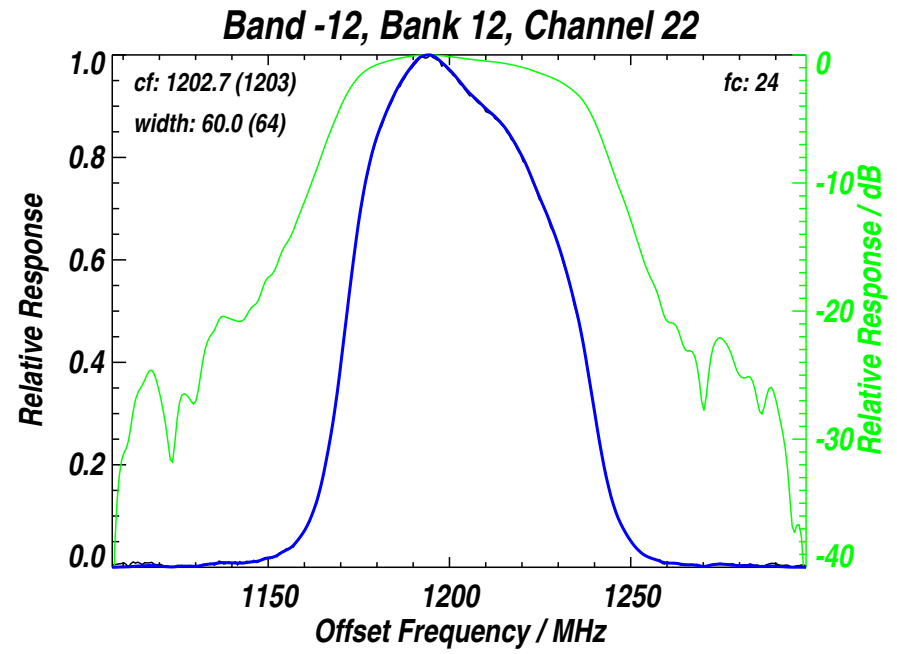
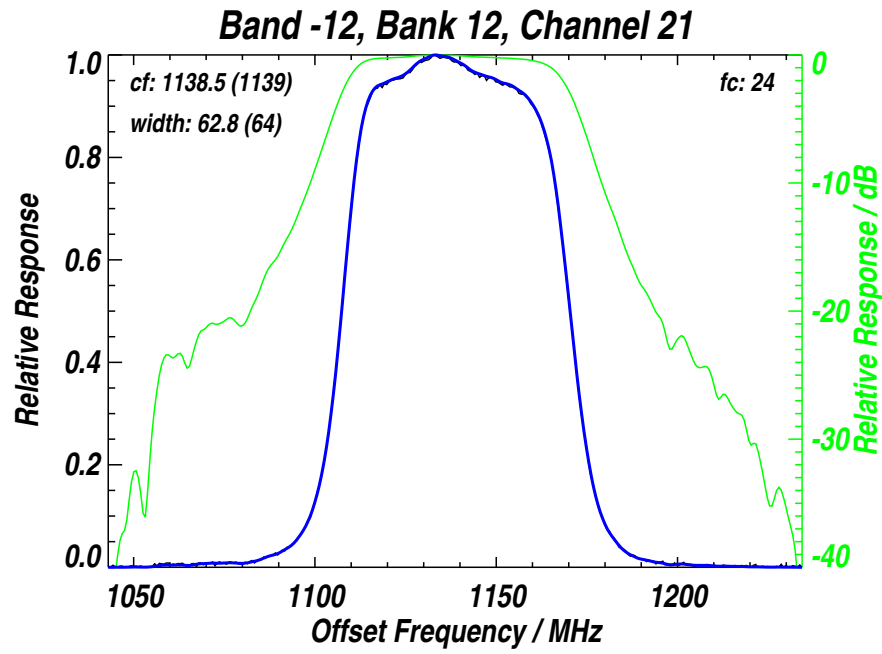
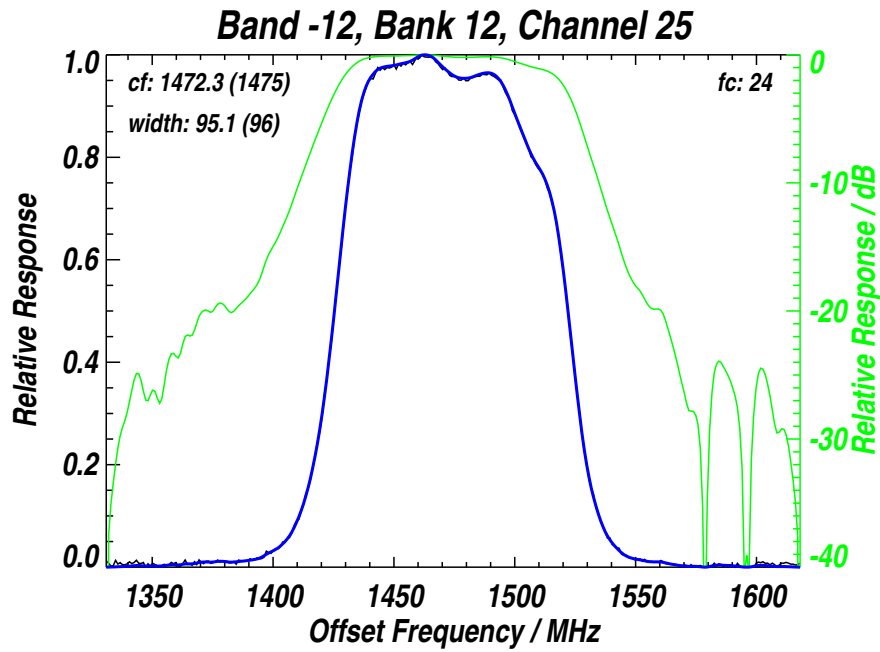


Figure H.345: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 12 (lsb)**  
**Bank 12**  
**Origin = 631.991430000 GHz**

Figure H.346: Lower sideband front-end sweep data for Band 12 taken via Filterbank 12, channel 25. See text for additional details.

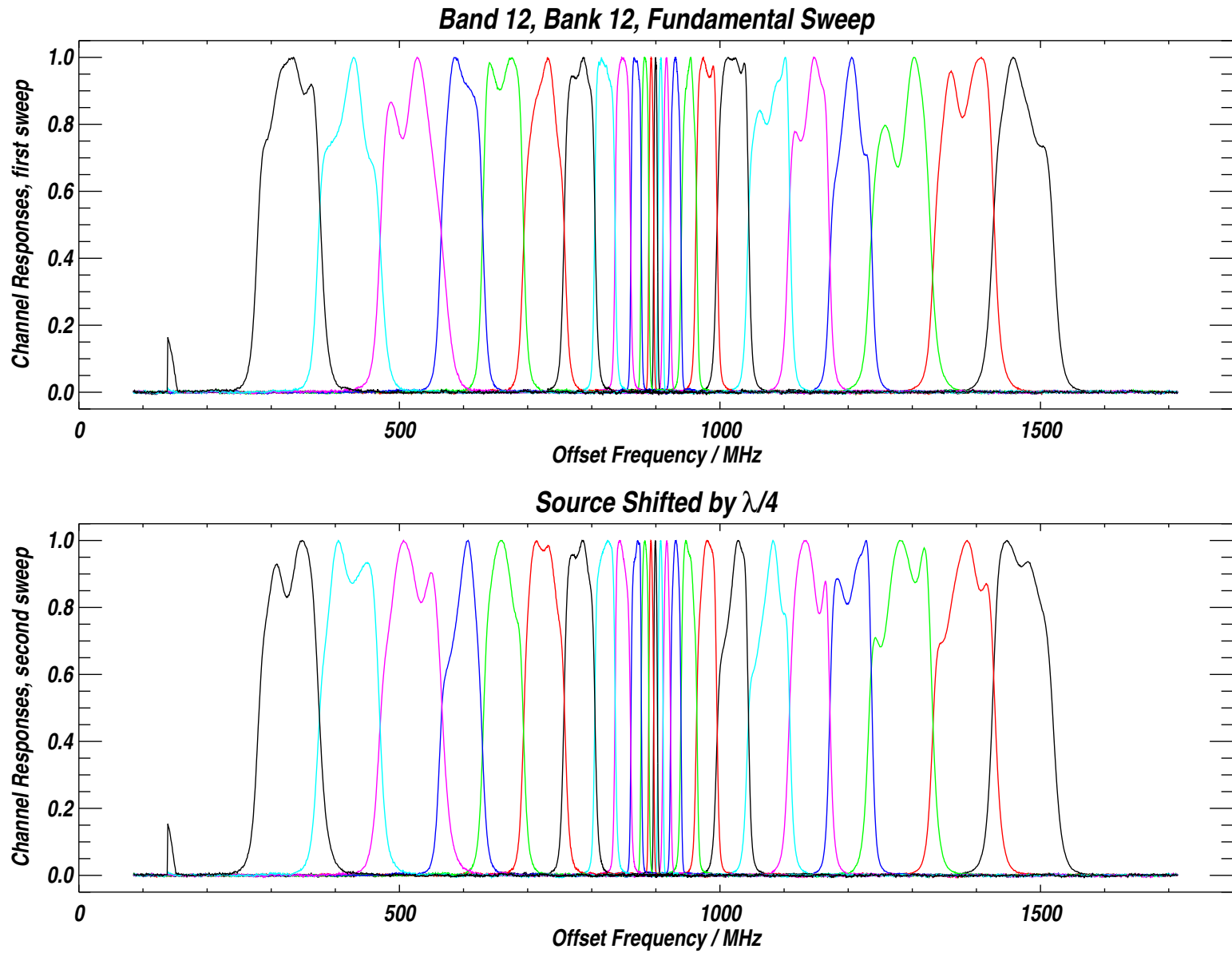


Figure H.347: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12. See text for additional details.

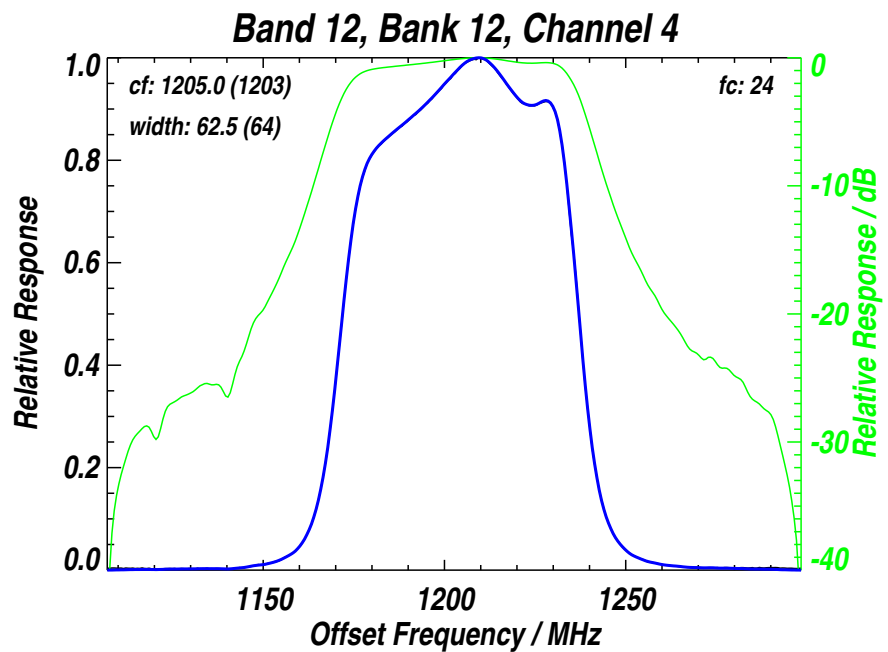
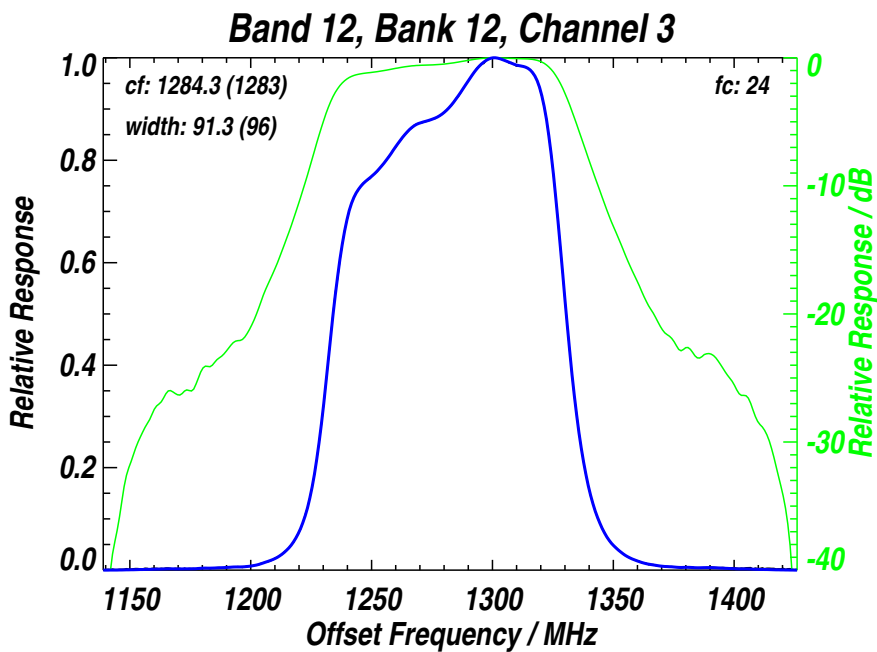
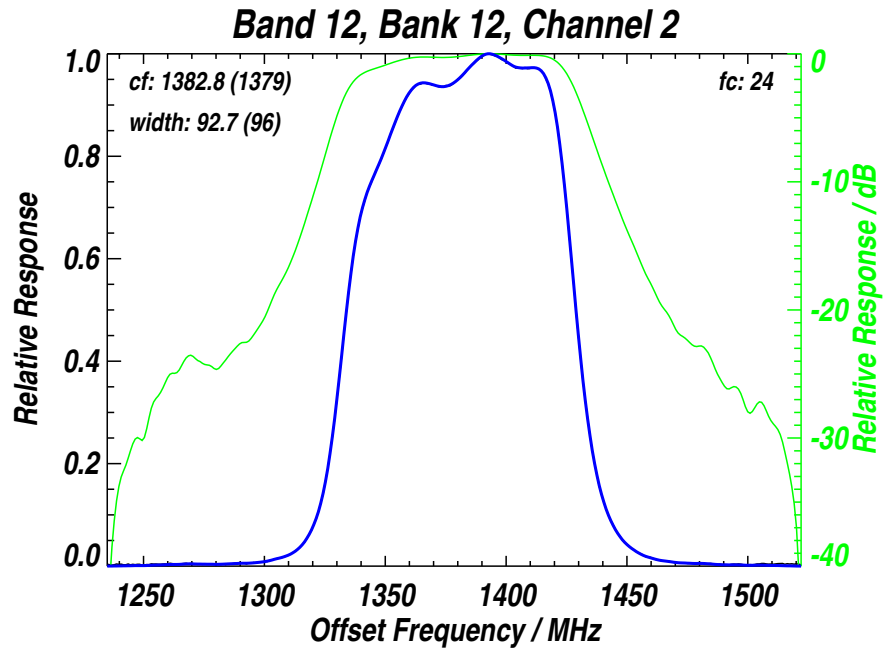
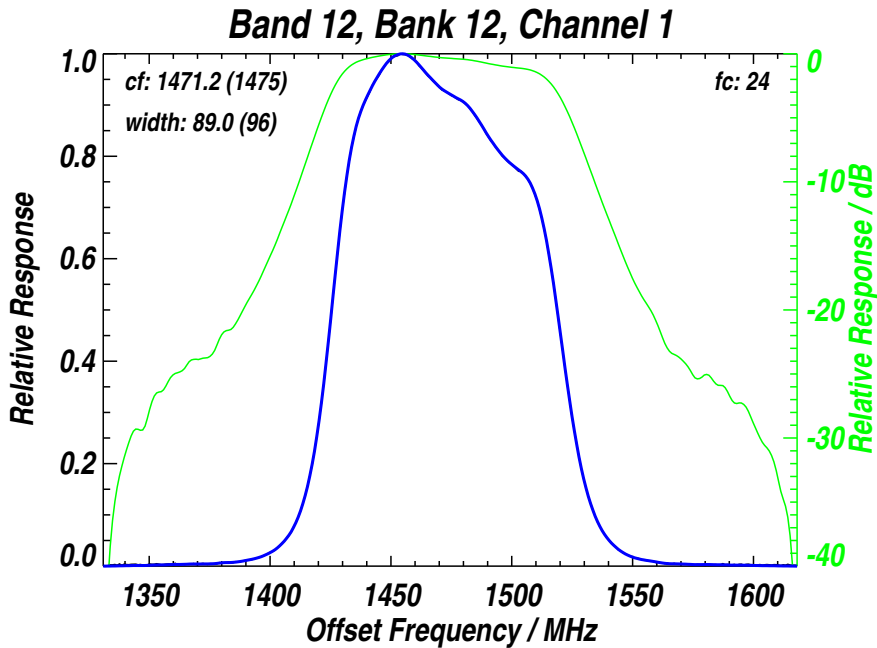


Figure H.348: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 1 to 4. See text for additional details.

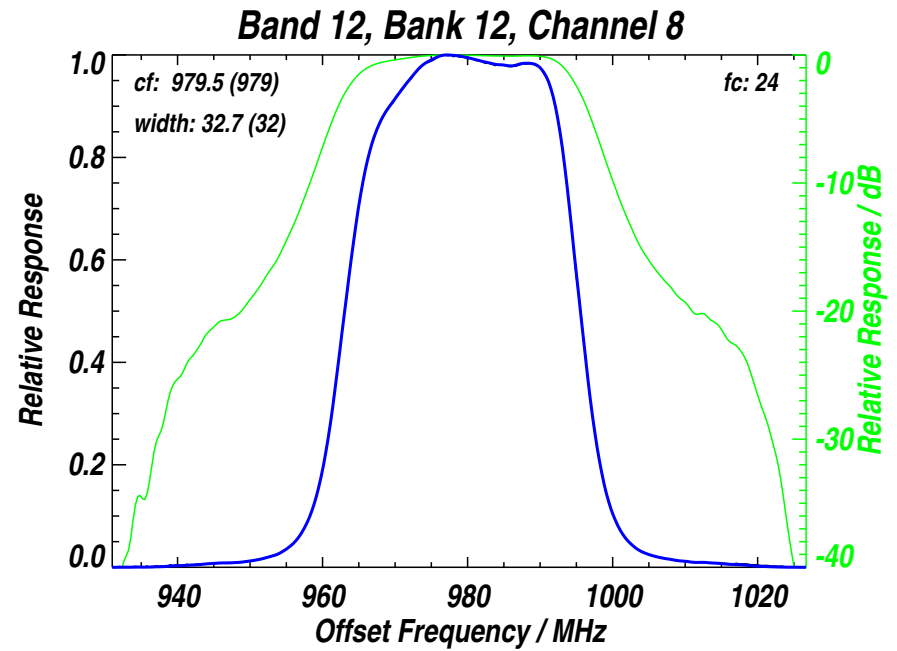
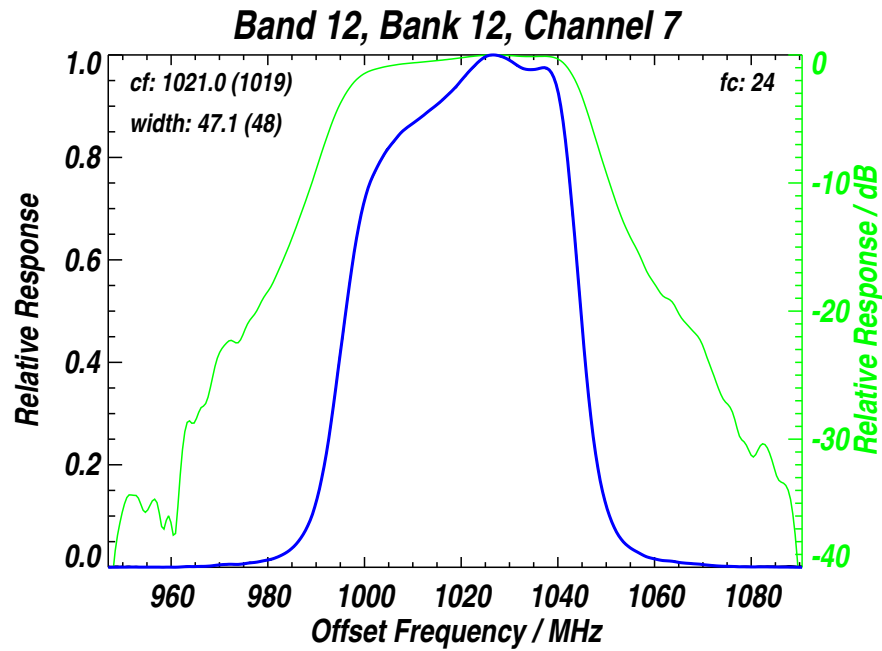
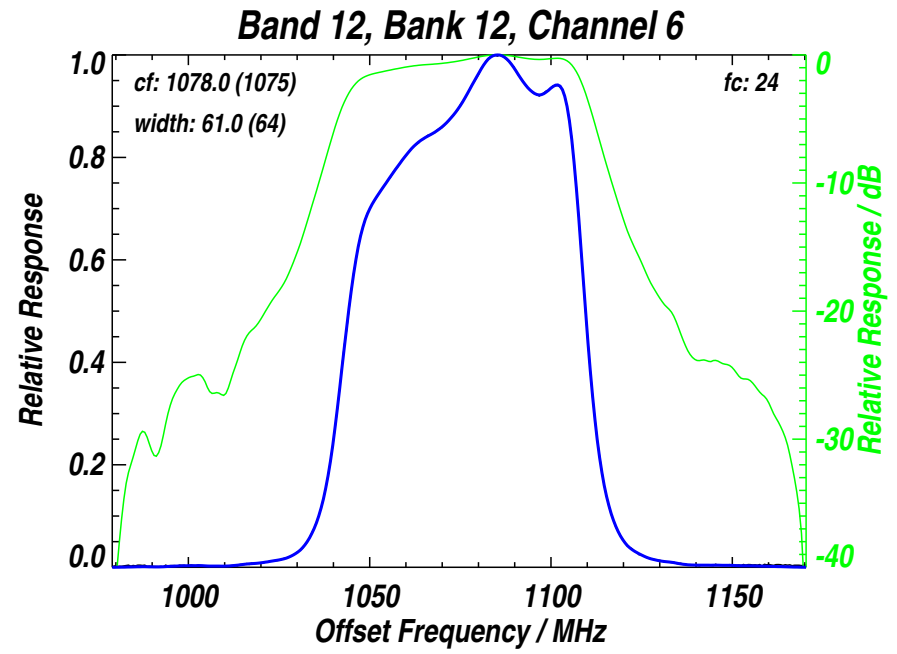
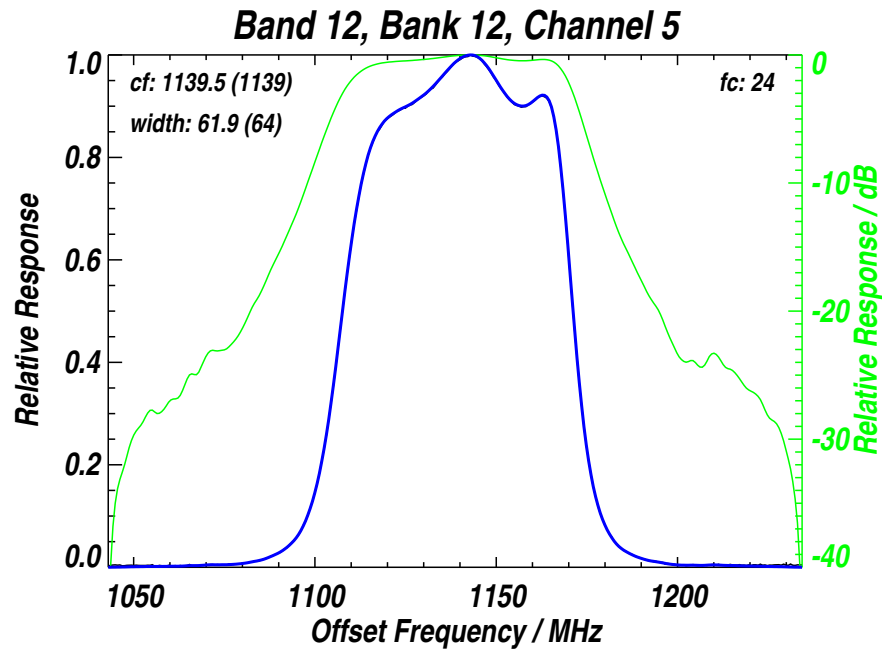


Figure H.349: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 5 to 8. See text for additional details.

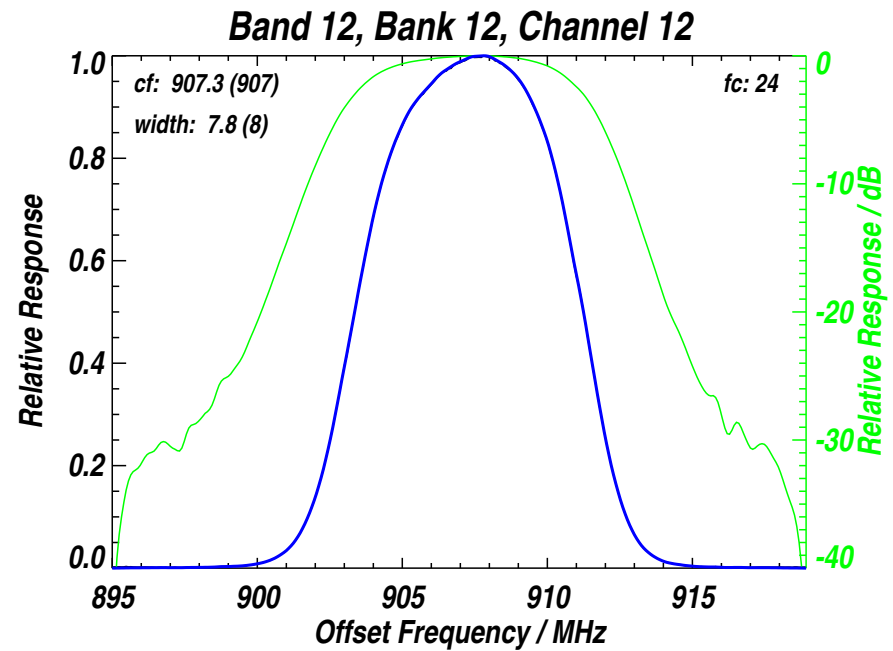
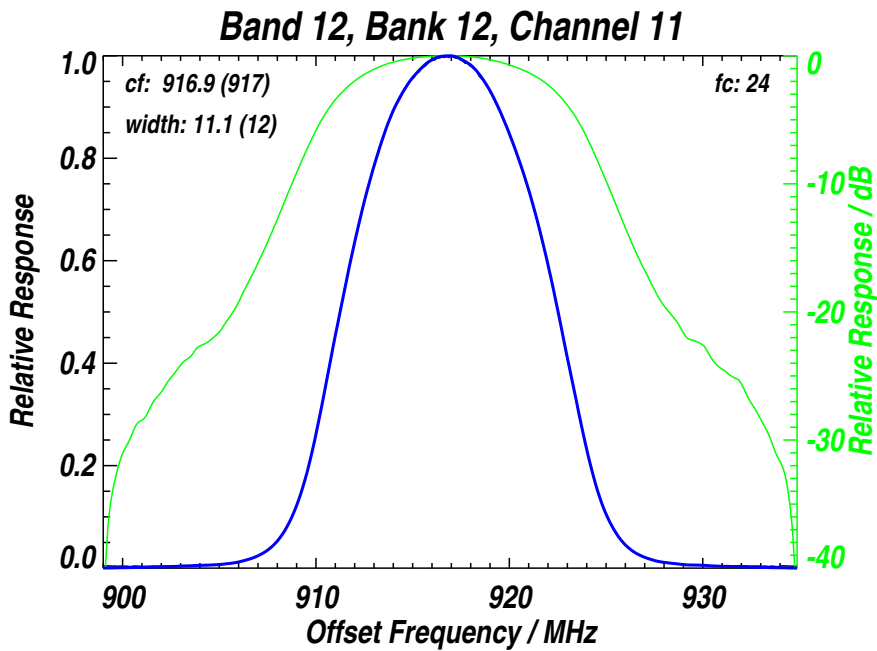
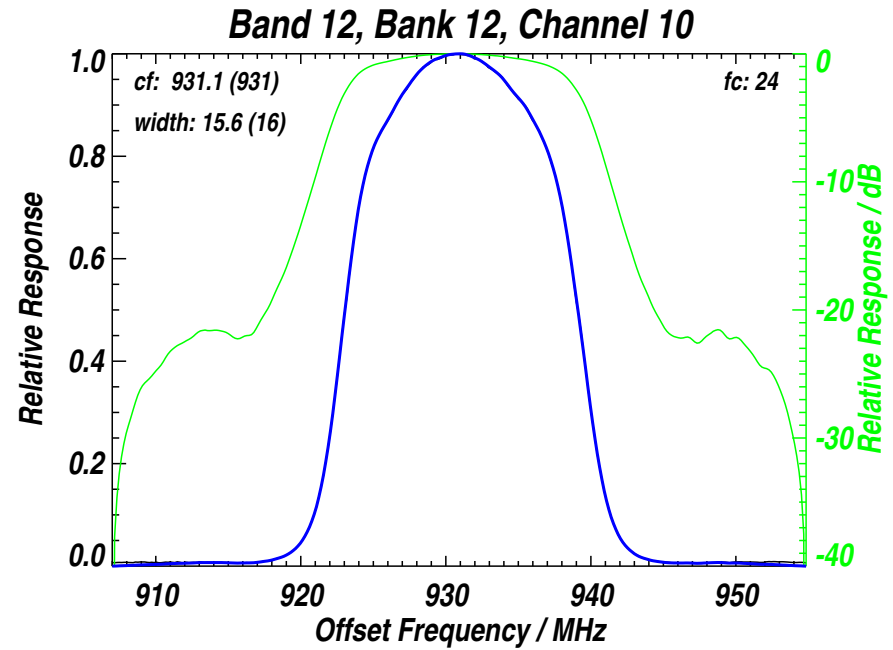
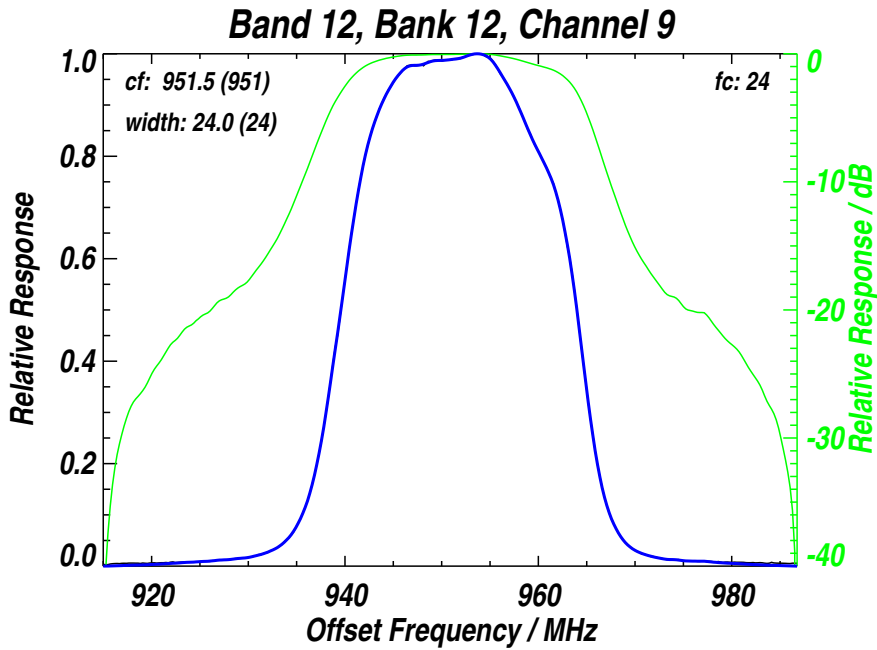


Figure H.350: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 9 to 12. See text for additional details.

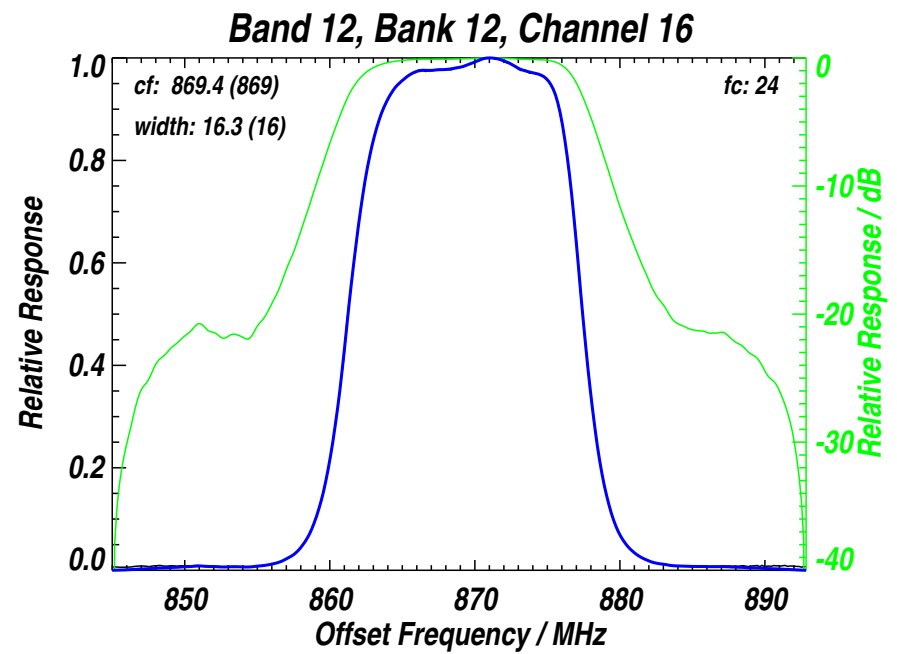
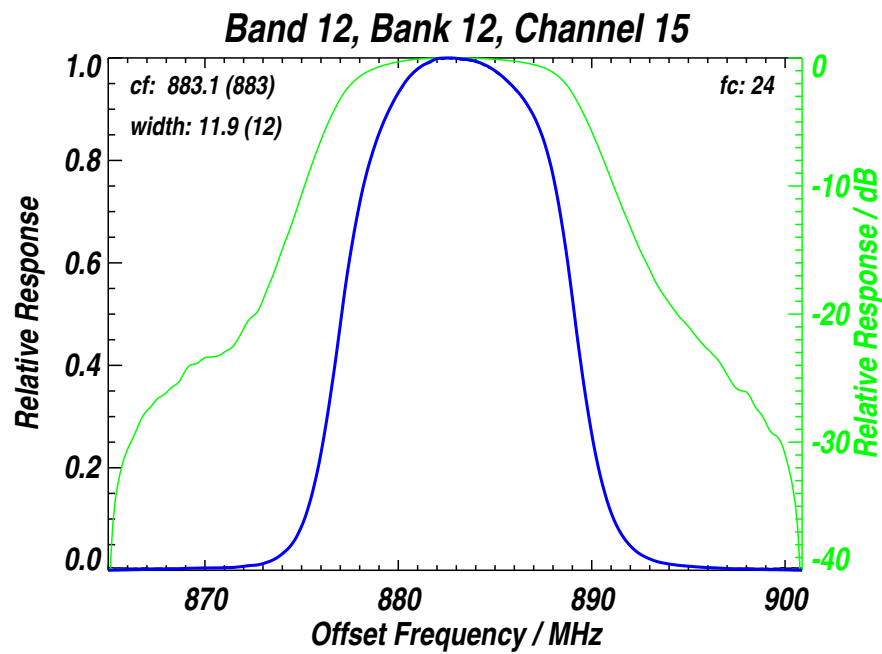
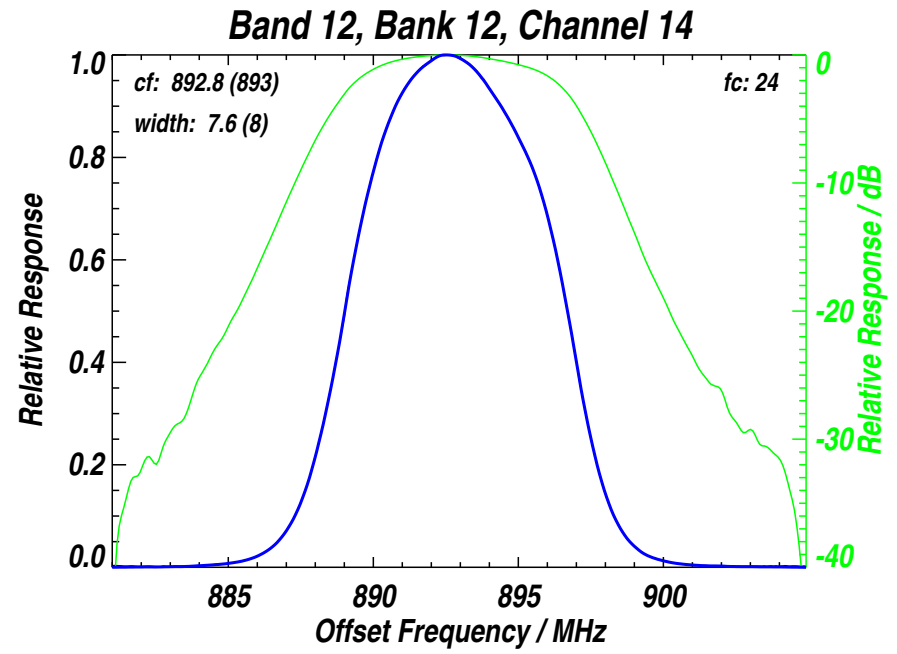
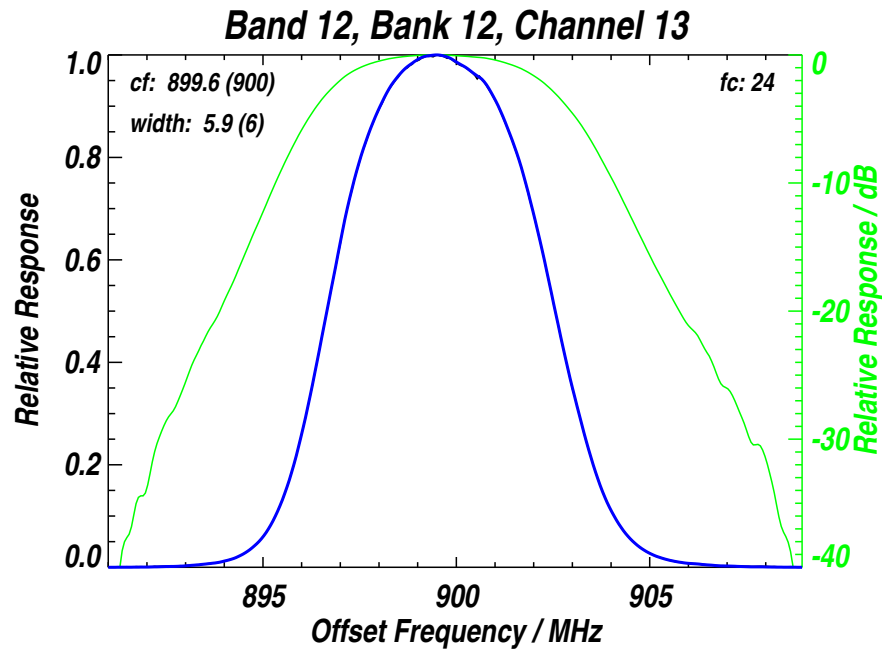


Figure H.351: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 13 to 16. See text for additional details.

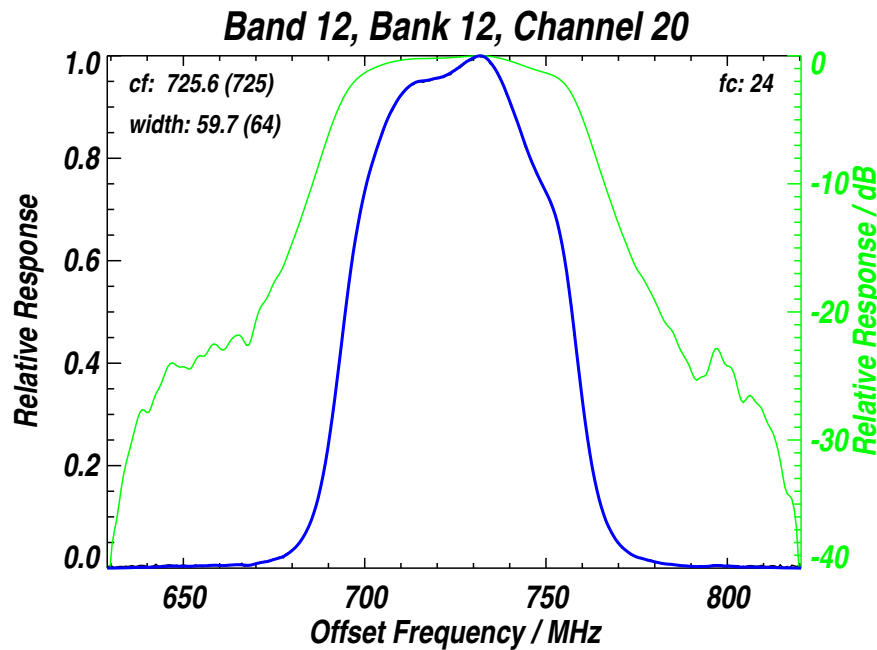
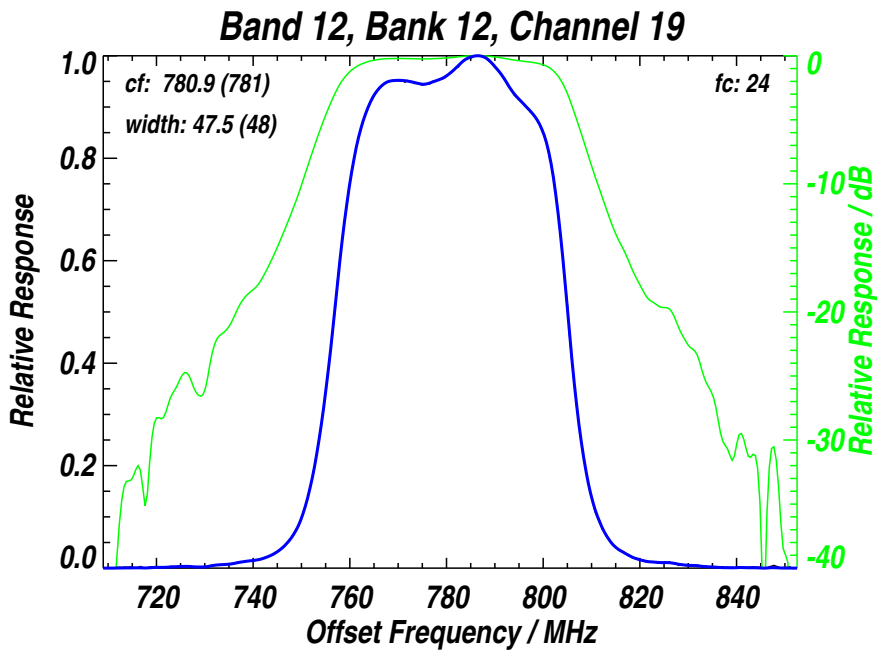
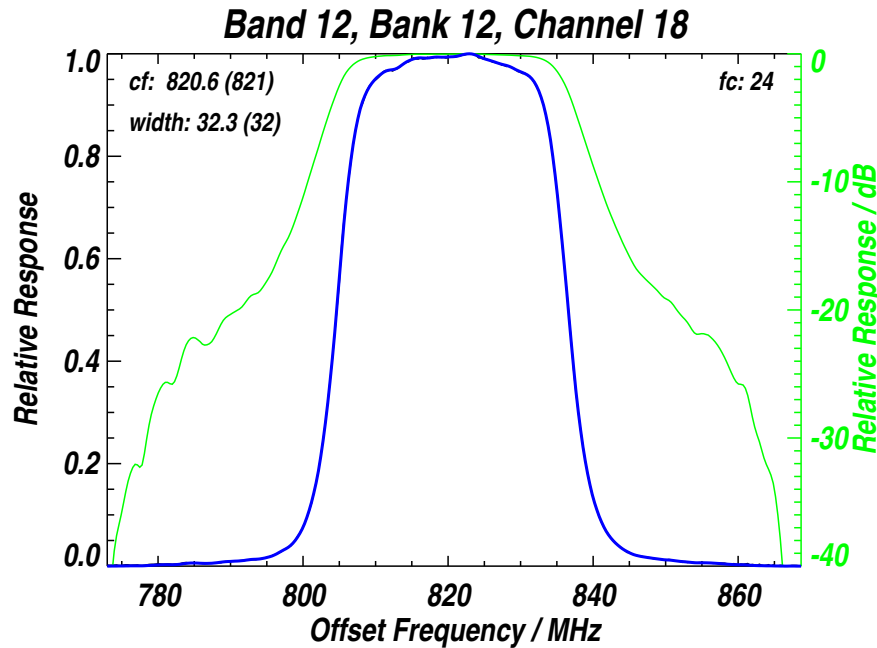
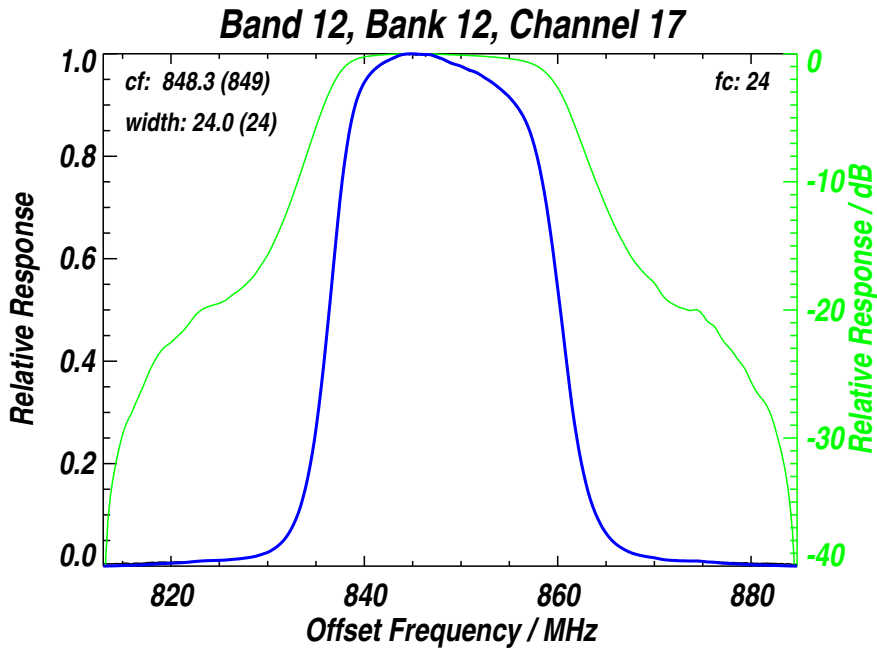


Figure H.352: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 17 to 20. See text for additional details.



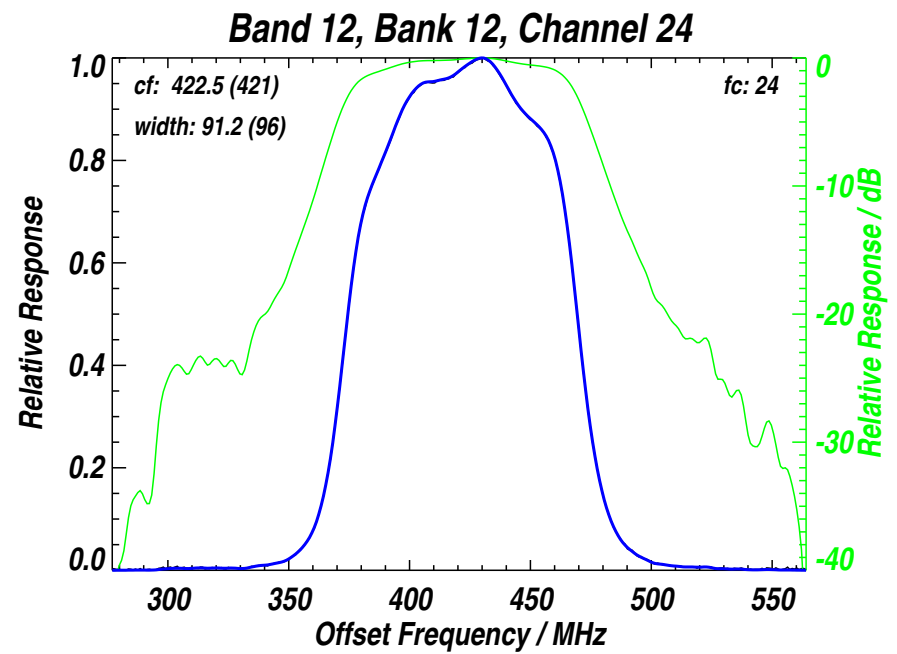
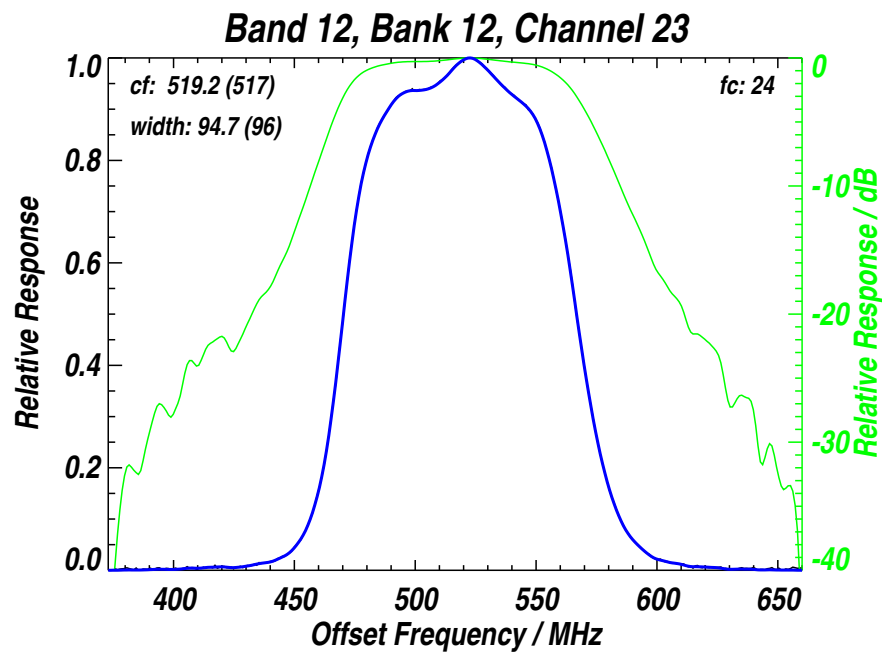
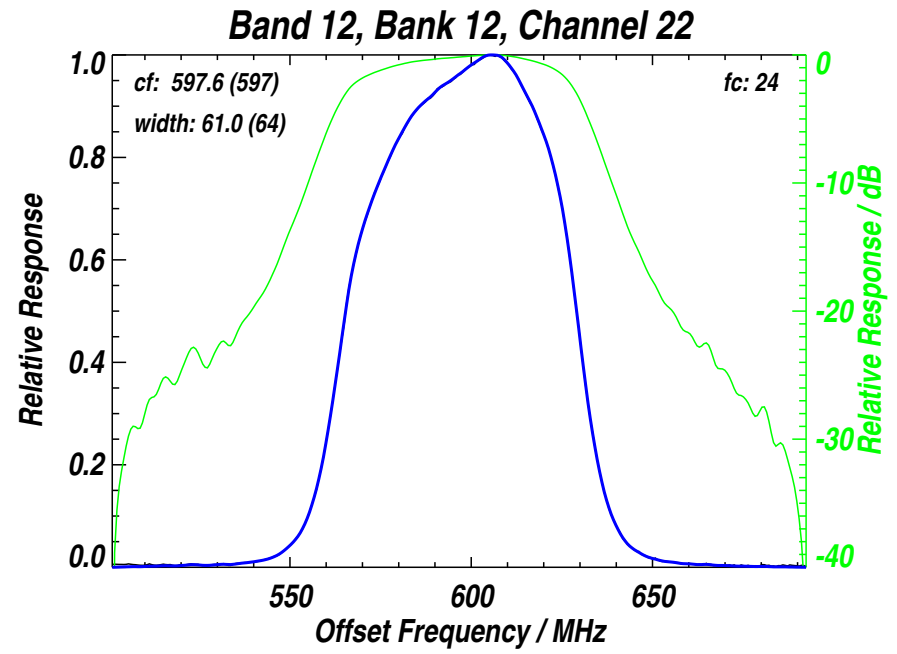
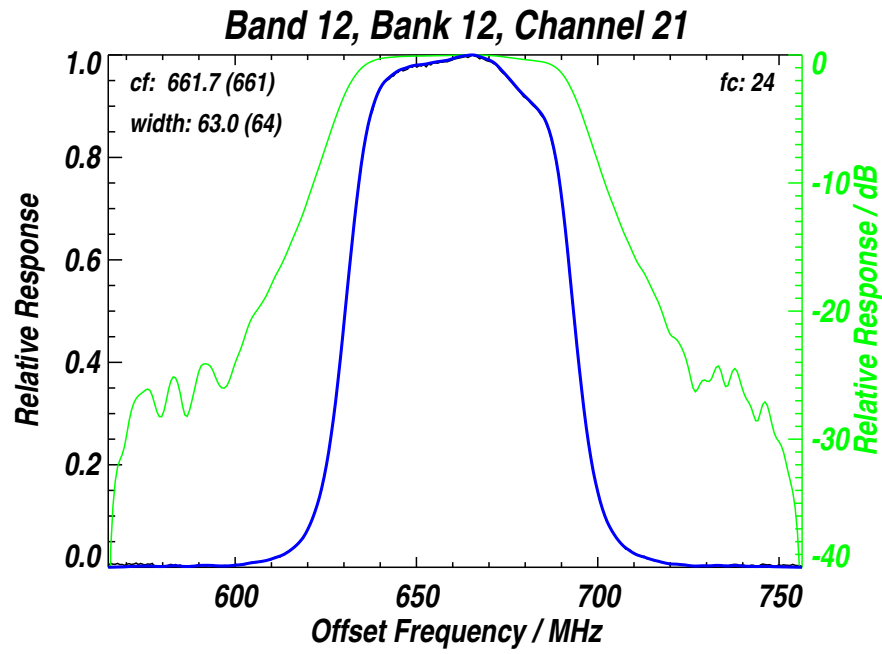
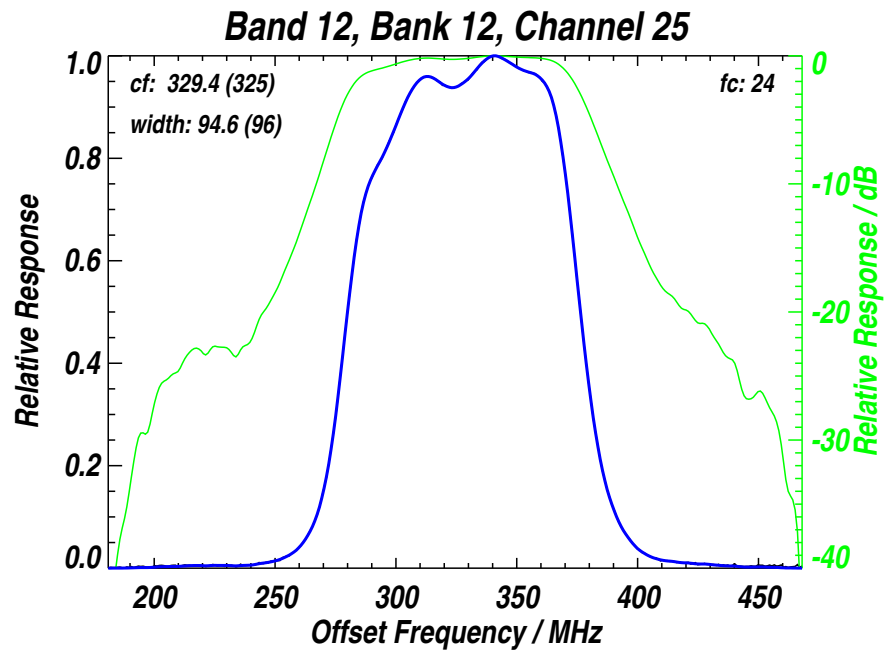


Figure H.353: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 12 (usb)**  
**Bank 12**  
**Origin = 651.948571428 GHz**

Figure H.354: Upper sideband front-end sweep data for Band 12 taken via Filterbank 12, channel 25. See text for additional details.

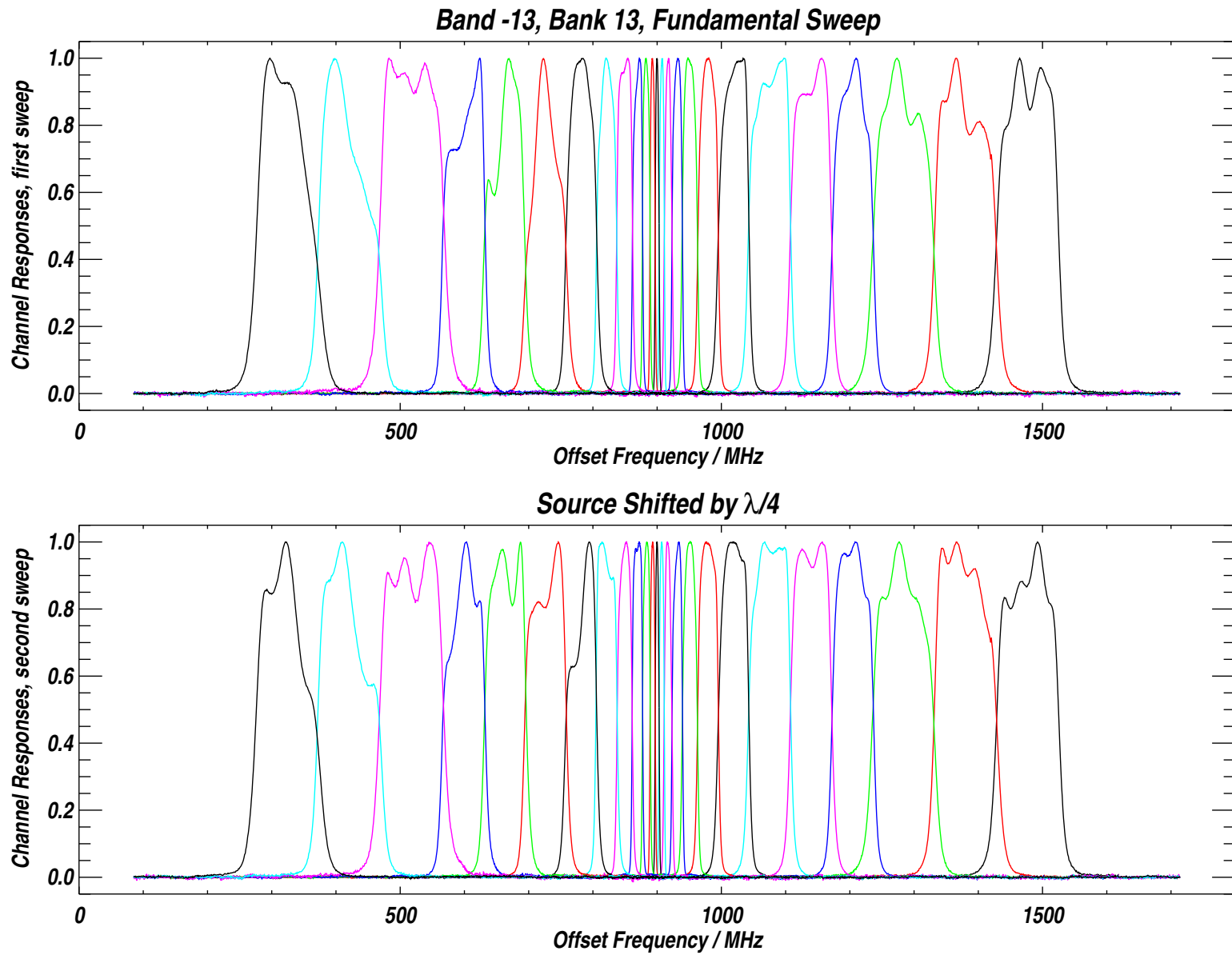


Figure H.355: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13. See text for additional details.

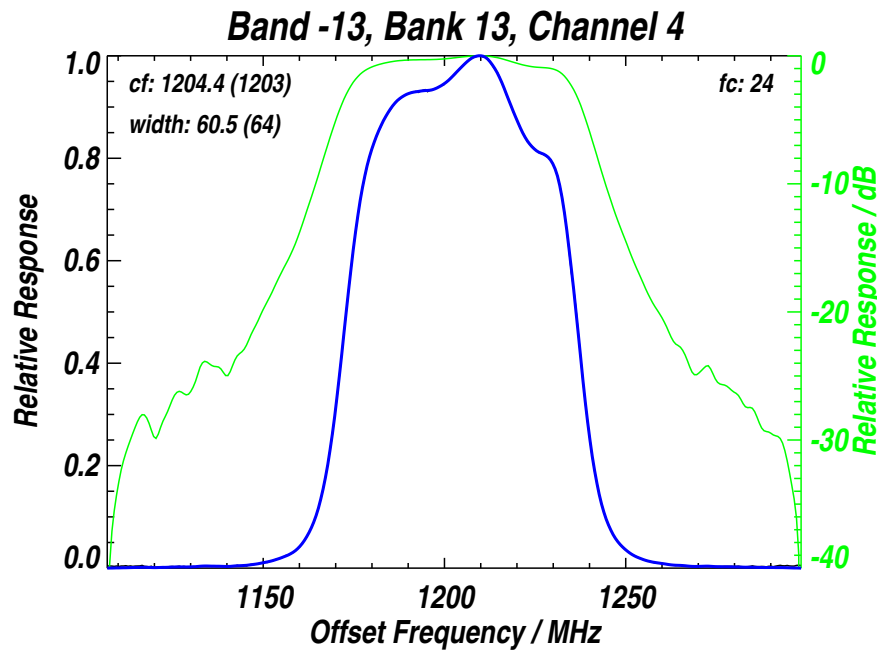
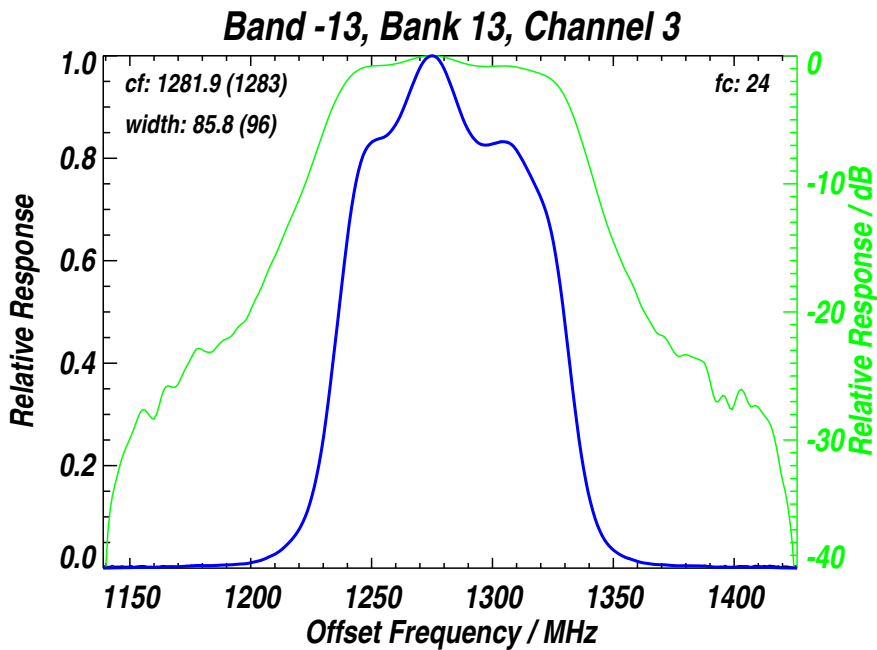
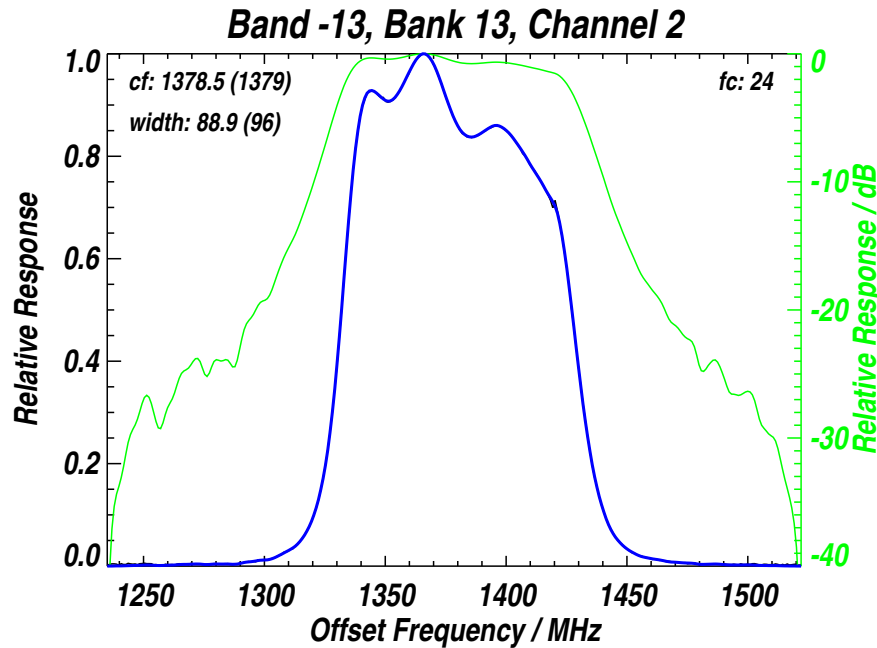
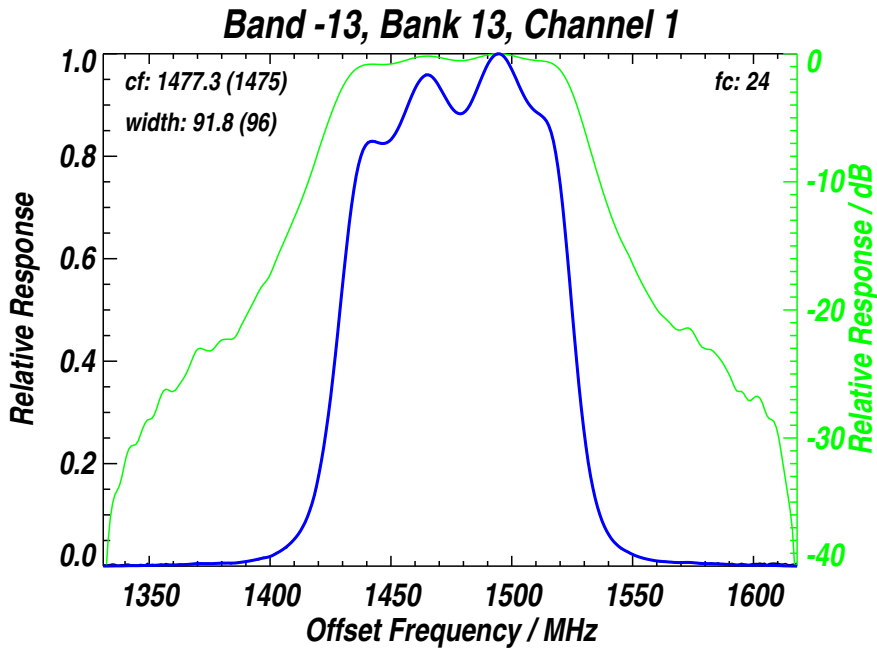


Figure H.356: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 1 to 4. See text for additional details.

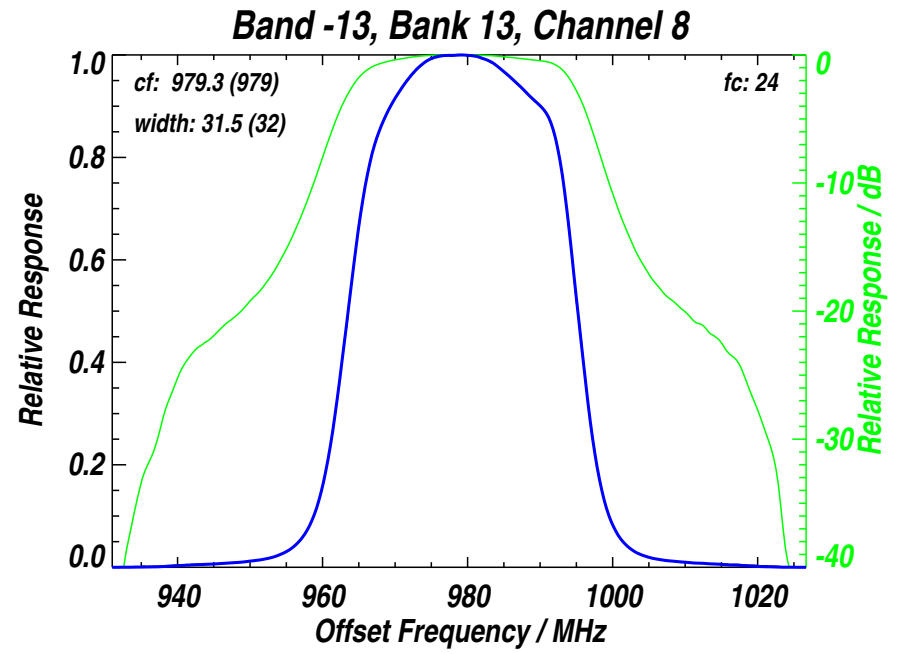
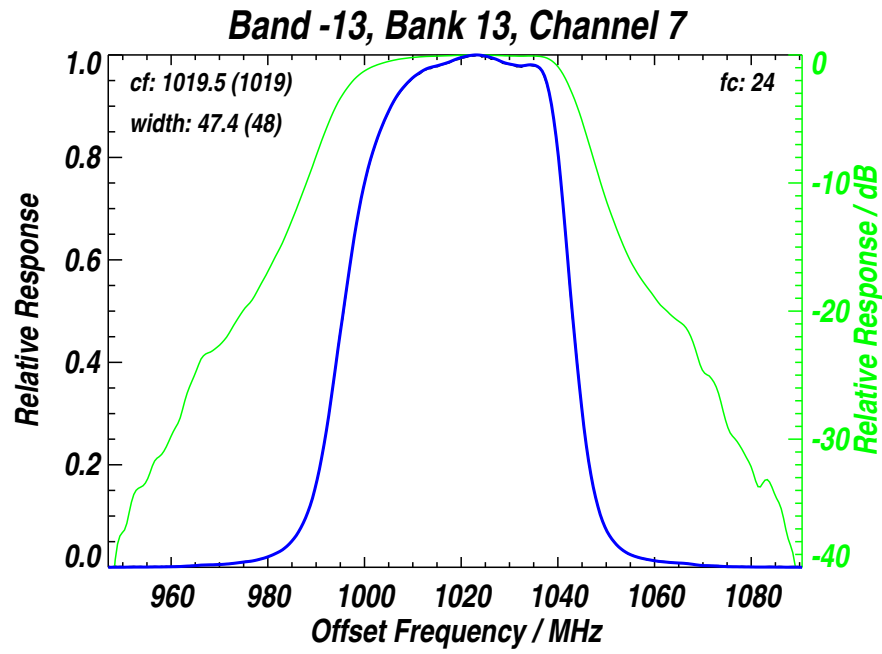
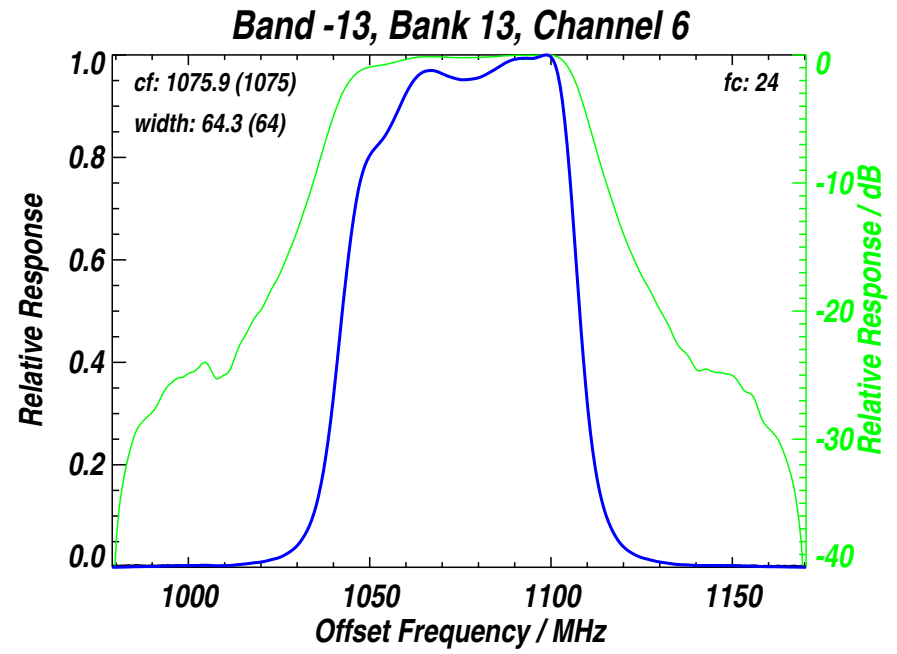
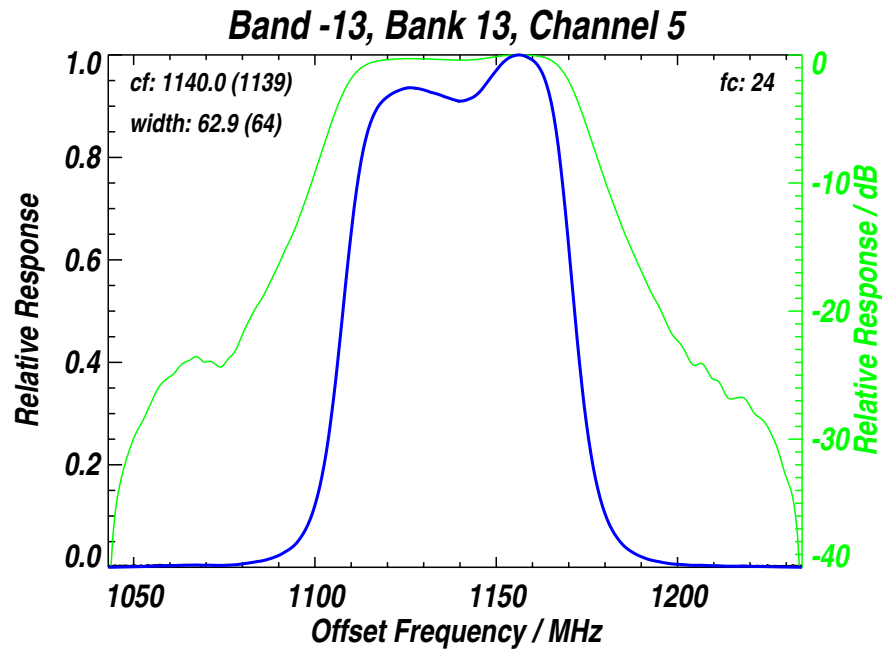


Figure H.357: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 5 to 8. See text for additional details.

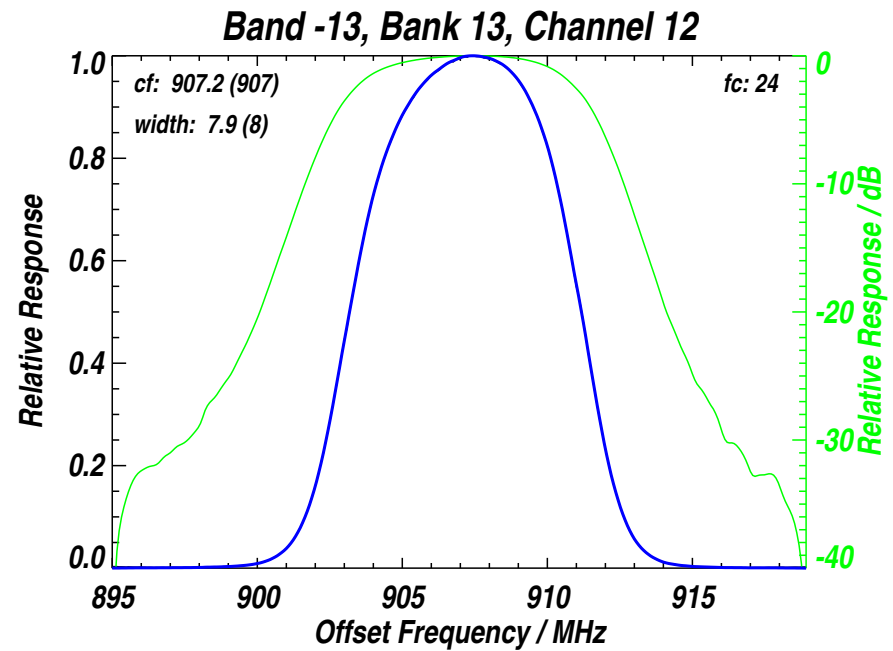
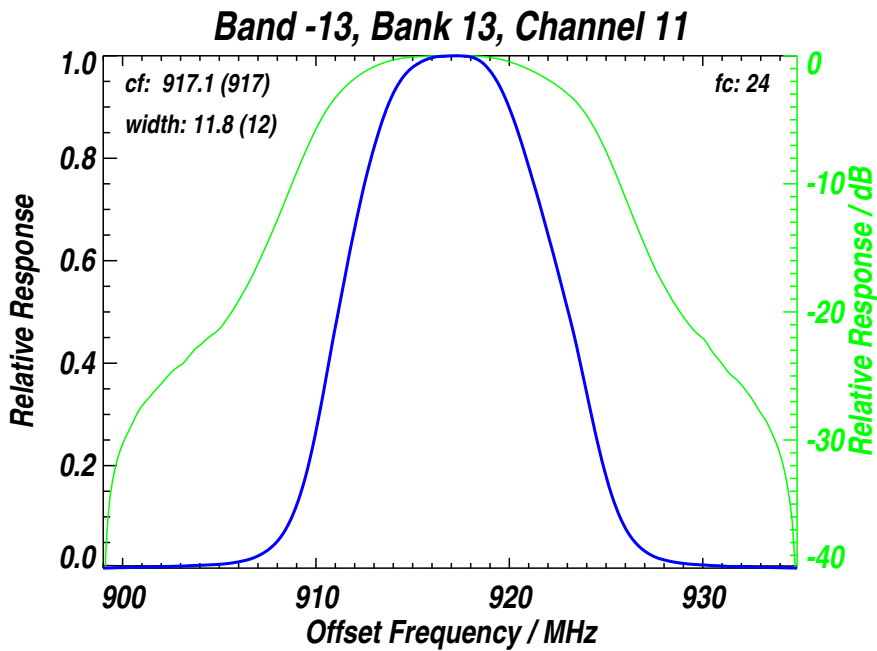
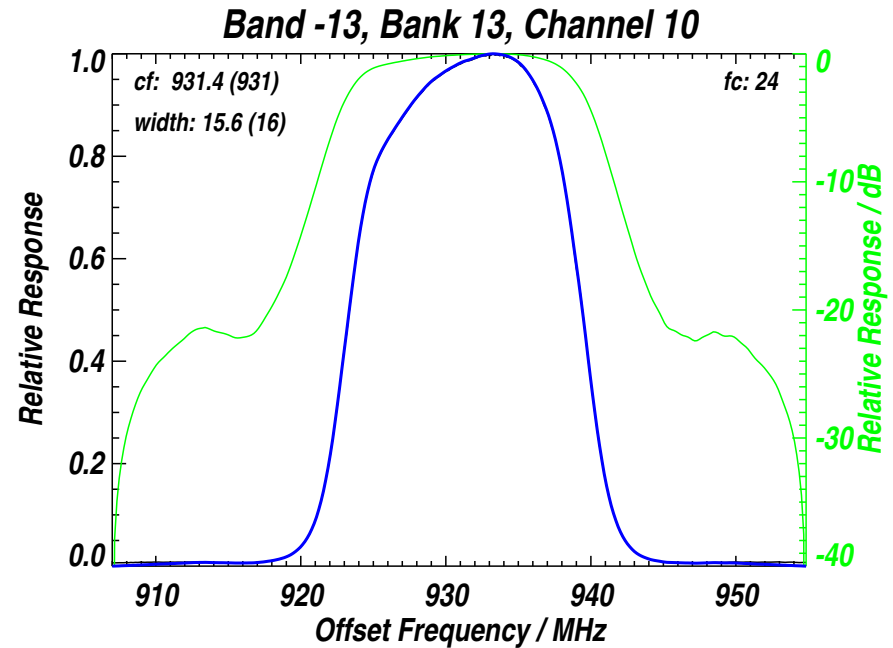
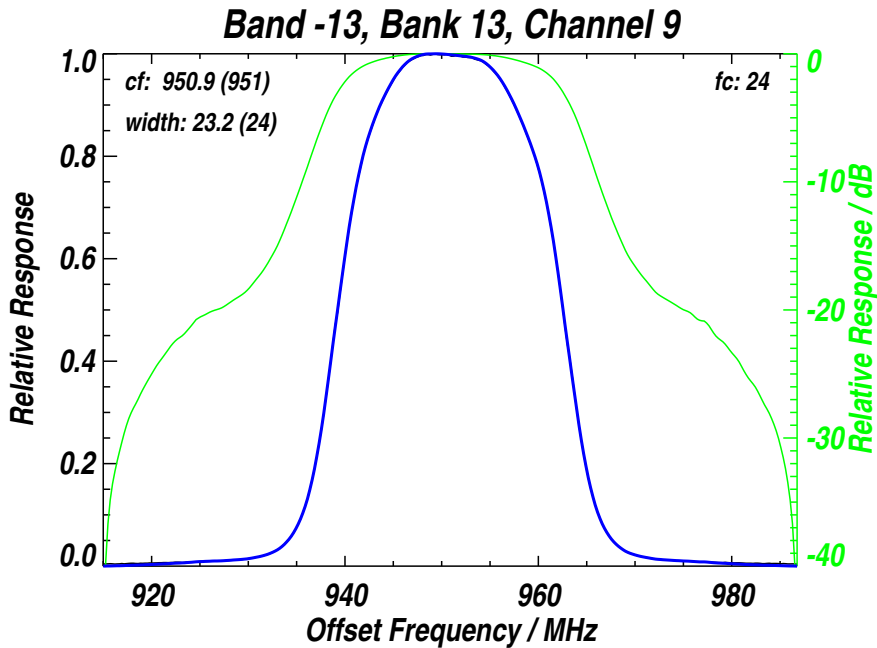


Figure H.358: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 9 to 12. See text for additional details.

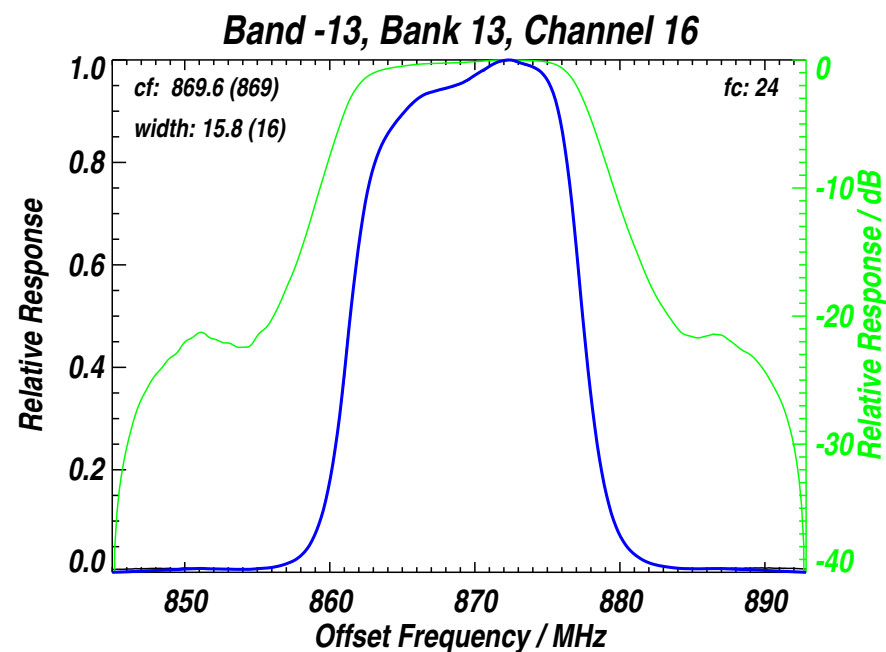
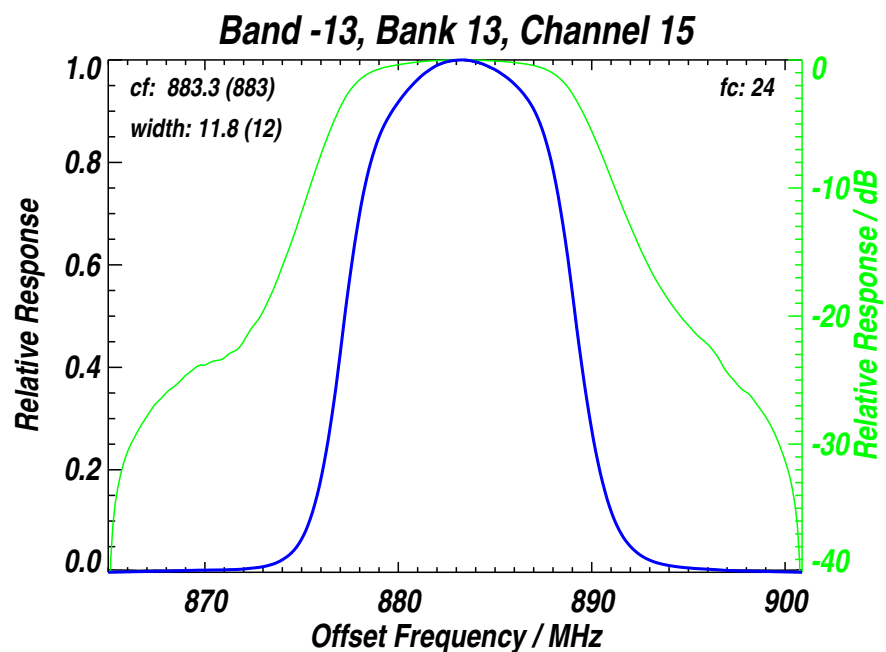
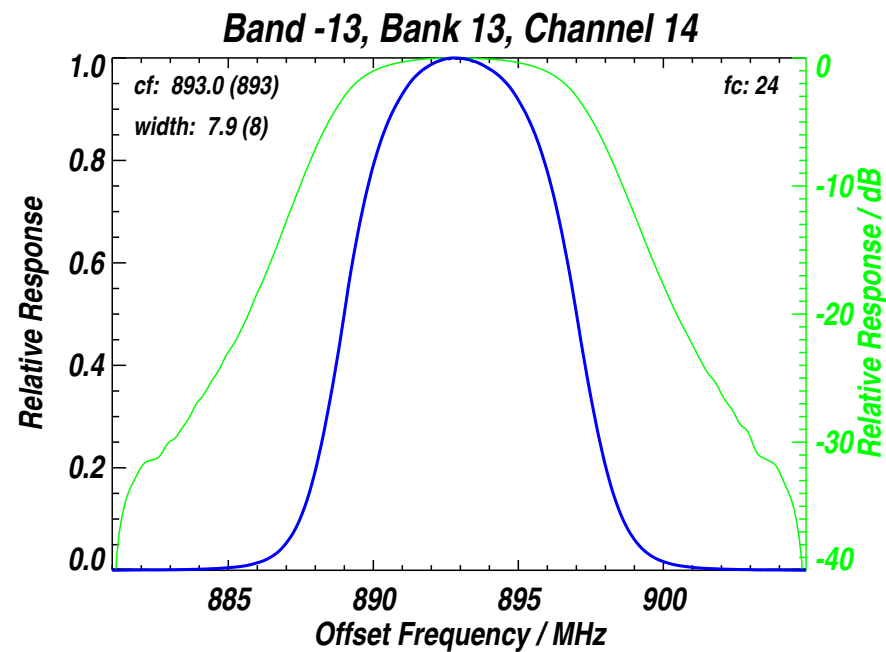
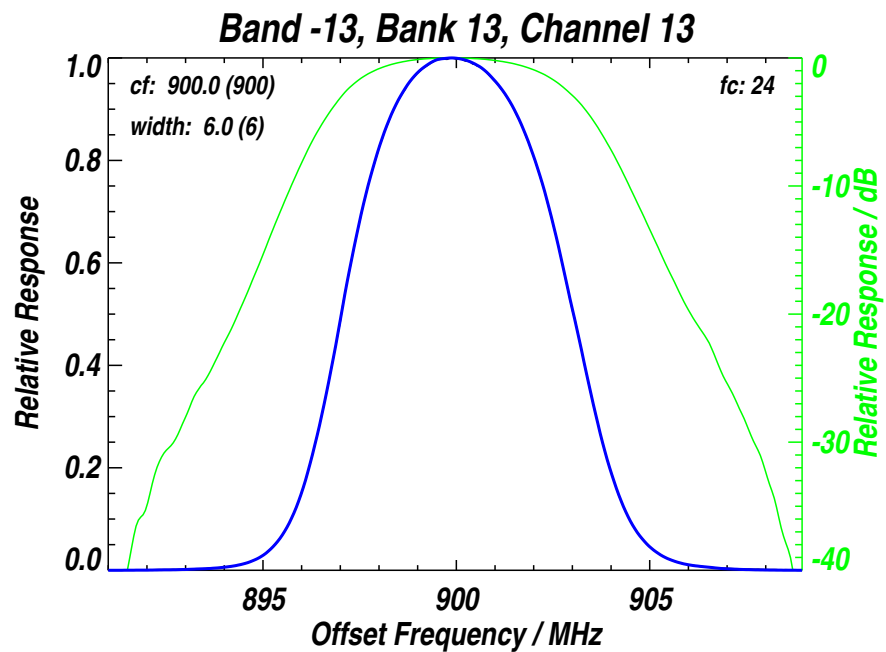


Figure H.359: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 13 to 16. See text for additional details.

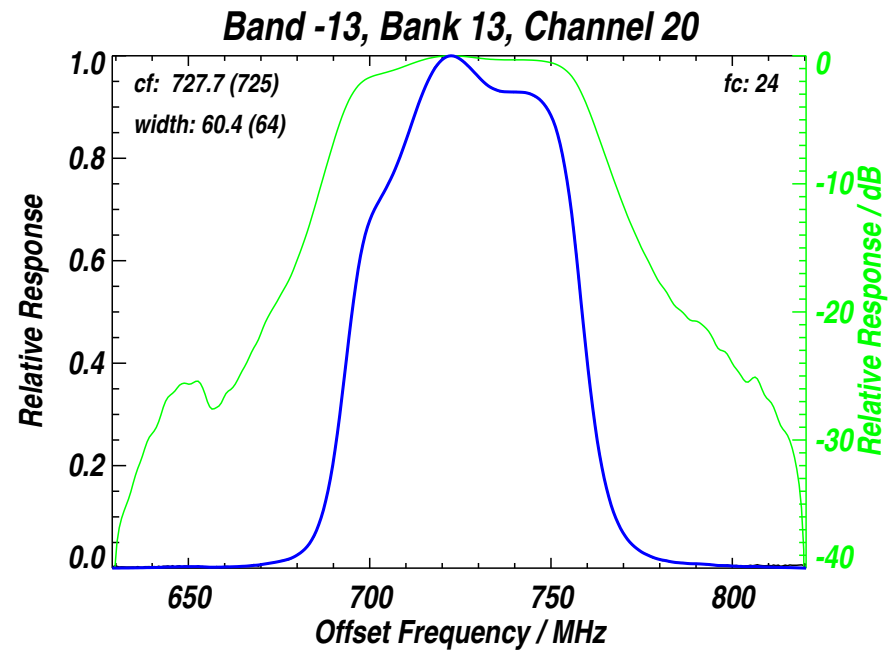
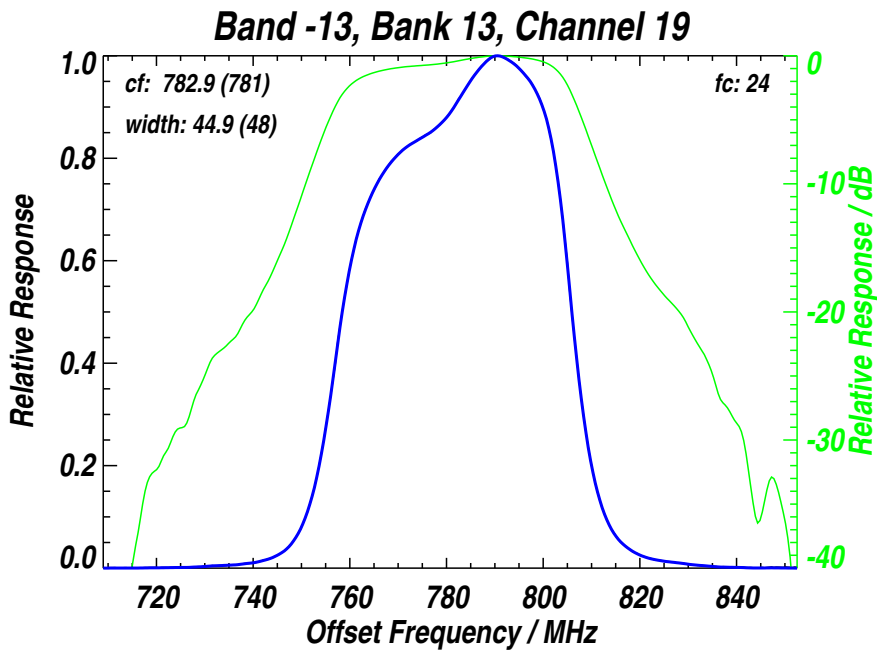
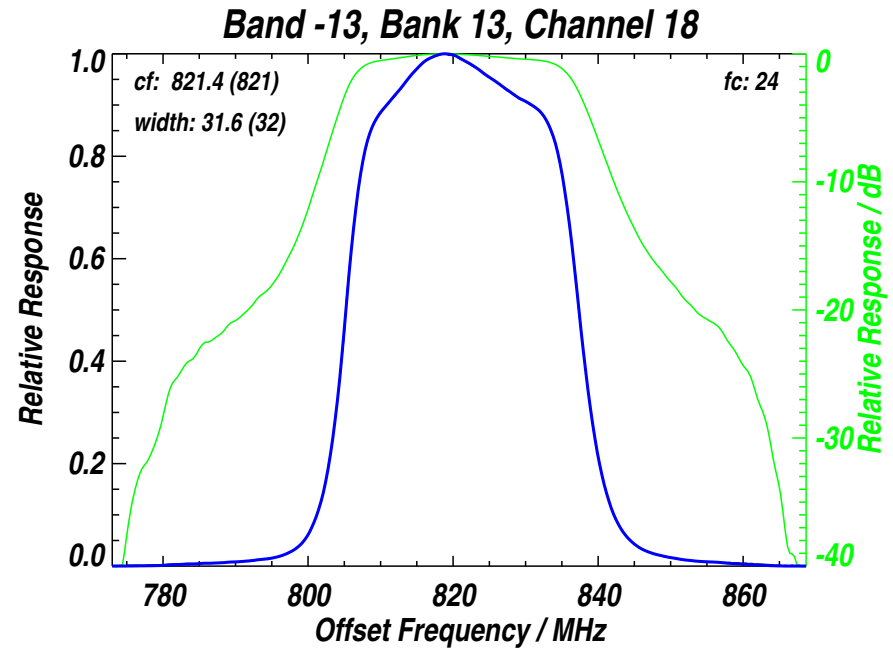
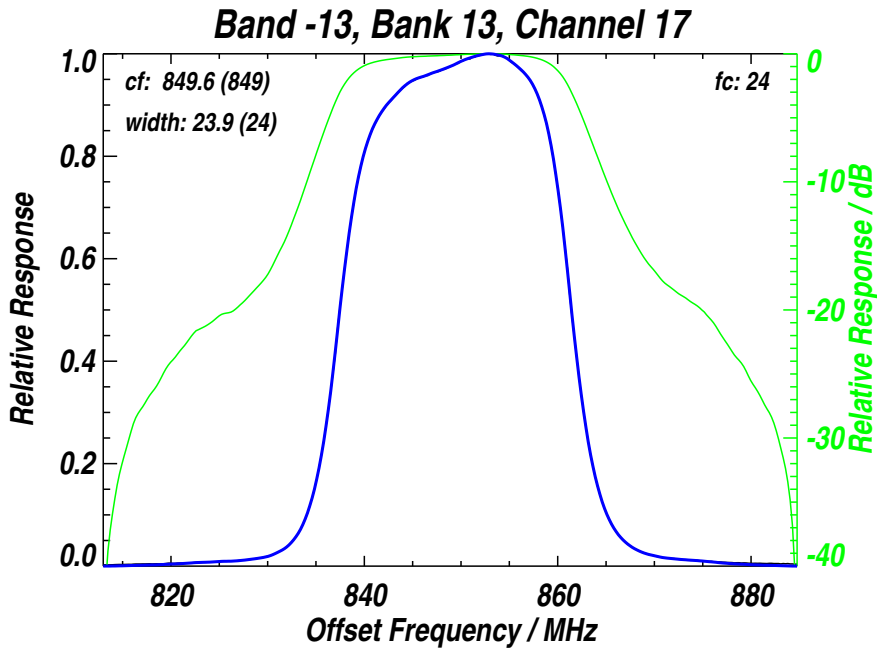


Figure H.360: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 17 to 20. See text for additional details.



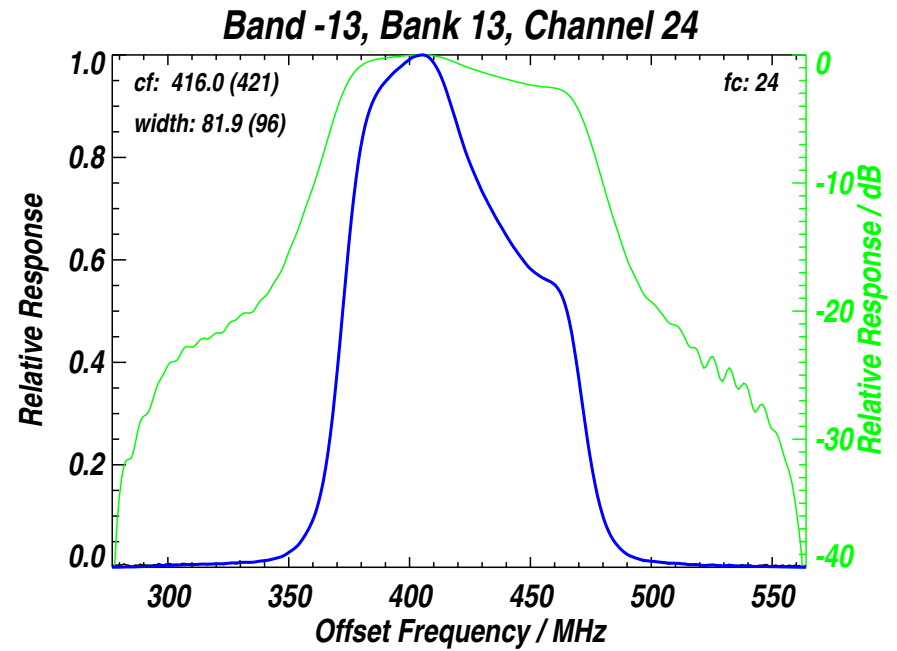
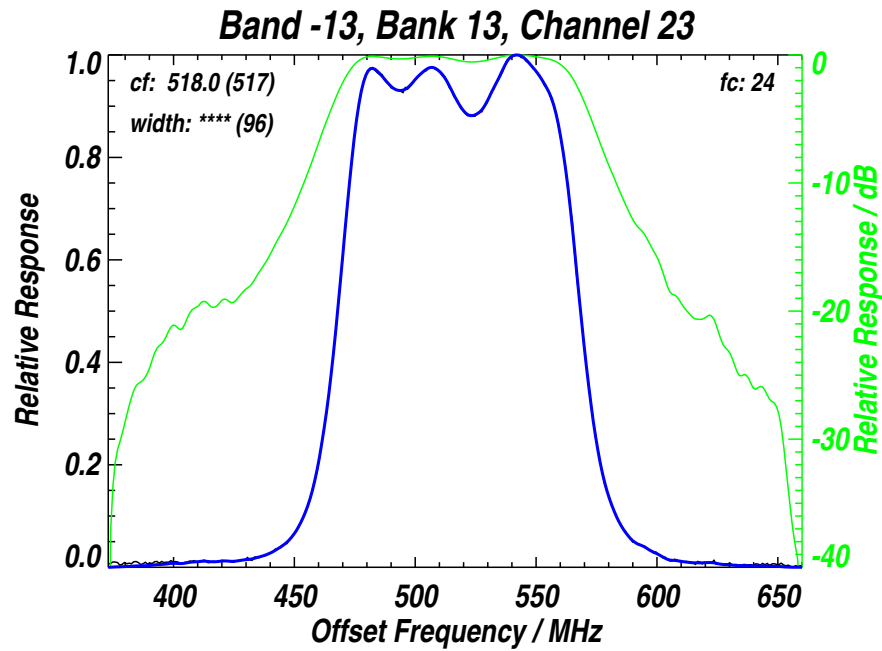
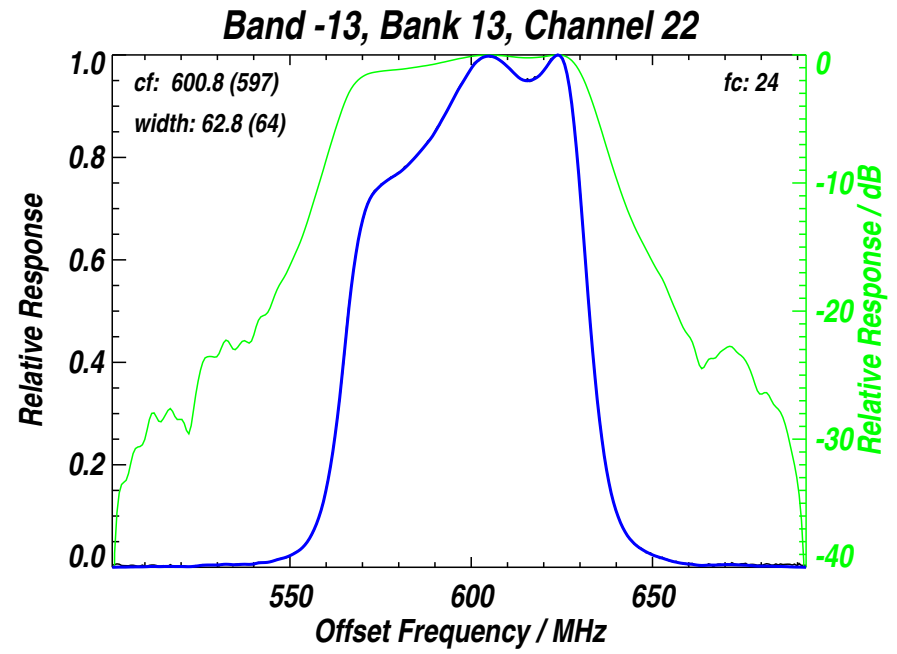
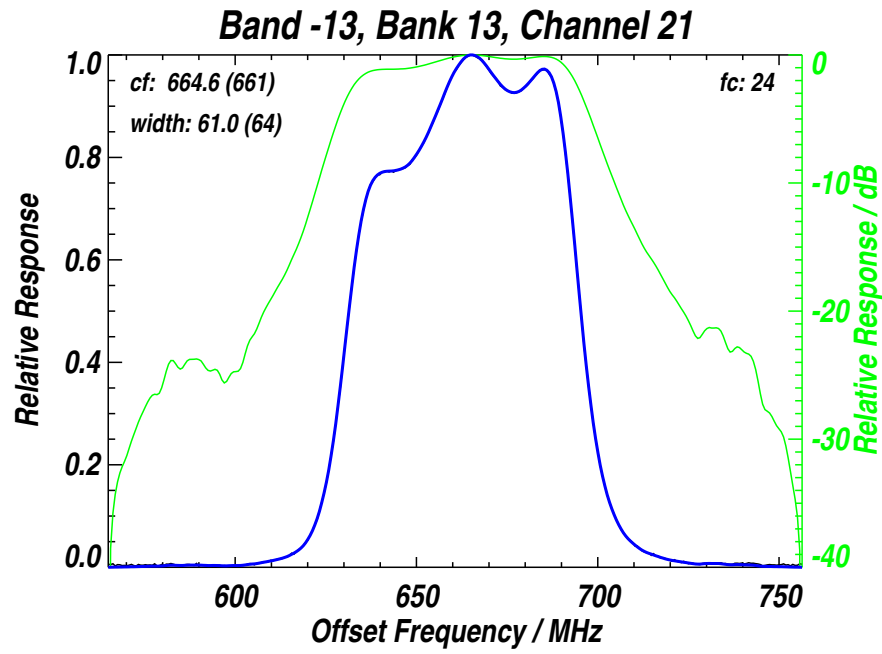
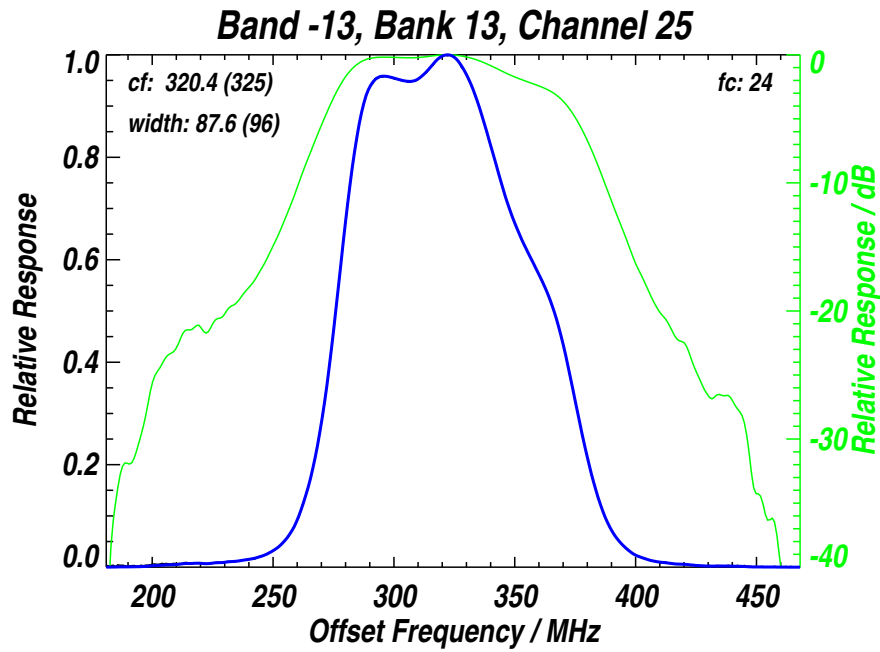


Figure H.361: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 21 to 24. See text for additional details.



**Band 13 (lsb)**  
**Bank 13**  
**Origin = 625.033080000 GHz**

Figure H.362: Lower sideband front-end sweep data for Band 13 taken via Filterbank 13, channel 25. See text for additional details.

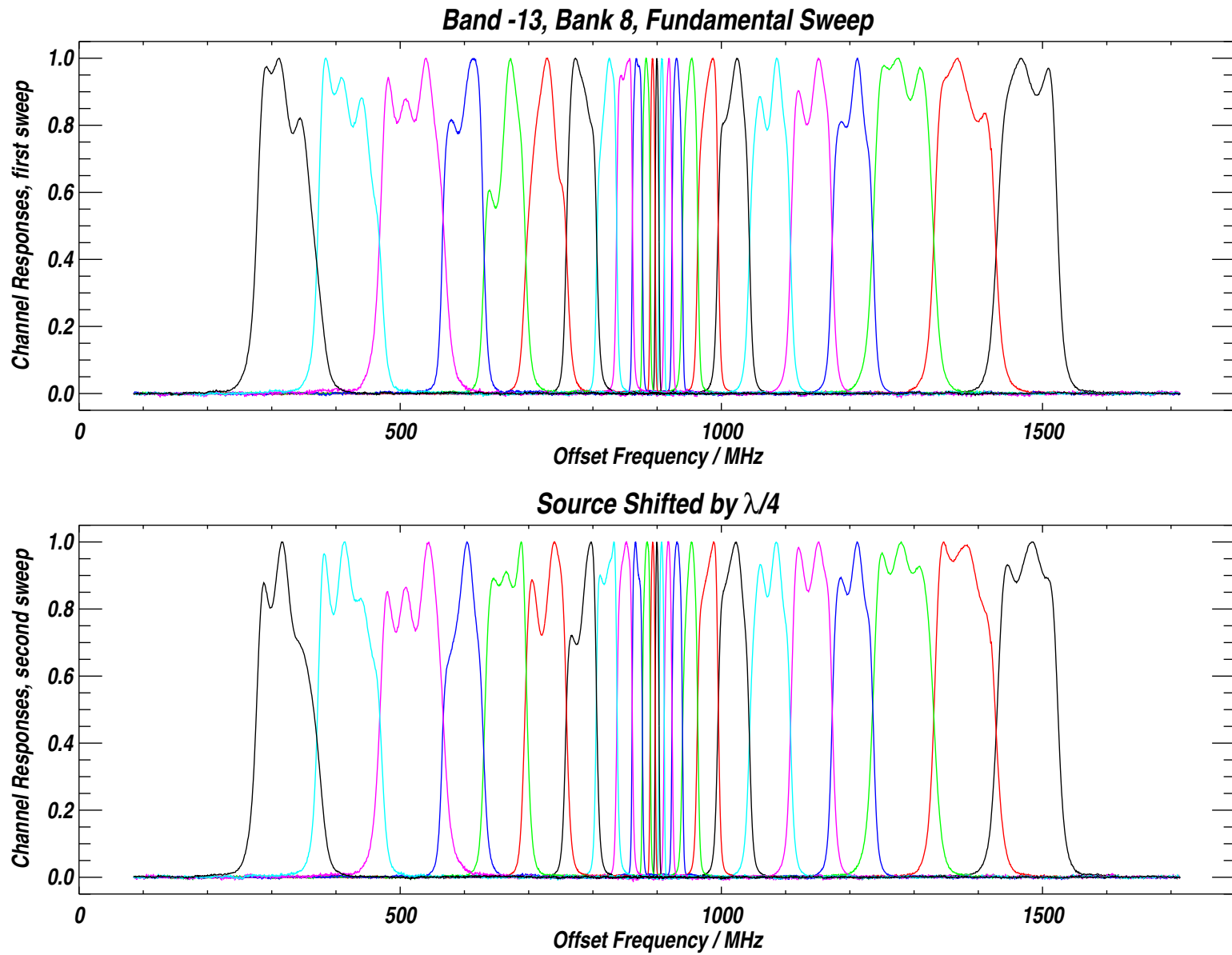


Figure H.363: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8. See text for additional details.

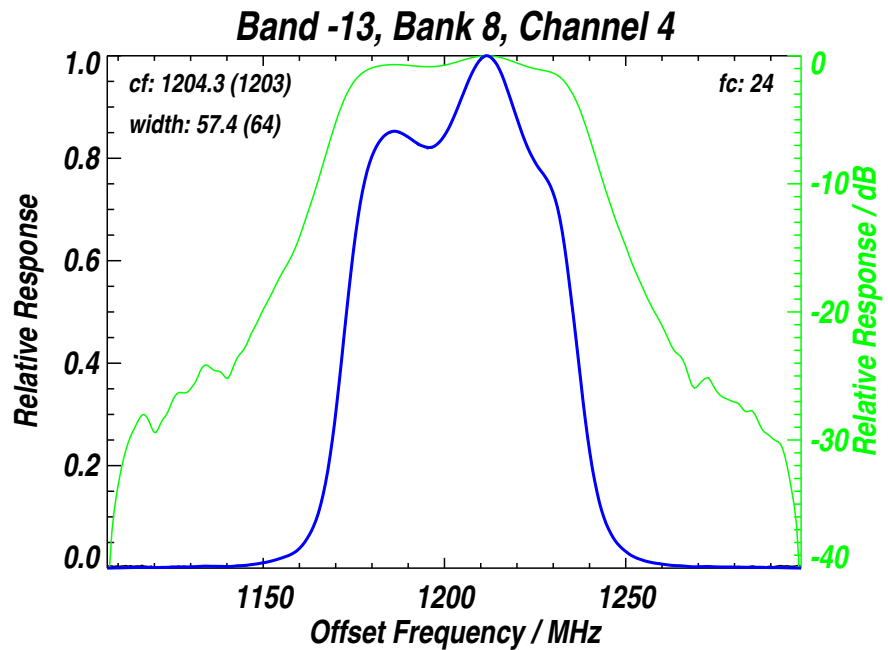
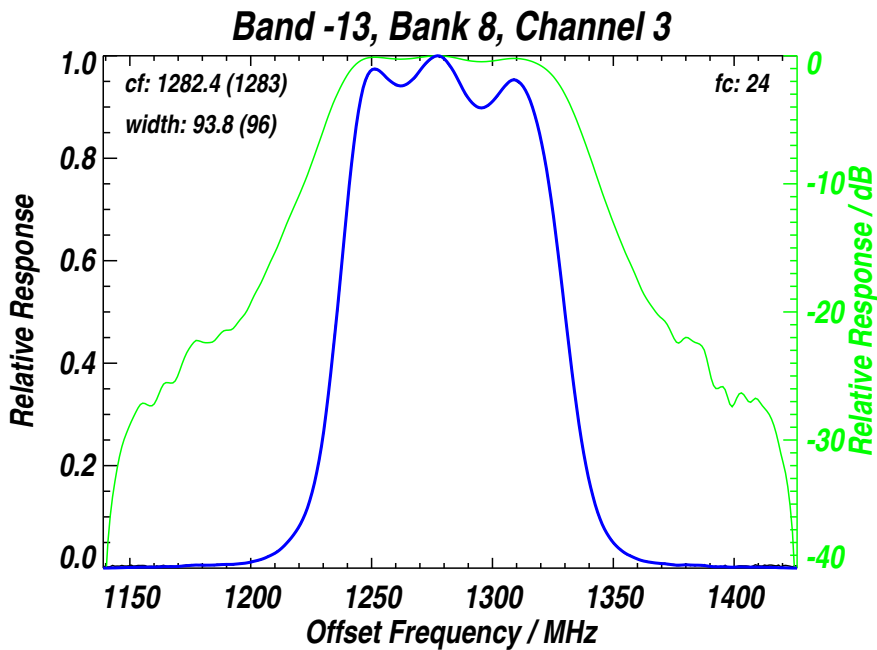
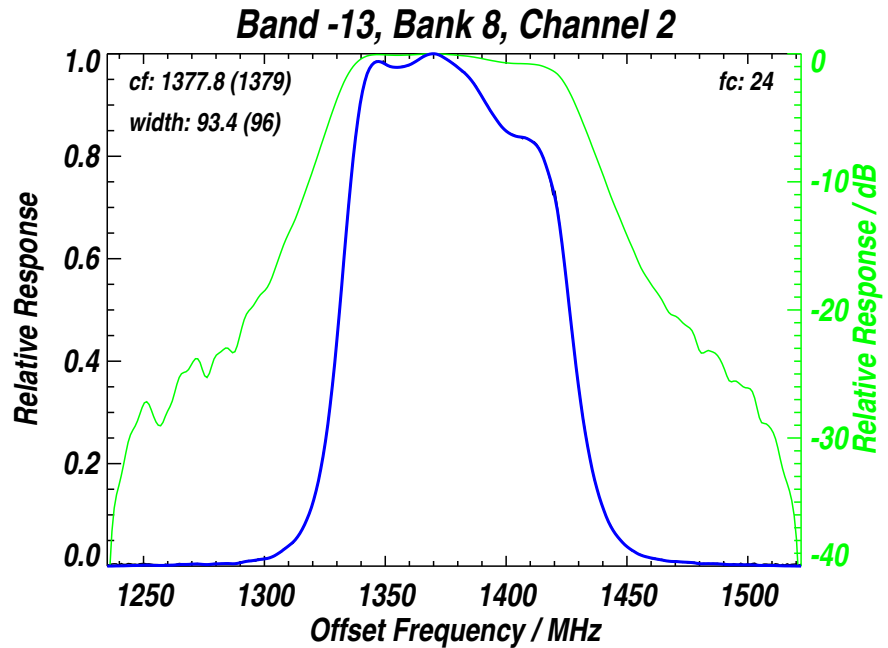
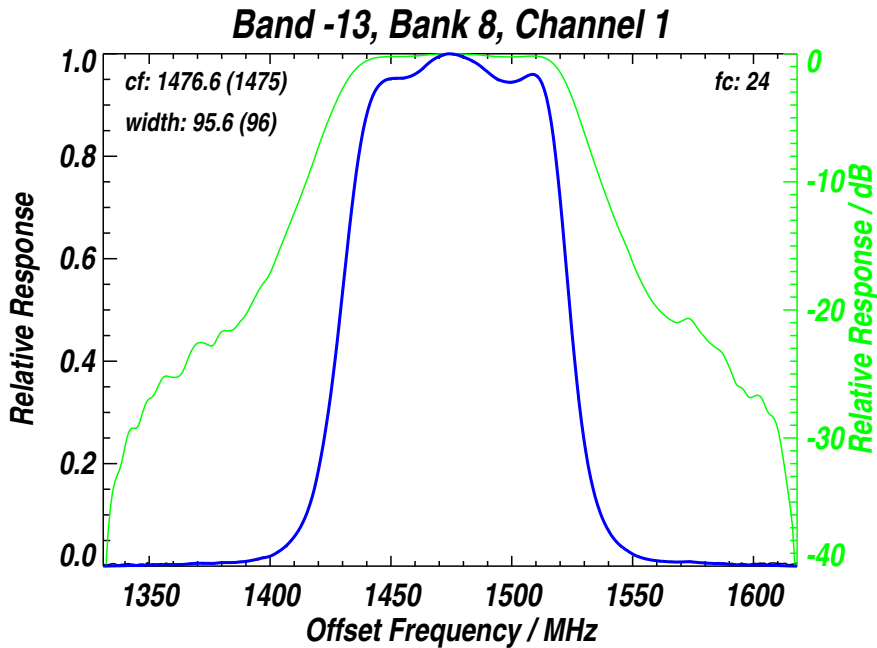


Figure H.364: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 1 to 4. See text for additional details.

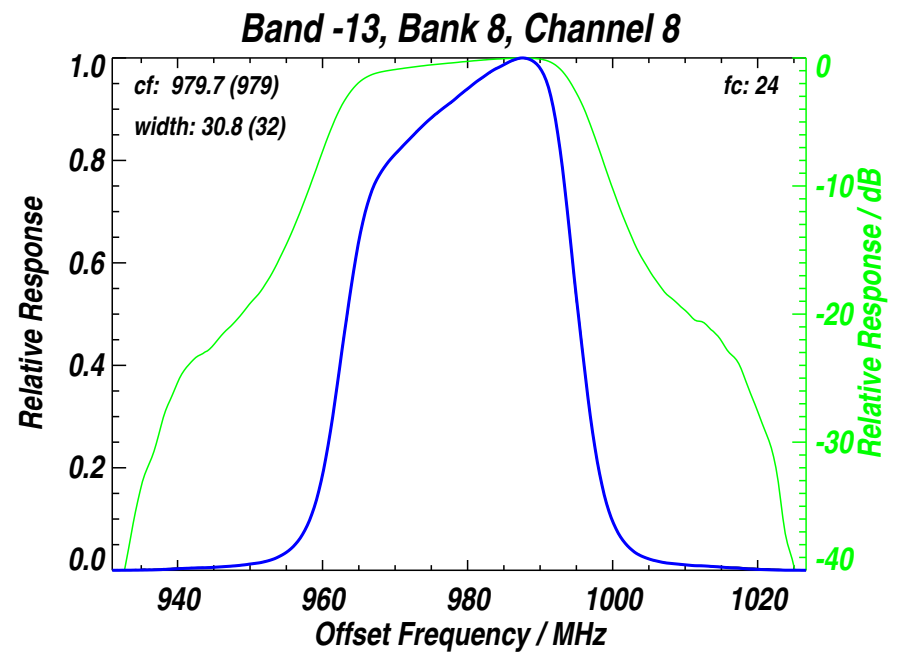
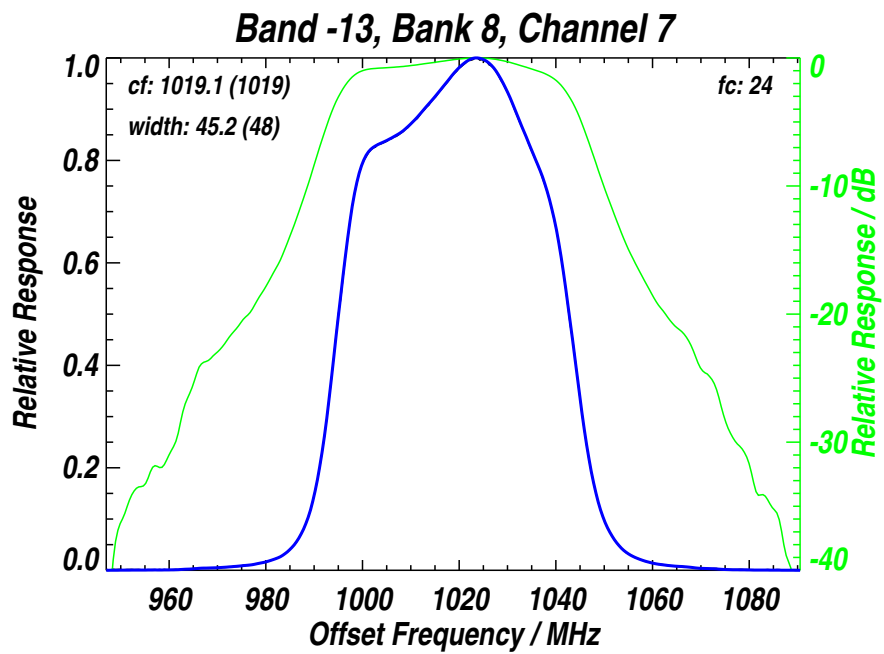
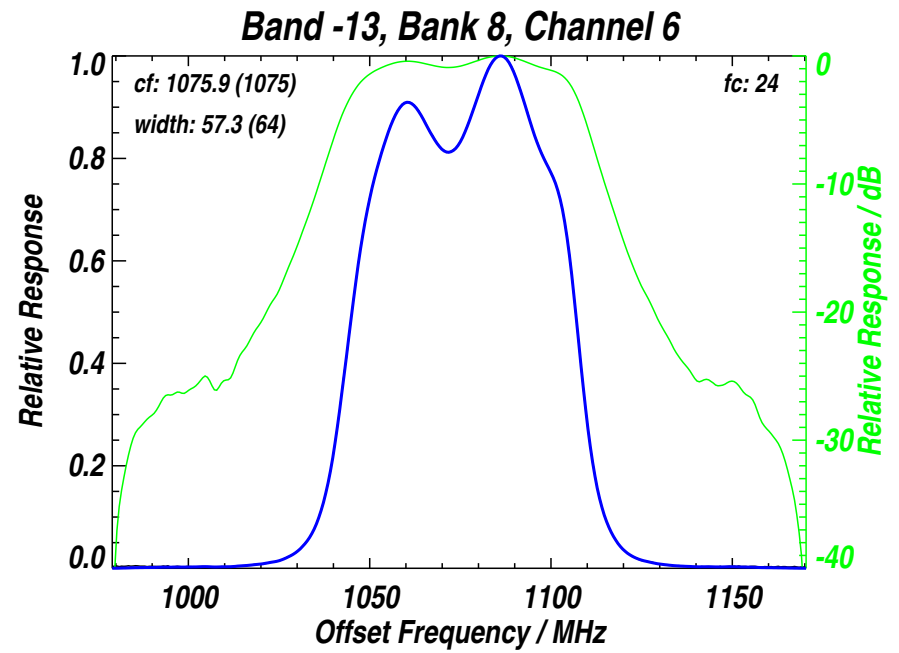
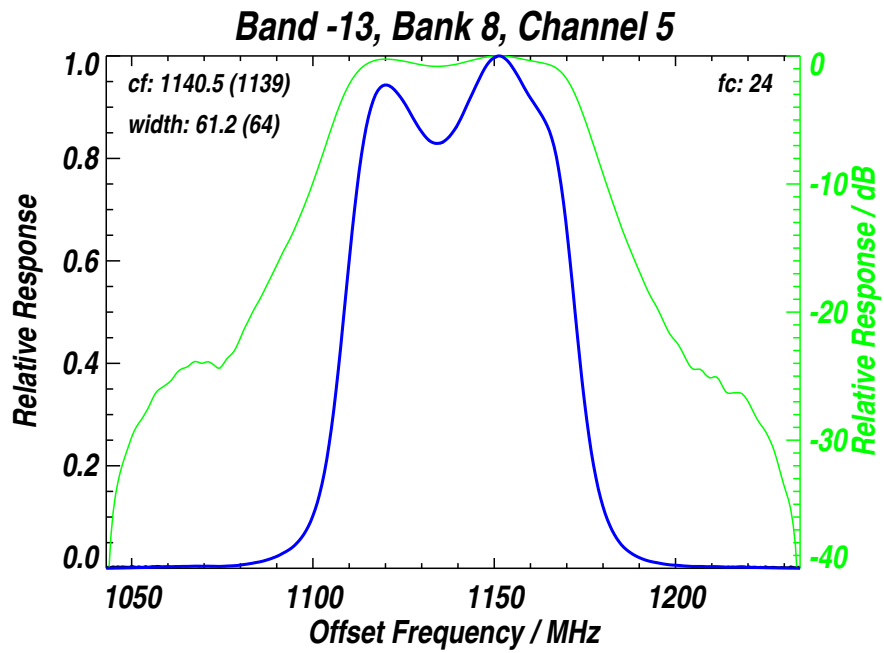


Figure H.365: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 5 to 8. See text for additional details.

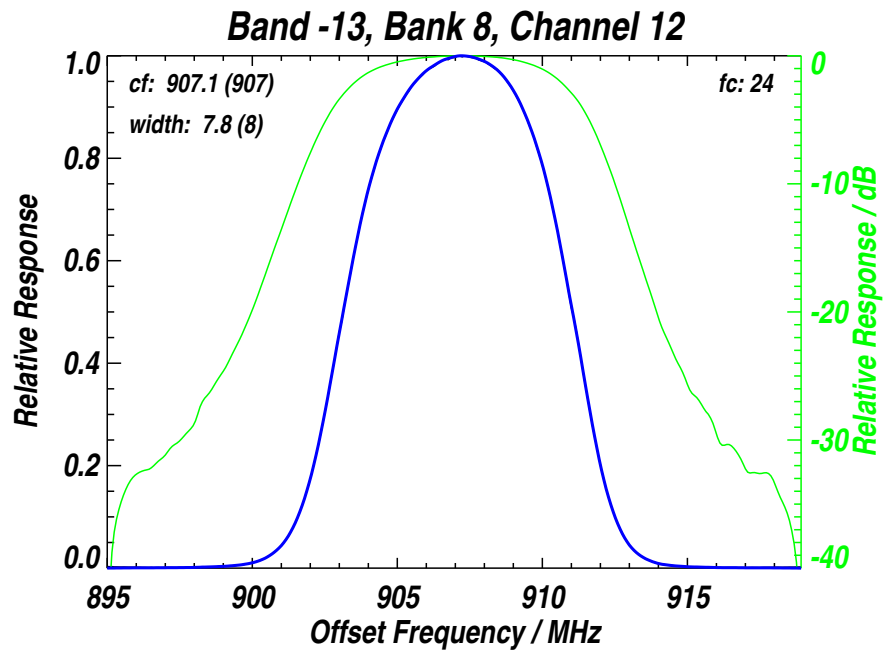
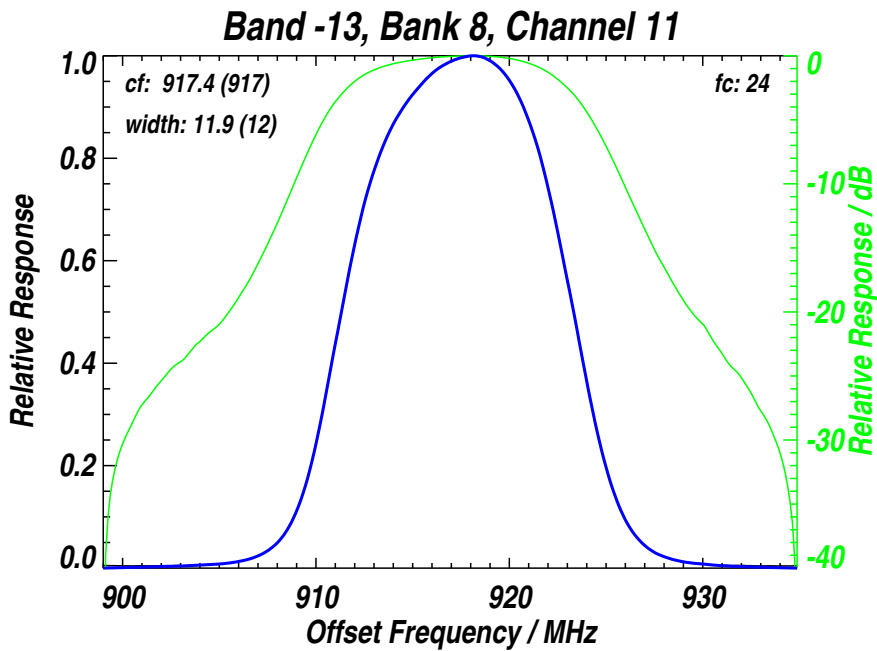
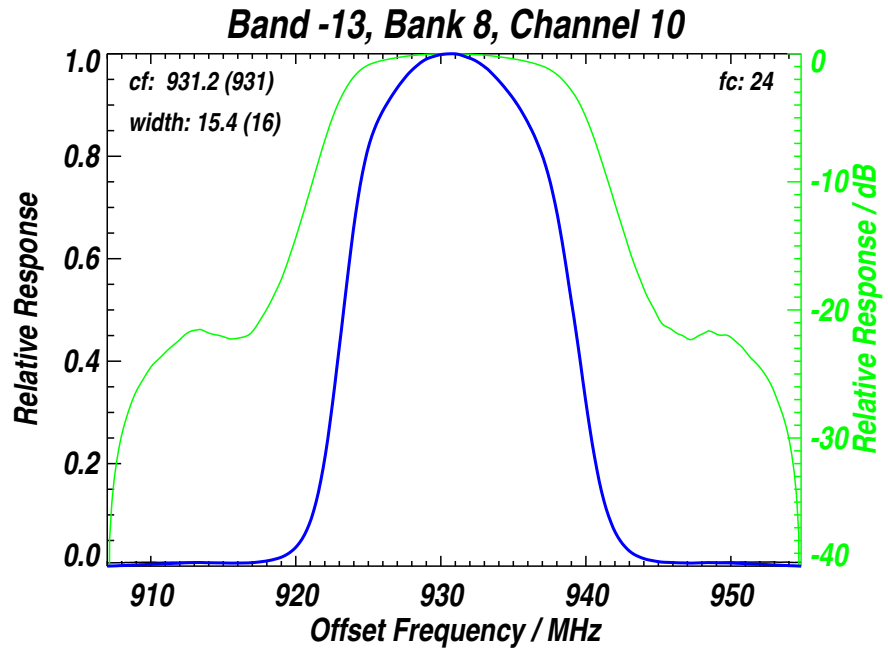
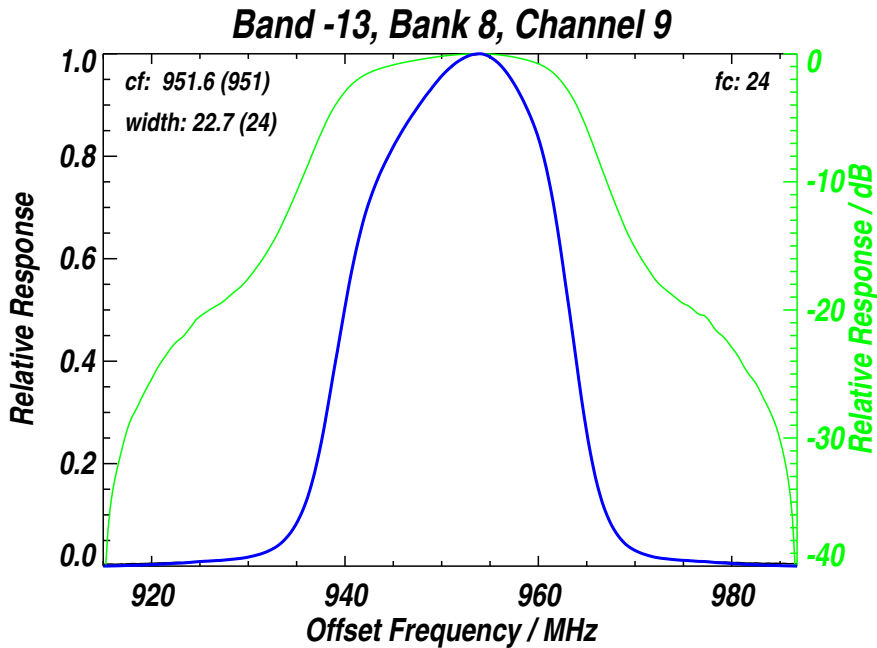


Figure H.366: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 9 to 12. See text for additional details.

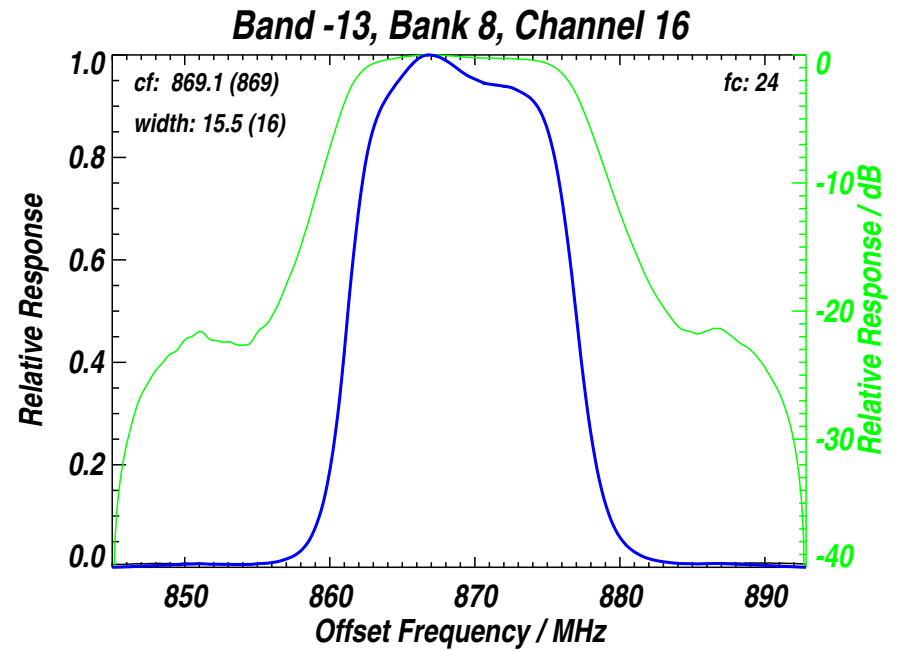
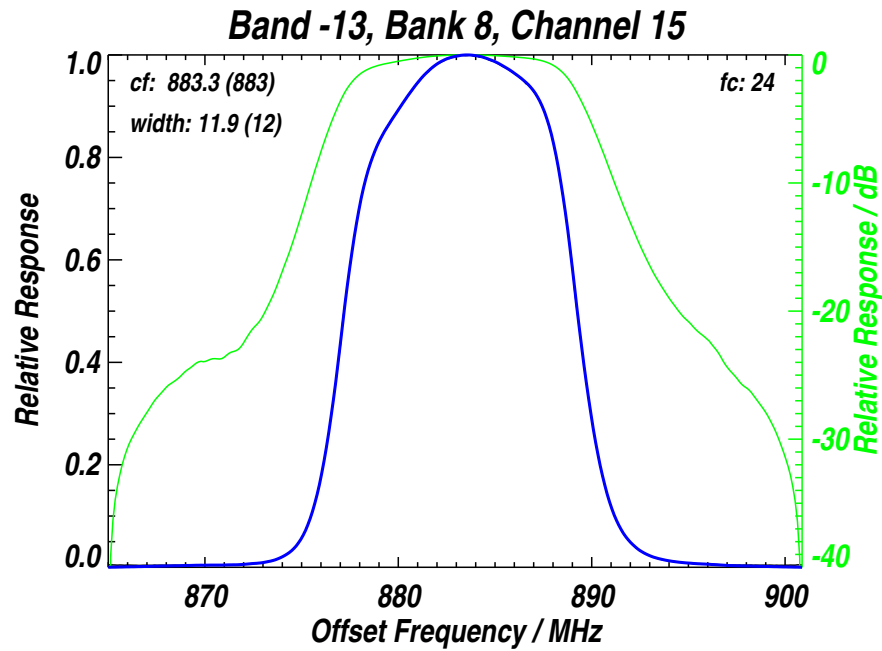
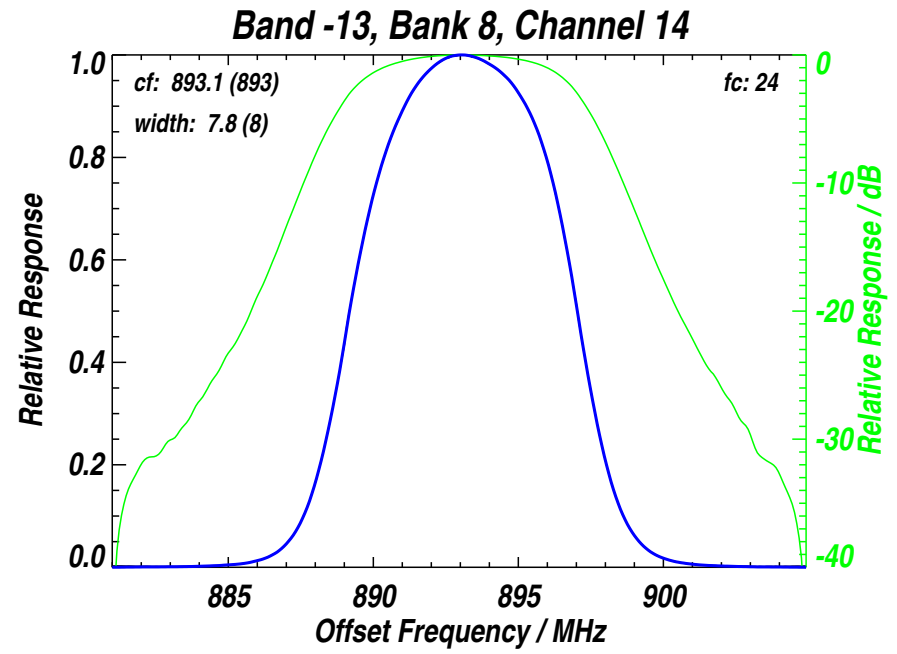
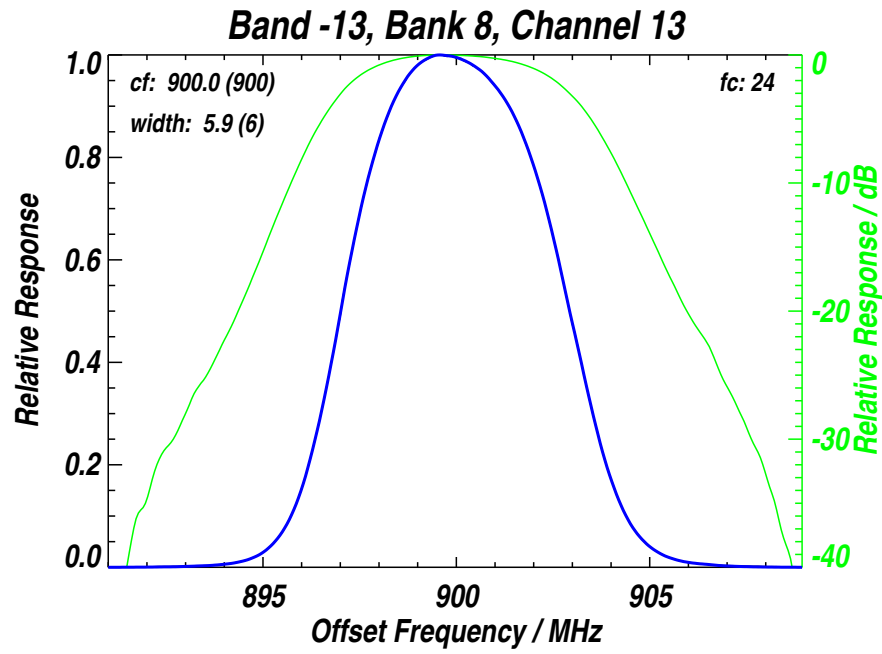


Figure H.367: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 13 to 16. See text for additional details.

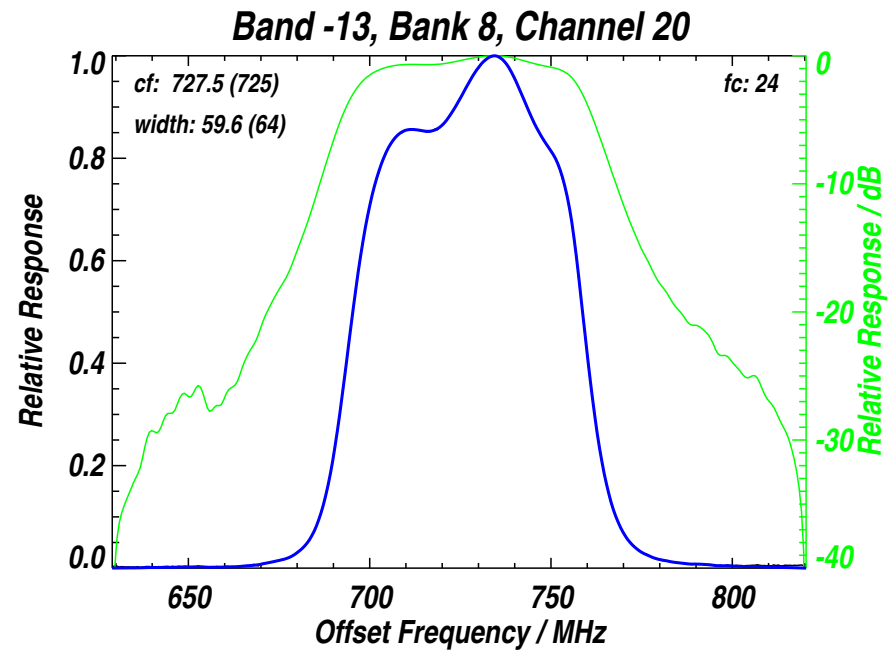
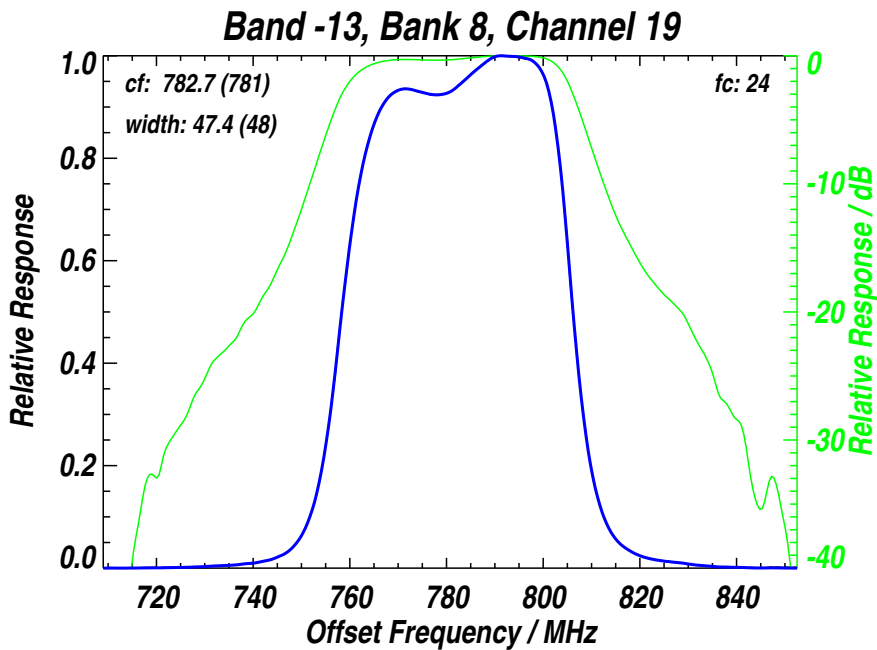
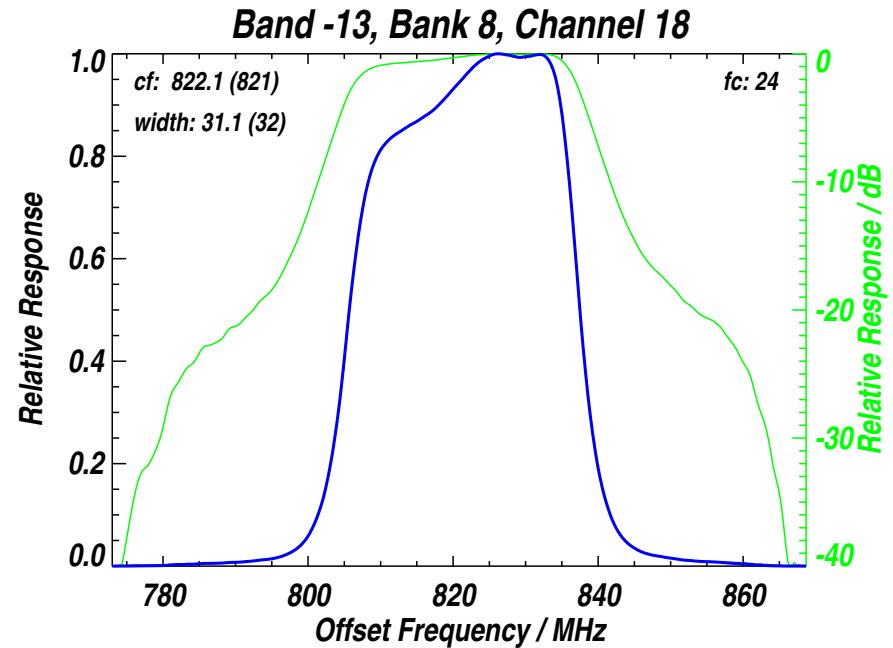
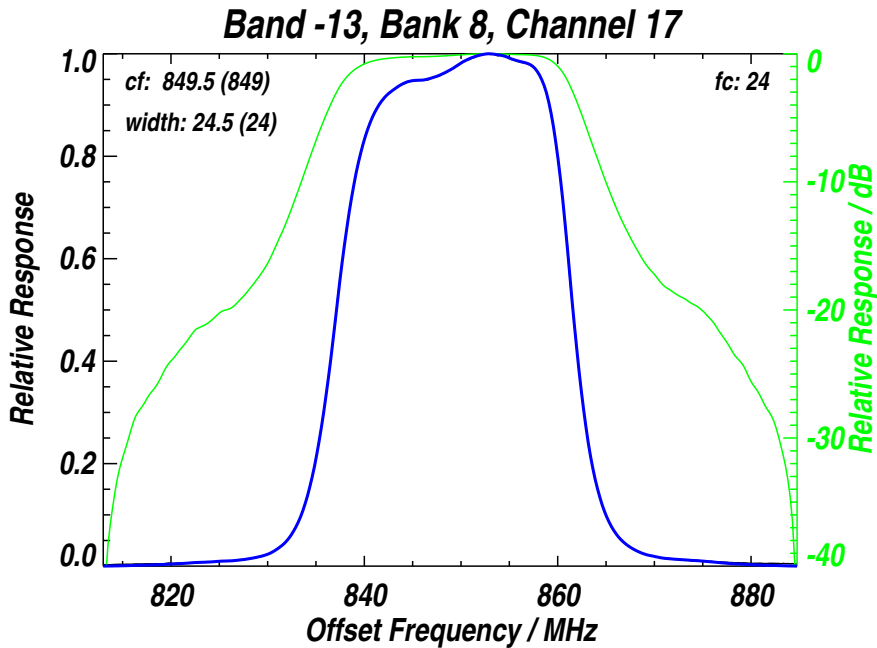


Figure H.368: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 17 to 20. See text for additional details.



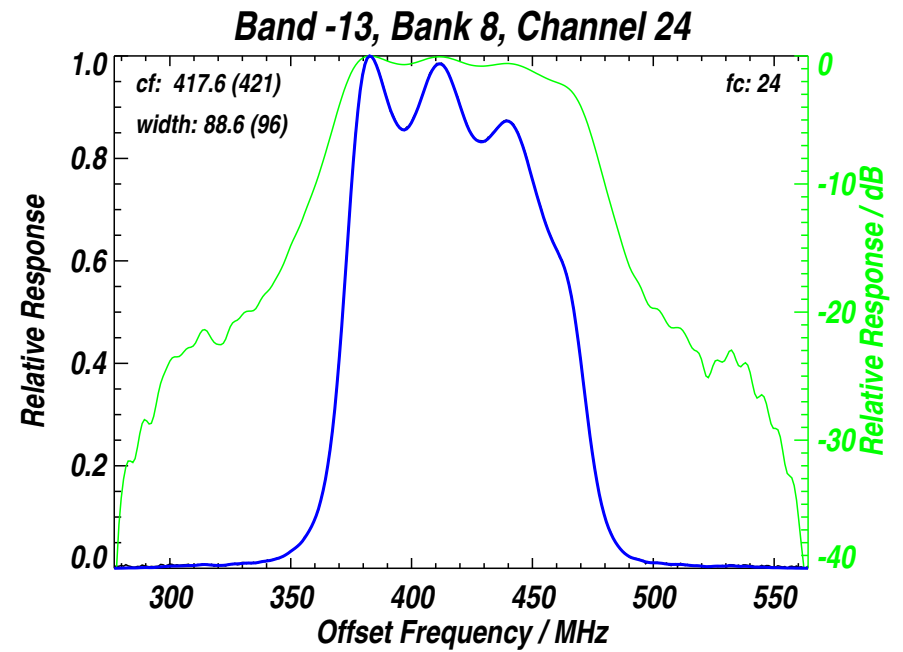
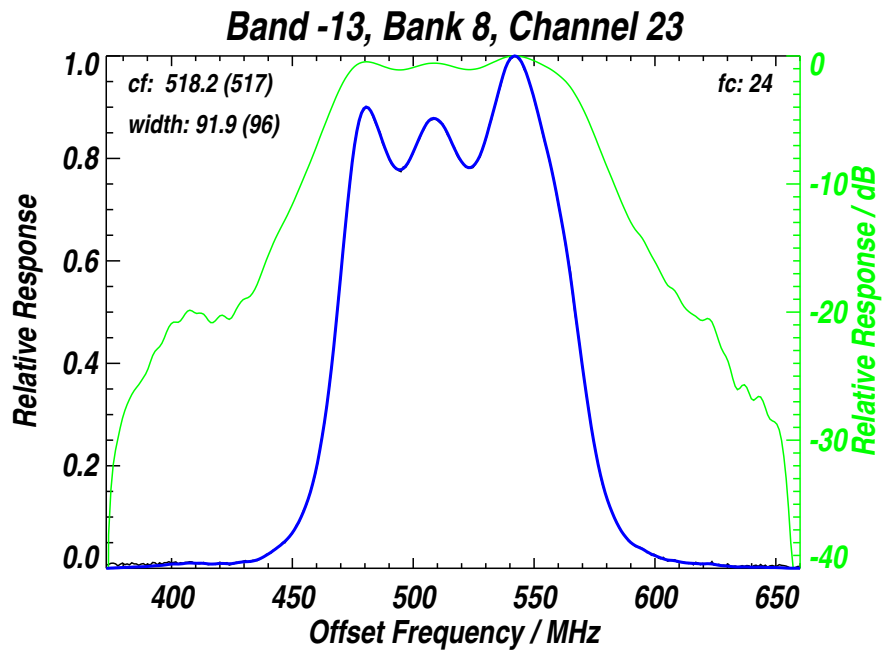
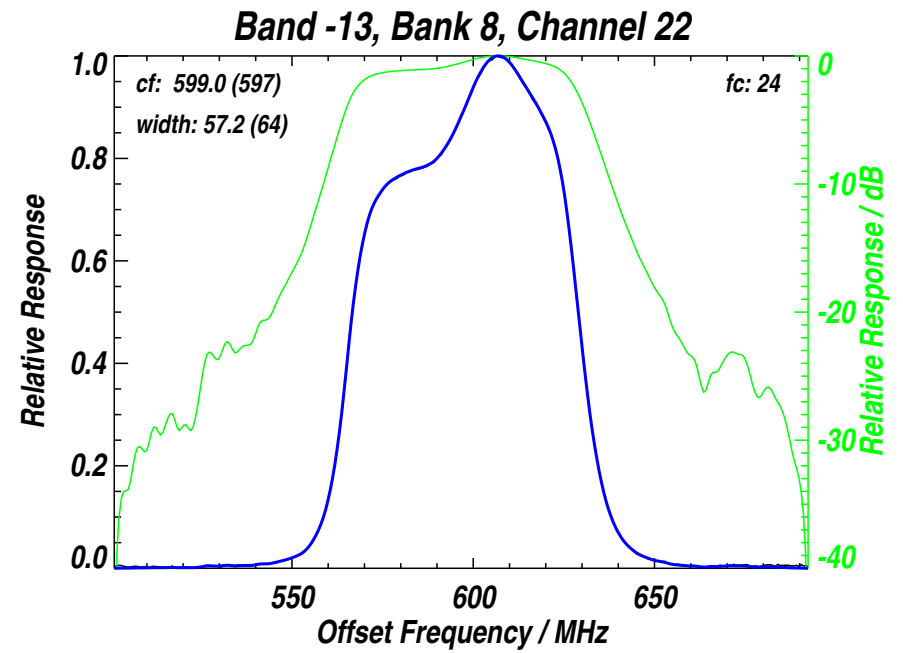
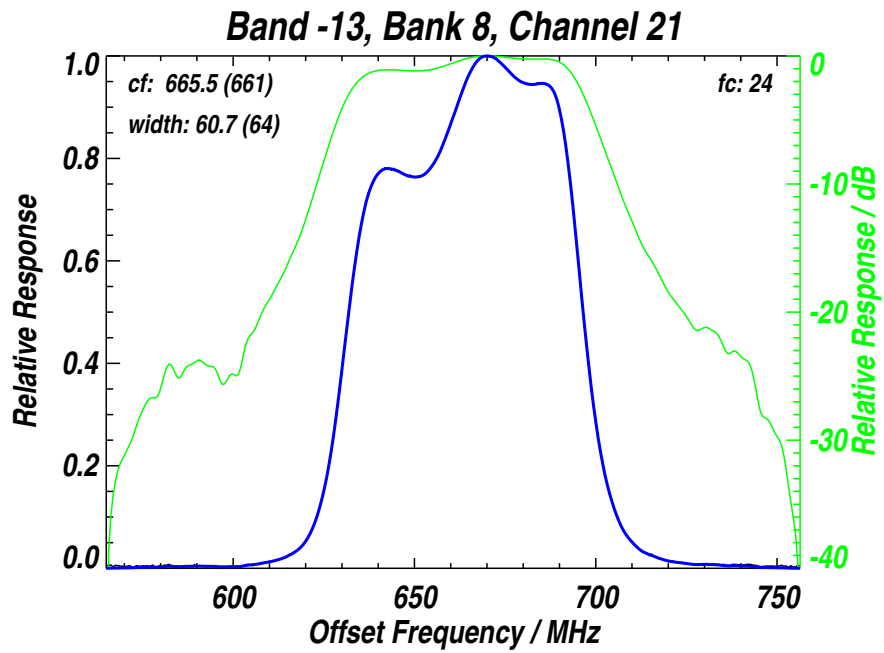
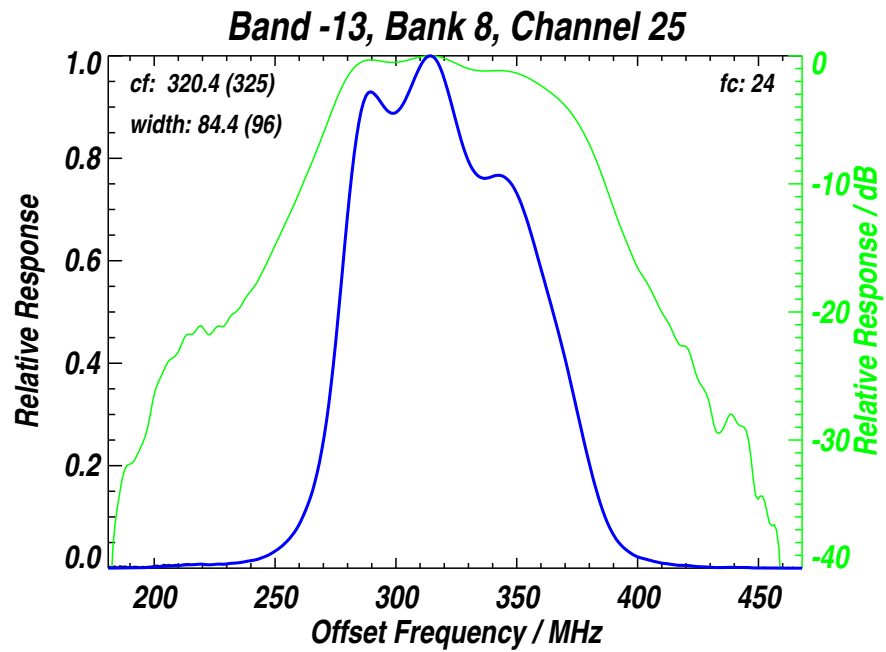


Figure H.369: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 13 (lsb)**  
**Bank 8**  
**Origin = 625.033080000 GHz**

Figure H.370: Lower sideband front-end sweep data for Band 13 taken via Filterbank 8, channel 25. See text for additional details.

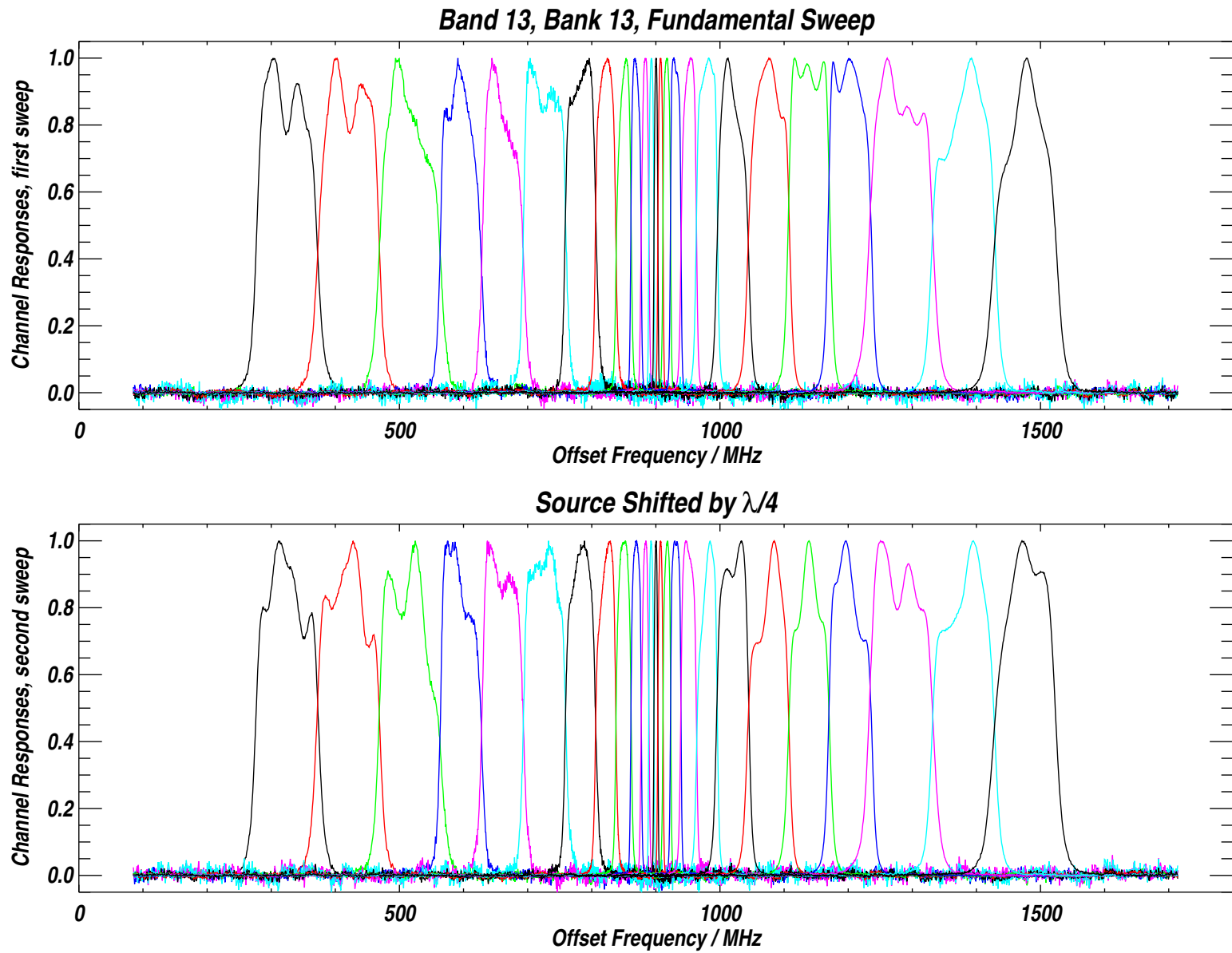


Figure H.371: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13. See text for additional details.

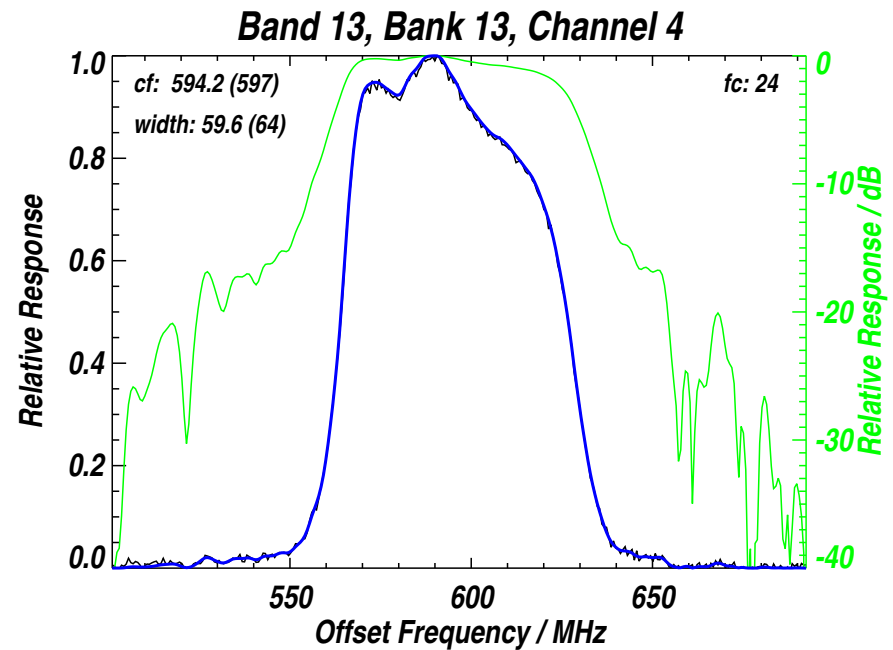
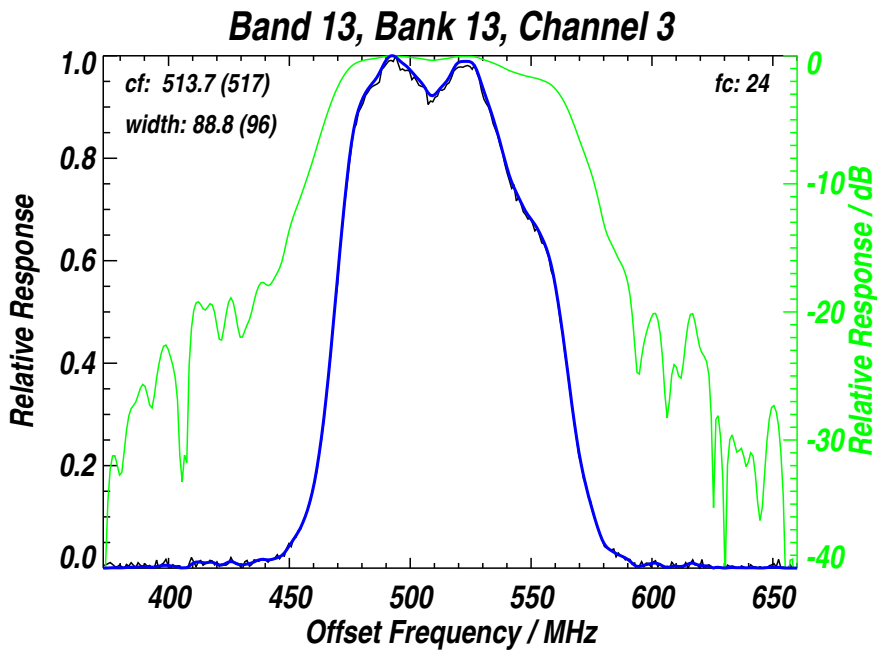
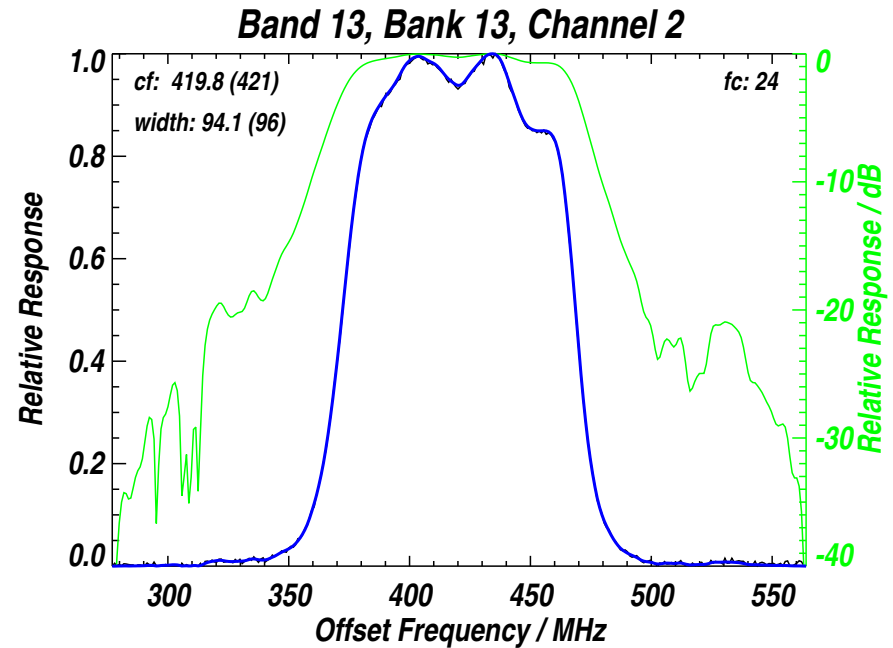
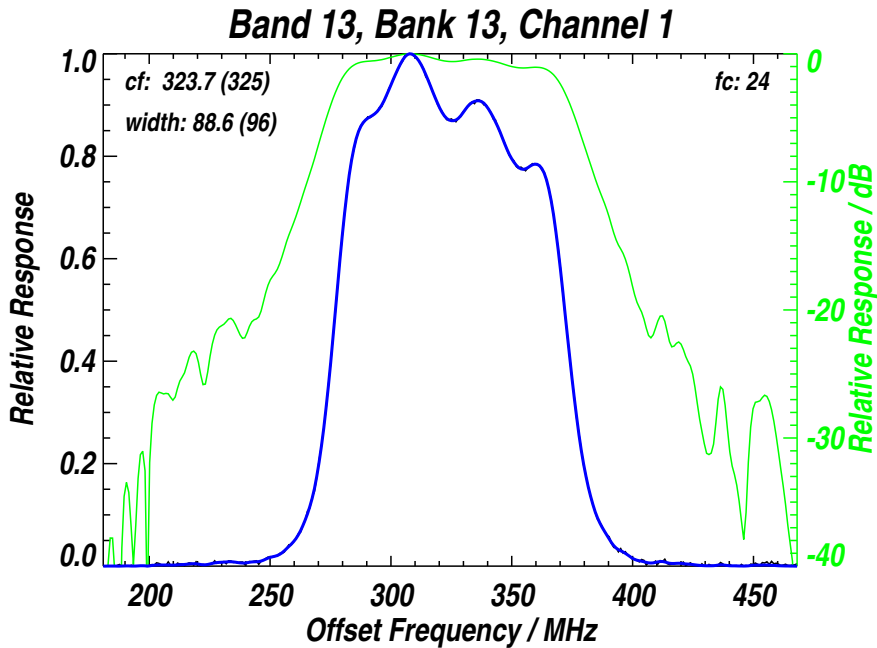


Figure H.372: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 1 to 4. See text for additional details.

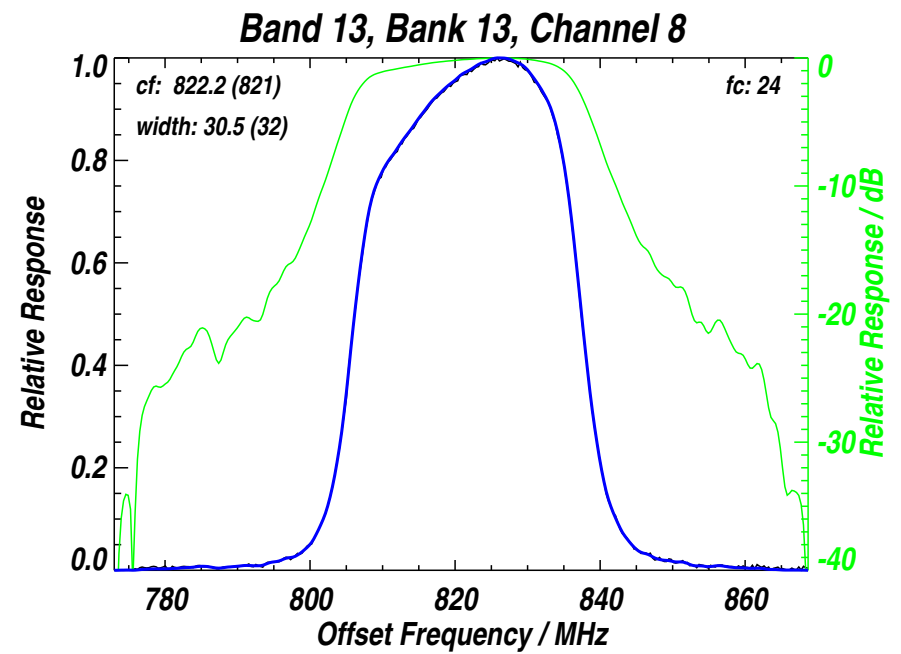
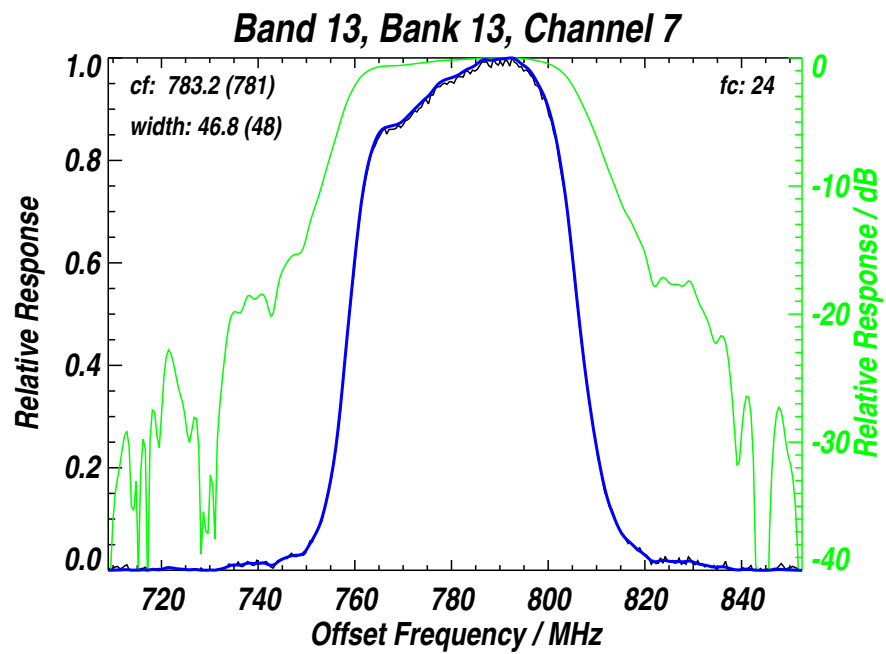
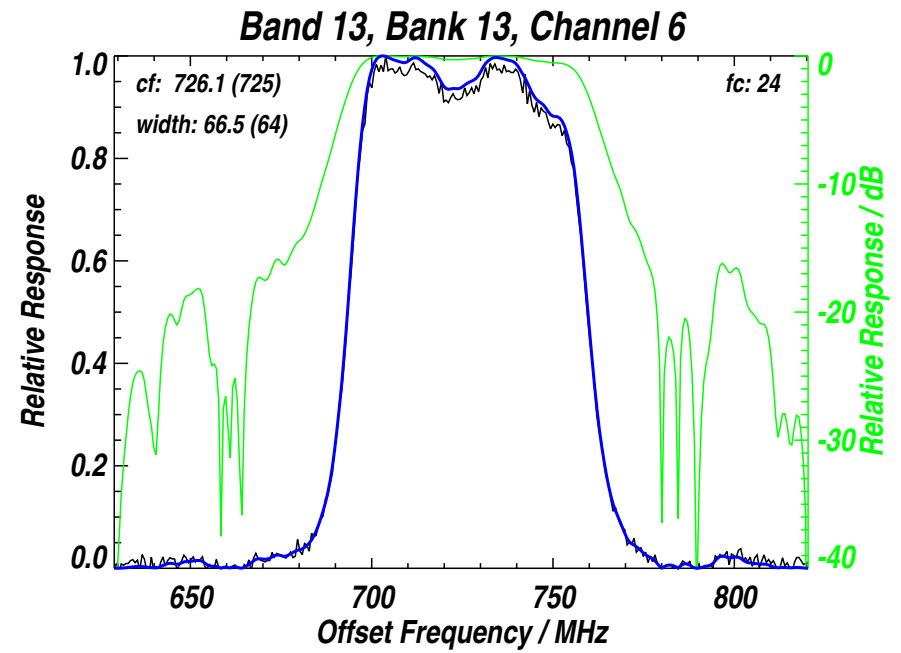
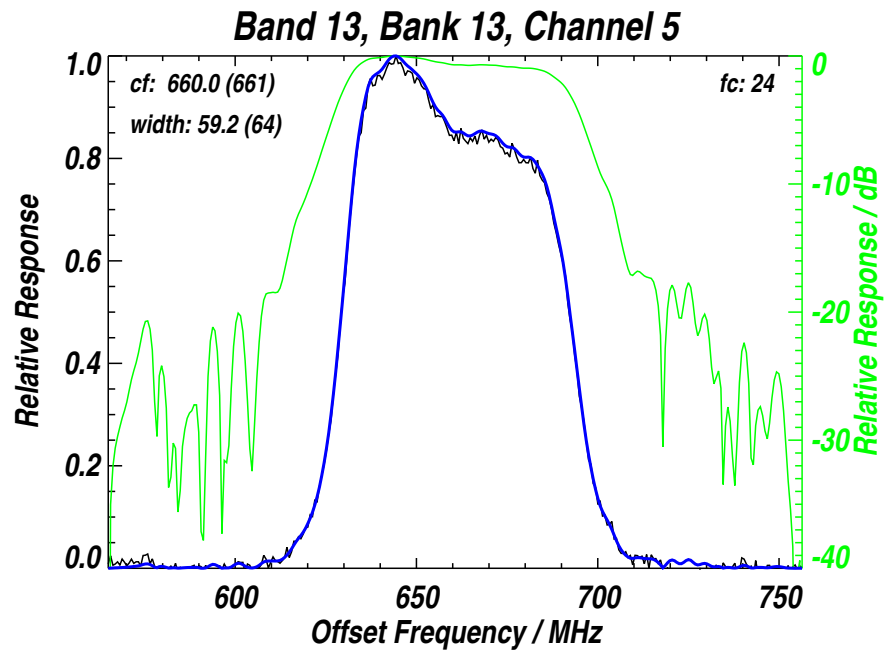


Figure H.373: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 5 to 8. See text for additional details.

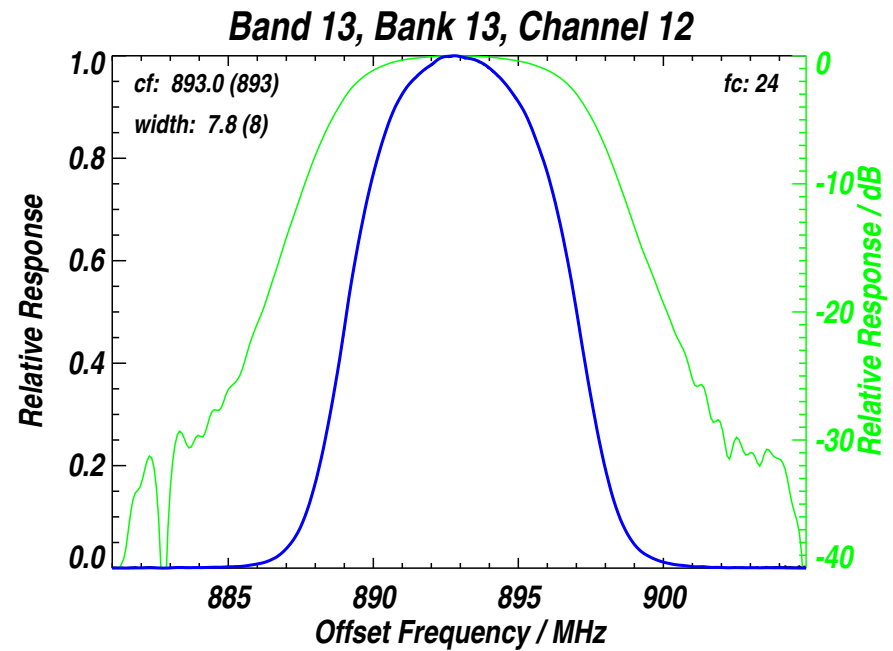
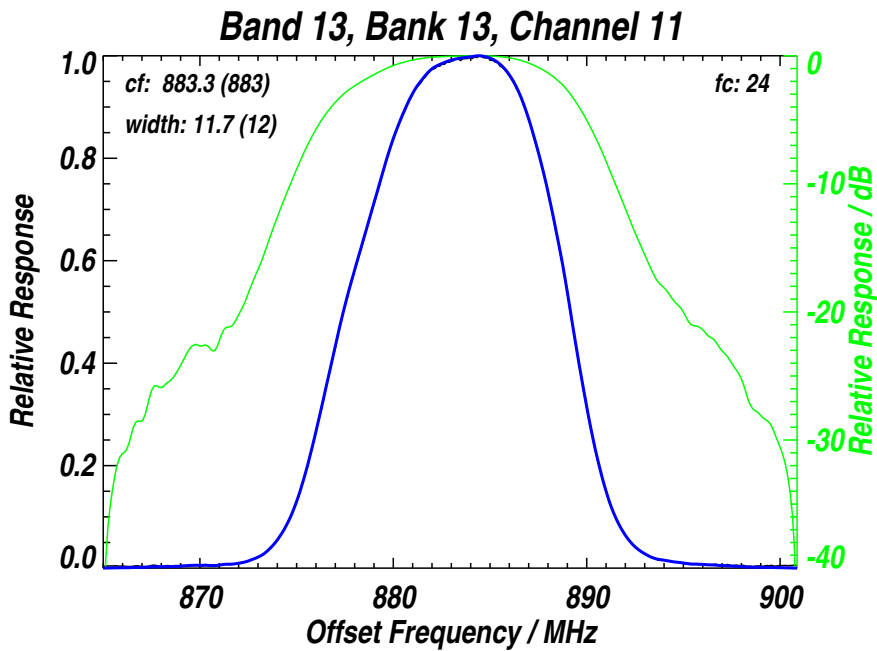
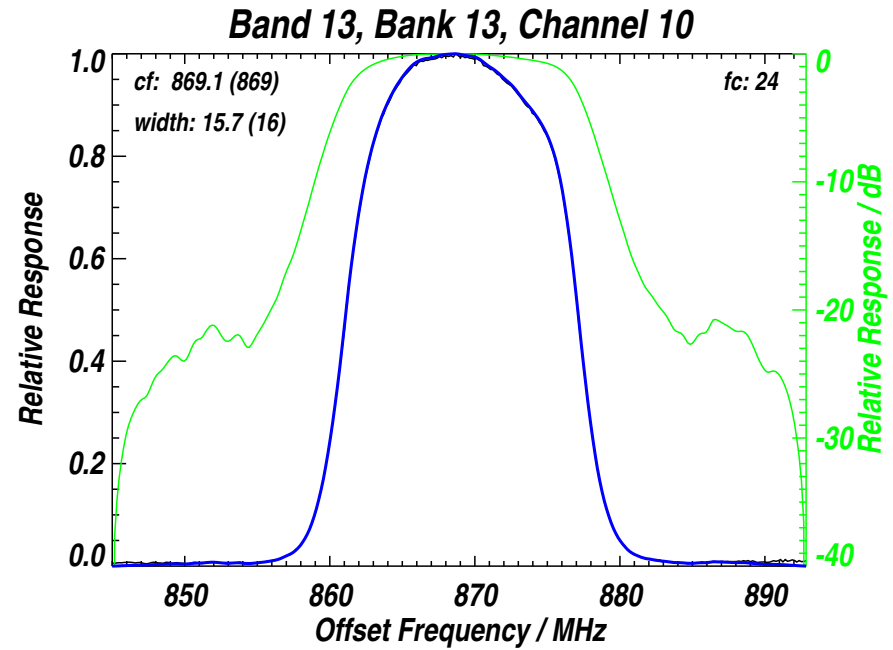
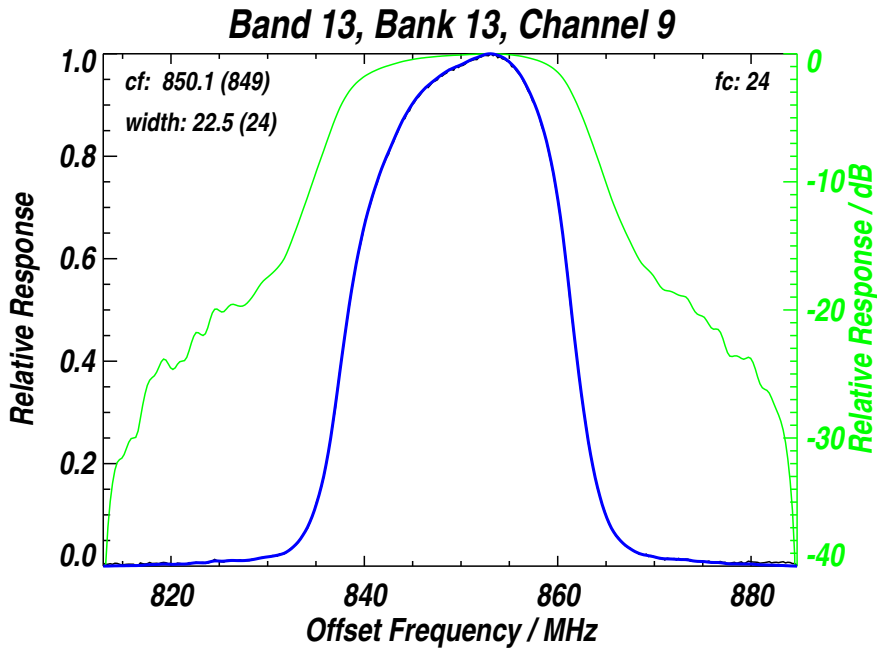


Figure H.374: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 9 to 12. See text for additional details.

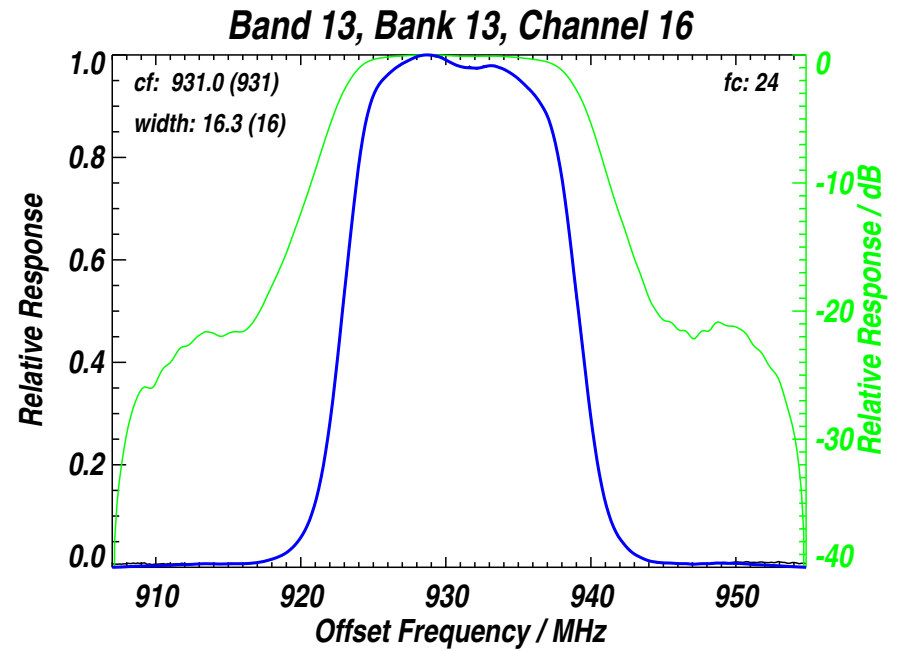
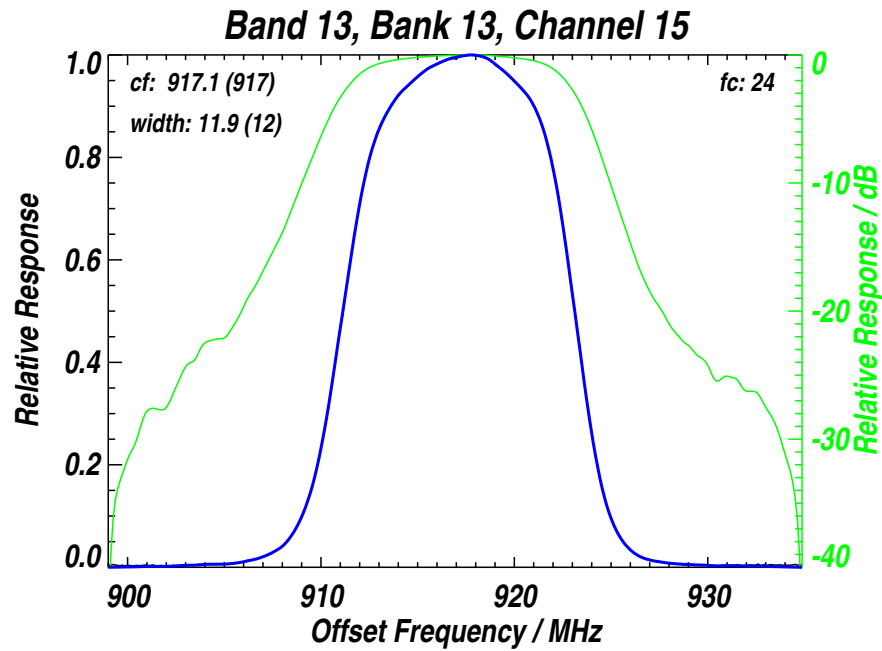
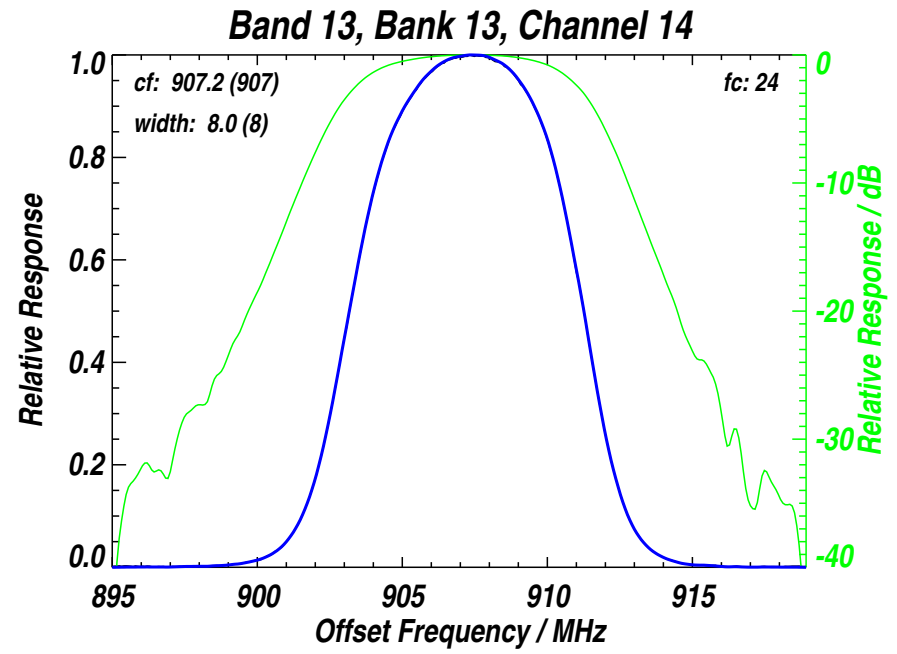
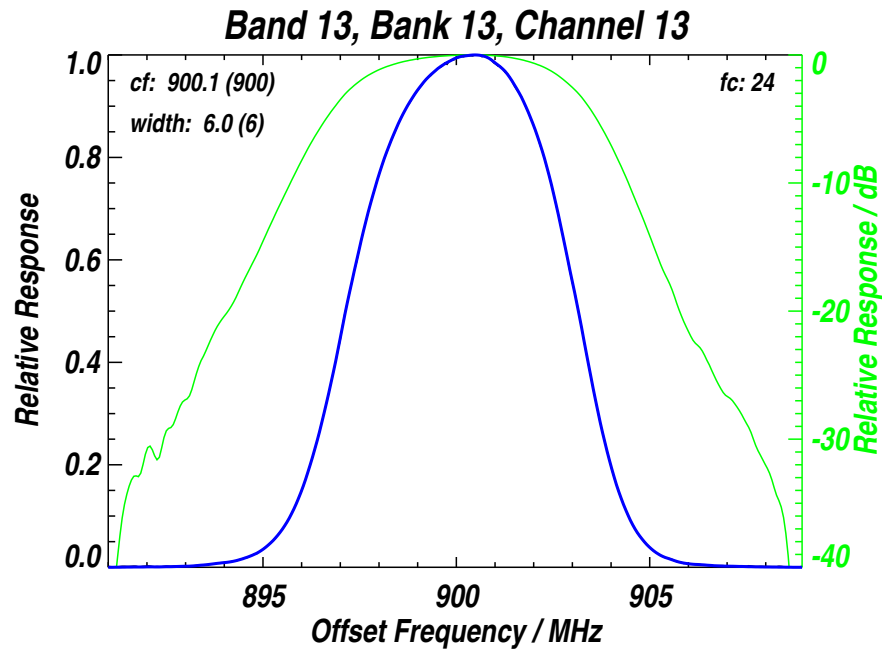


Figure H.375: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 13 to 16. See text for additional details.

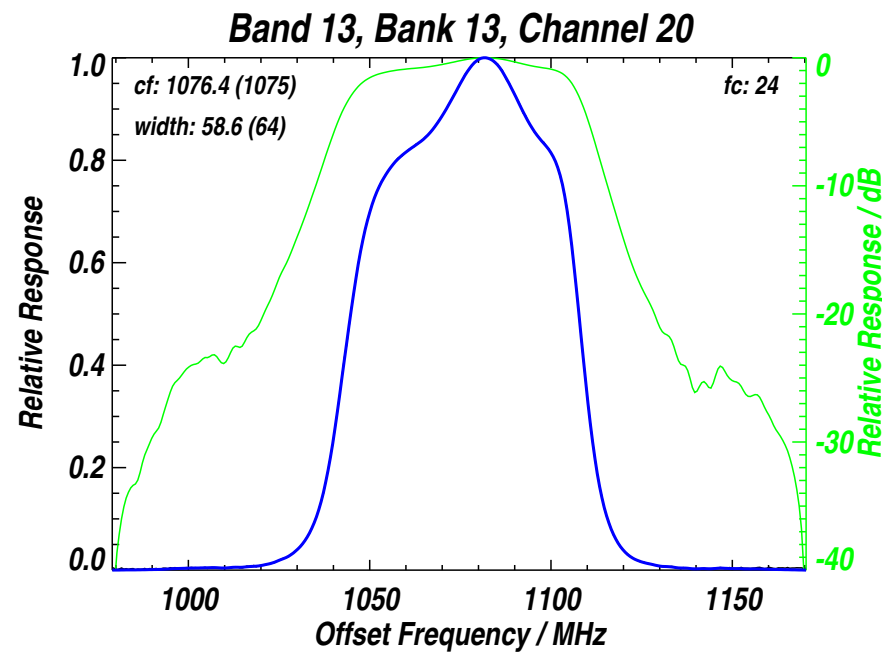
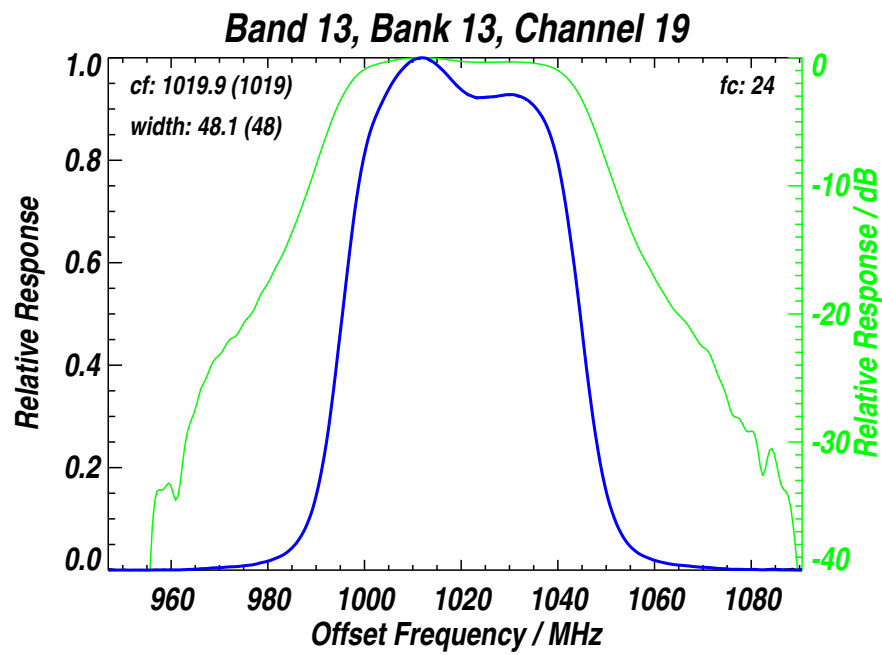
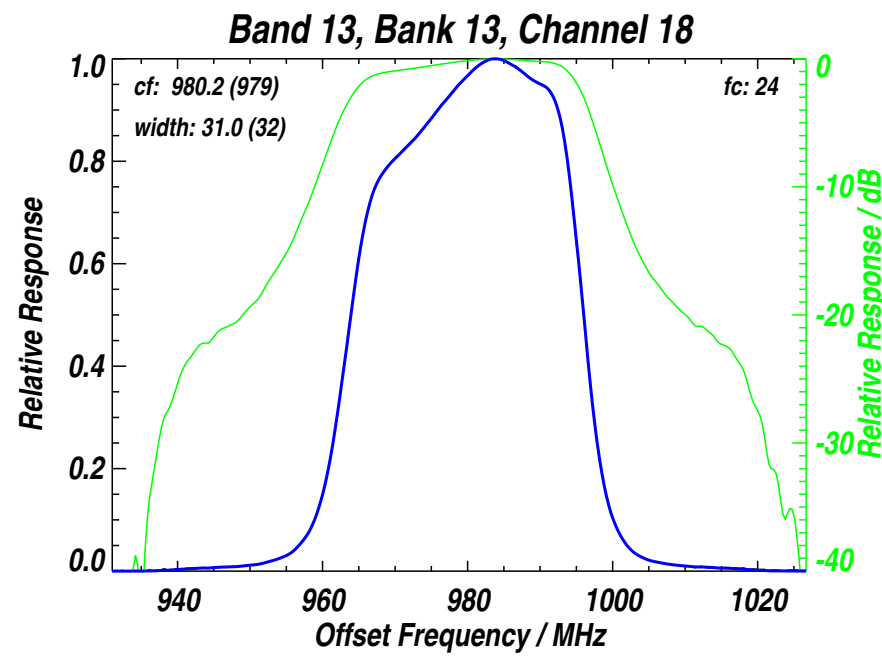
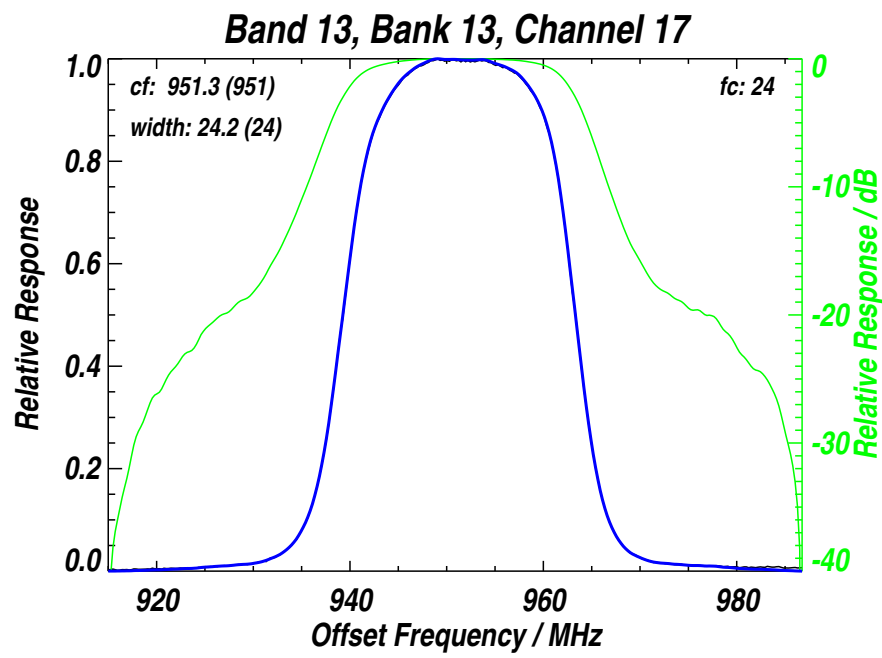


Figure H.376: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 17 to 20. See text for additional details.



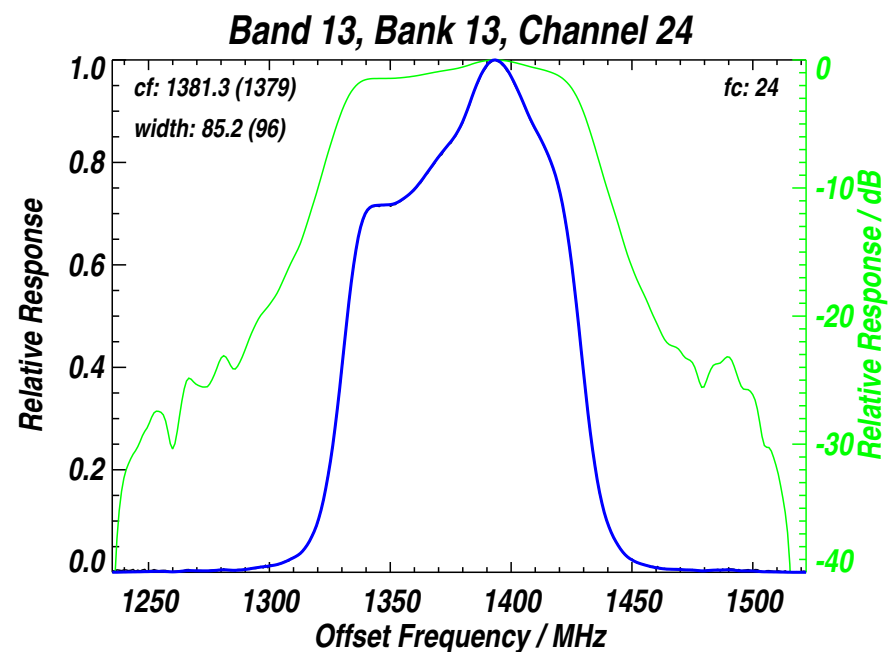
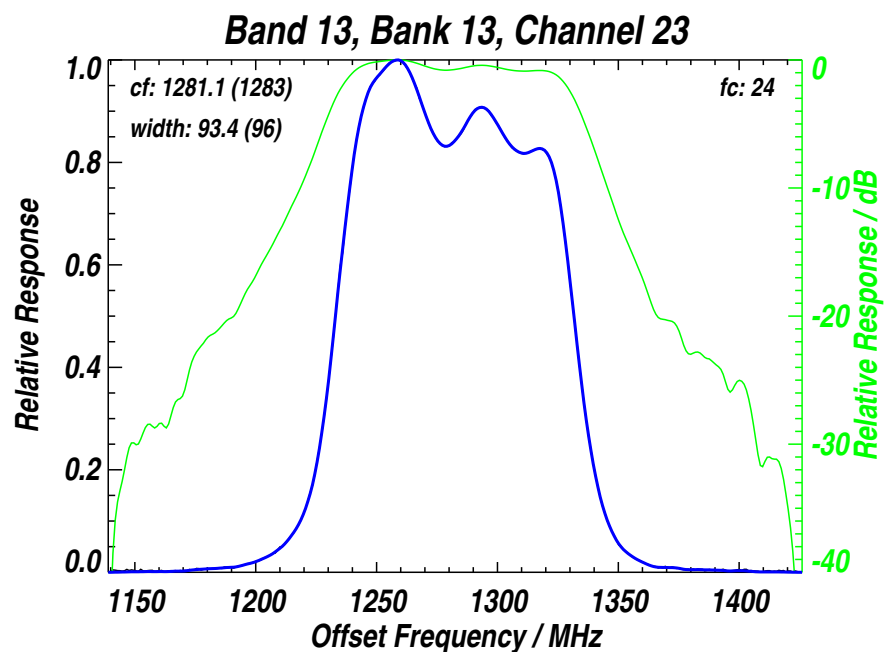
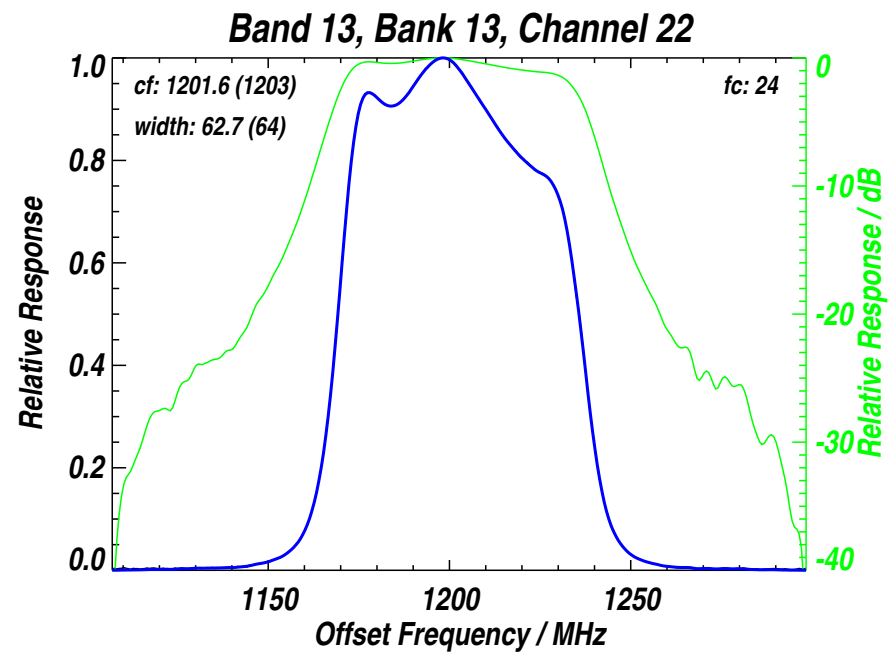
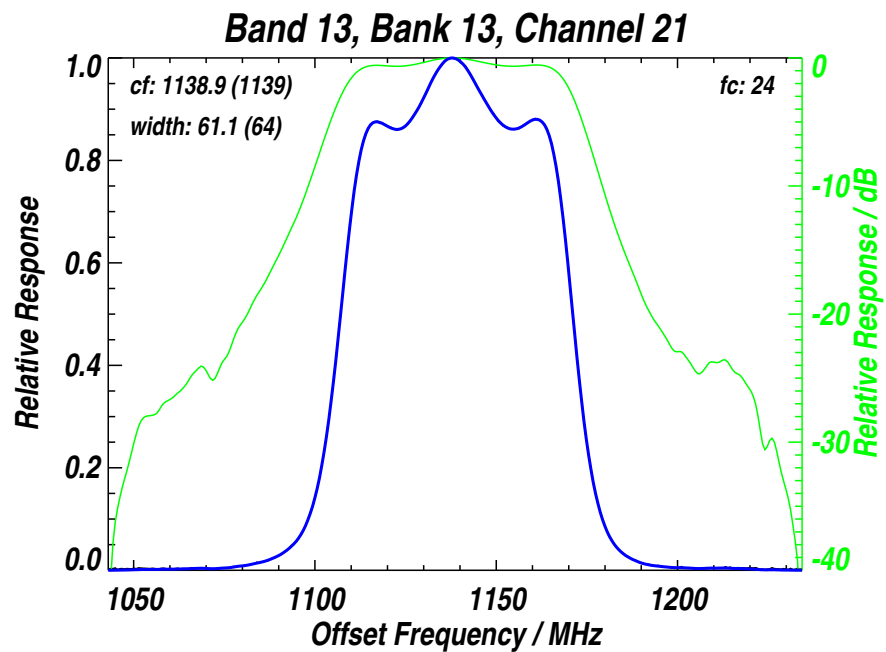
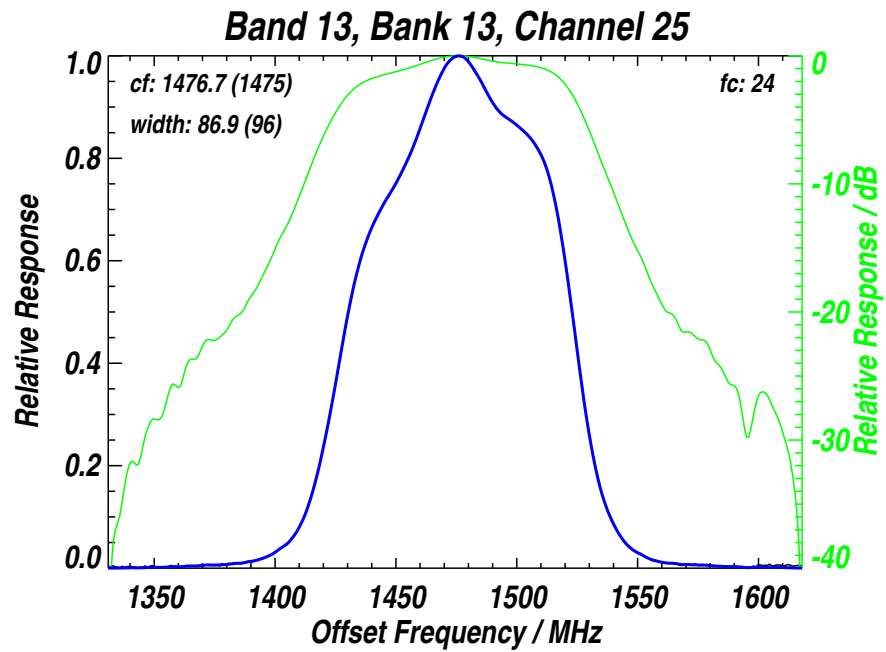


Figure H.377: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channels 21 to 24. See text for additional details.



**Band 13 (usb)**  
**Bank 13**  
**Origin = 658.906923066 GHz**

Figure H.378: Upper sideband front-end sweep data for Band 13 taken via Filterbank 13, channel 25. See text for additional details.

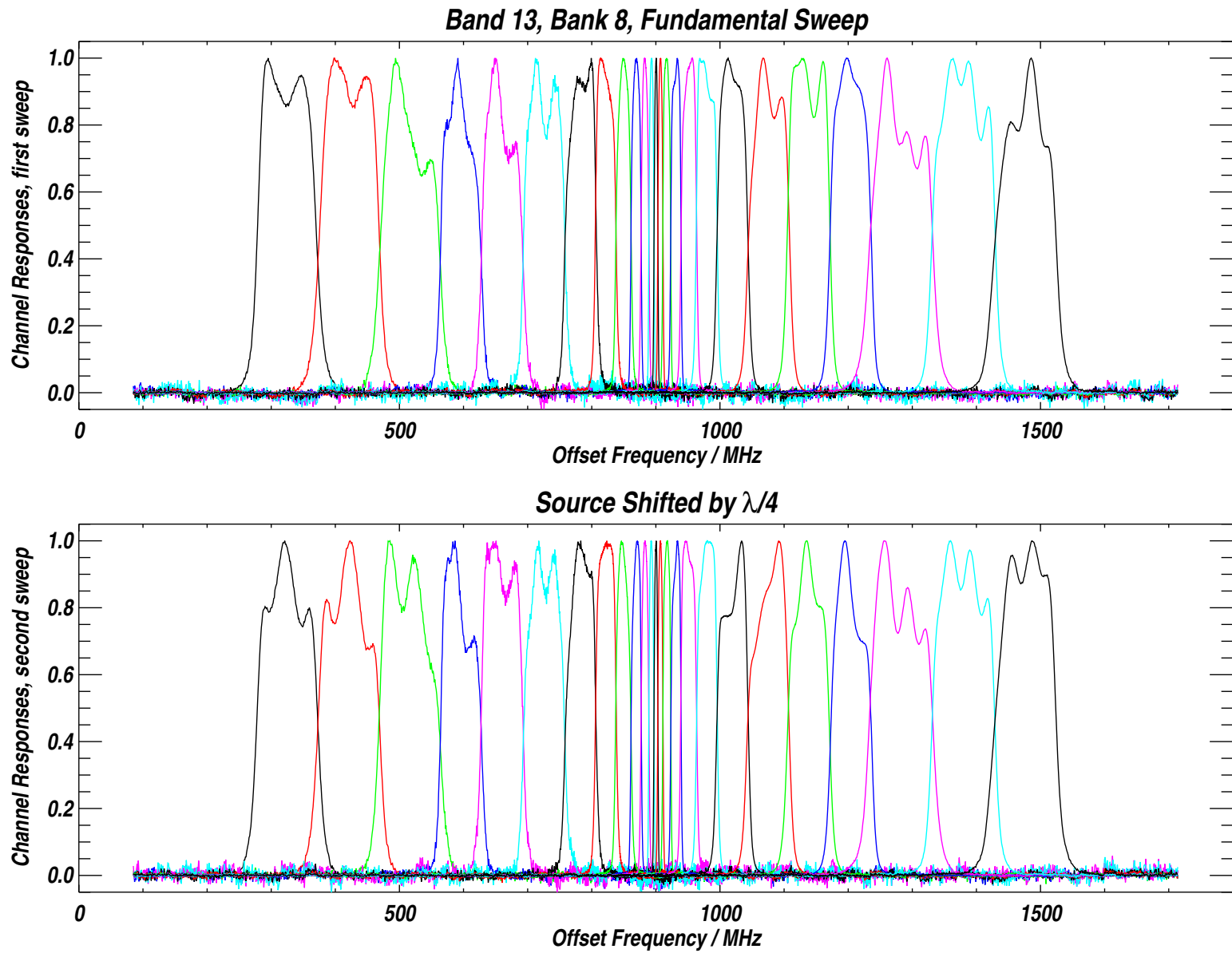


Figure H.379: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8. See text for additional details.

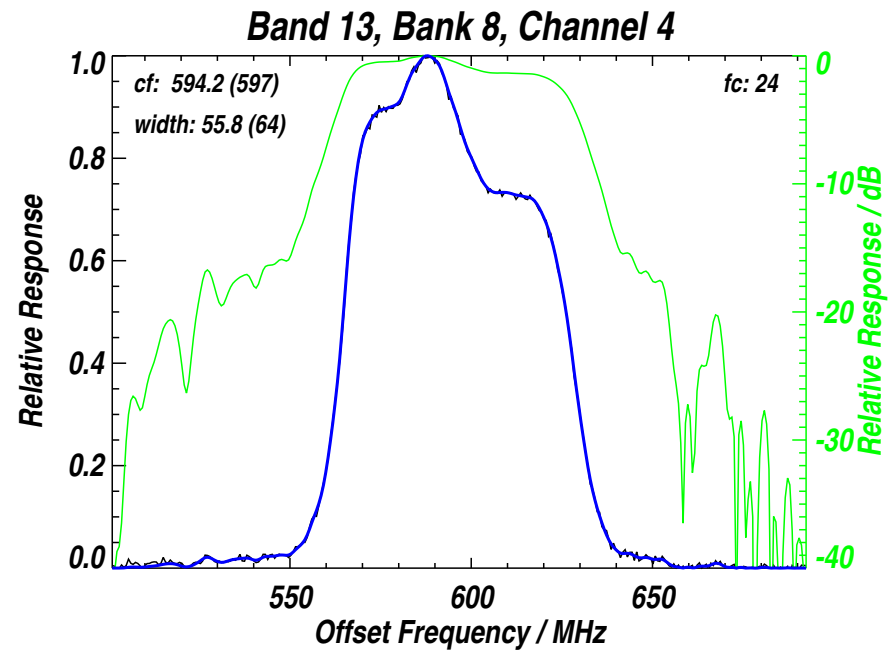
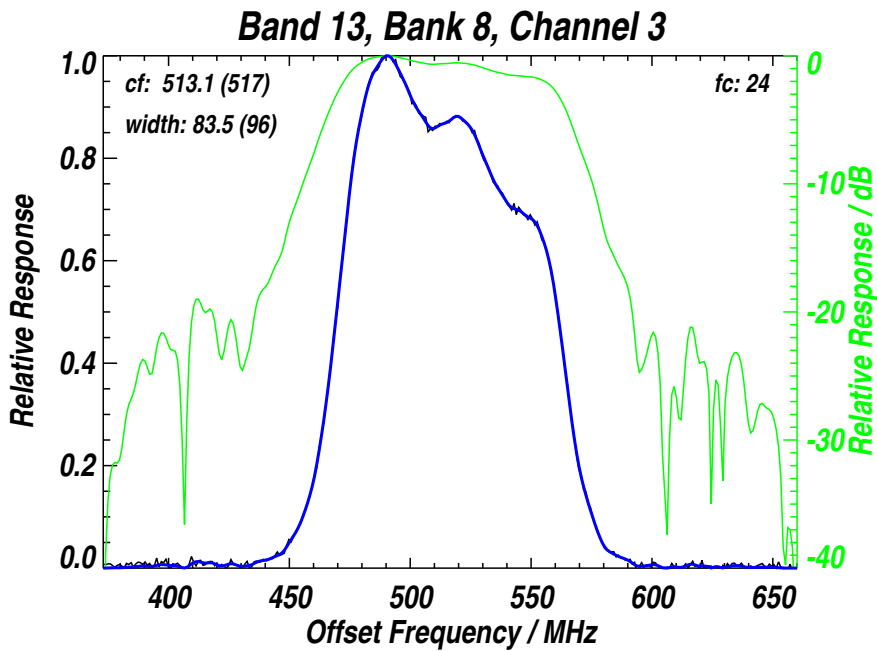
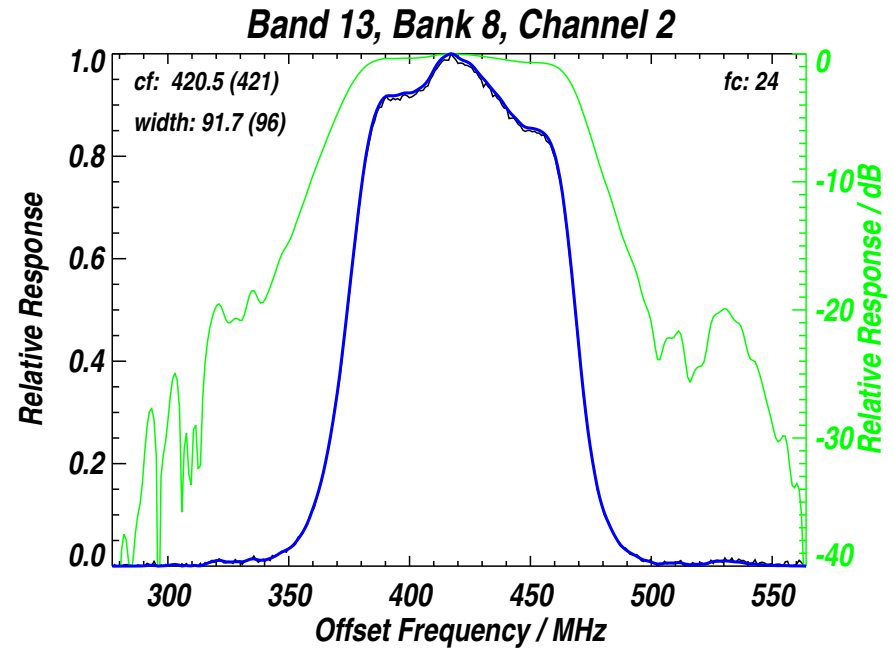
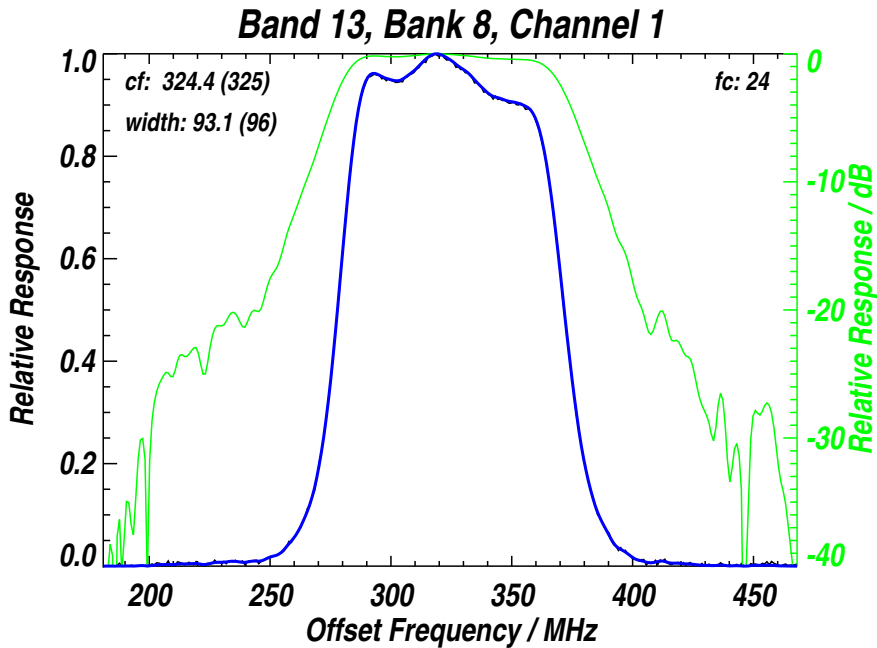


Figure H.380: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 1 to 4. See text for additional details.

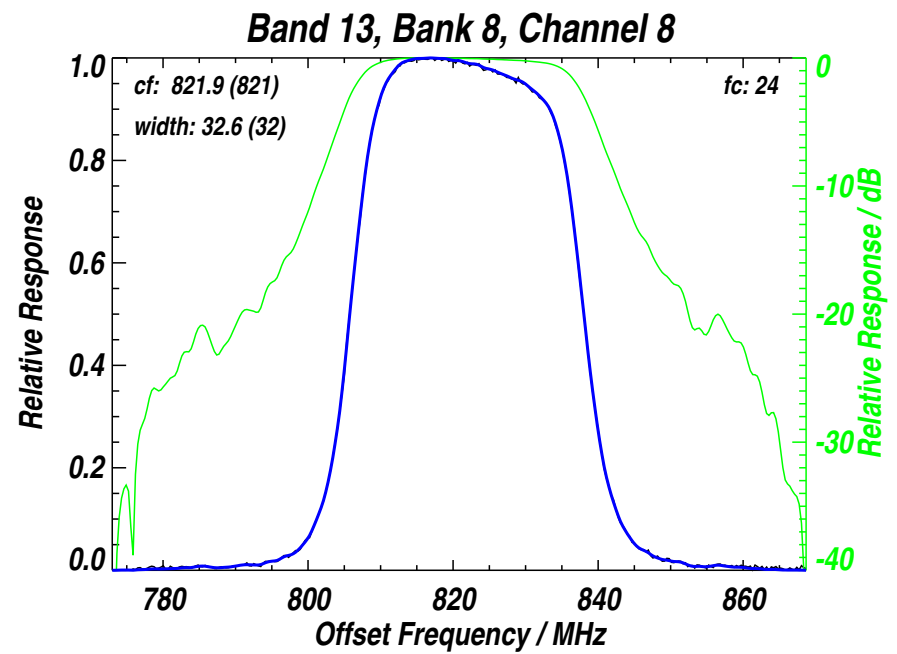
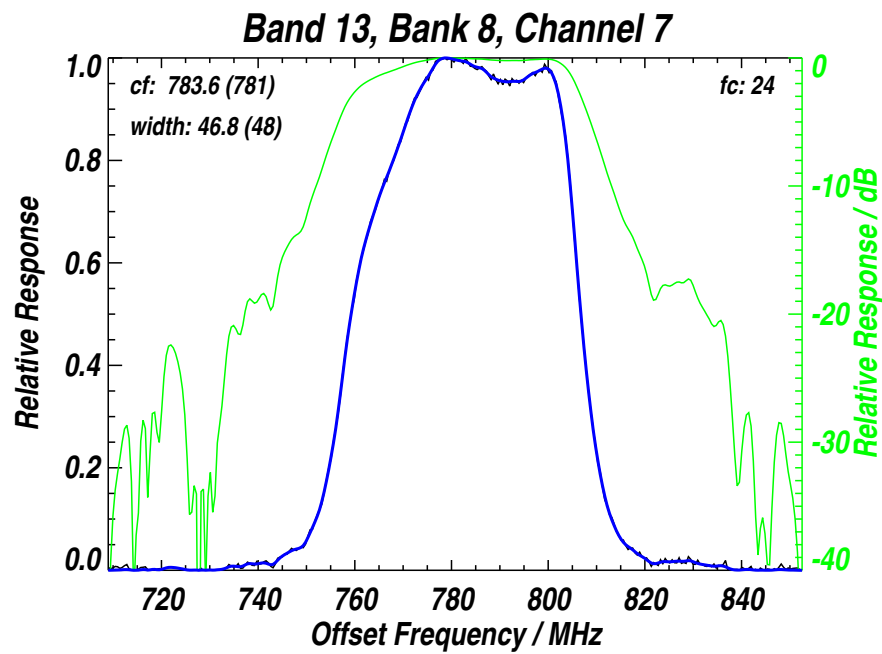
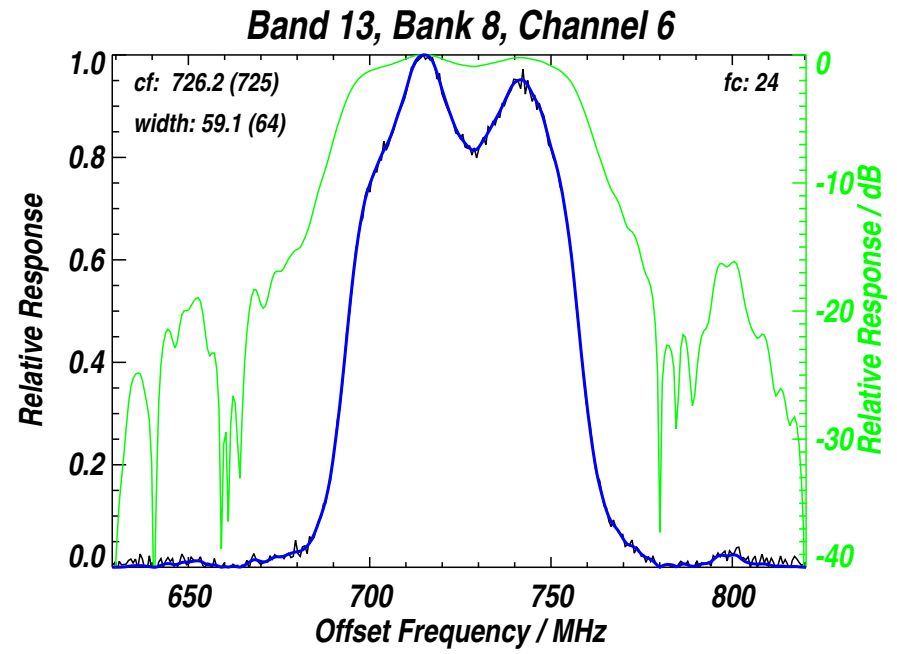
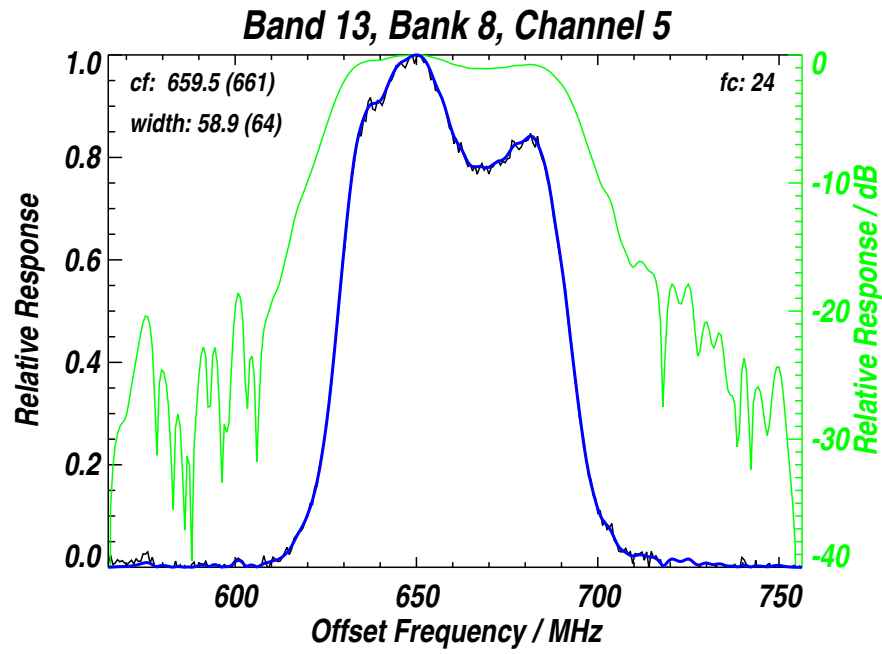


Figure H.381: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 5 to 8. See text for additional details.

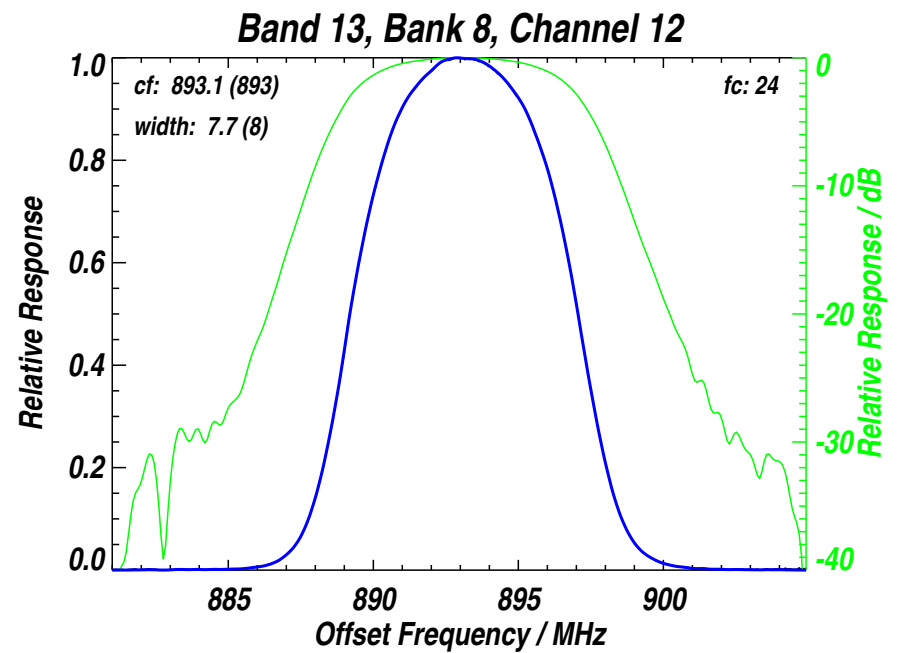
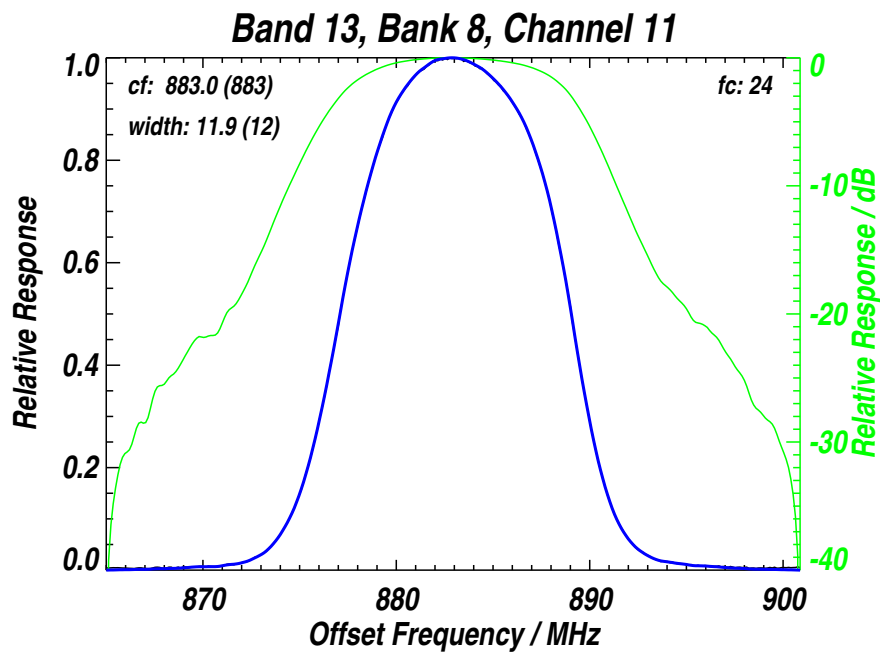
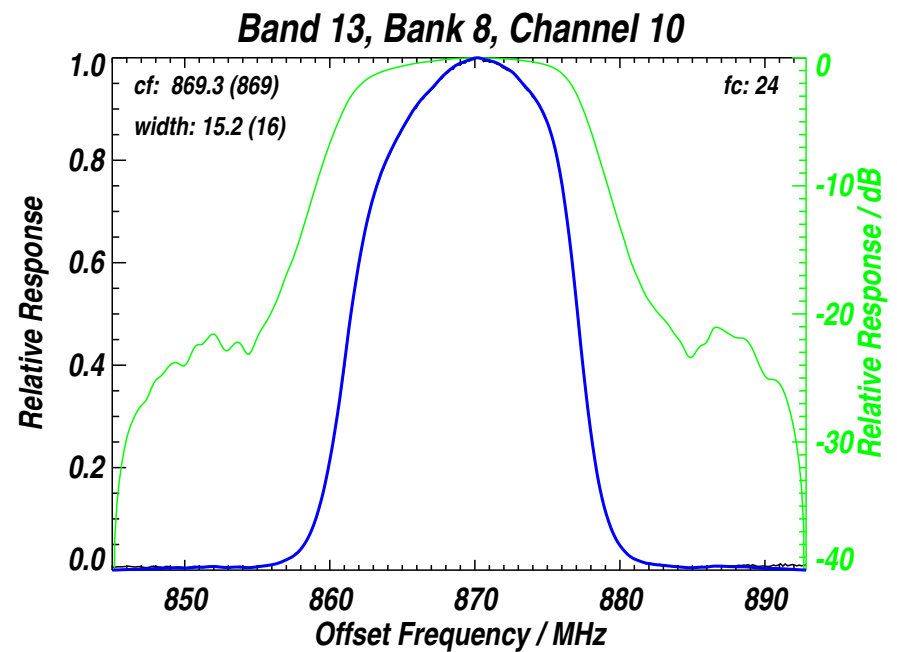
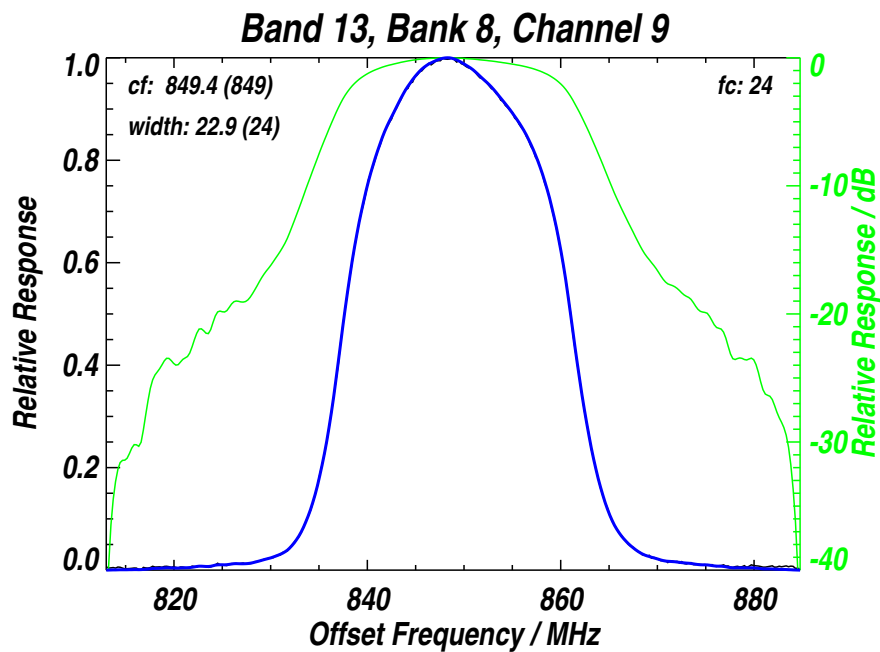


Figure H.382: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 9 to 12. See text for additional details.

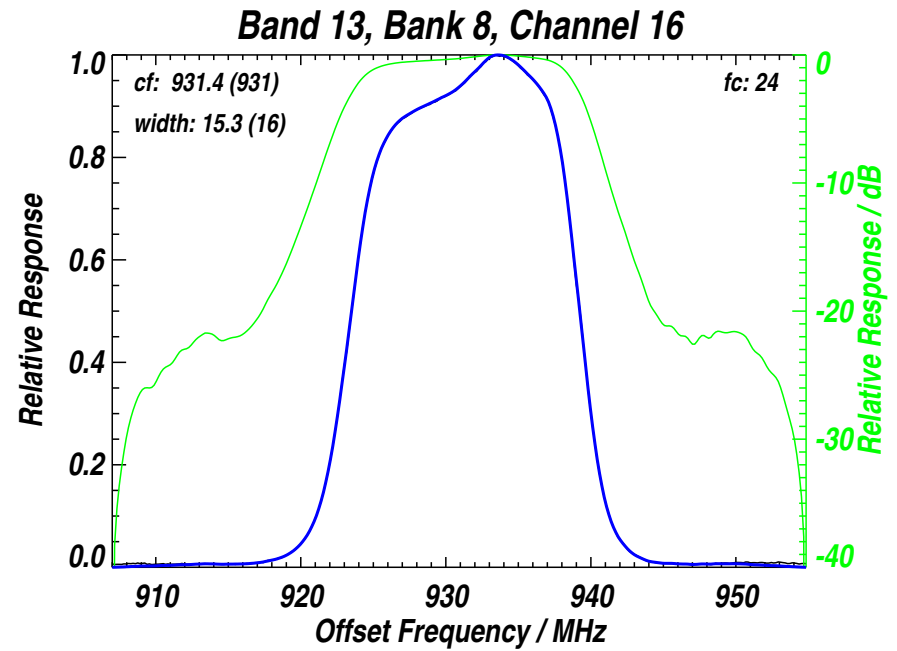
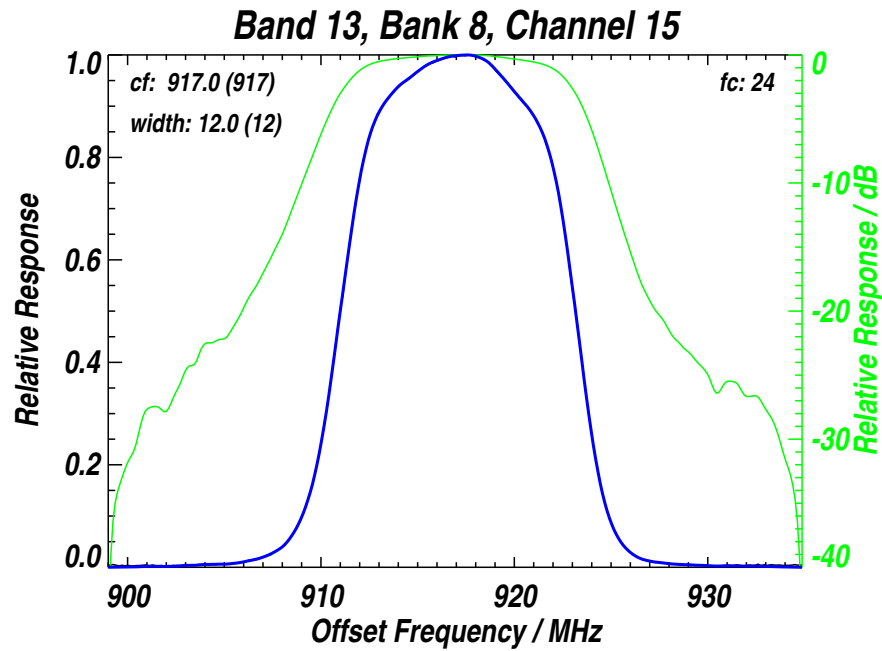
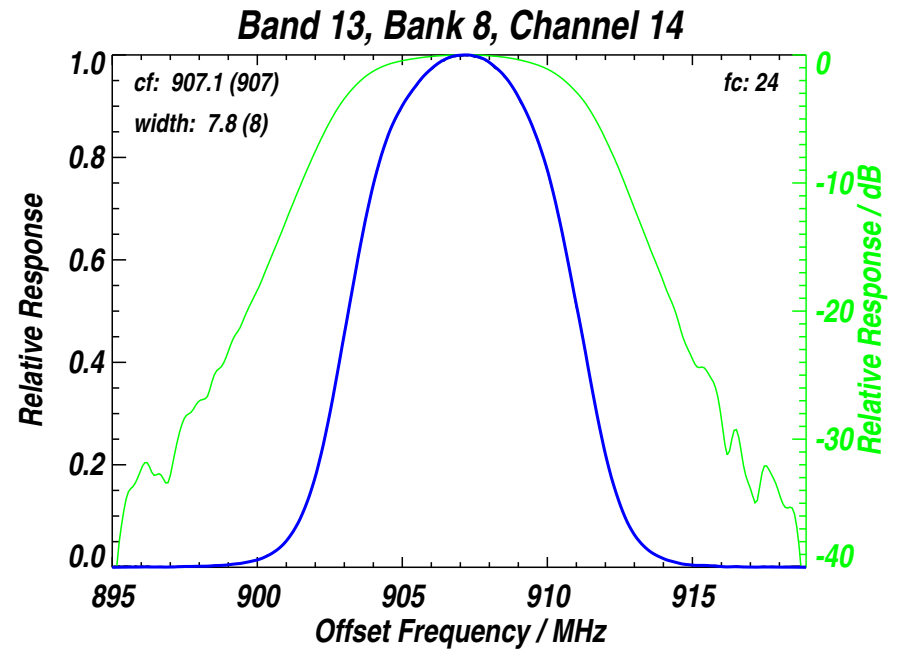
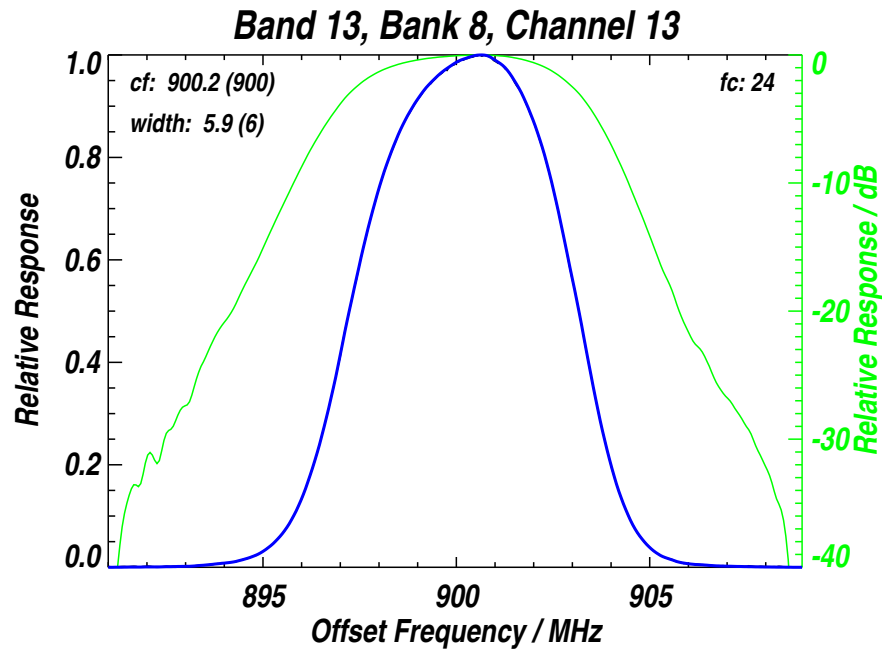


Figure H.383: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 13 to 16. See text for additional details.

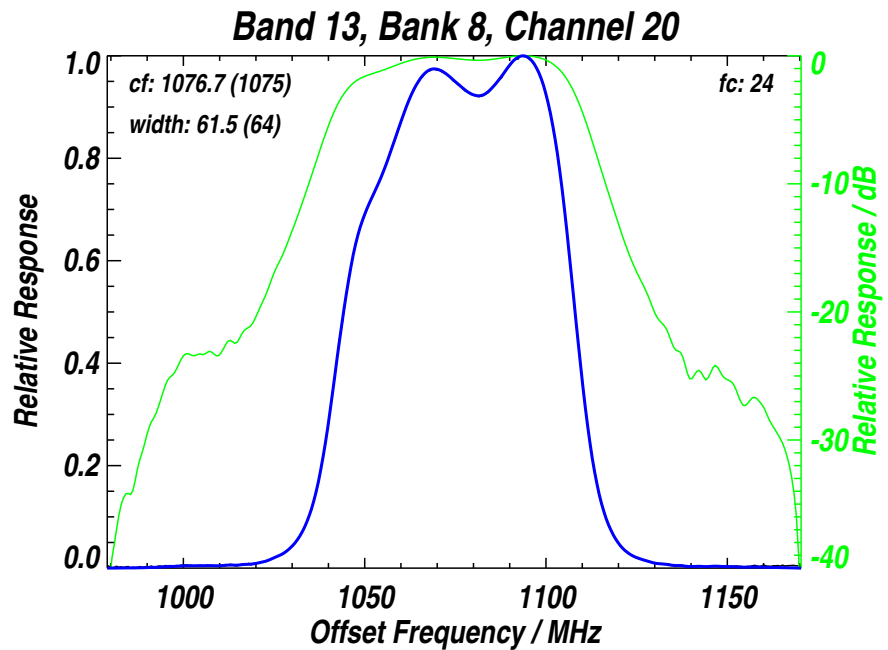
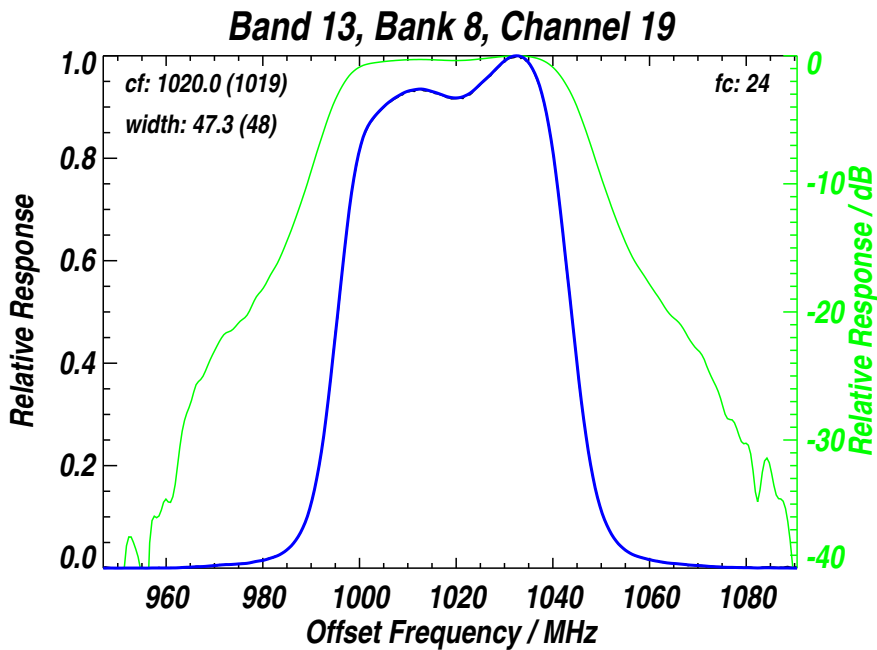
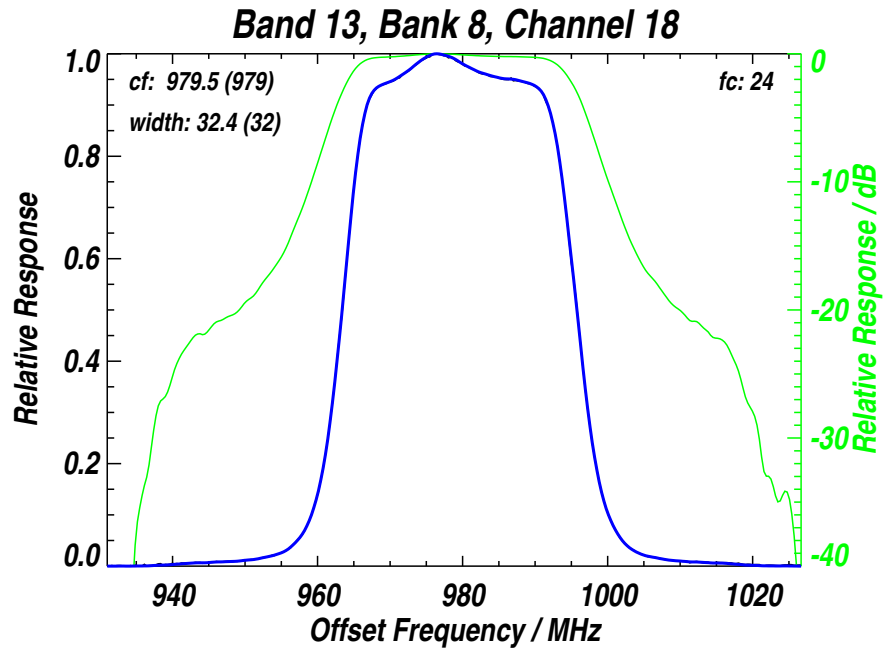
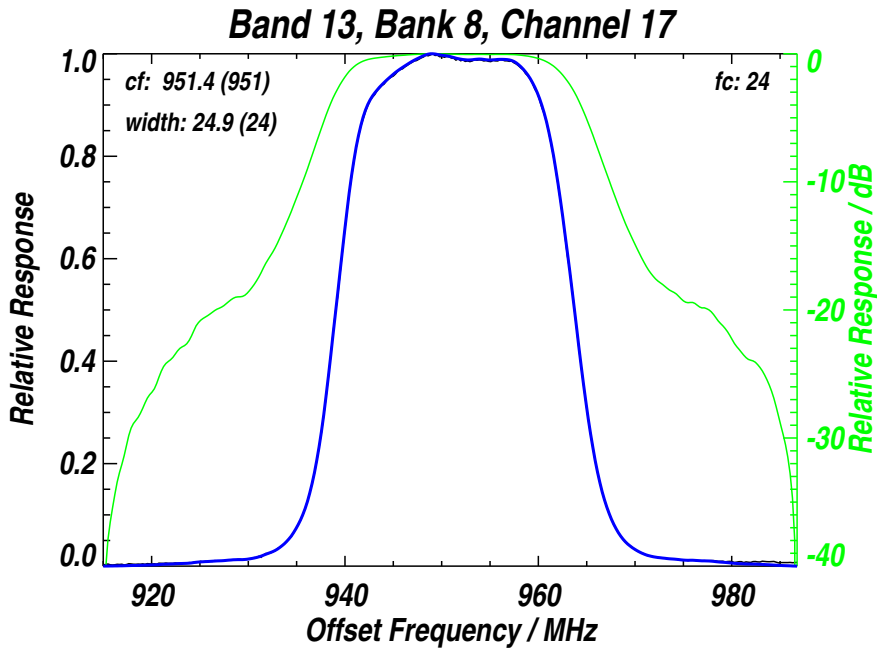


Figure H.384: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 17 to 20. See text for additional details.



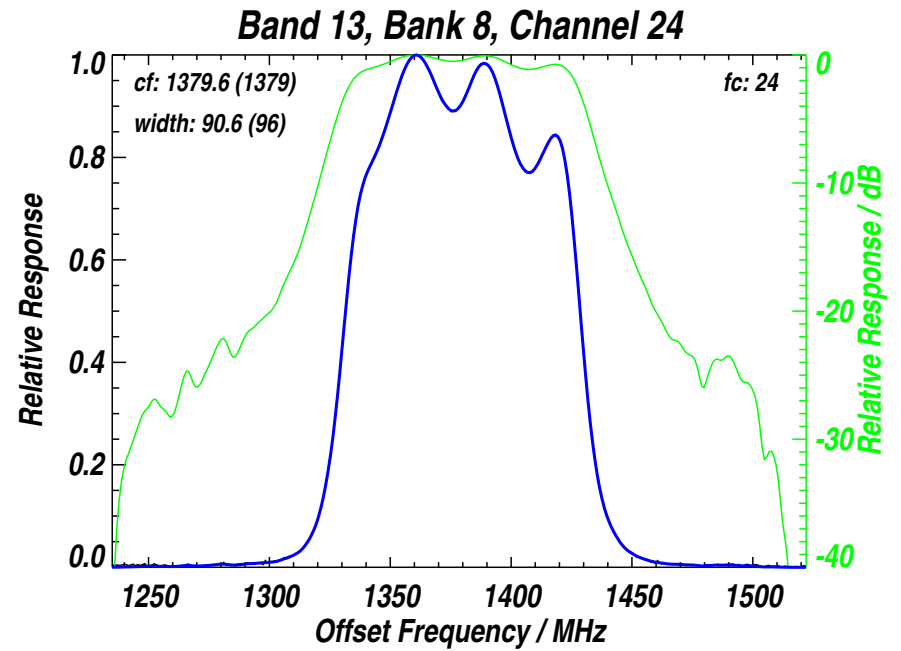
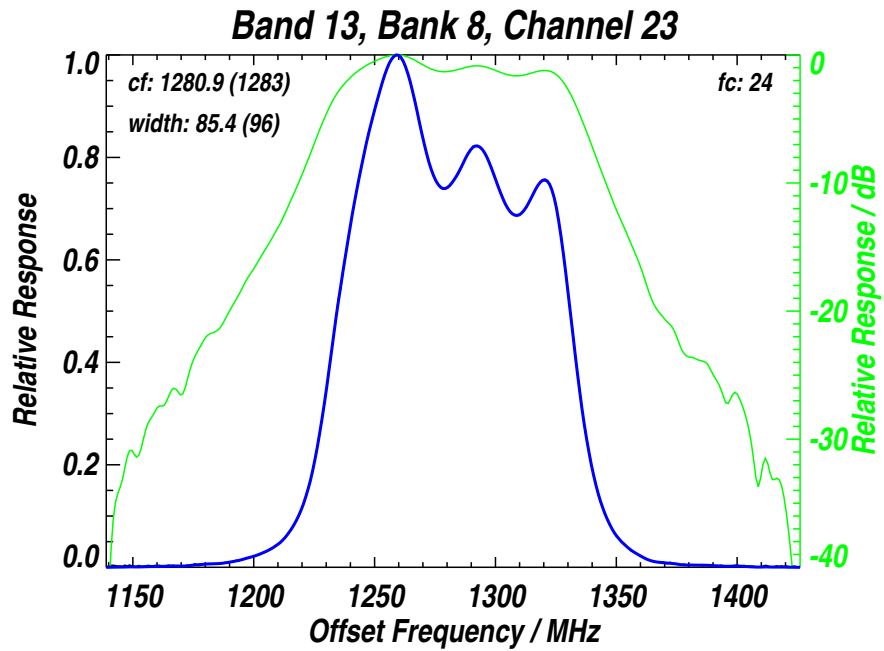
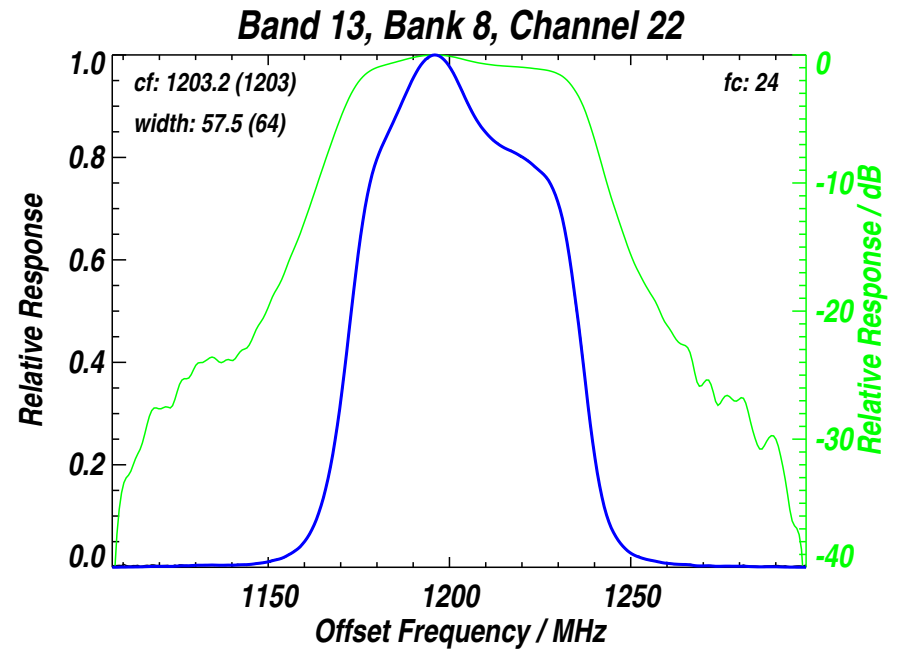
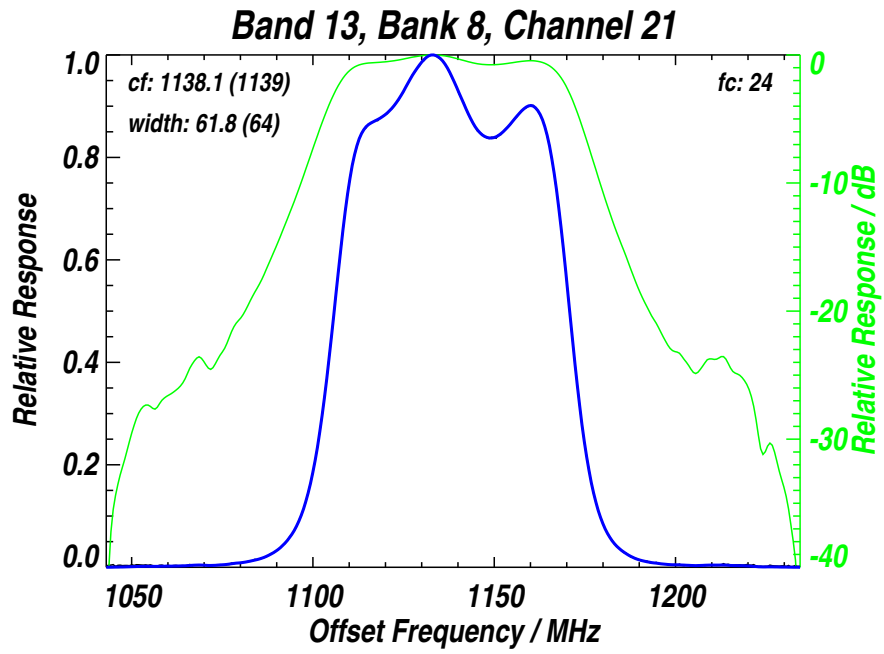
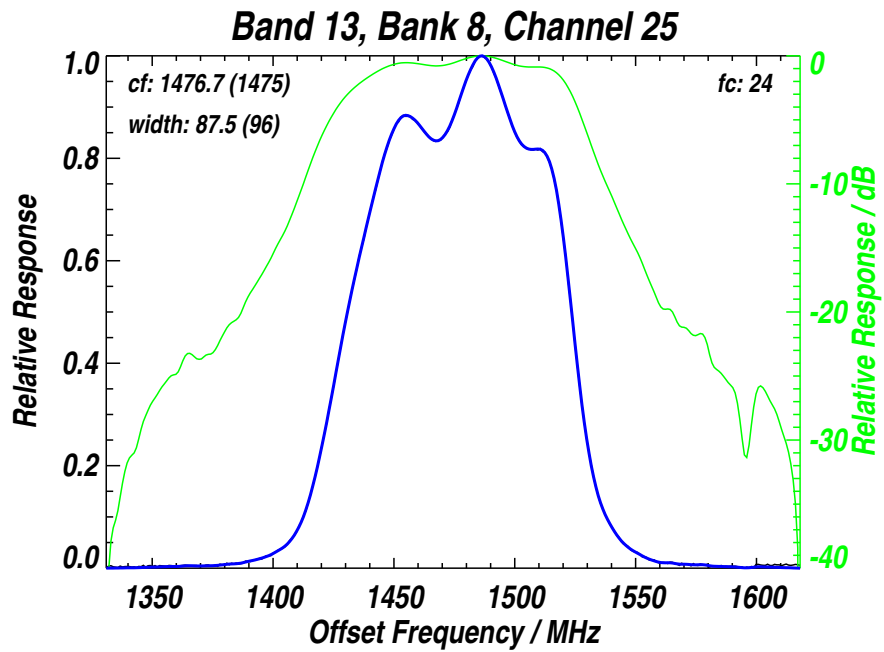


Figure H.385: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channels 21 to 24. See text for additional details.



**Band 13 (usb)**  
**Bank 8**  
**Origin = 658.906923066 GHz**

Figure H.386: Upper sideband front-end sweep data for Band 13 taken via Filterbank 8, channel 25. See text for additional details.

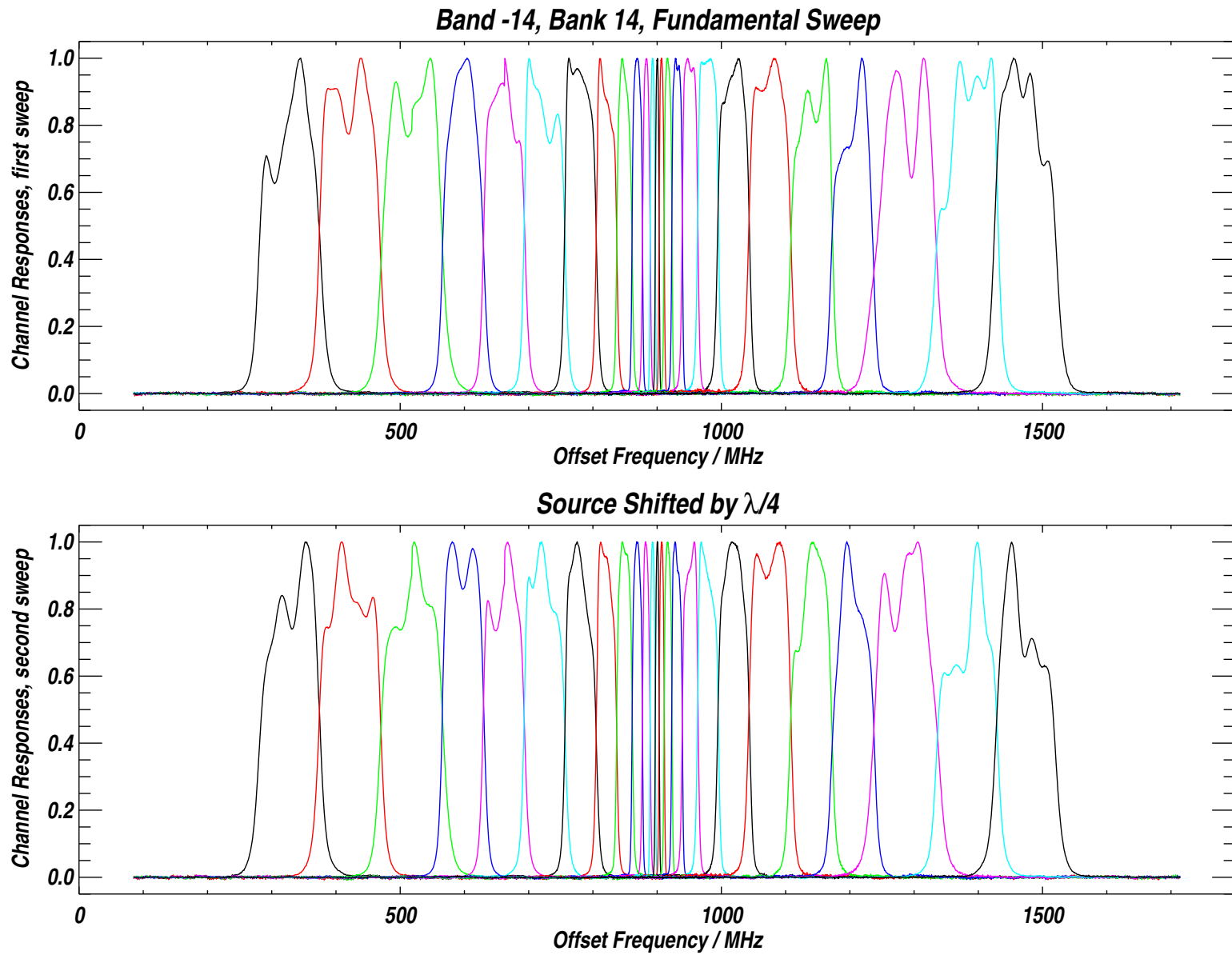


Figure H.387: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14. See text for additional details.

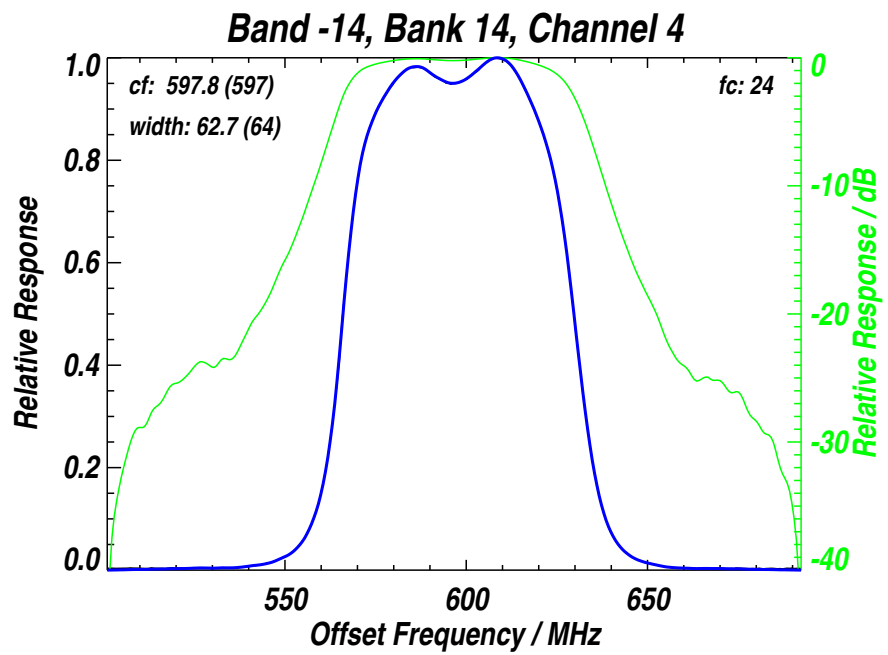
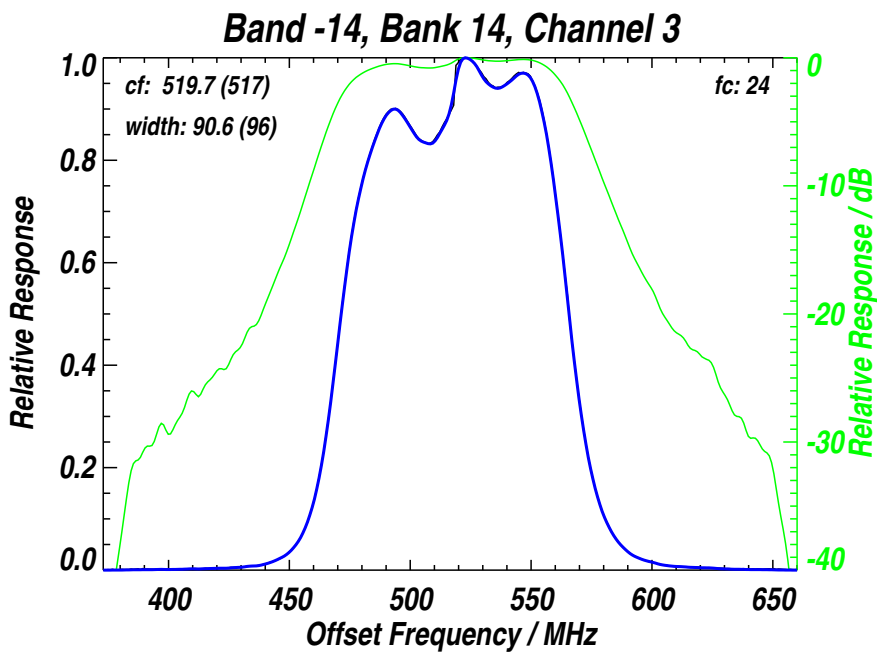
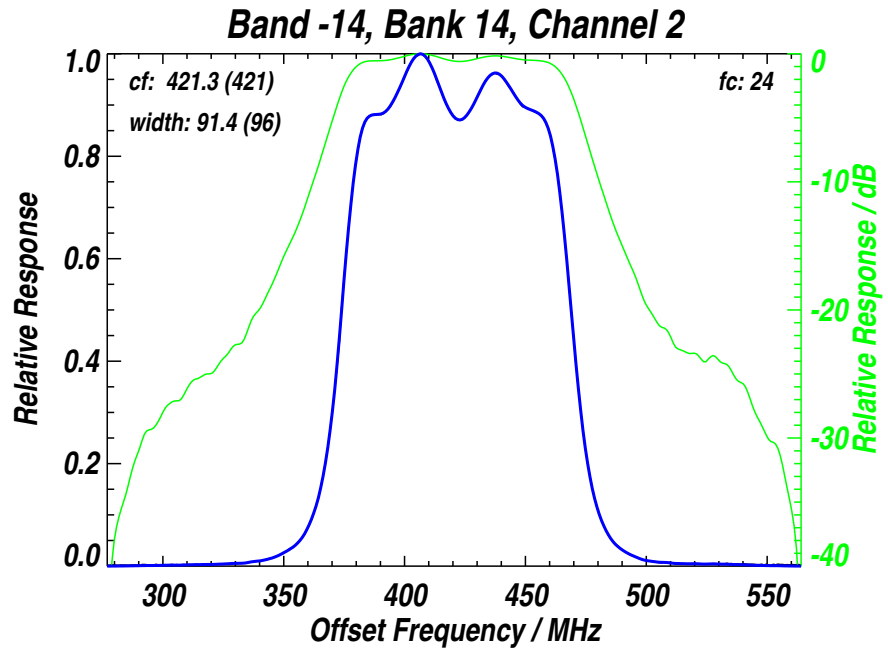
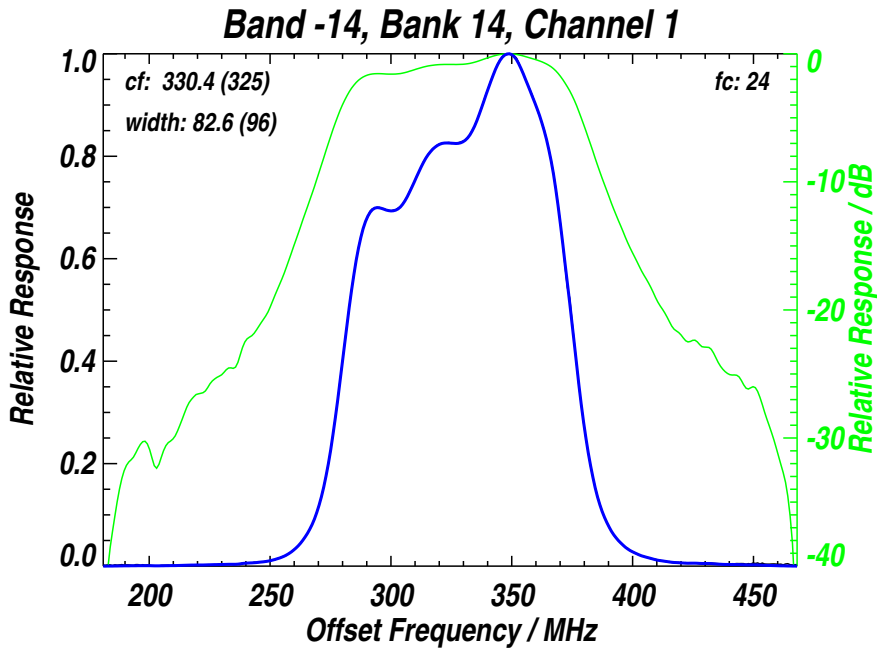


Figure H.388: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 1 to 4. See text for additional details.

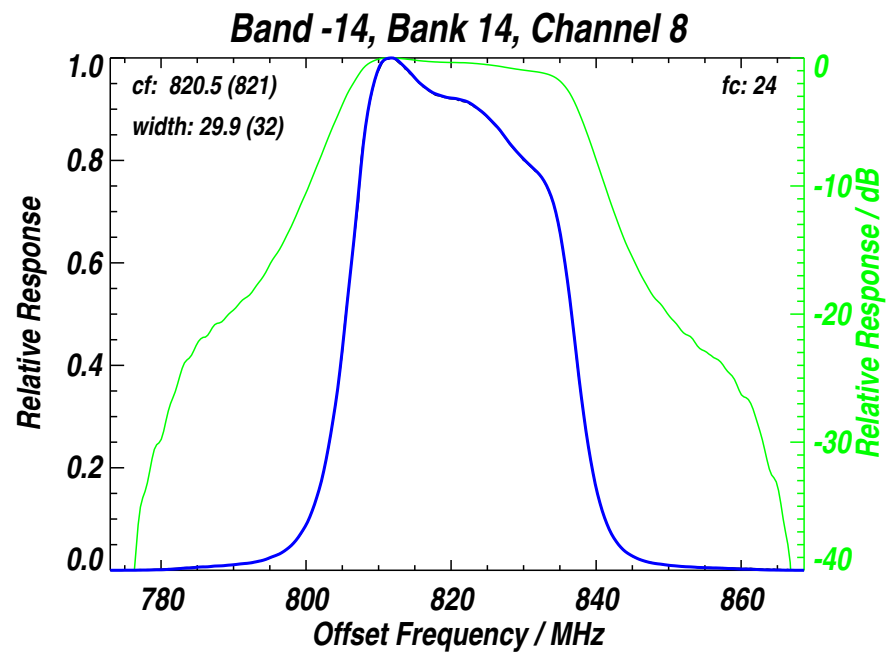
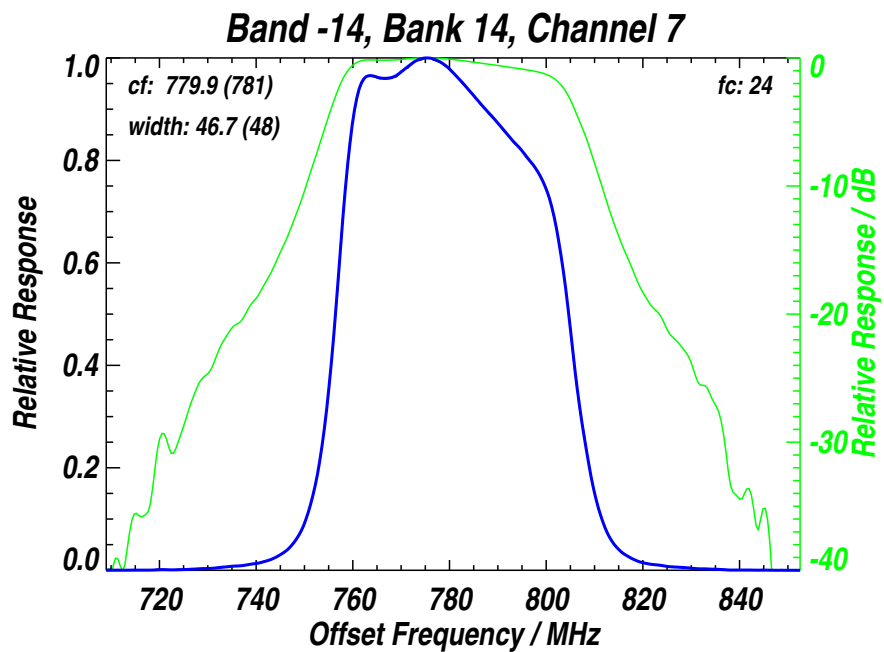
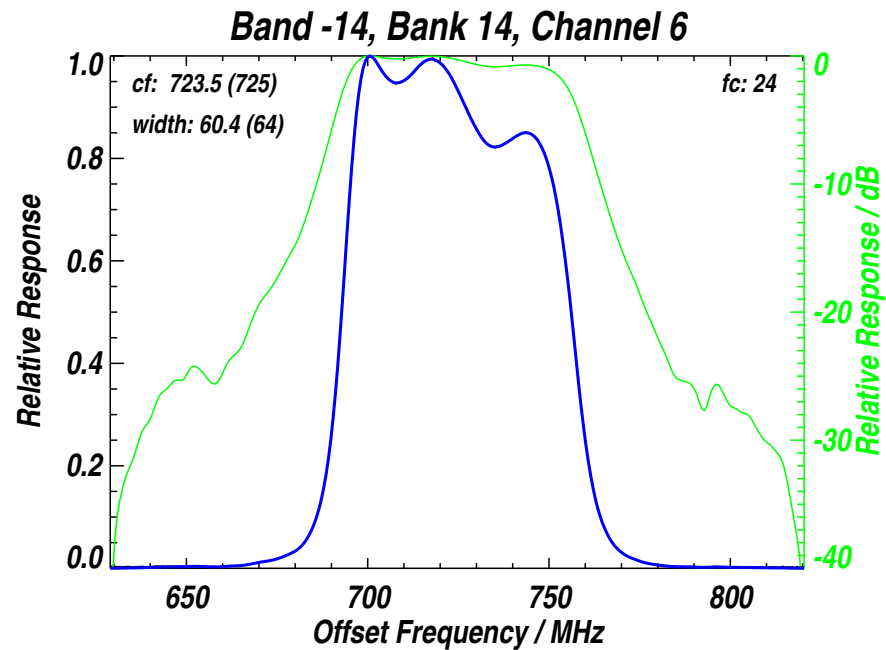
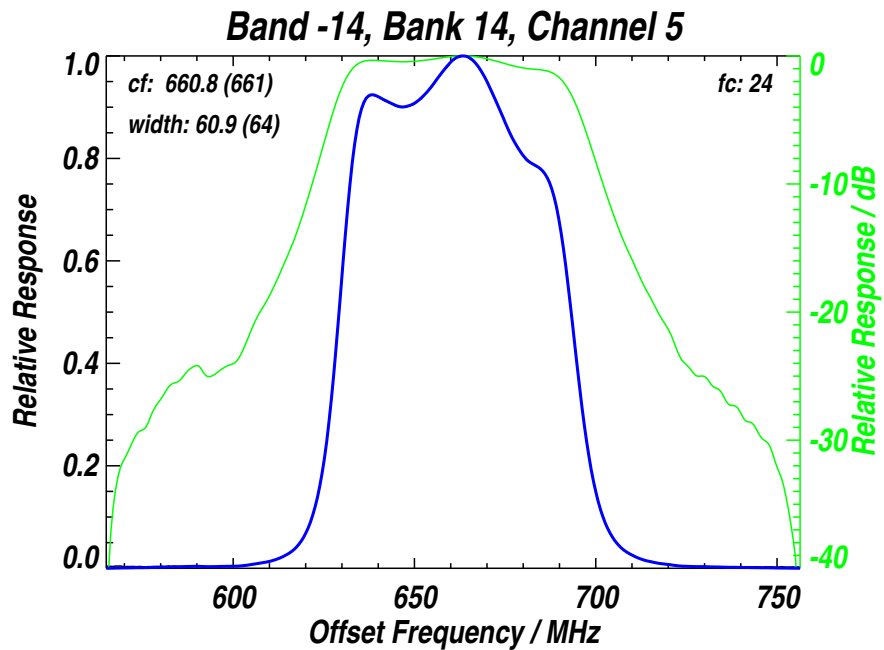


Figure H.389: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 5 to 8. See text for additional details.

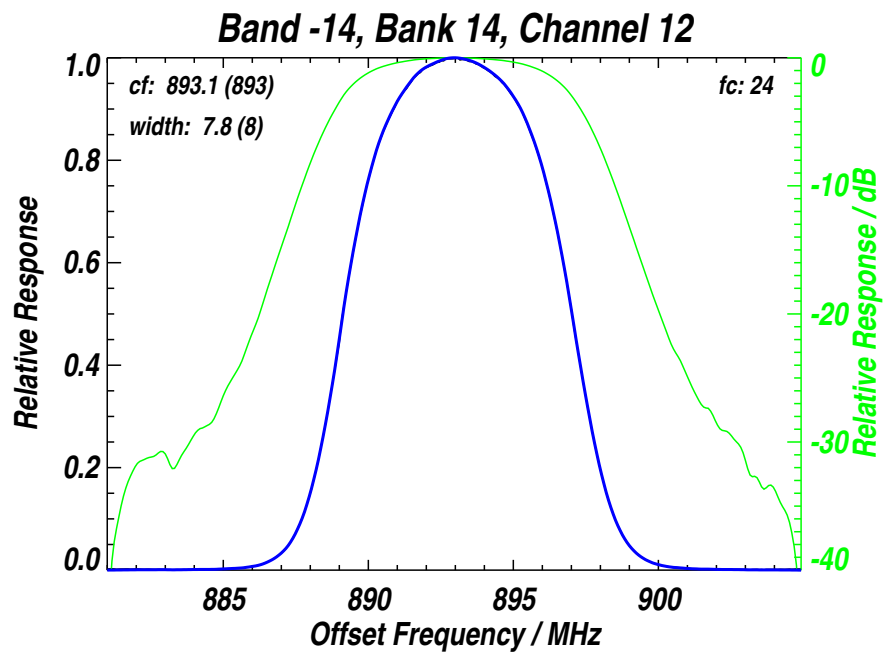
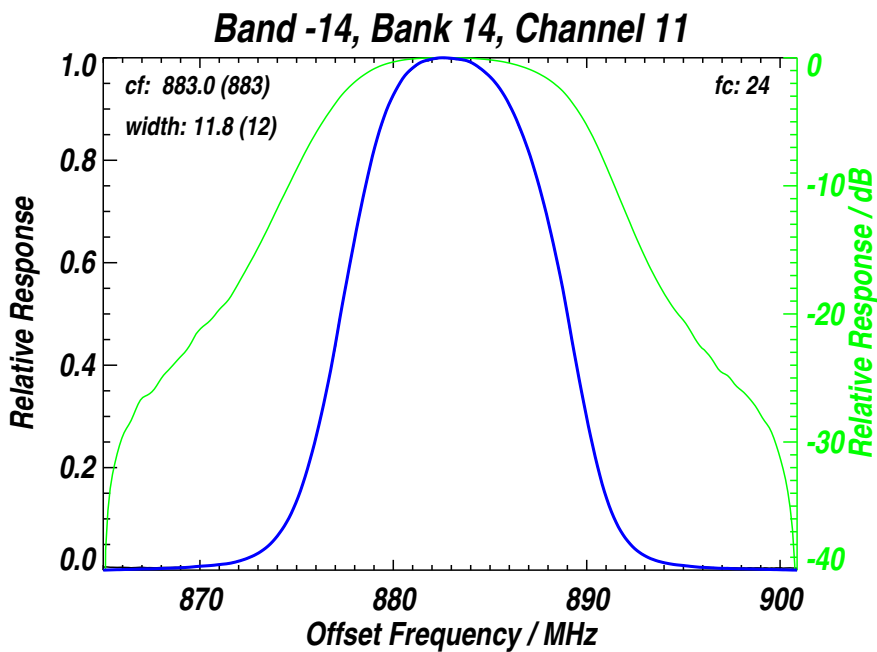
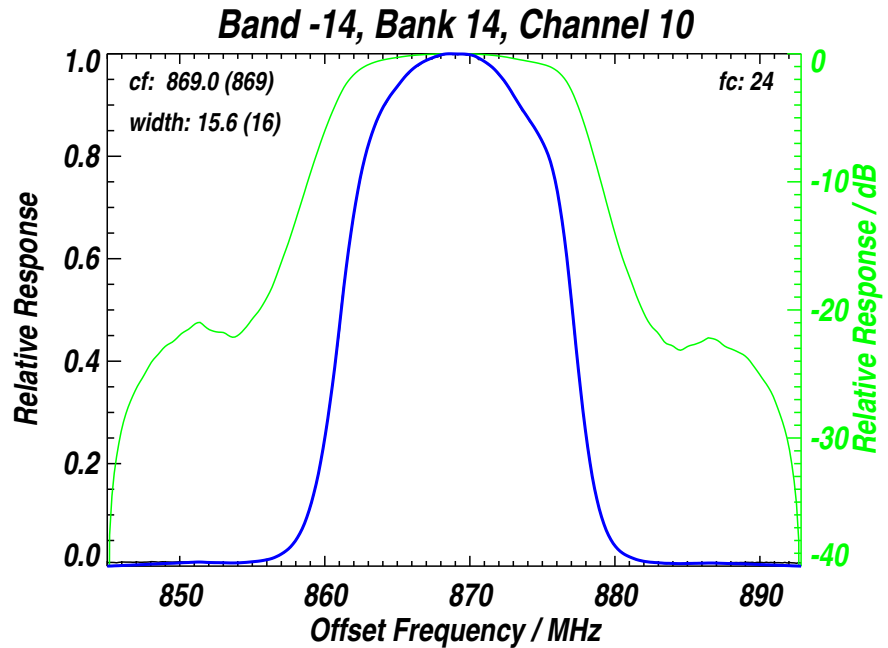
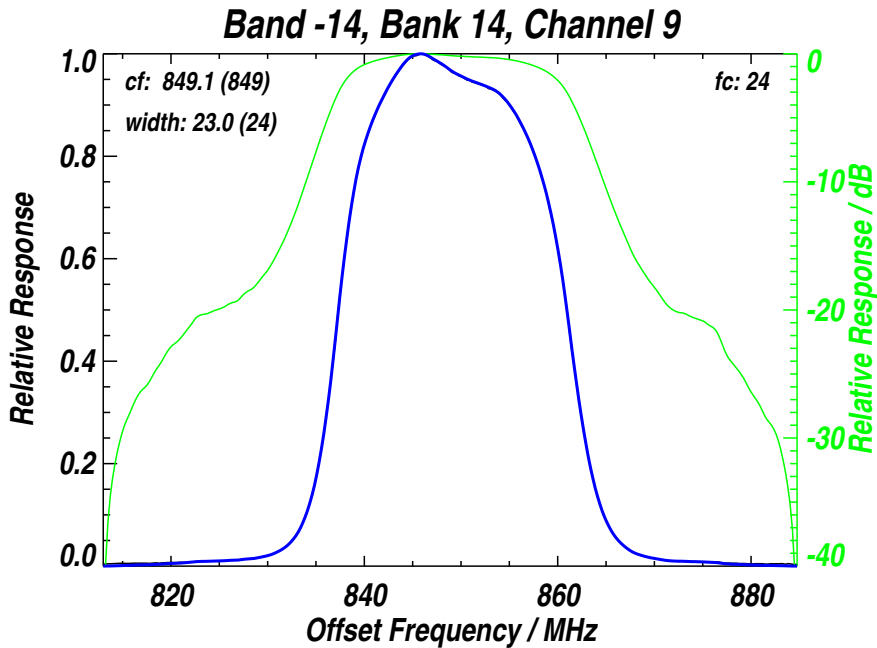


Figure H.390: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 9 to 12. See text for additional details.

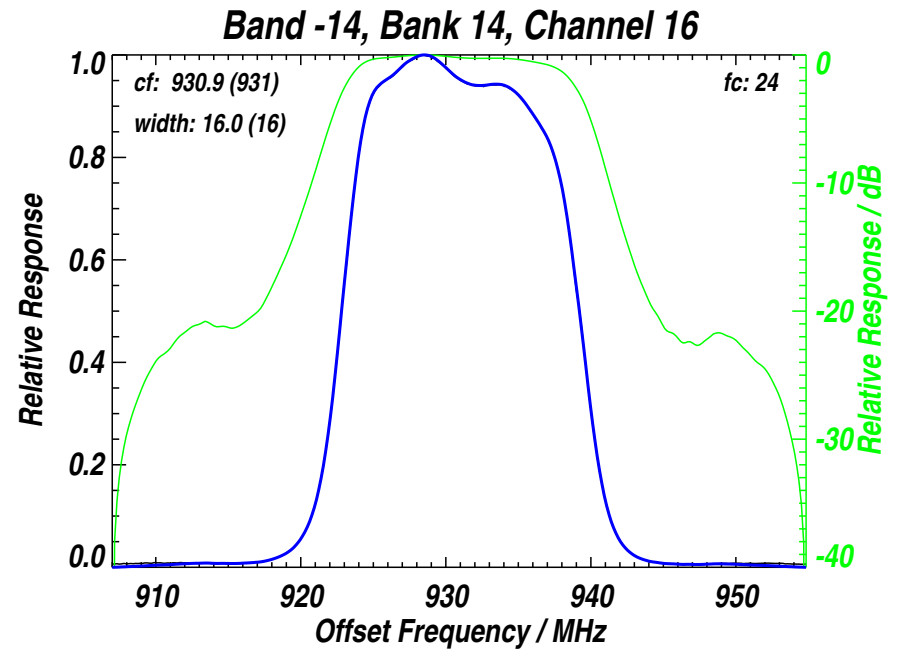
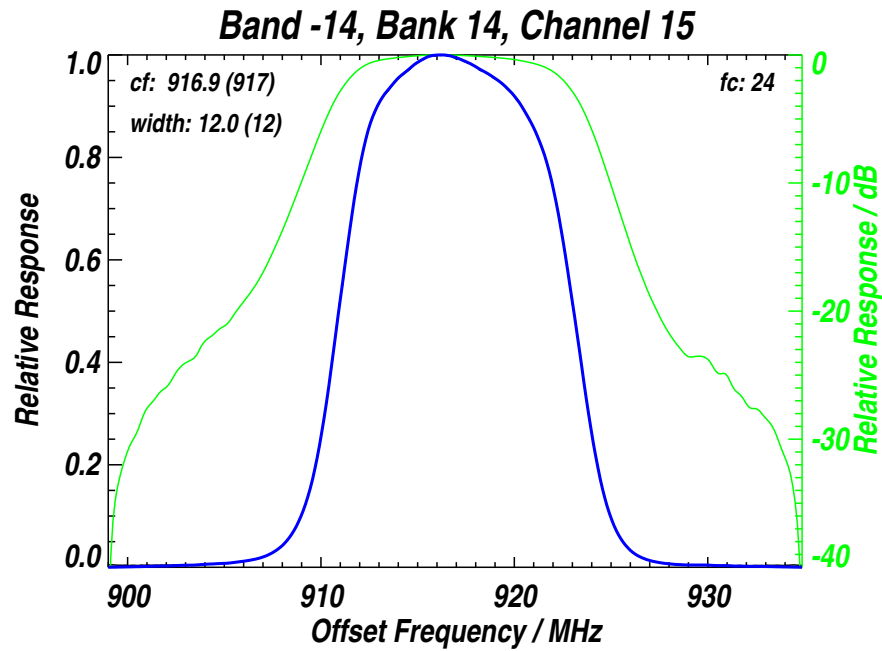
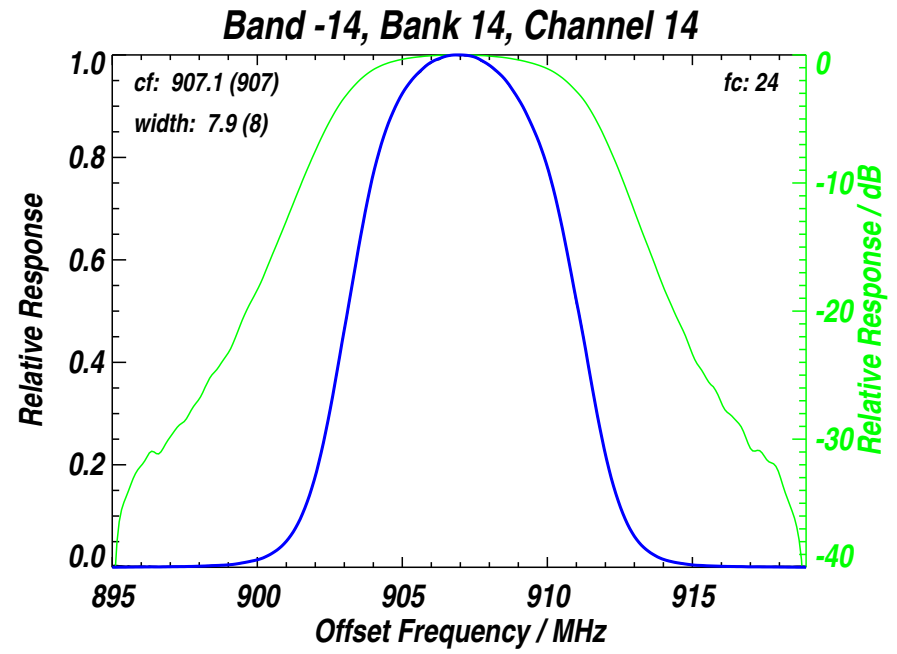
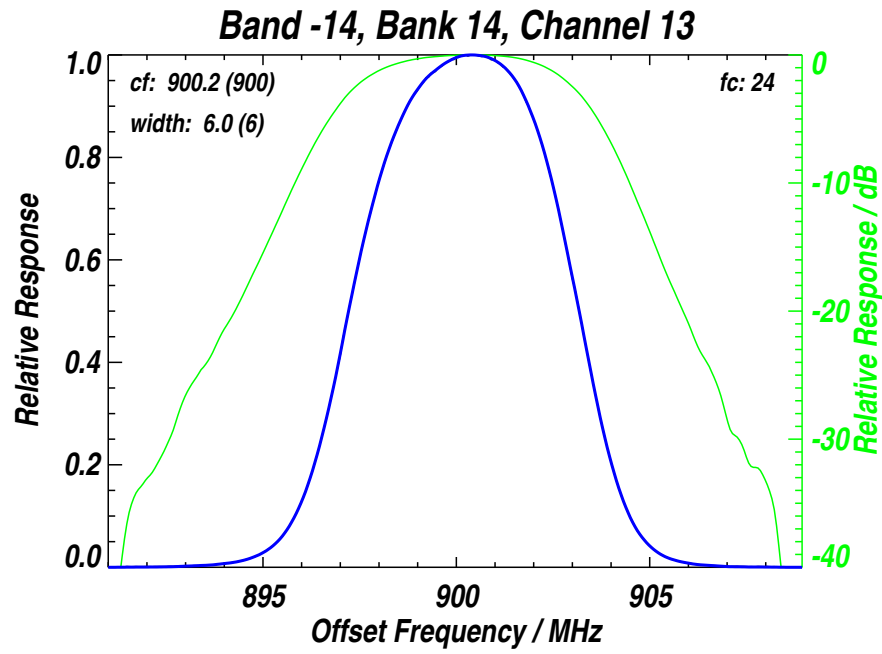


Figure H.391: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 13 to 16. See text for additional details.

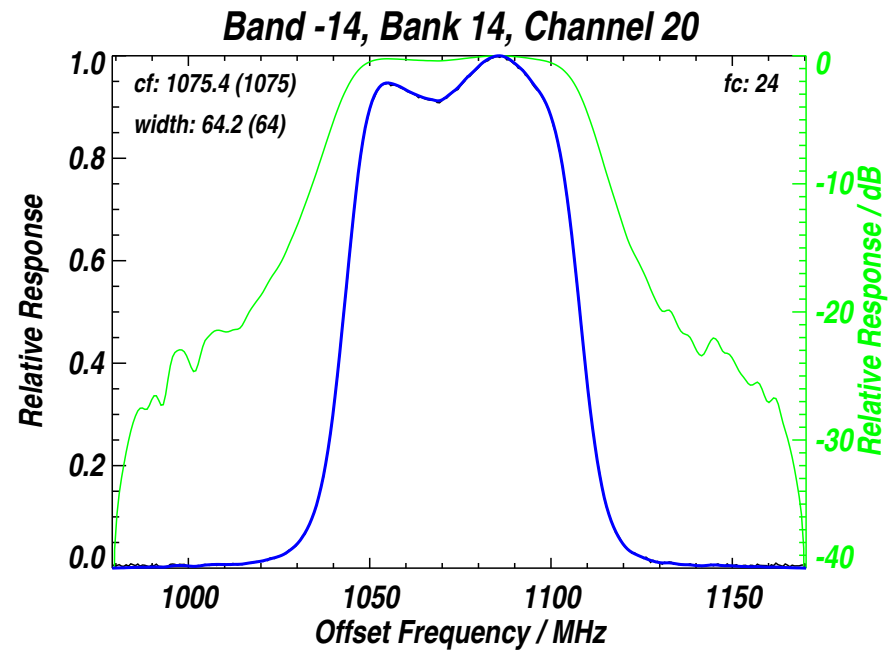
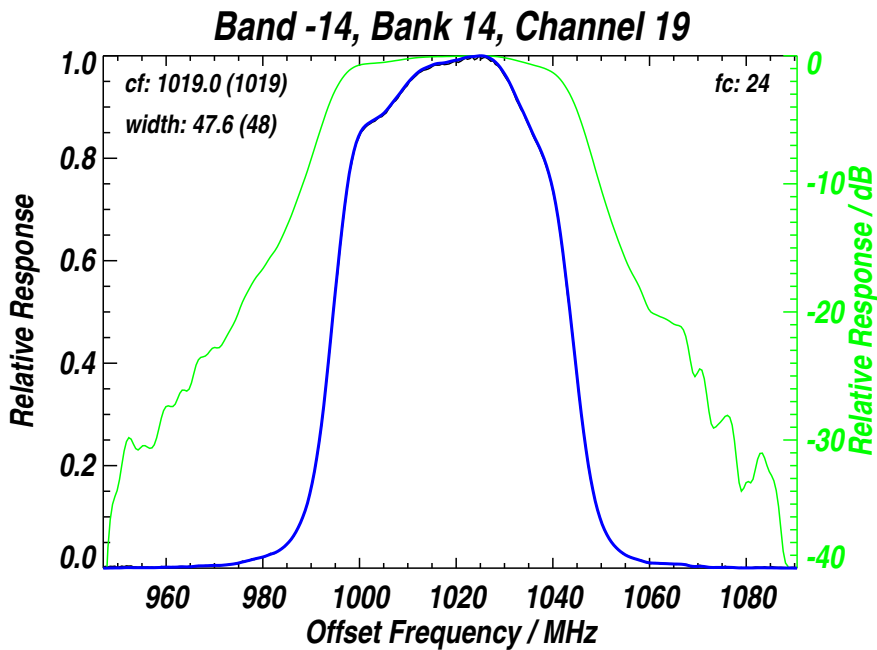
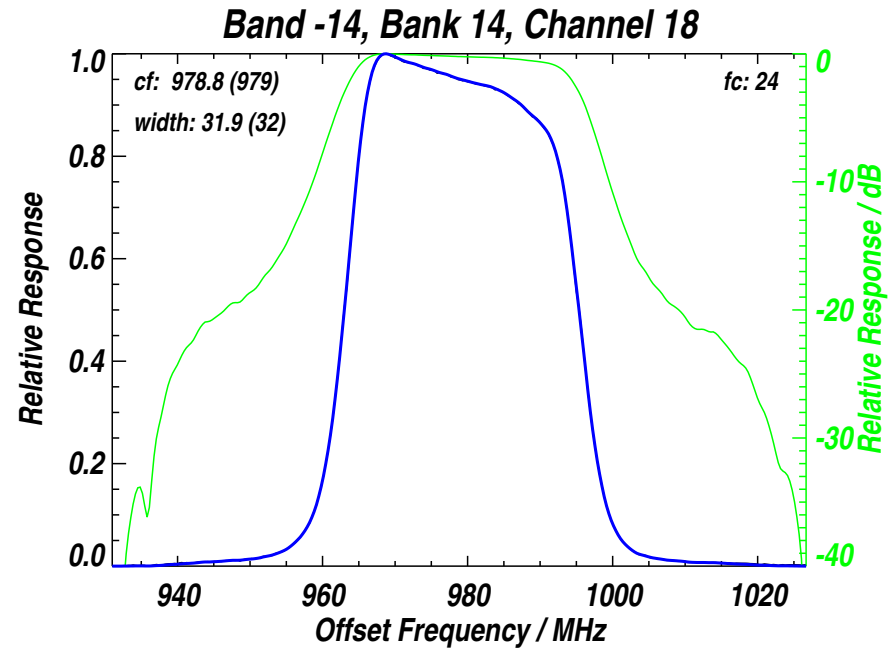
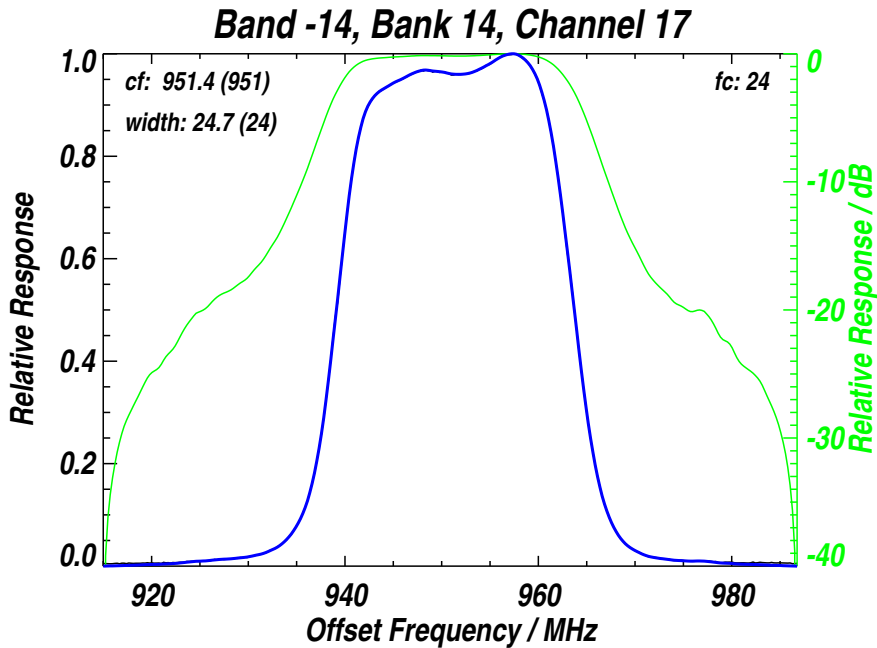


Figure H.392: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 17 to 20. See text for additional details.



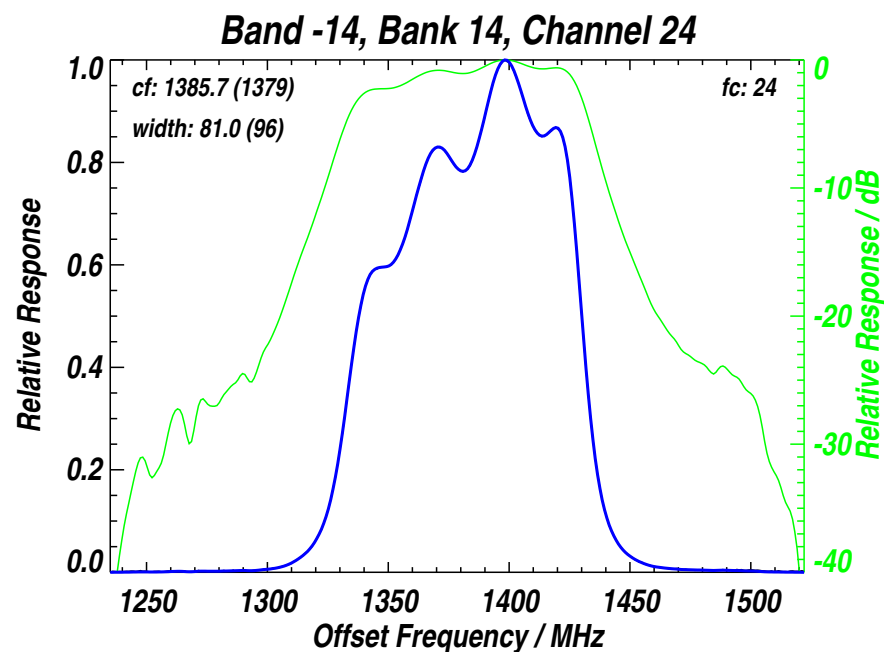
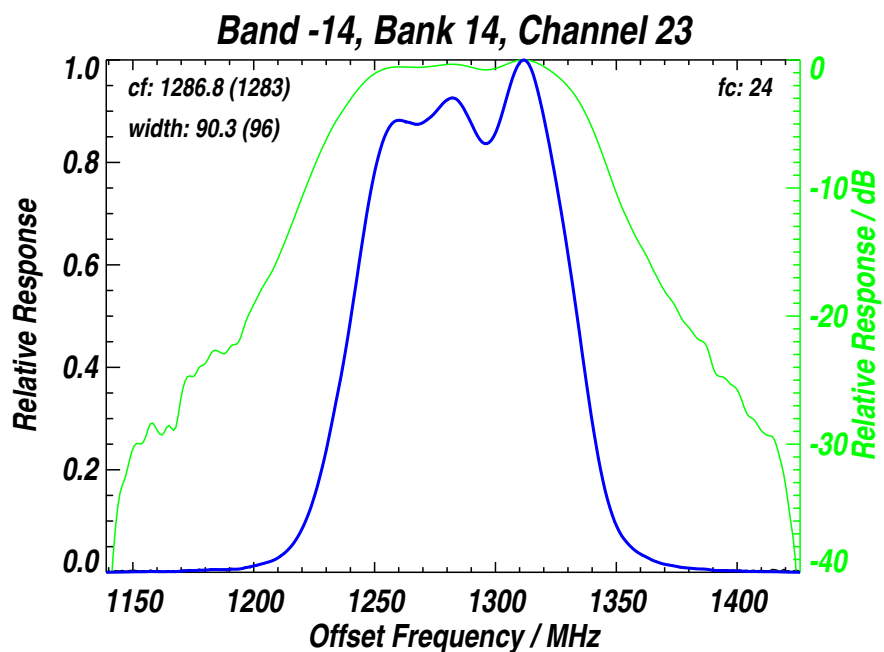
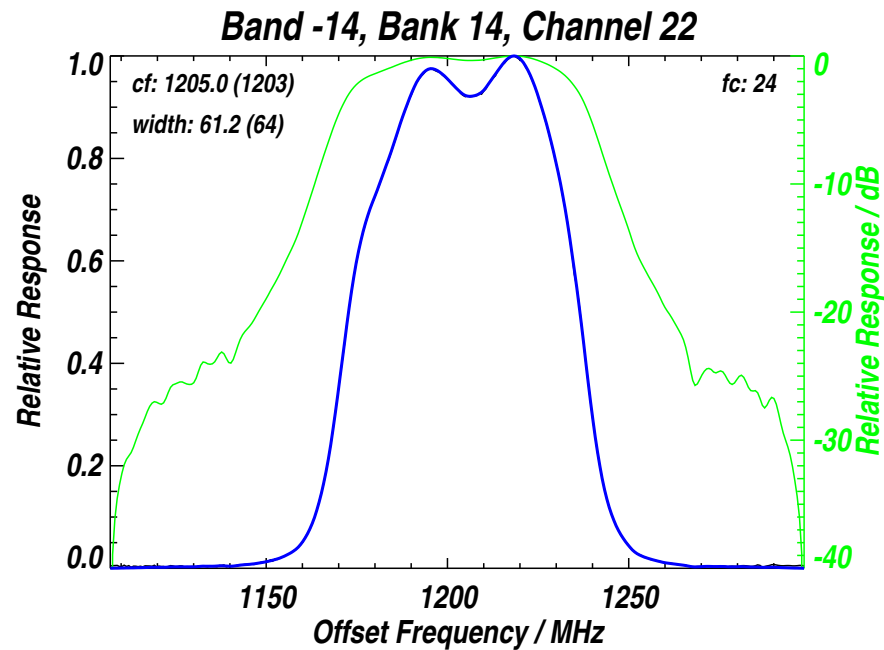
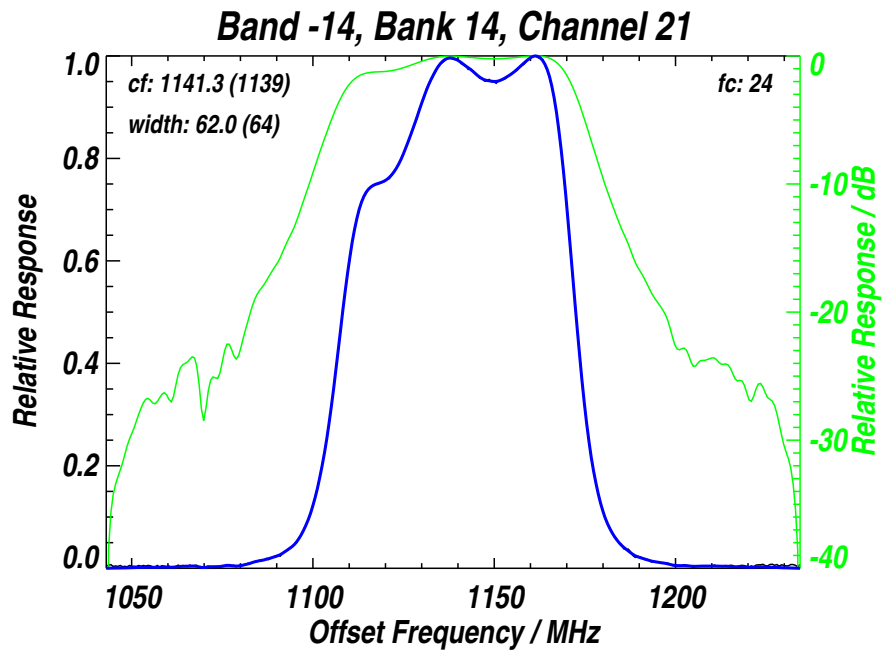
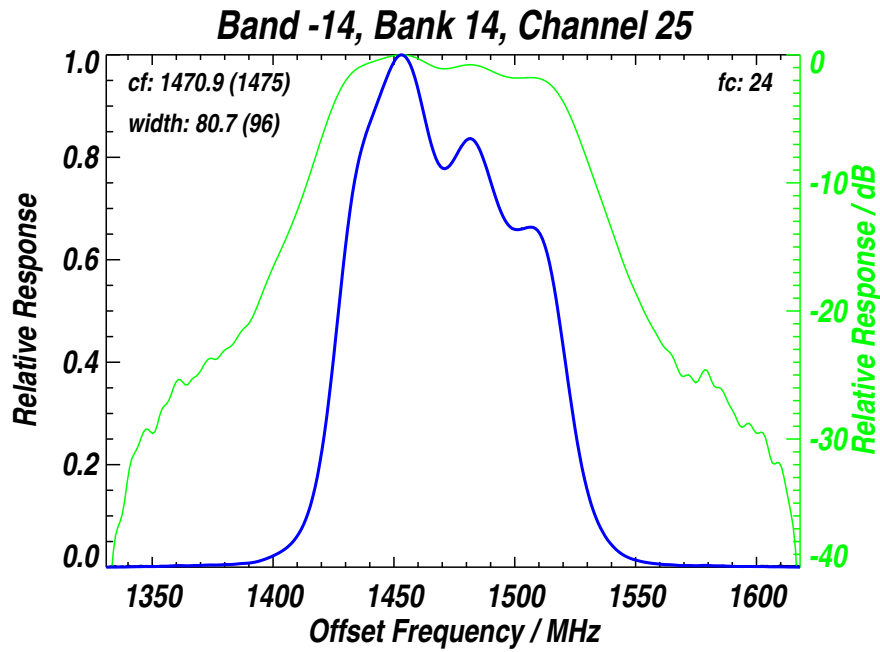


Figure H.393: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 21 to 24. See text for additional details.



**Band 14 (lsb)**  
**Bank 14**  
**Origin = 624.486000012 GHz**

Figure H.394: Lower sideband front-end sweep data for Band 14 taken via Filterbank 14, channel 25. See text for additional details.

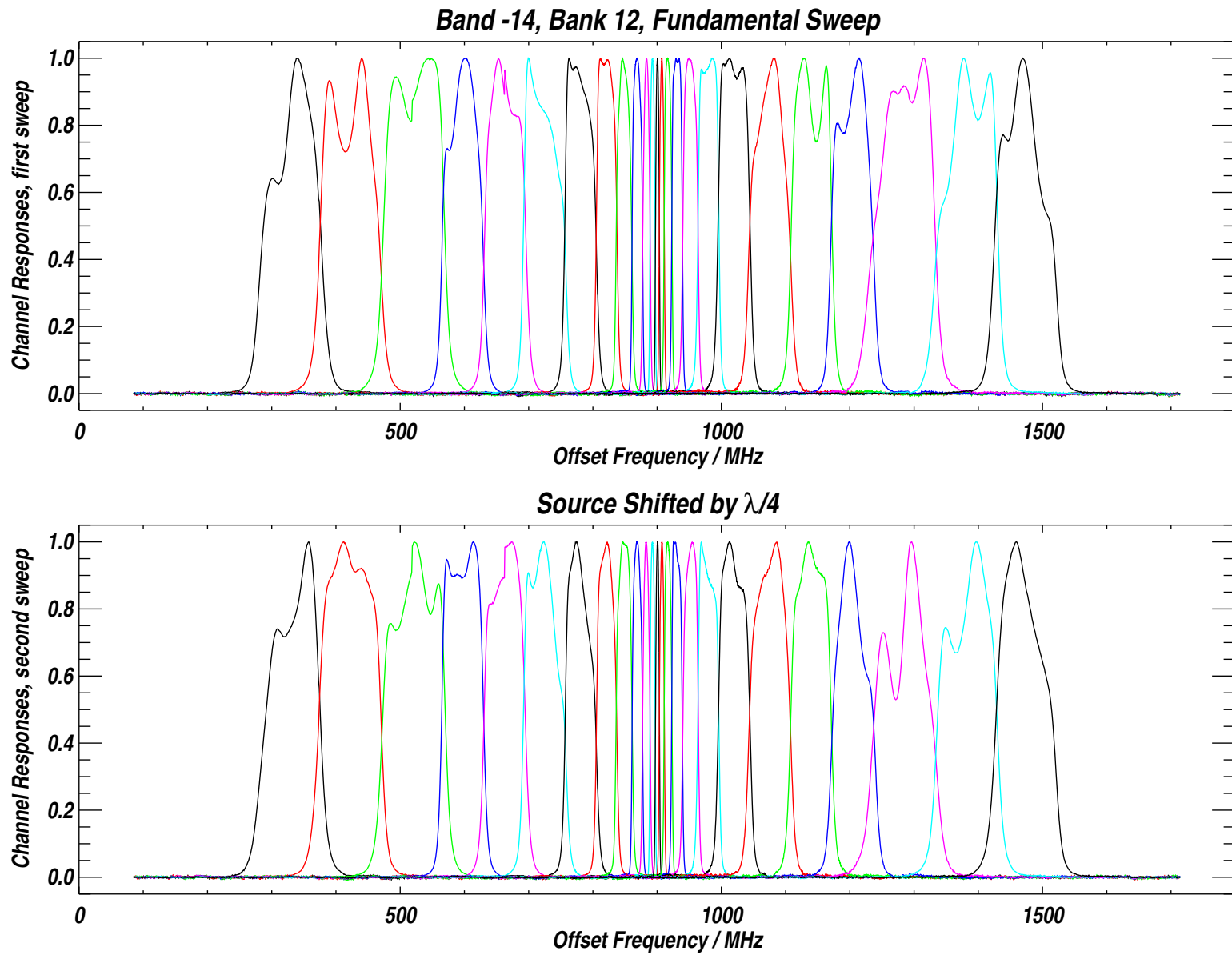


Figure H.395: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12. See text for additional details.

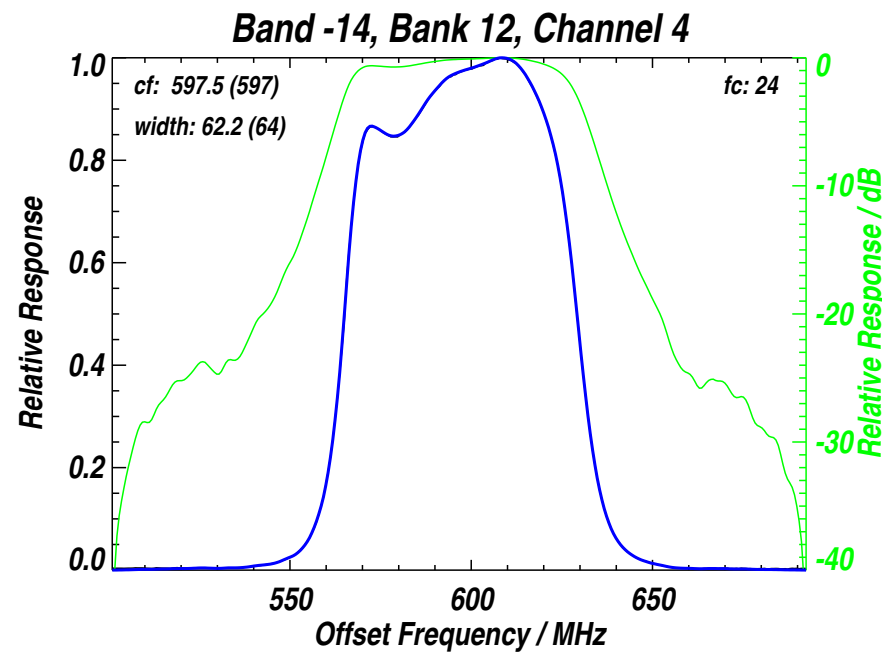
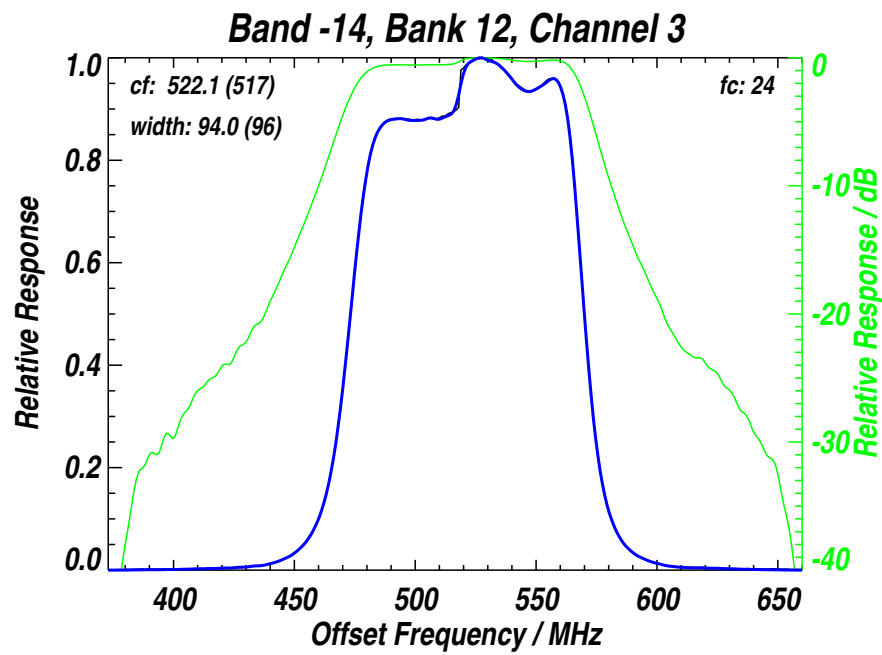
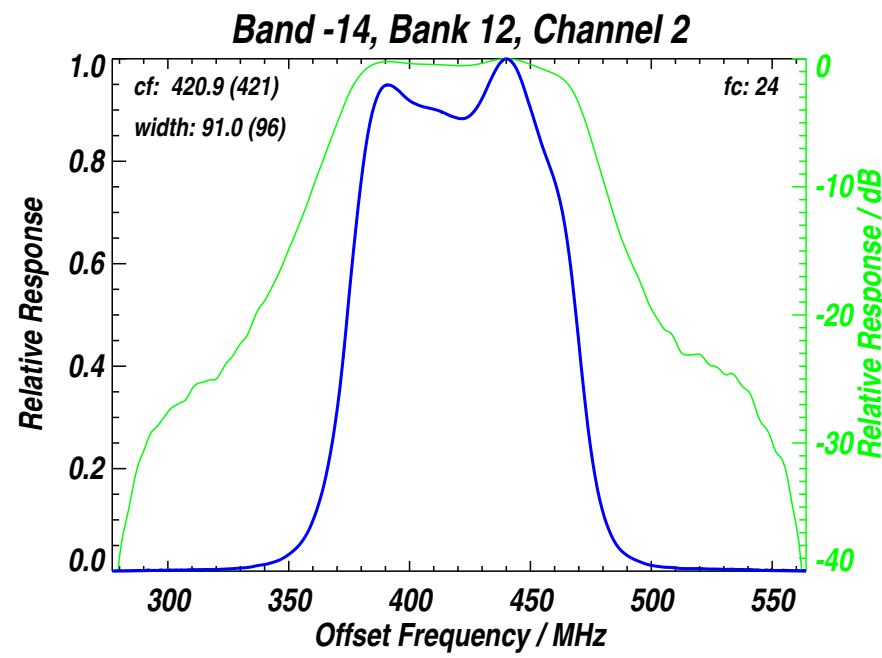
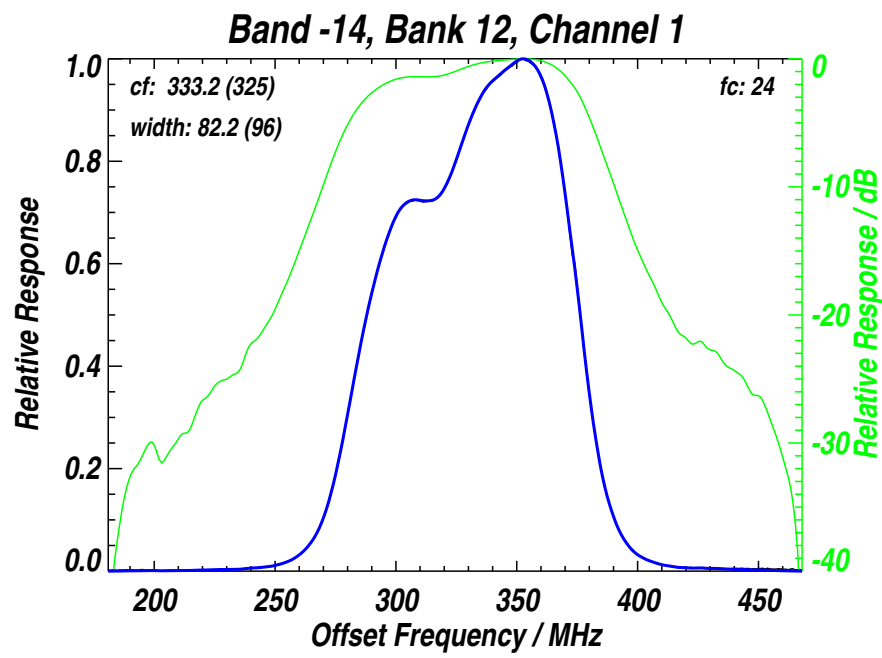


Figure H.396: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 1 to 4. See text for additional details.

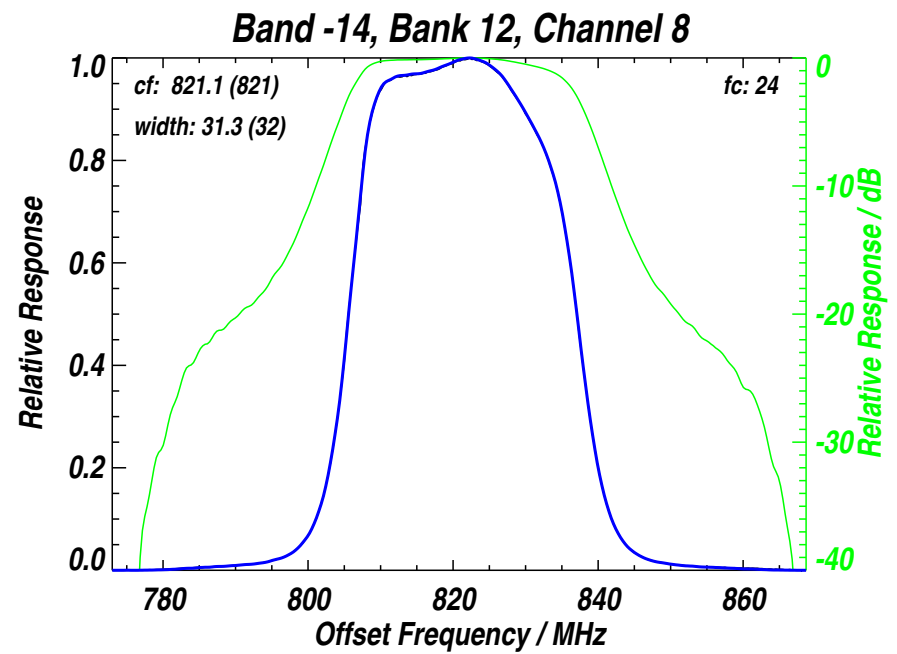
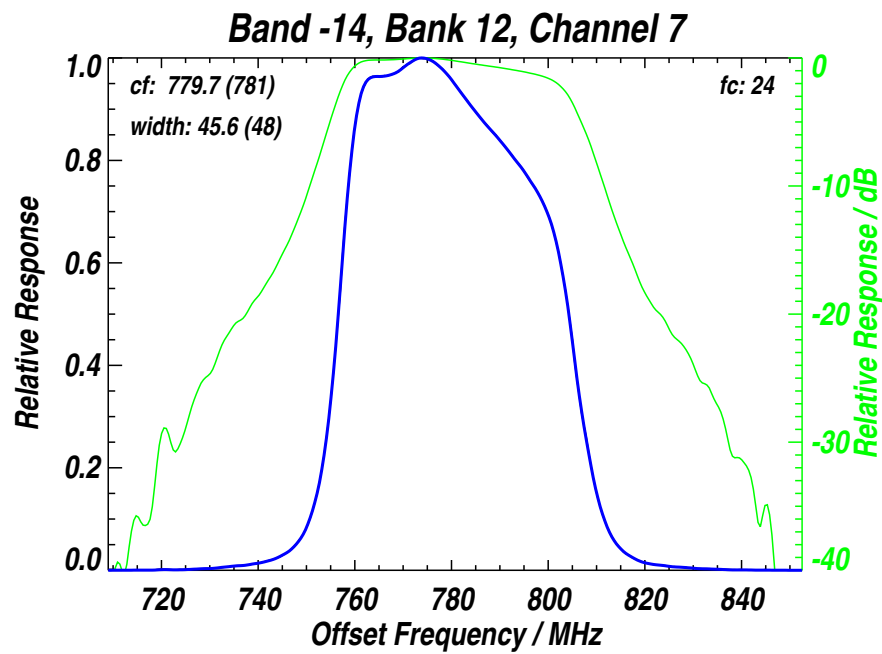
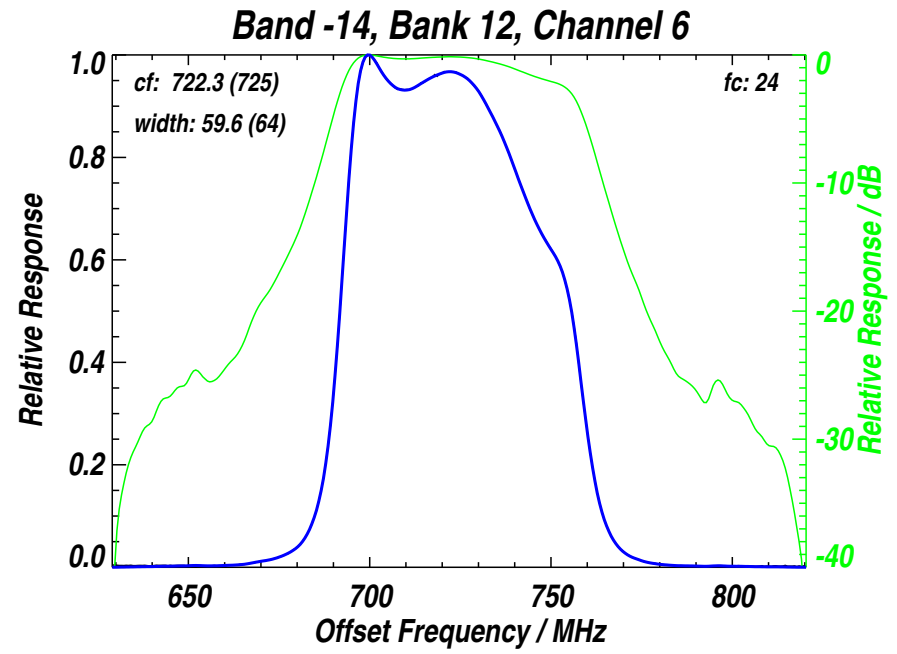
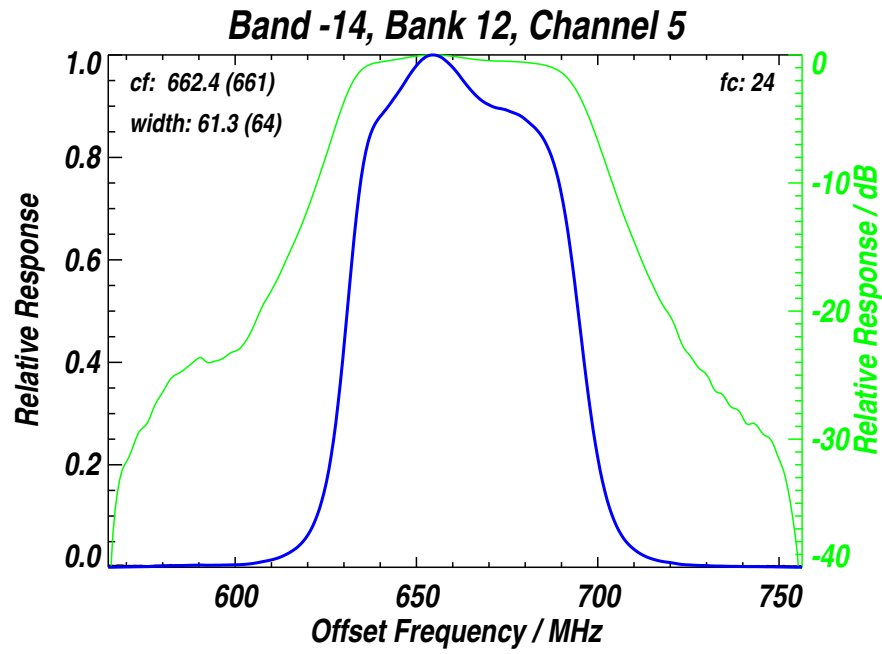


Figure H.397: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 5 to 8. See text for additional details.

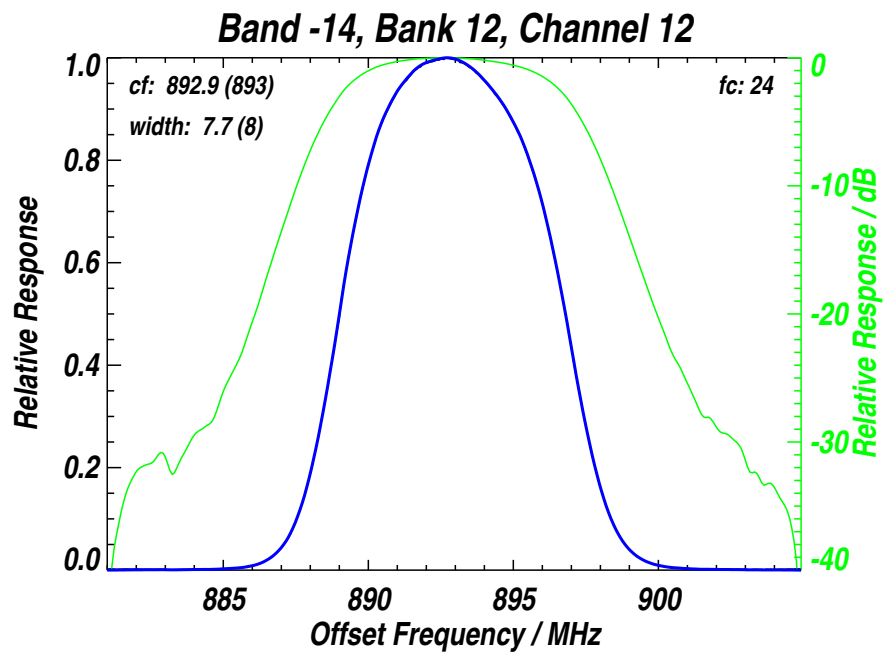
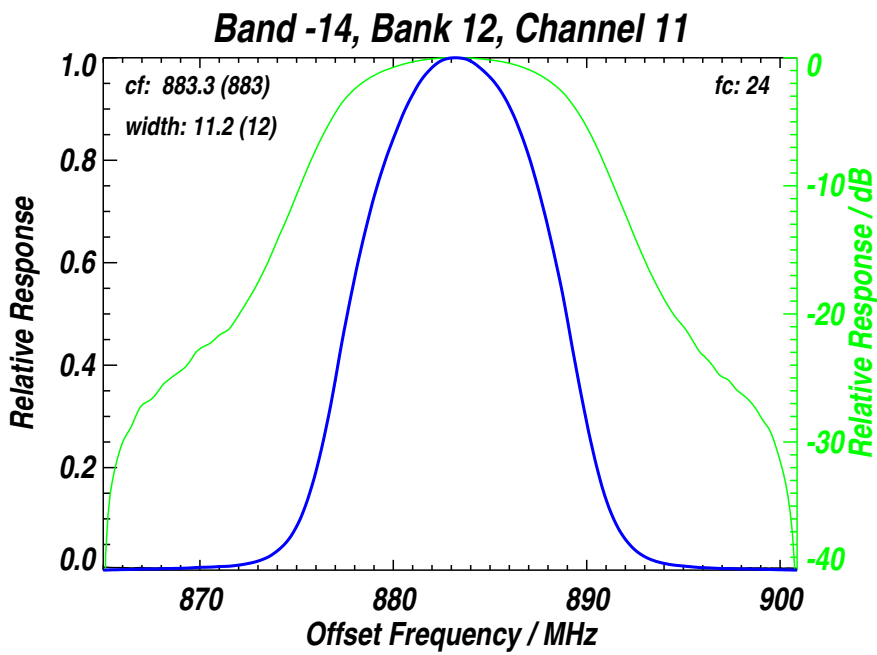
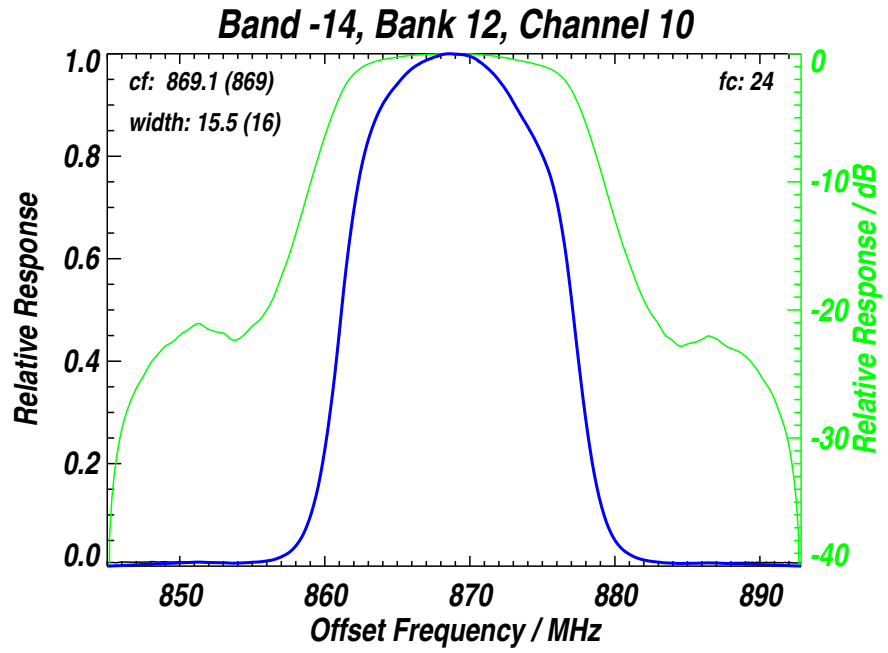
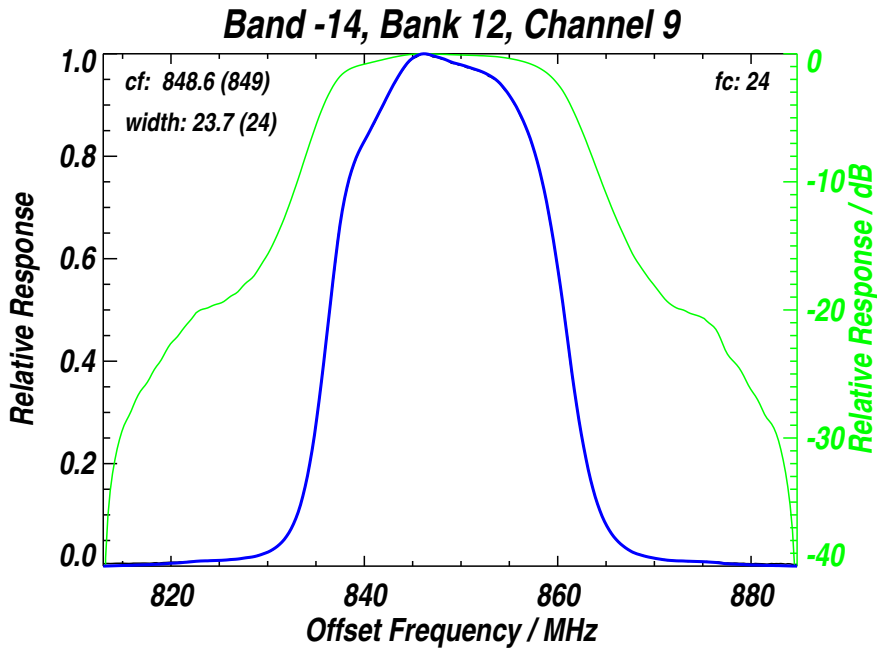


Figure H.398: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 9 to 12. See text for additional details.

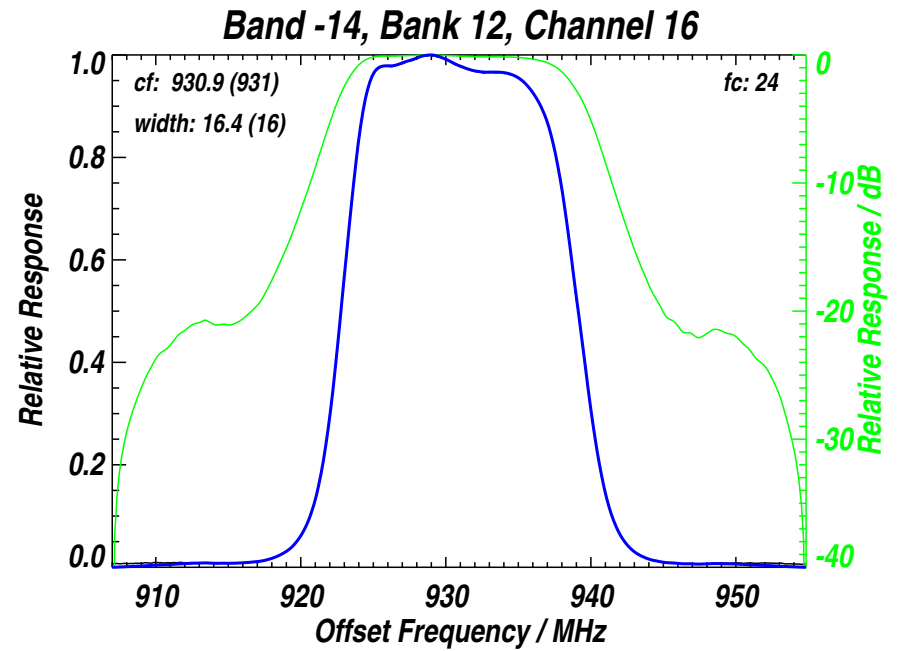
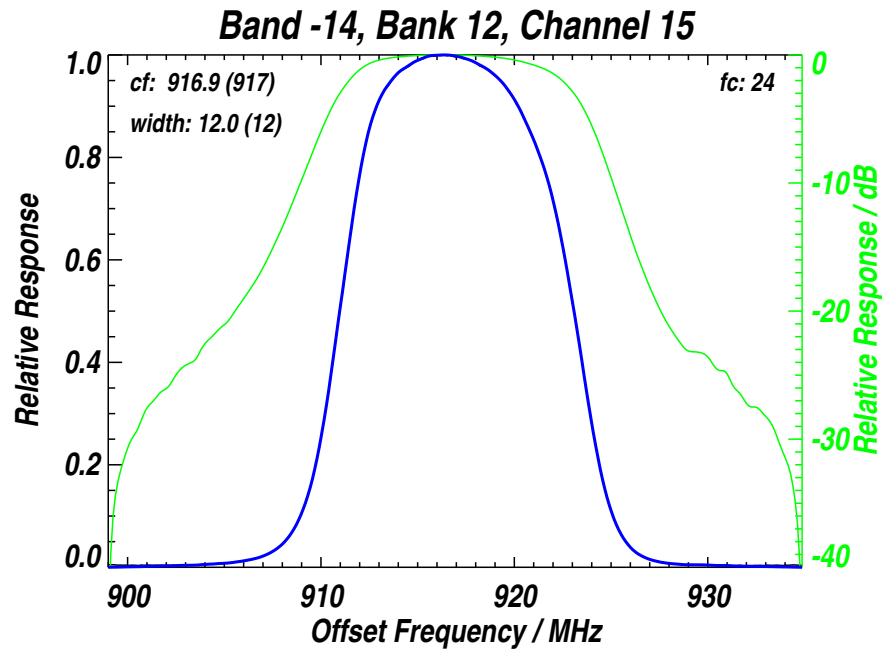
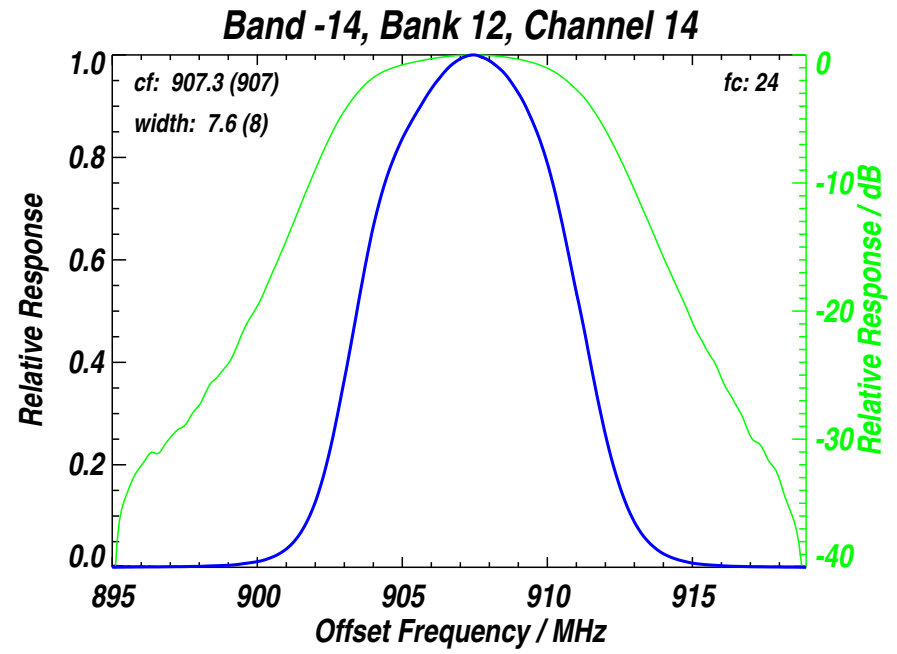
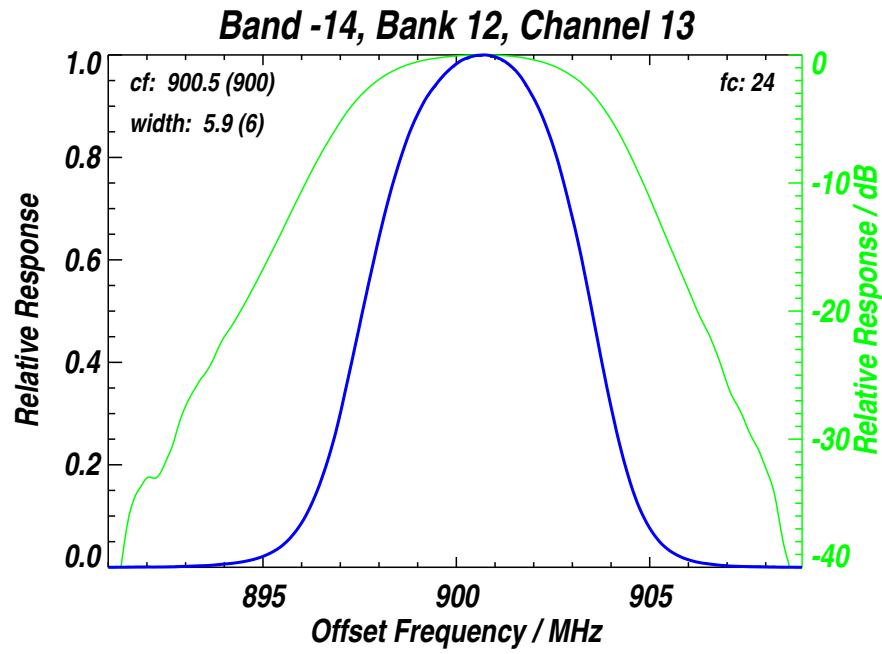


Figure H.399: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 13 to 16. See text for additional details.

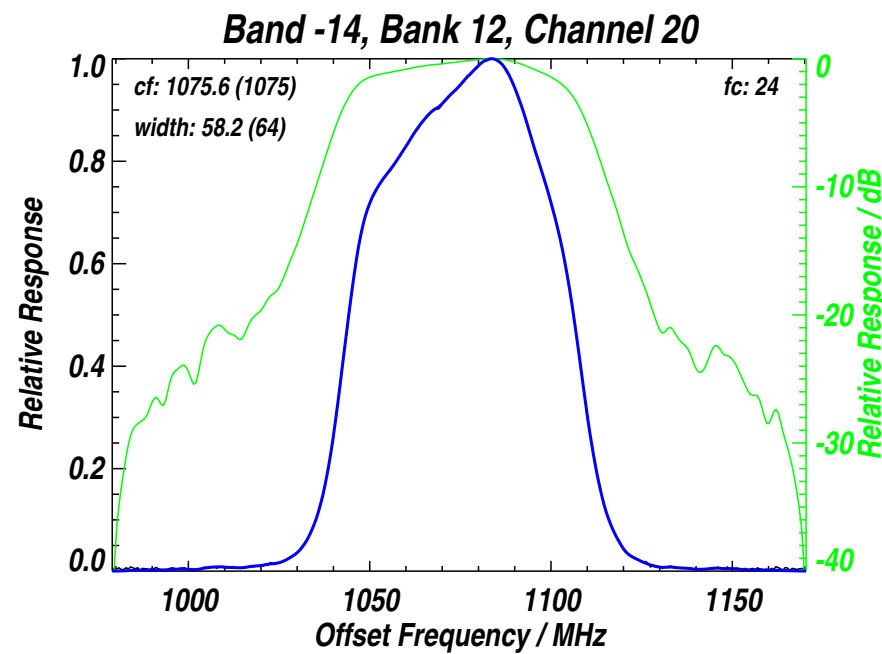
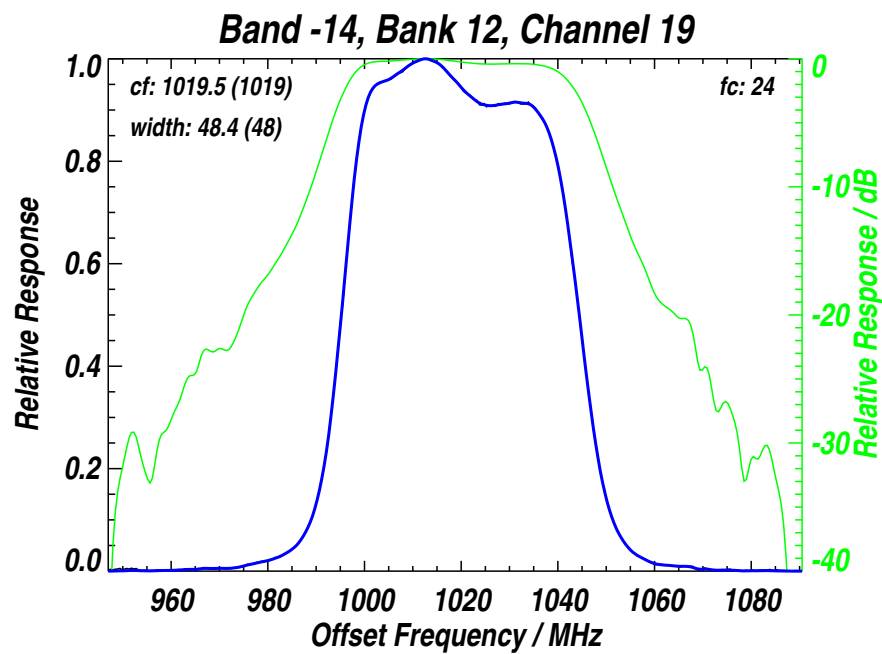
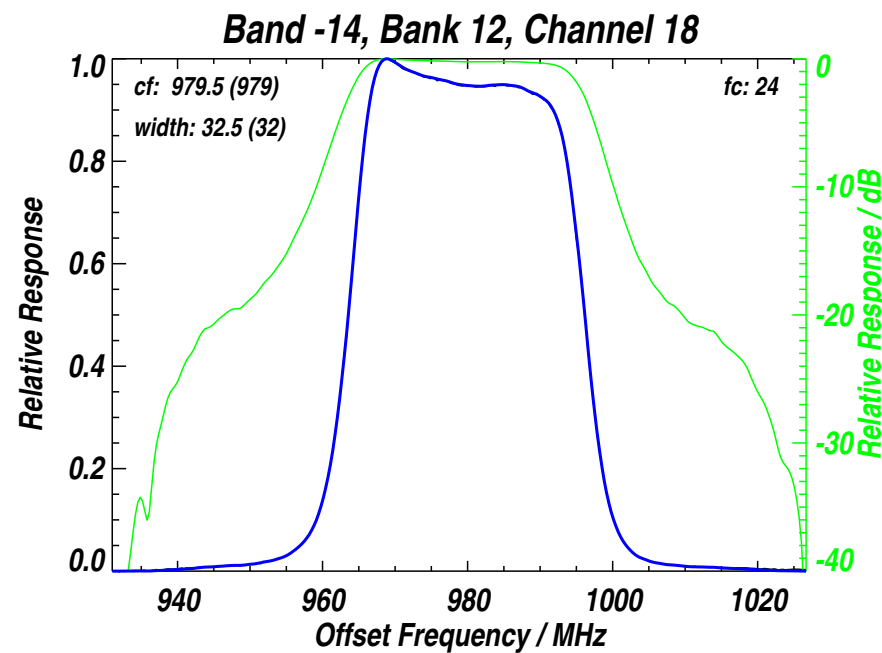
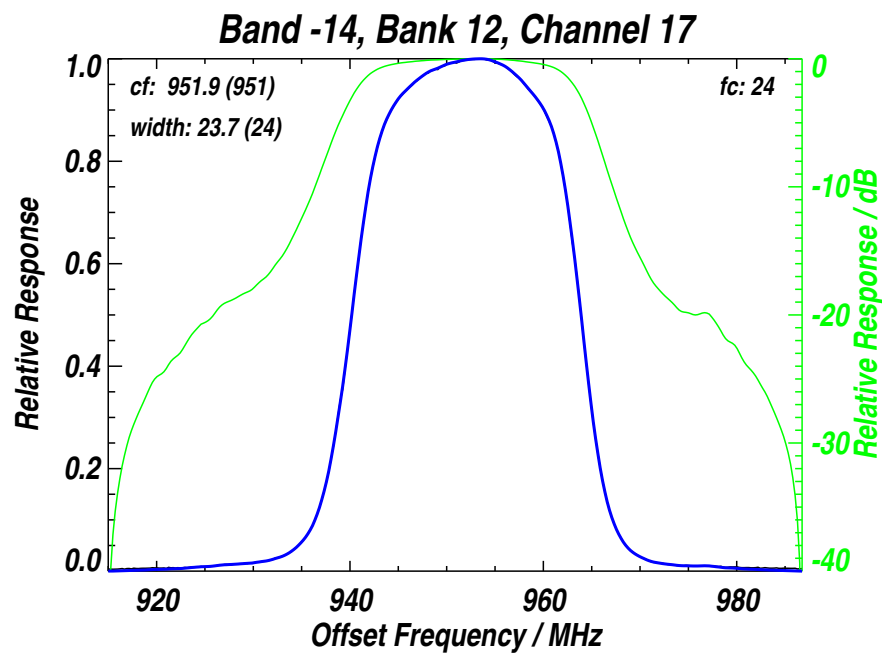


Figure H.400: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 17 to 20. See text for additional details.



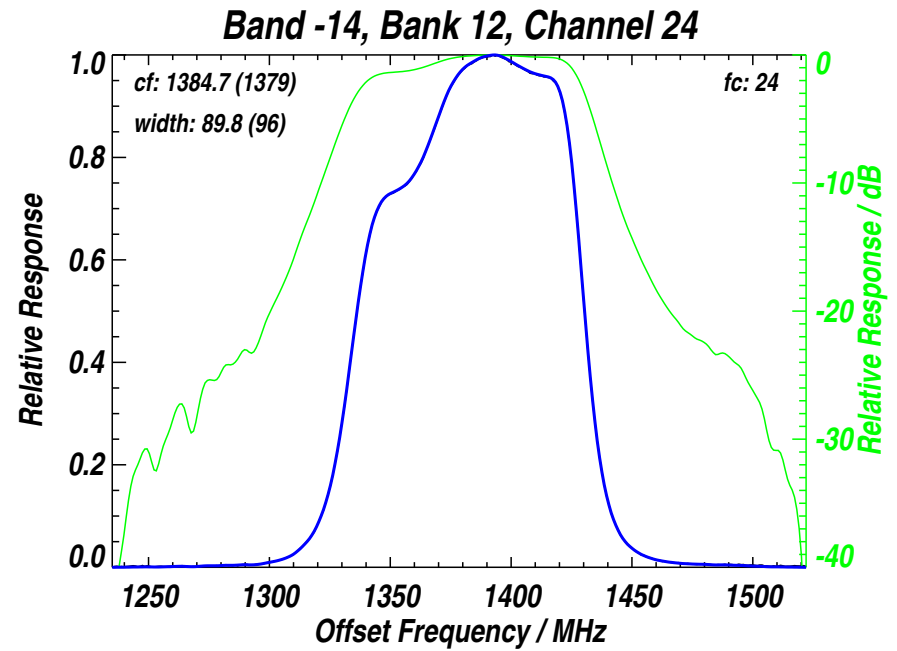
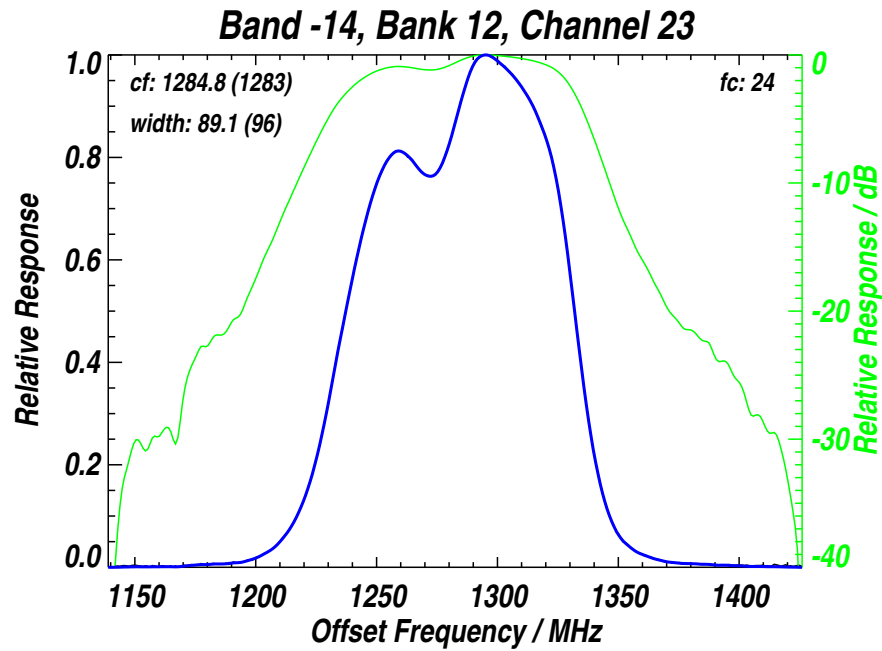
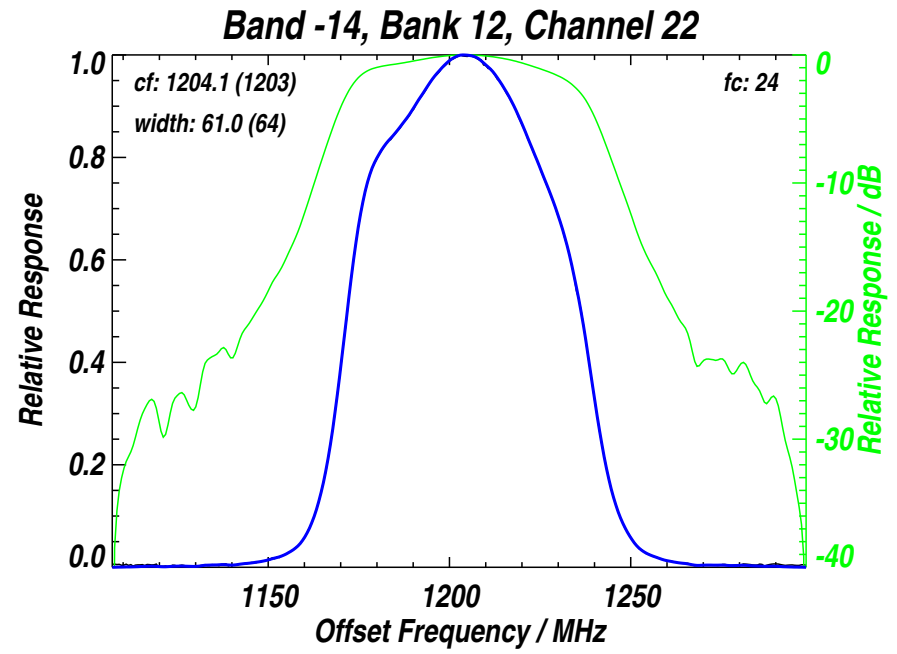
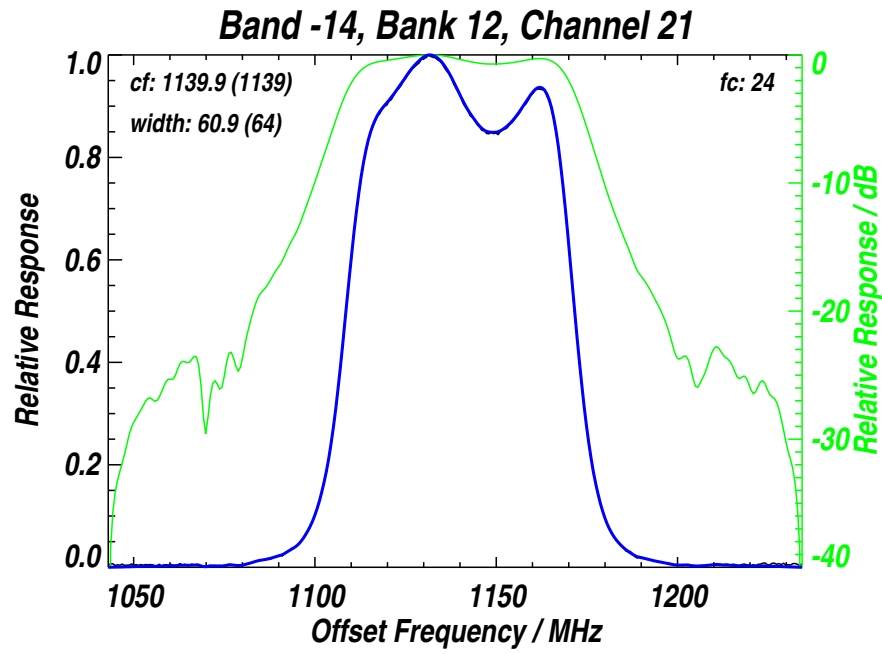
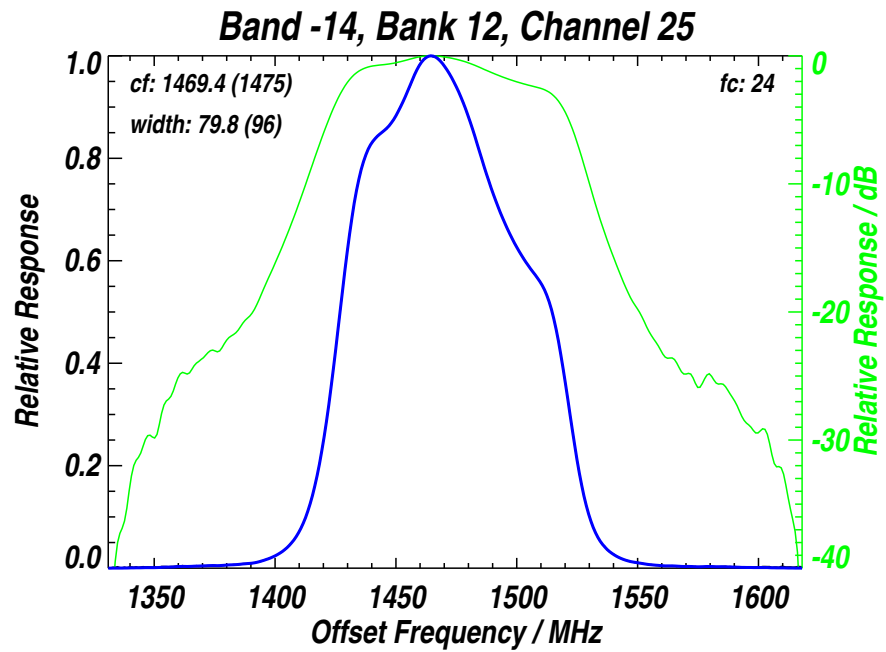


Figure H.401: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 14 (lsb)**  
**Bank 12**  
**Origin = 624.486000012 GHz**

Figure H.402: Lower sideband front-end sweep data for Band 14 taken via Filterbank 12, channel 25. See text for additional details.

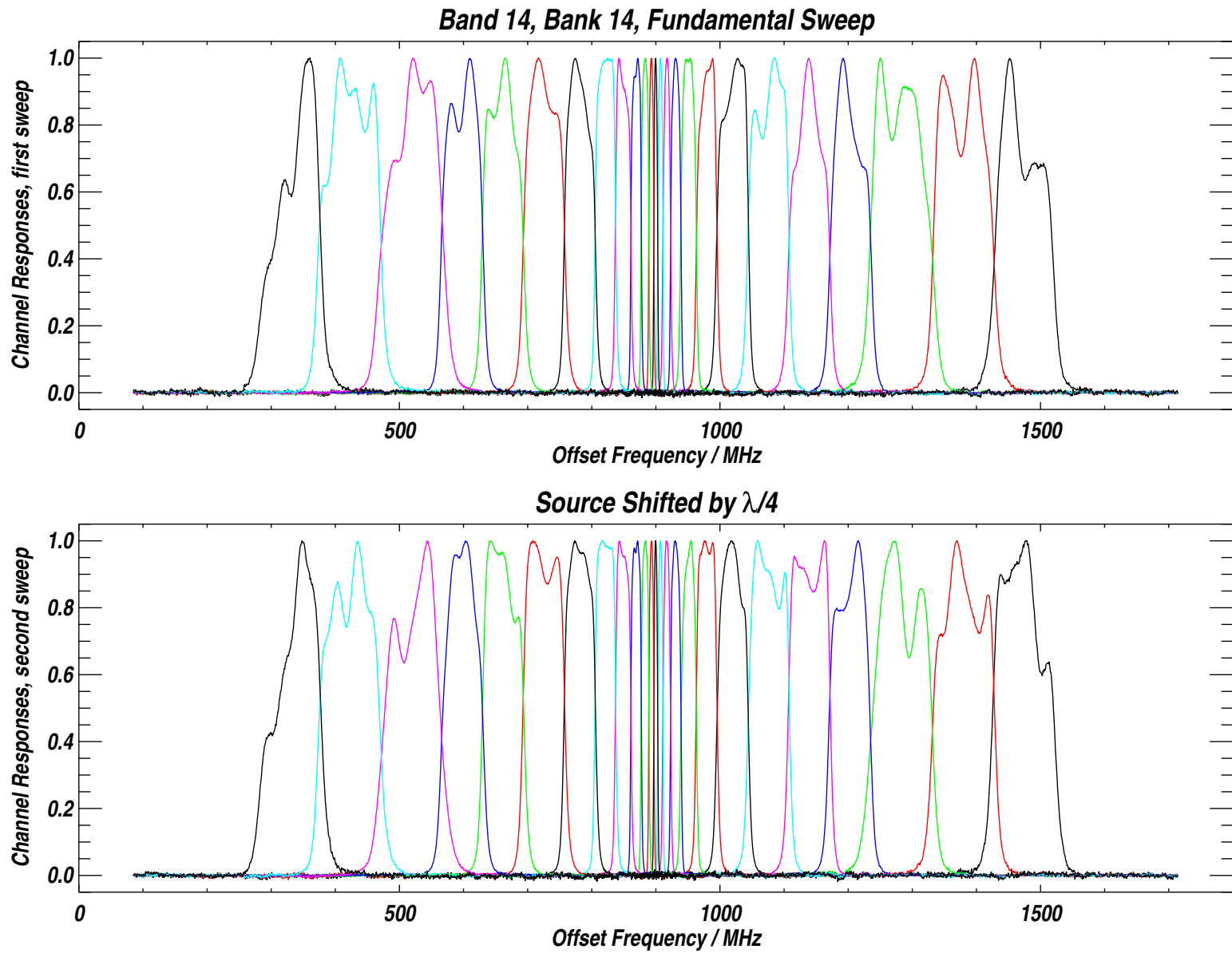


Figure H.403: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14. See text for additional details.

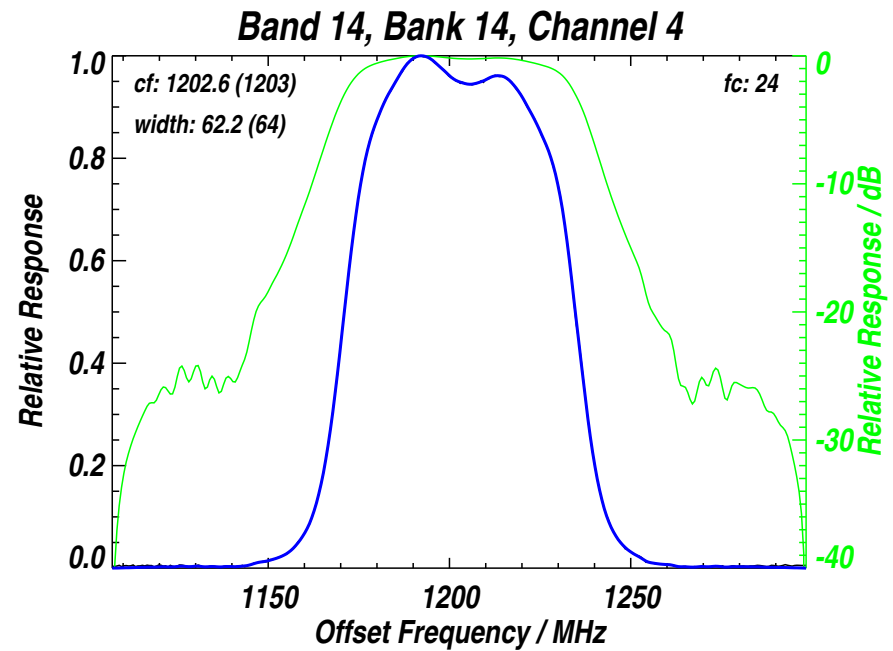
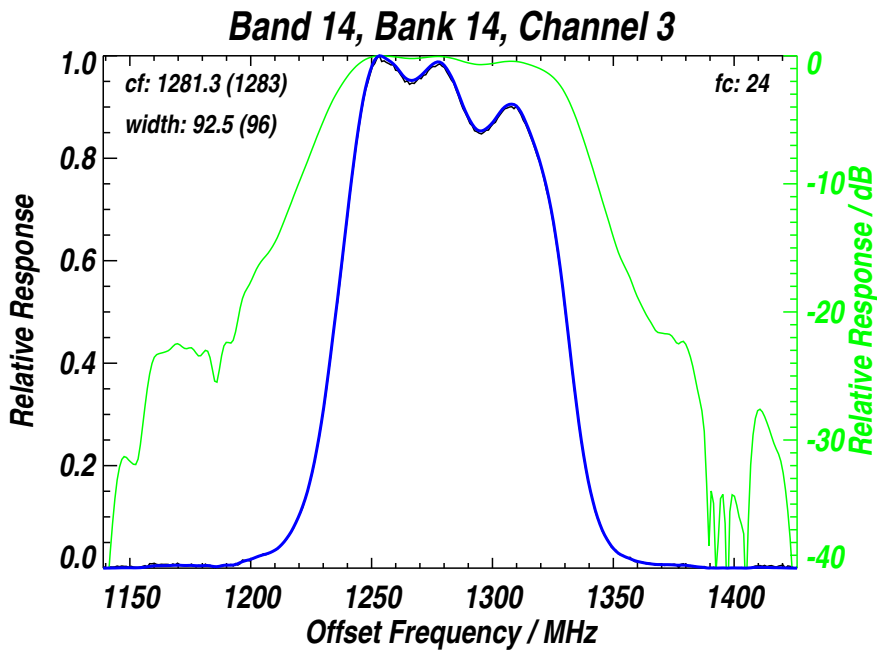
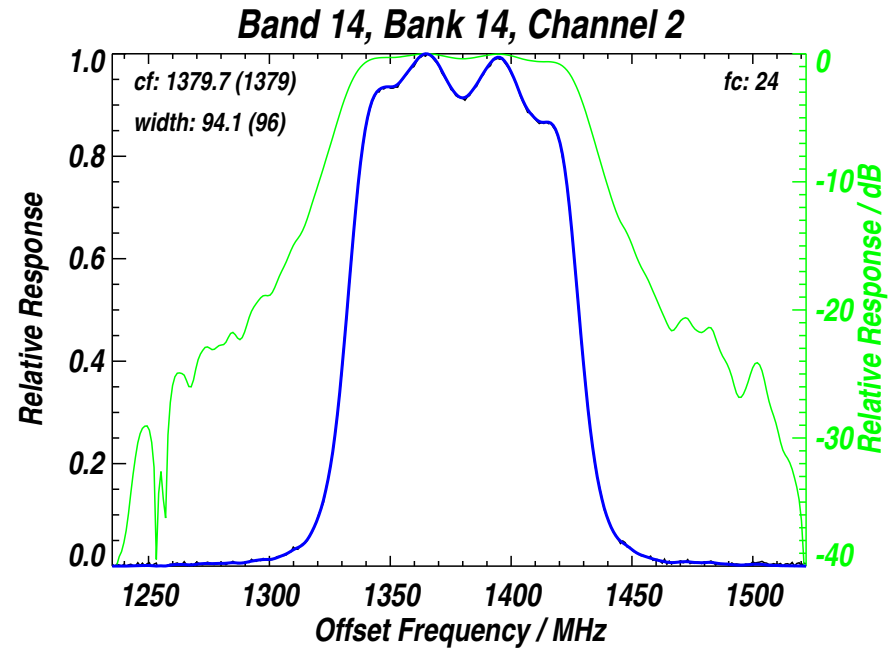
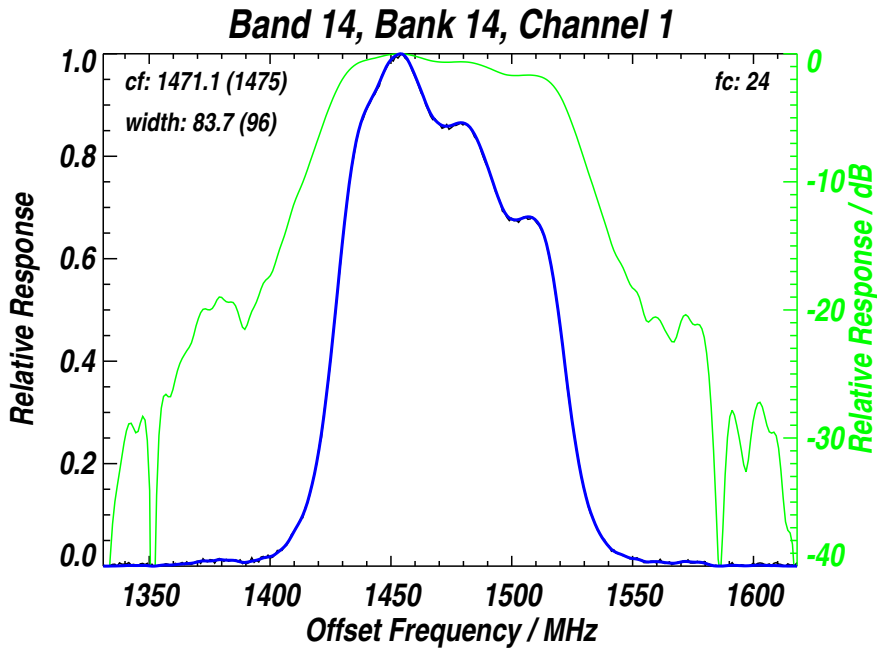


Figure H.404: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 1 to 4. See text for additional details.

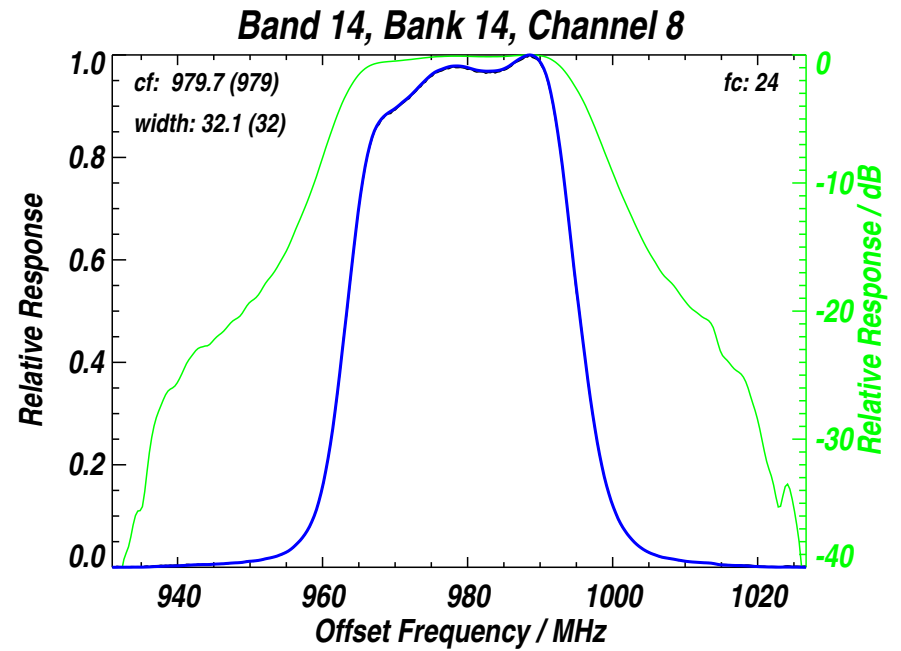
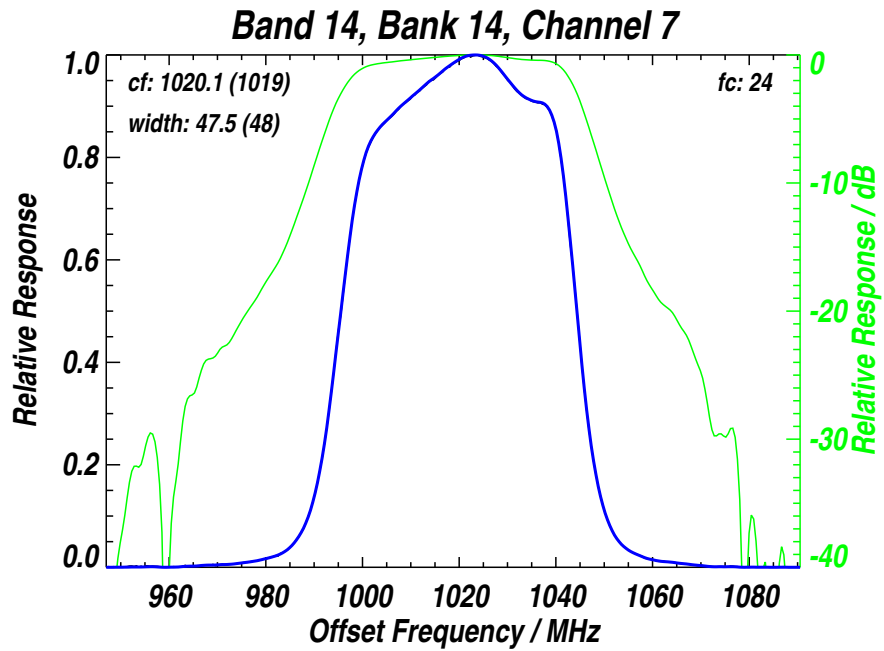
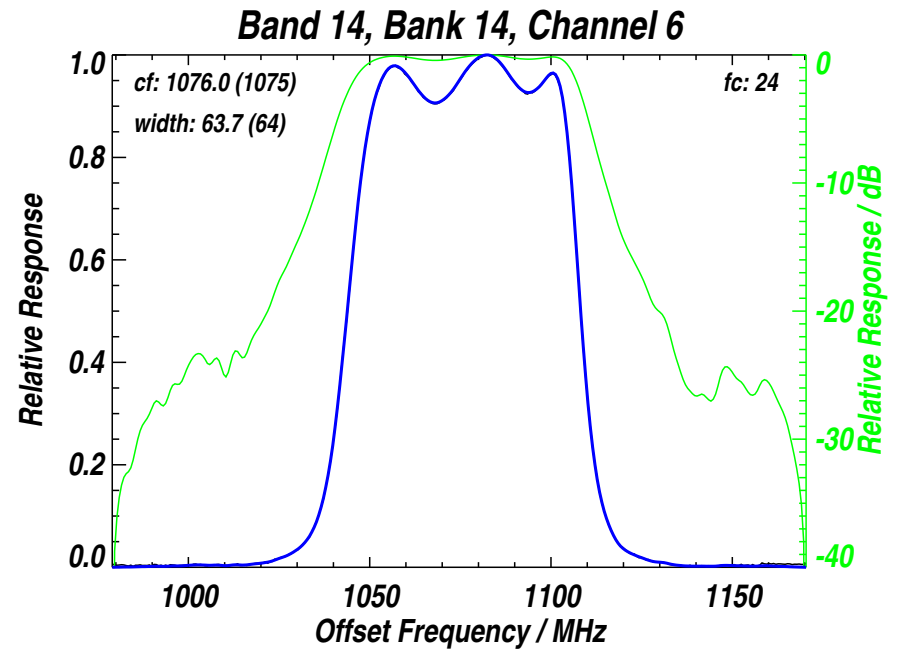
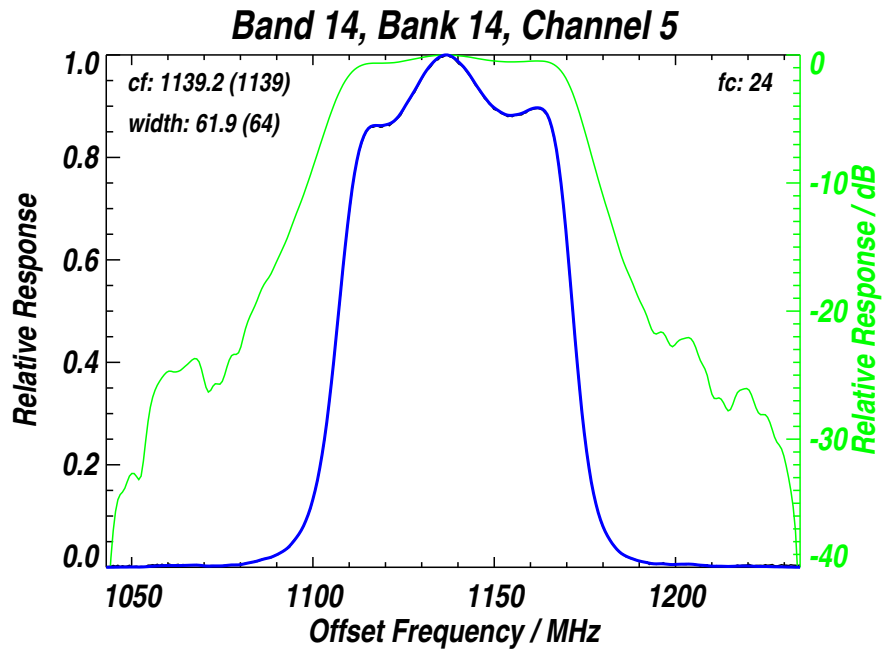


Figure H.405: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 5 to 8. See text for additional details.

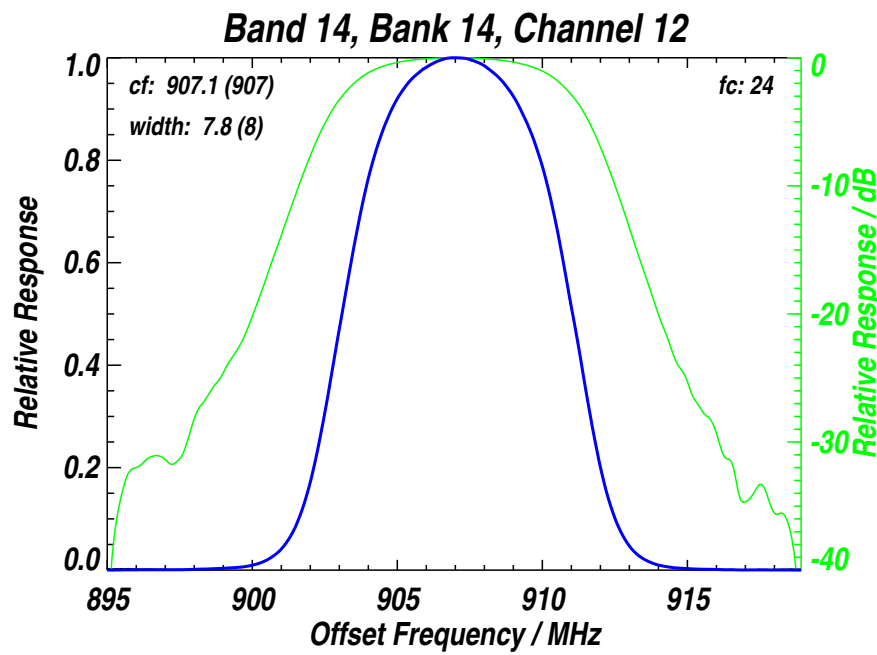
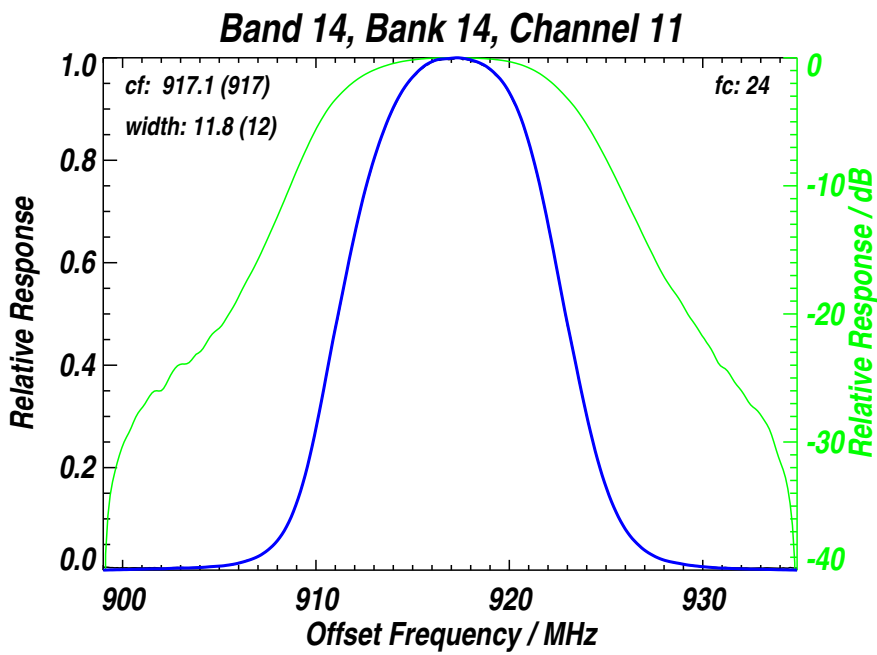
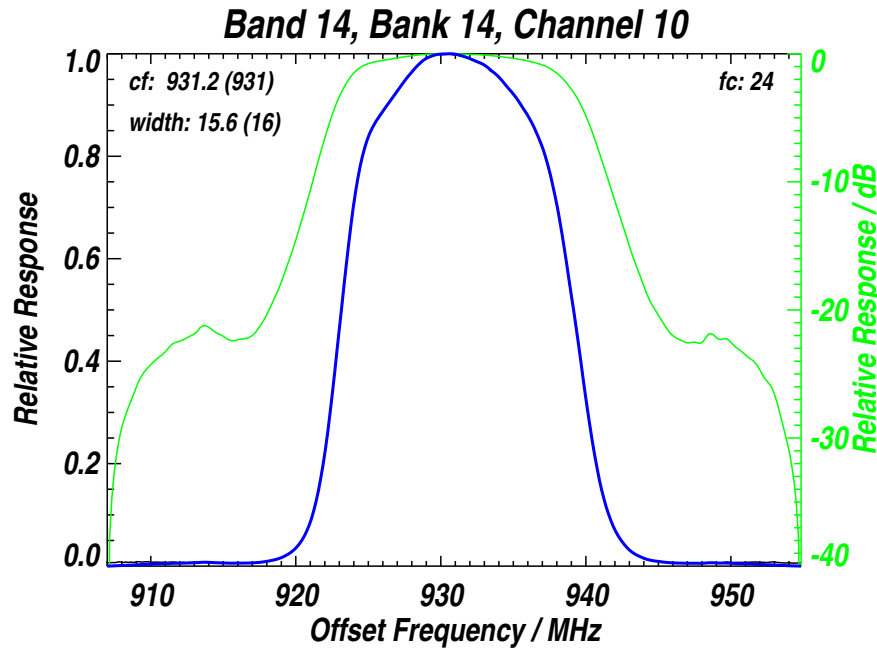
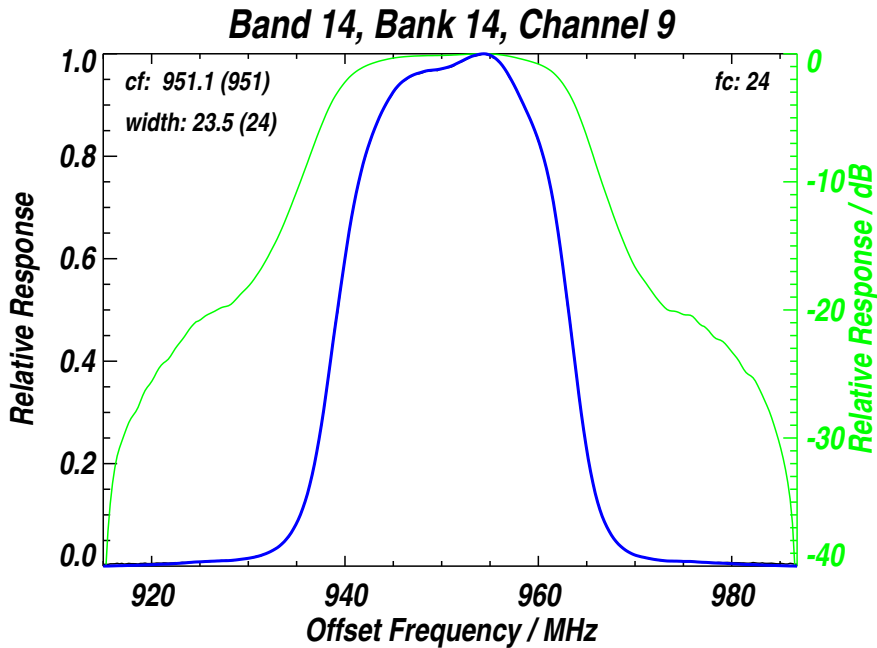


Figure H.406: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 9 to 12. See text for additional details.

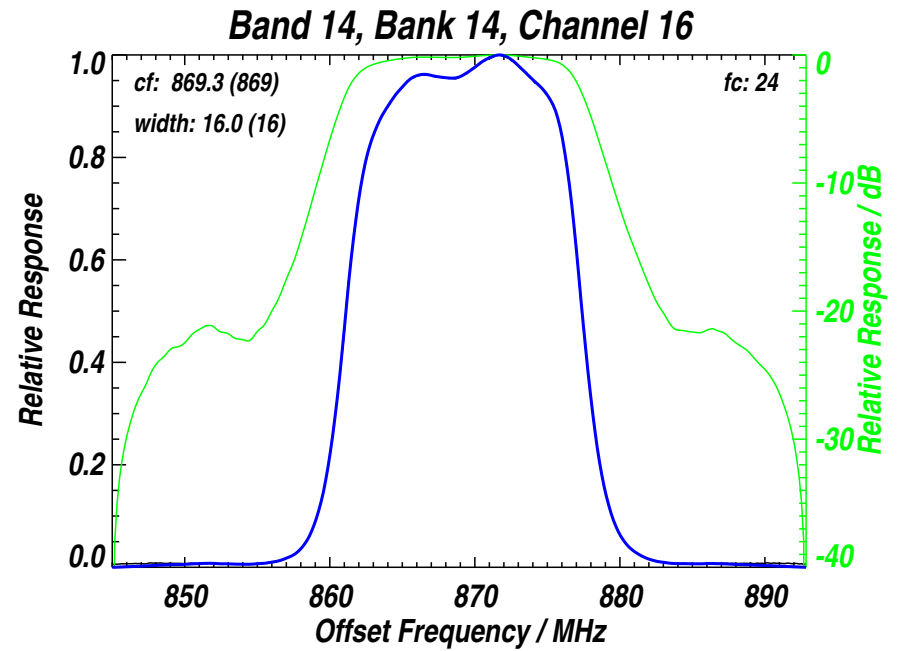
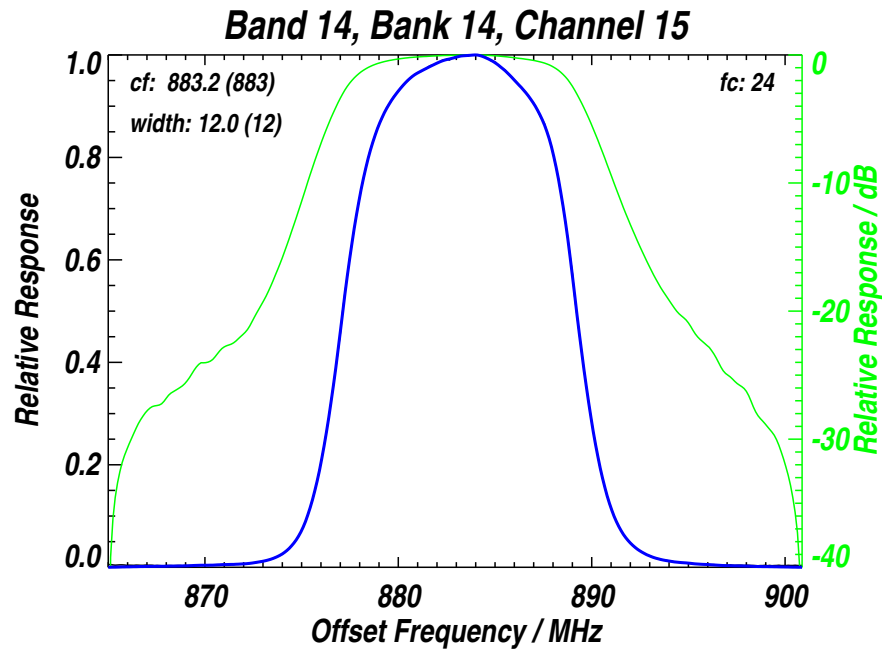
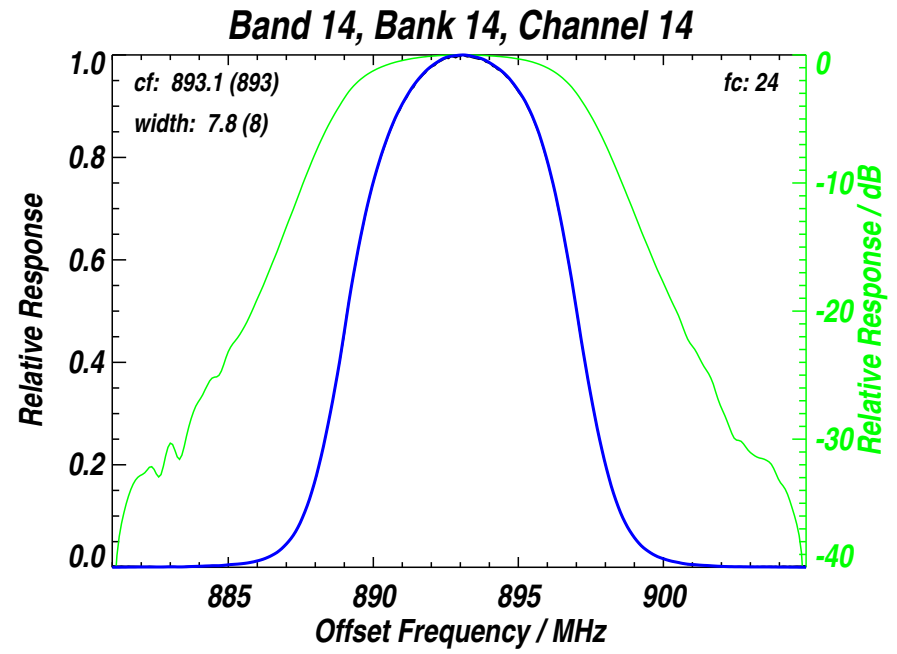
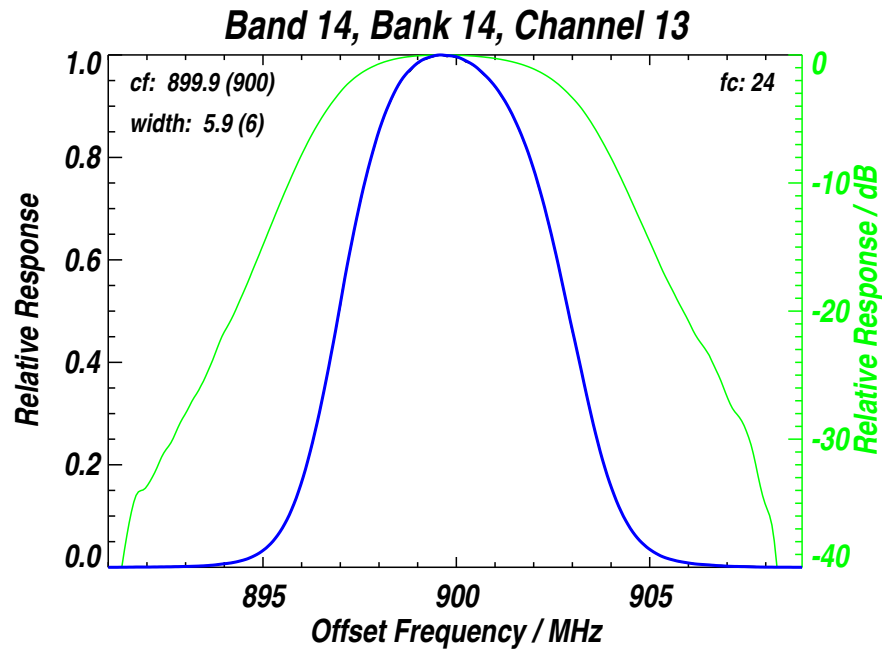


Figure H.407: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 13 to 16. See text for additional details.

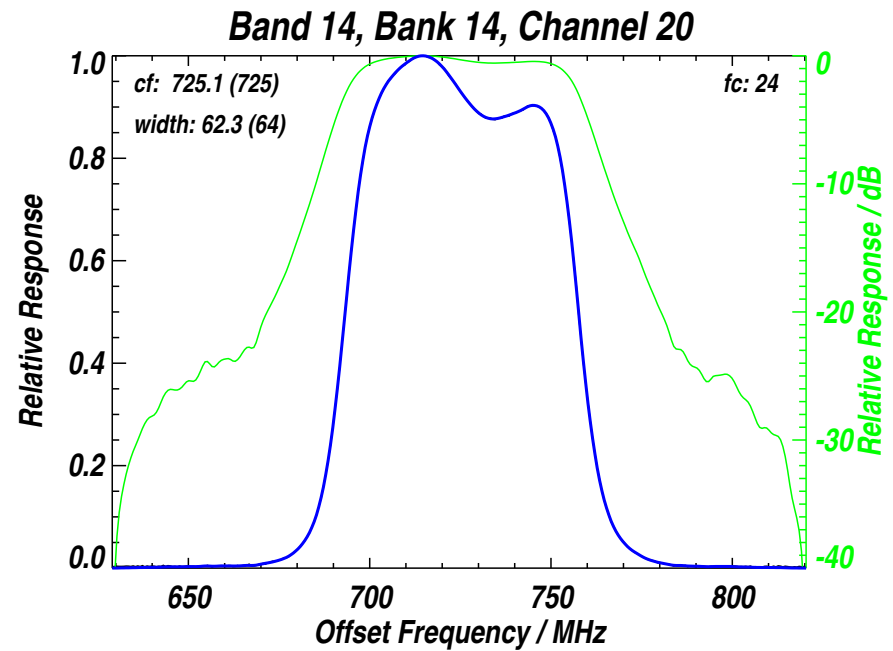
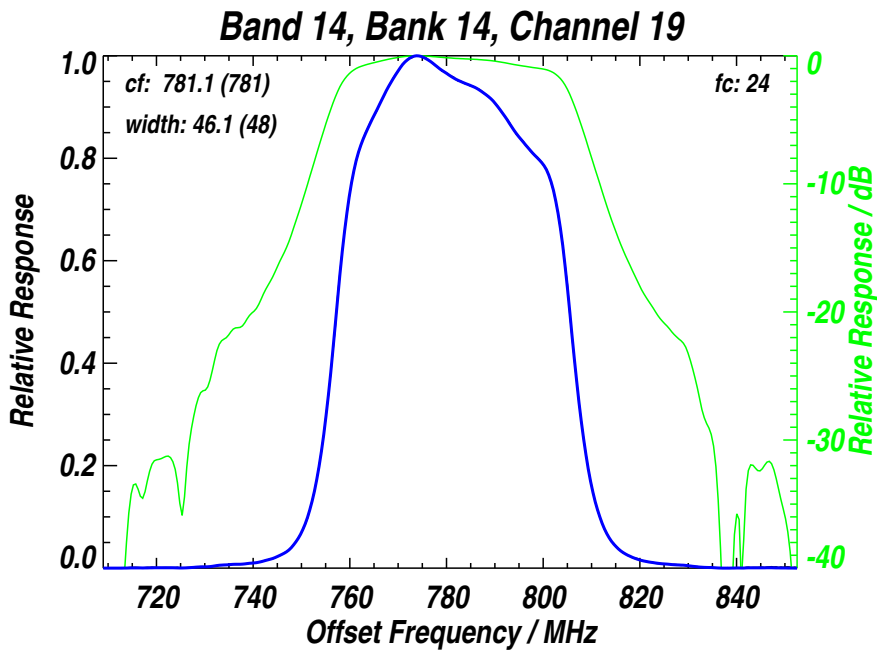
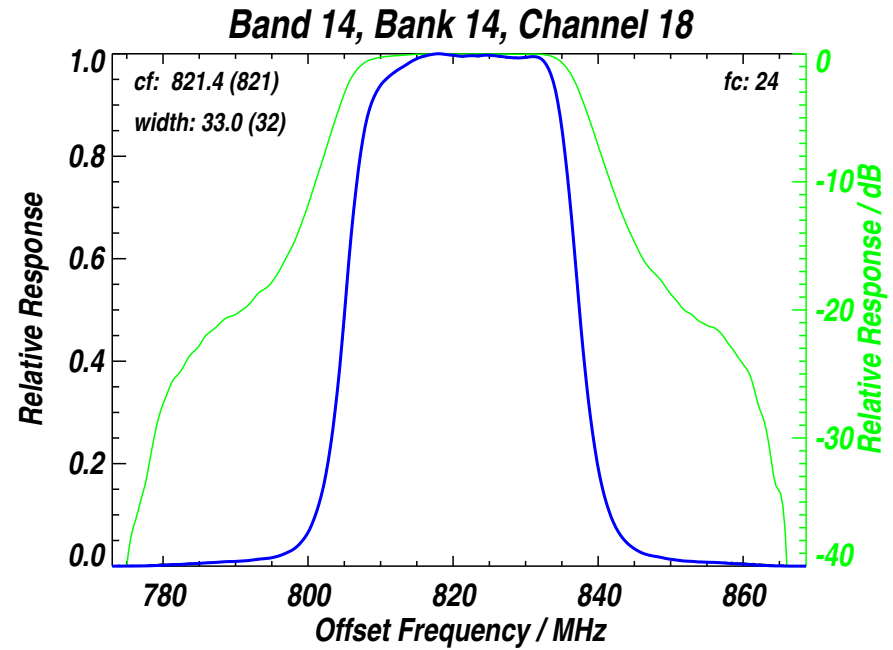
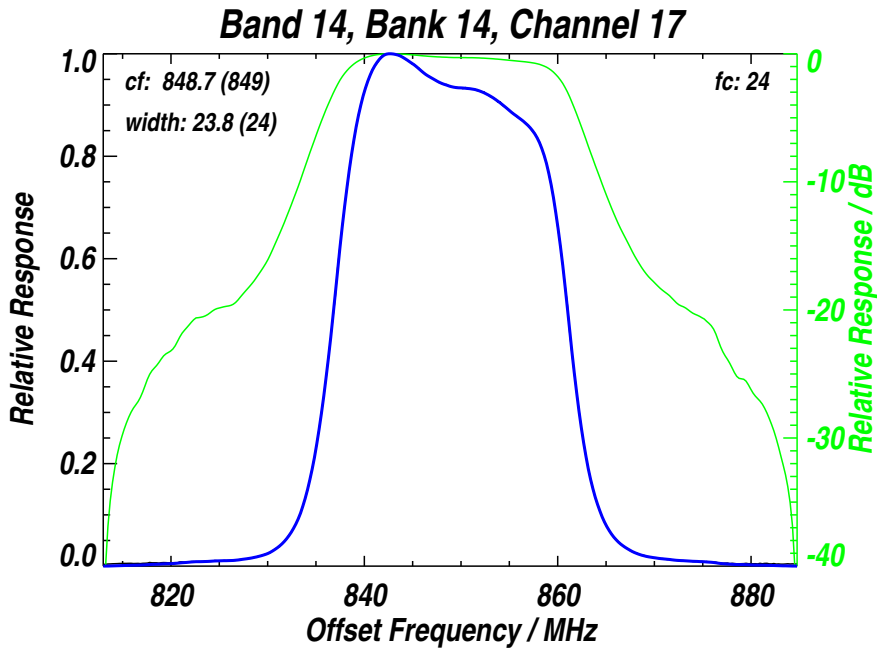


Figure H.408: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 17 to 20. See text for additional details.



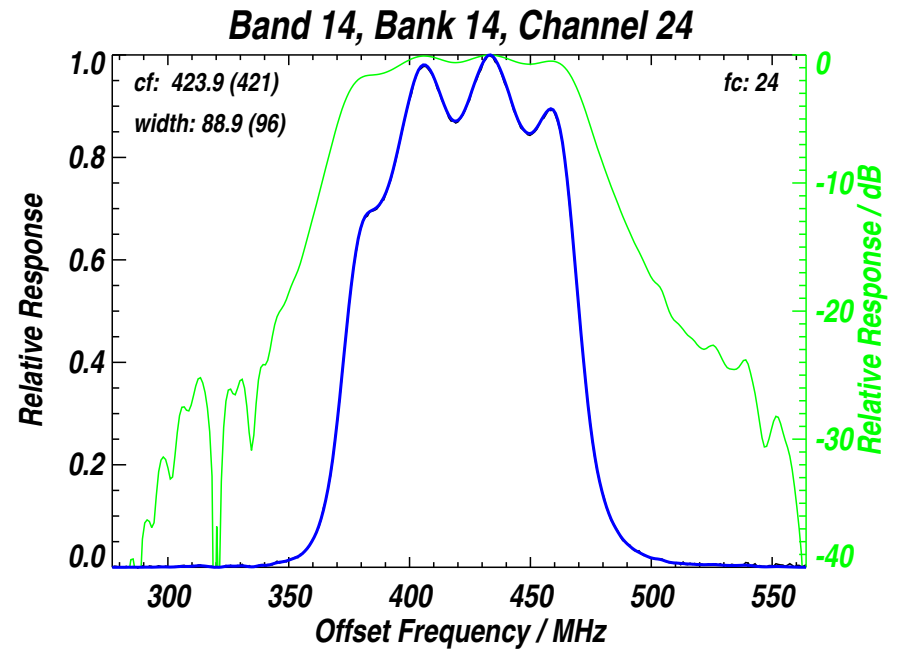
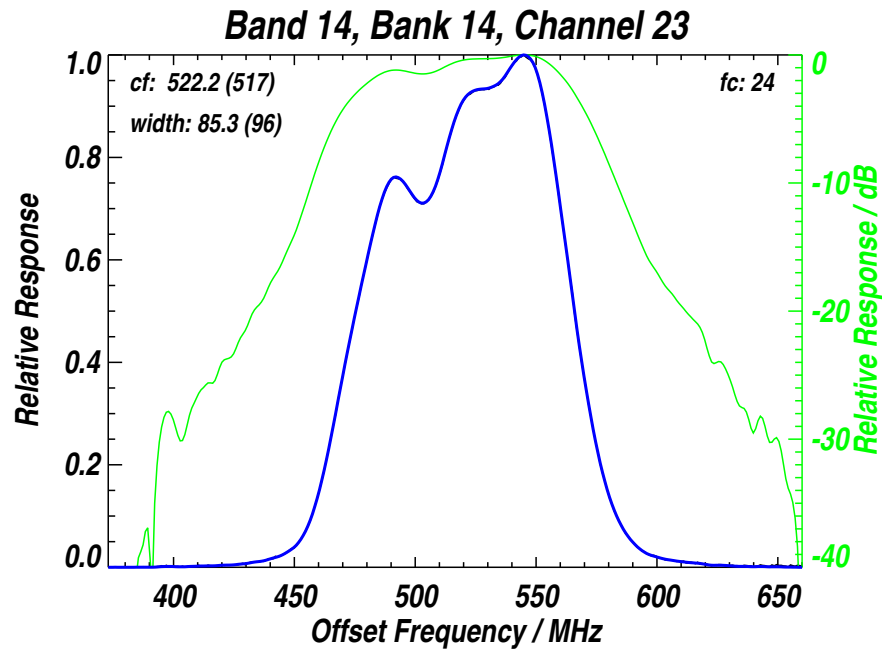
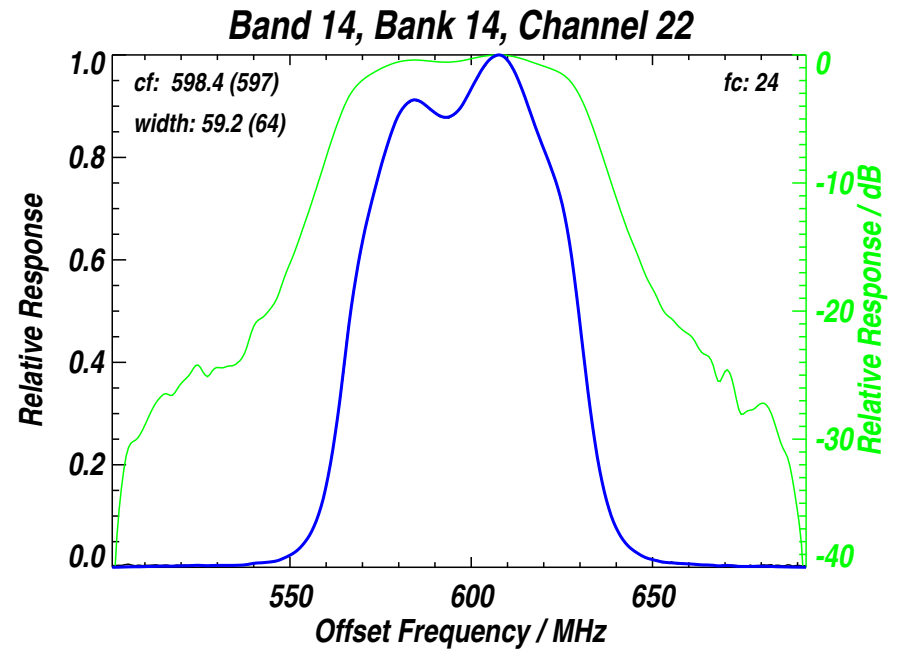
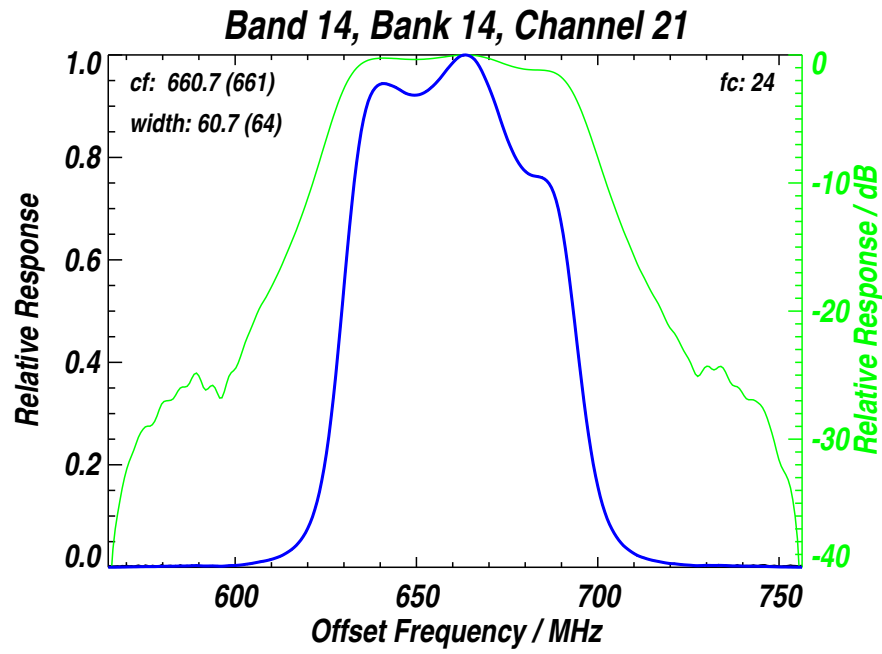
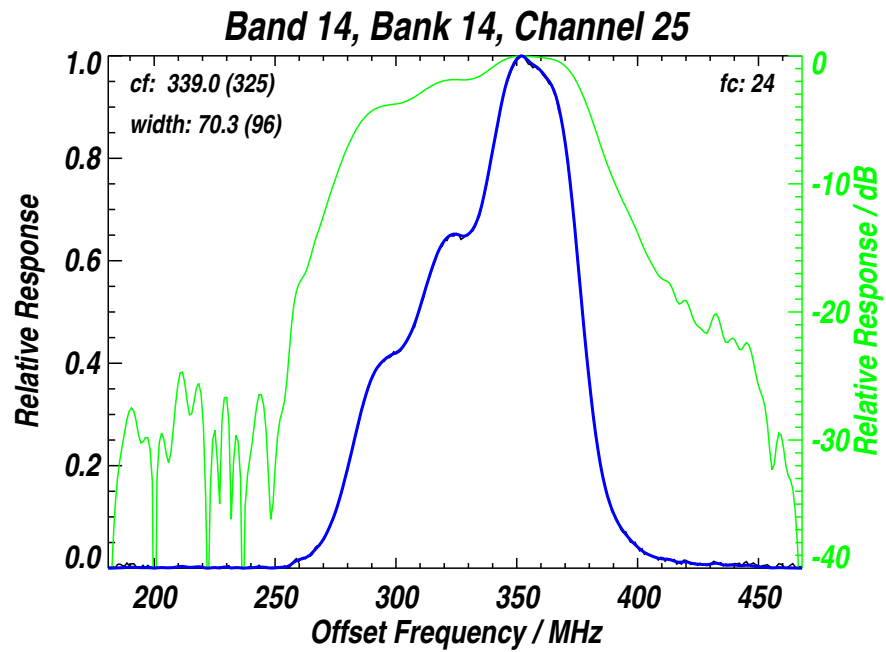


Figure H.409: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channels 21 to 24. See text for additional details.



**Band 14 (usb)**  
**Bank 14**  
**Origin = 659.453999988 GHz**

Figure H.410: Upper sideband front-end sweep data for Band 14 taken via Filterbank 14, channel 25. See text for additional details.

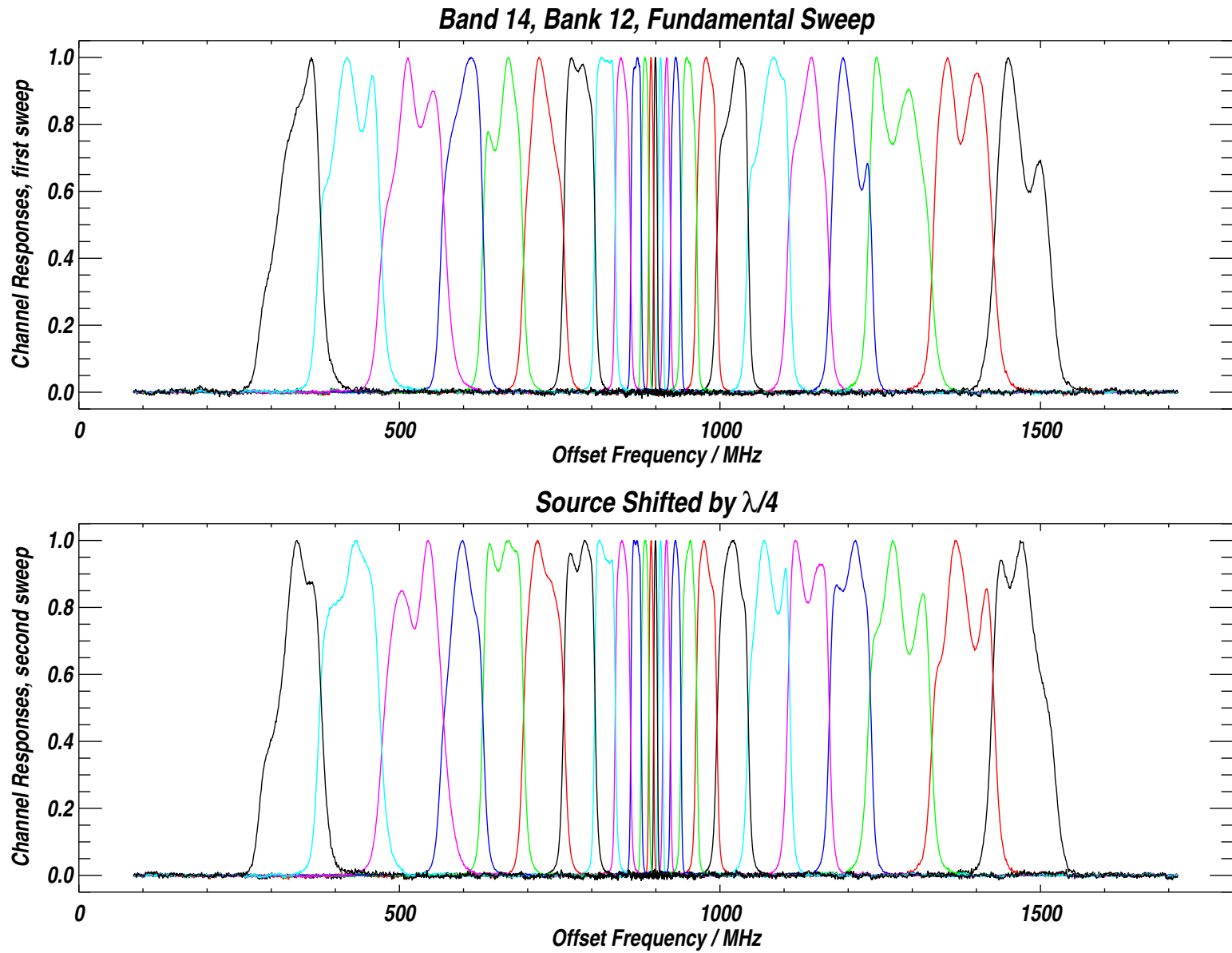


Figure H.411: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12. See text for additional details.

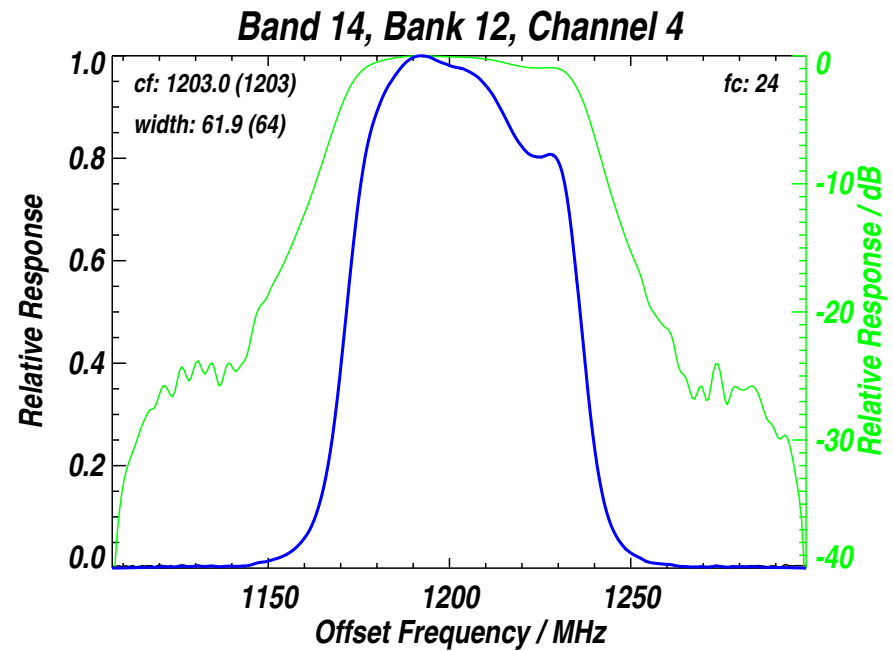
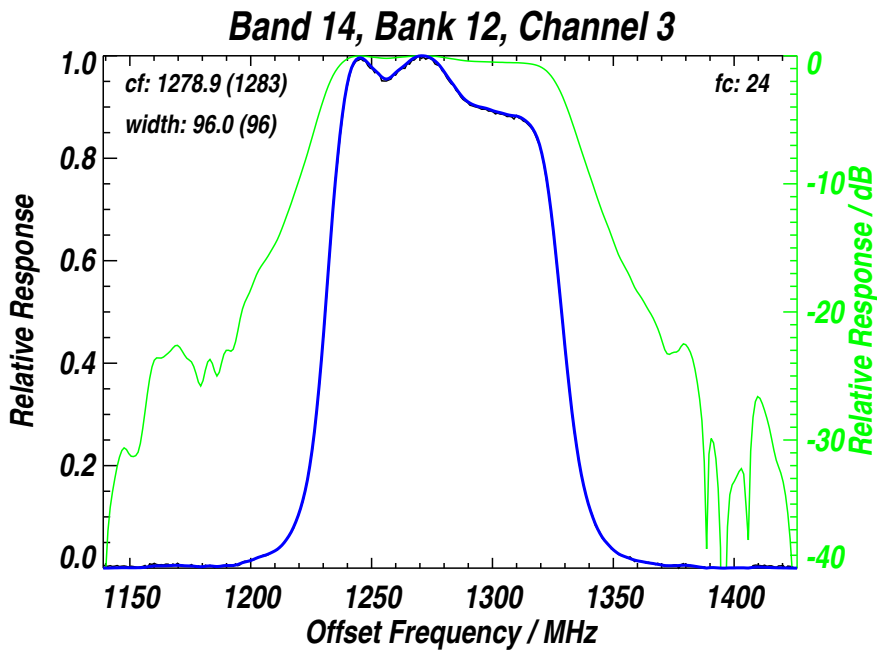
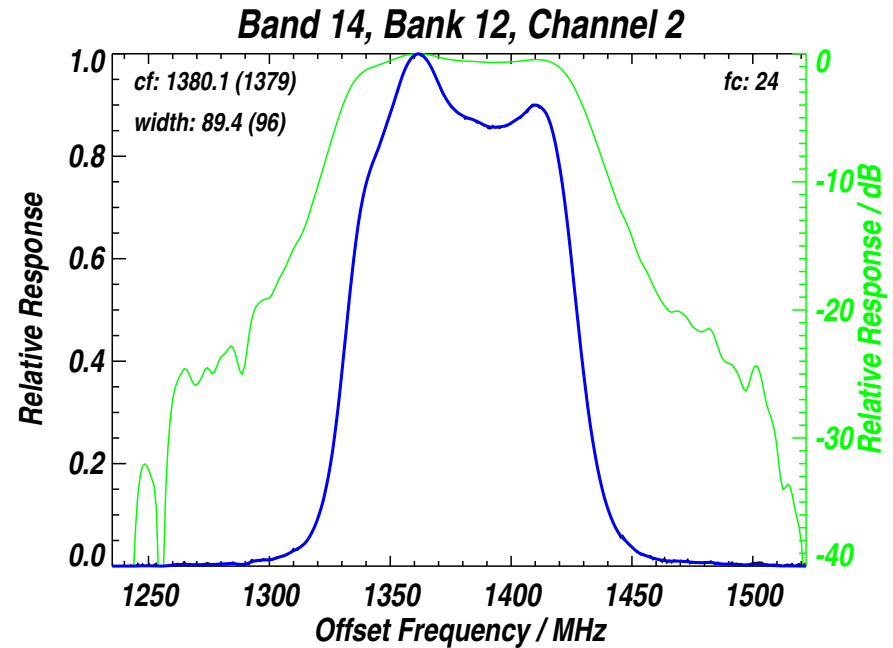
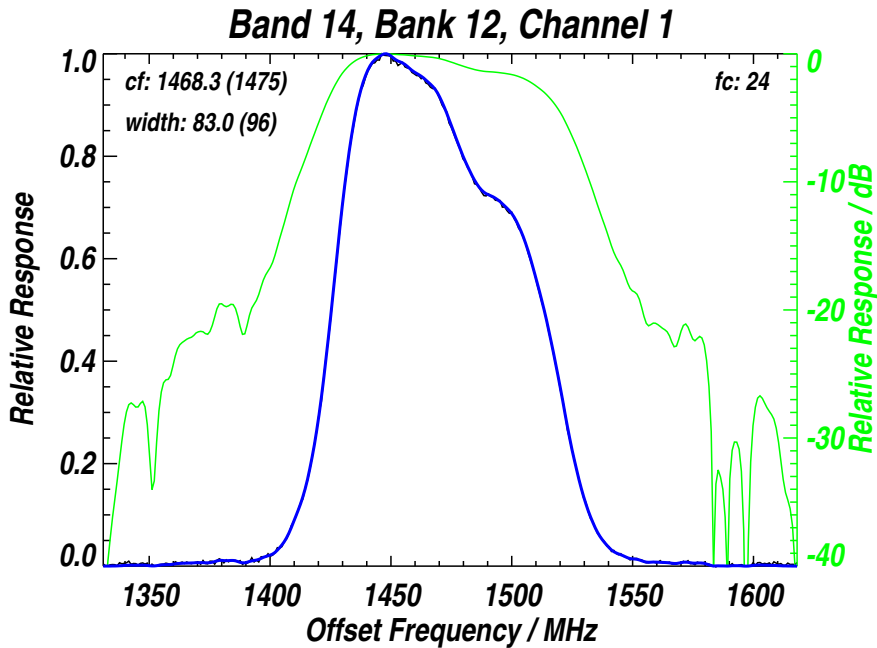


Figure H.412: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 1 to 4. See text for additional details.

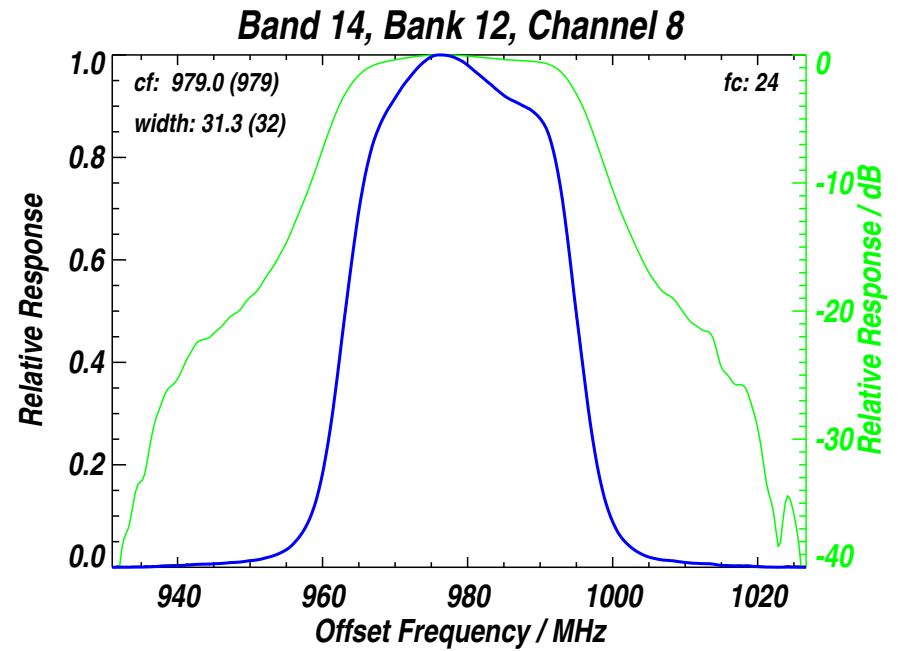
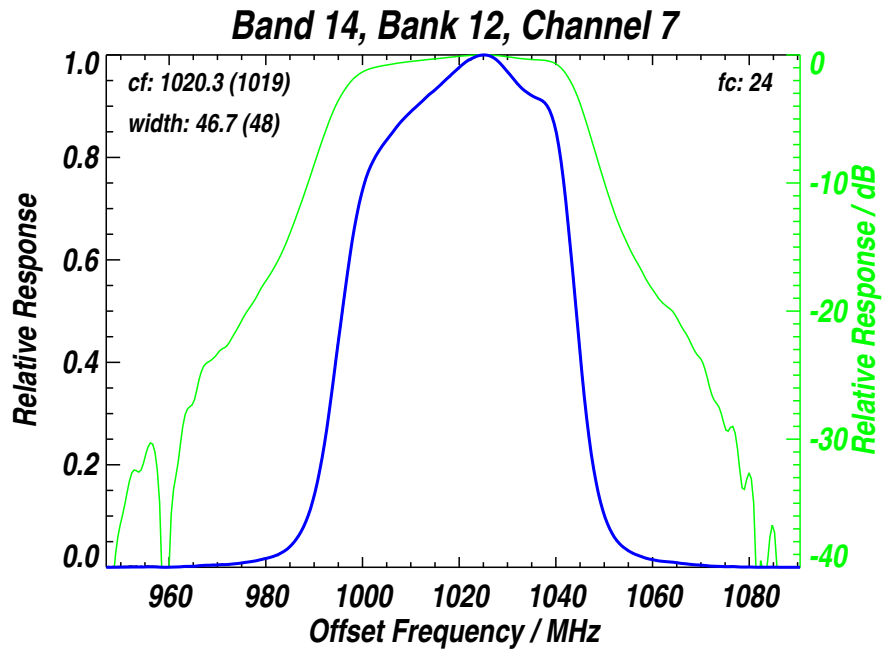
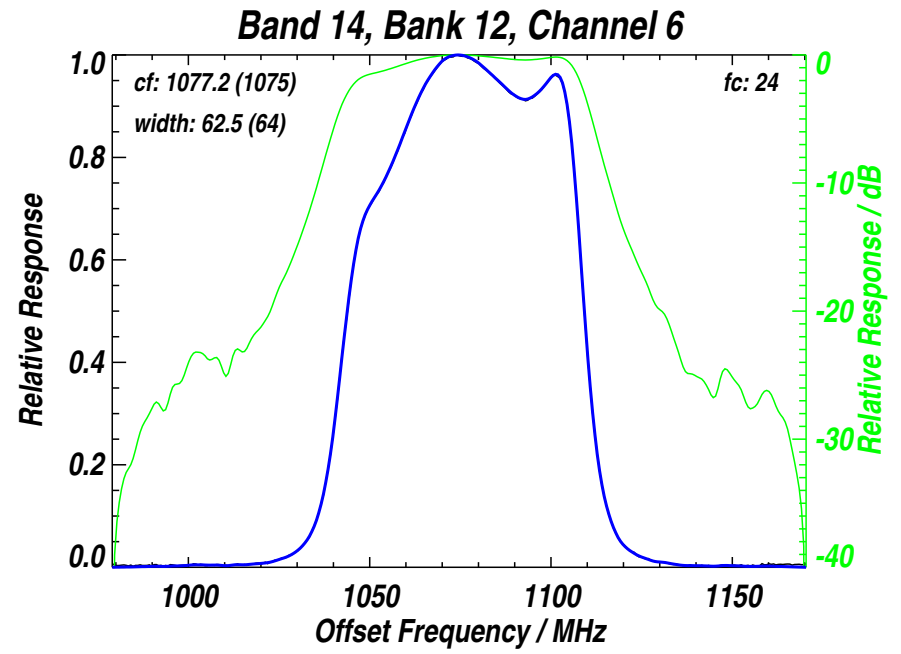
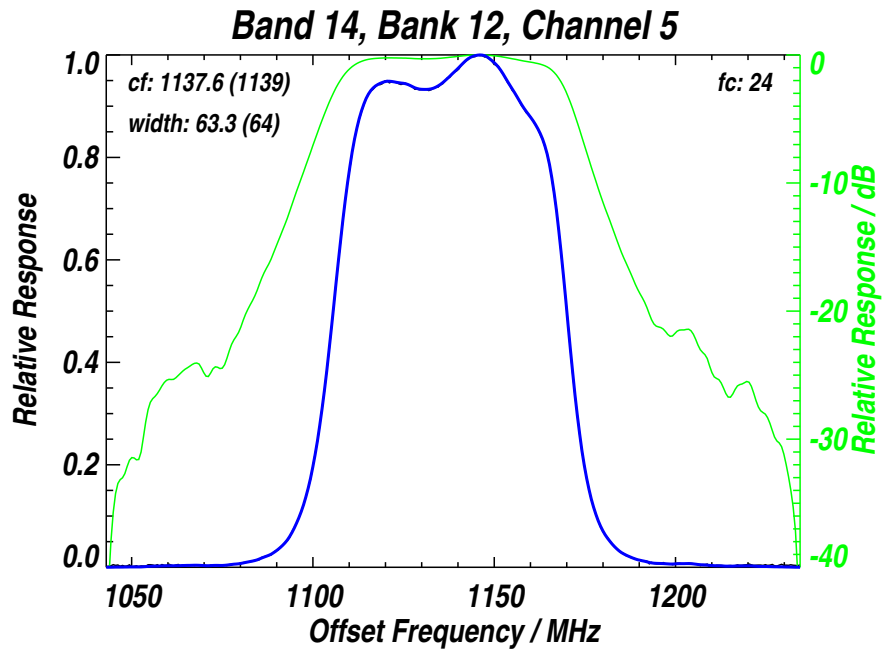


Figure H.413: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 5 to 8. See text for additional details.

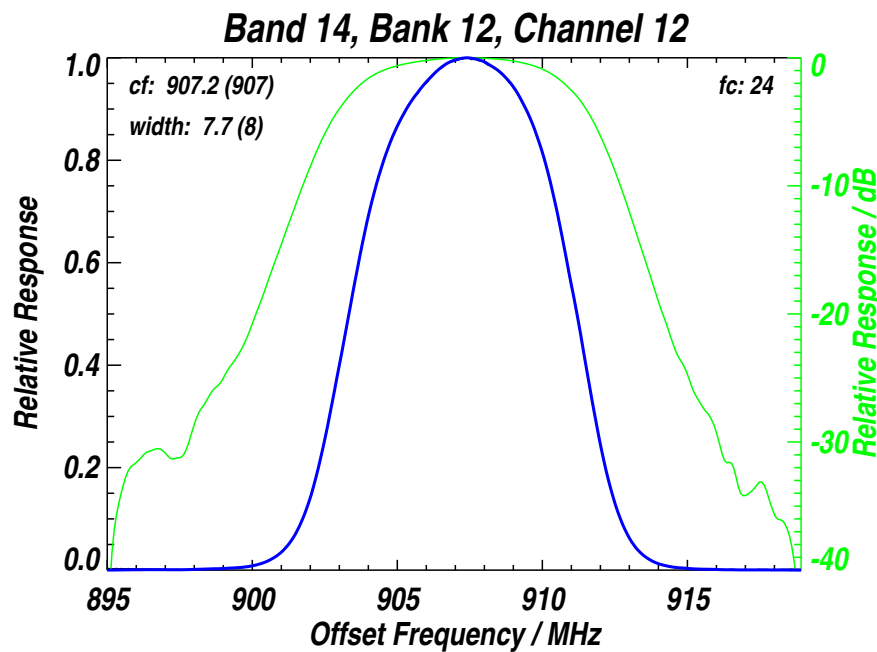
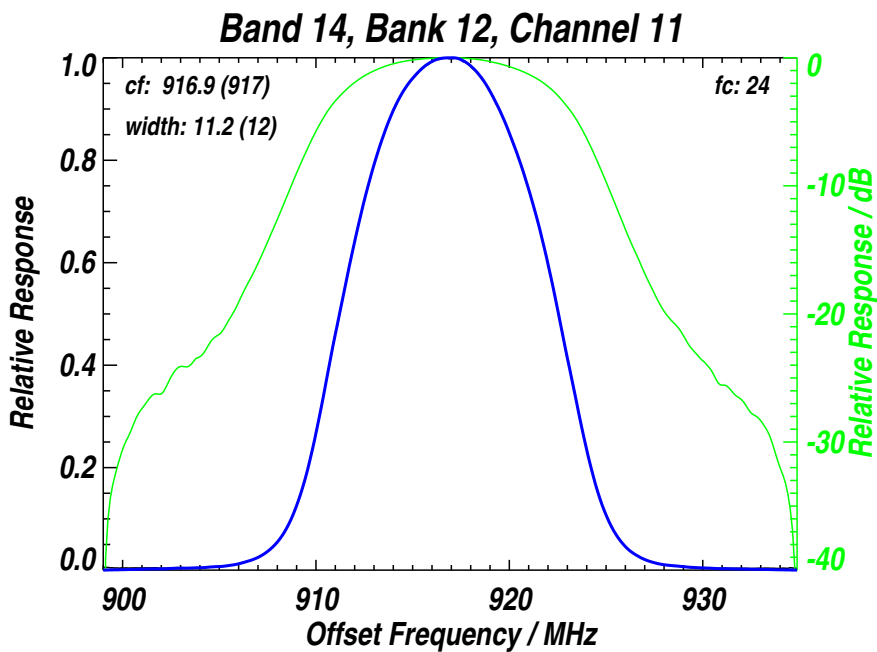
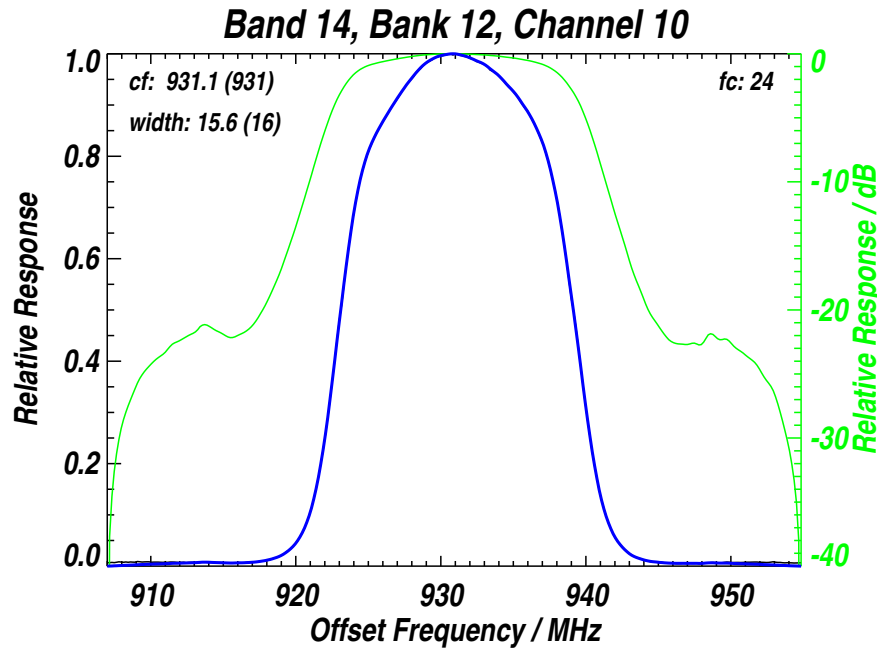
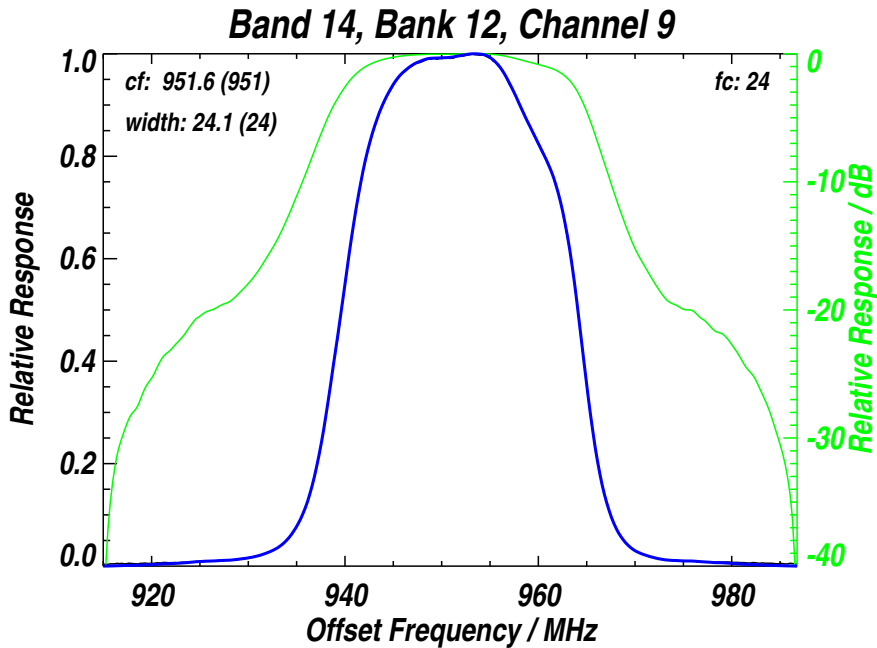


Figure H.414: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 9 to 12. See text for additional details.

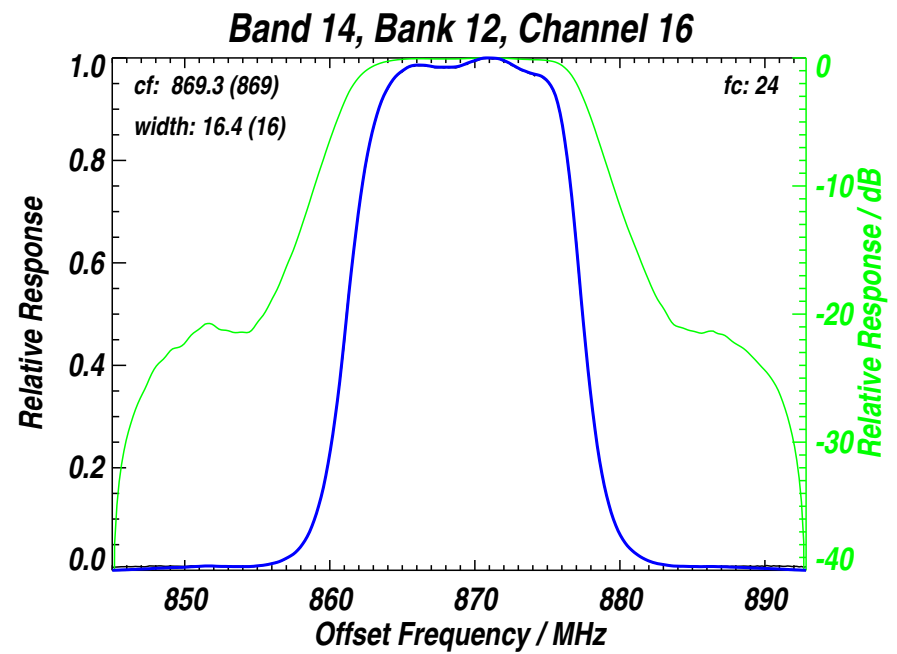
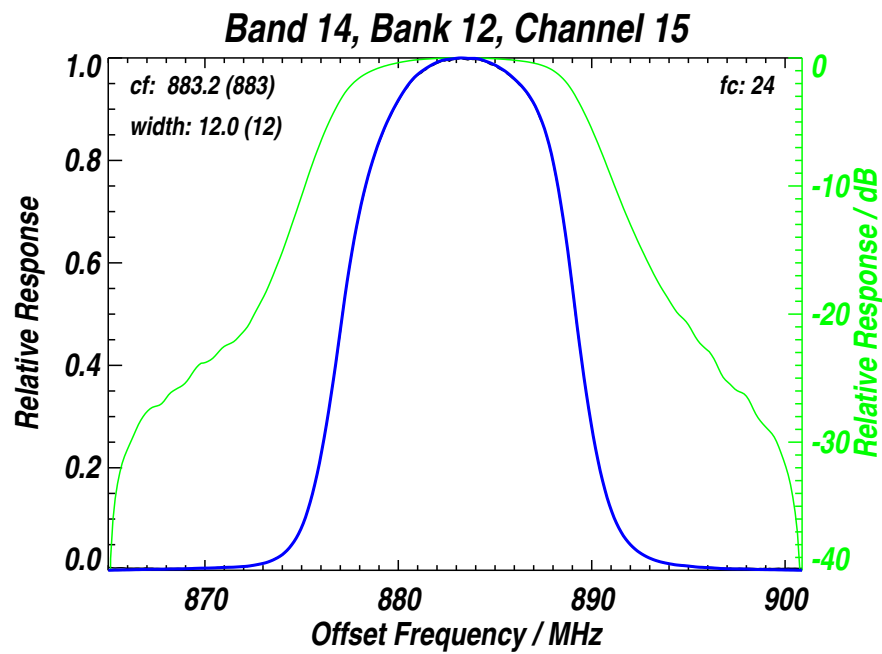
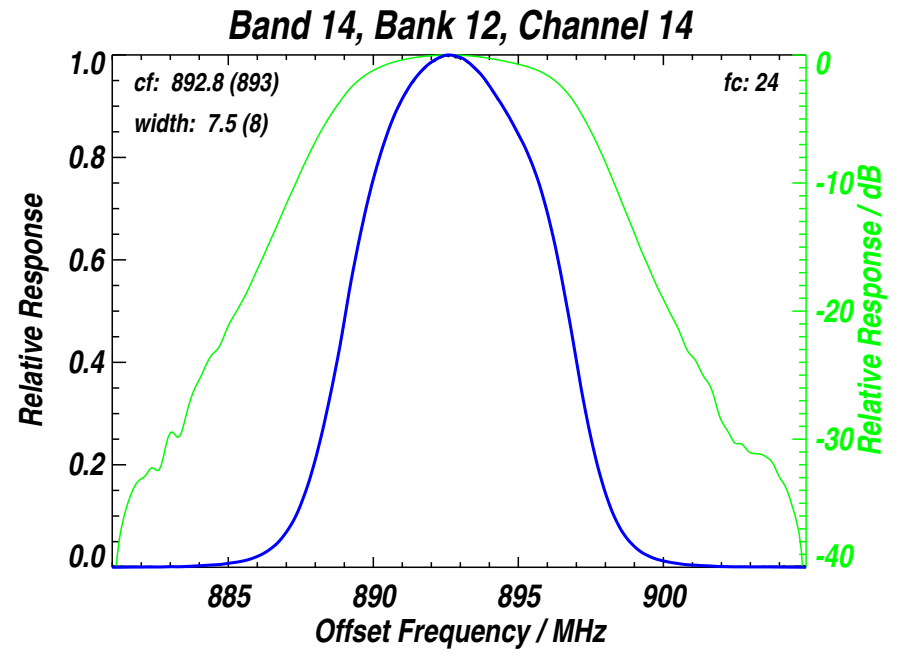
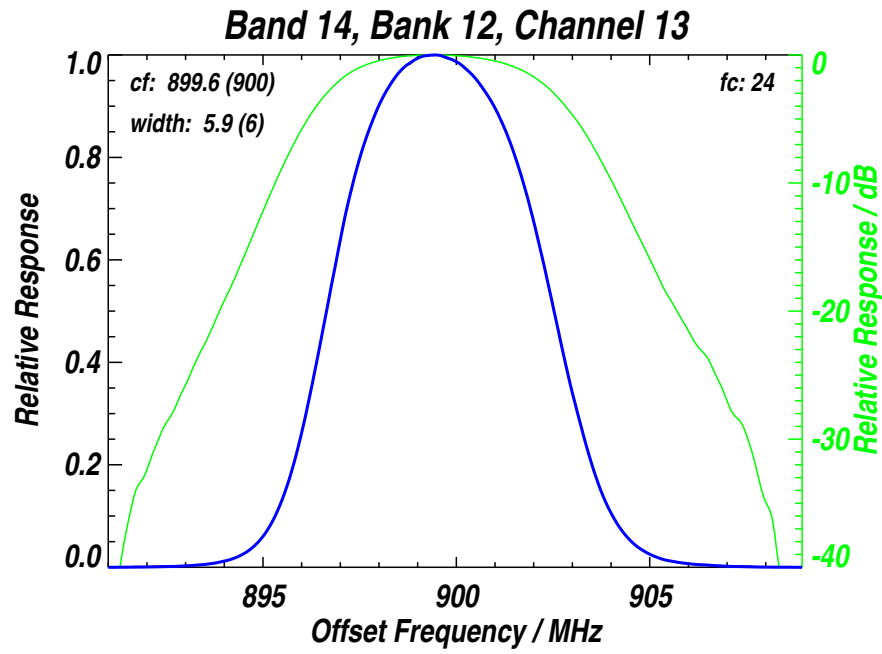


Figure H.415: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 13 to 16. See text for additional details.

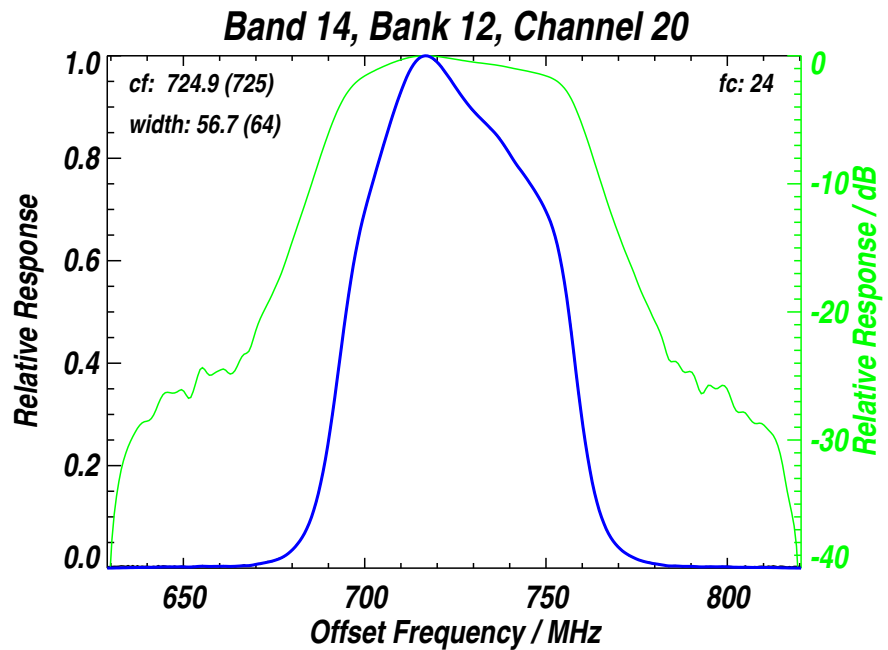
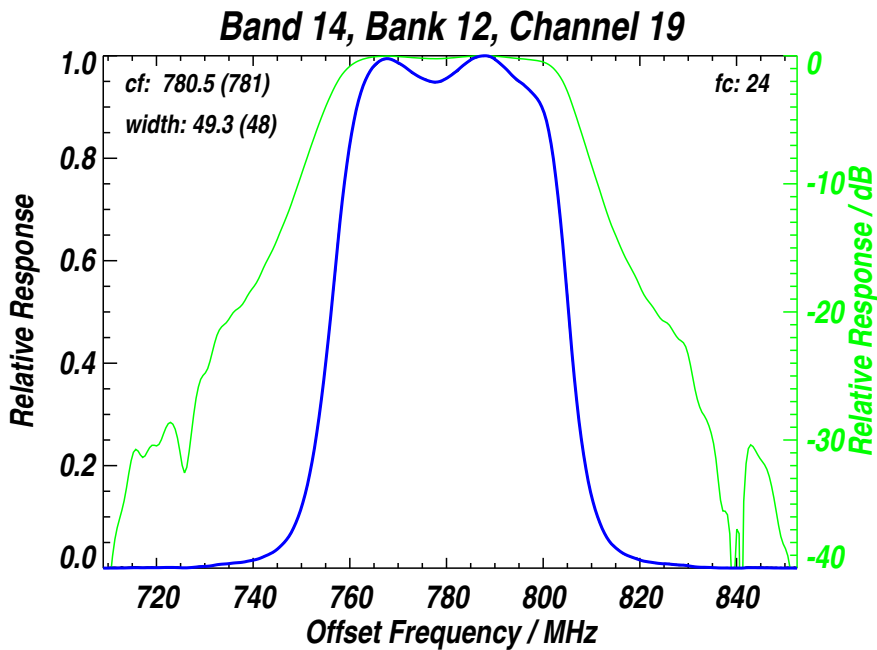
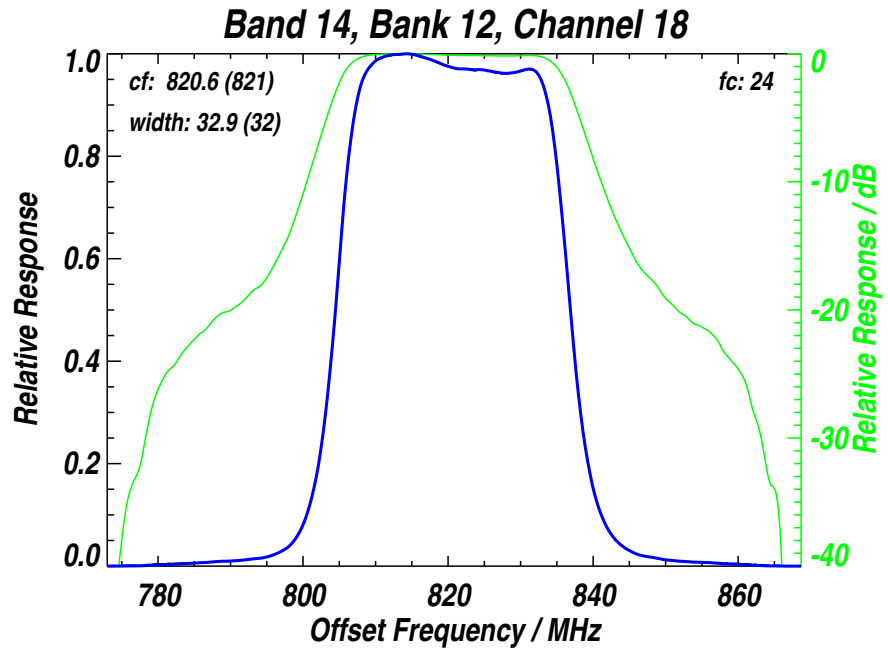
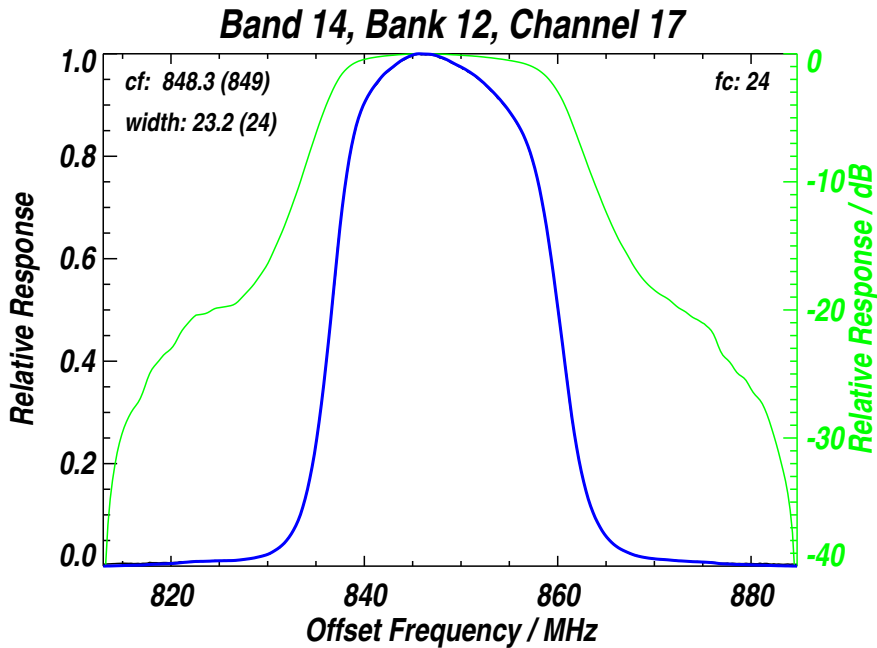


Figure H.416: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 17 to 20. See text for additional details.



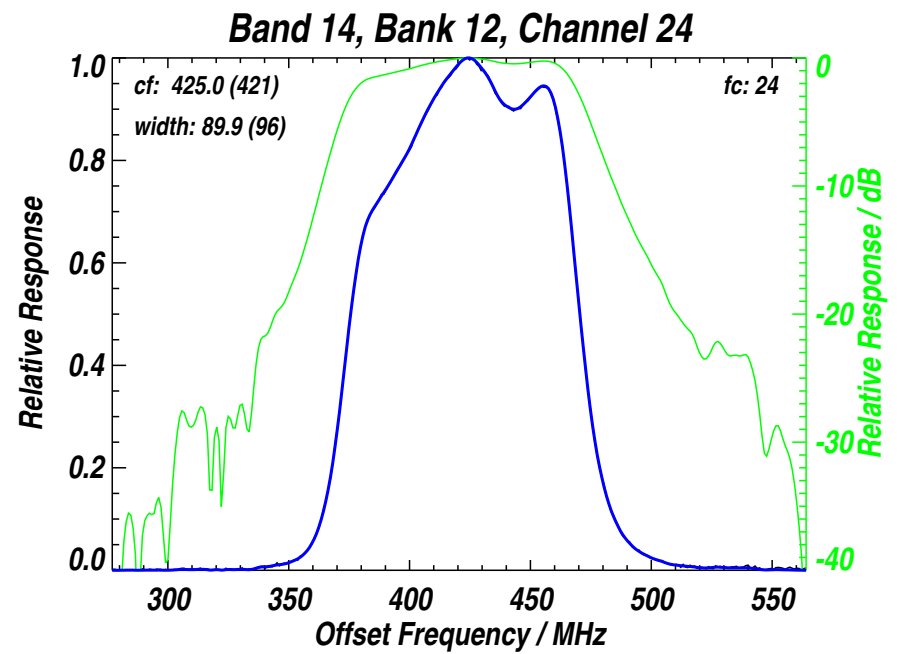
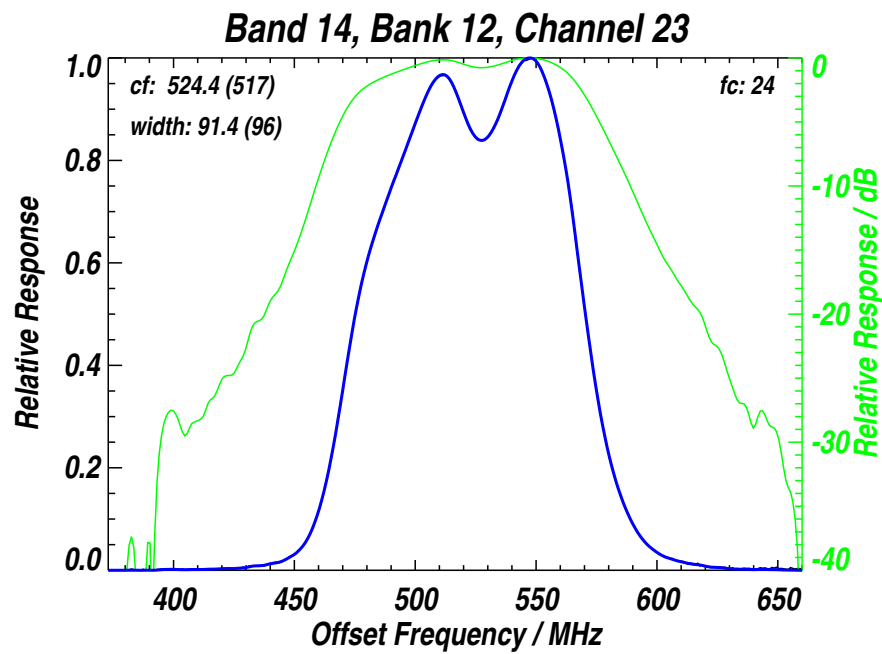
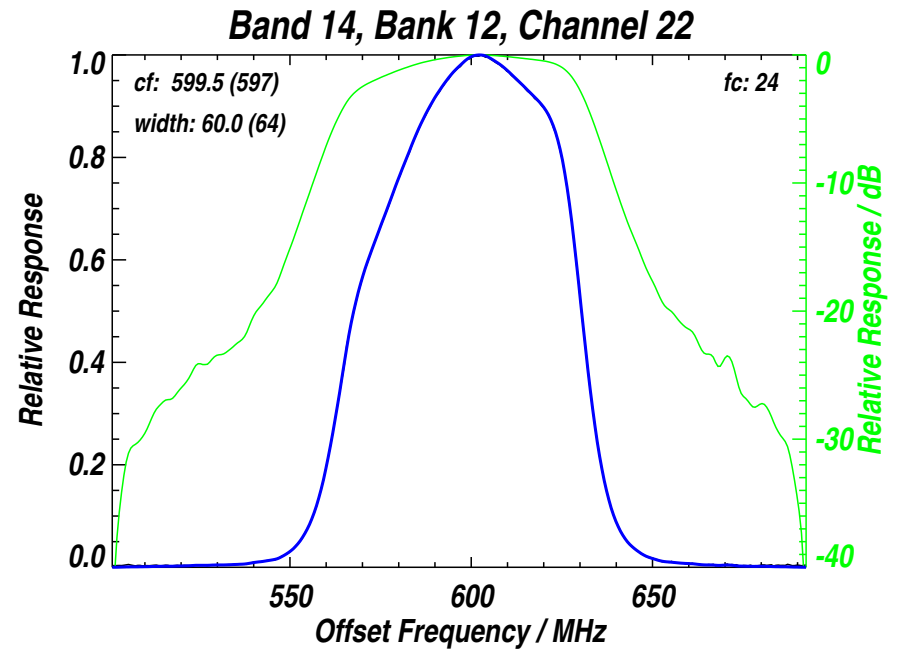
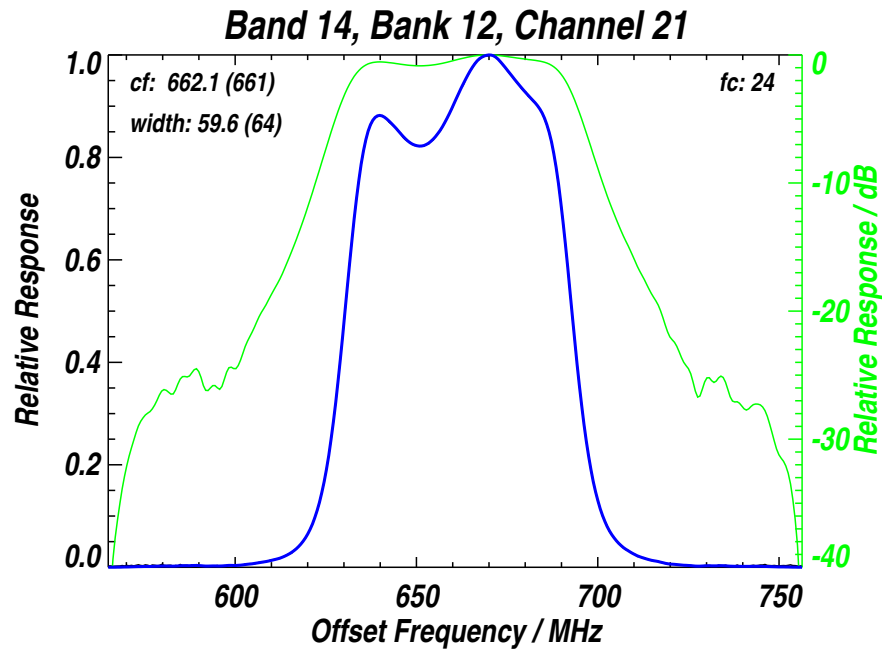
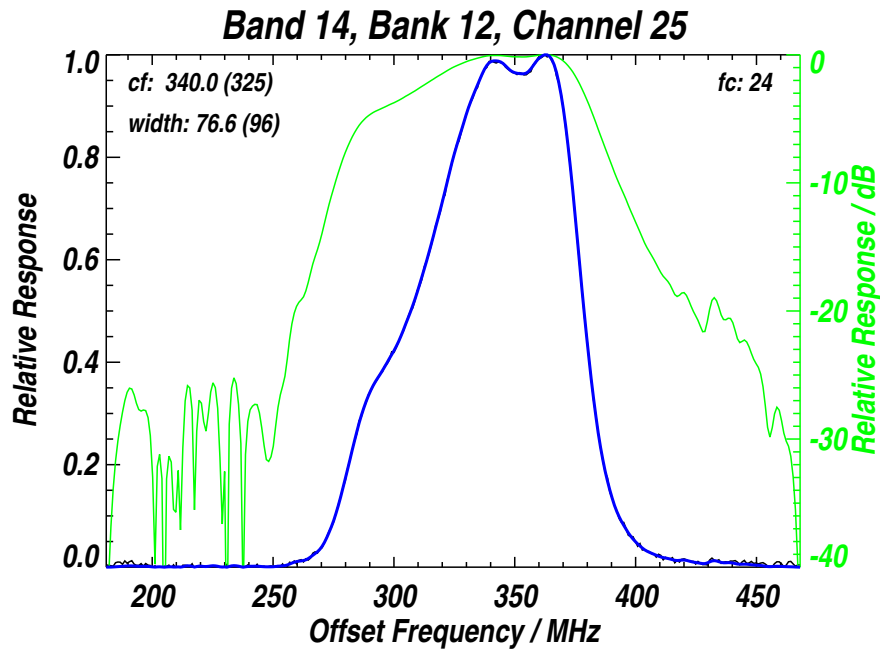


Figure H.417: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channels 21 to 24. See text for additional details.



**Band 14 (usb)**  
**Bank 12**  
**Origin = 659.453999988 GHz**

Figure H.418: Upper sideband front-end sweep data for Band 14 taken via Filterbank 12, channel 25. See text for additional details.

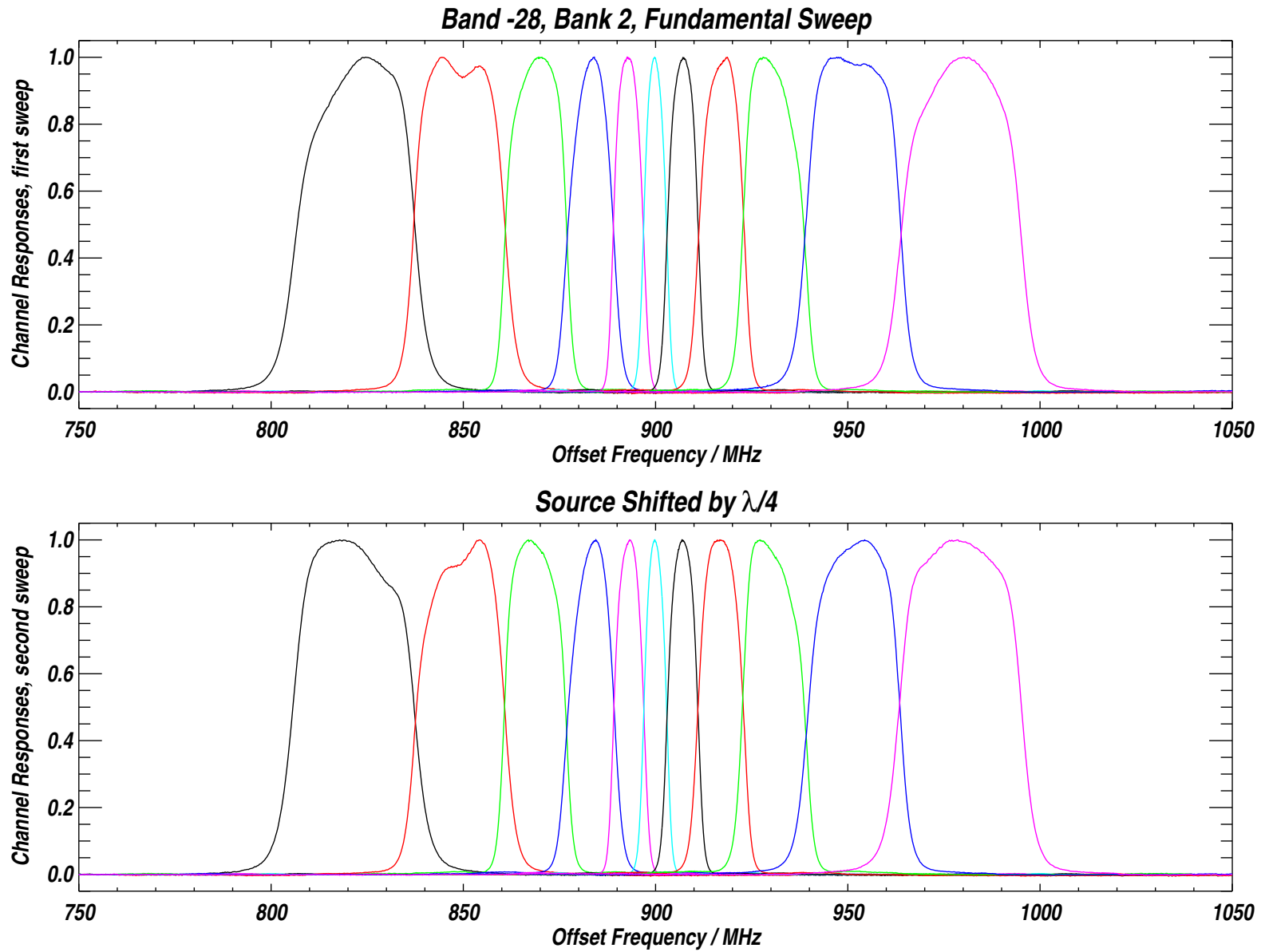


Figure H.419: Lower sideband front-end sweep data for Band 28. See text for additional details.

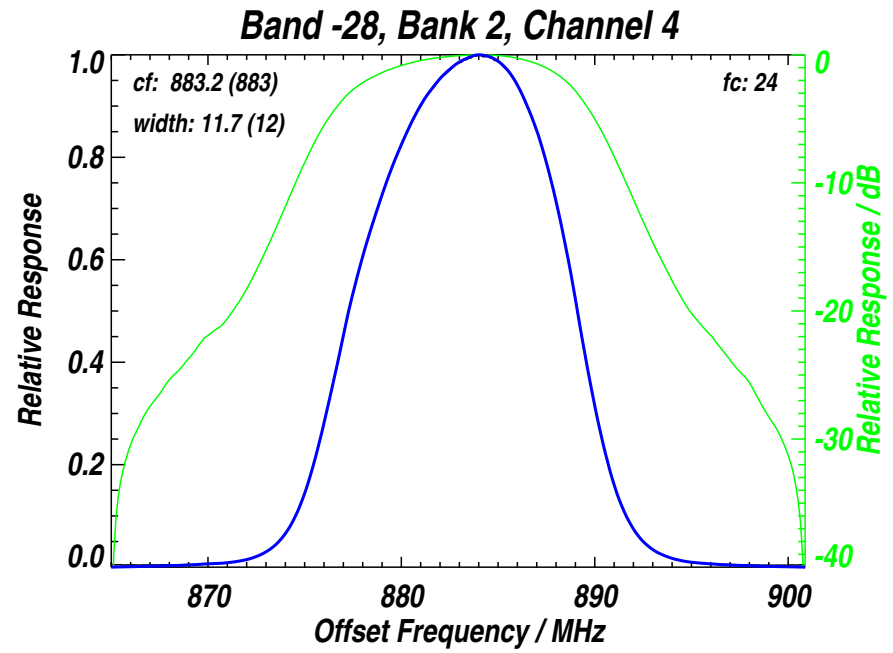
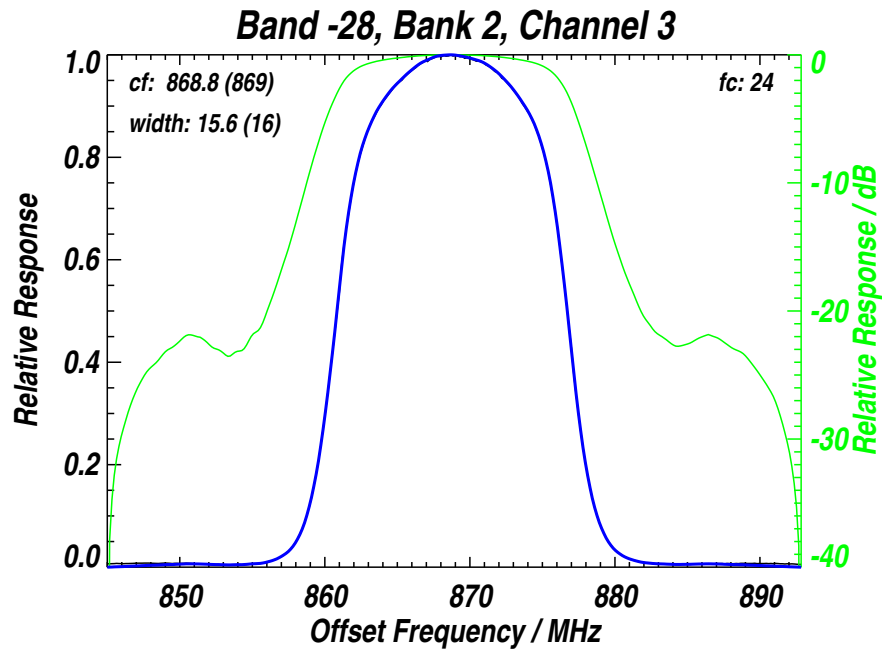
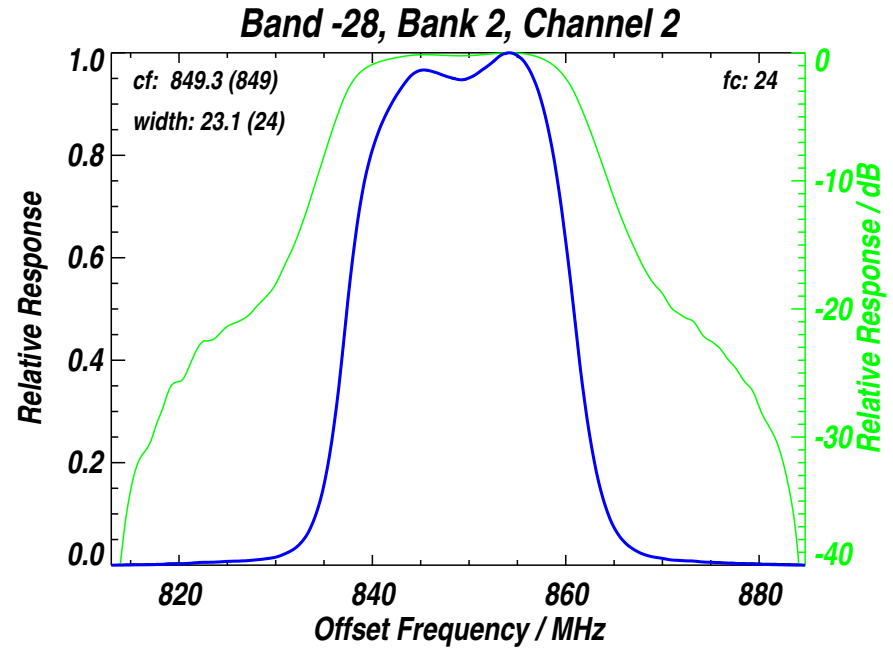
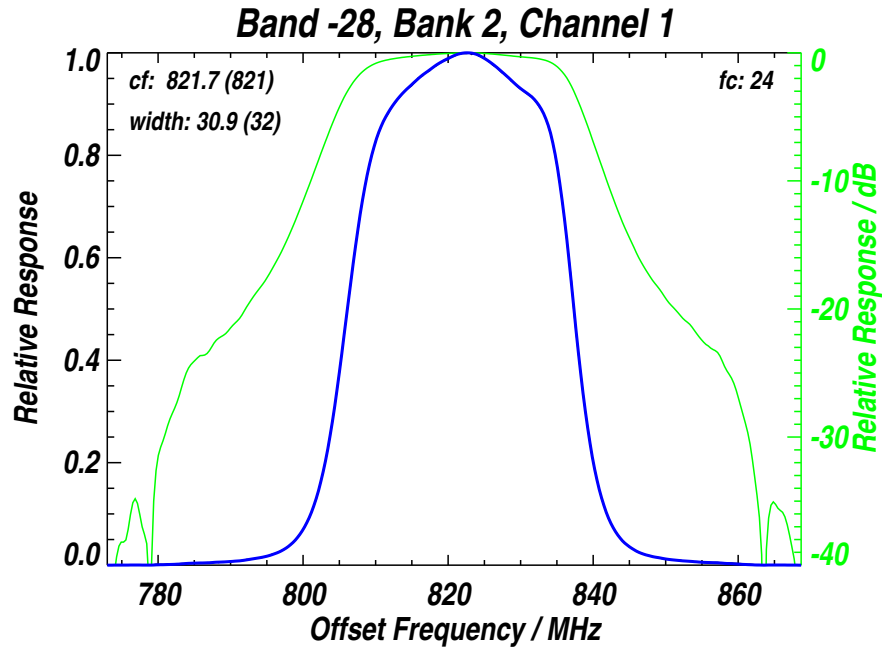


Figure H.420: Lower sideband front-end sweep data for Band 28, channels 1 to 4. See text for additional details.

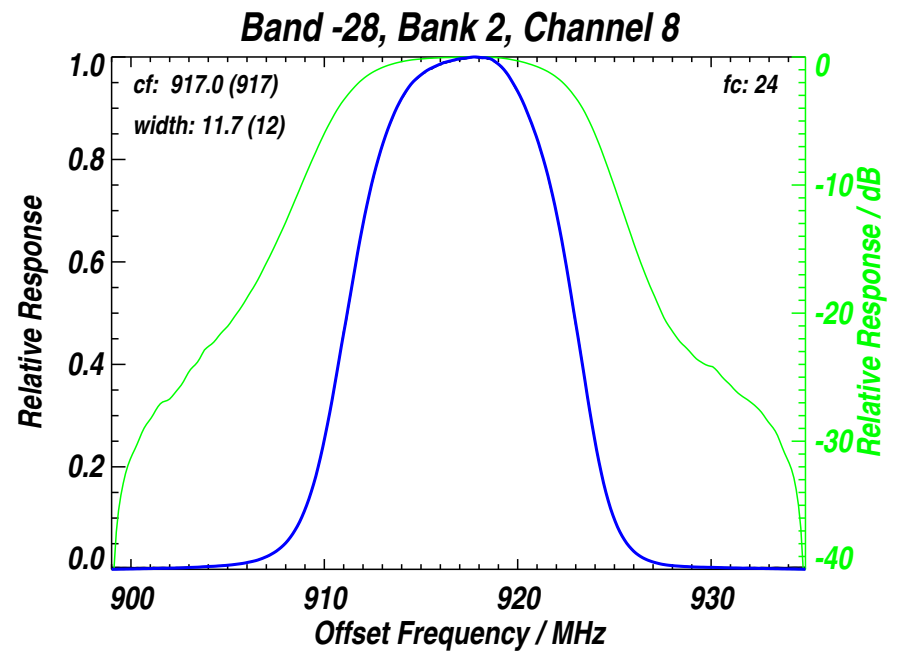
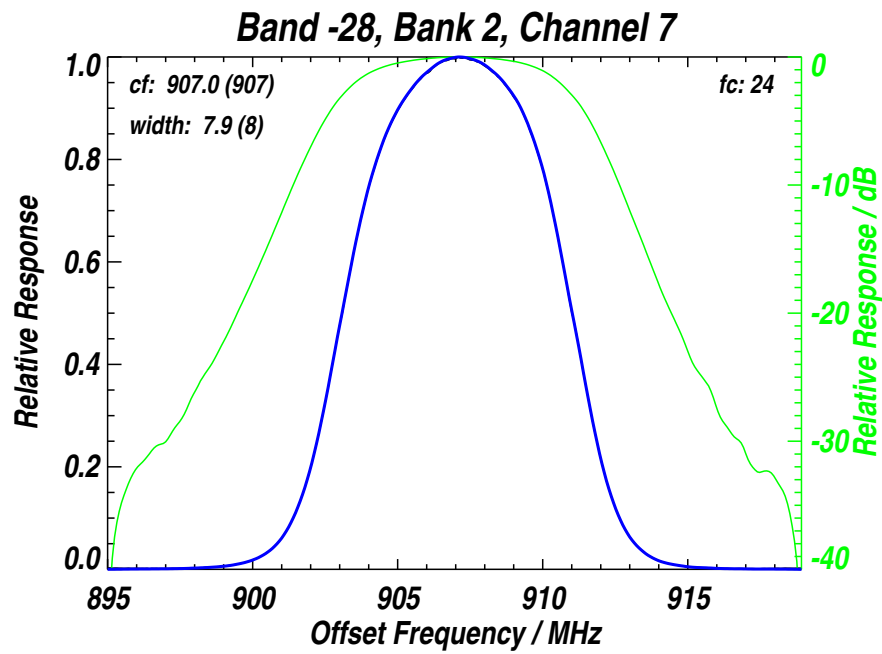
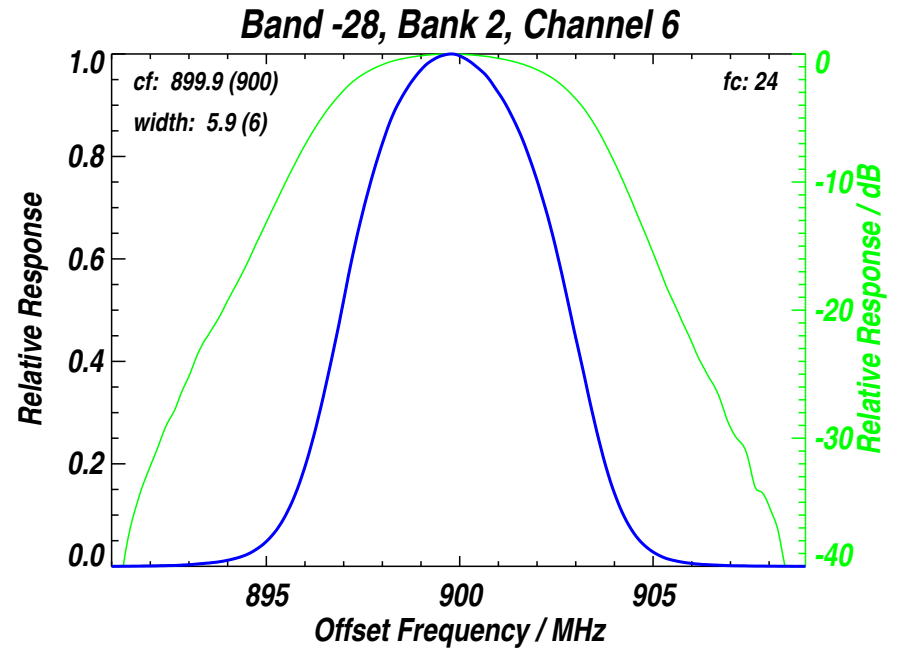
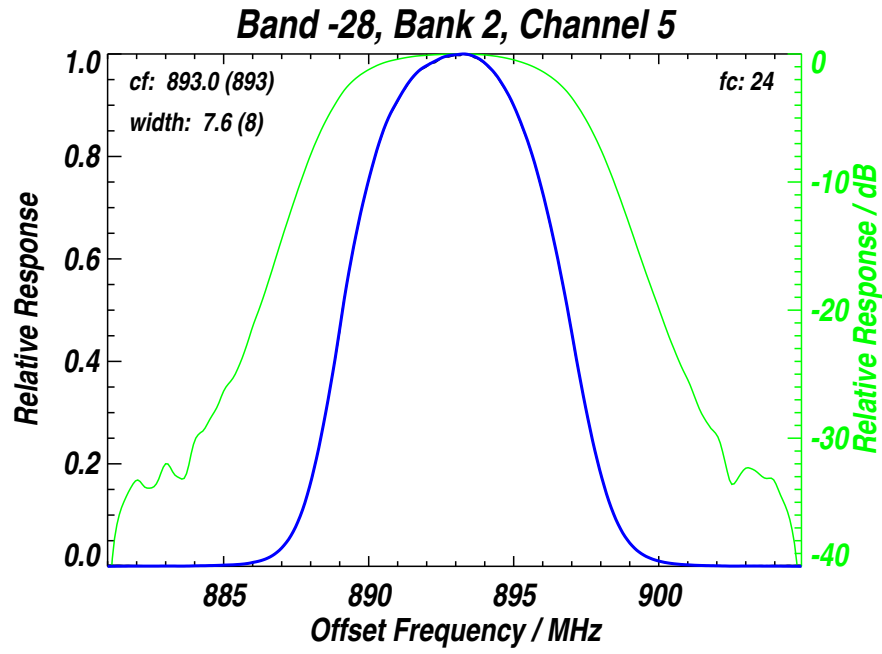
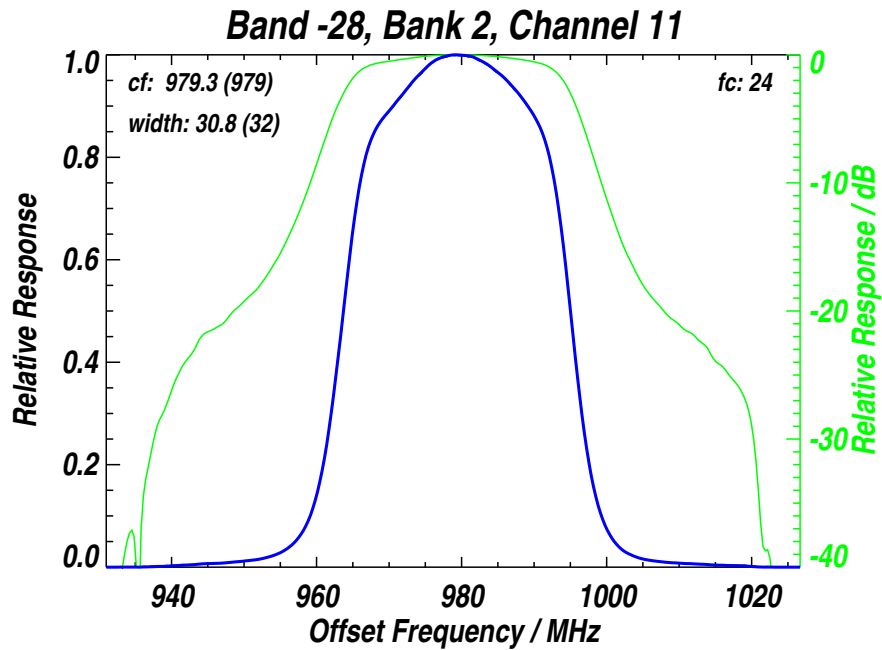
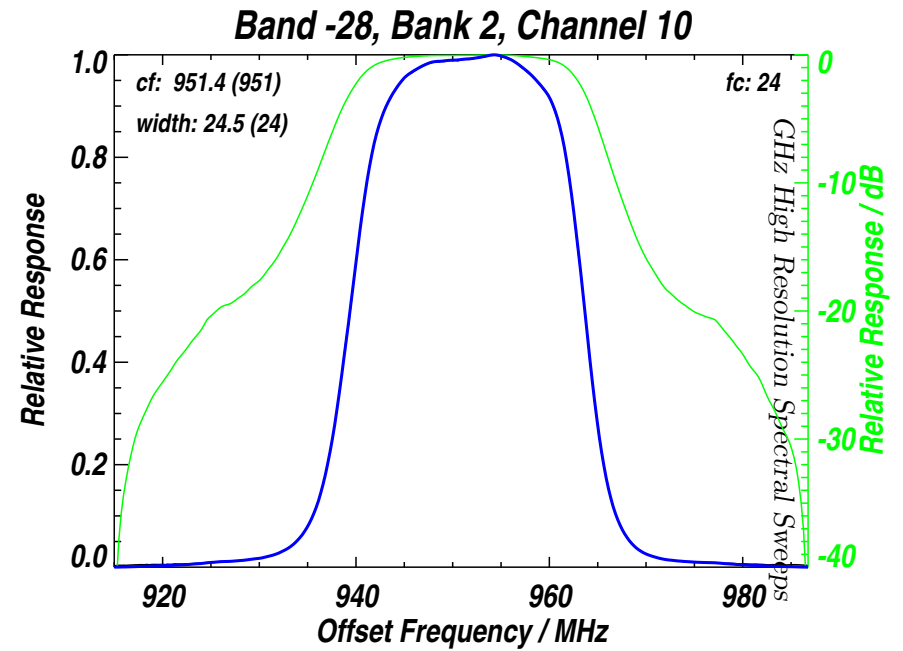
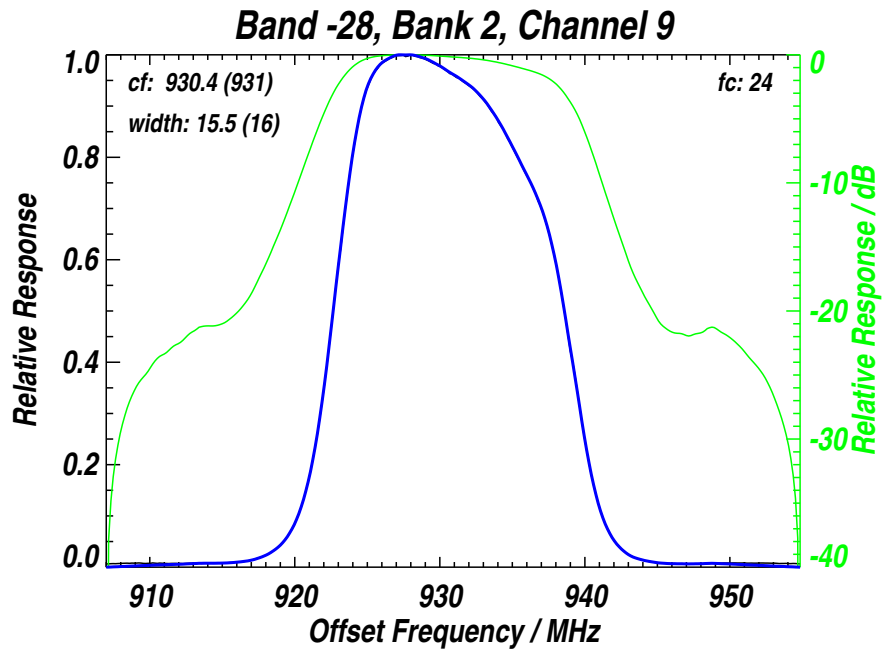


Figure H.421: Lower sideband front-end sweep data for Band 28, channels 5 to 8. See text for additional details.



**Band 28 (lsb)**  
**Bank 2**  
**Origin = 635.123499990 GHz**

Figure H.422: Lower sideband front-end sweep data for Band 28, channels 9 to 11. See text for additional details.

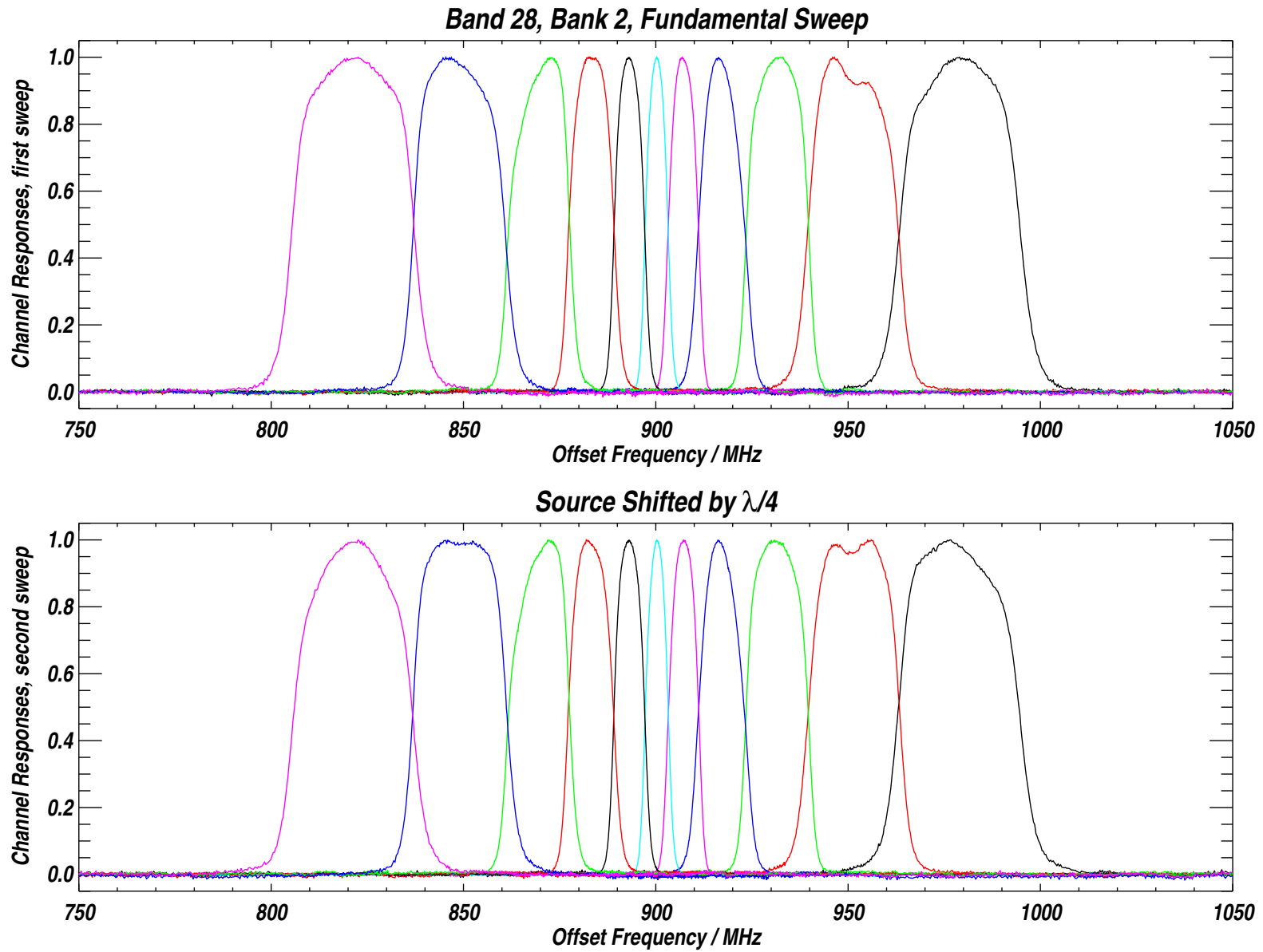


Figure H.423: Upper sideband front-end sweep data for Band 28. See text for additional details.

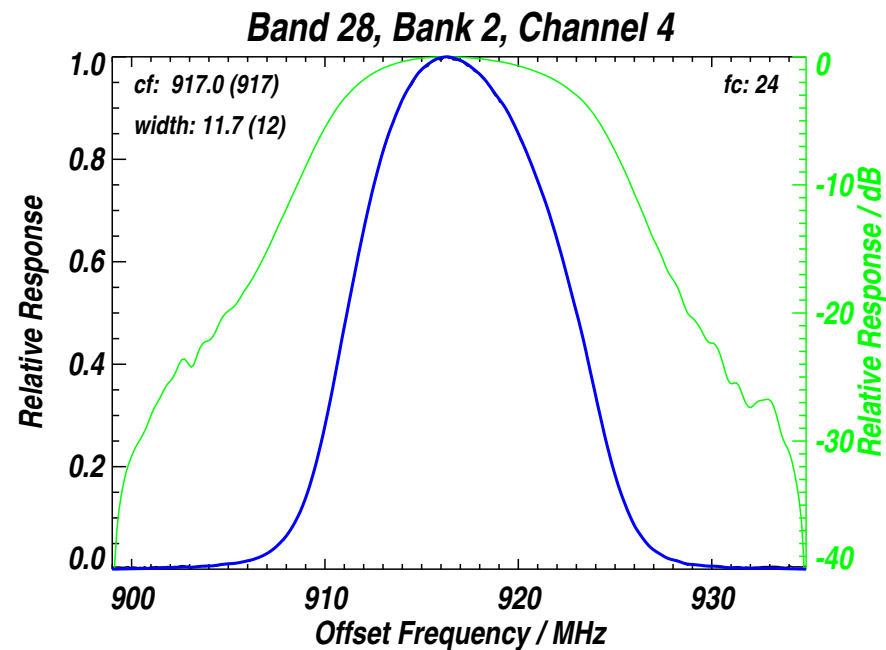
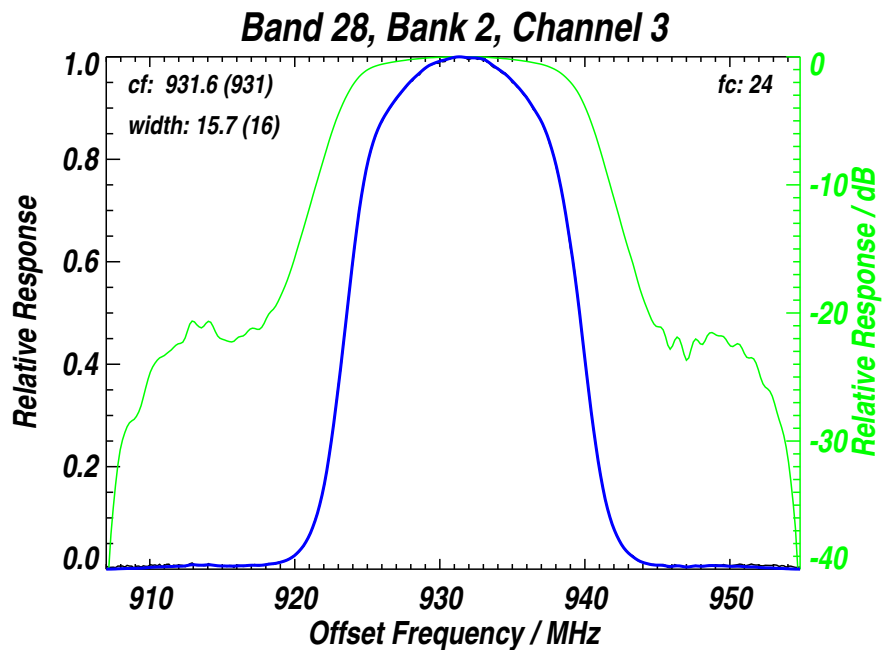
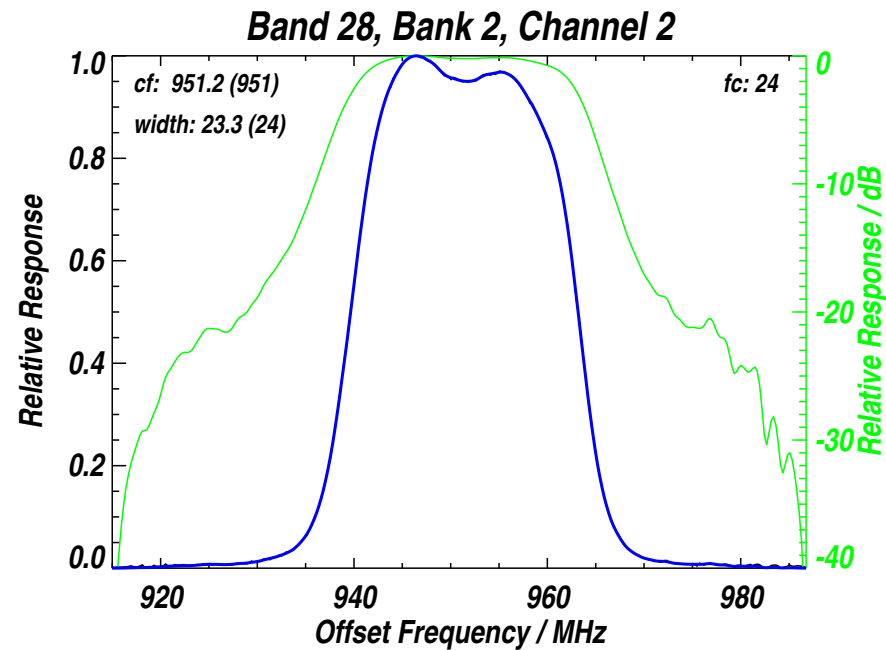
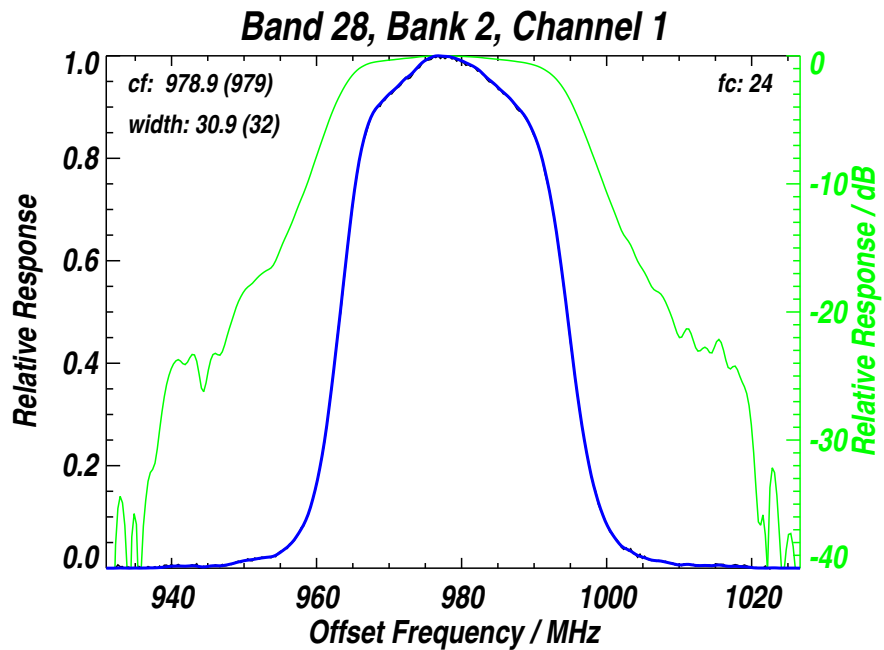


Figure H.424: Upper sideband front-end sweep data for Band 28, channels 1 to 4. See text for additional details.



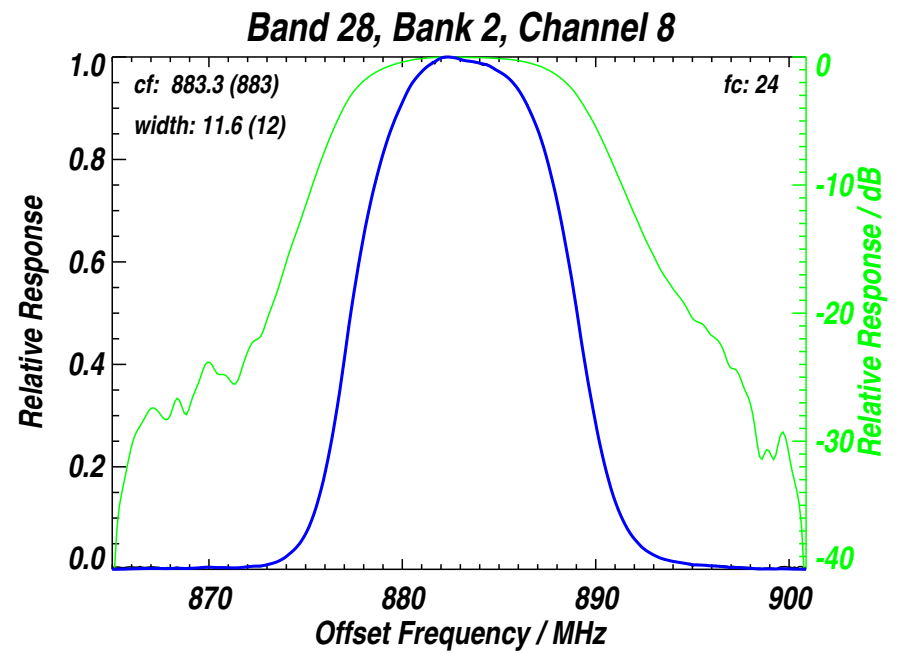
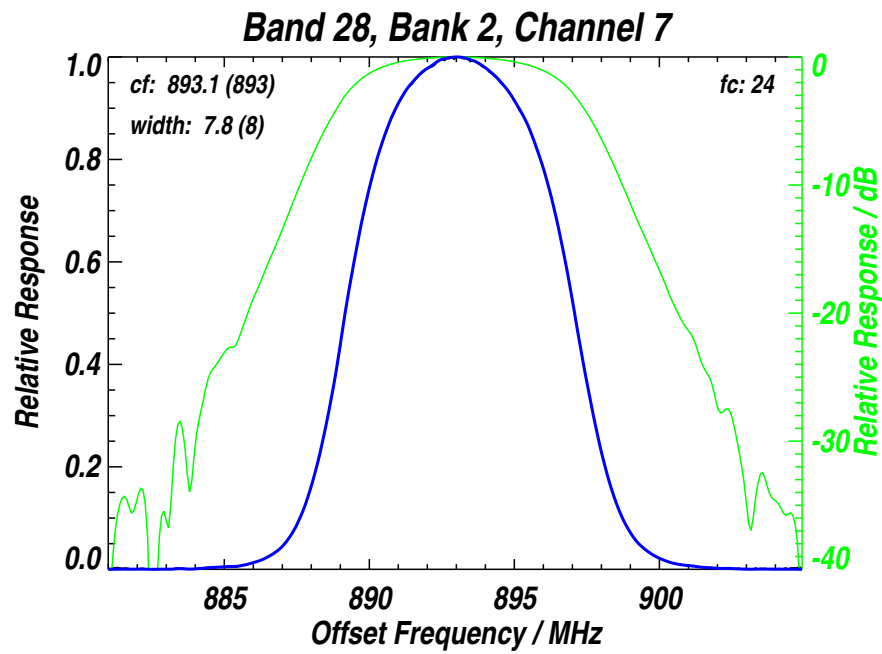
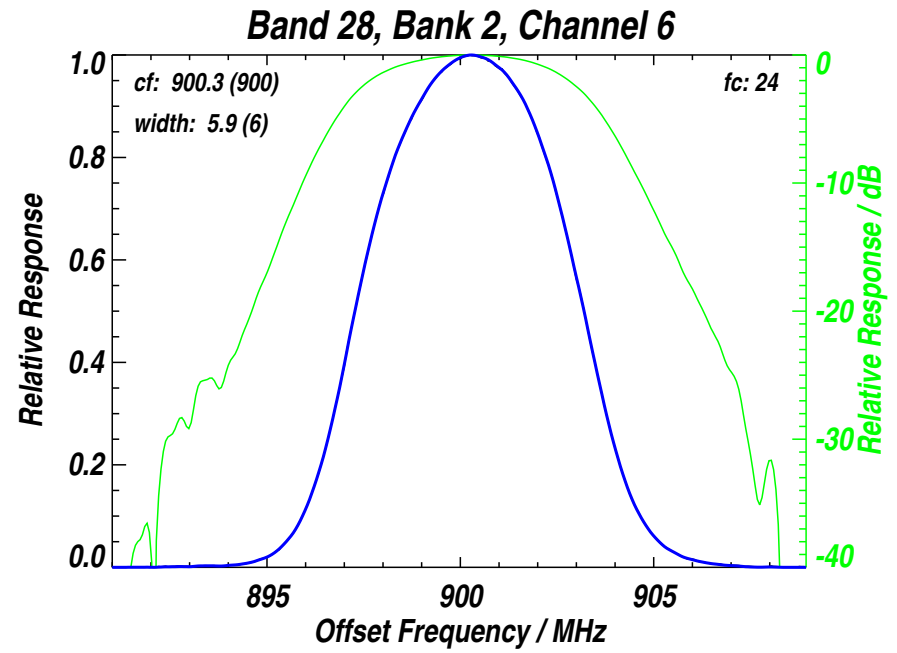
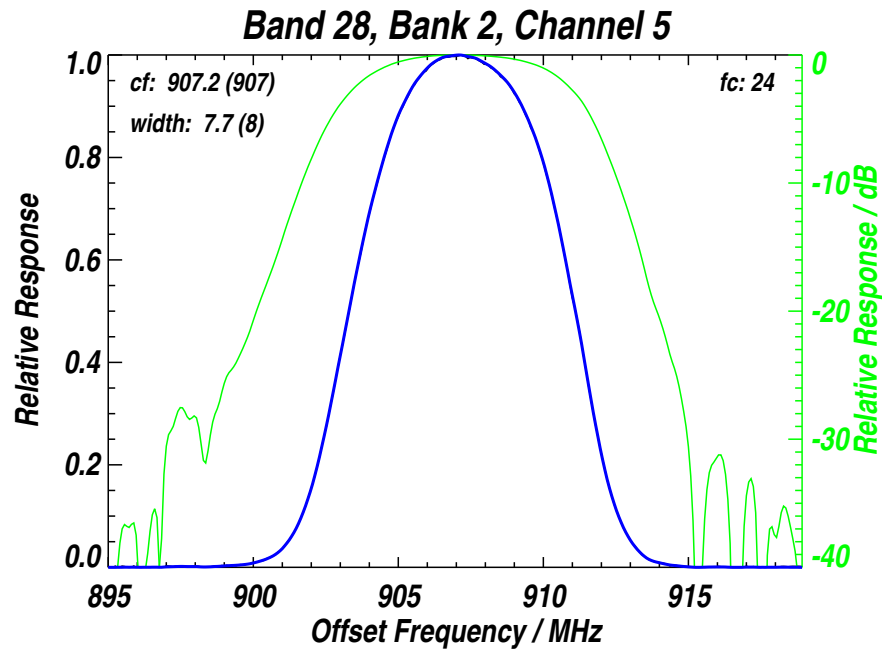
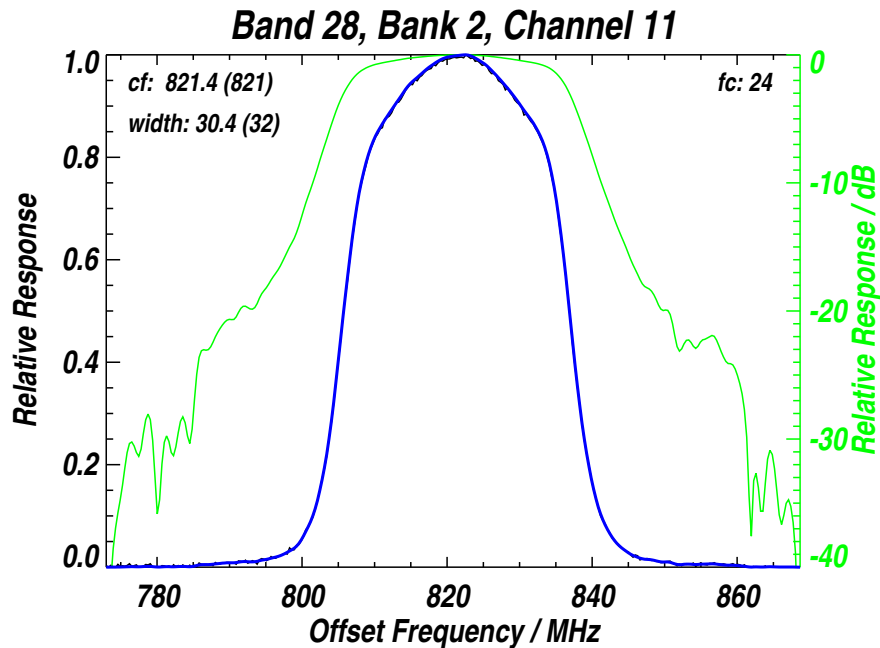
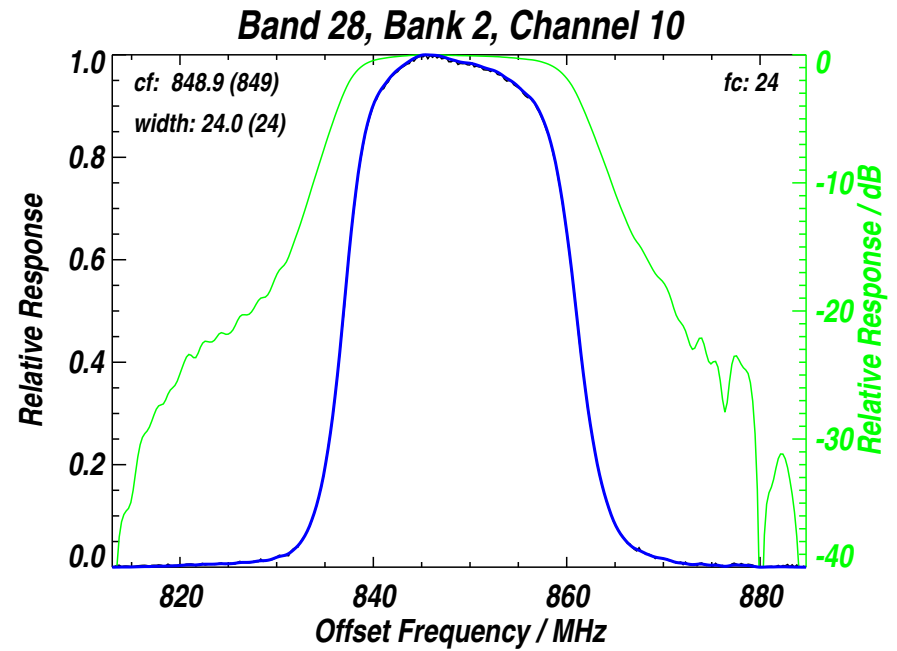
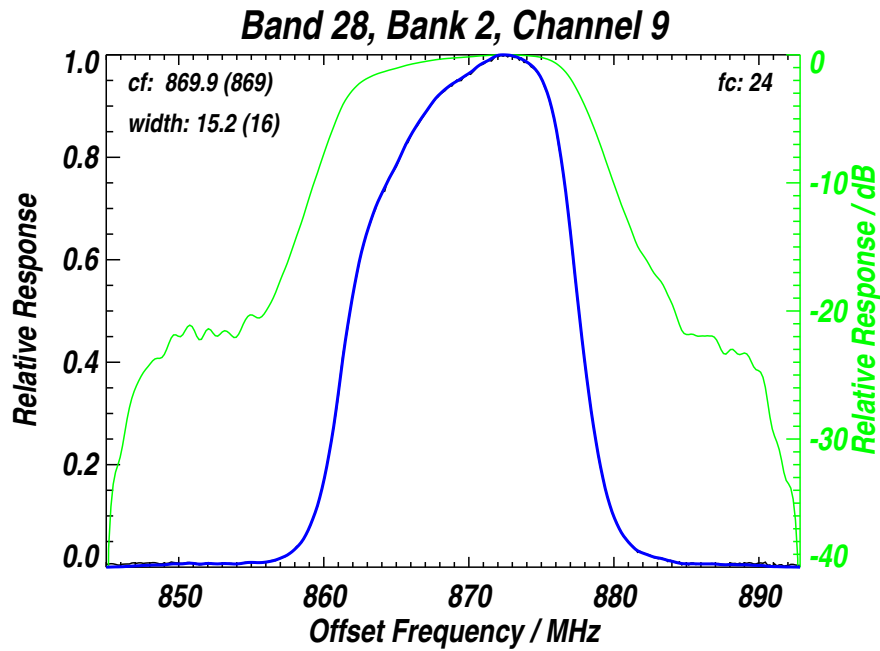


Figure H.425: Upper sideband front-end sweep data for Band 28, channels 5 to 8. See text for additional details.



**Band 28 (usb)**  
**Bank 2**  
**Origin = 648.816500010 GHz**

Figure H.426: Upper sideband front-end sweep data for Band 28, channels 9 to 11. See text for additional details.

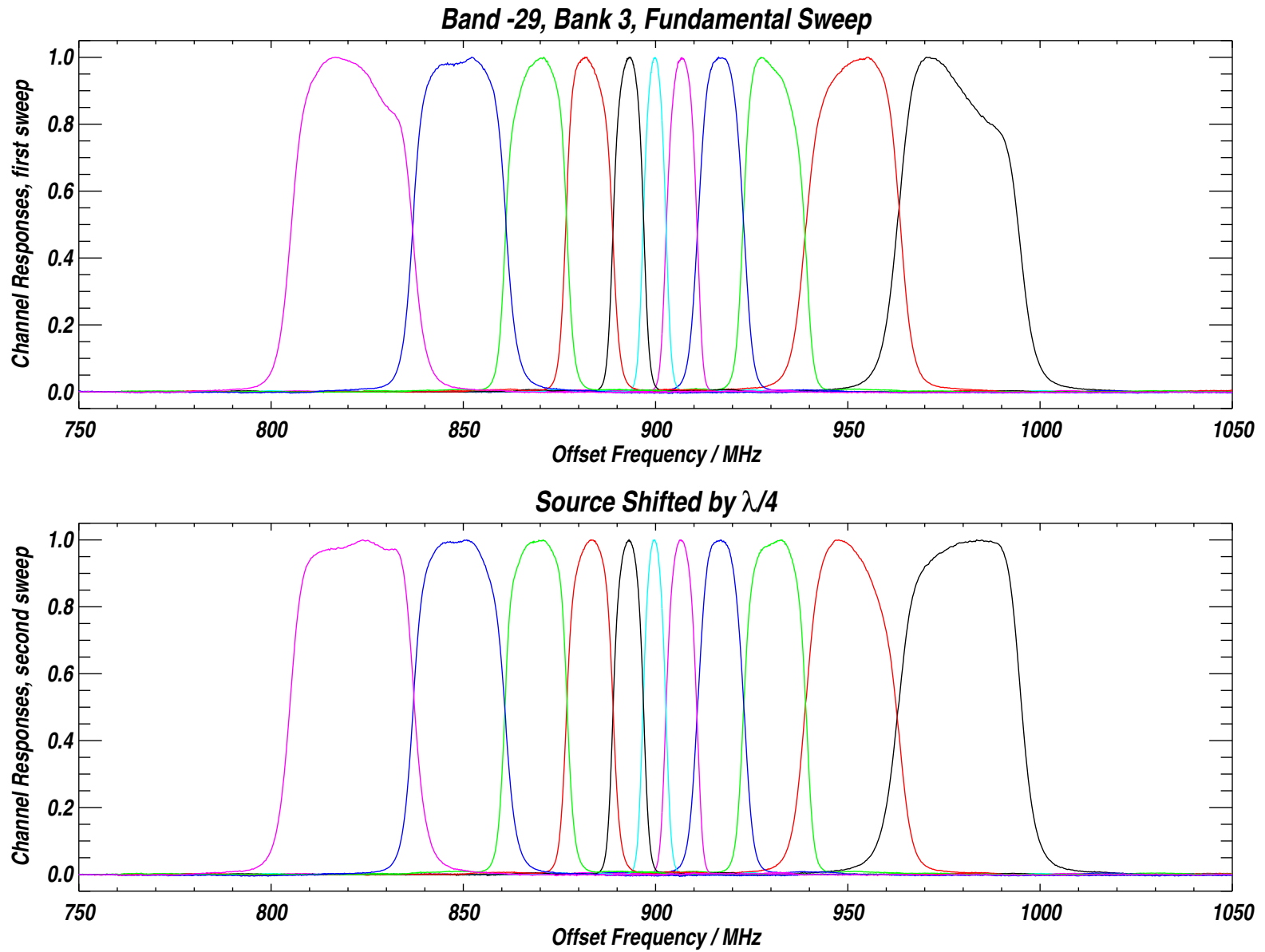


Figure H.427: Lower sideband front-end sweep data for Band 29. See text for additional details.

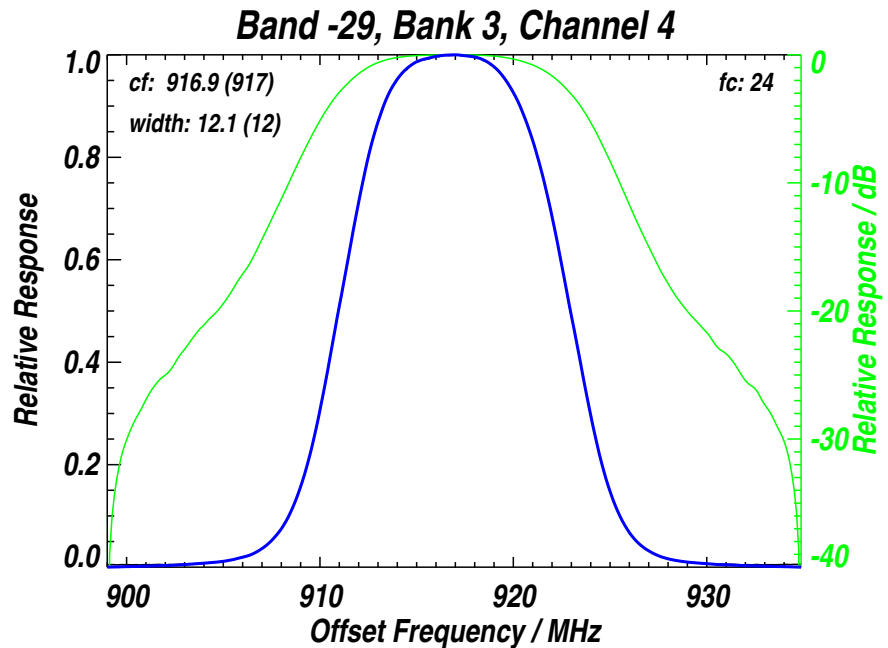
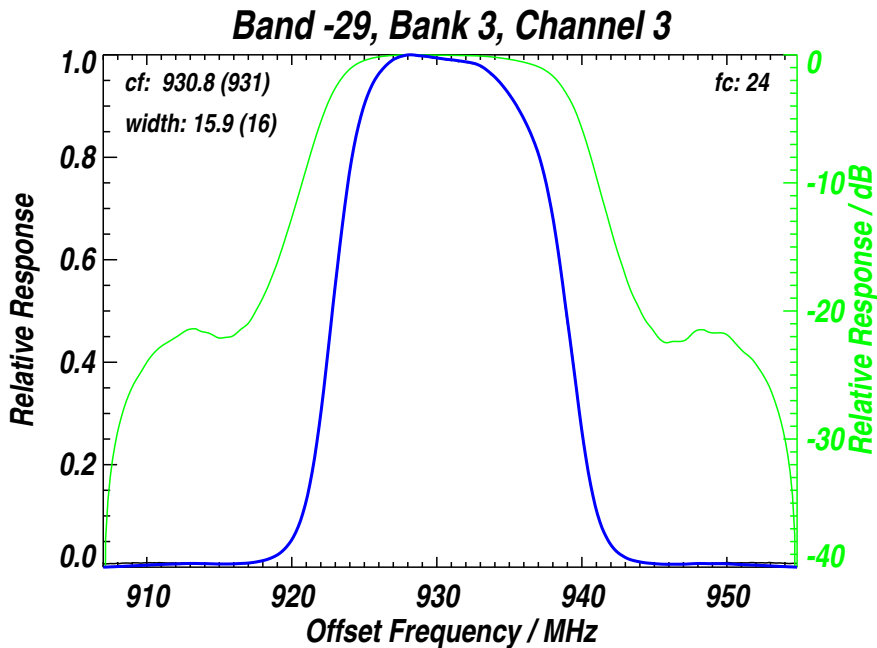
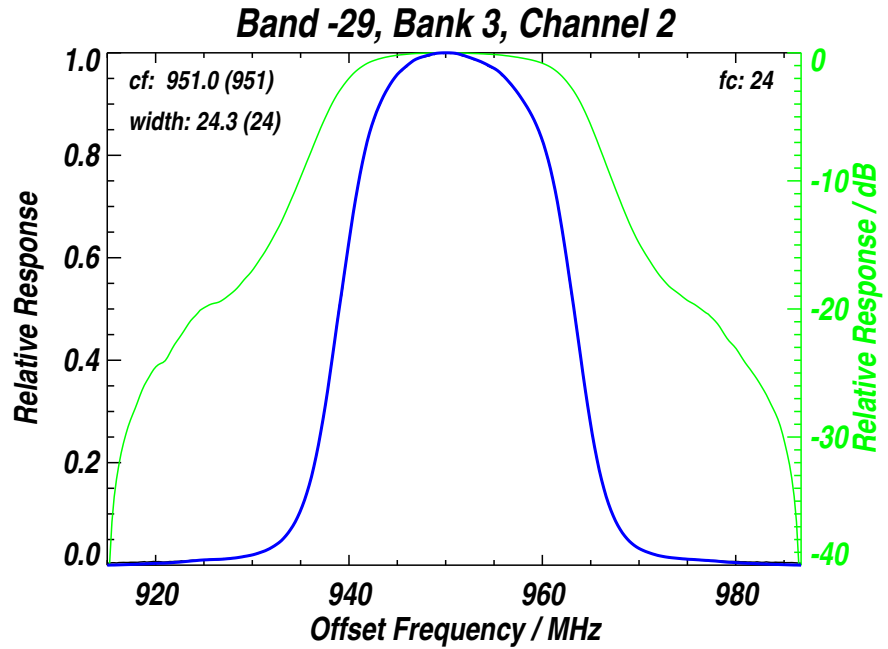
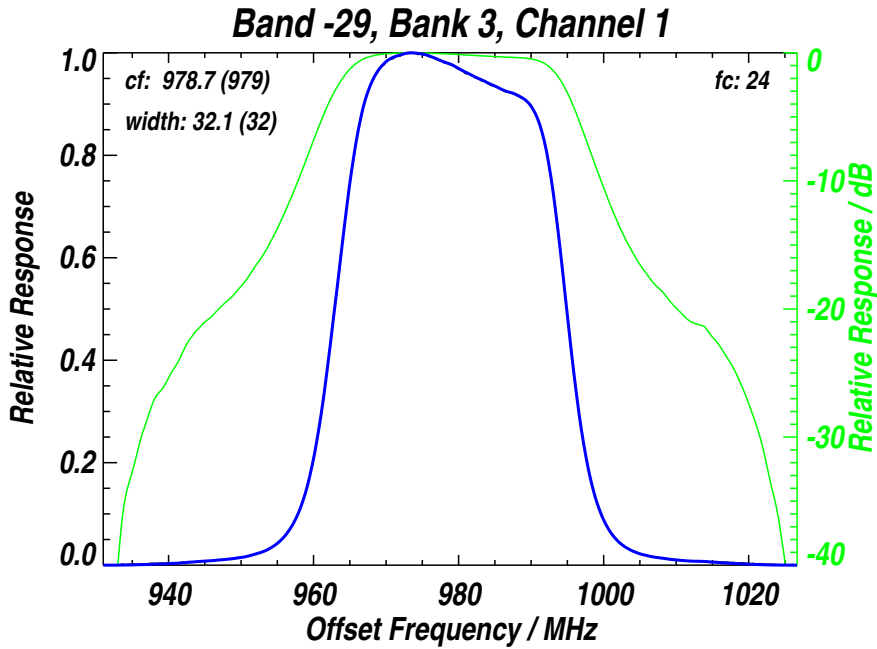


Figure H.428: Lower sideband front-end sweep data for Band 29, channels 1 to 4. See text for additional details.

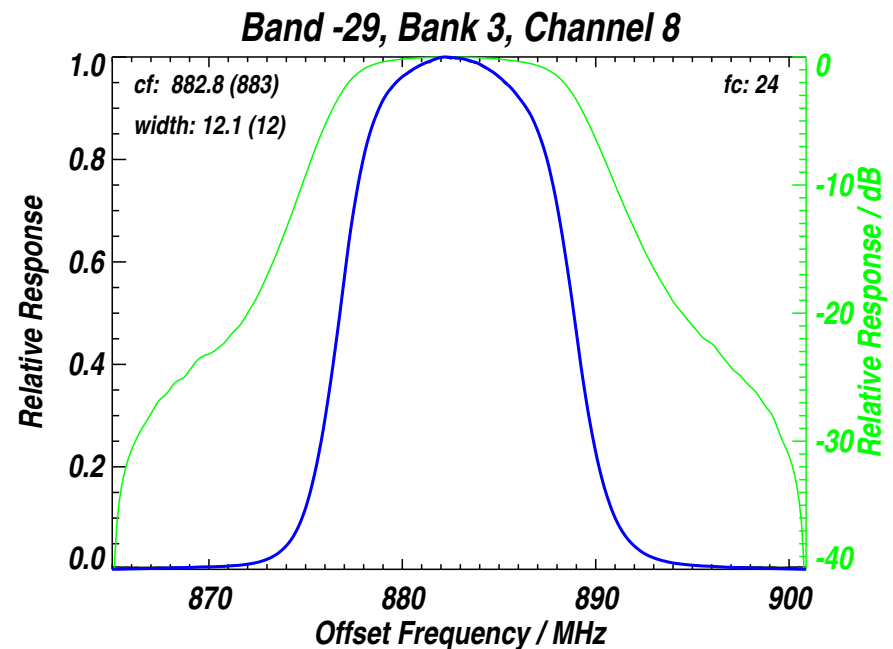
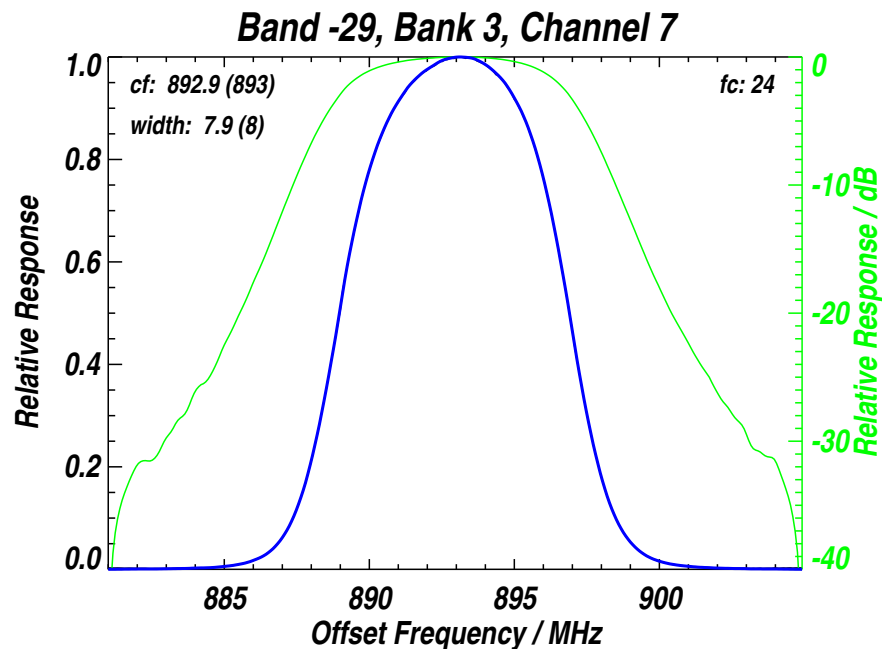
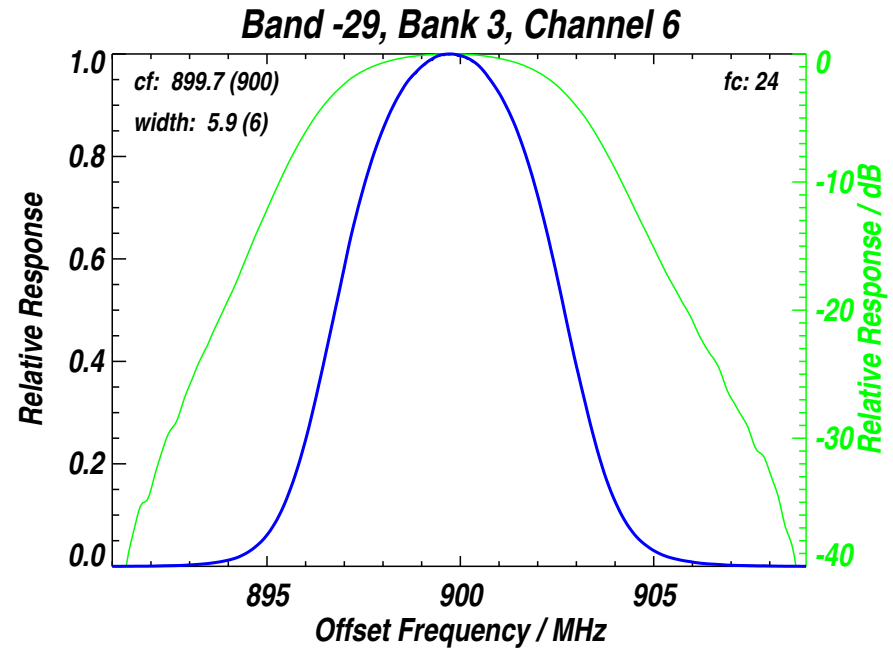
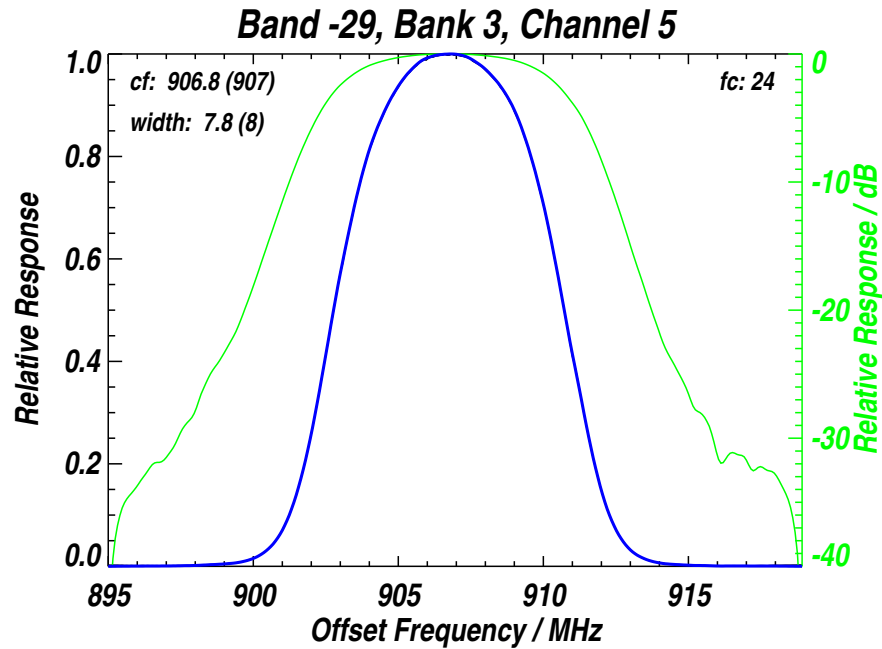
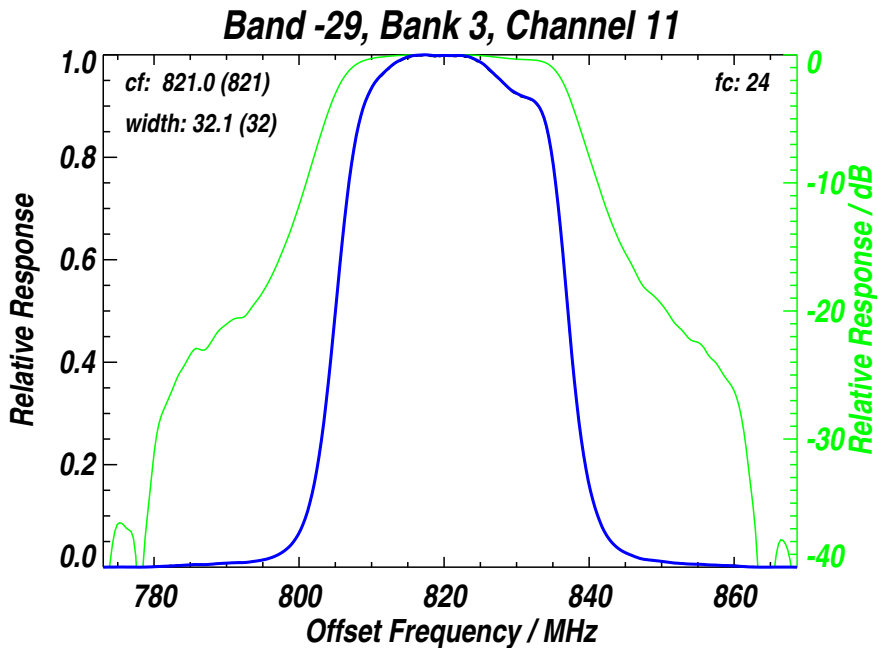
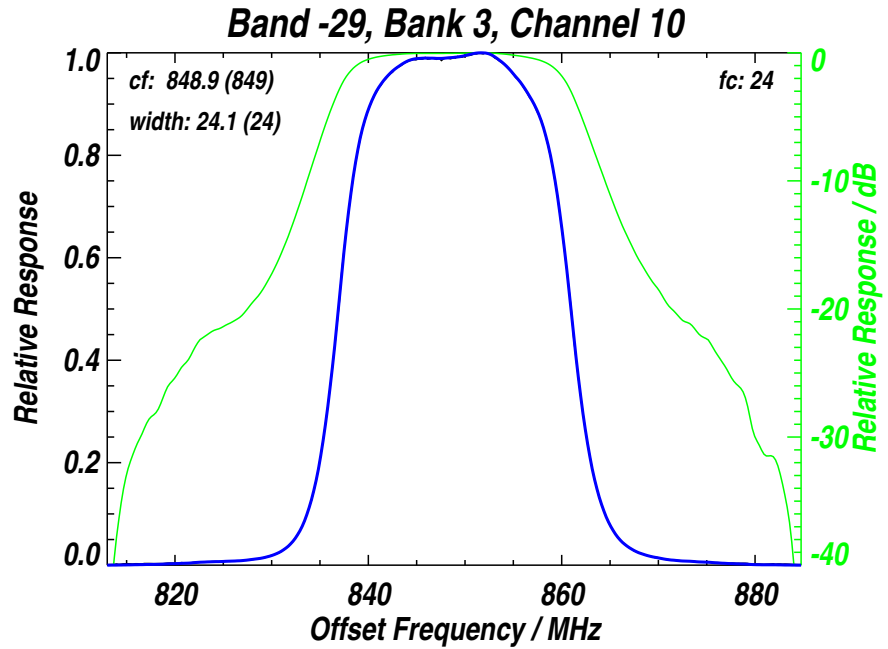
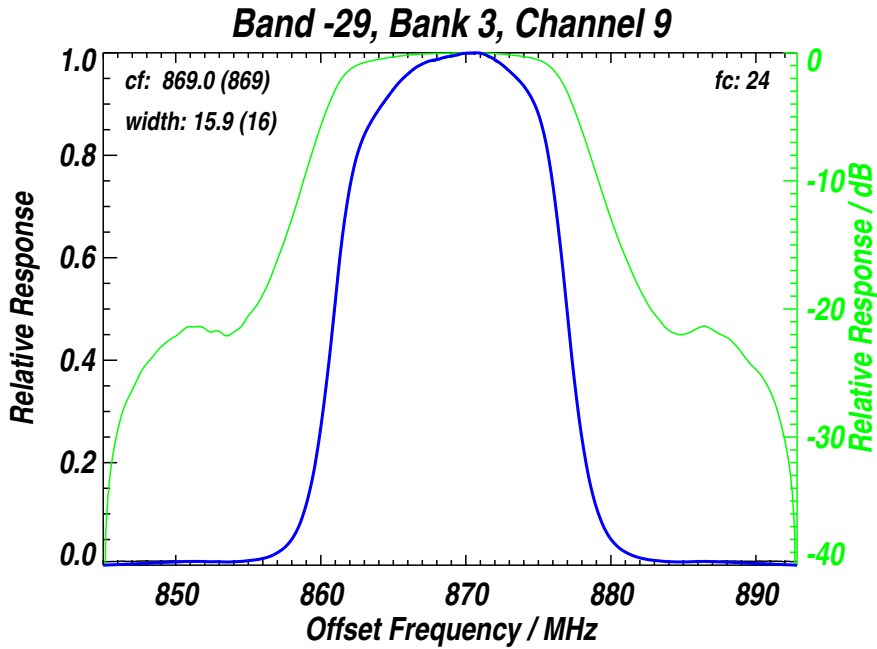


Figure H.429: Lower sideband front-end sweep data for Band 29, channels 5 to 8. See text for additional details.



**Band 29 (lsb)**  
**Bank 3**  
**Origin = 634.984049994 GHz**

Figure H.430: Lower sideband front-end sweep data for Band 29, channels 9 to 11. See text for additional details.

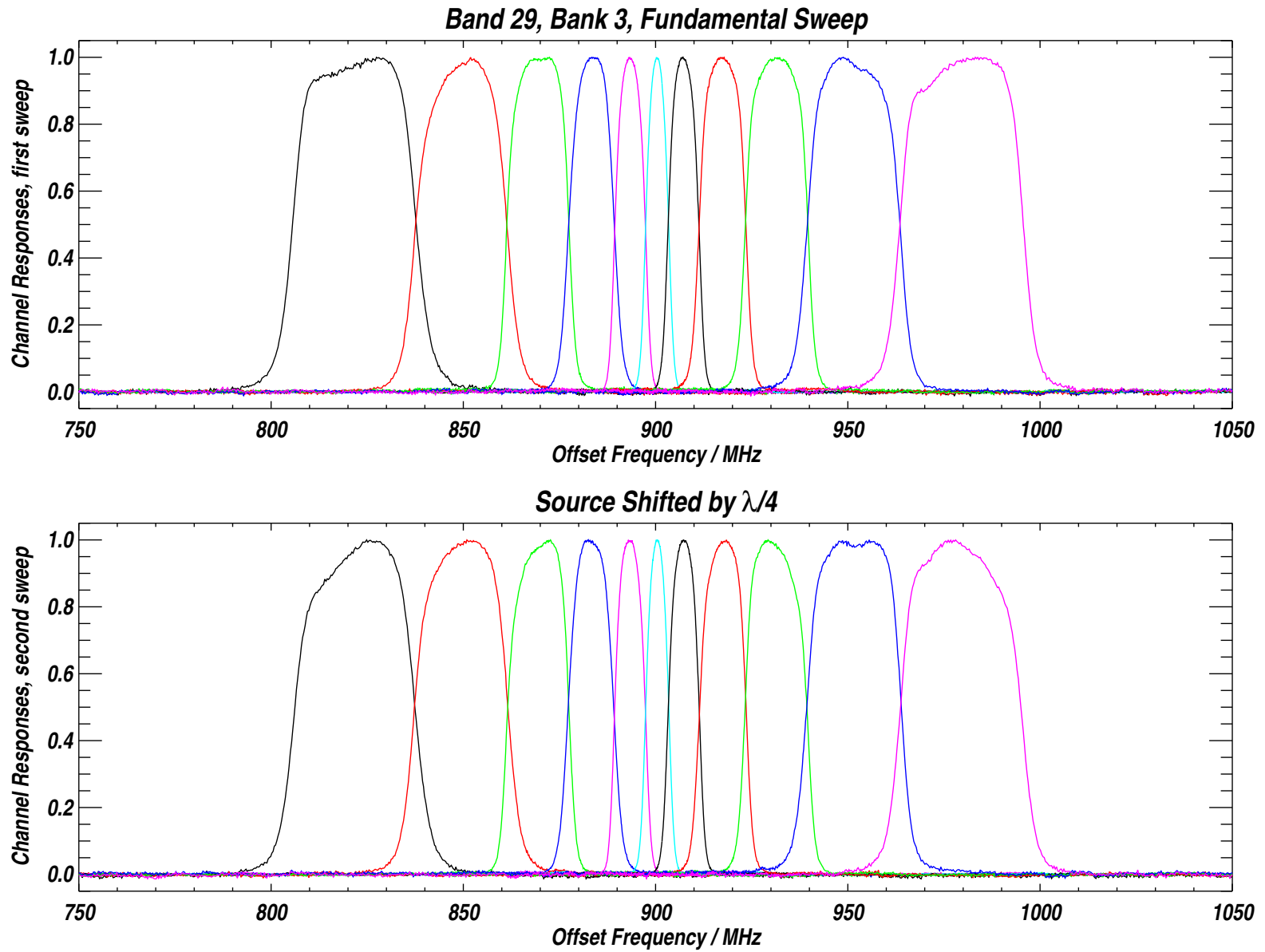


Figure H.431: Upper sideband front-end sweep data for Band 29. See text for additional details.

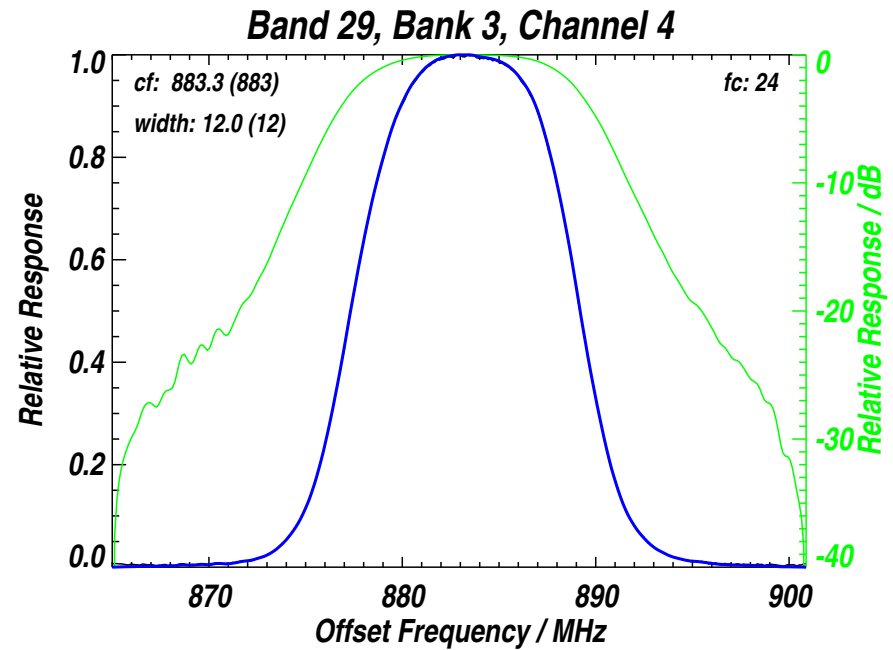
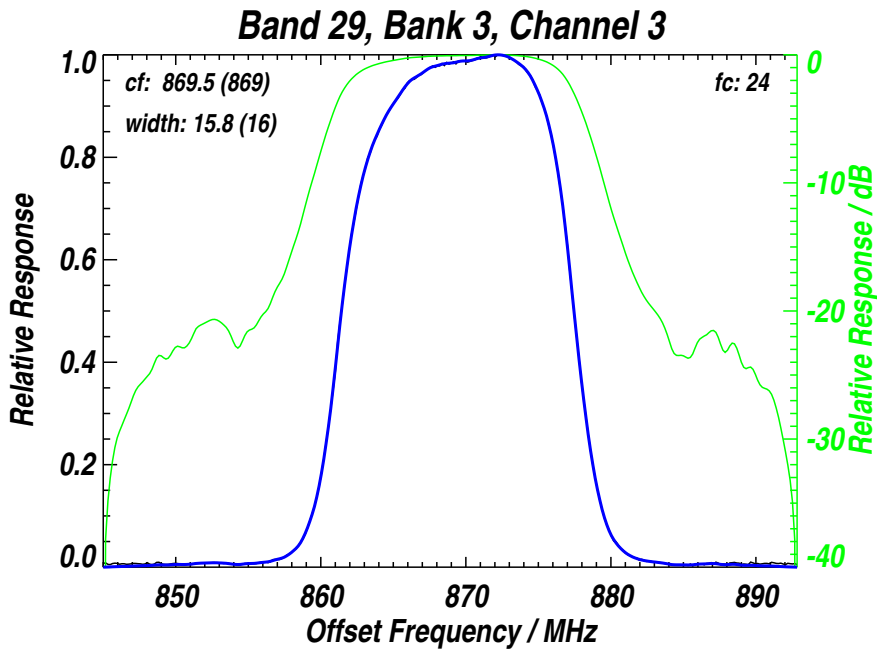
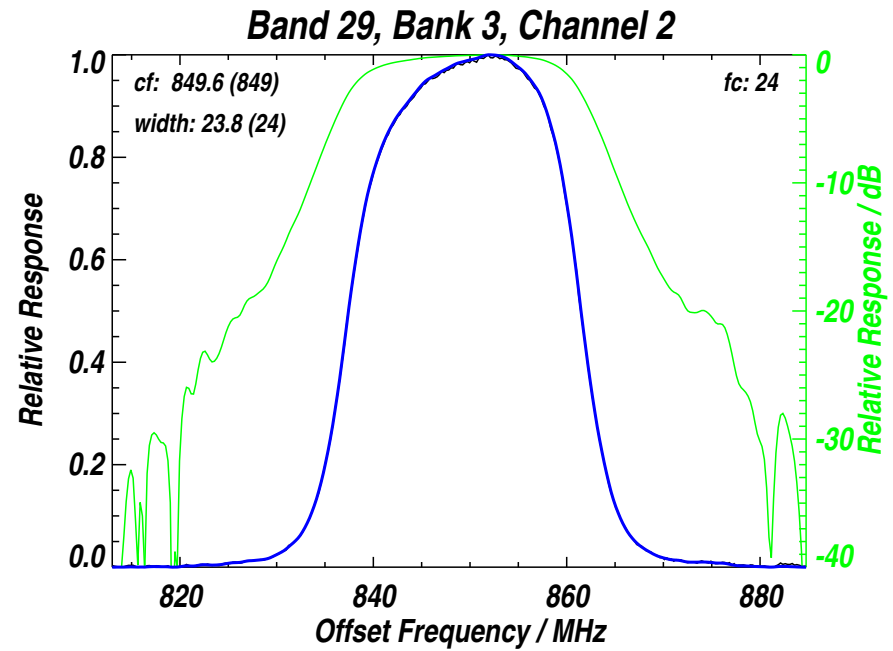
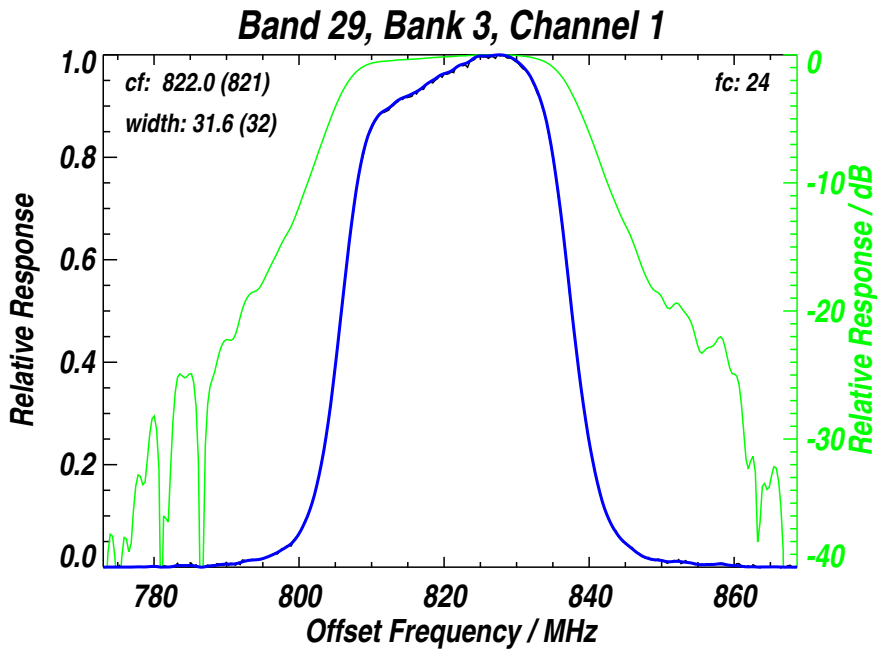


Figure H.432: Upper sideband front-end sweep data for Band 29, channels 1 to 4. See text for additional details.



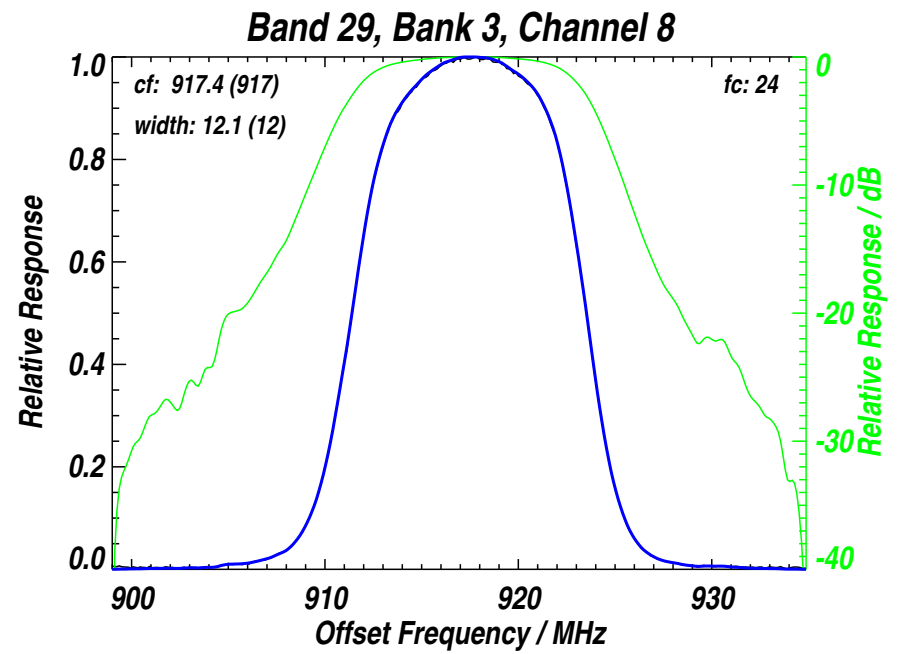
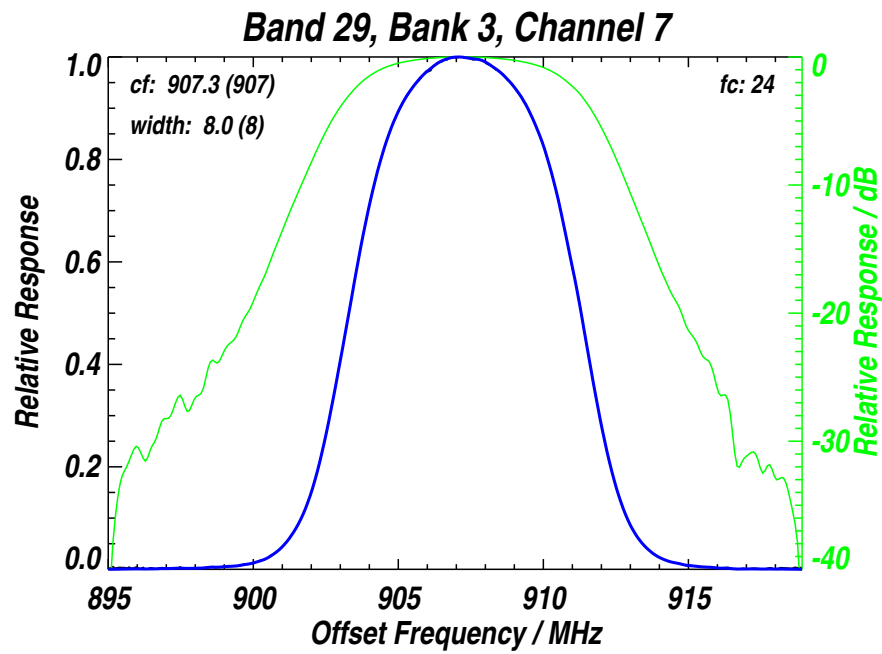
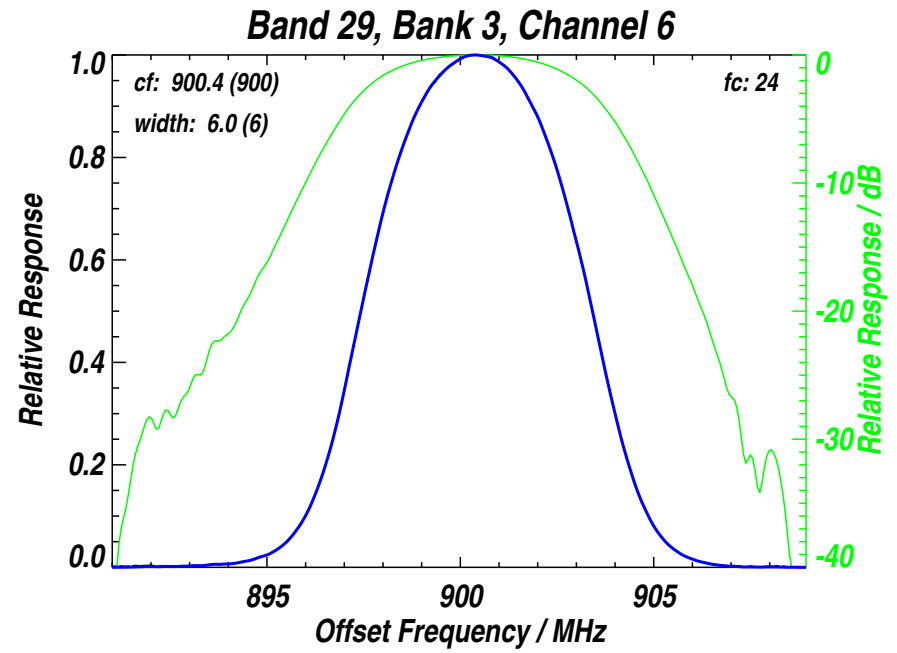
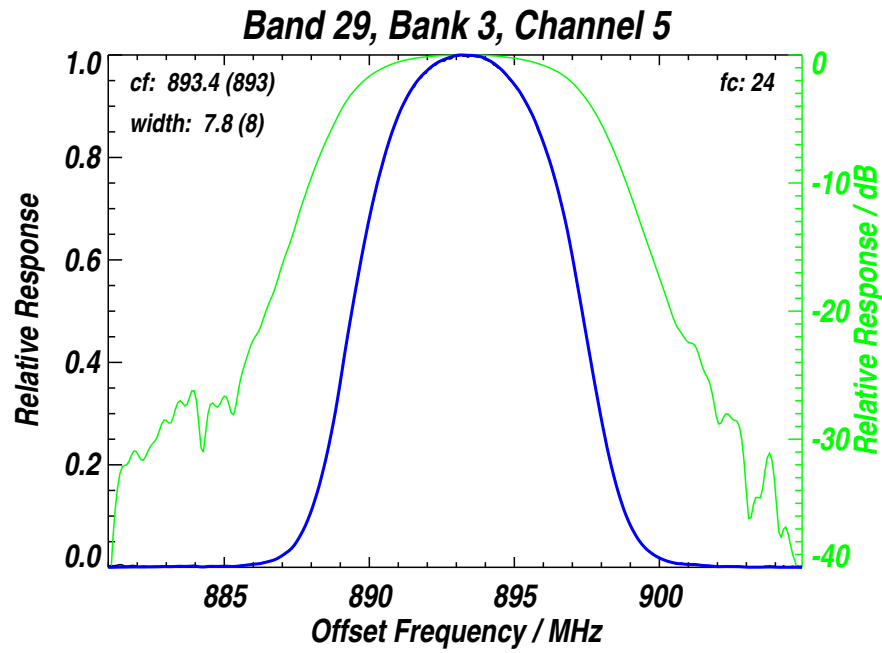
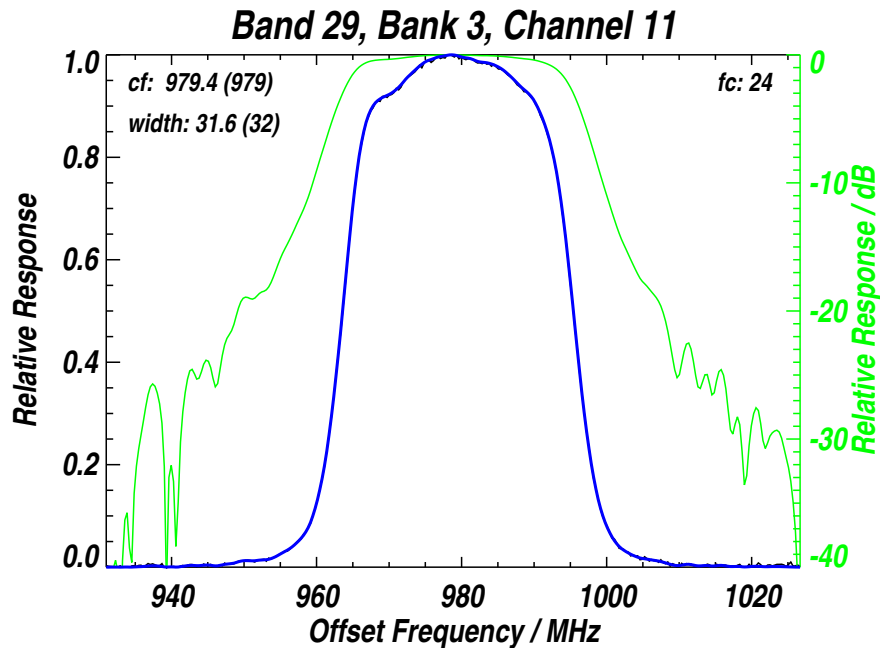
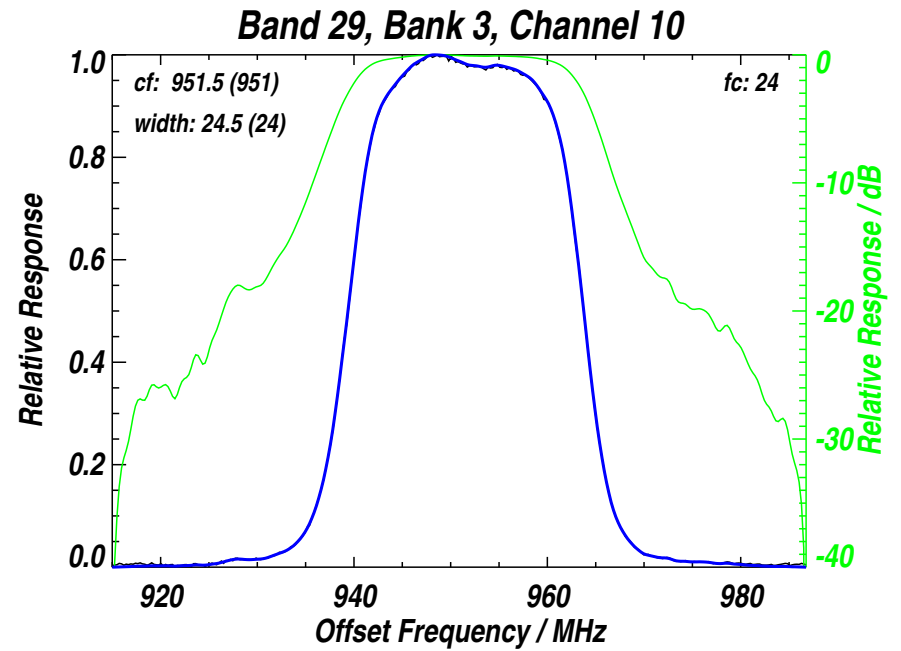
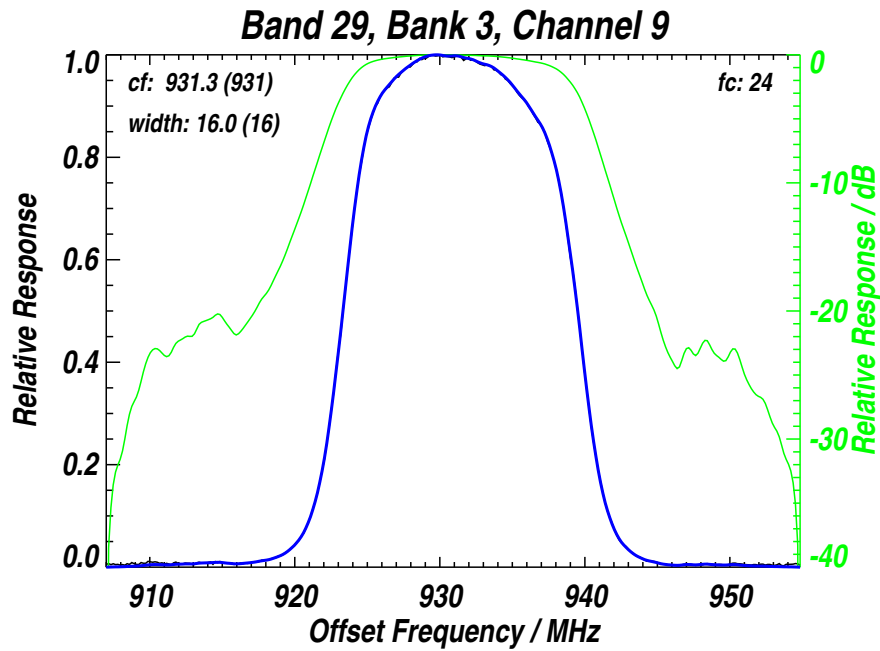


Figure H.433: Upper sideband front-end sweep data for Band 29, channels 5 to 8. See text for additional details.



**Band 29 (usb)**  
**Bank 3**  
**Origin = 648.955950006 GHz**

Figure H.434: Upper sideband front-end sweep data for Band 29, channels 9 to 11. See text for additional details.

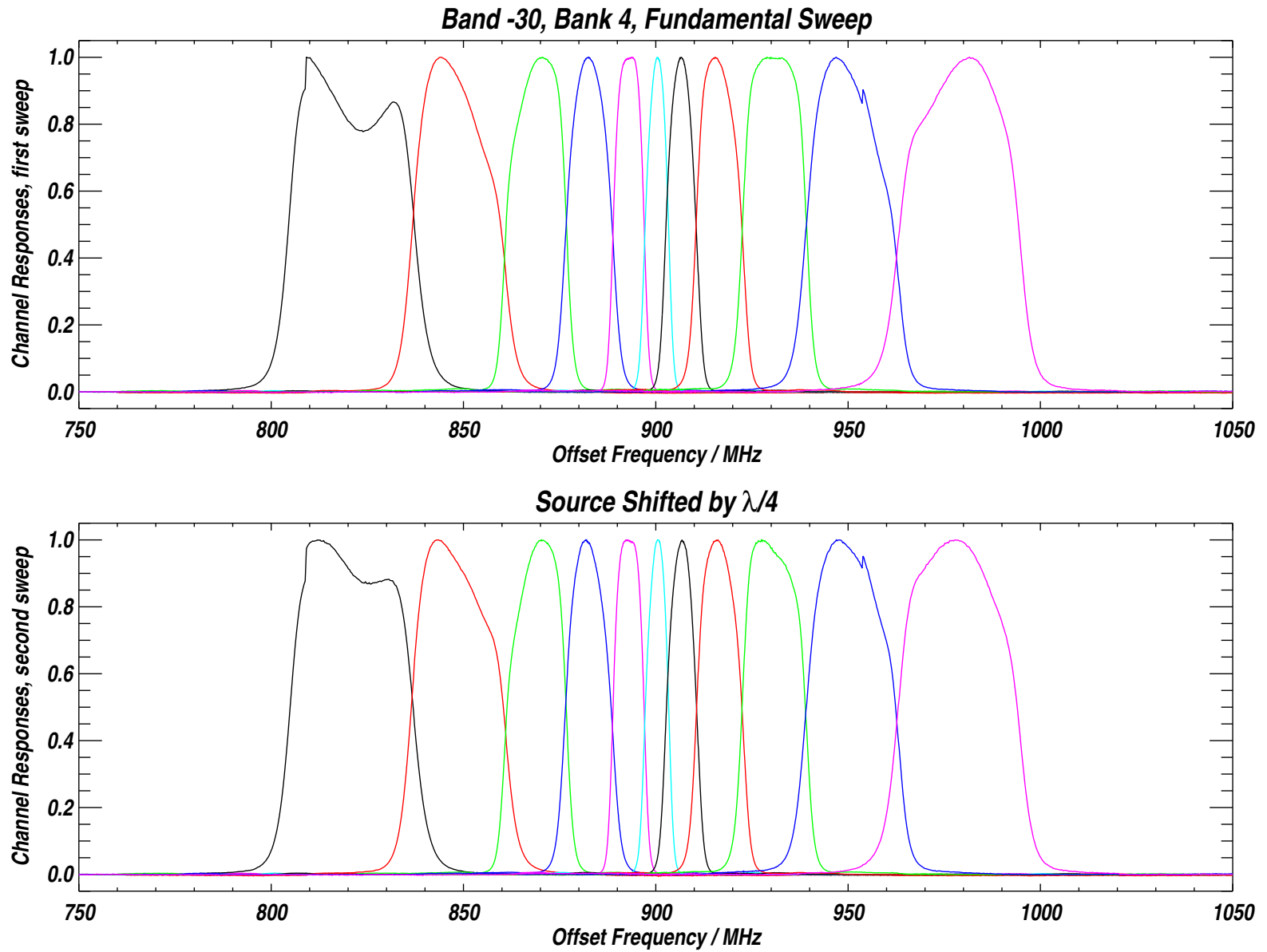


Figure H.435: Lower sideband front-end sweep data for Band 30. See text for additional details.

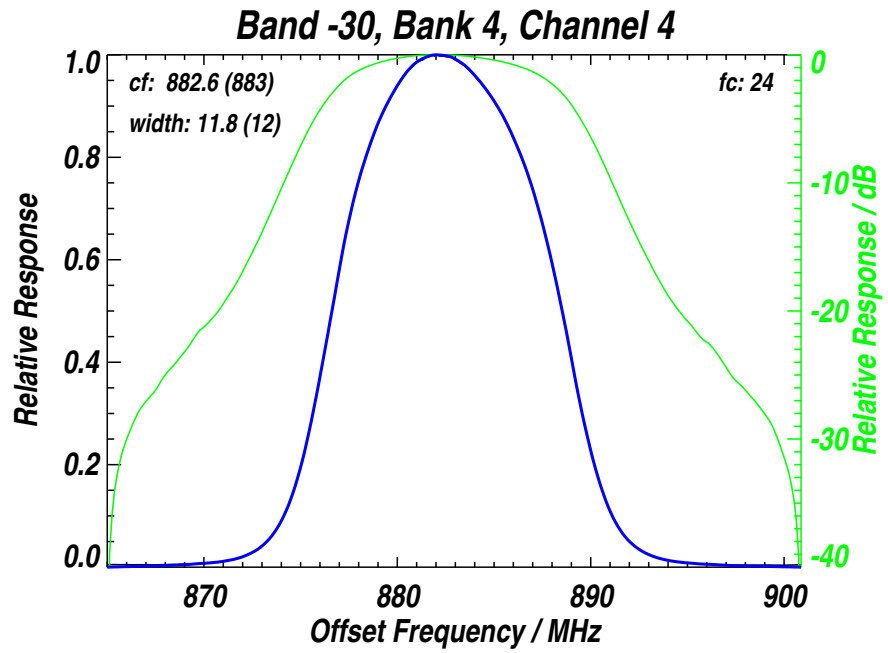
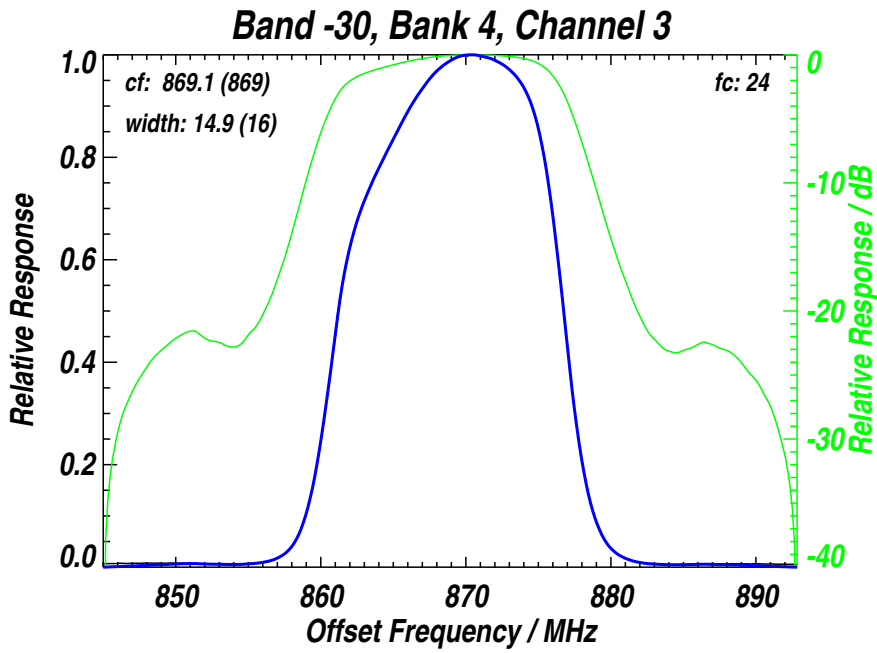
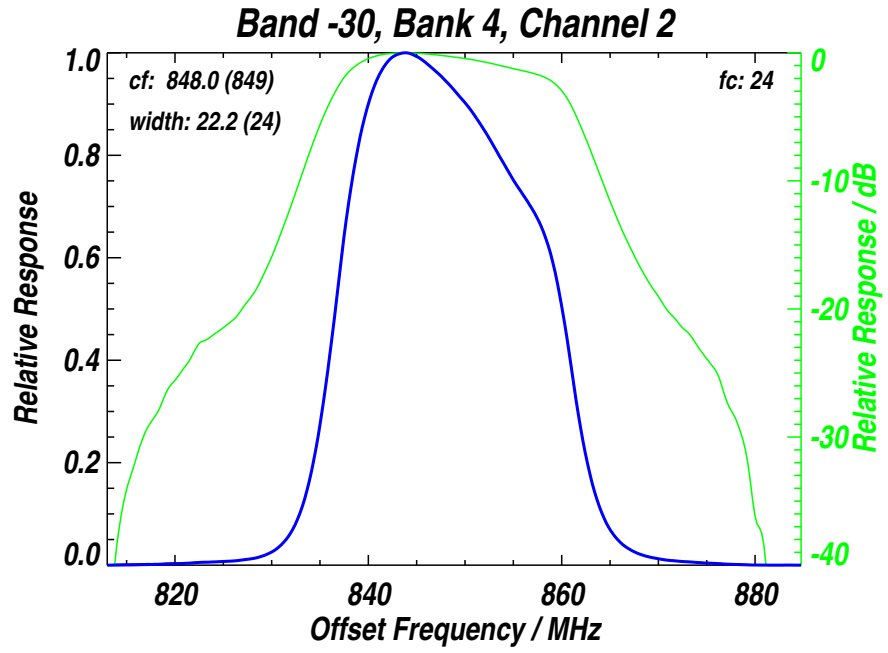
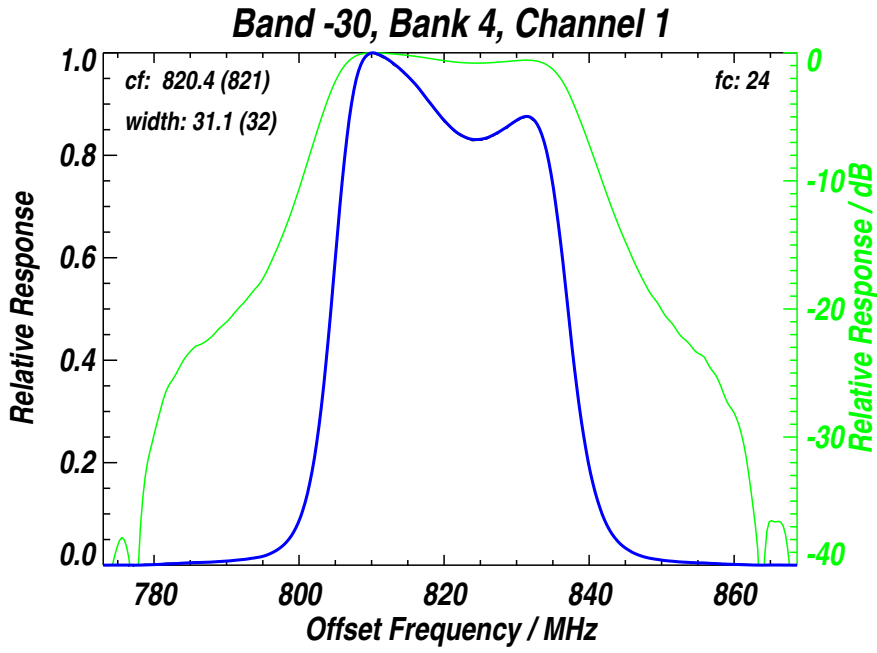


Figure H.436: Lower sideband front-end sweep data for Band 30, channels 1 to 4. See text for additional details.

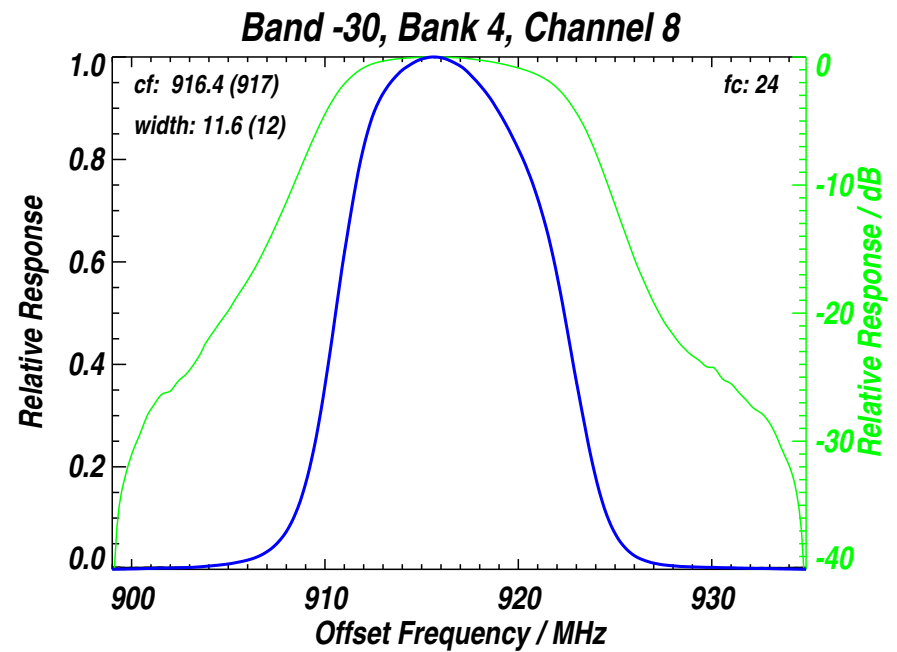
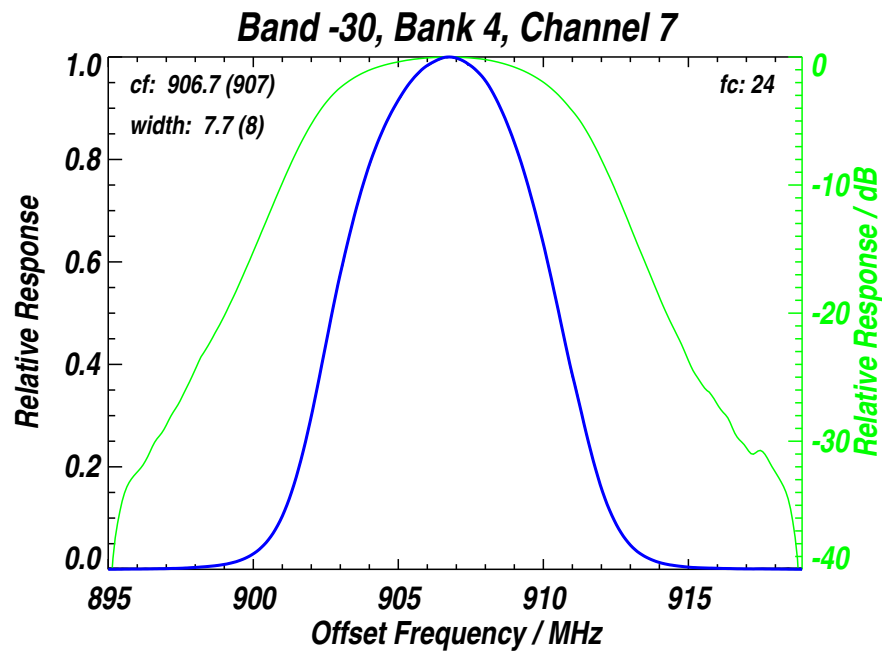
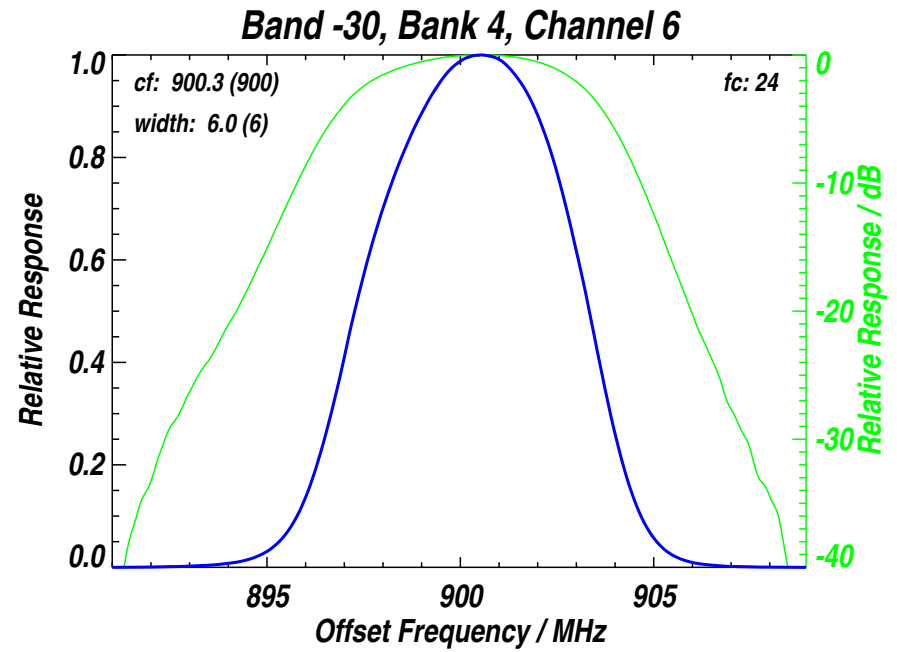
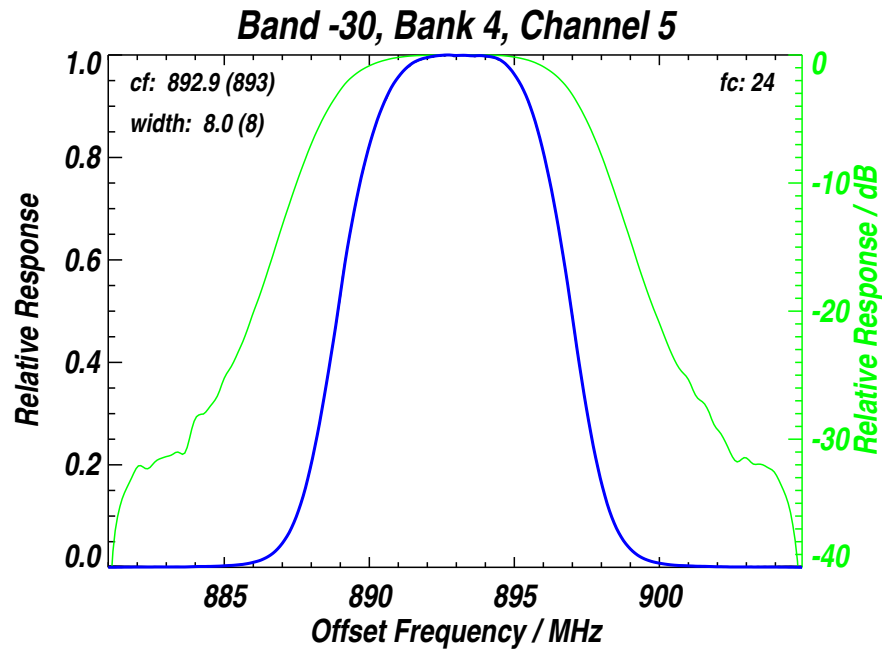
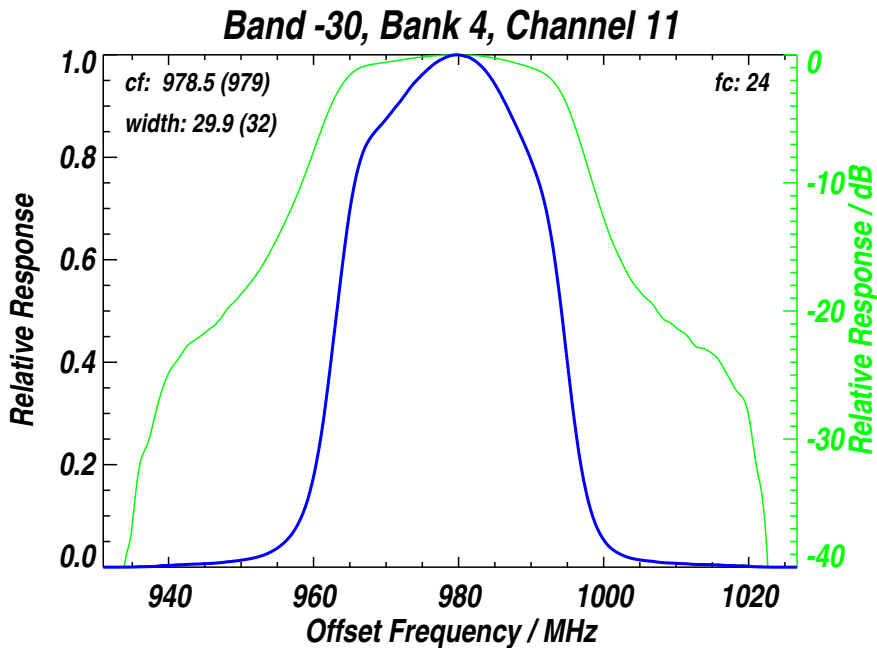
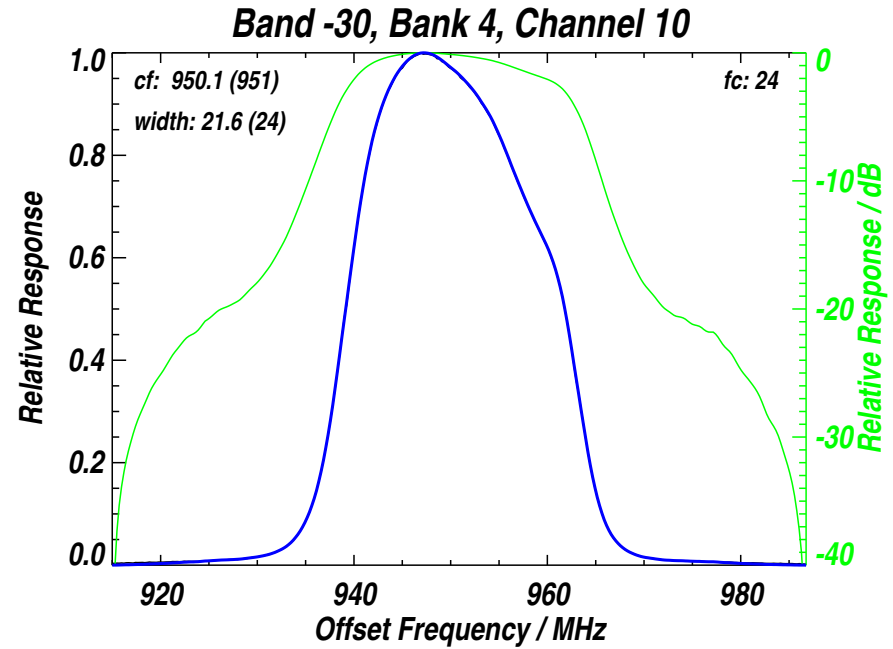
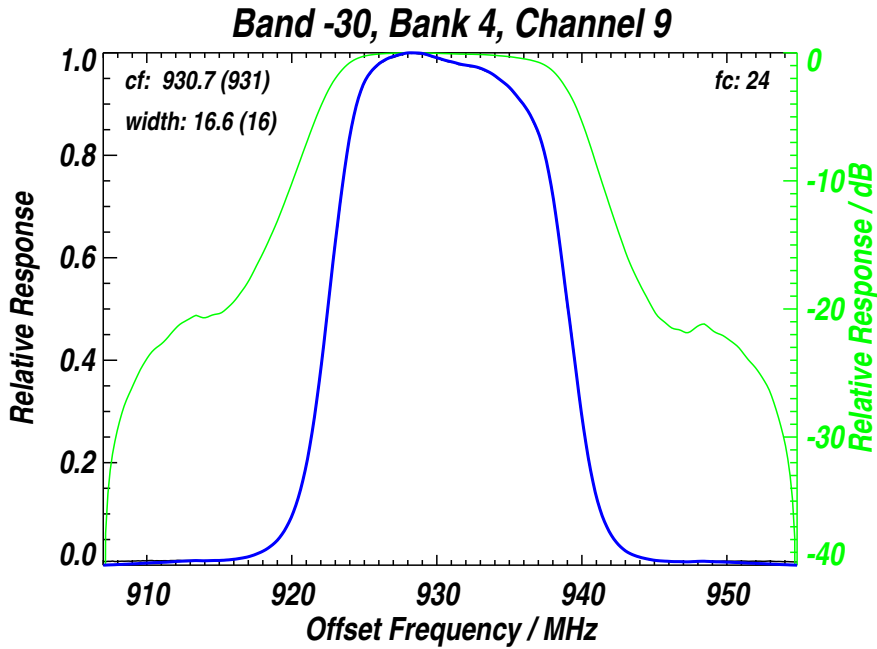


Figure H.437: Lower sideband front-end sweep data for Band 30, channels 5 to 8. See text for additional details.



**Band 30 (lsb)**  
**Bank 4**  
**Origin = 624.339500022 GHz**

Figure H.438: Lower sideband front-end sweep data for Band 30, channels 9 to 11. See text for additional details.

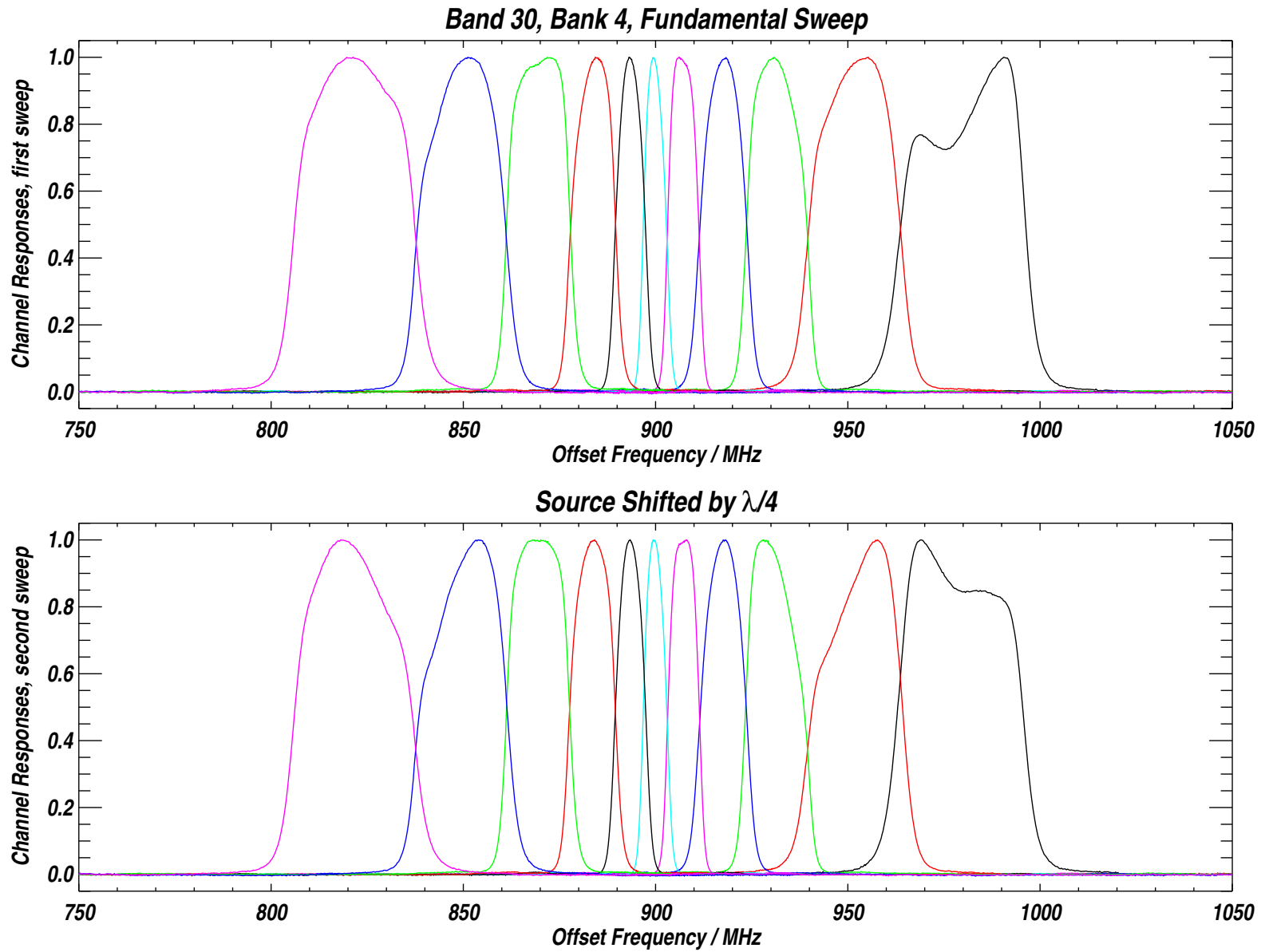


Figure H.439: Upper sideband front-end sweep data for Band 30. See text for additional details.

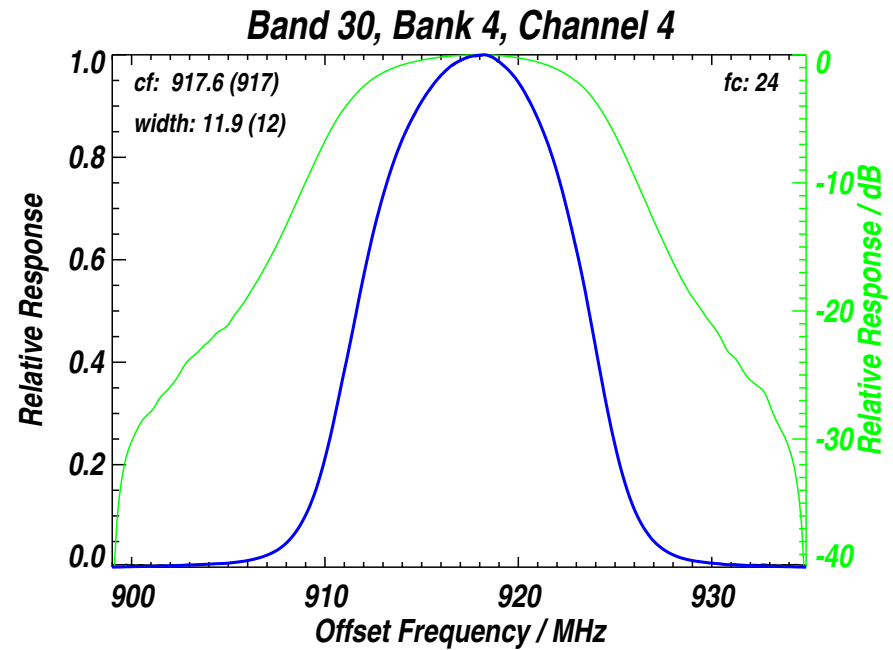
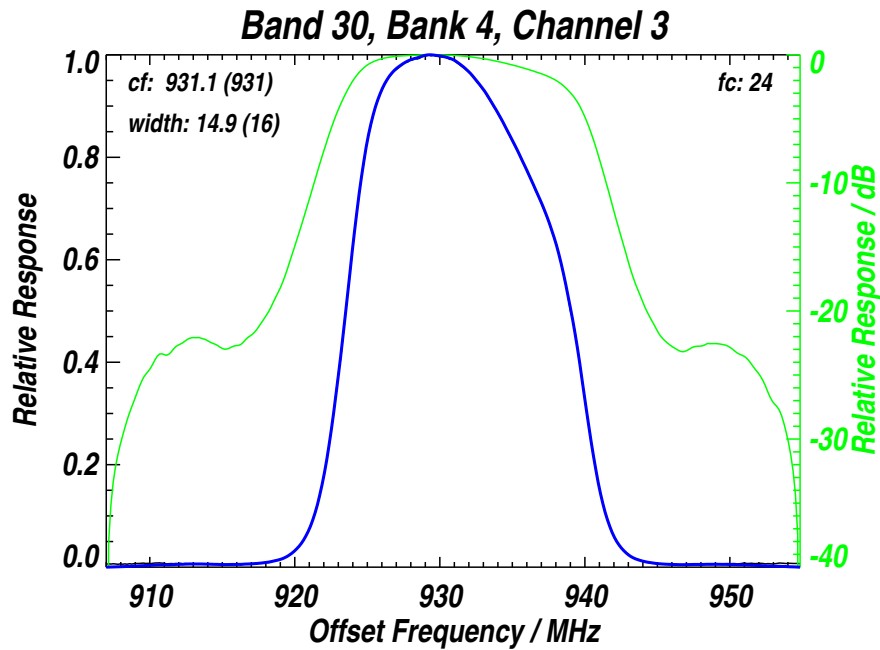
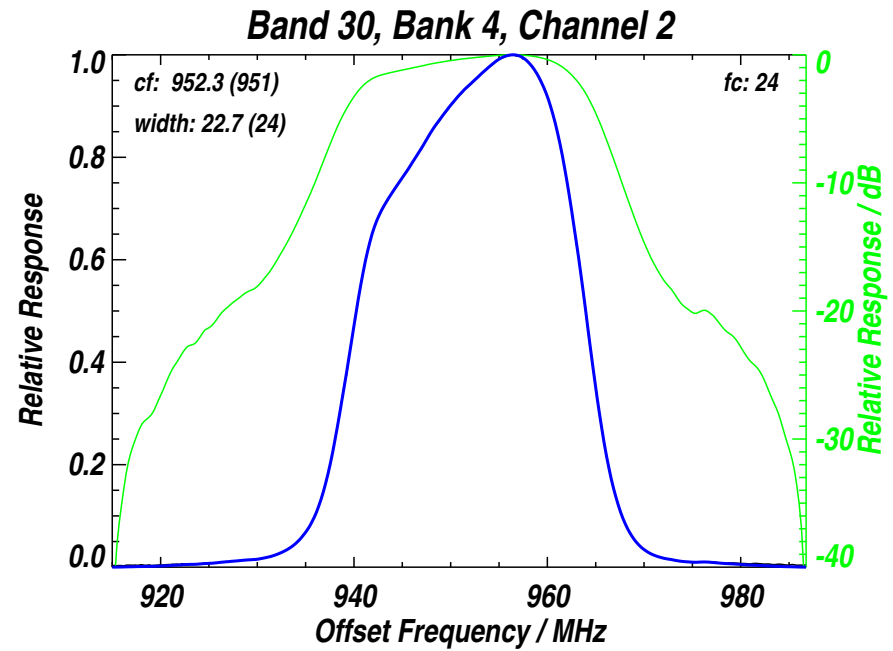
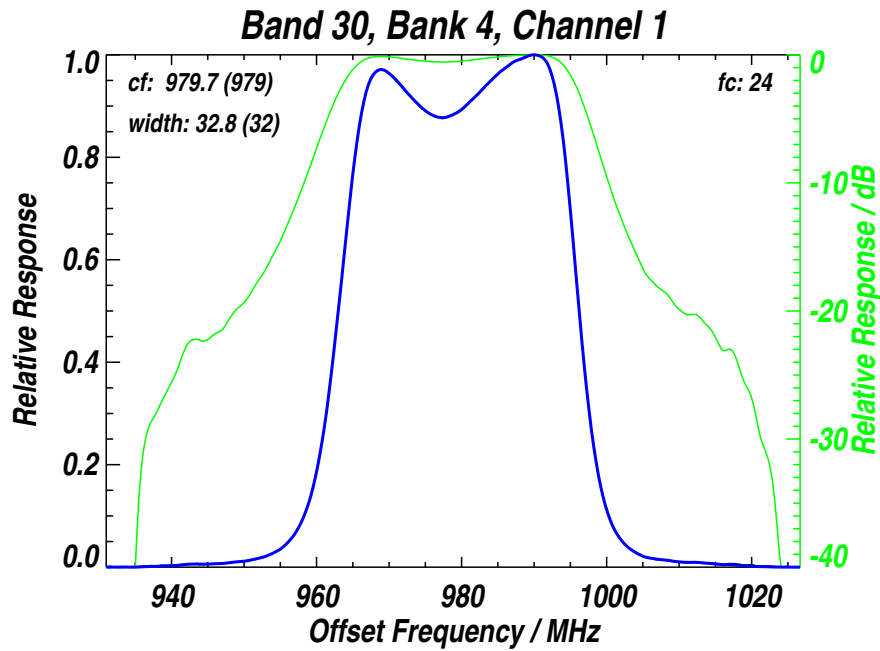


Figure H.440: Upper sideband front-end sweep data for Band 30, channels 1 to 4. See text for additional details.



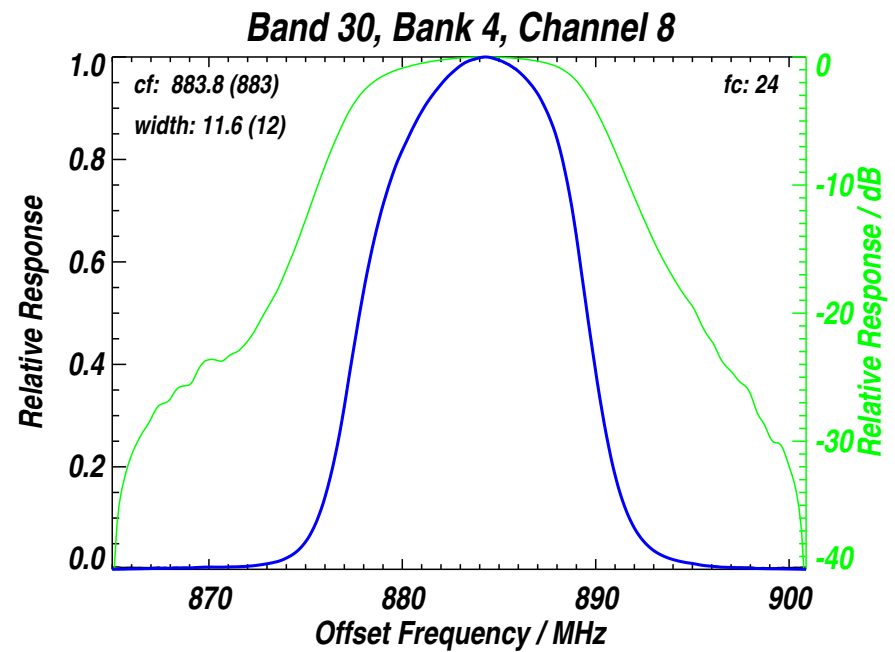
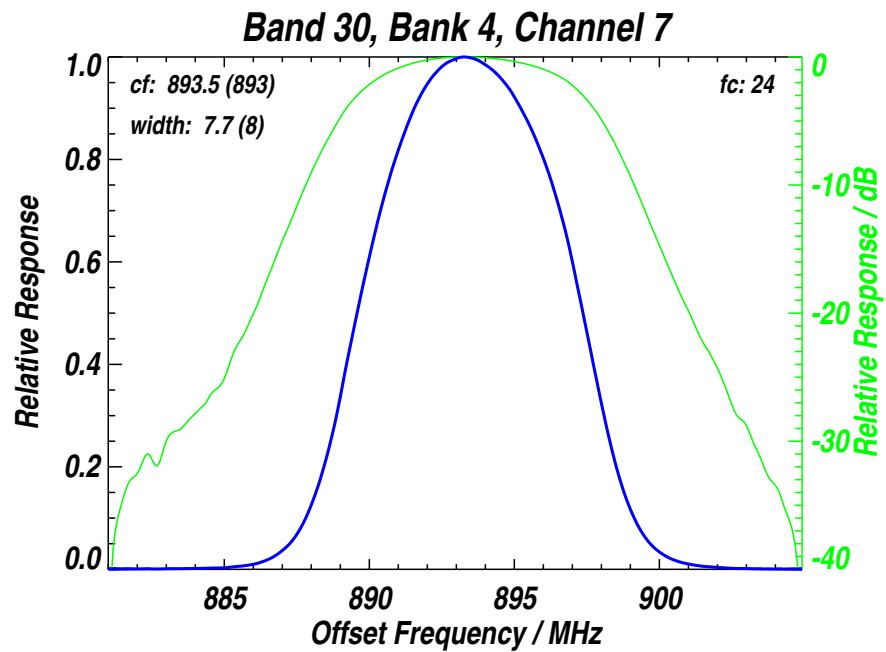
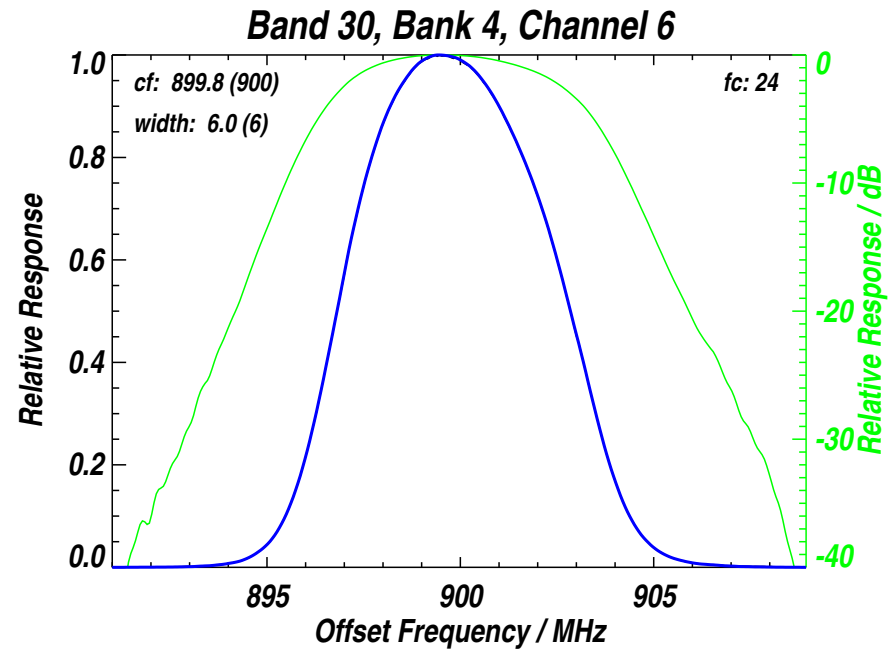
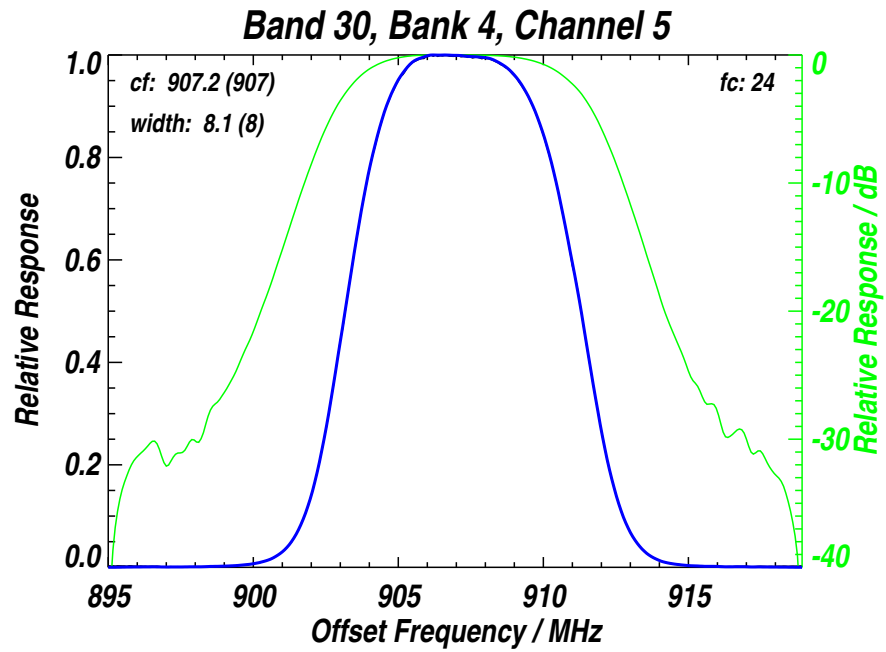
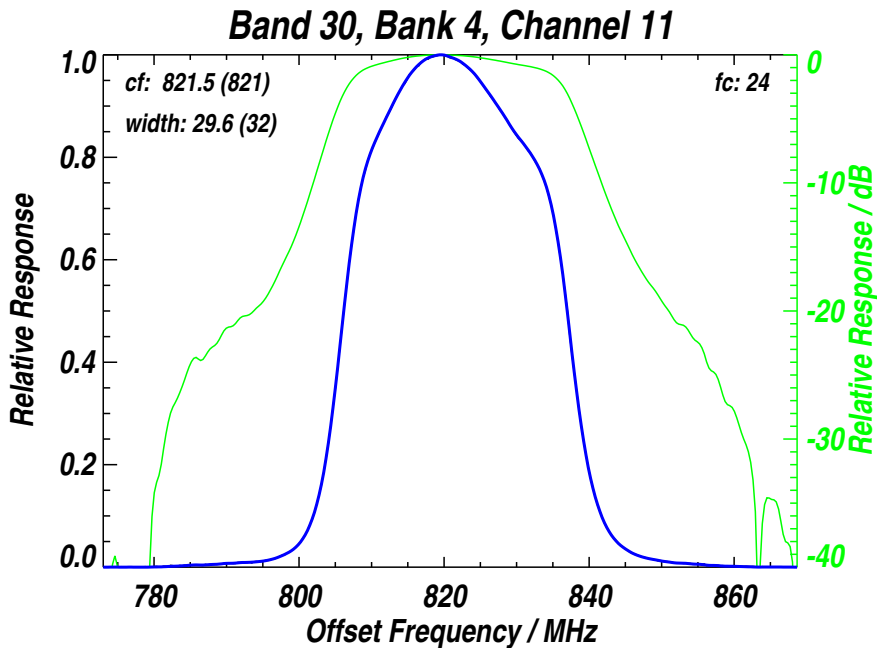
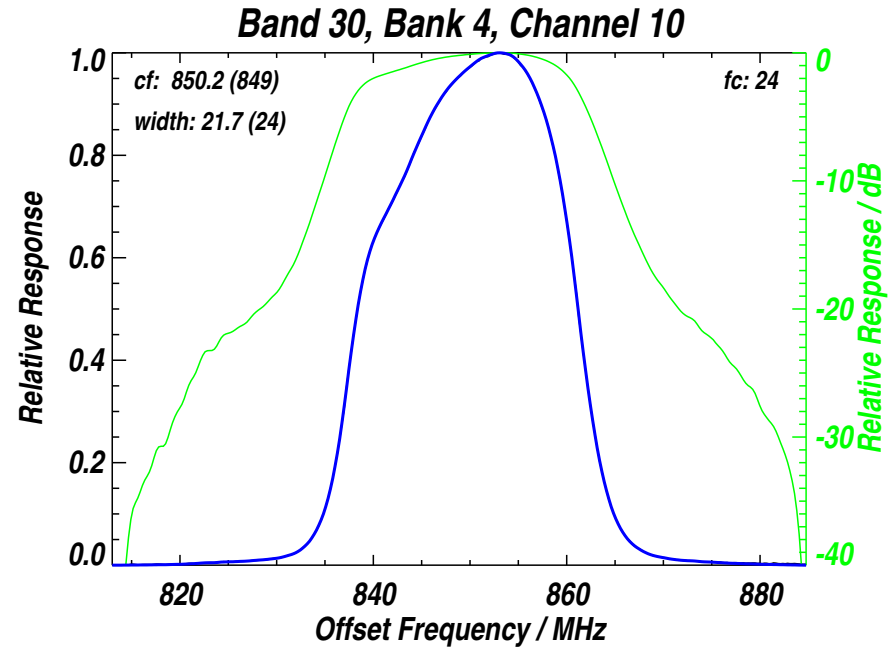
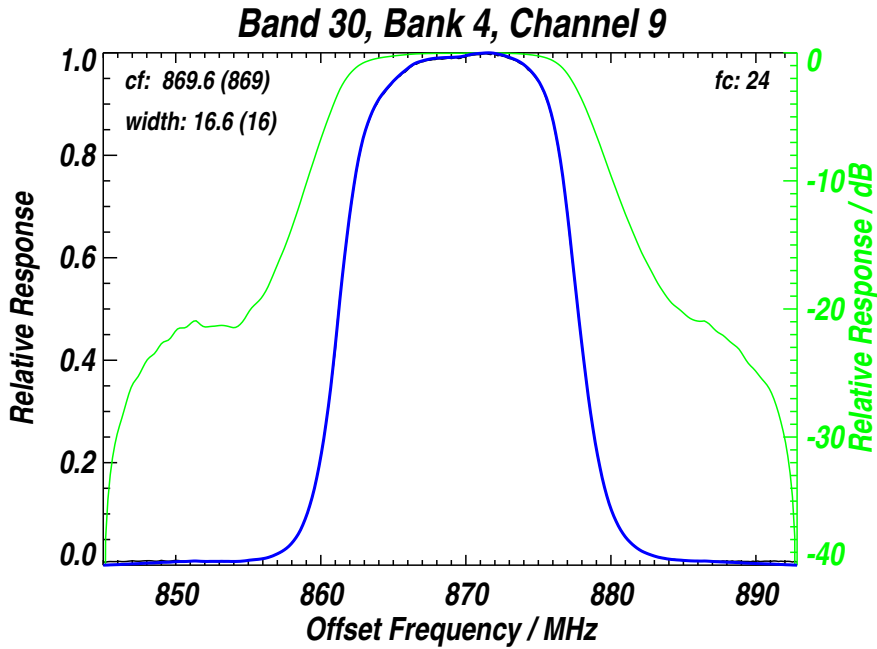


Figure H.441: Upper sideband front-end sweep data for Band 30, channels 5 to 8. See text for additional details.



**Band 30 (usb)**  
**Bank 4**  
**Origin = 659.600500020 GHz**

Figure H.442: Upper sideband front-end sweep data for Band 30, channels 9 to 11. See text for additional details.

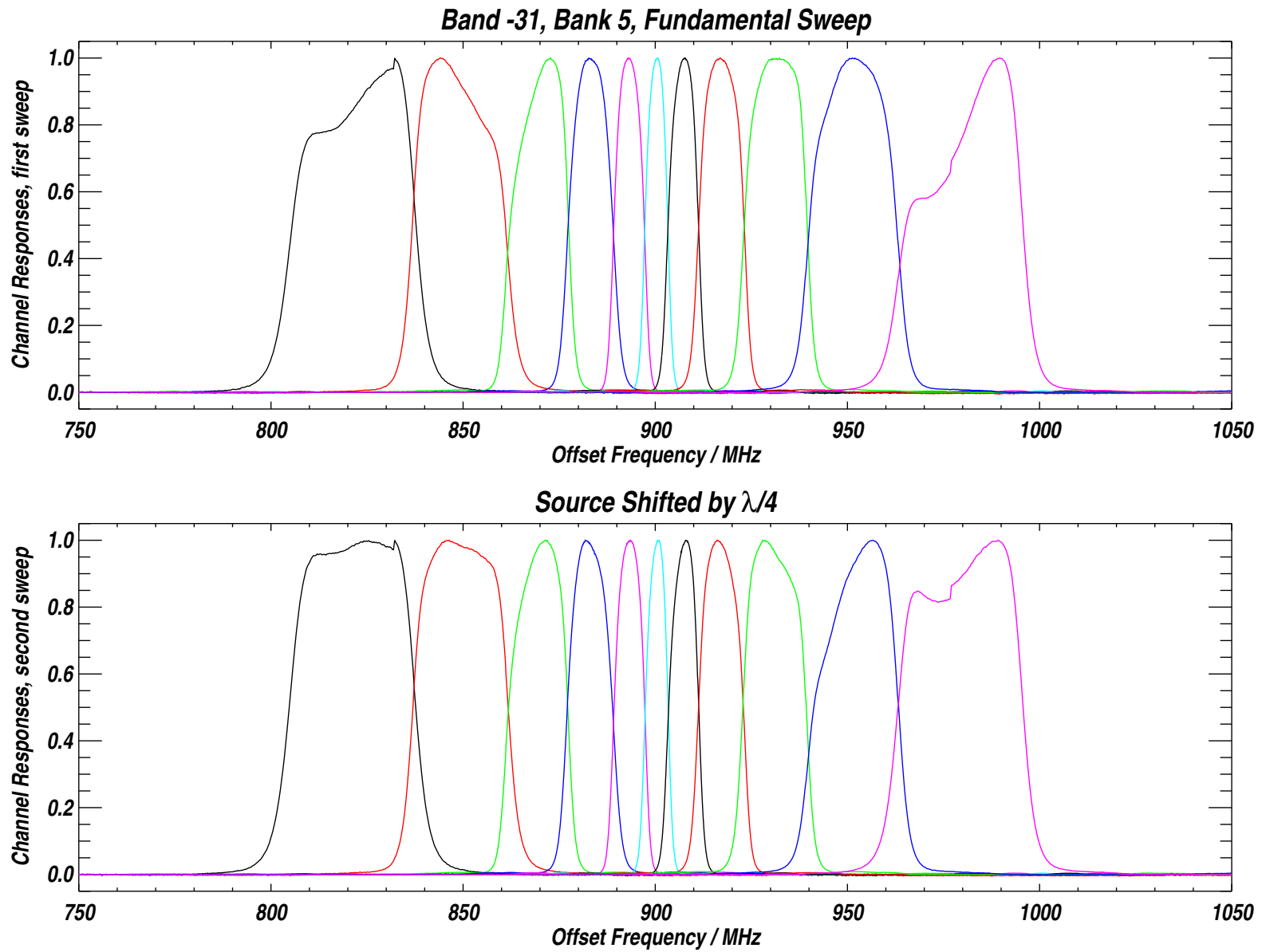


Figure H.443: Lower sideband front-end sweep data for Band 31. See text for additional details.

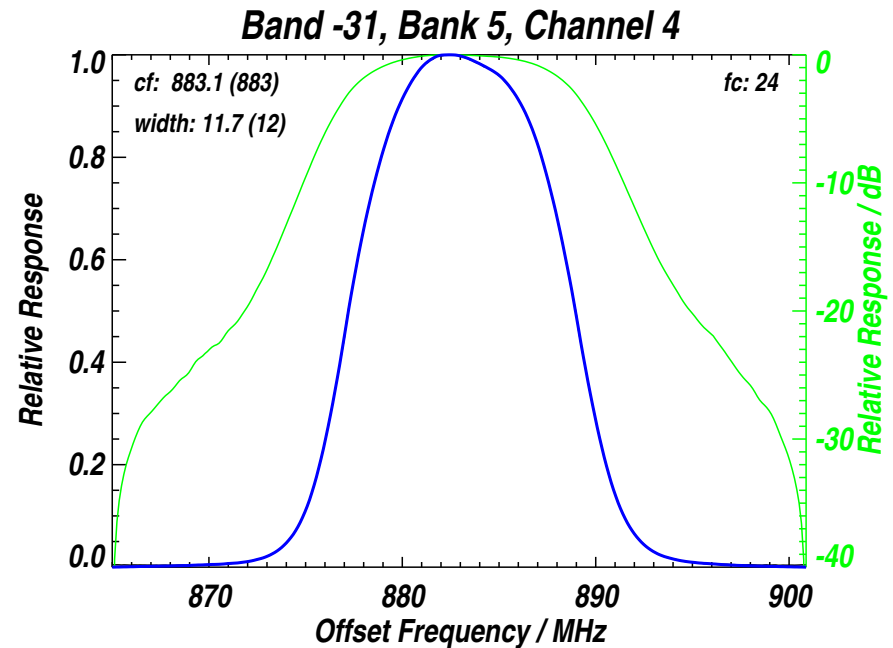
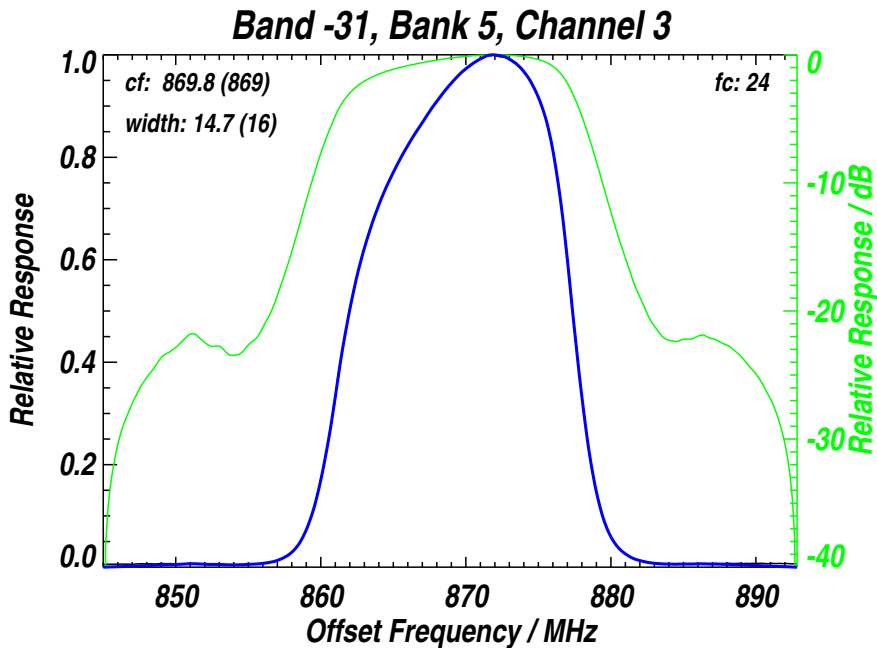
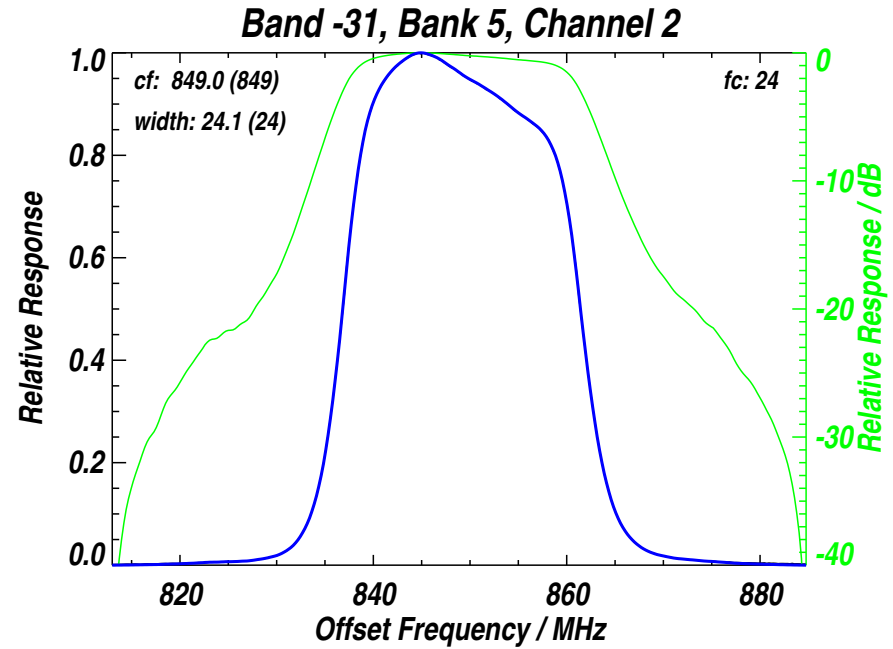
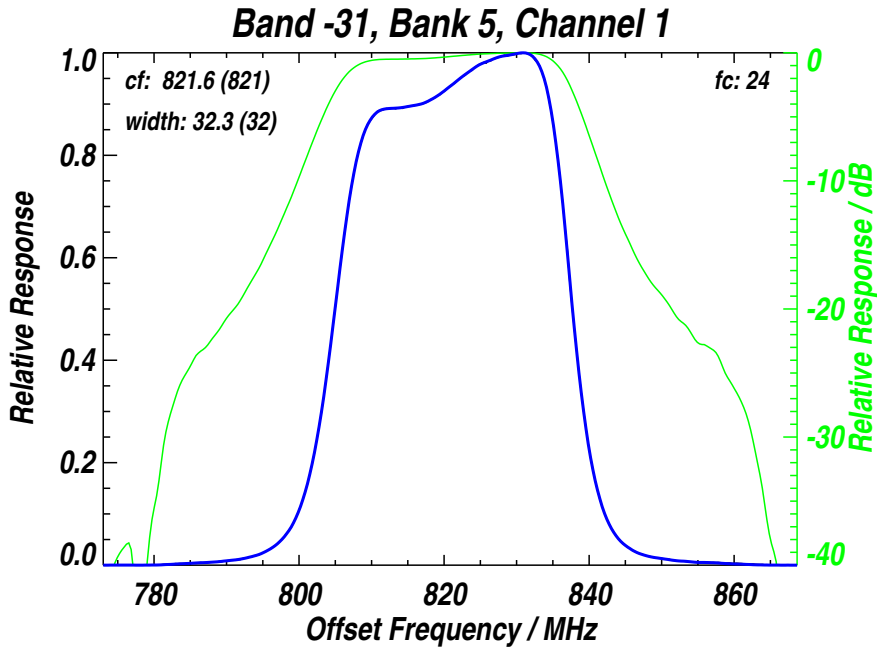


Figure H.444: Lower sideband front-end sweep data for Band 31, channels 1 to 4. See text for additional details.

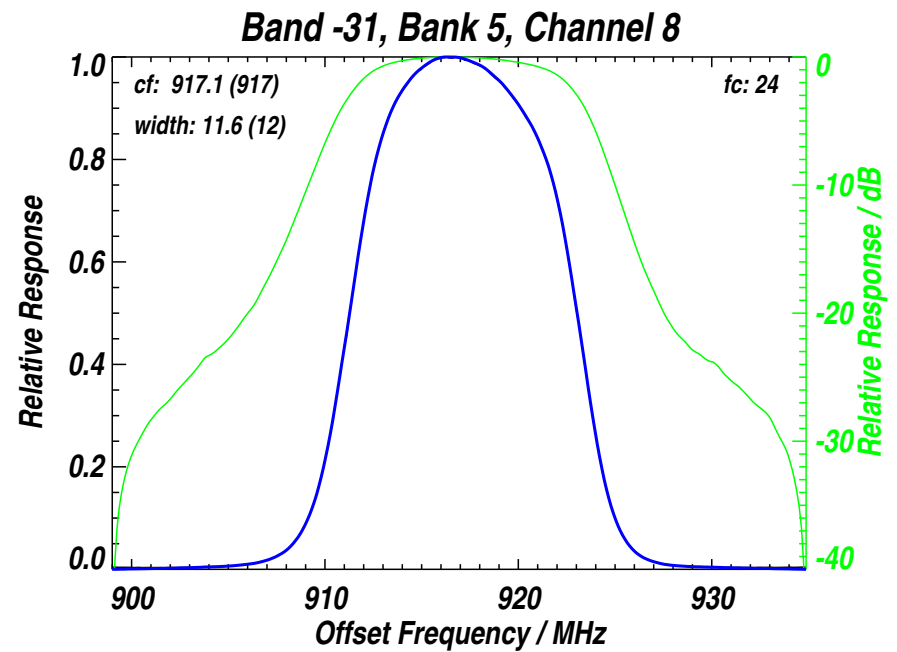
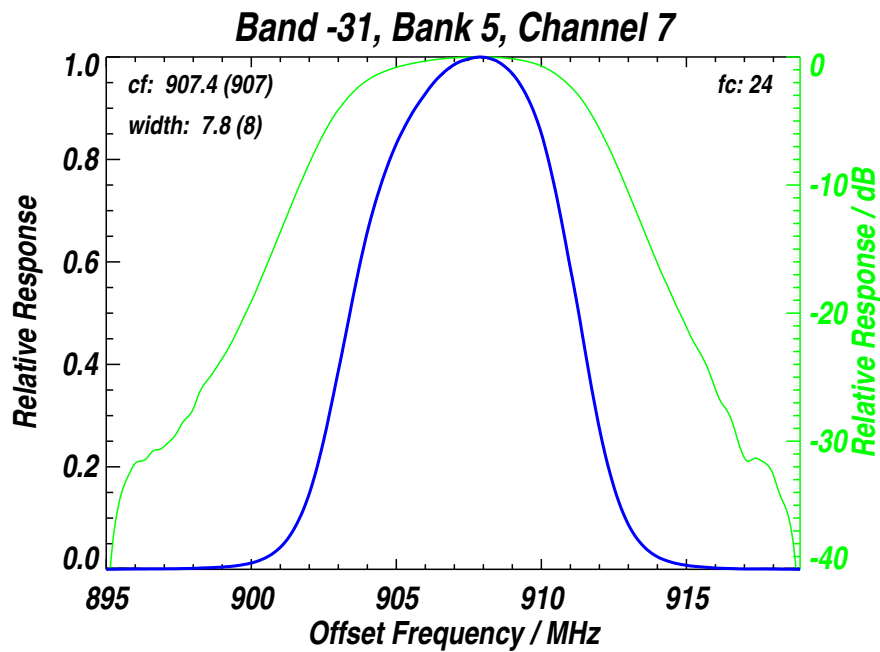
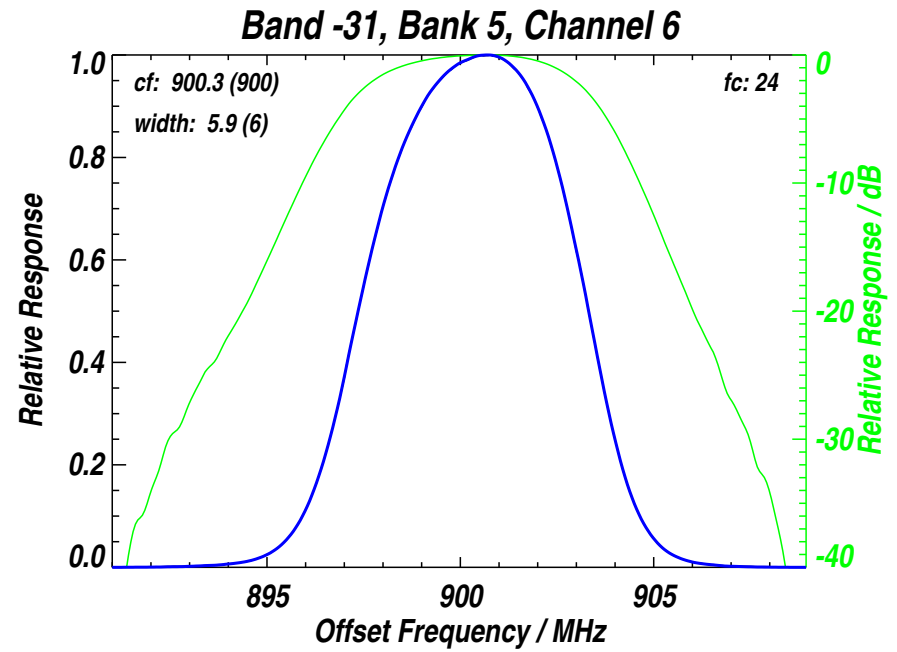
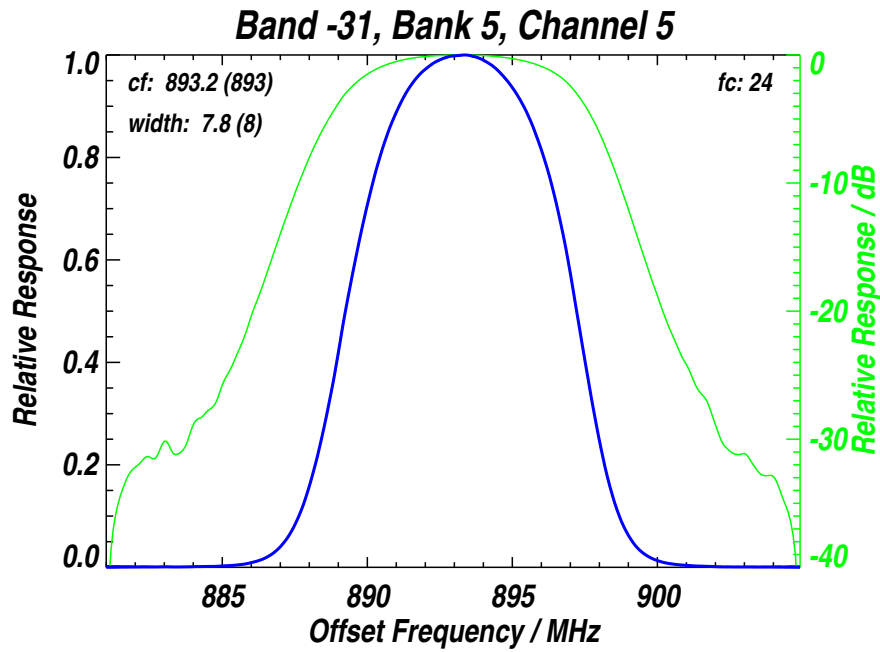
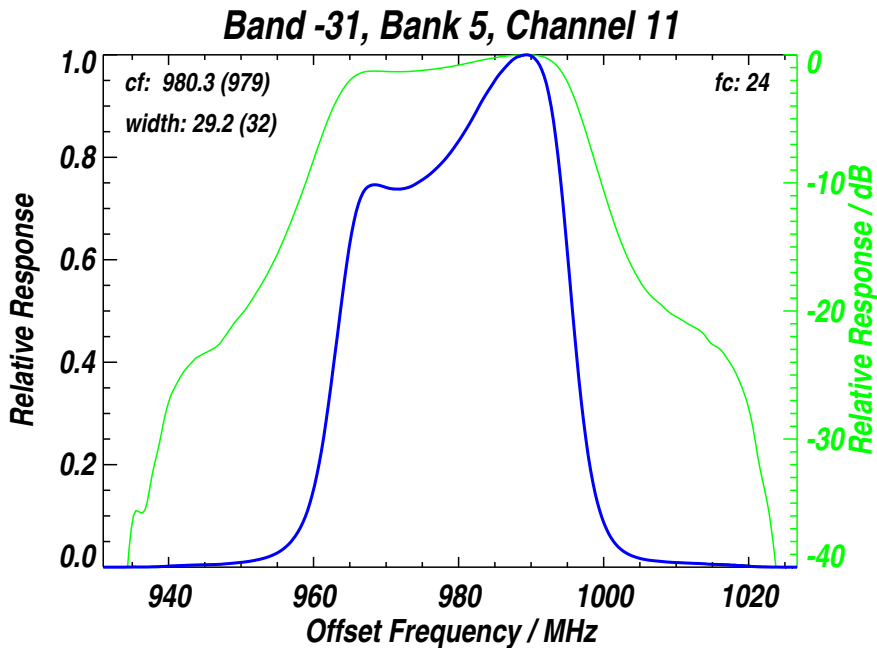
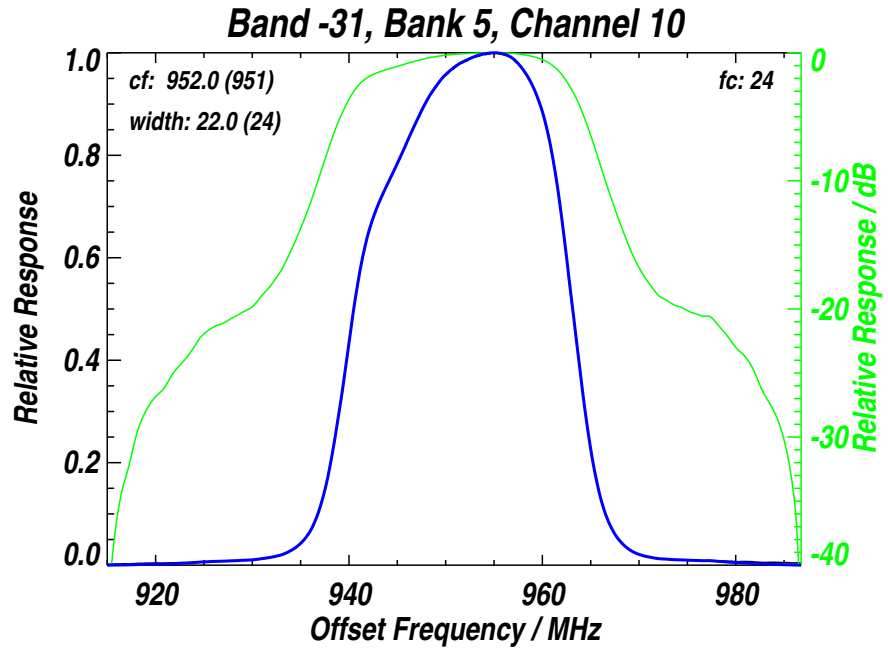
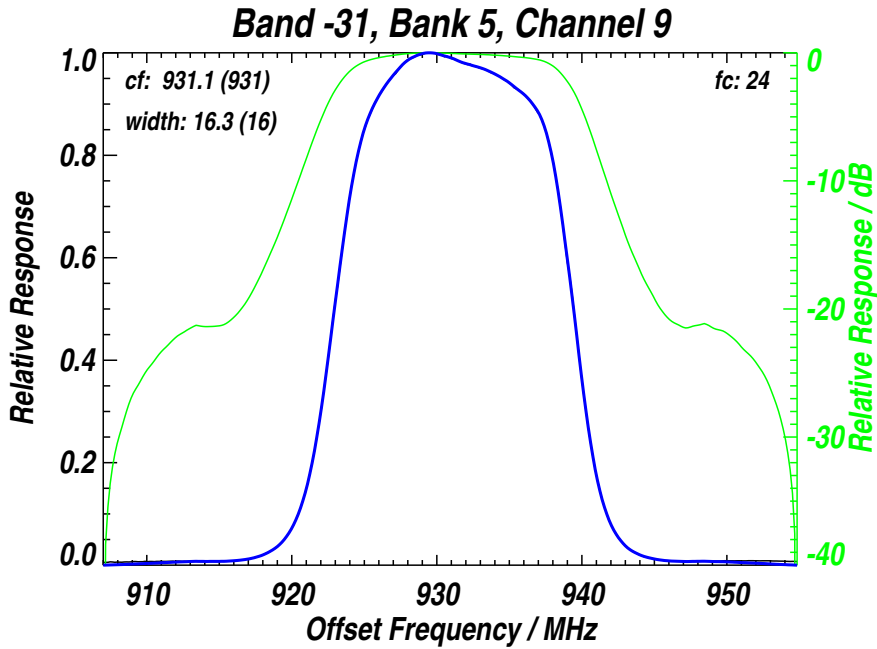


Figure H.445: Lower sideband front-end sweep data for Band 31, channels 5 to 8. See text for additional details.



**Band 31 (lsb)**  
**Bank 5**  
**Origin = 623.881999986 GHz**

Figure H.446: Lower sideband front-end sweep data for Band 31, channels 9 to 11. See text for additional details.

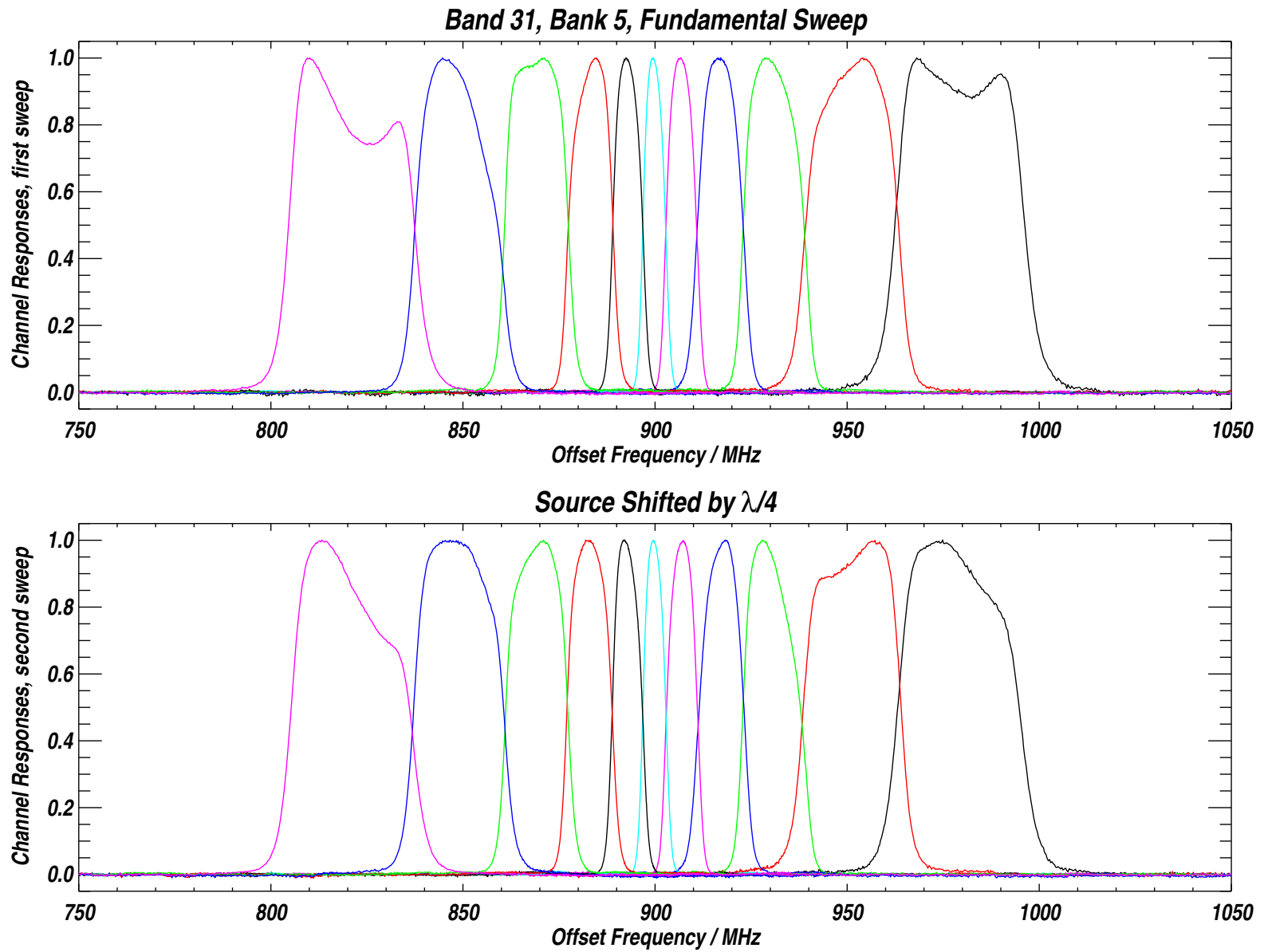


Figure H.447: Upper sideband front-end sweep data for Band 31. See text for additional details.

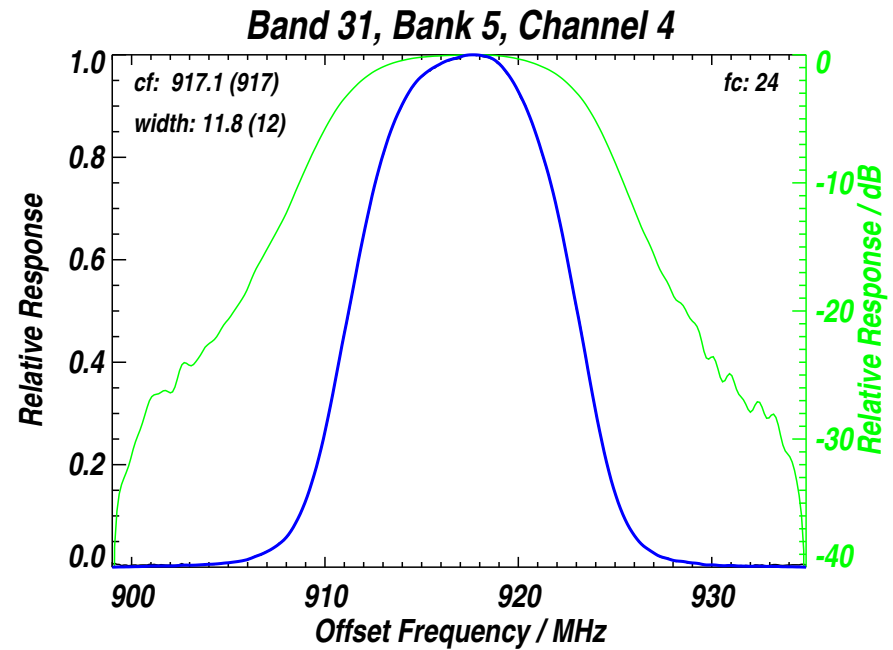
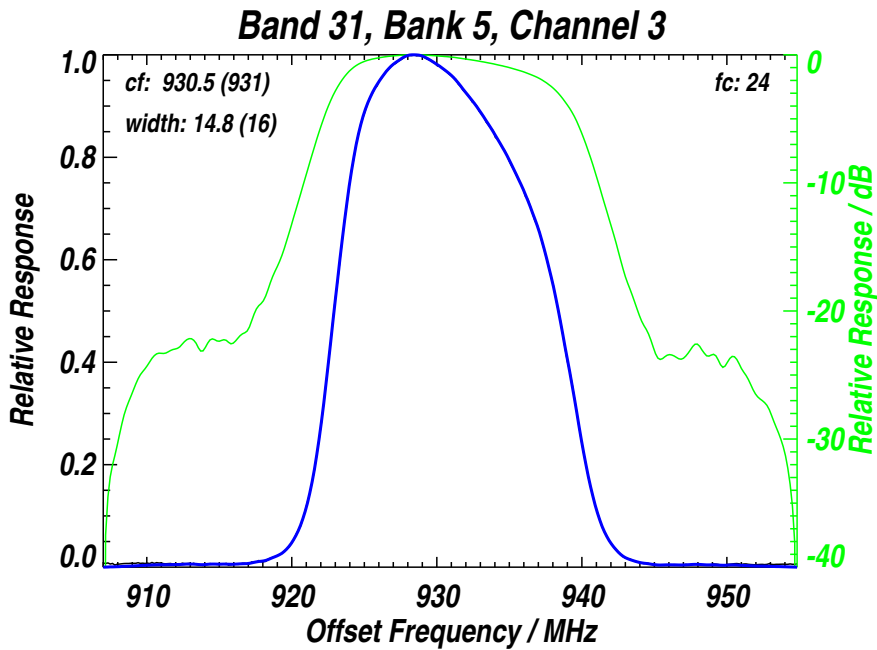
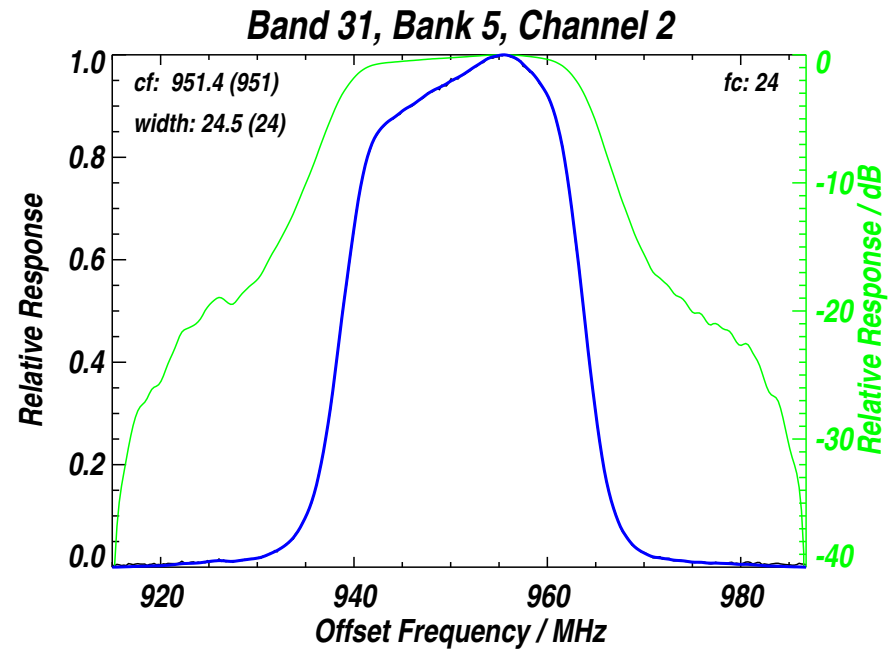
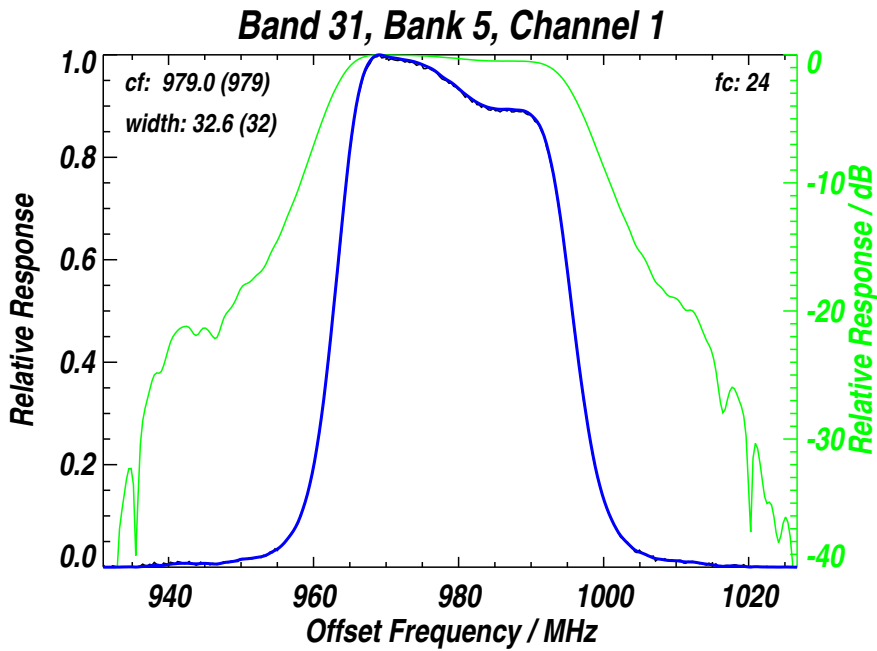


Figure H.448: Upper sideband front-end sweep data for Band 31, channels 1 to 4. See text for additional details.



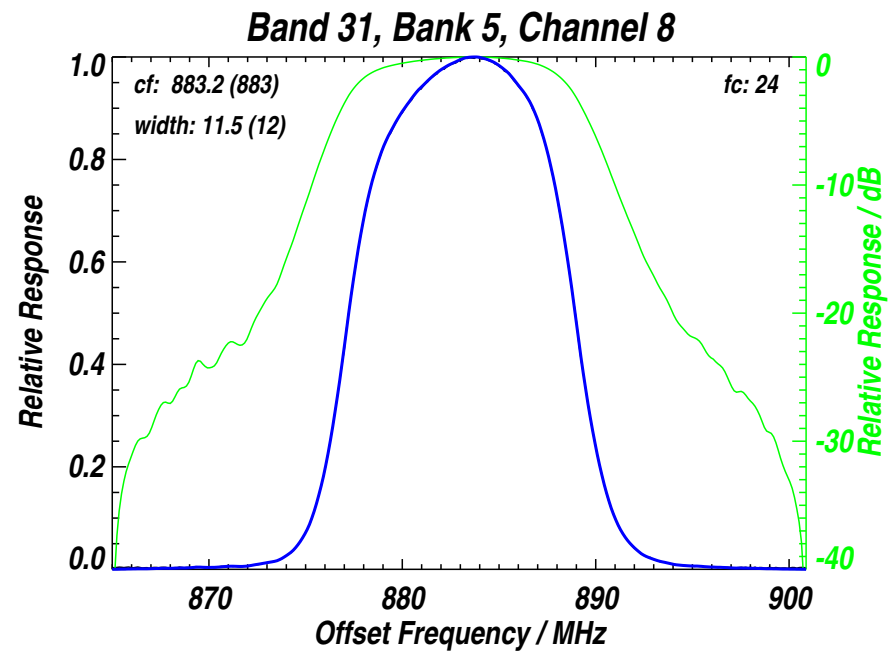
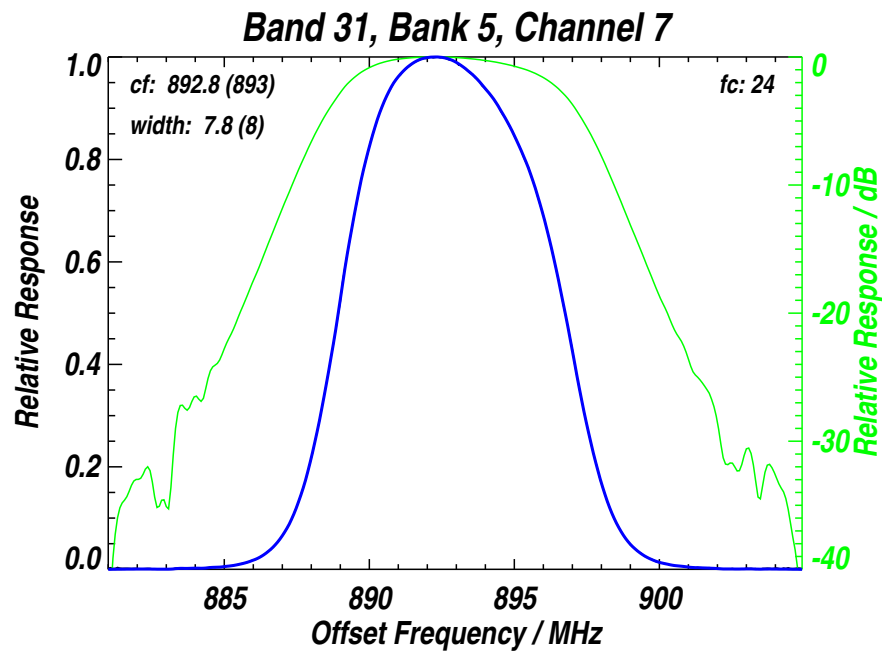
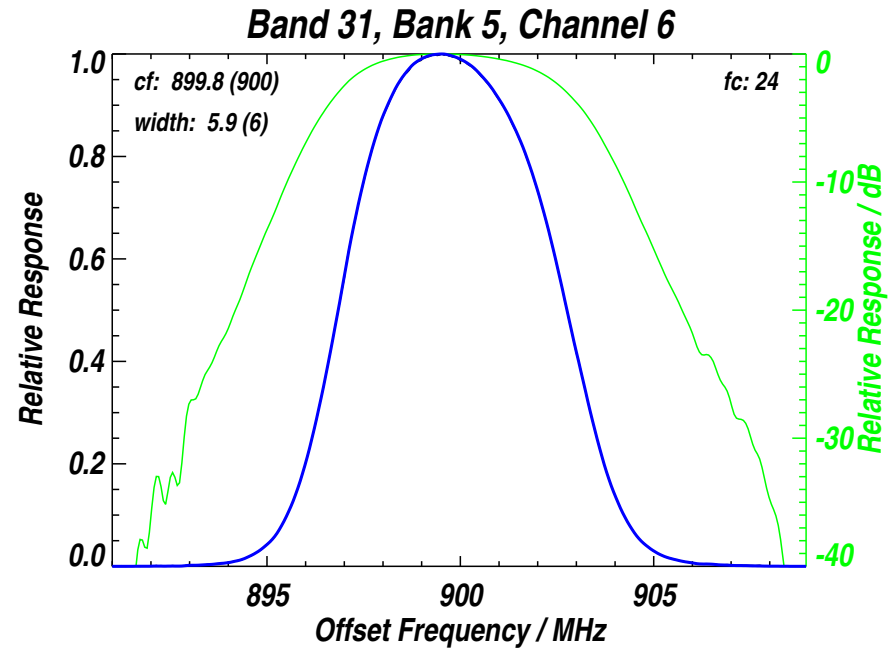
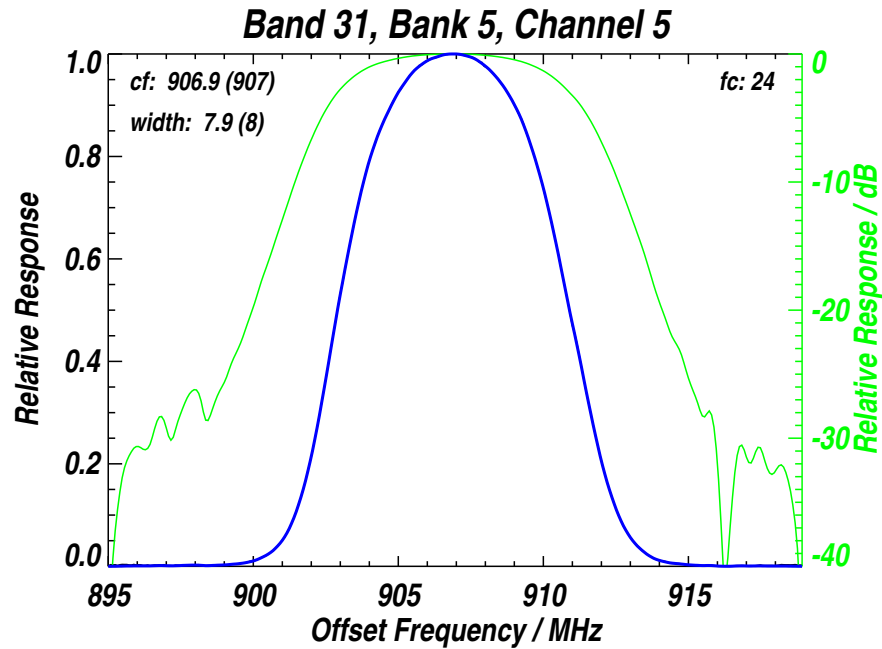
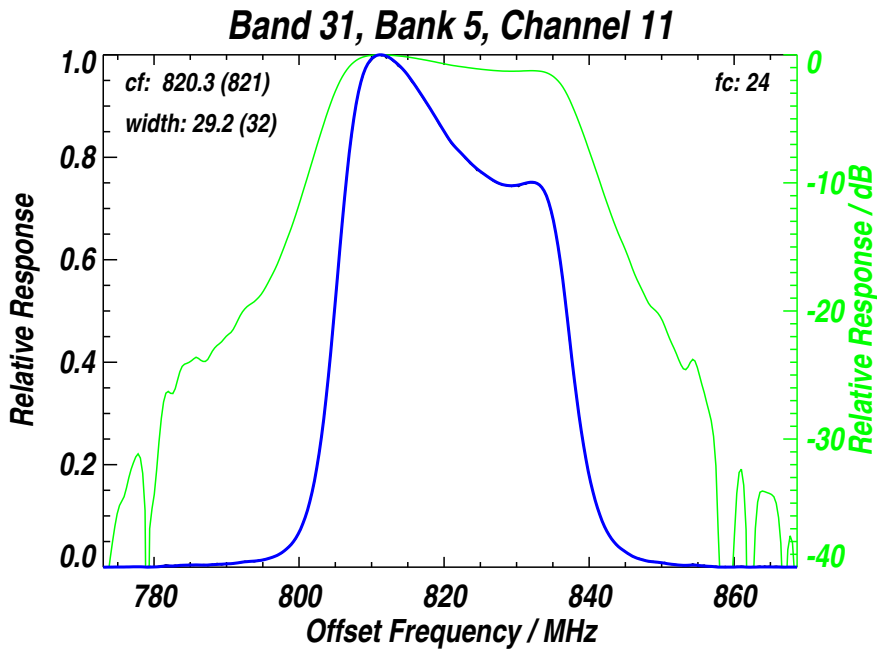
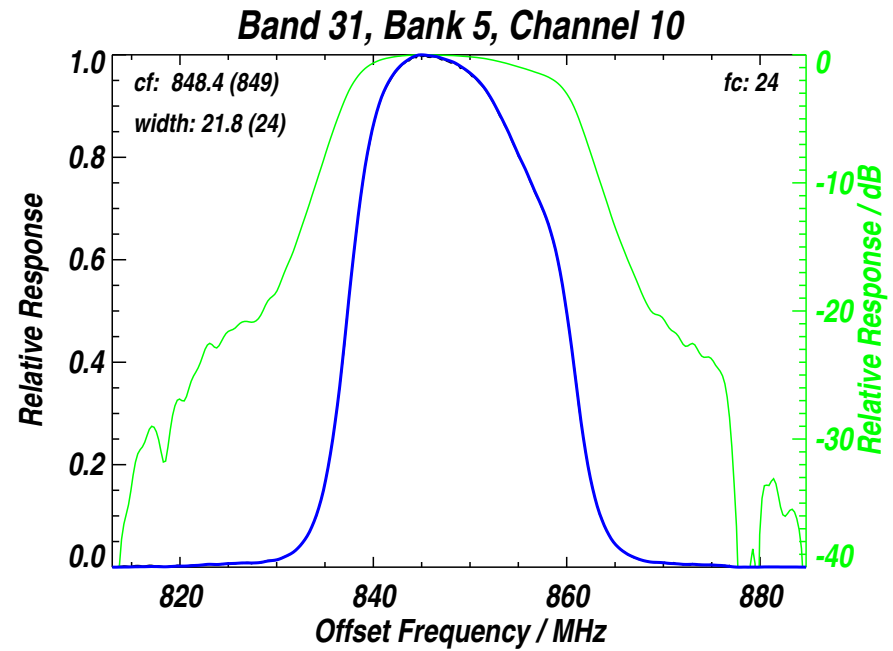
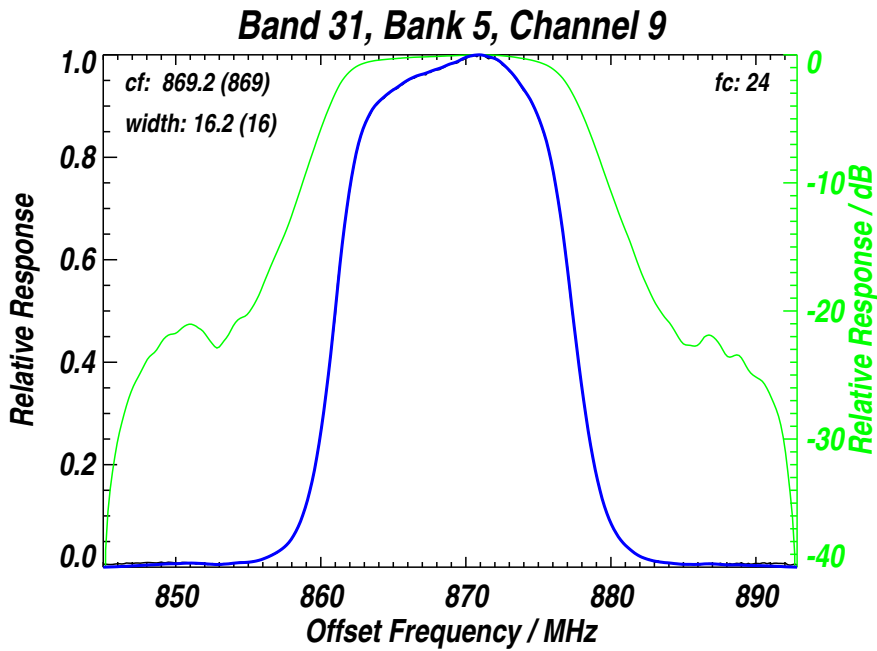


Figure H.449: Upper sideband front-end sweep data for Band 31, channels 5 to 8. See text for additional details.



**Band 31 (usb)**  
**Bank 5**  
**Origin = 660.058000014 GHz**

Figure H.450: Upper sideband front-end sweep data for Band 31, channels 9 to 11. See text for additional details.



## Appendix I

# THz High Resolution Spectral Sweep Data

Because of the absence of viable fundamental sources, high resolution spectral sweeps of the THz subsystem were performed through the 1st IF. The same calibration controller that was used to perform the GHz band fundamental sweeps was used for these sweeps, and the measurement timing of the fundamental GHz sweeps was retained.

To maintain consistency with the GHz channel shape data, the IF sweep data were processed to provide the illusion at the ASCII data file level that fundamental sweeps had been performed. ‘Pseudo’ lower and upper sideband data files were created, affording us the future option of modifying these data without impact to Forward Model software. For the present we have chosen to keep the channel shapes the same in both sidebands, and this decision will be revisited after in-flight data has been obtained and processed by Level 2 software. Band 20 does not have a dedicated filterbank for use in flight, so plots are provided for Band 20 channel shapes using filterbanks 12 and 15, either of which may be used operationally to analyze this band.

Unlike the GHz subsystems, the THz 1st. LO is not locked to the MO, and is expected to drift orbitally by up to  $\sim 1$  MHz. The ASCII data files used by the Forward Model software corresponding to the data plotted here assume the nominal center position for the THz LO. It is the job of the retrieval software to dynamically estimate the actual LO frequency from atmospheric data, and to process the data accordingly.

In the interests of preventing this document from growing even larger, only the lower sideband data files are reproduced below. The upper sideband data are currently just the mirror image (about the nominal 1st. LO frequency) of the data plotted below.

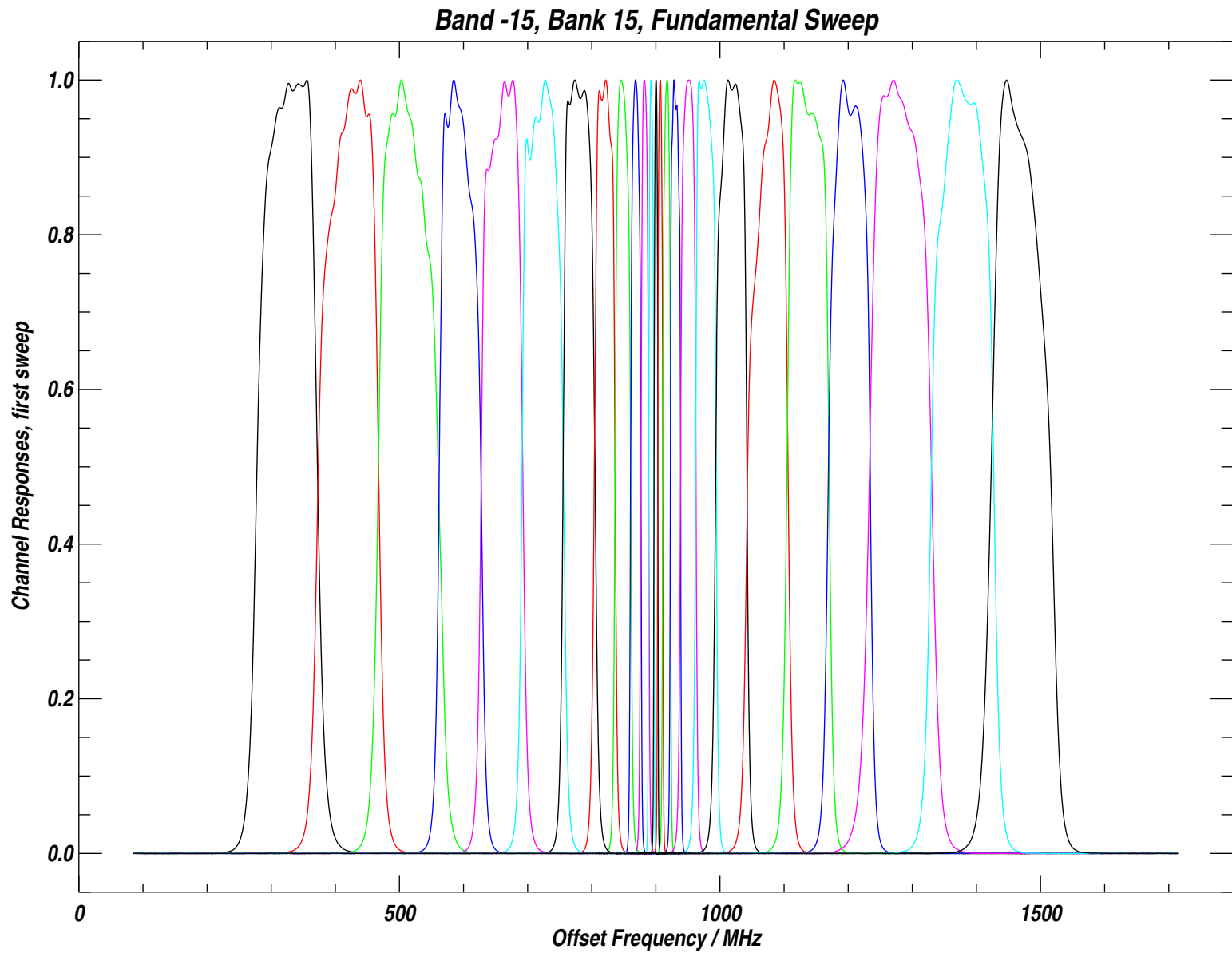


Figure I.1: 1st. IF sweep data for Band 15, plotted as the channels appear in the lower sideband. See text for additional details.

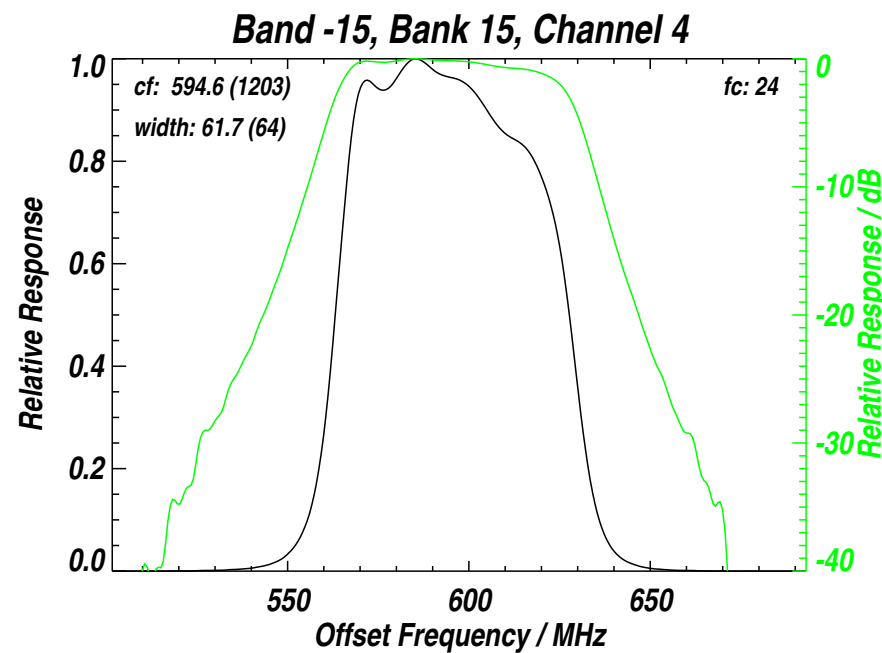
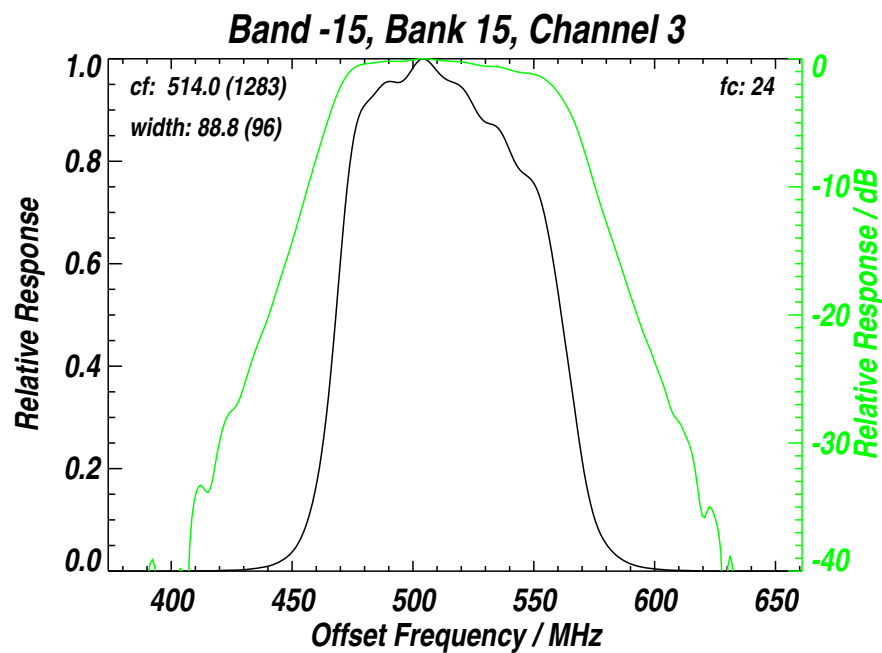
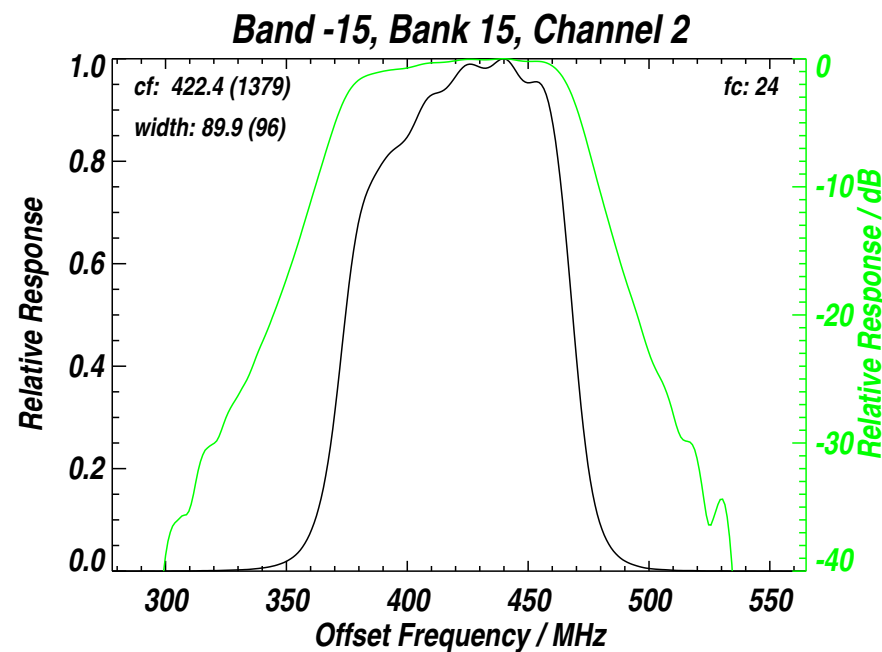
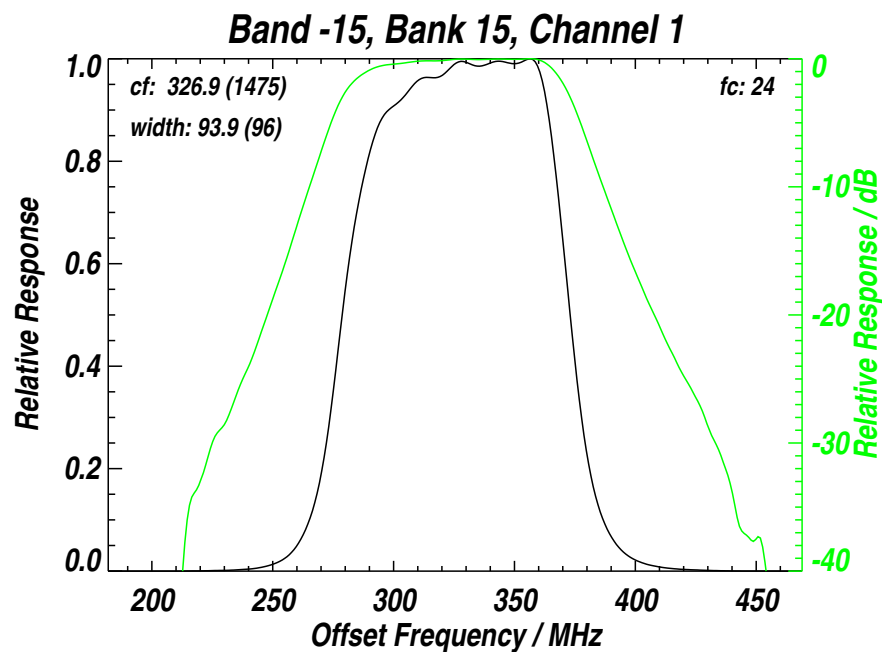


Figure I.2: 1st IF sweep data for Band 15, channels 1 to 4, plotted as the channels appear in the lower sideband. See text for additional details.

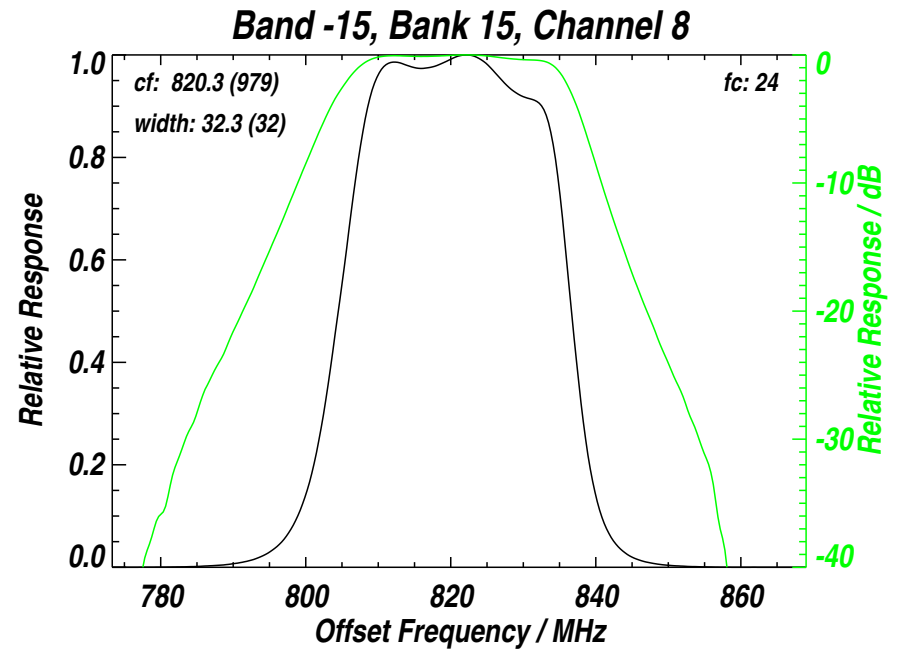
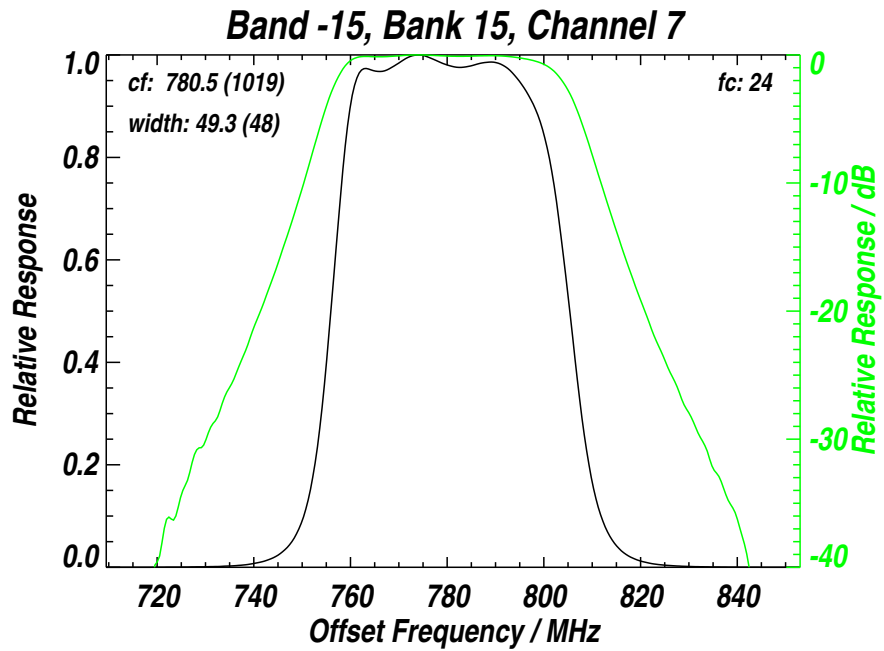
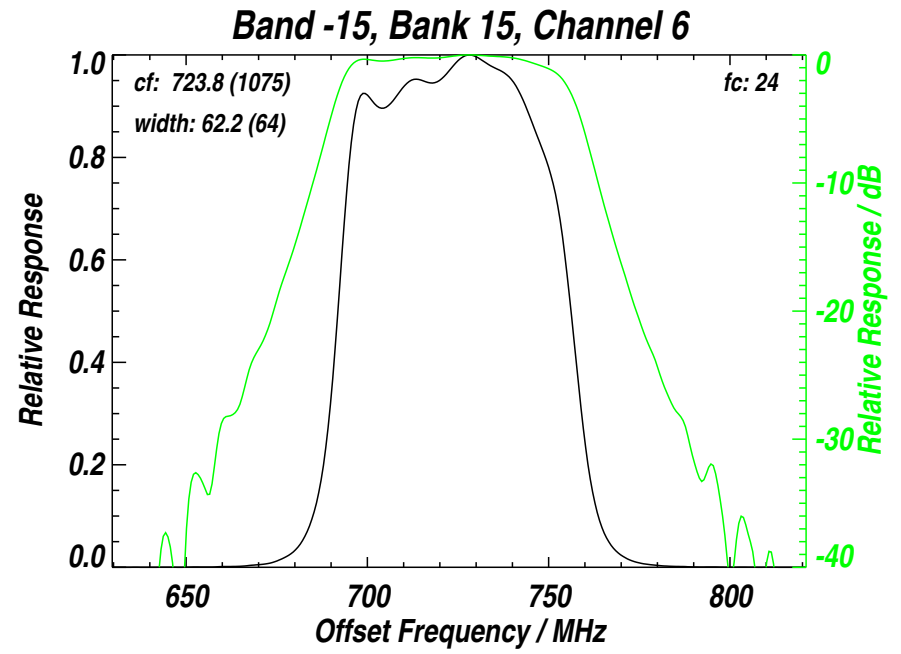
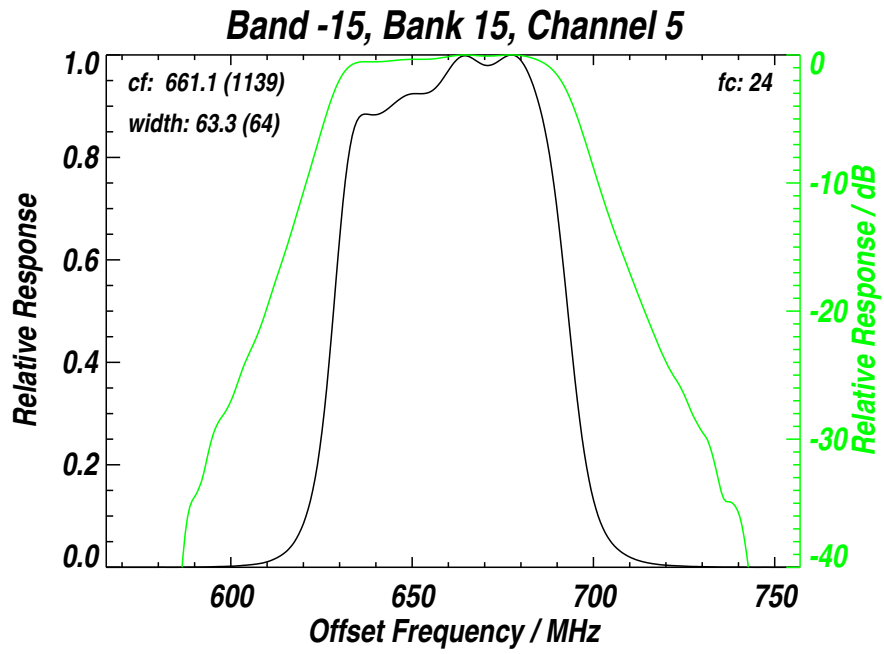


Figure I.3: 1st IF sweep data for Band 15, channels 5 to 8, plotted as the channels appear in the lower sideband. See text for additional details.

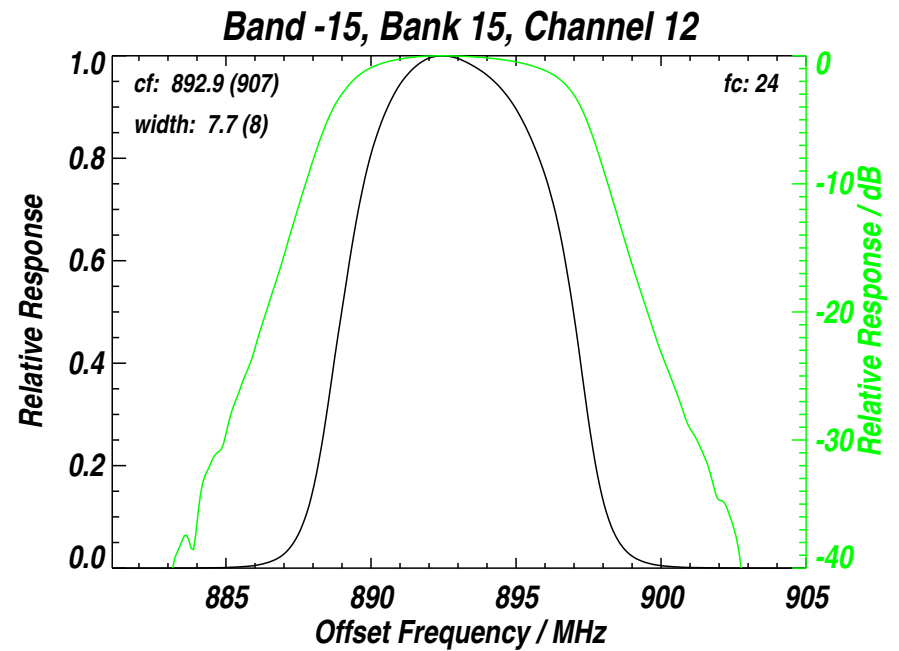
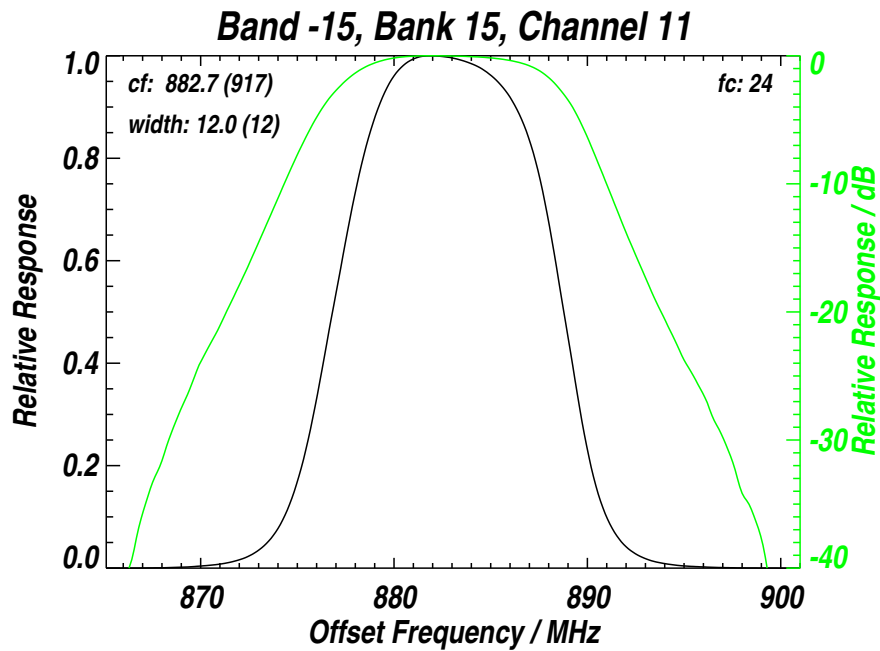
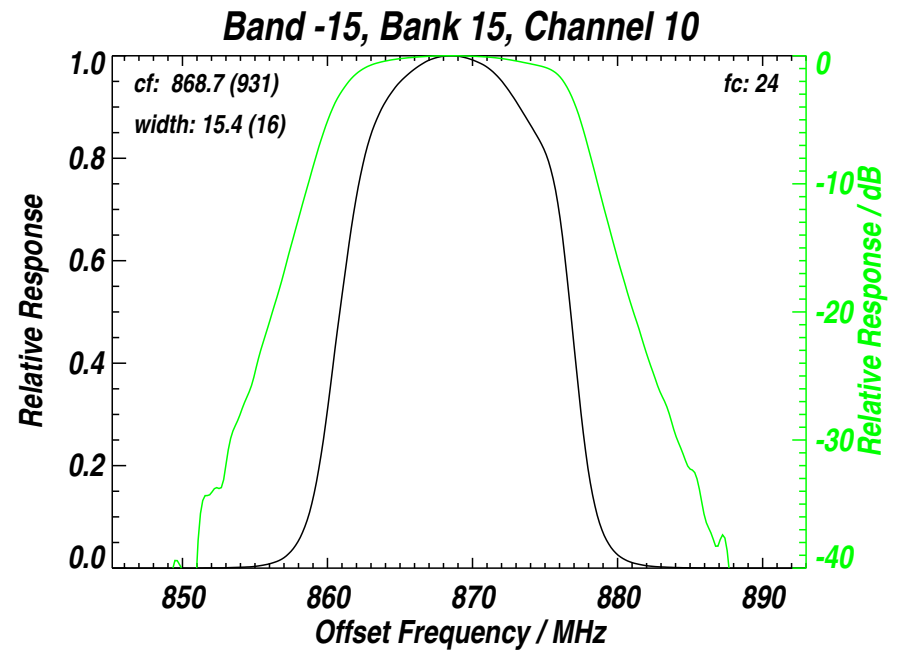
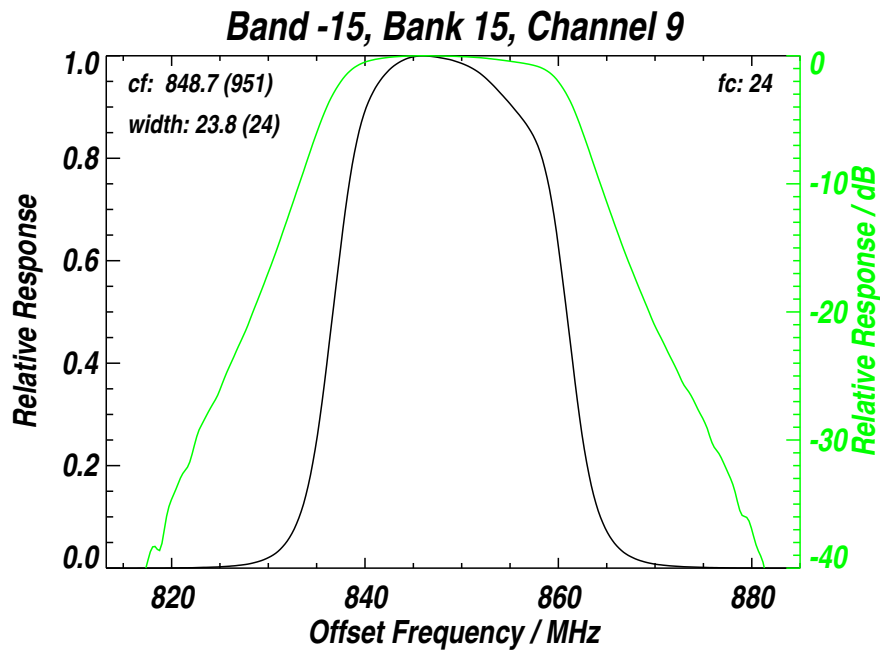


Figure I.4: 1st IF sweep data for Band 15, channels 9 to 12, plotted as the channels appear in the lower sideband. See text for additional details.



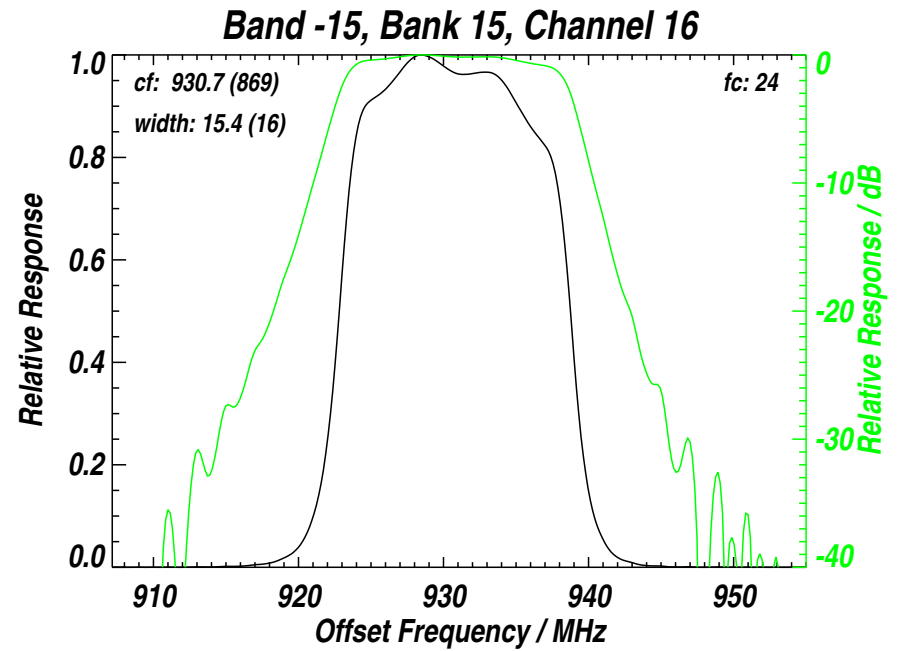
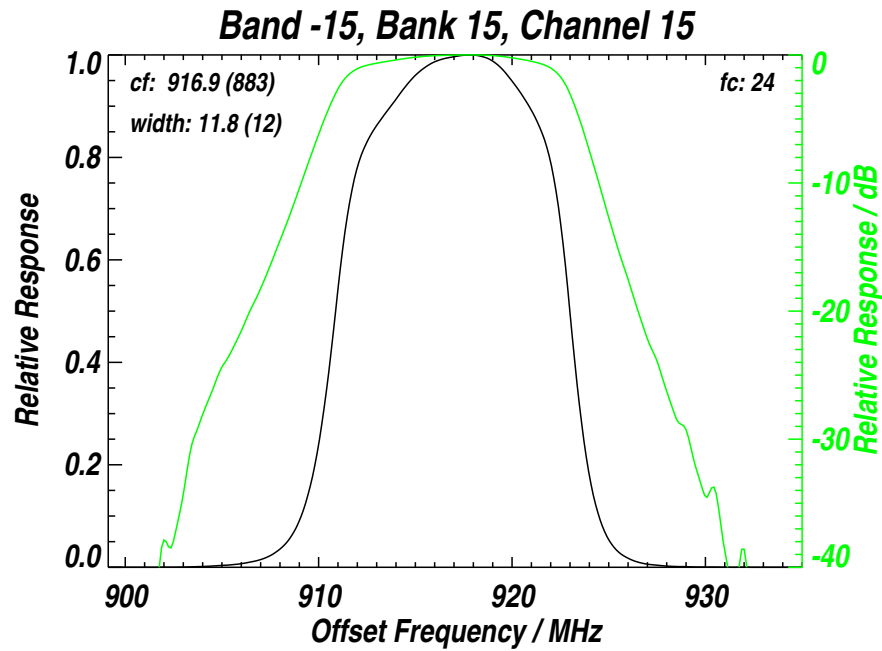
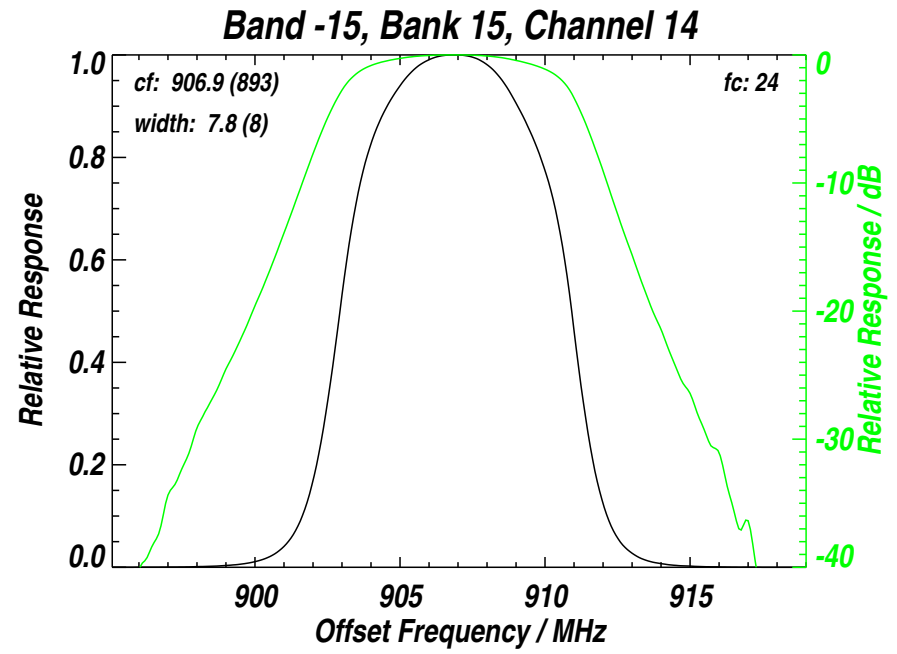
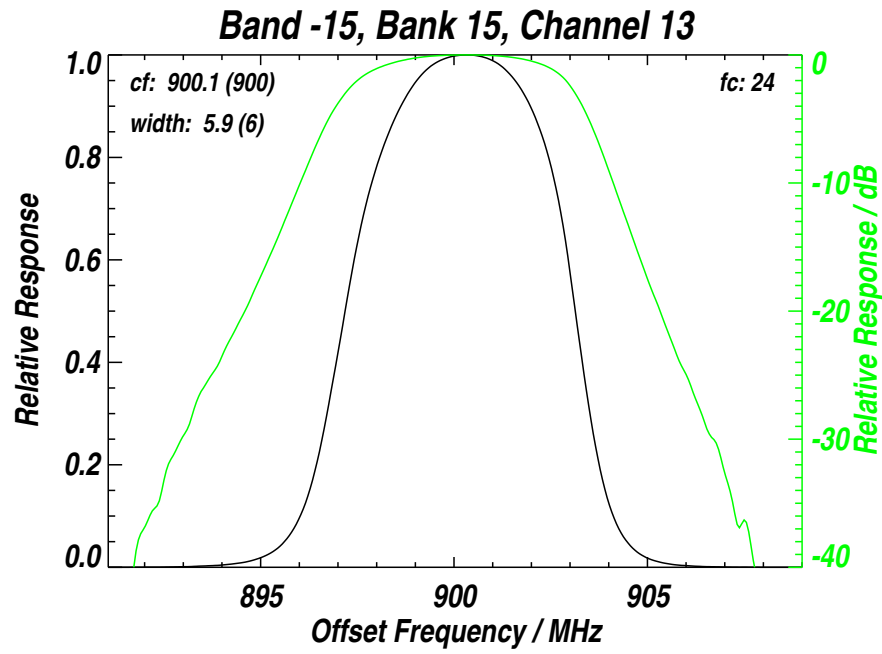


Figure I.5: 1st IF sweep data for Band 15, channels 13 to 16, plotted as the channels appear in the lower sideband. See text for additional details.

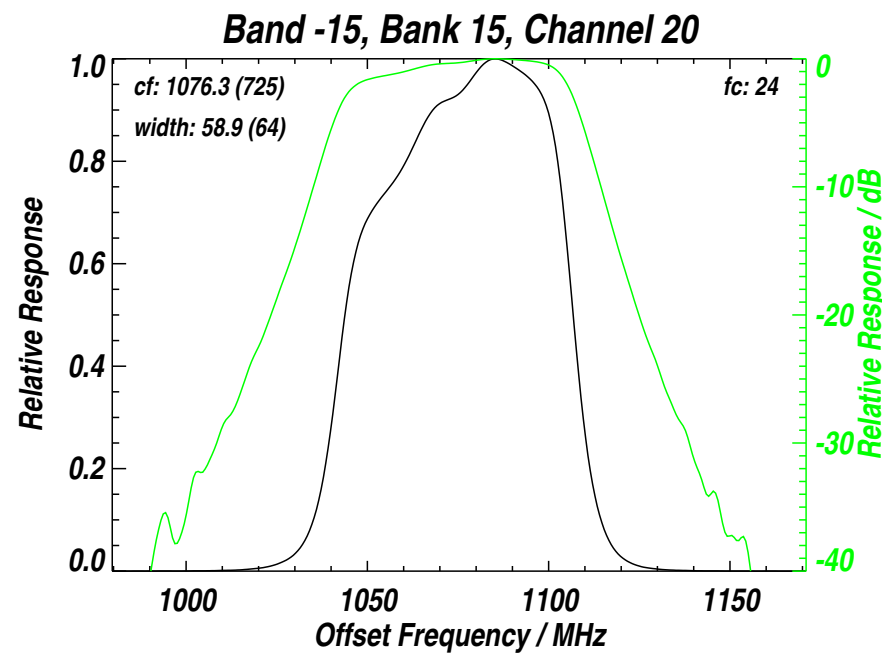
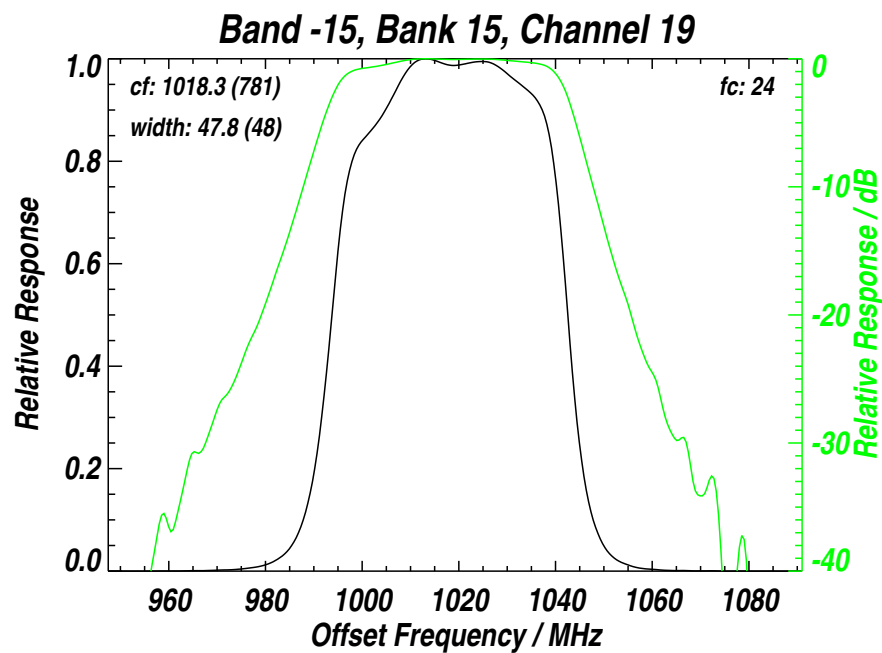
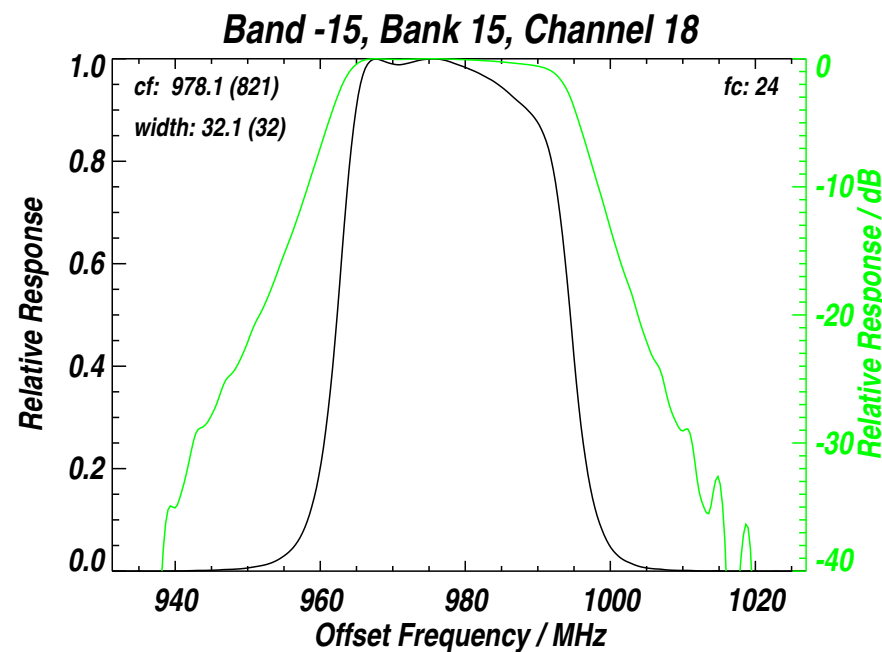
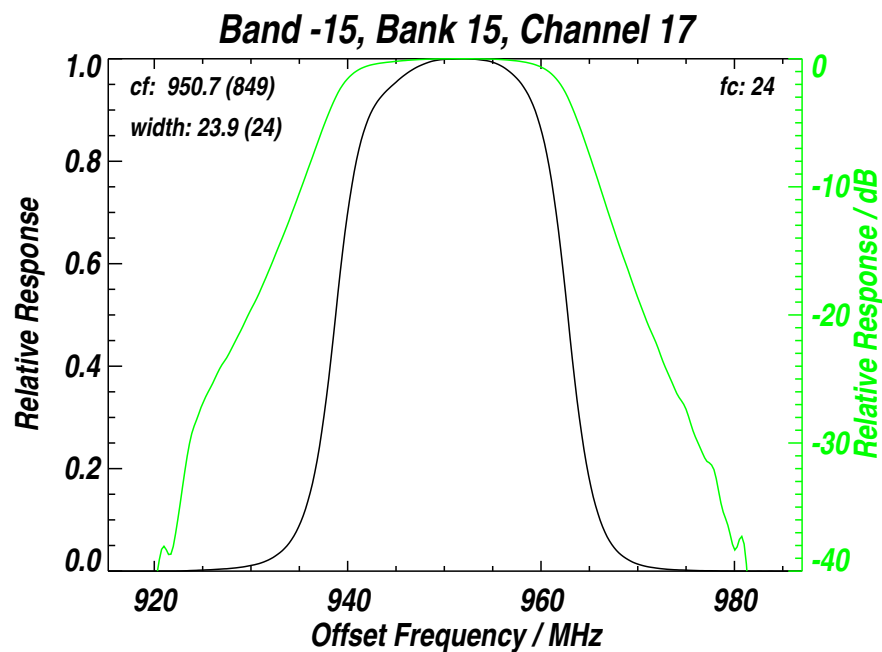


Figure I.6: 1st IF sweep data for Band 15, channels 17 to 20, plotted as the channels appear in the lower sideband. See text for additional details.

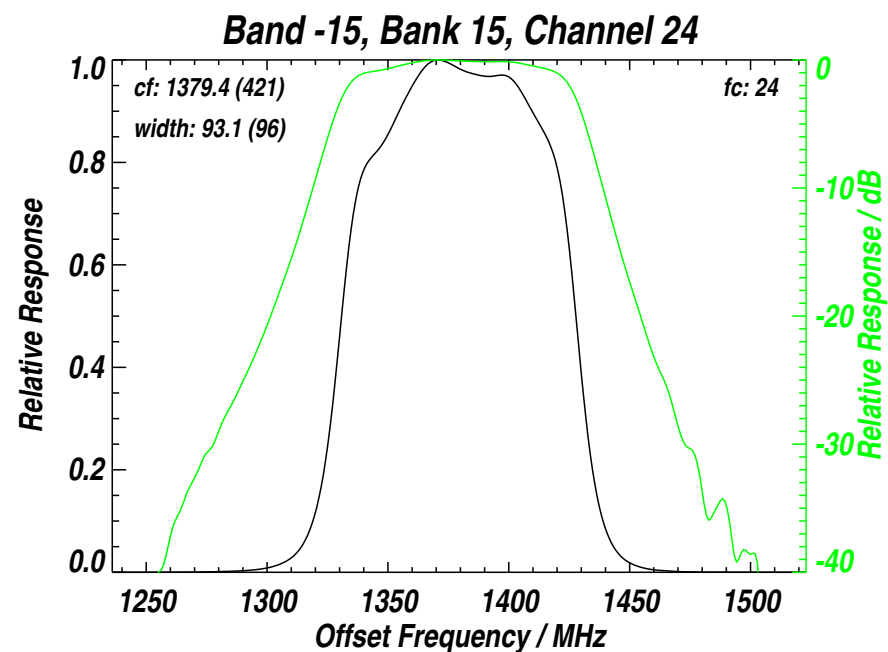
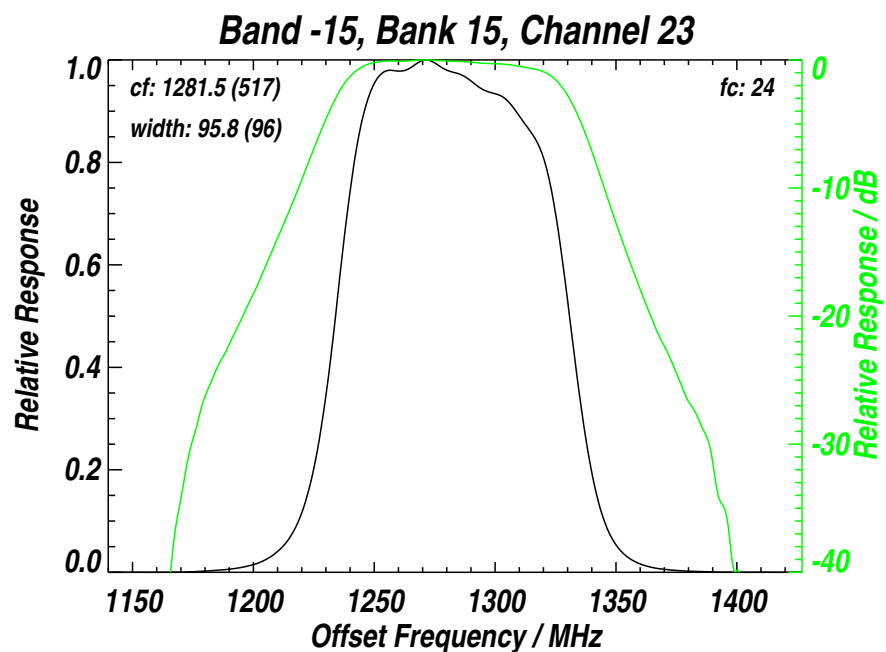
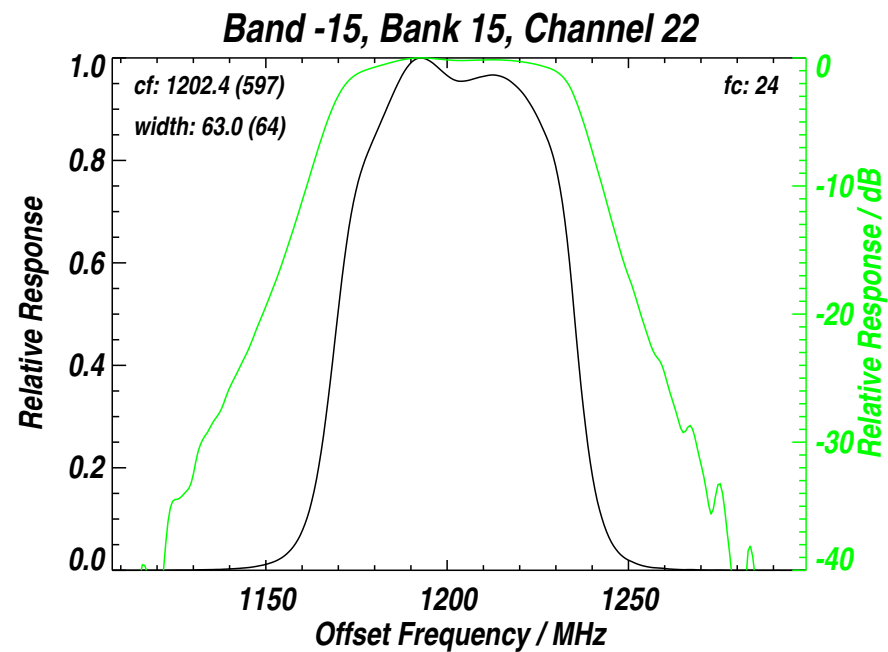
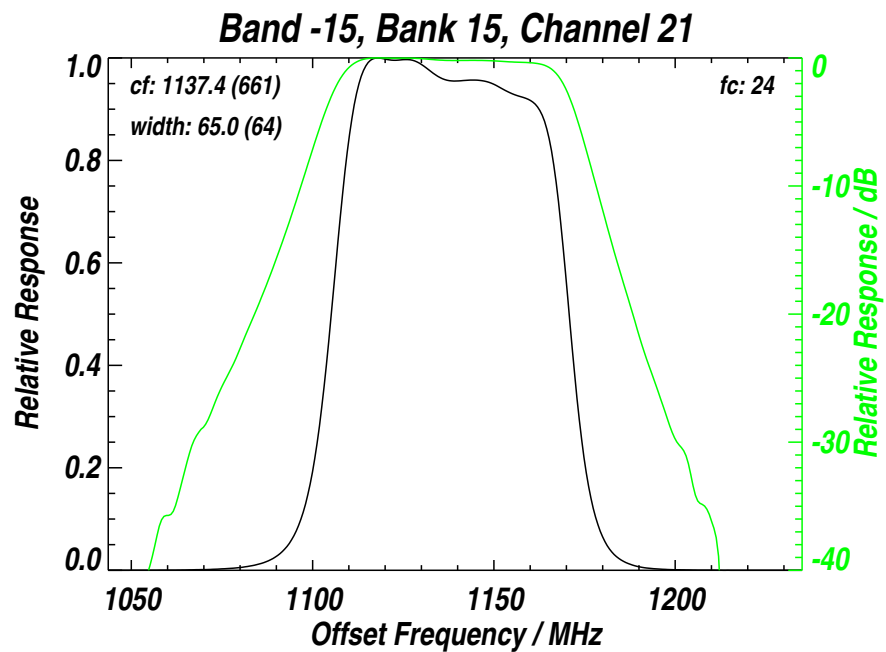
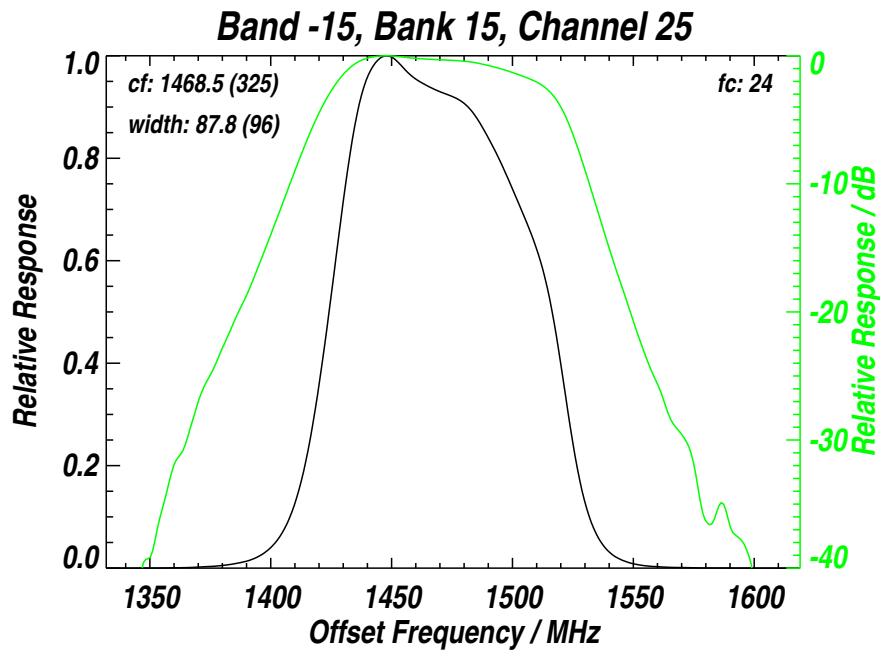


Figure I.7: 1st IF sweep data for Band 15, channels 21 to 24, plotted as the channels appear in the lower sideband. See text for additional details.



**Band 15 (lsb)**  
**Bank 15**  
**Origin = 2513.473500000 GHz**

Figure I.8: 1st IF sweep data for Band 15, channel 25, plotted as the channel appears in the lower sideband. See text for additional details.

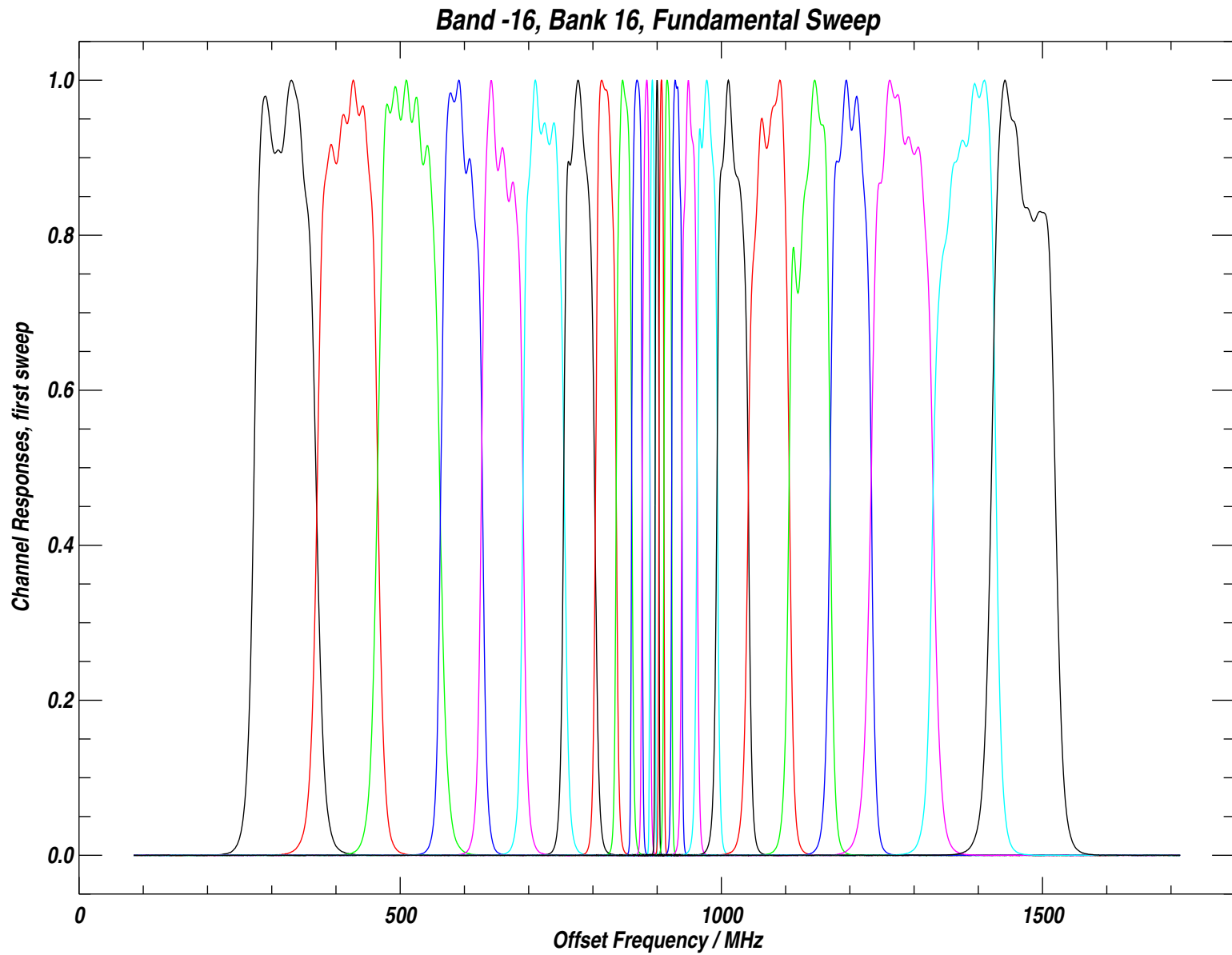


Figure I.9: 1st. IF sweep data for Band 16, plotted as the channels appear in the lower sideband. See text for additional details.

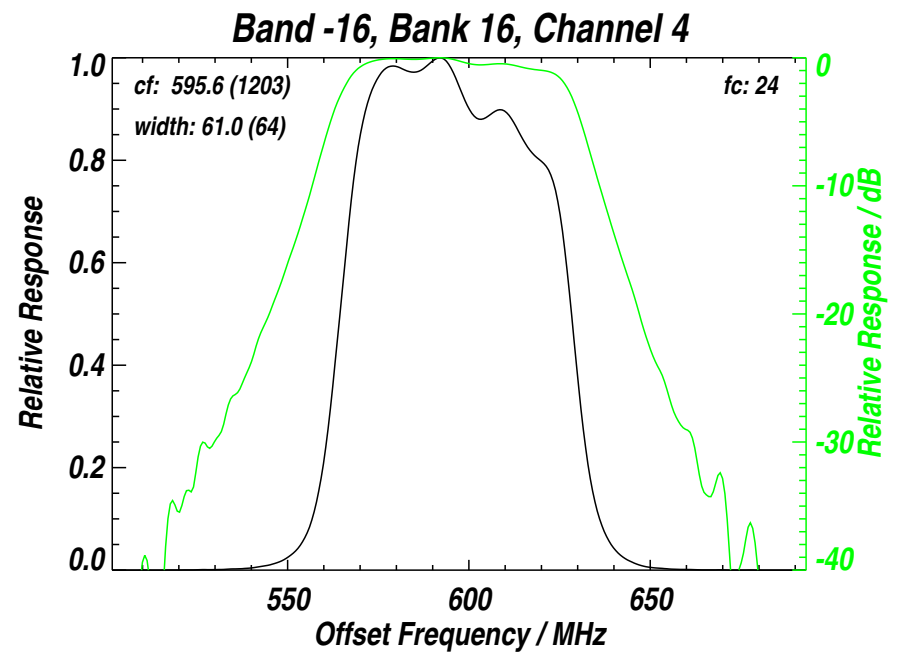
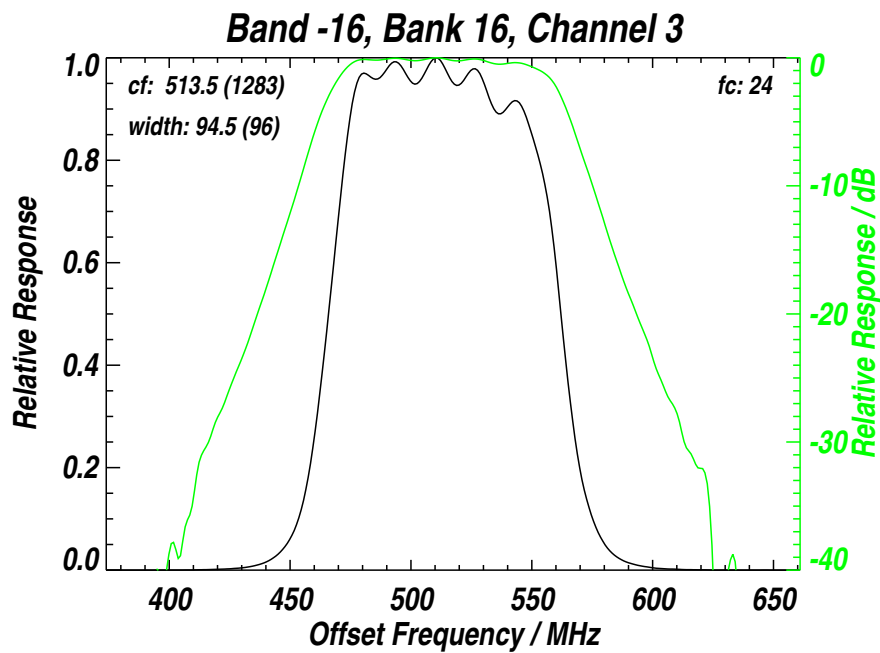
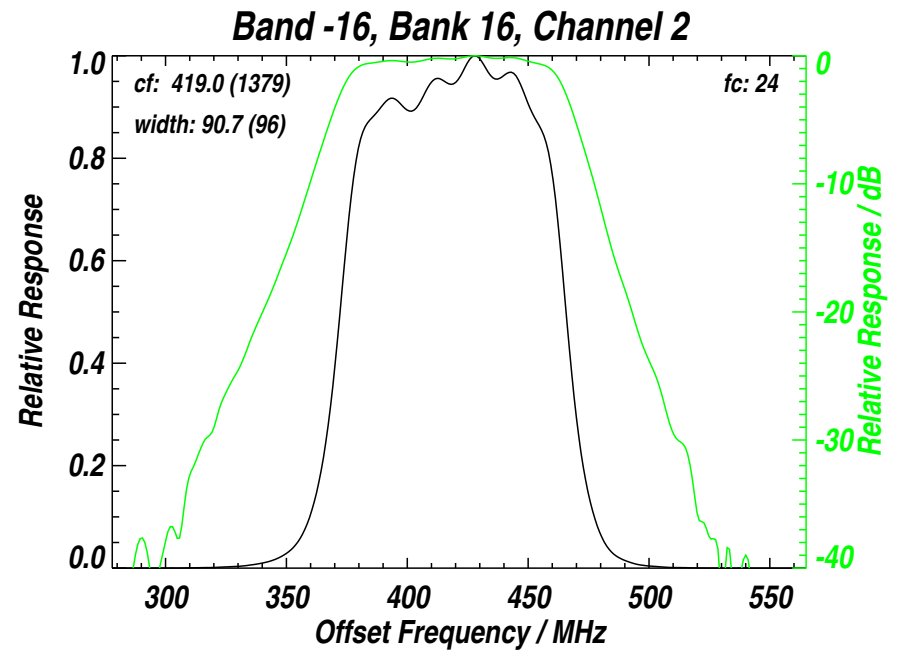
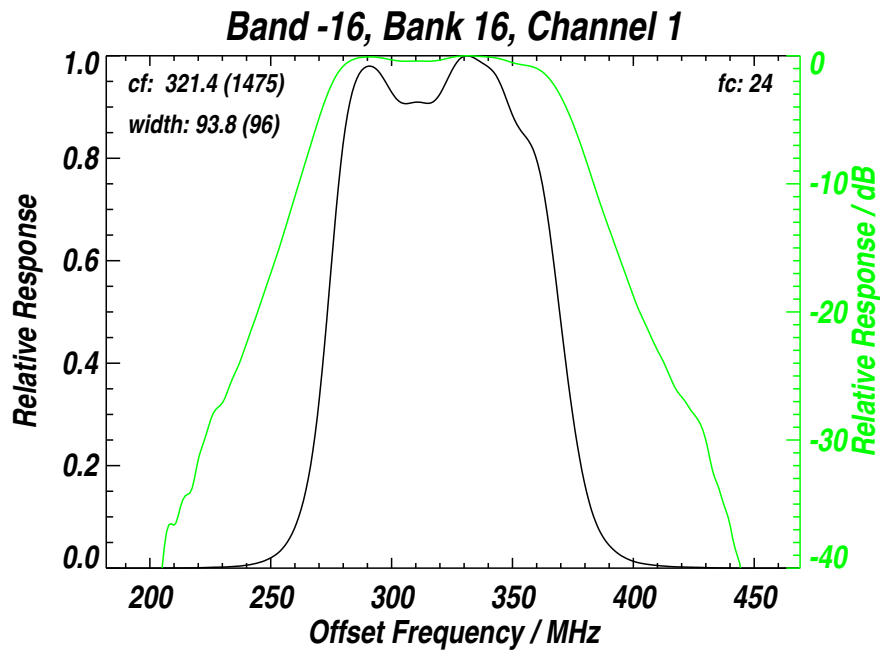


Figure I.10: 1st IF sweep data for Band 16, channels 1 to 4, plotted as the channels appear in the lower sideband. See text for additional details.

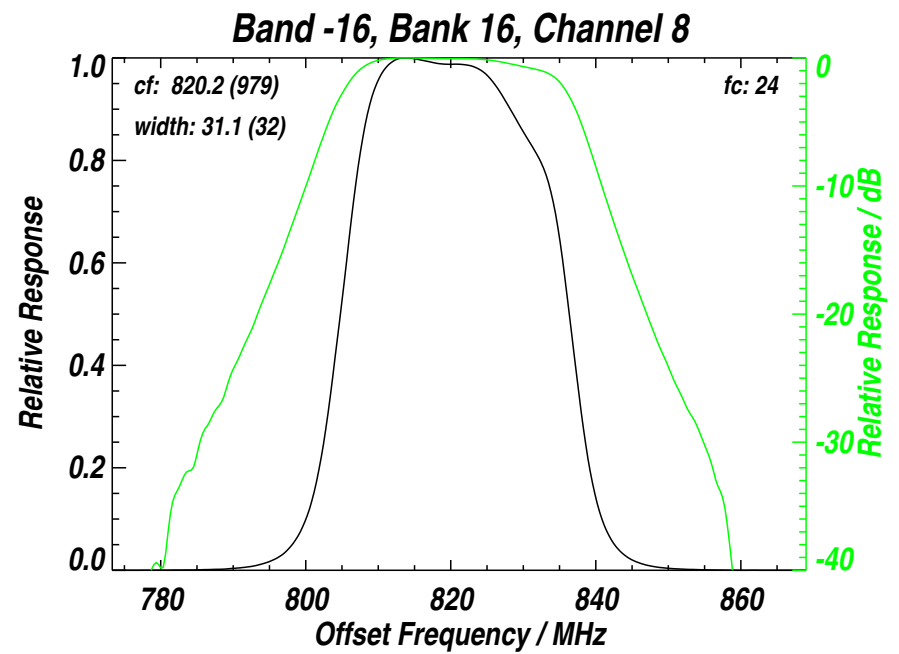
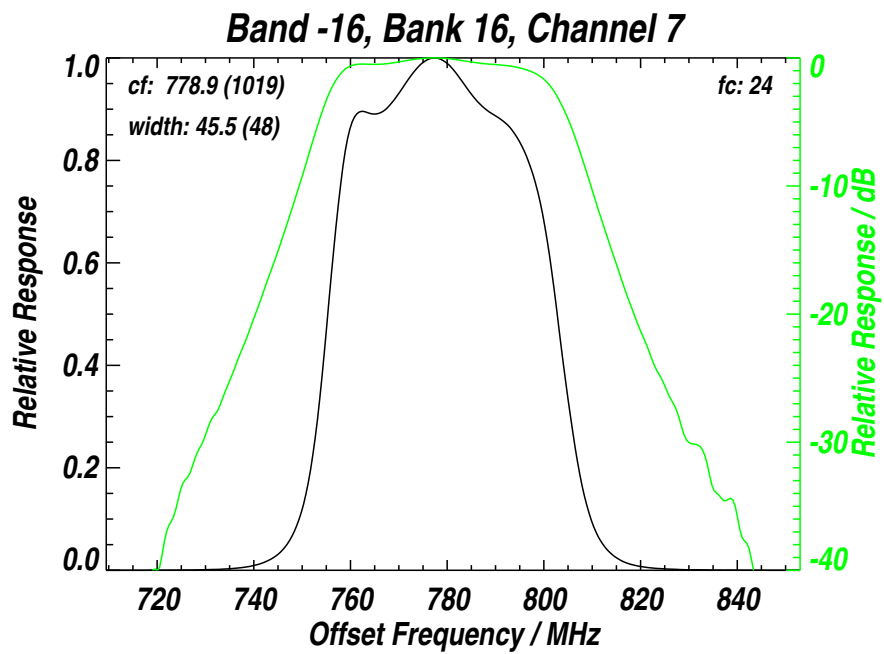
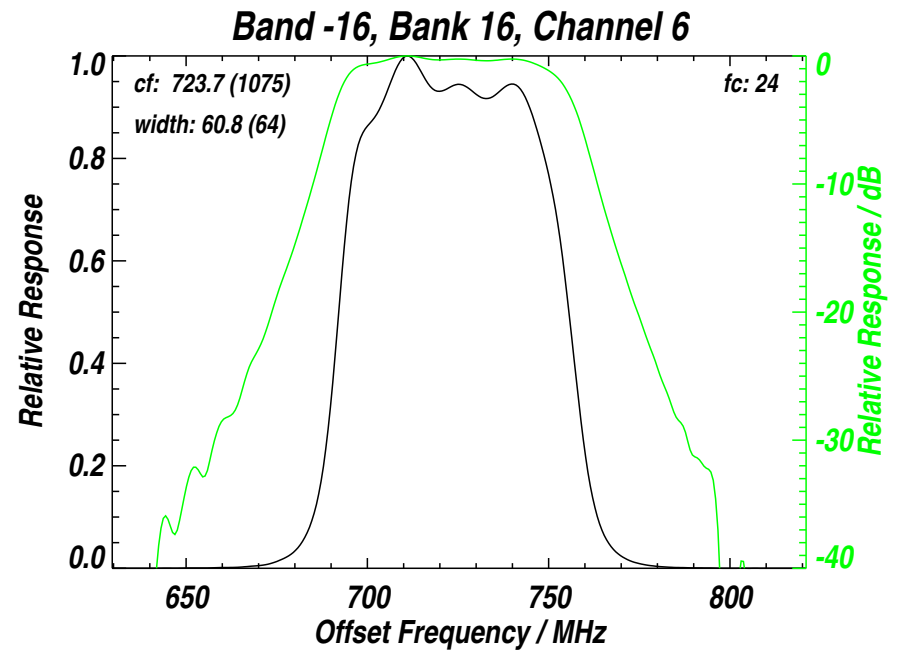
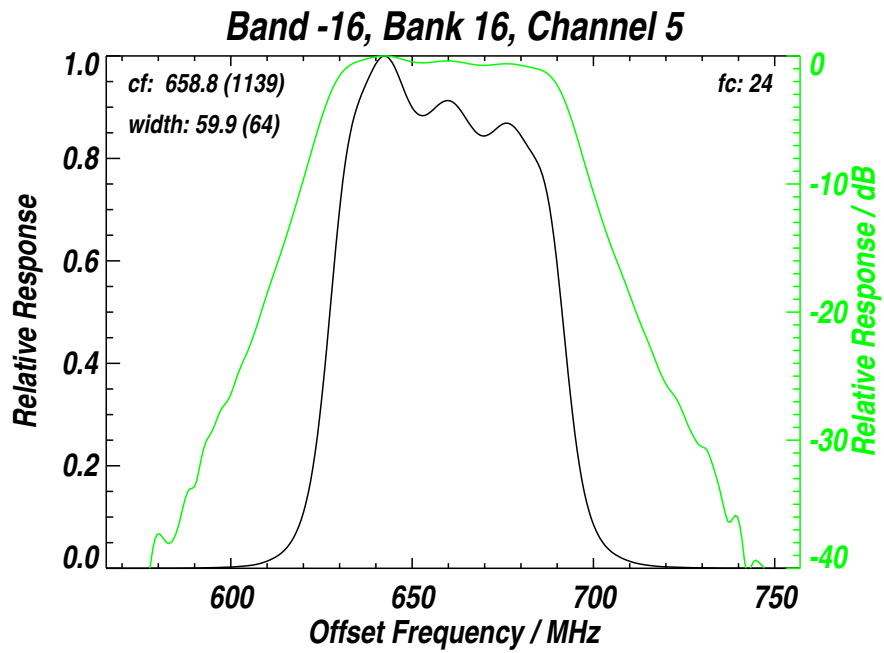


Figure I.11: 1st IF sweep data for Band 16, channels 5 to 8, plotted as the channels appear in the lower sideband. See text for additional details.

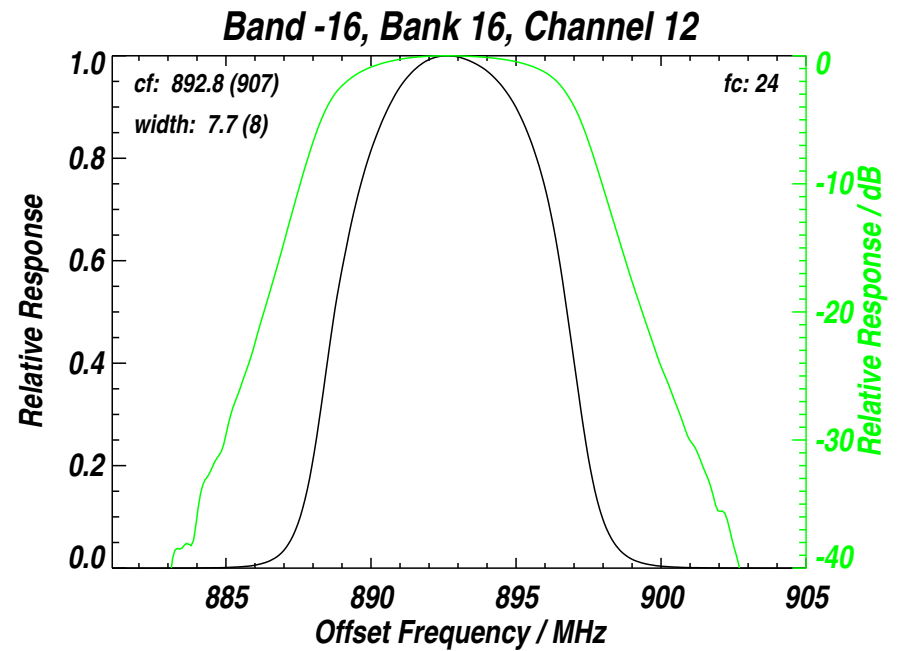
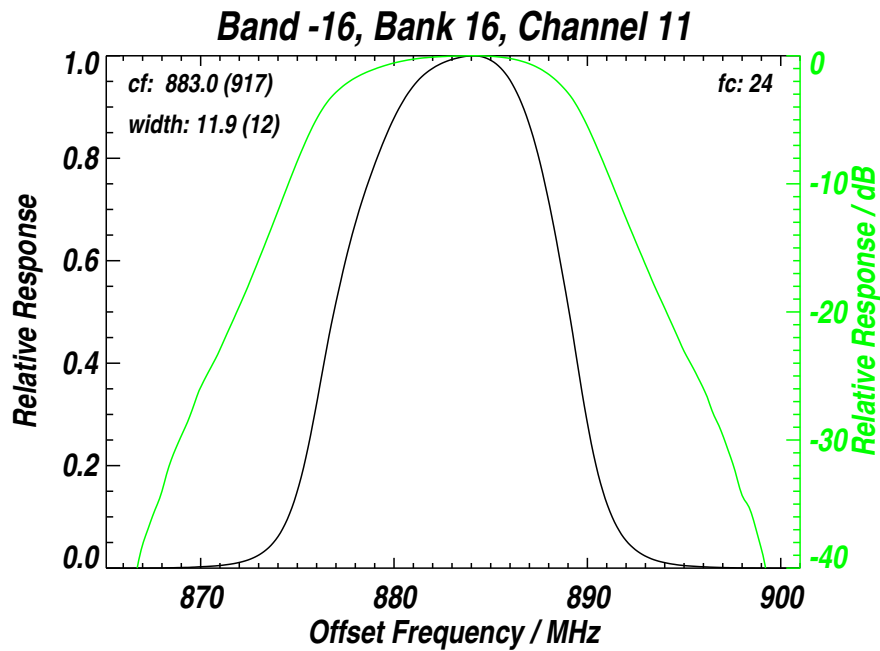
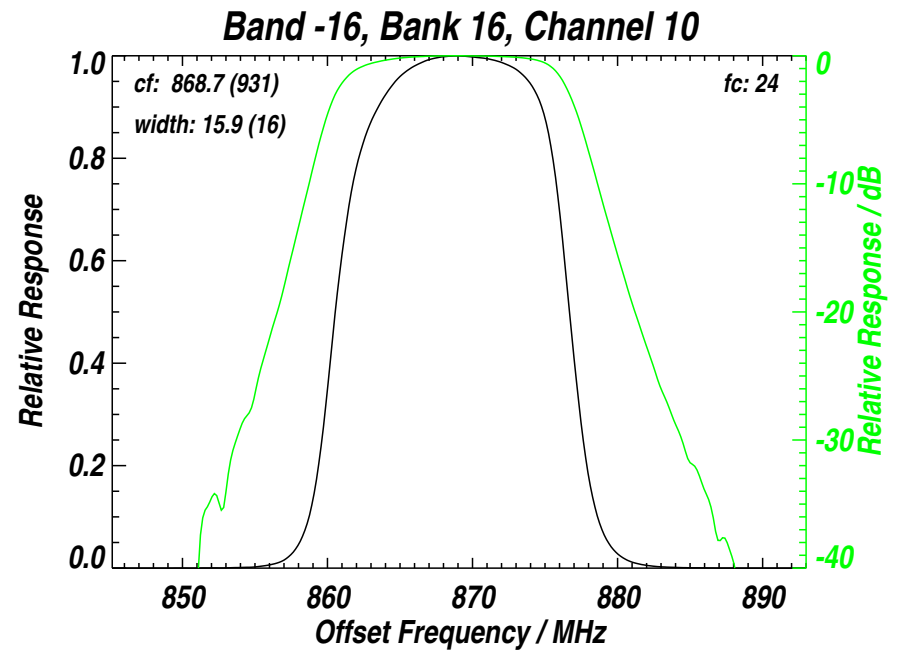
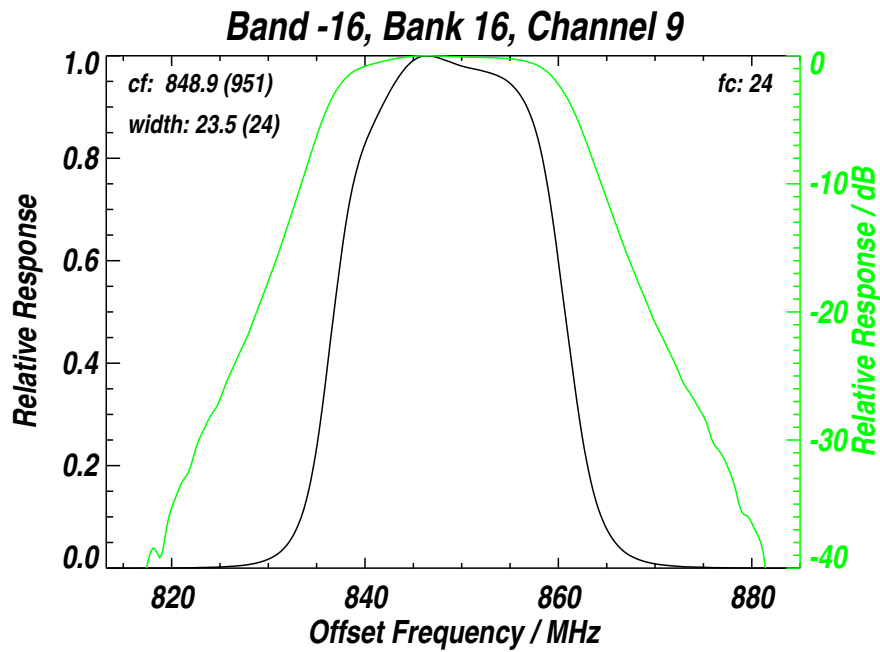


Figure I.12: 1st IF sweep data for Band 16, channels 9 to 12, plotted as the channels appear in the lower sideband. See text for additional details.



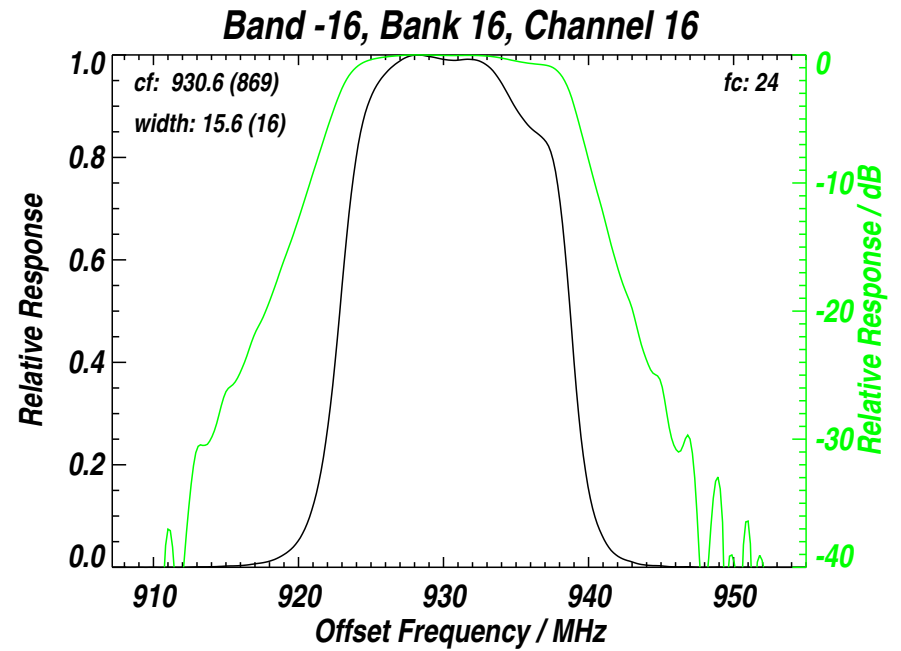
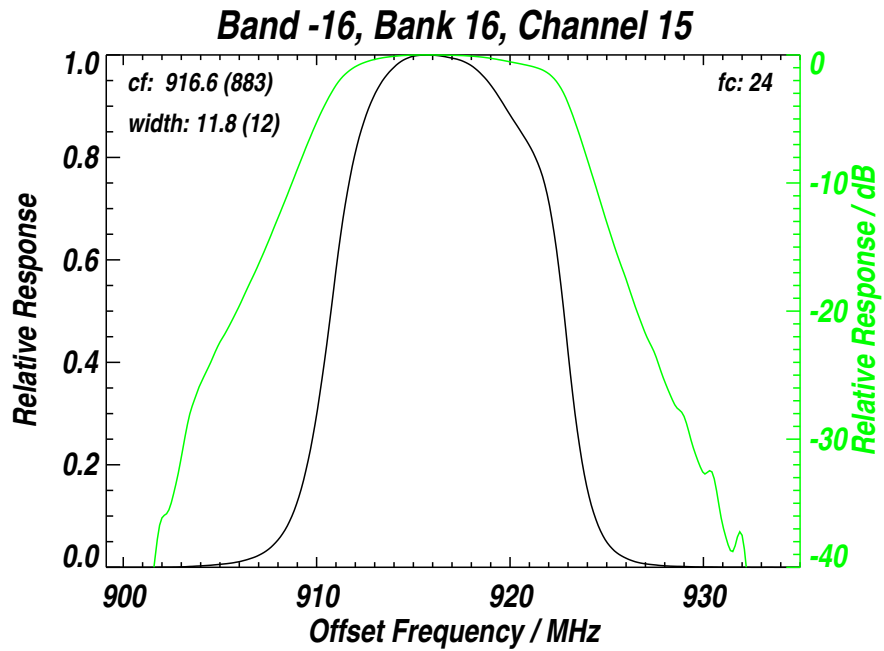
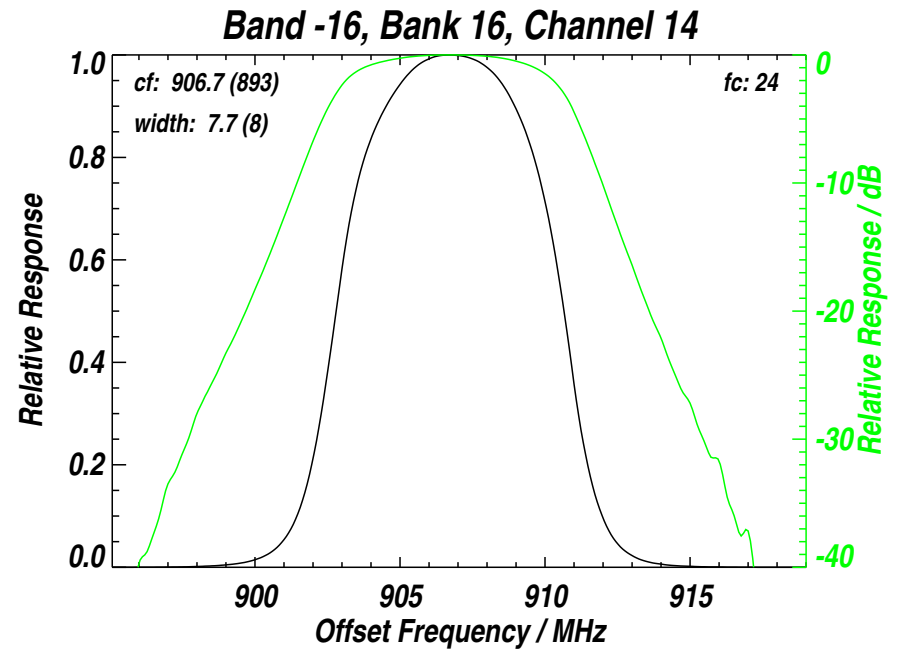
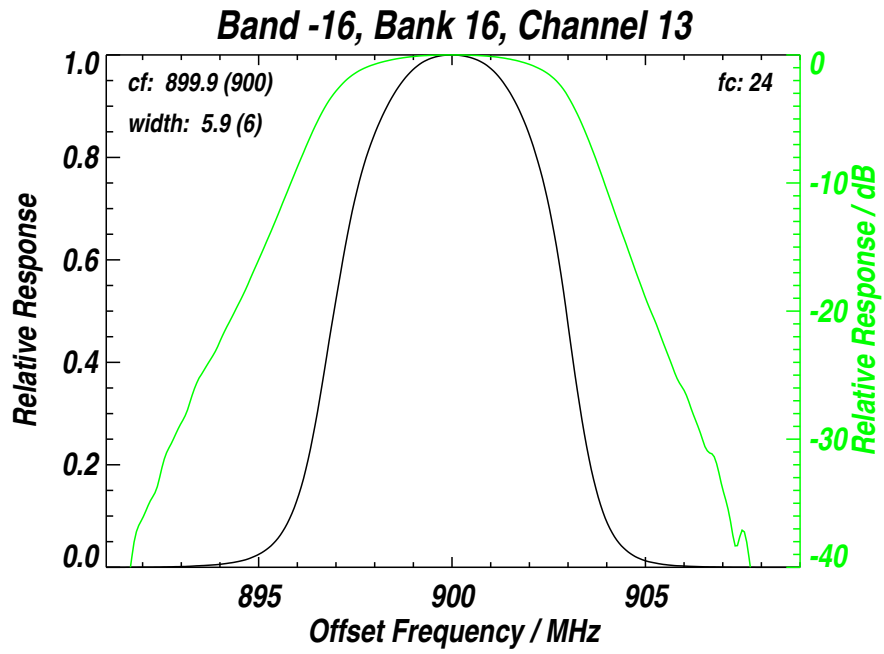


Figure I.13: 1st IF sweep data for Band 16, channels 13 to 16, plotted as the channels appear in the lower sideband. See text for additional details.

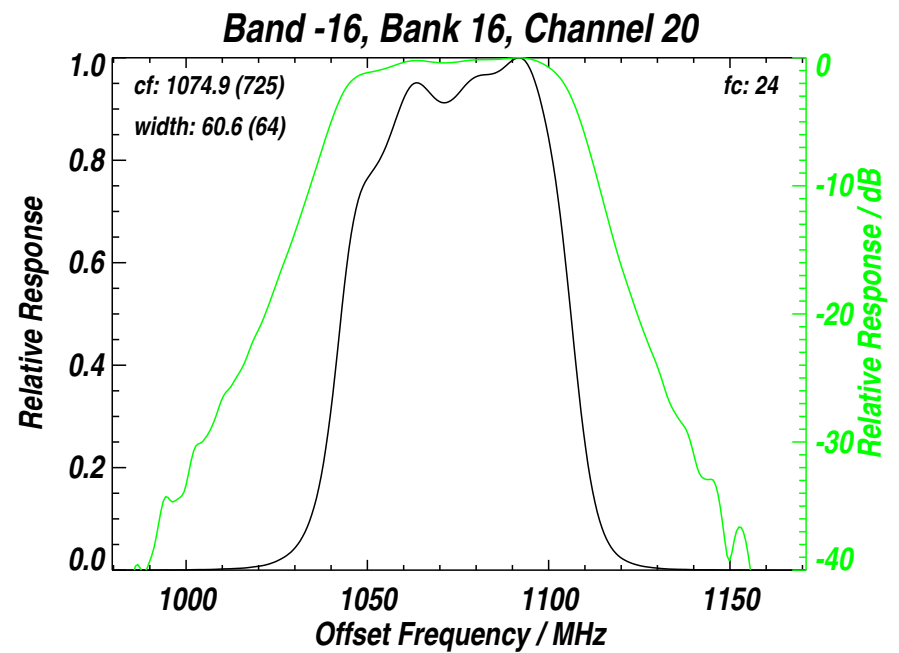
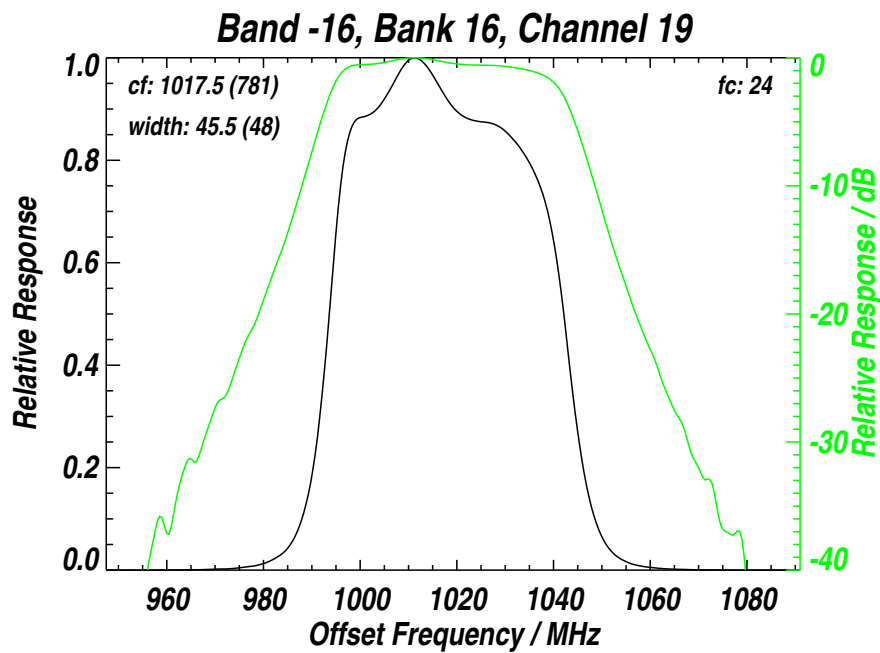
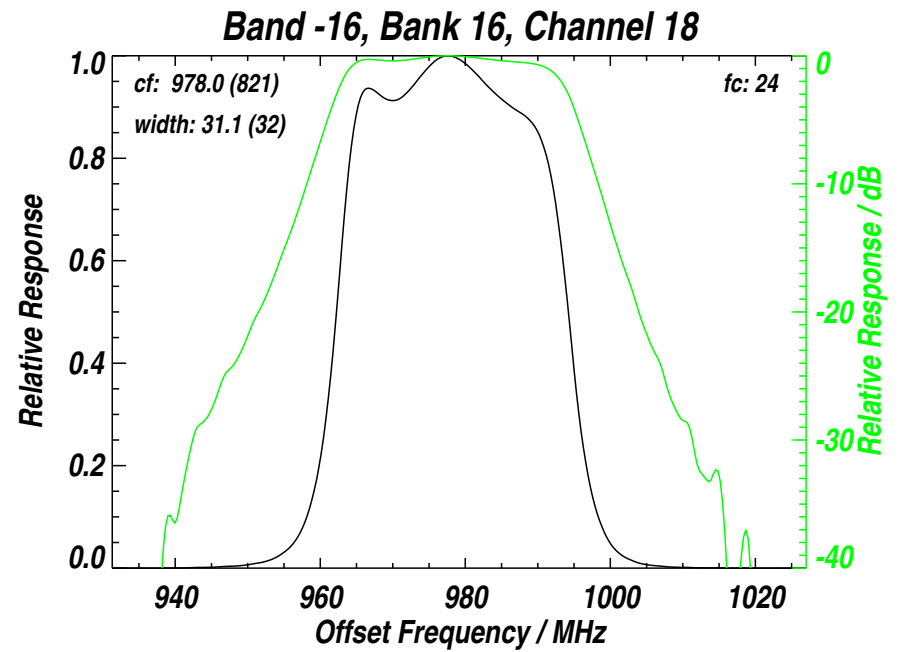
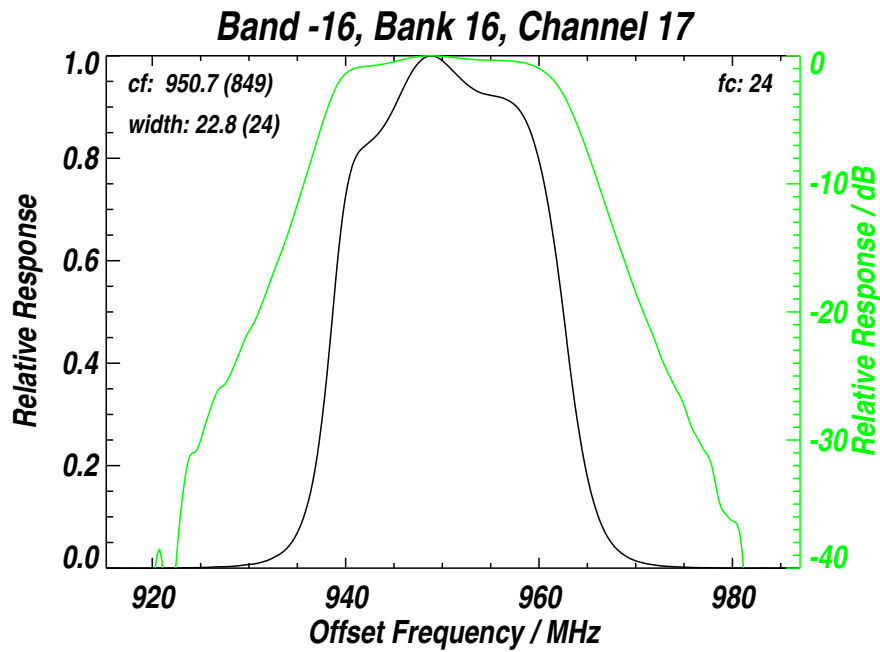


Figure I.14: 1st IF sweep data for Band 16, channels 17 to 20, plotted as the channels appear in the lower sideband. See text for additional details.

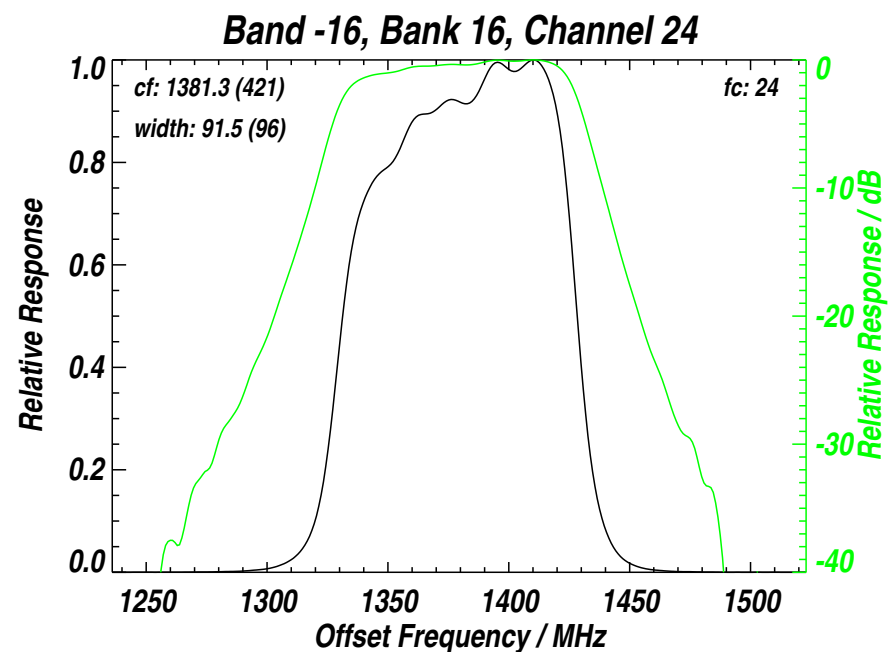
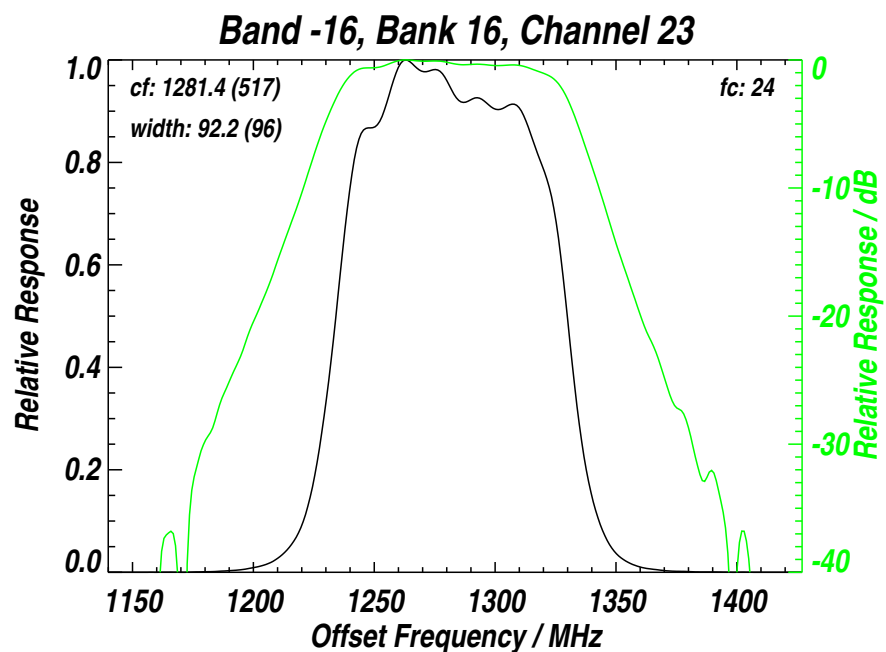
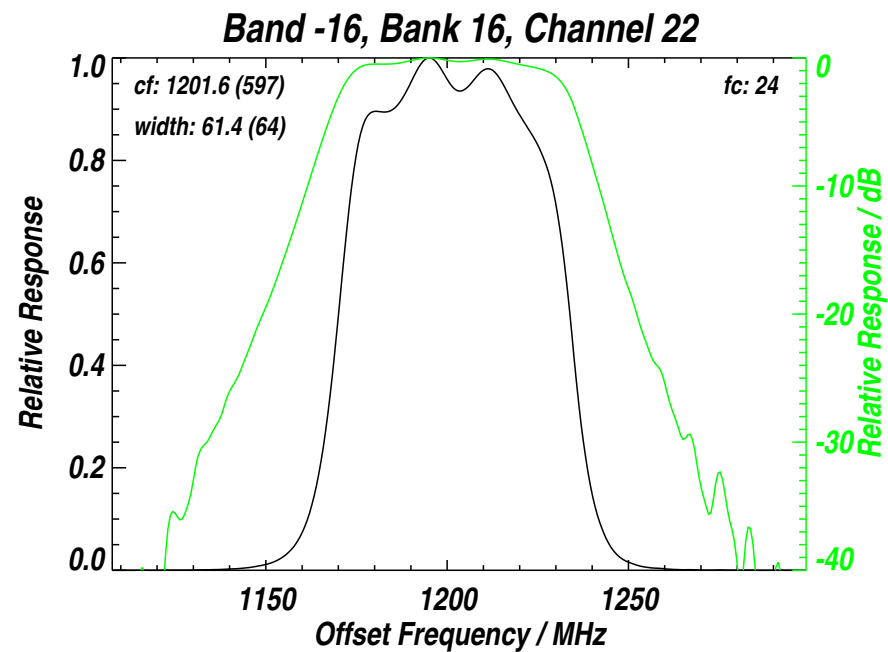
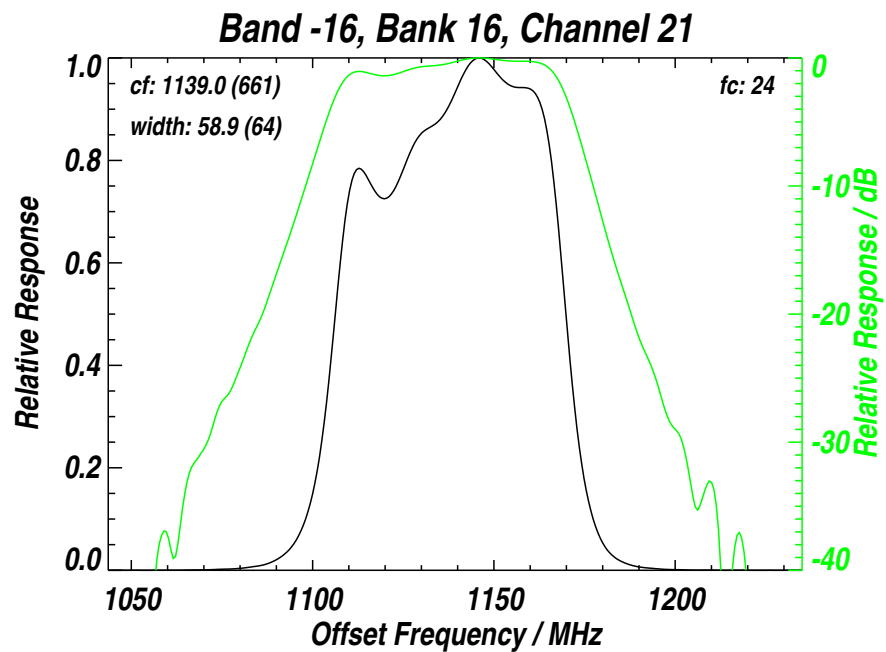
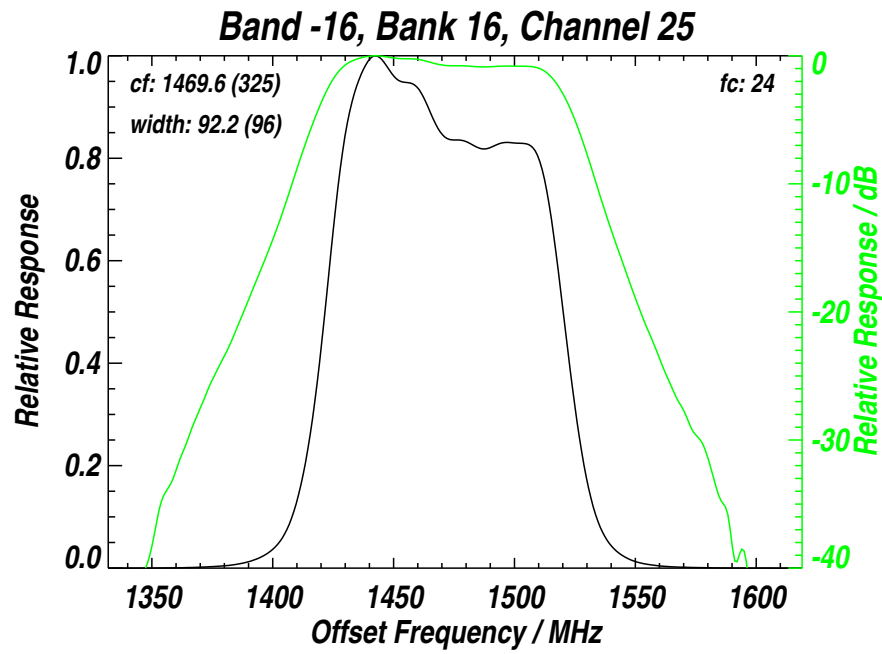


Figure I.15: 1st IF sweep data for Band 16, channels 21 to 24, plotted as the channels appear in the lower sideband. See text for additional details.



**Band 16 (lsb)**  
**Bank 16**  
**Origin = 2509.105700000 GHz**

Figure I.16: 1st IF sweep data for Band 16, channel 25, plotted as the channel appears in the lower sideband. See text for additional details.

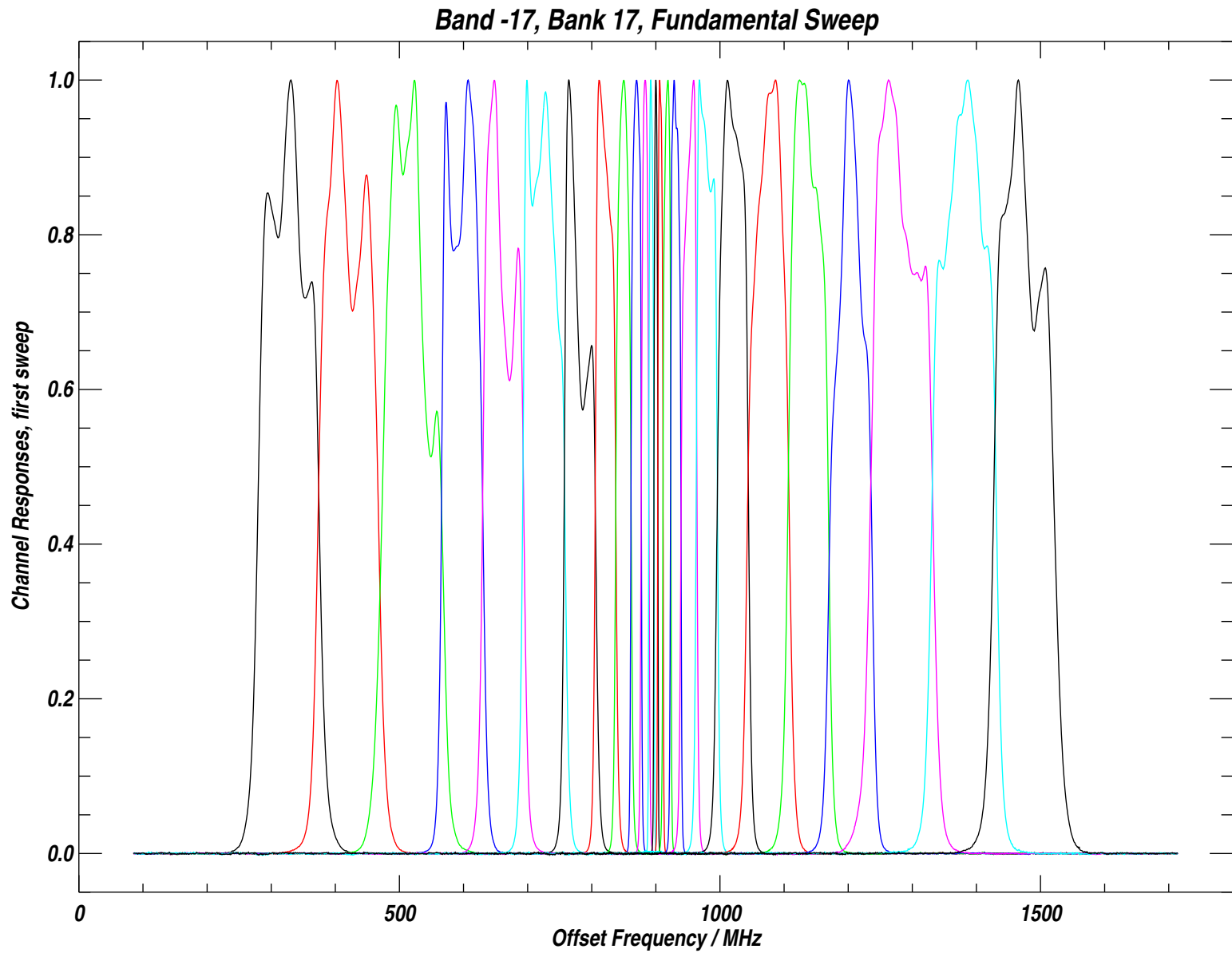


Figure I.17: 1st. IF sweep data for Band 17, plotted as the channels appear in the lower sideband. See text for additional details.

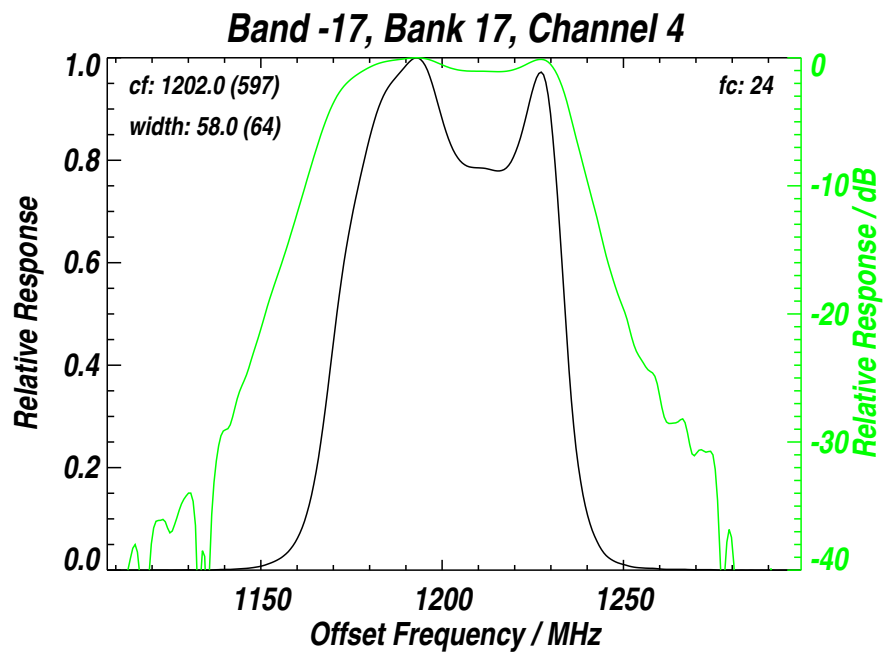
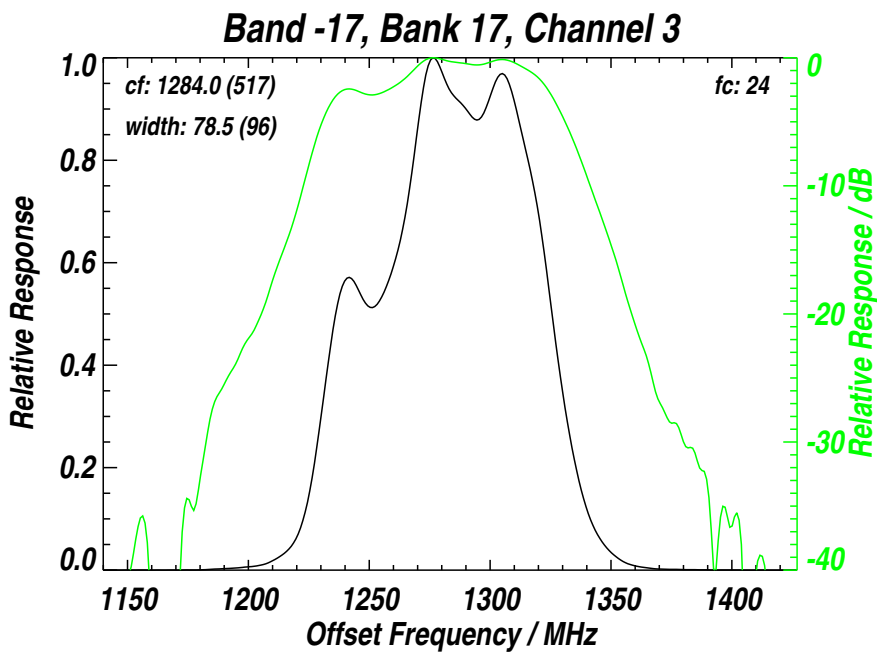
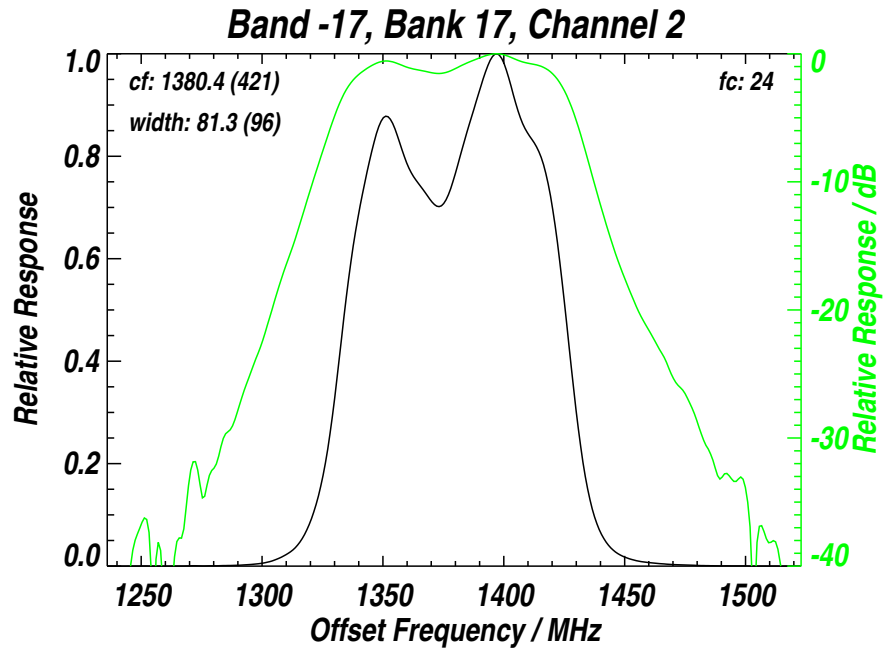
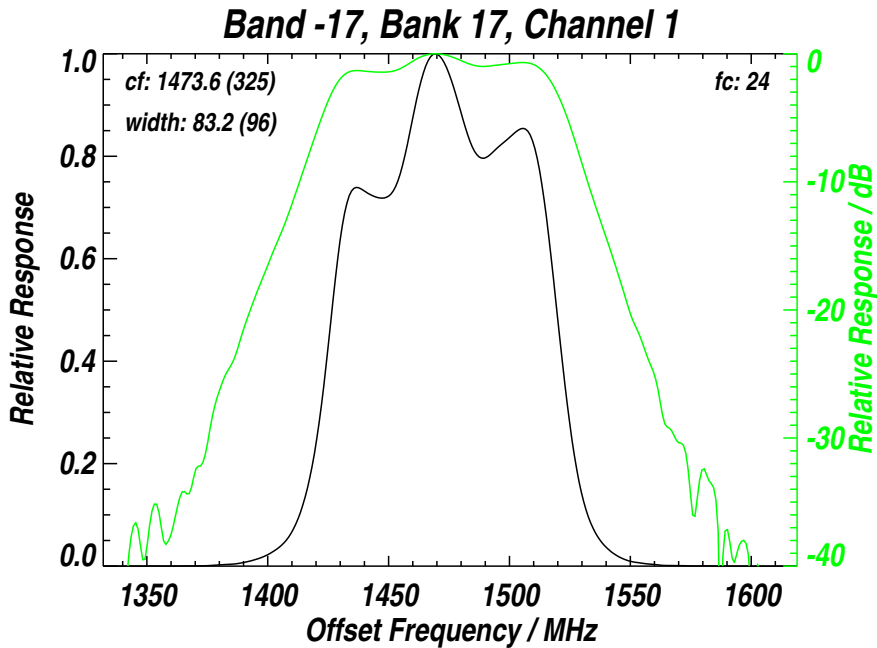


Figure I.18: 1st IF sweep data for Band 17, channels 1 to 4, plotted as the channels appear in the lower sideband. See text for additional details.

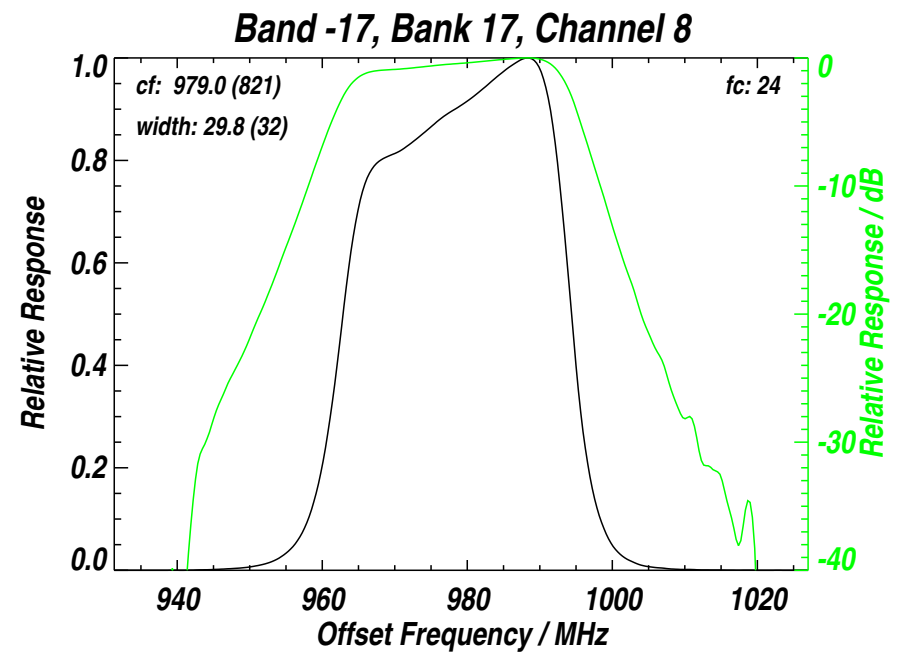
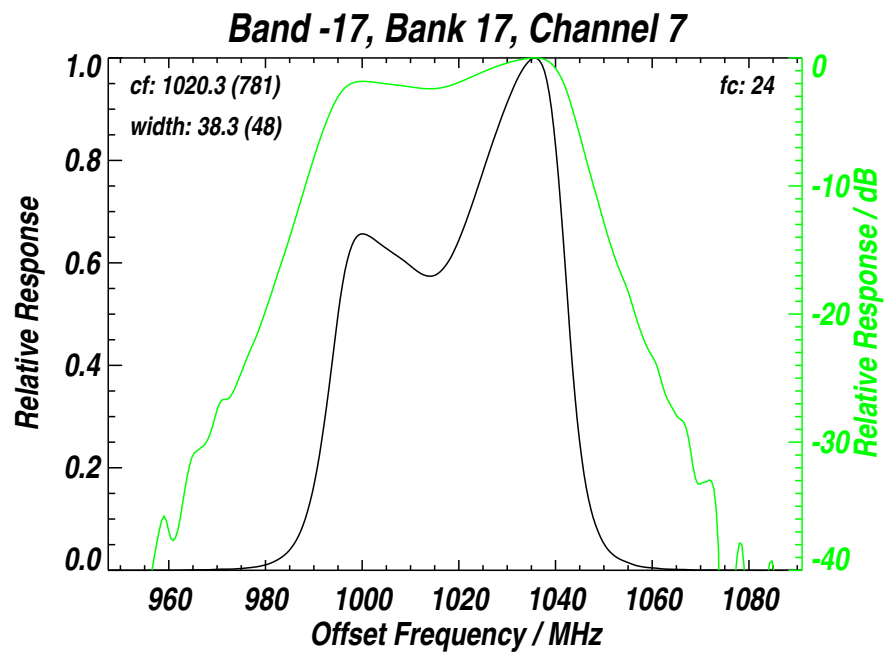
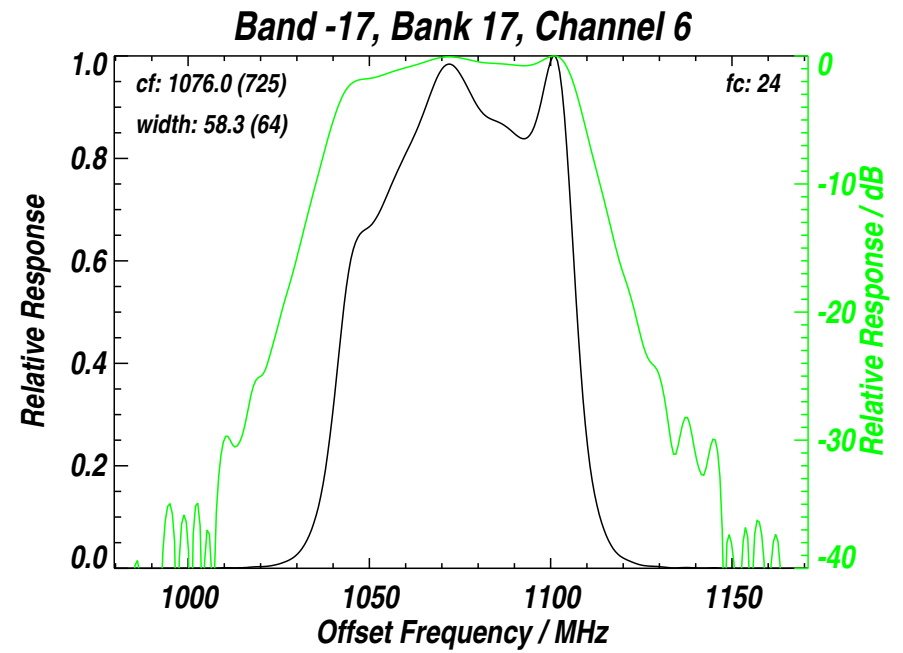
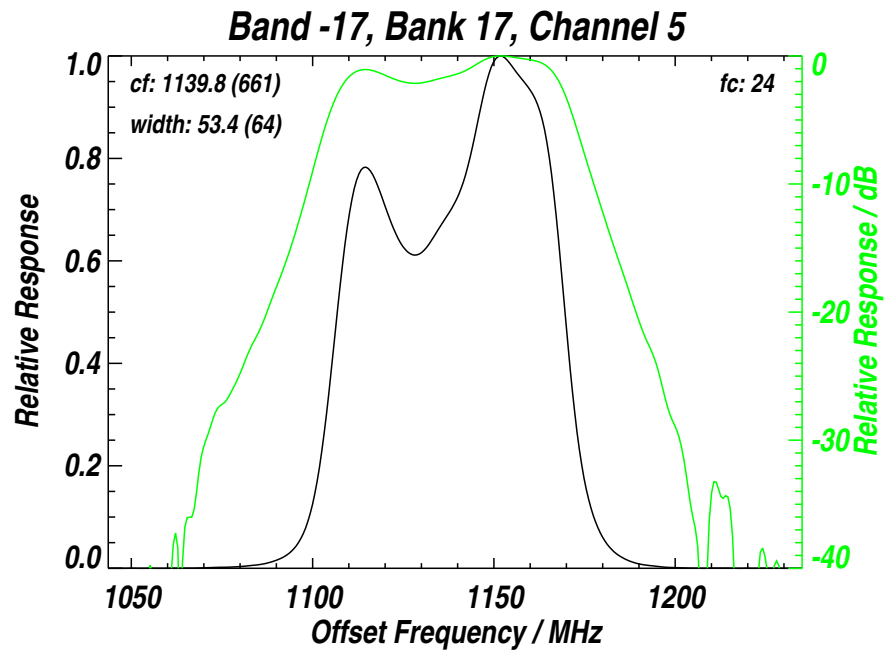


Figure I.19: 1st IF sweep data for Band 17, channels 5 to 8, plotted as the channels appear in the lower sideband. See text for additional details.

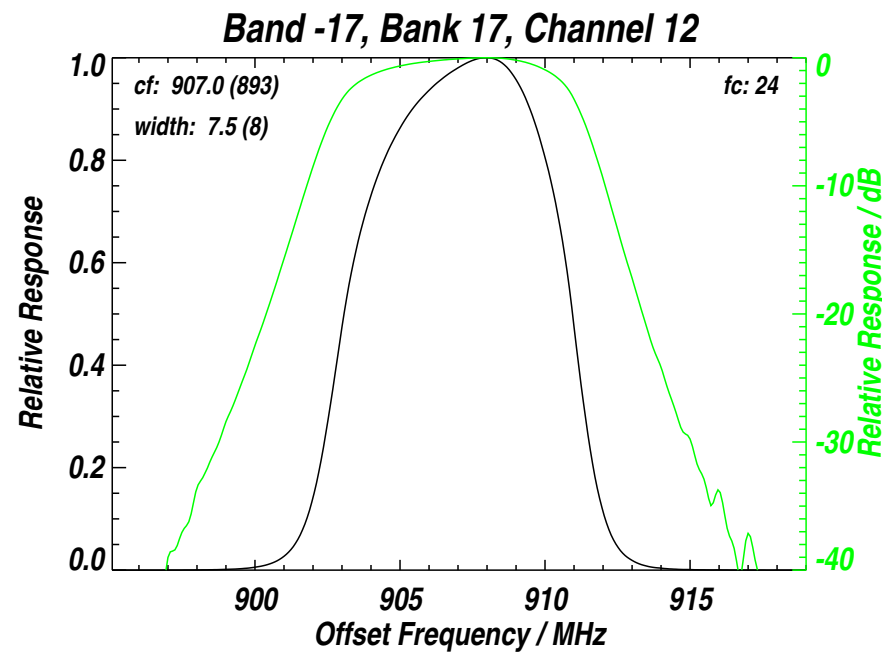
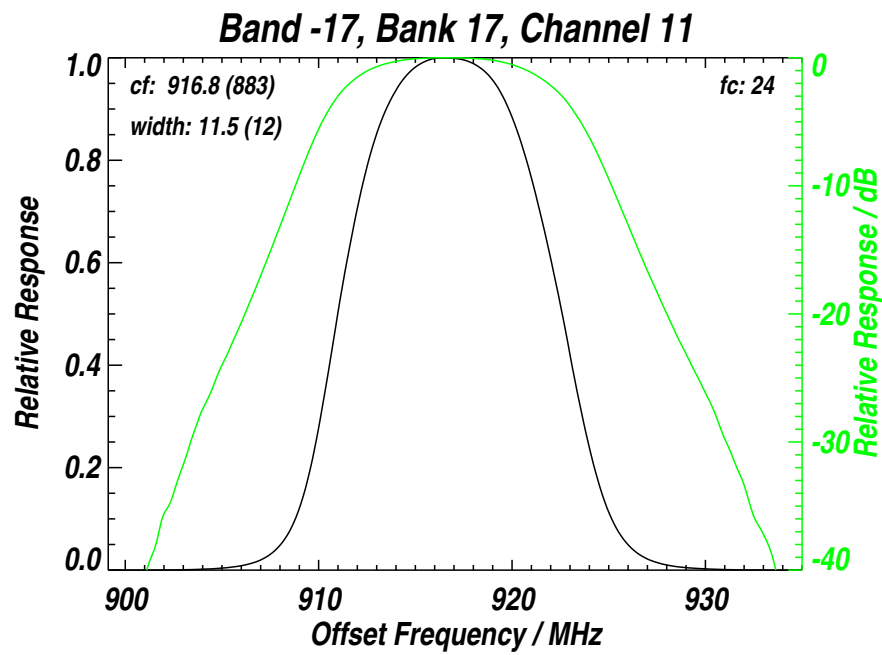
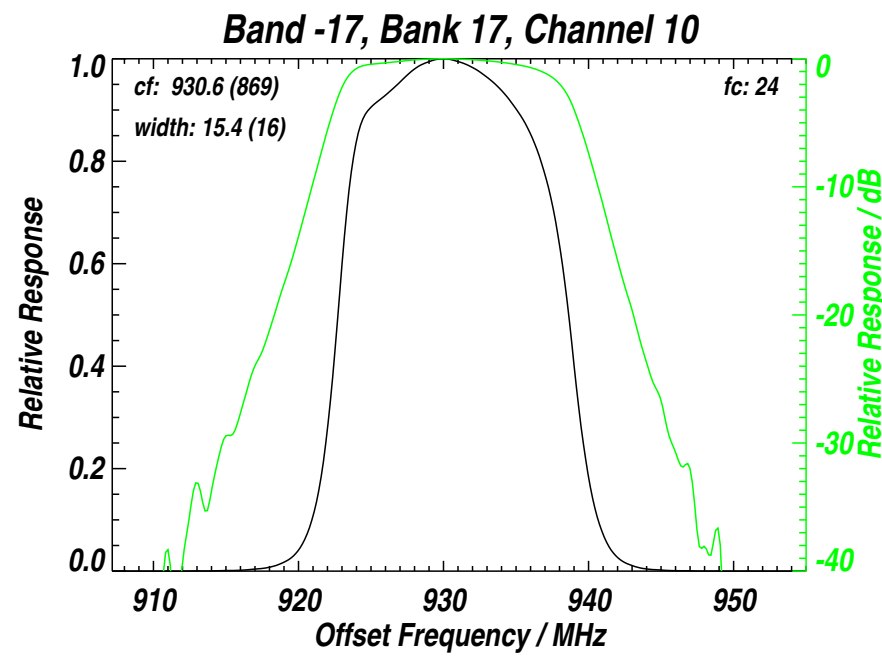
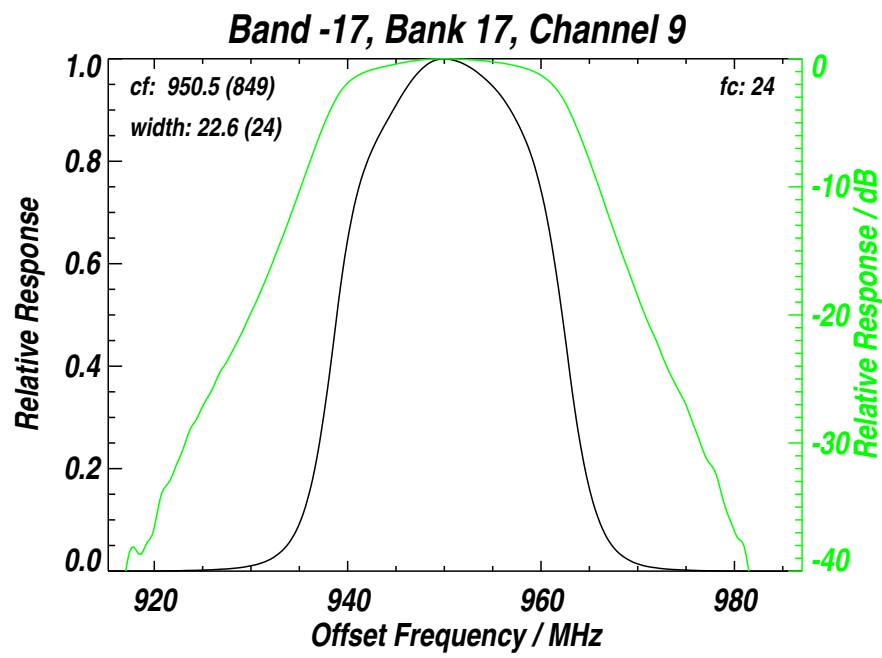


Figure I.20: 1st IF sweep data for Band 17, channels 9 to 12, plotted as the channels appear in the lower sideband. See text for additional details.



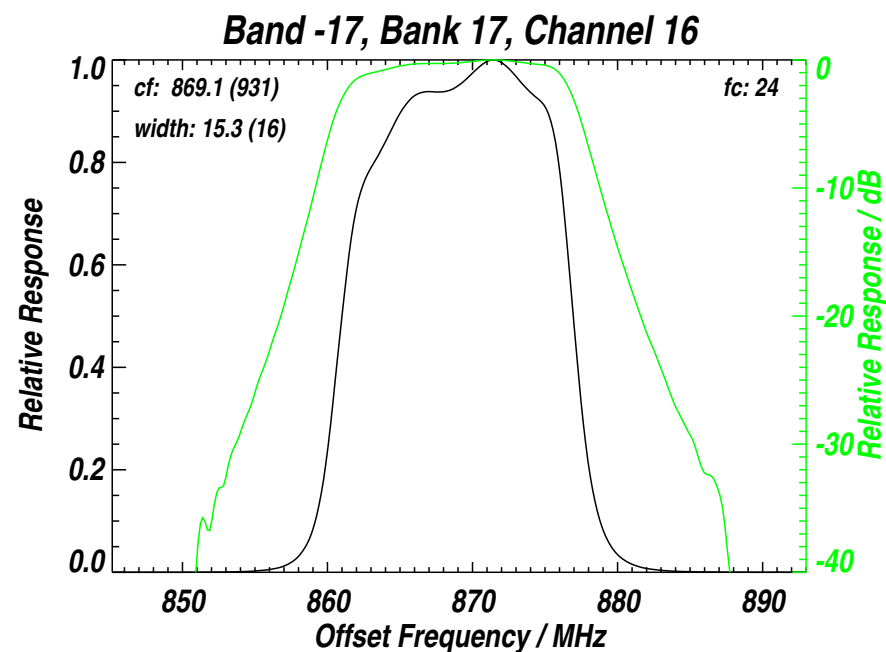
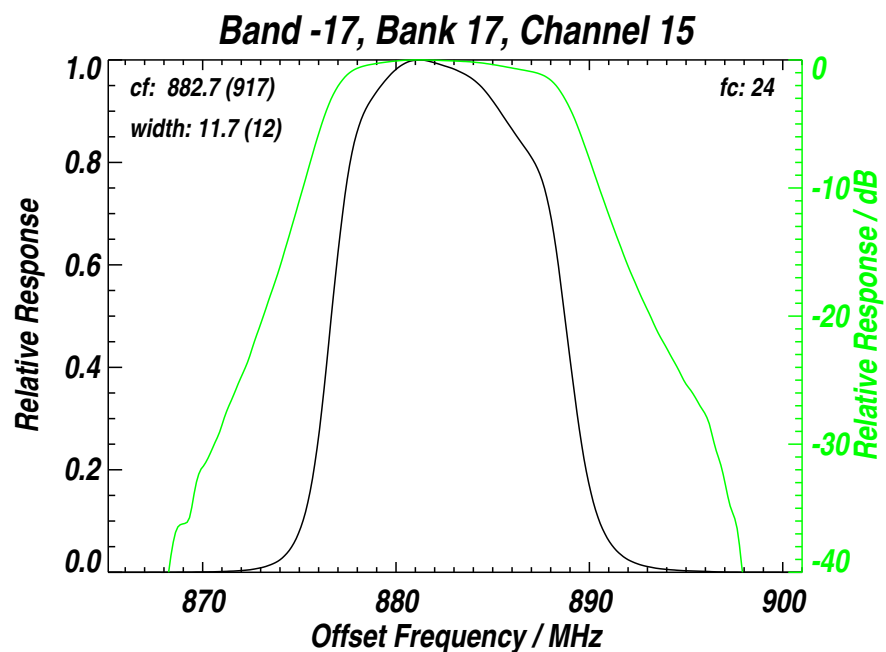
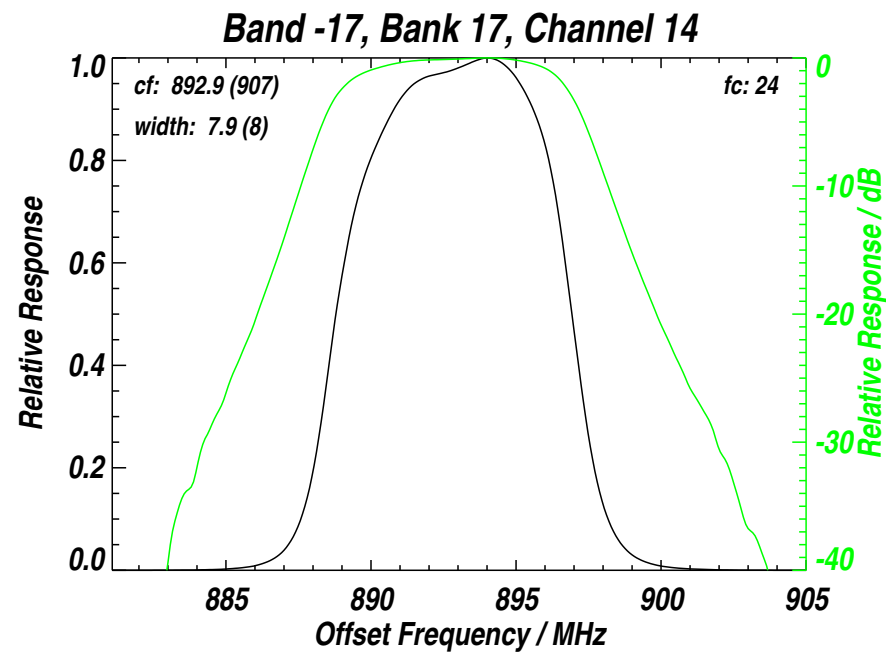
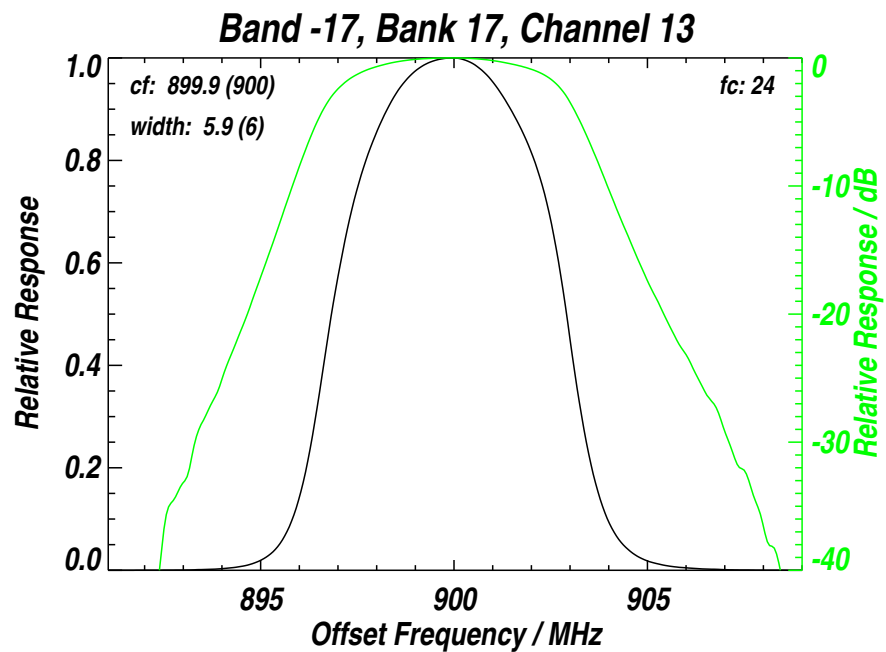


Figure I.21: 1st IF sweep data for Band 17, channels 13 to 16, plotted as the channels appear in the lower sideband. See text for additional details.

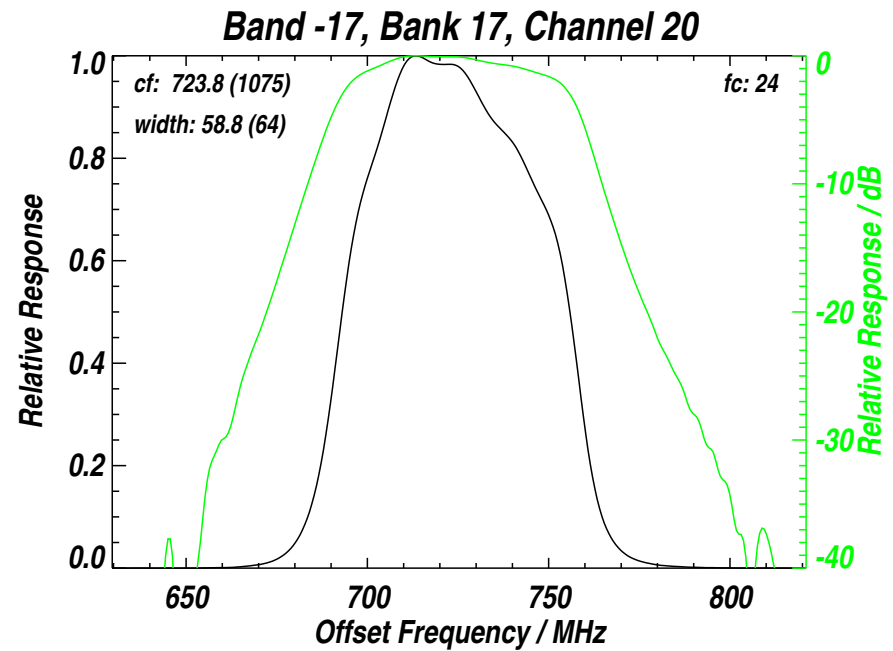
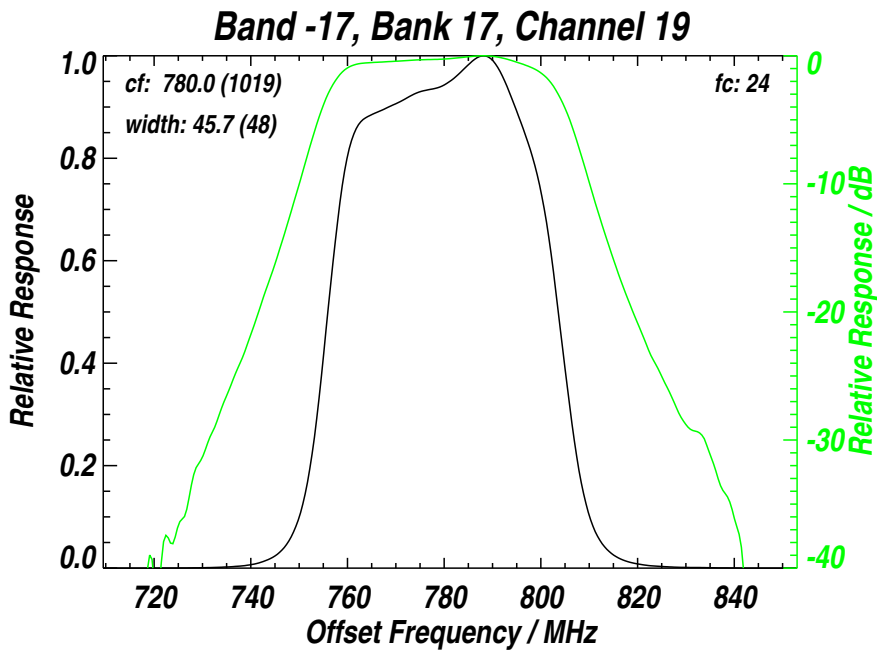
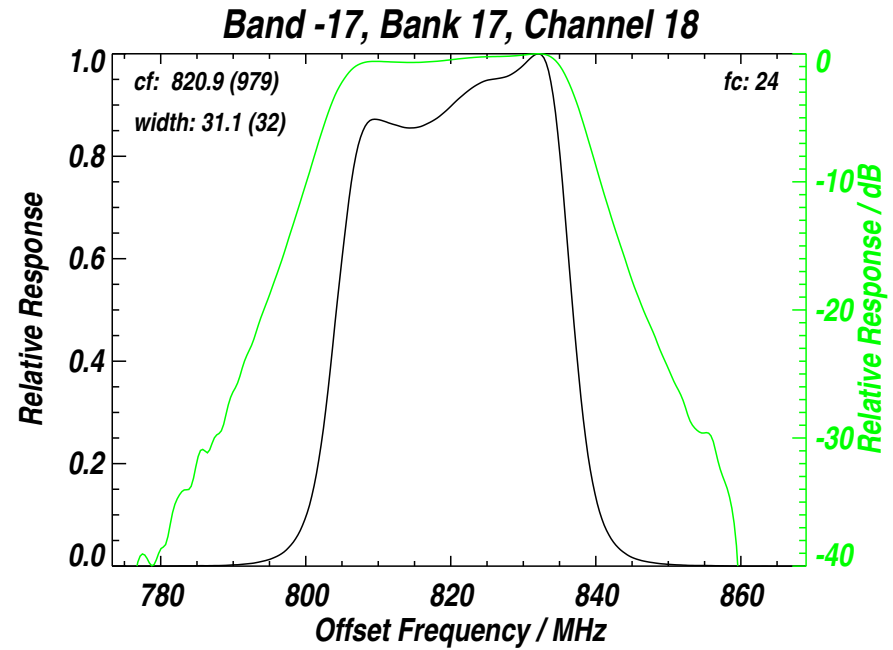
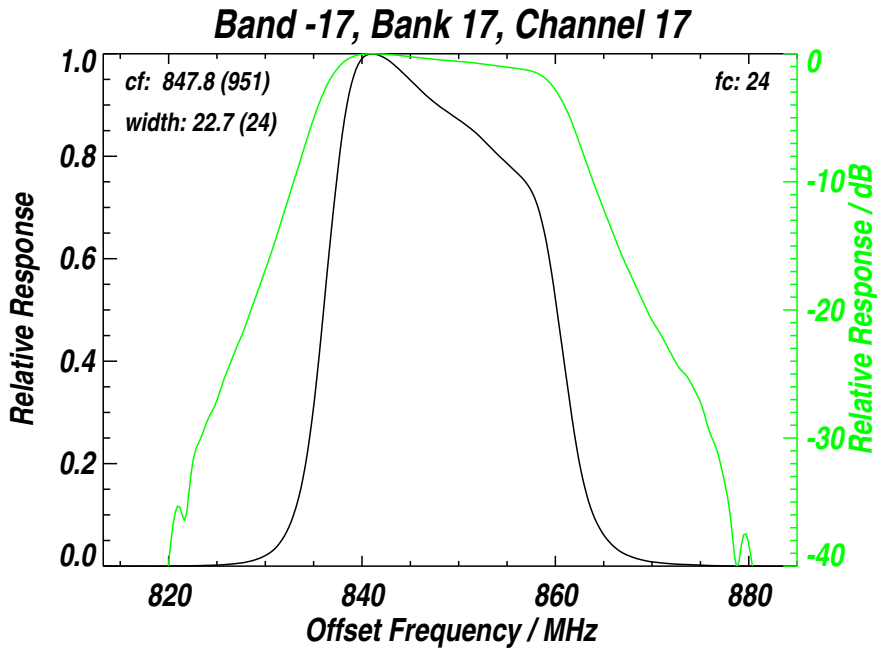


Figure I.22: 1st IF sweep data for Band 17, channels 17 to 20, plotted as the channels appear in the lower sideband. See text for additional details.

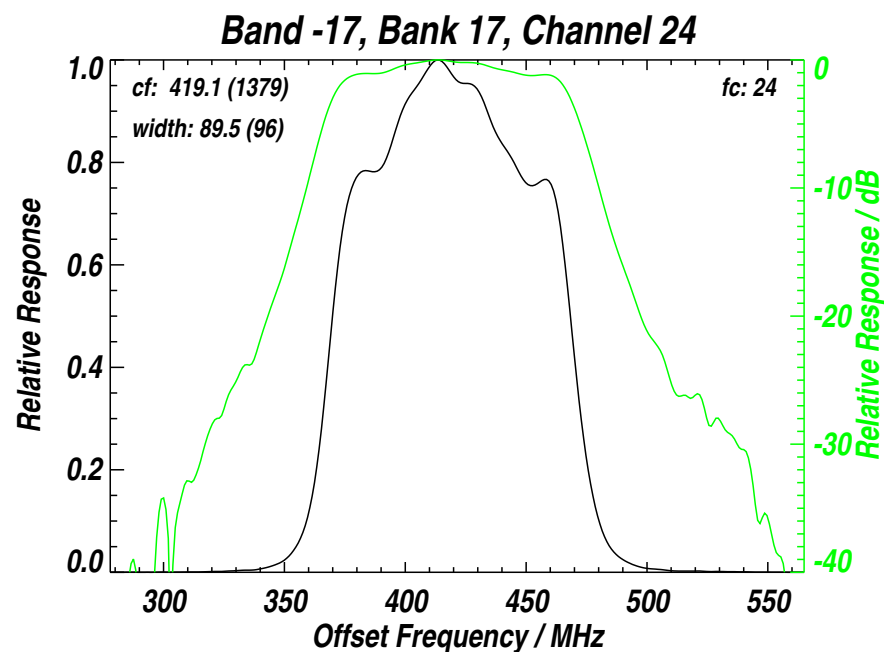
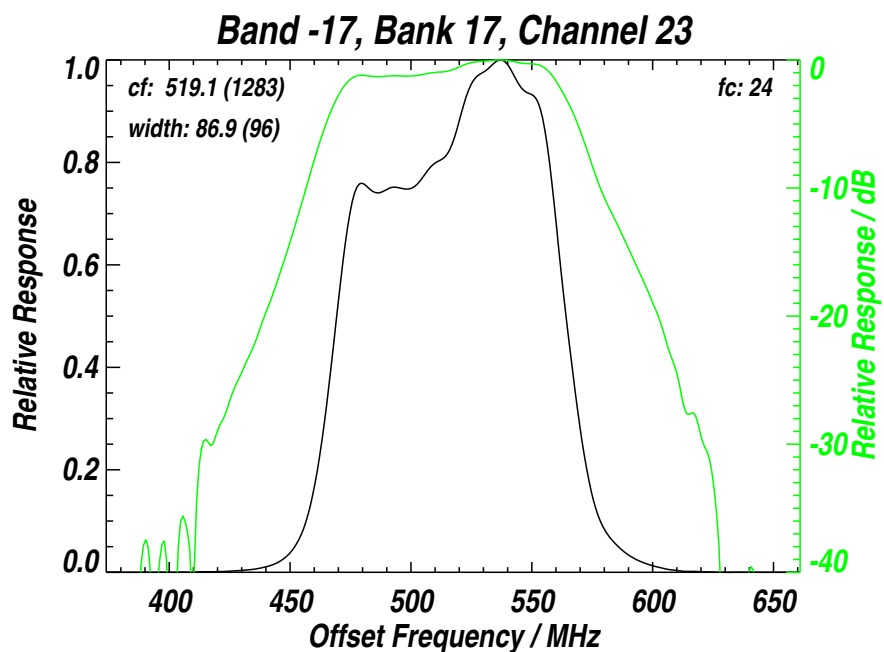
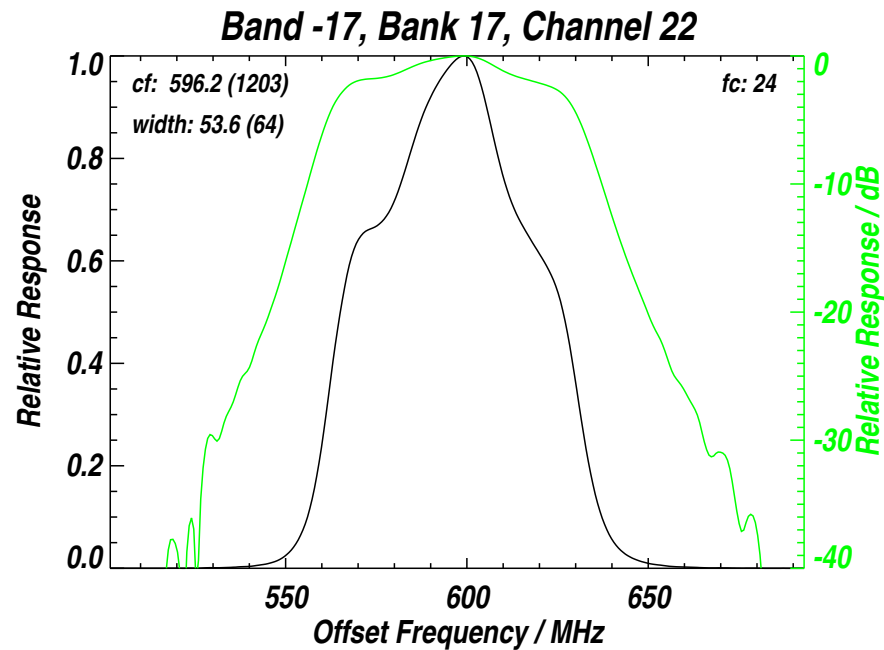
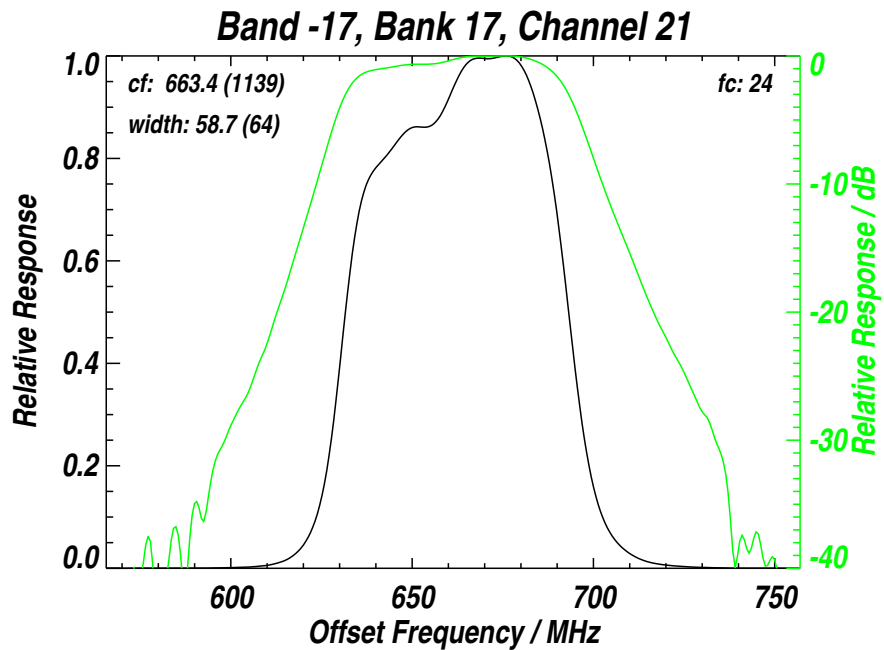
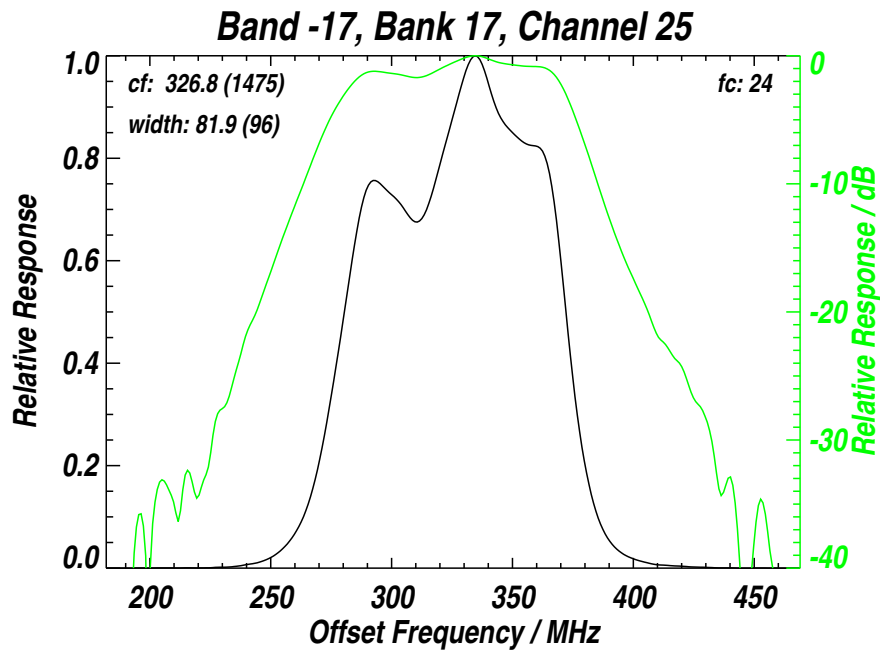


Figure I.23: 1st IF sweep data for Band 17, channels 21 to 24, plotted as the channels appear in the lower sideband. See text for additional details.



**Band 17 (lsb)**  
**Bank 17**  
**Origin = 2501.480400000 GHz**

Figure I.24: 1st IF sweep data for Band 17, channel 25, plotted as the channel appears in the lower sideband. See text for additional details.

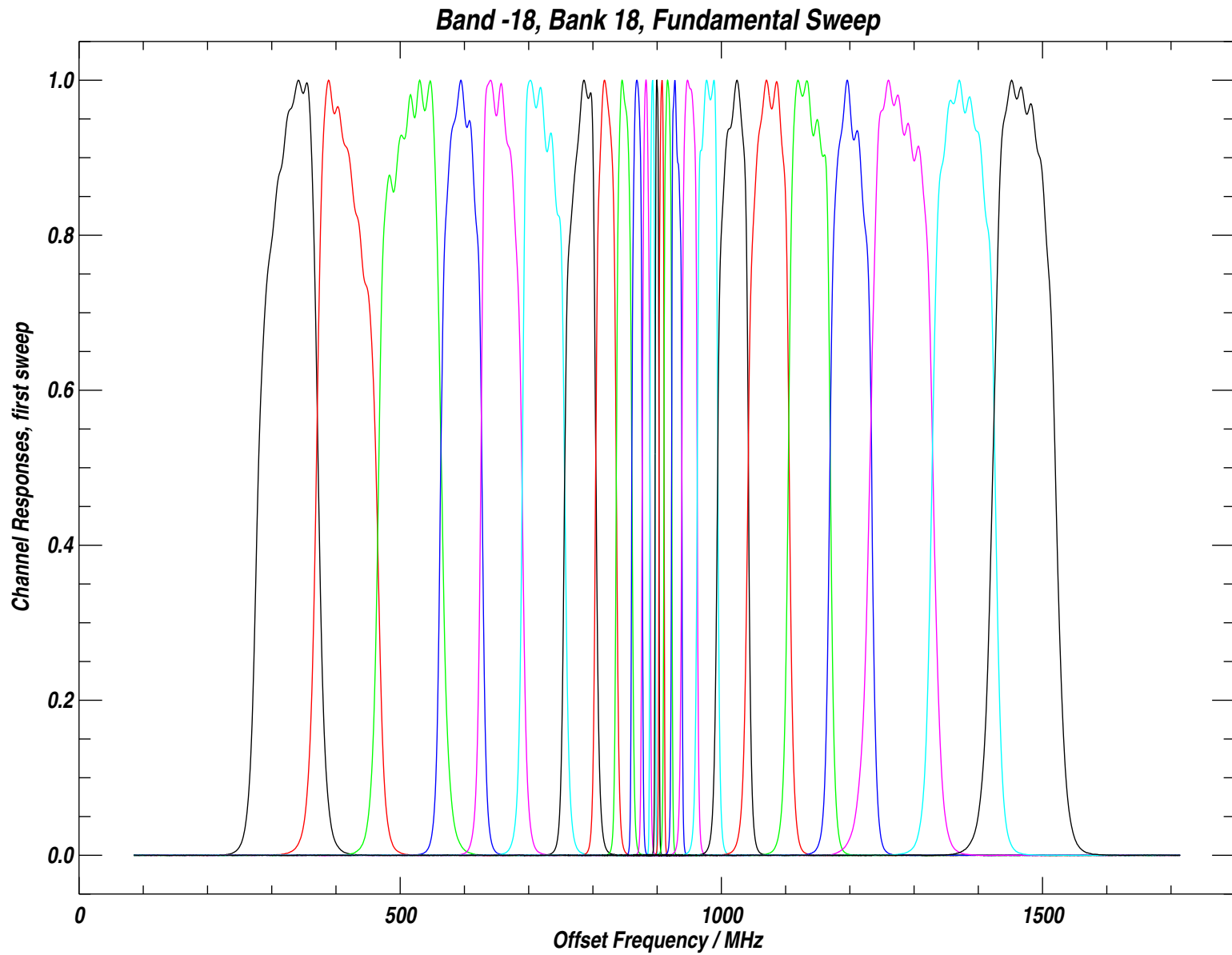


Figure I.25: 1st. IF sweep data for Band 18, plotted as the channels appear in the lower sideband. See text for additional details.

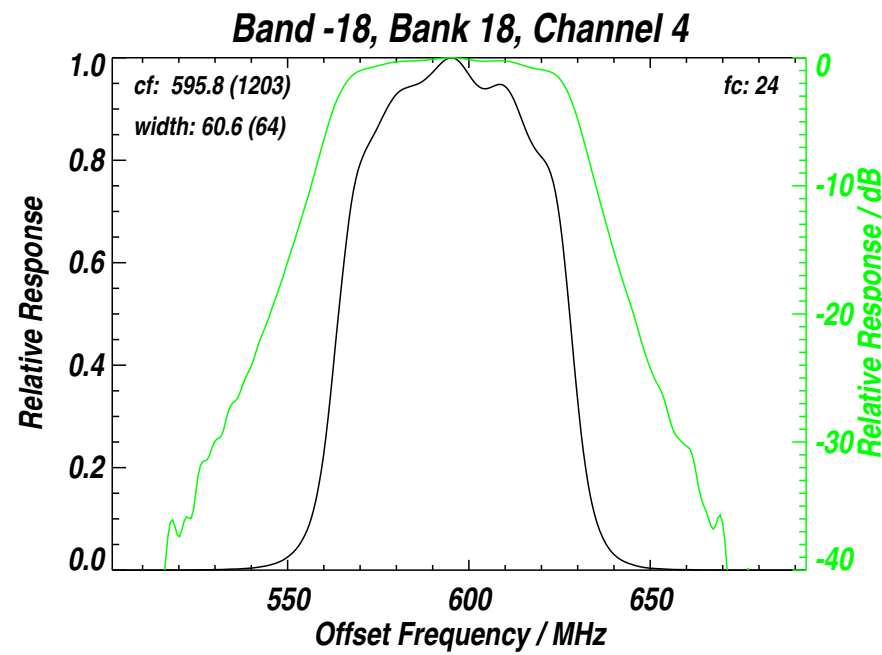
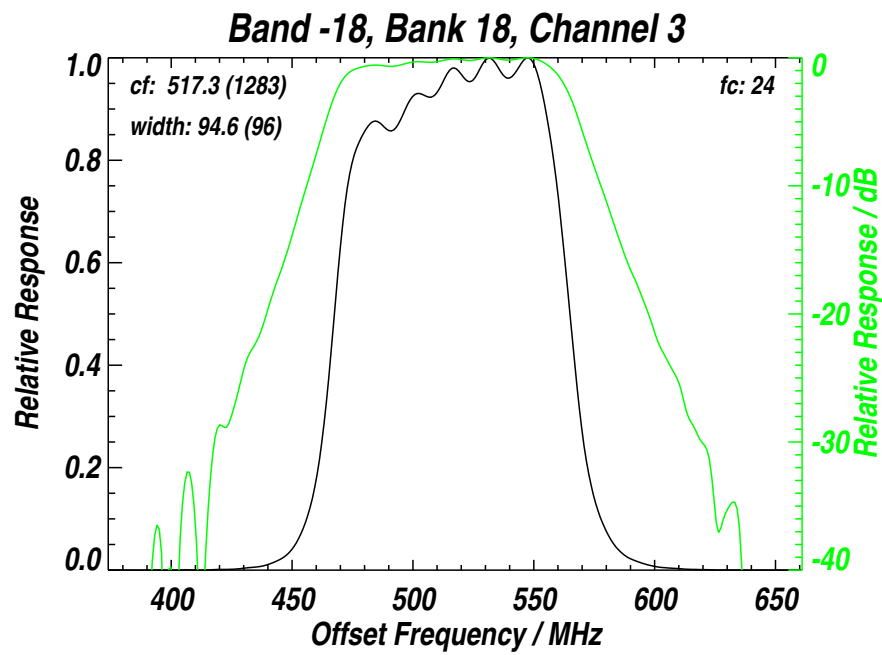
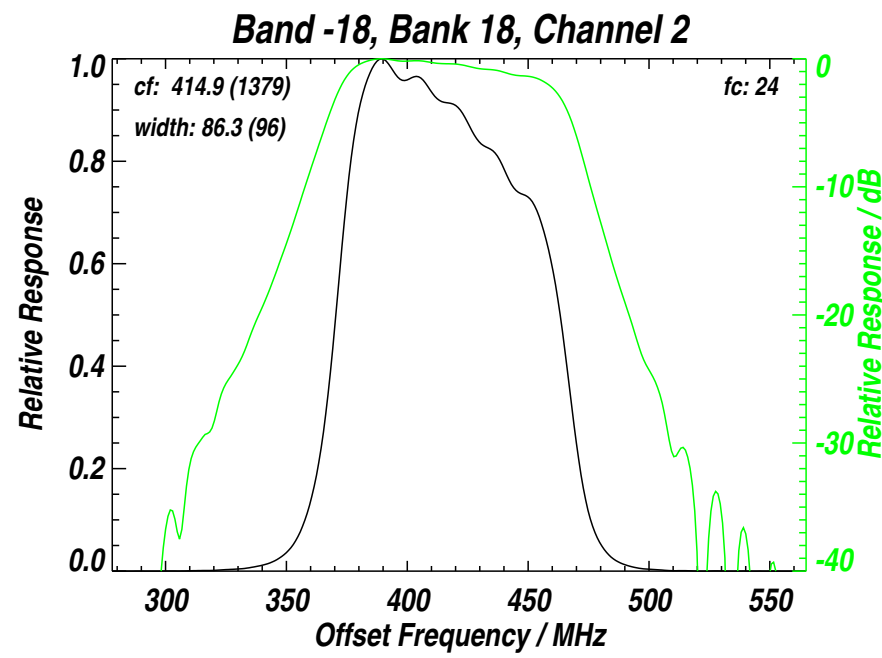
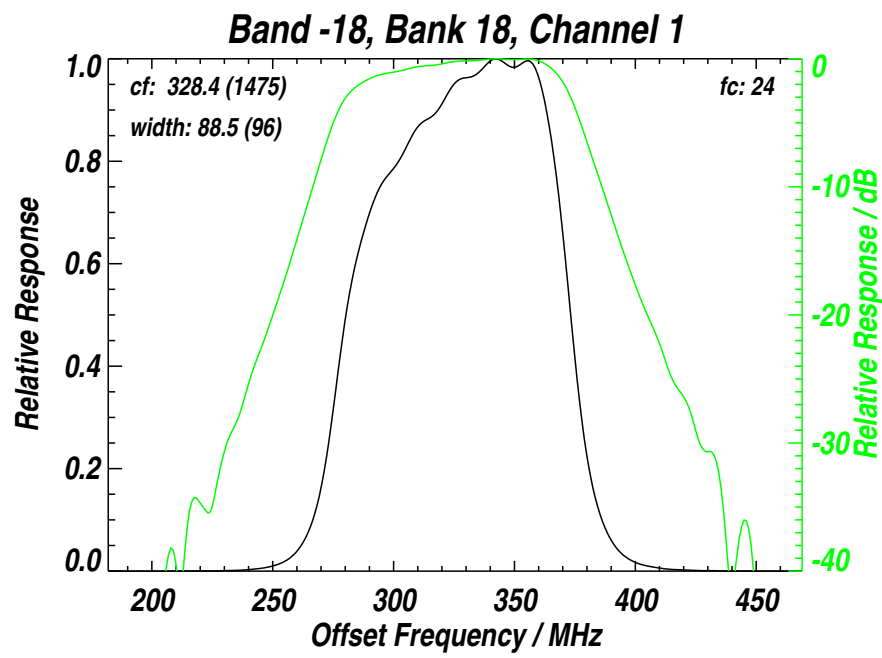


Figure I.26: 1st IF sweep data for Band 18, channels 1 to 4, plotted as the channels appear in the lower sideband. See text for additional details.

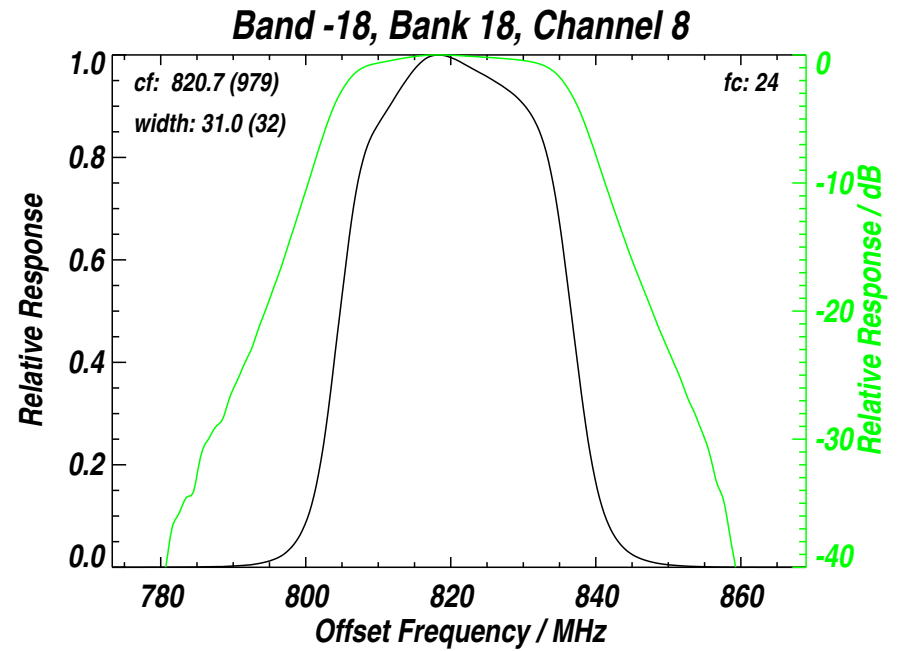
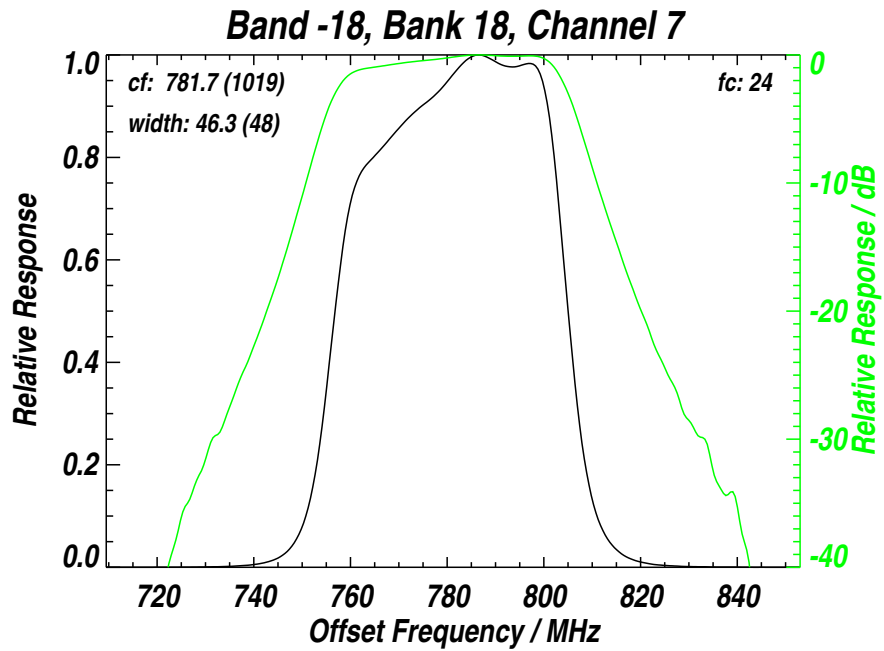
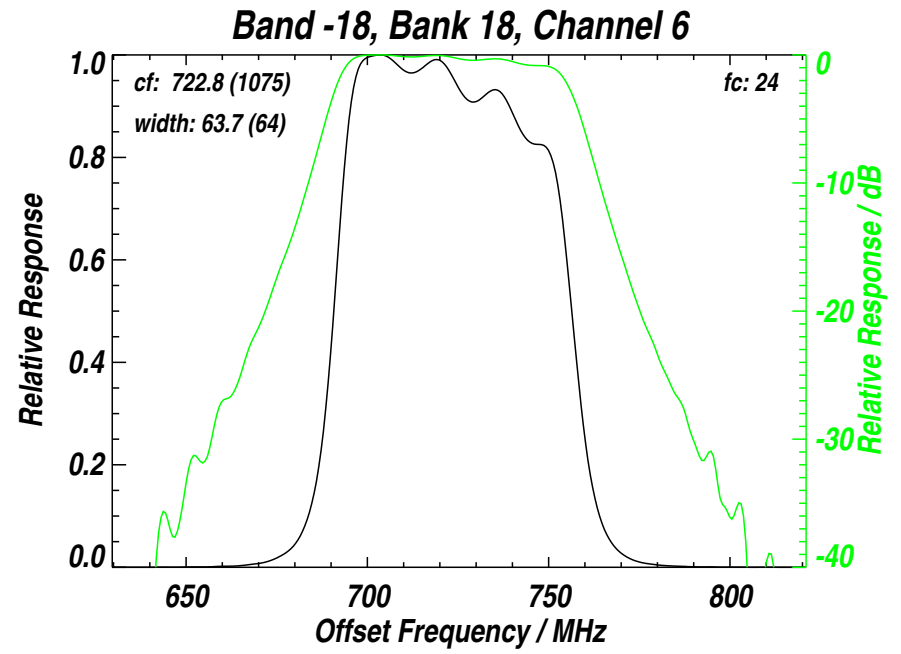
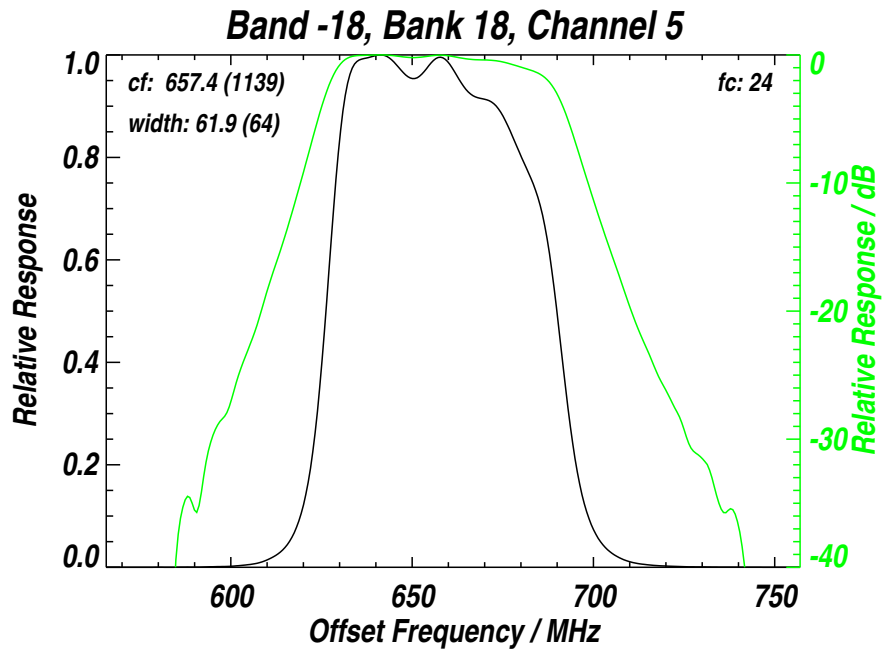


Figure I.27: 1st IF sweep data for Band 18, channels 5 to 8, plotted as the channels appear in the lower sideband. See text for additional details.

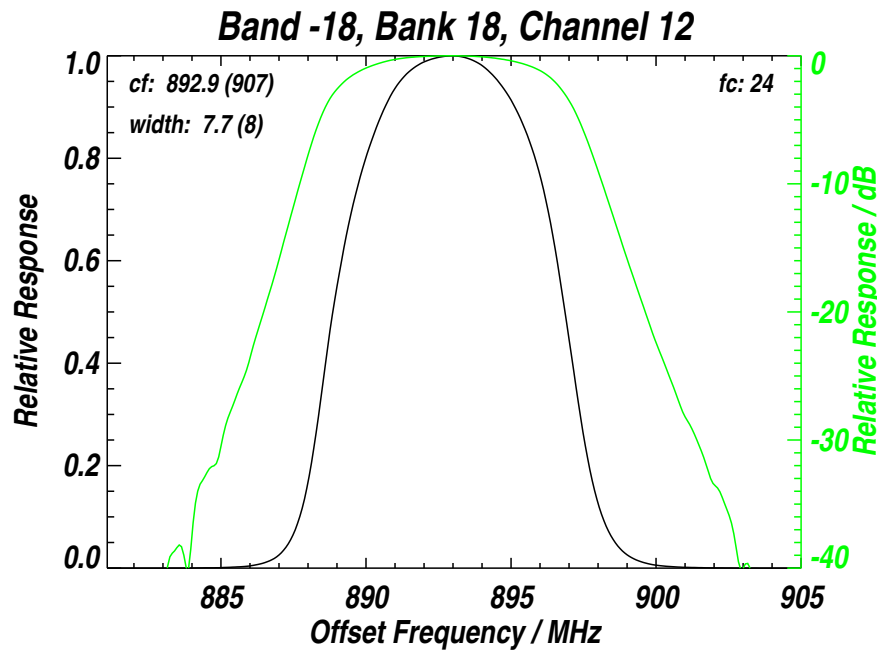
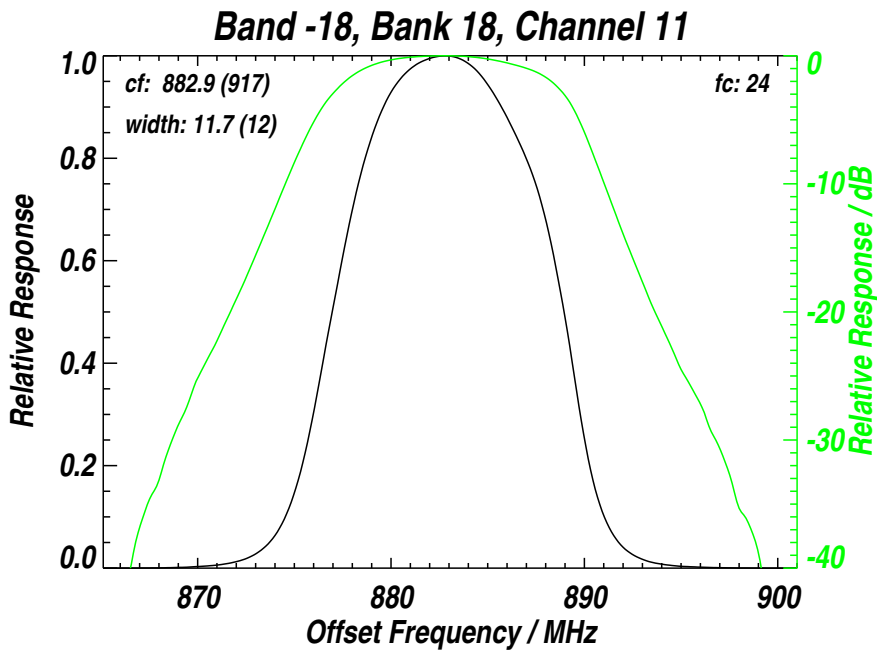
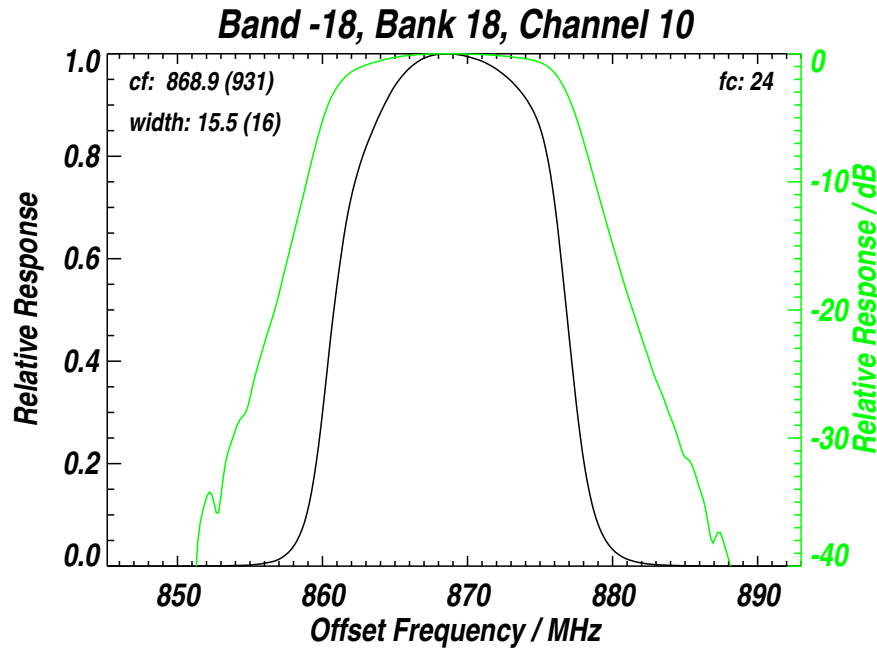
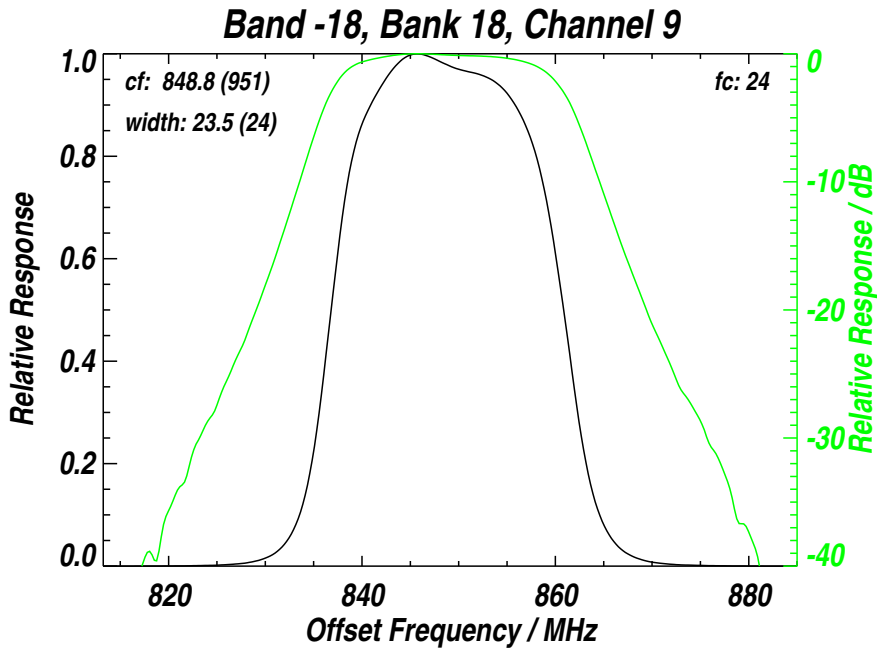


Figure I.28: 1st IF sweep data for Band 18, channels 9 to 12, plotted as the channels appear in the lower sideband. See text for additional details.



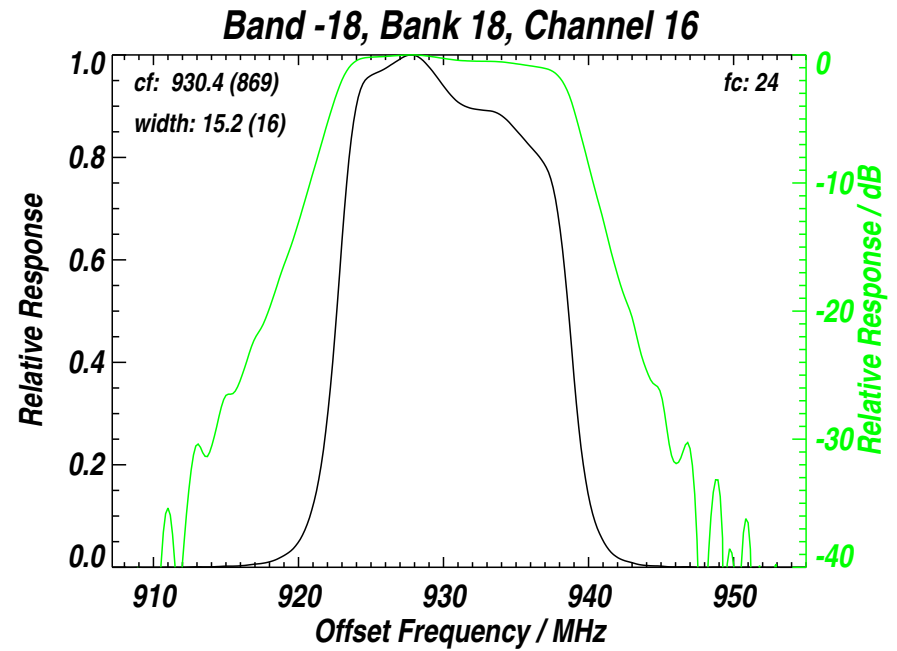
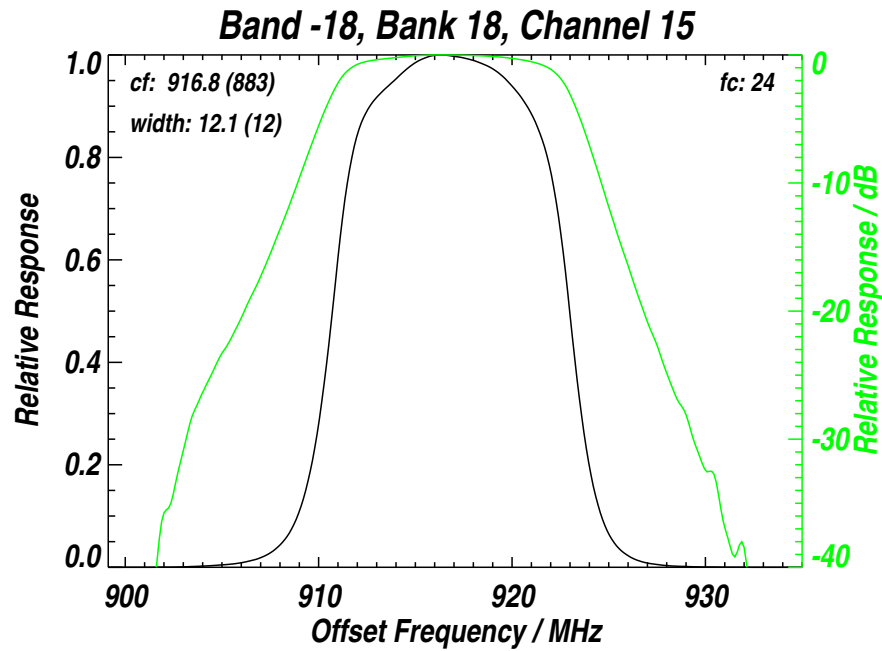
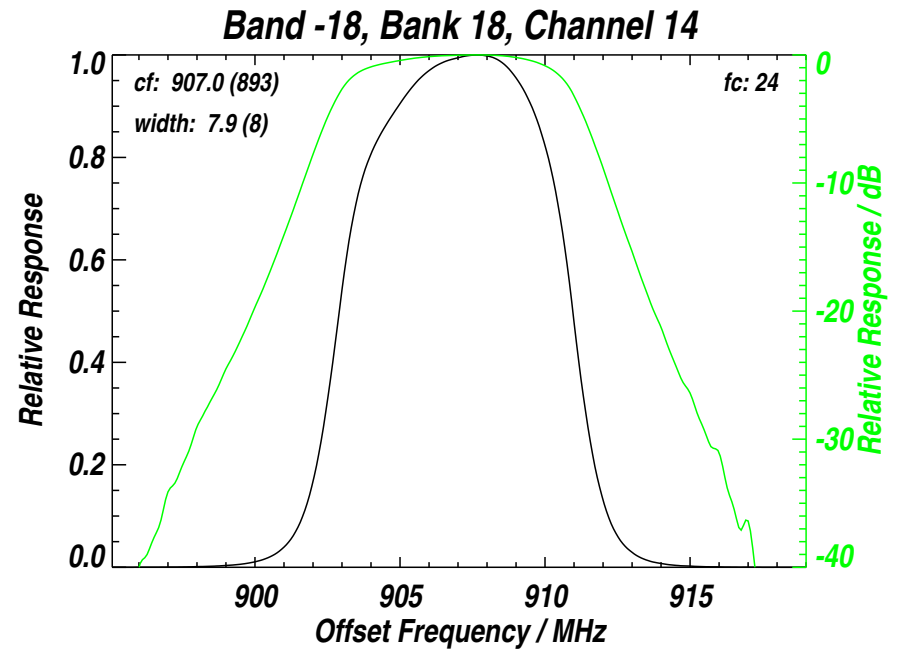
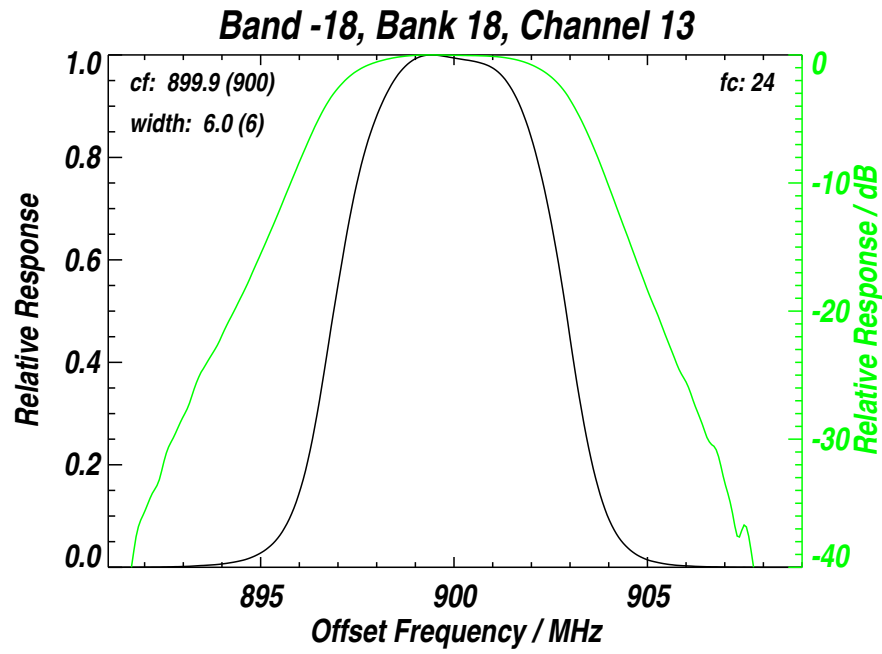


Figure I.29: 1st IF sweep data for Band 18, channels 13 to 16, plotted as the channels appear in the lower sideband. See text for additional details.

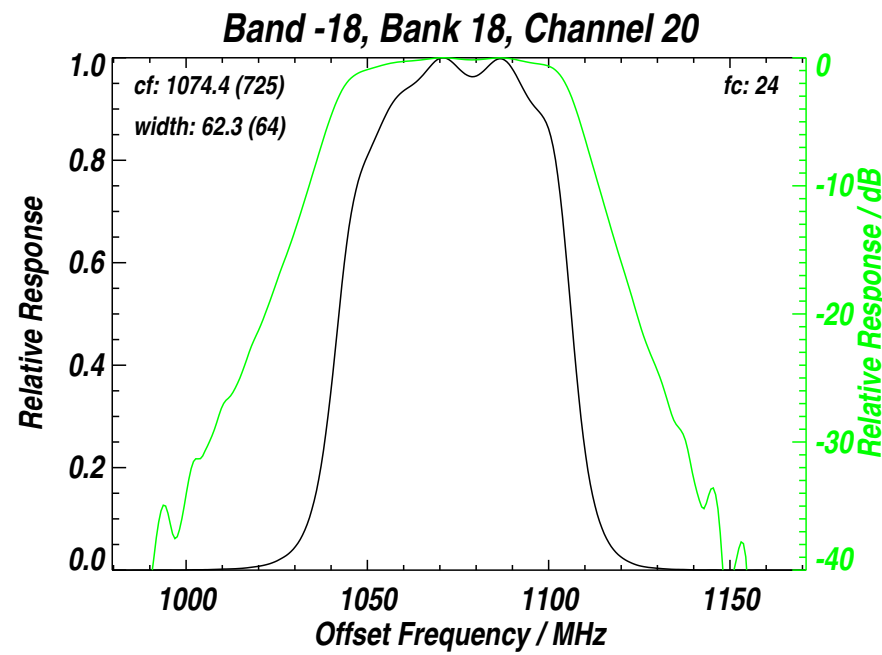
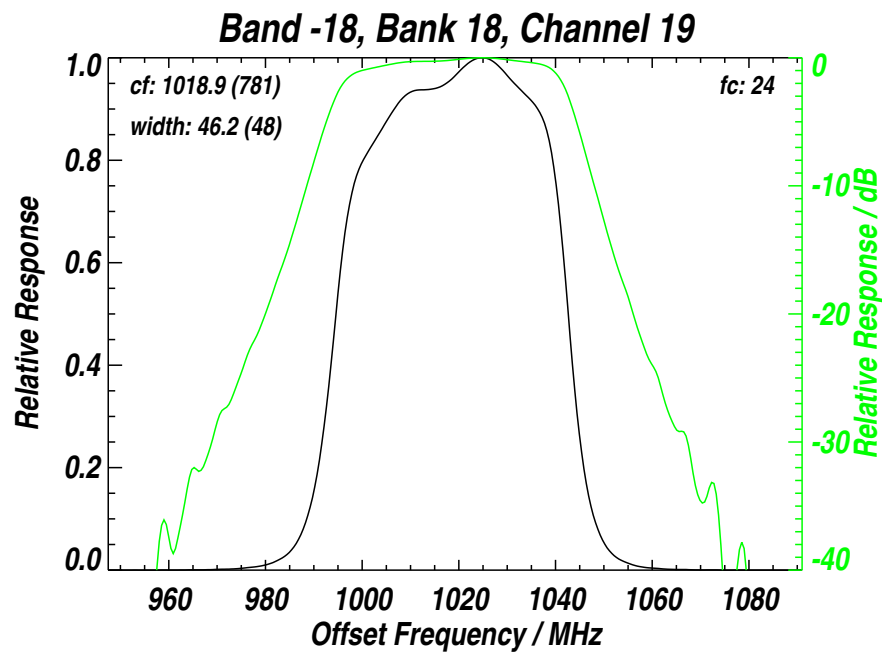
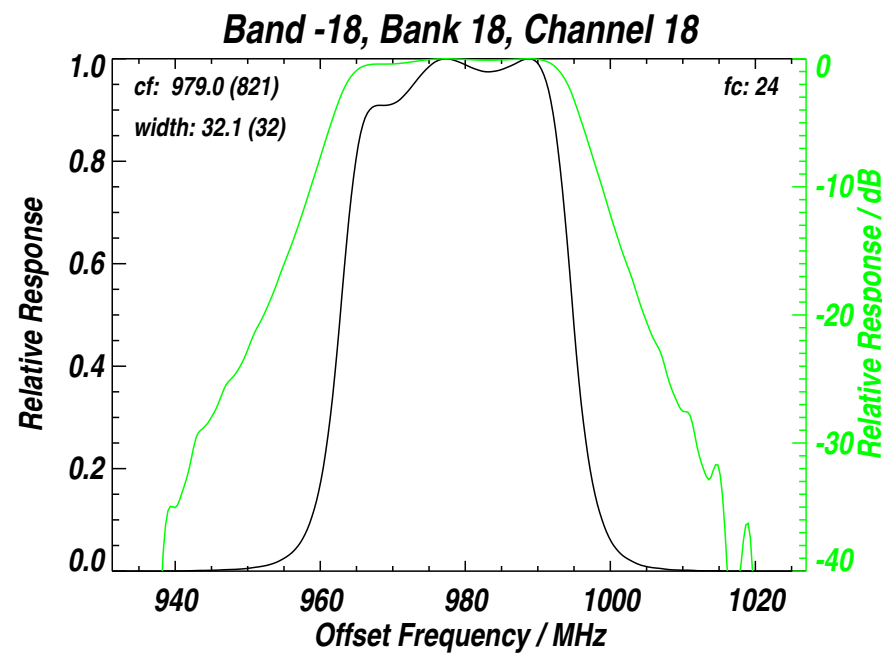
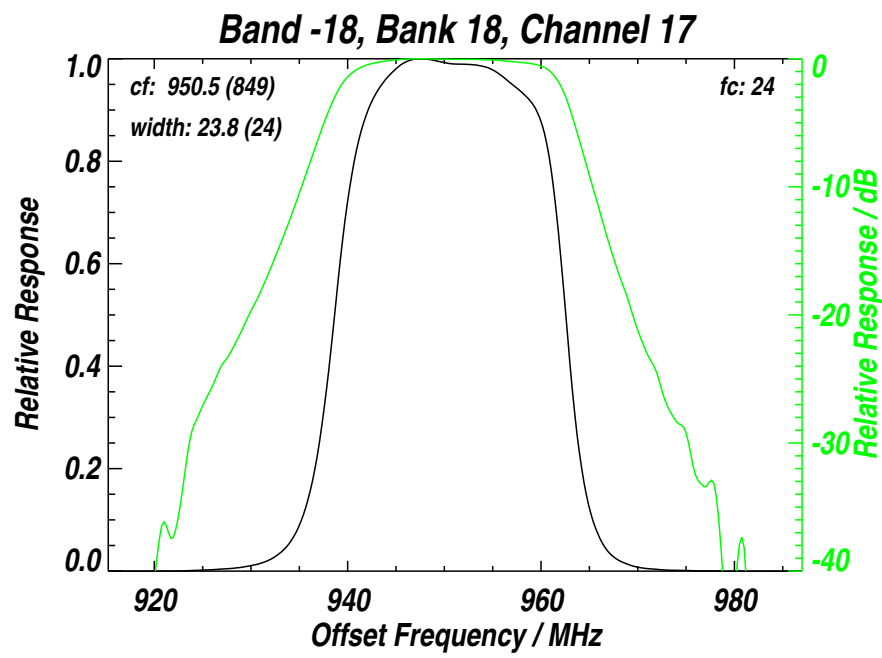


Figure I.30: 1st IF sweep data for Band 18, channels 17 to 20, plotted as the channels appear in the lower sideband. See text for additional details.

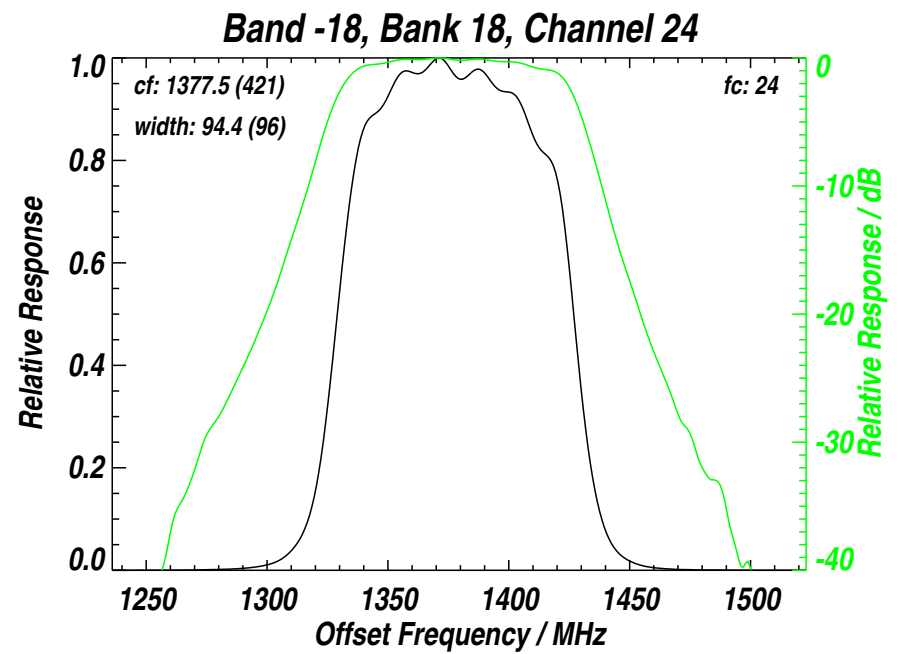
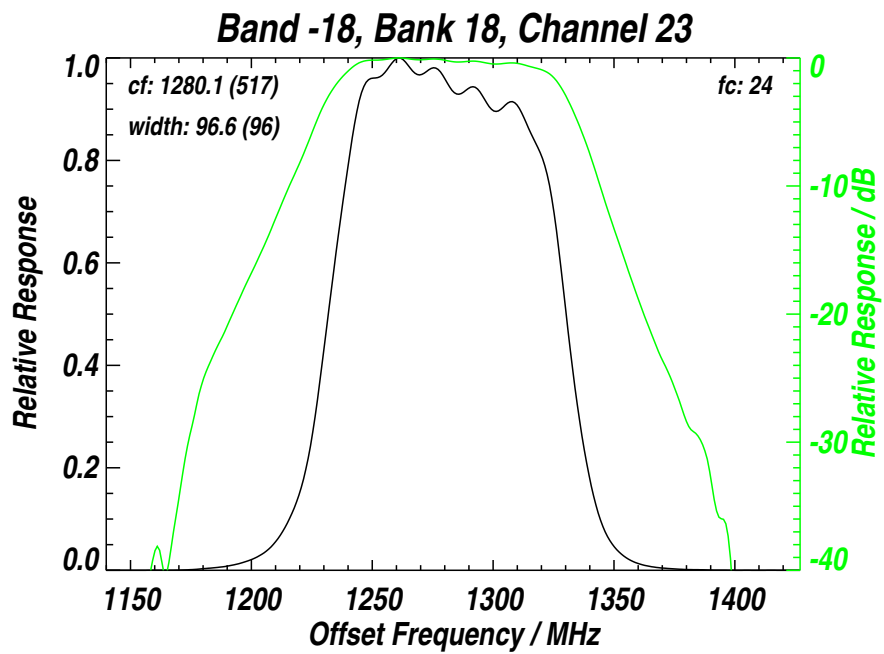
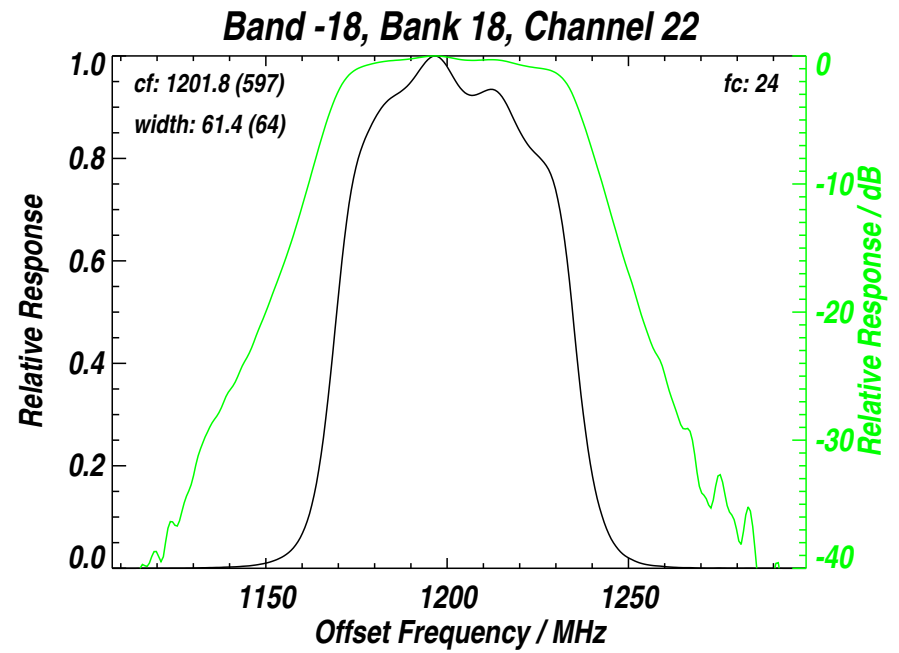
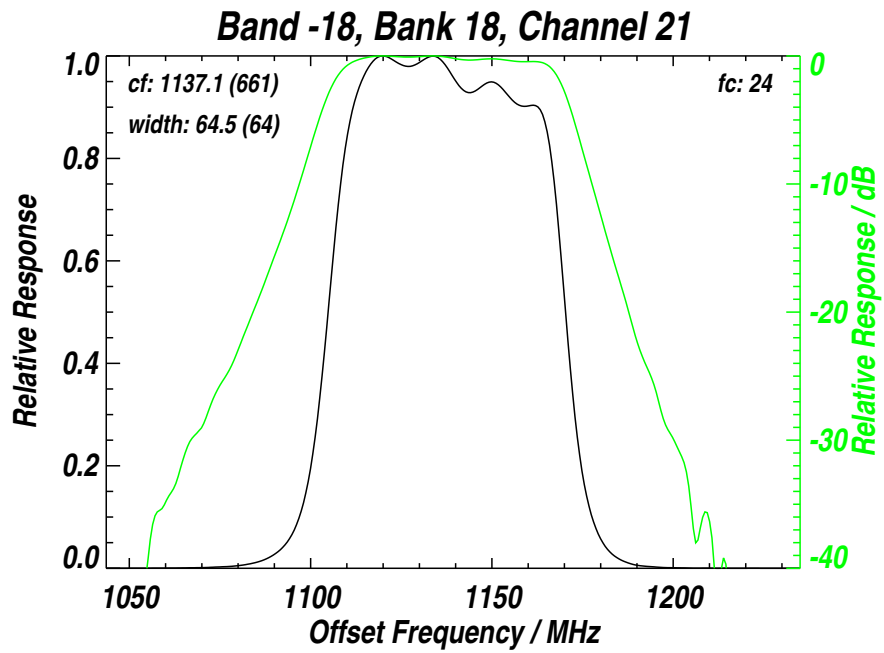
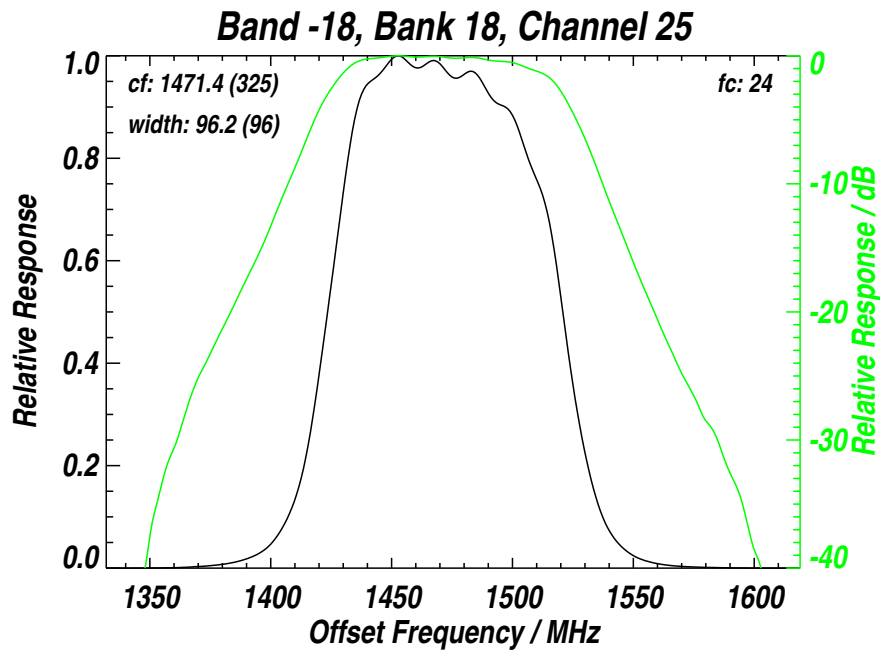


Figure I.31: 1st IF sweep data for Band 18, channels 21 to 24, plotted as the channels appear in the lower sideband. See text for additional details.



**Band 18 (lsb)**  
**Bank 18**  
**Origin = 2513.473500000 GHz**

Figure I.32: 1st IF sweep data for Band 16, channel 25, plotted as the channel appears in the lower sideband. See text for additional details.

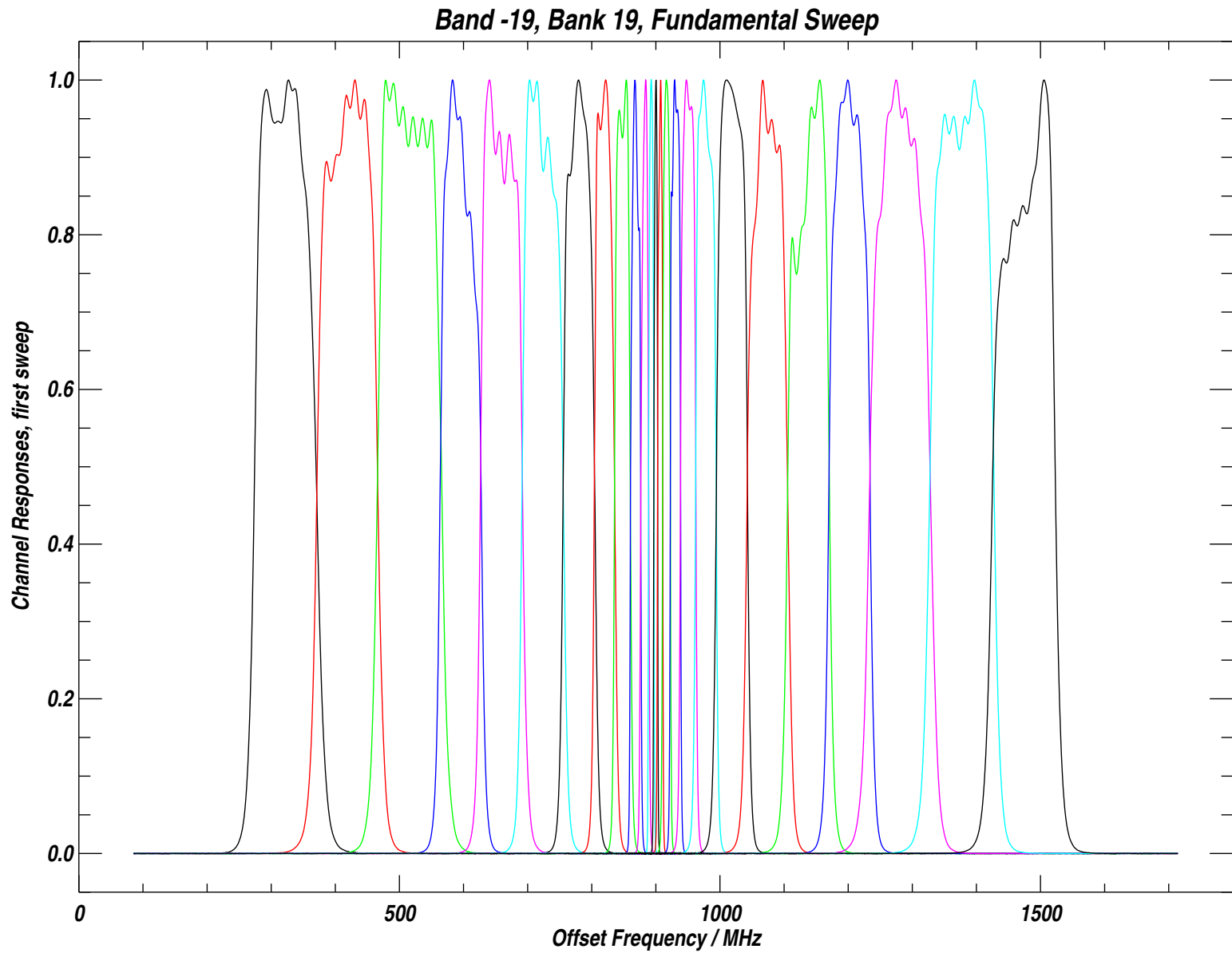


Figure I.33: 1st. IF sweep data for Band 19, plotted as the channels appear in the lower sideband. See text for additional details.

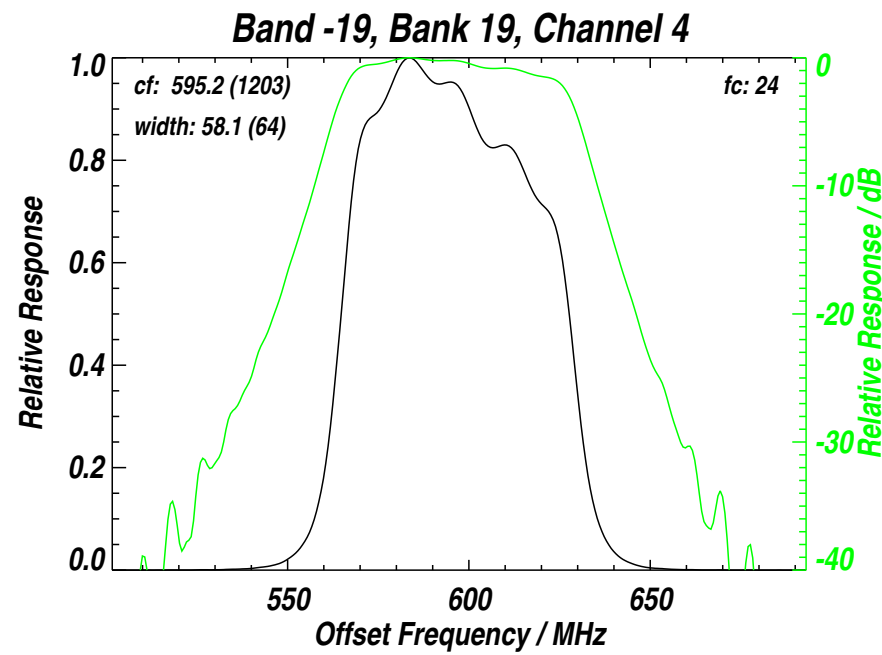
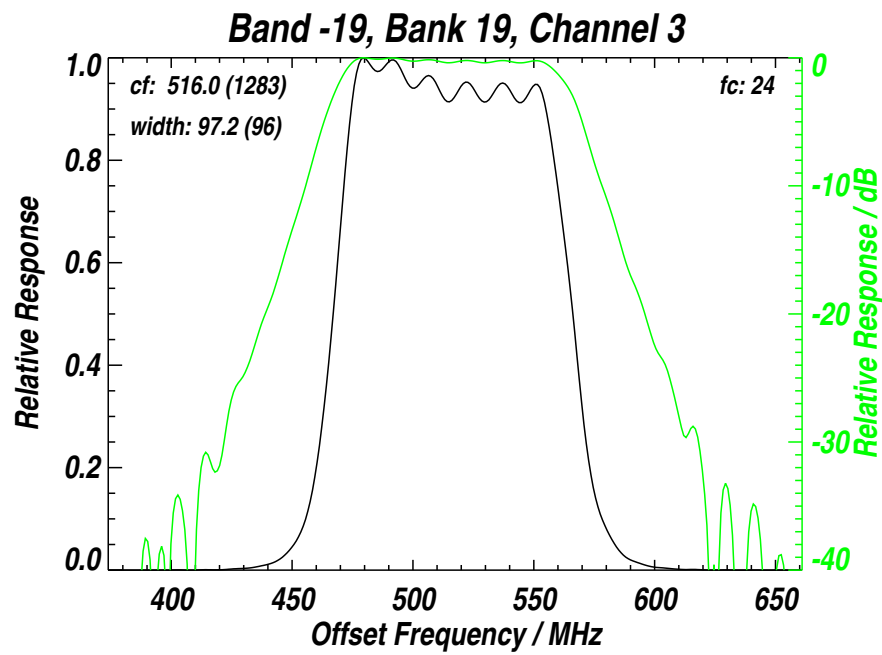
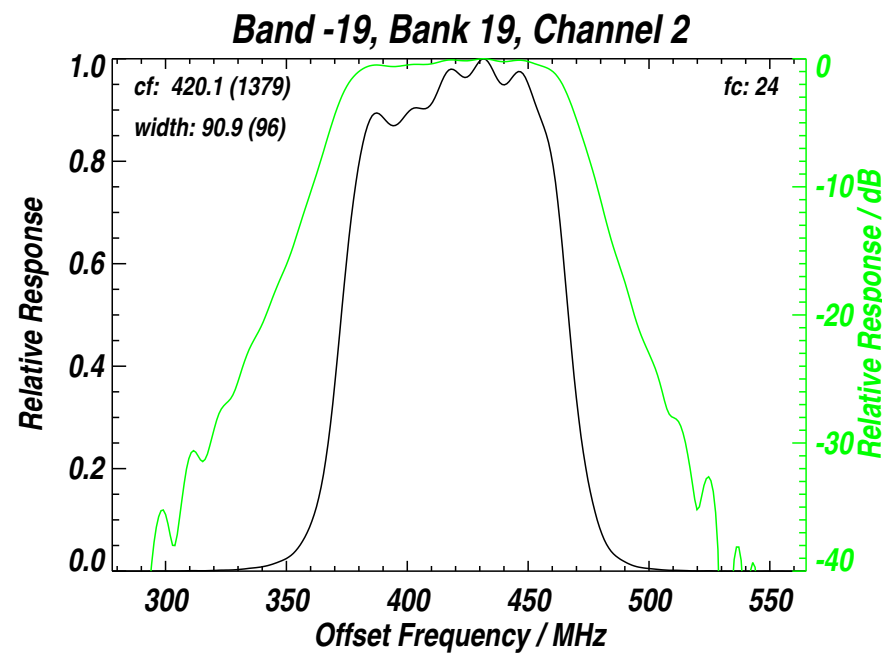
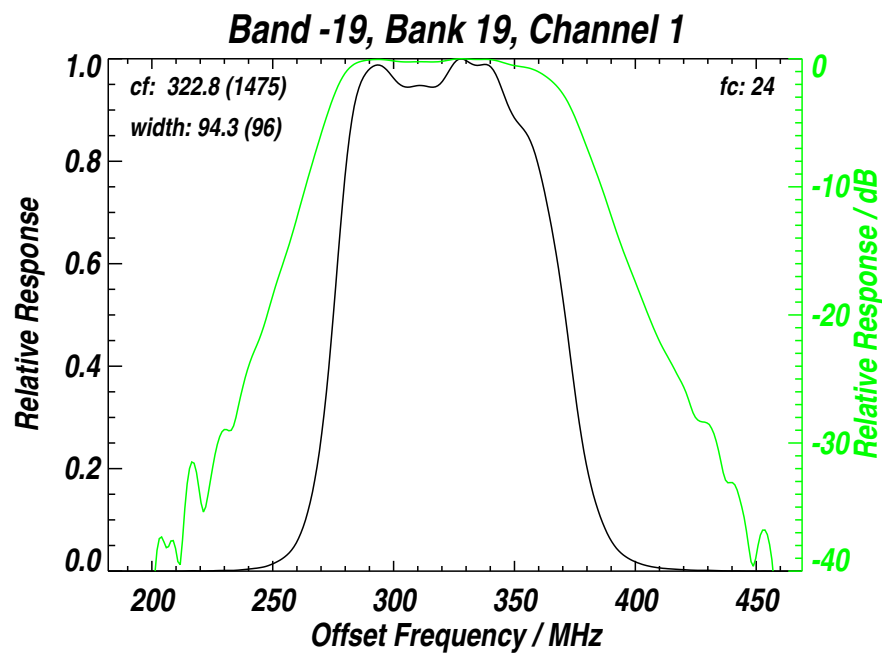


Figure I.34: 1st IF sweep data for Band 19, channels 1 to 4, plotted as the channels appear in the lower sideband. See text for additional details.

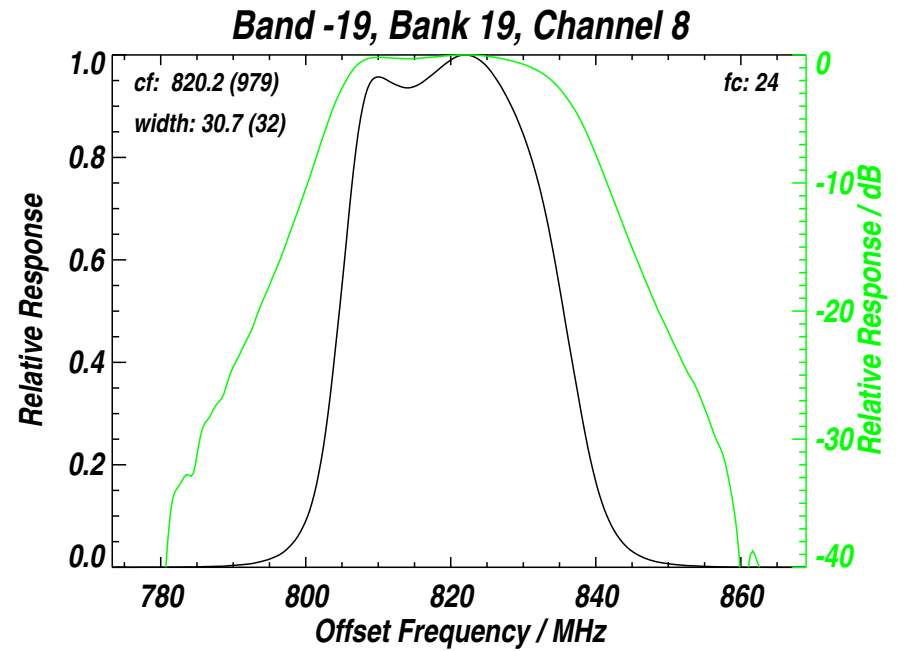
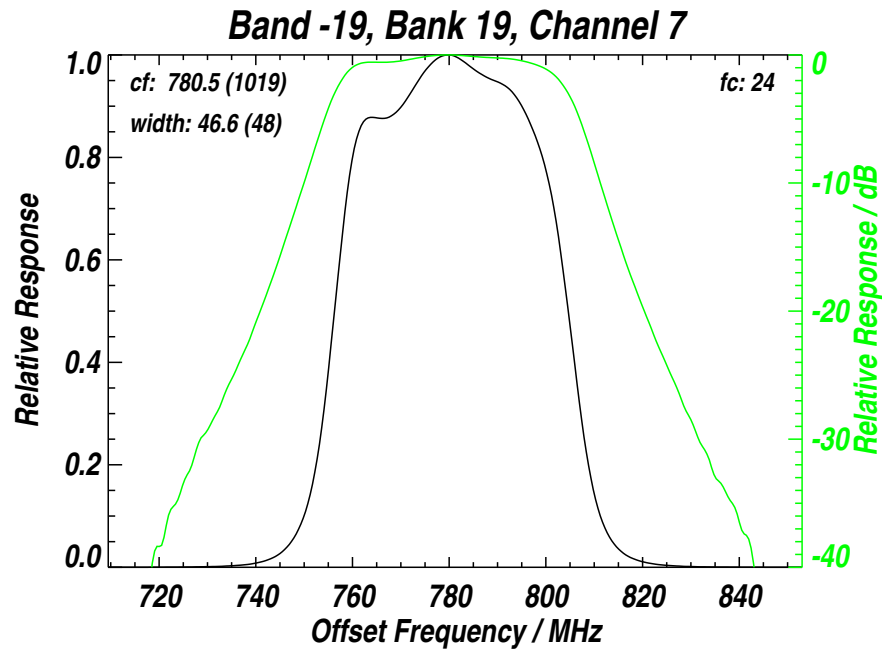
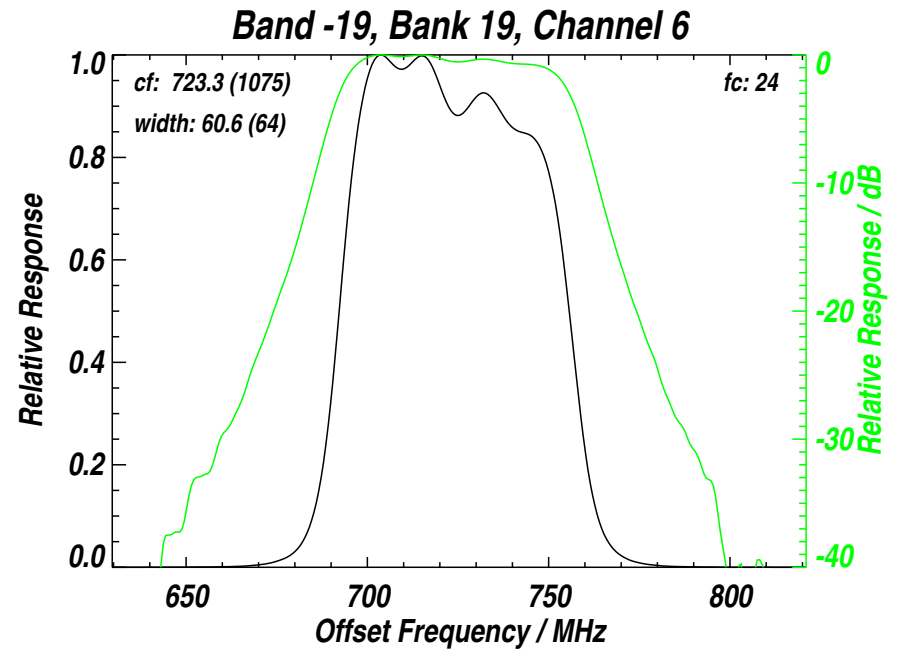
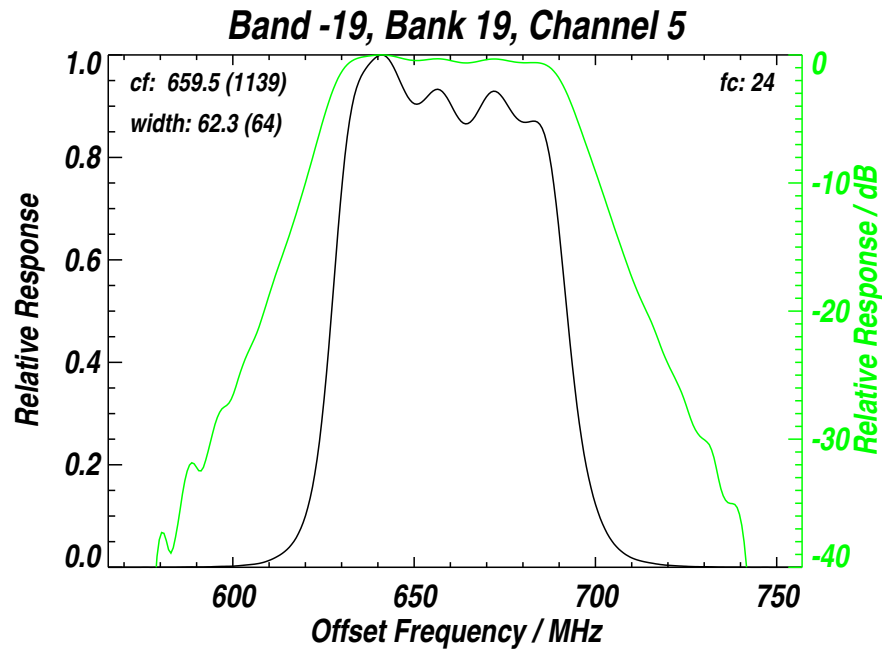


Figure I.35: 1st IF sweep data for Band 19, channels 5 to 8, plotted as the channels appear in the lower sideband. See text for additional details.

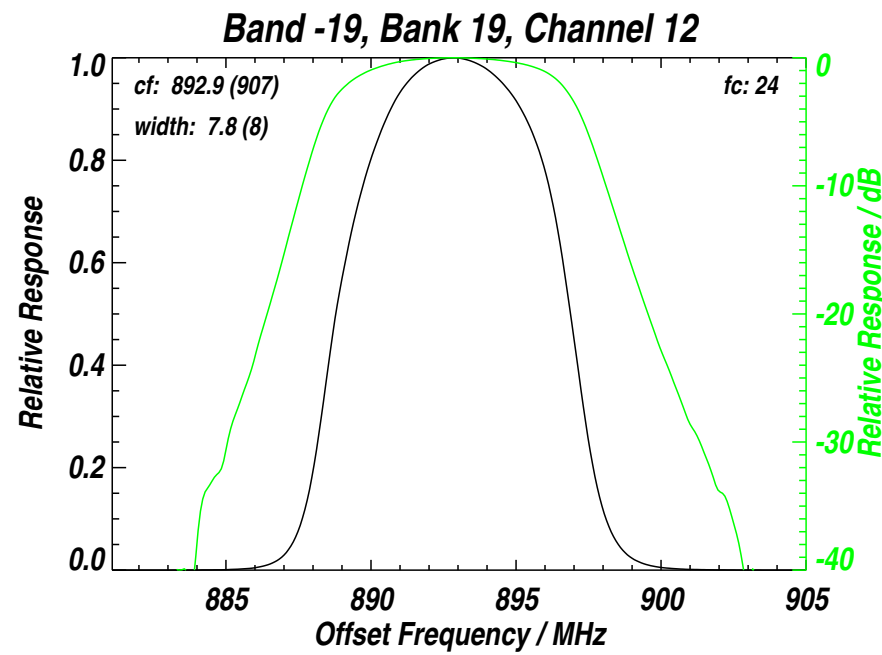
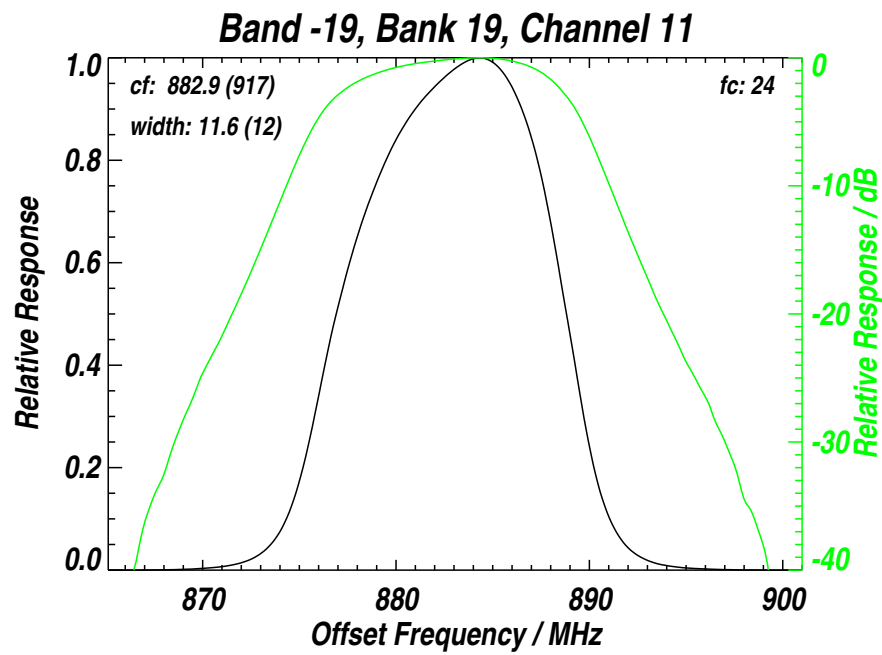
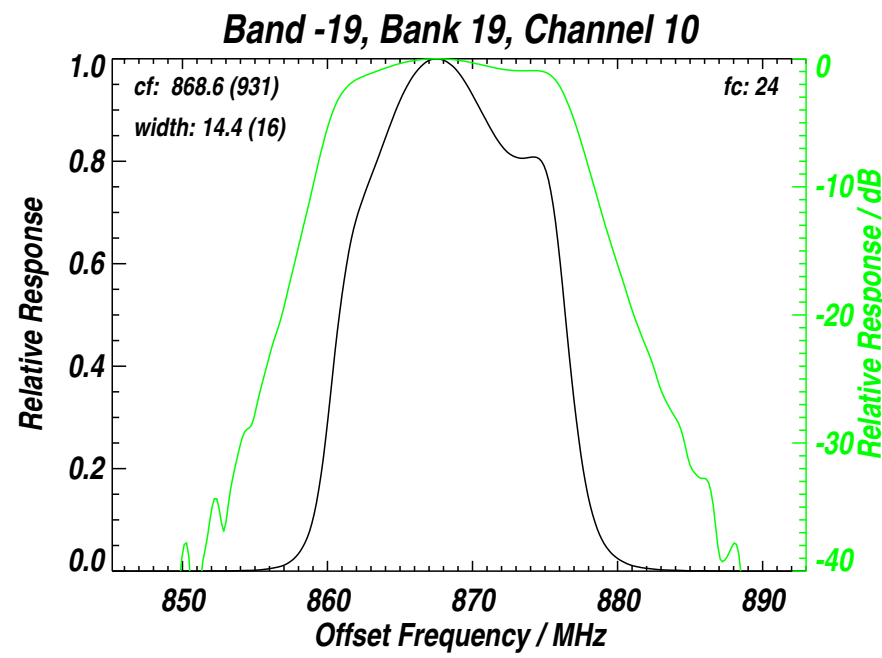
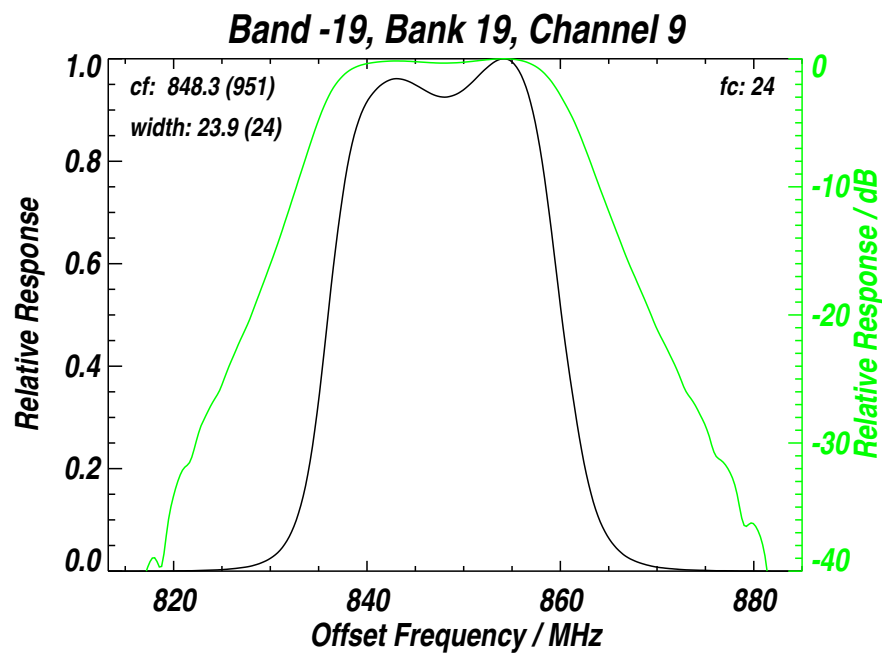


Figure I.36: 1st IF sweep data for Band 19, channels 9 to 12, plotted as the channels appear in the lower sideband. See text for additional details.



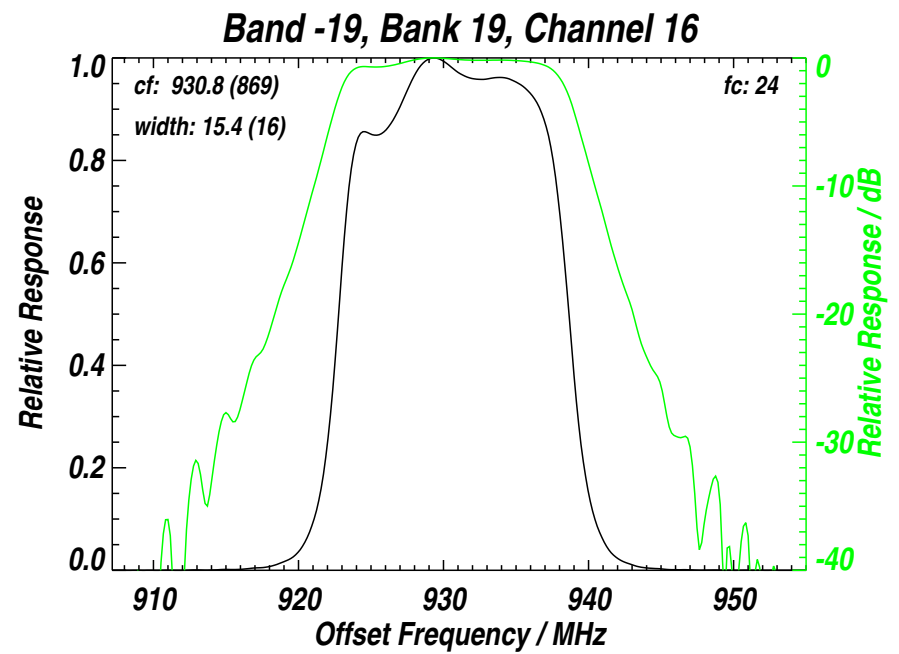
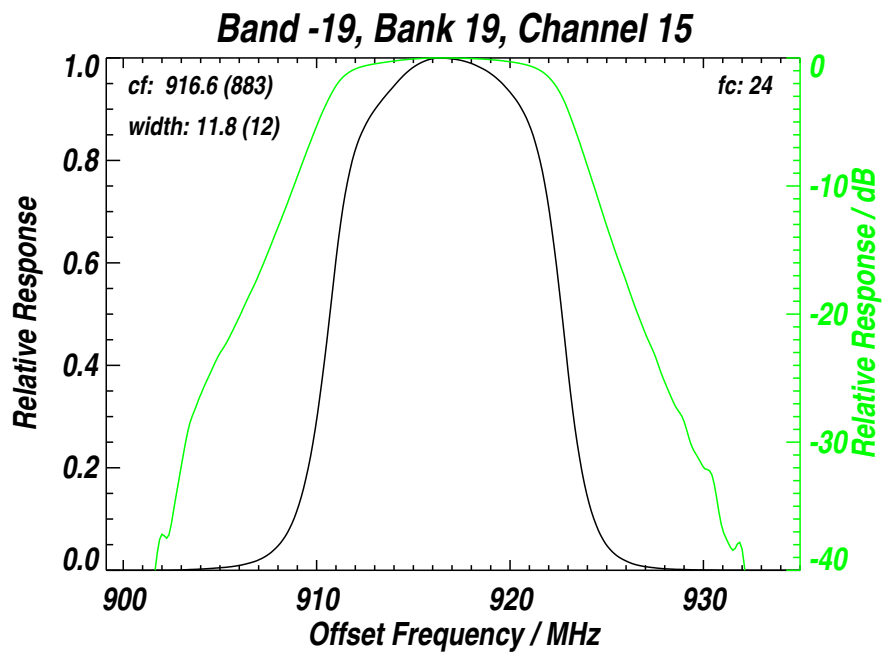
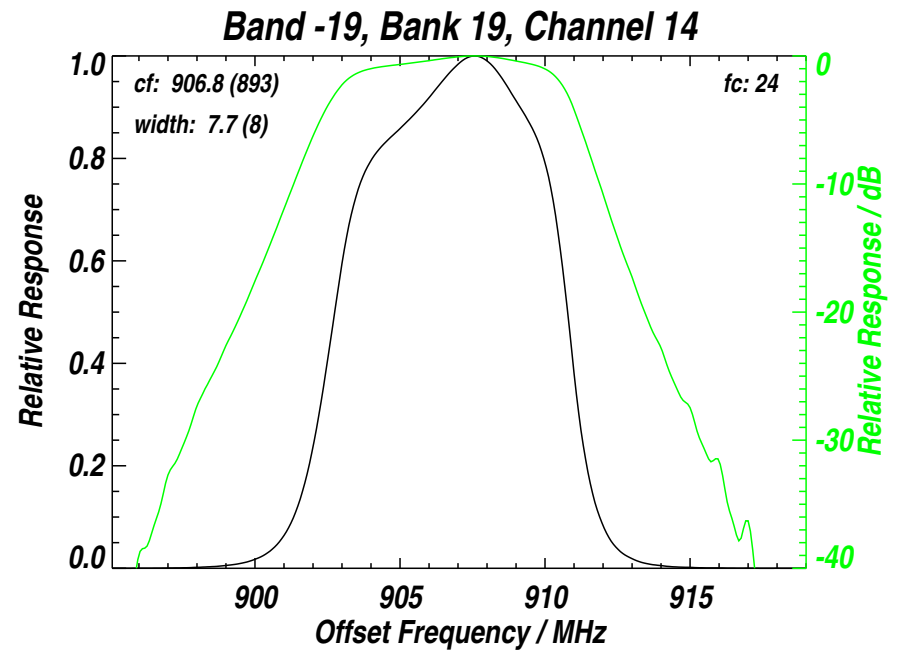
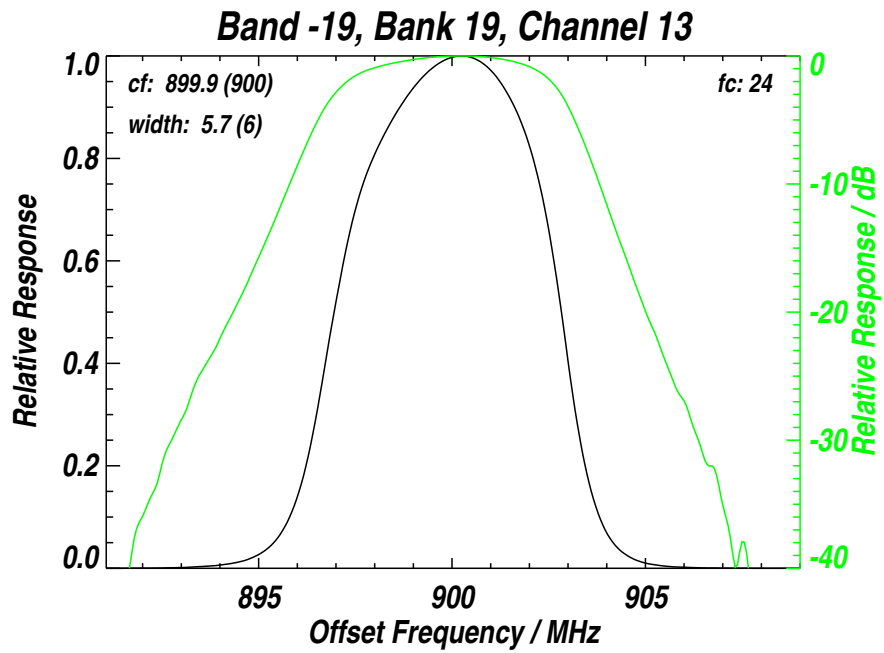


Figure I.37: 1st IF sweep data for Band 19, channels 13 to 16, plotted as the channels appear in the lower sideband. See text for additional details.

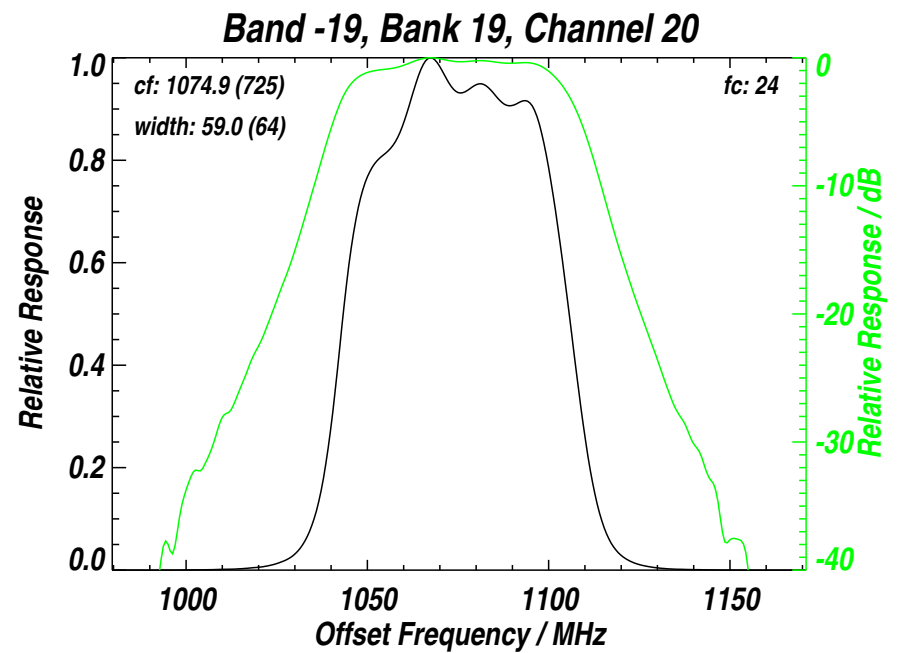
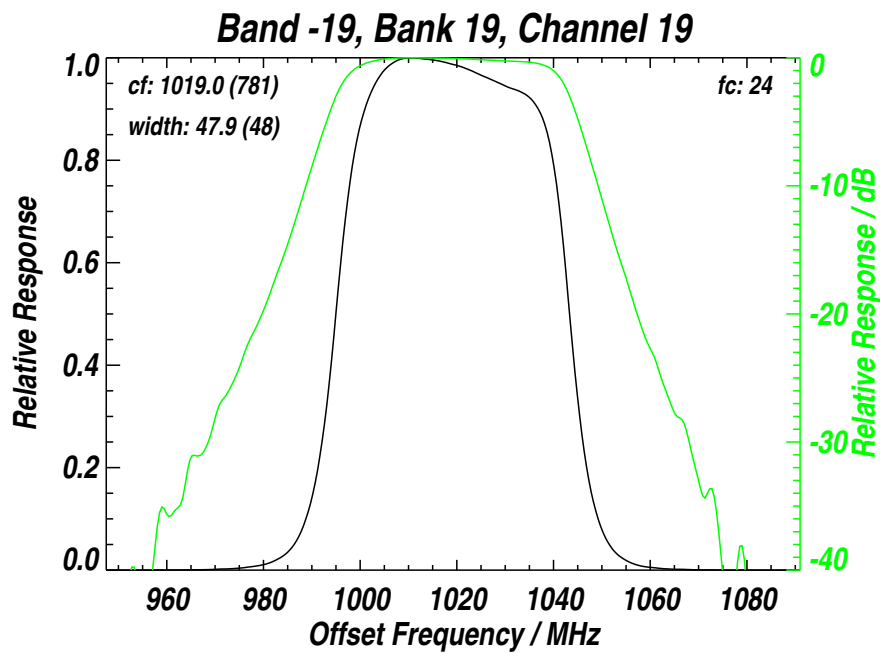
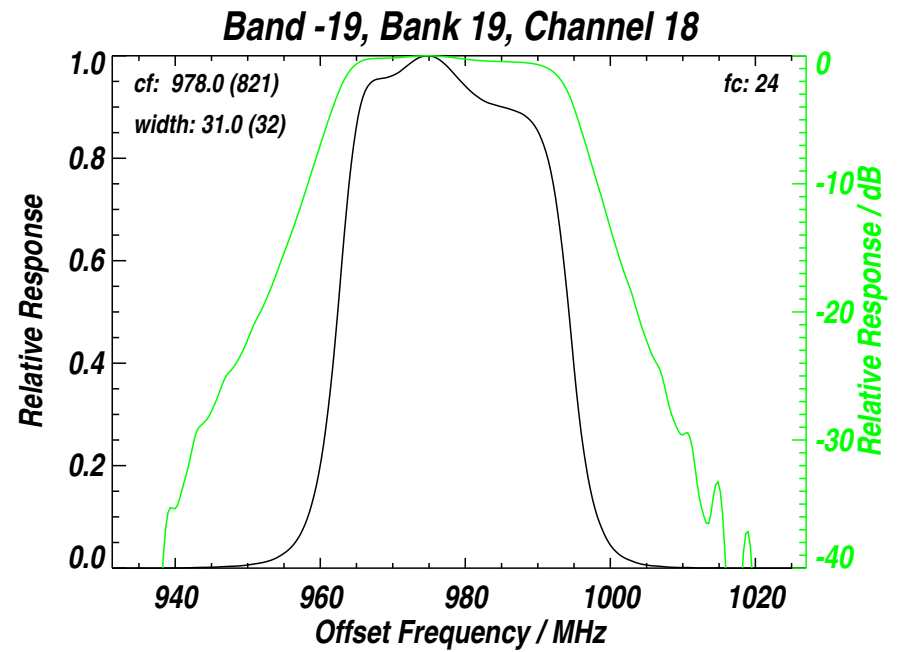
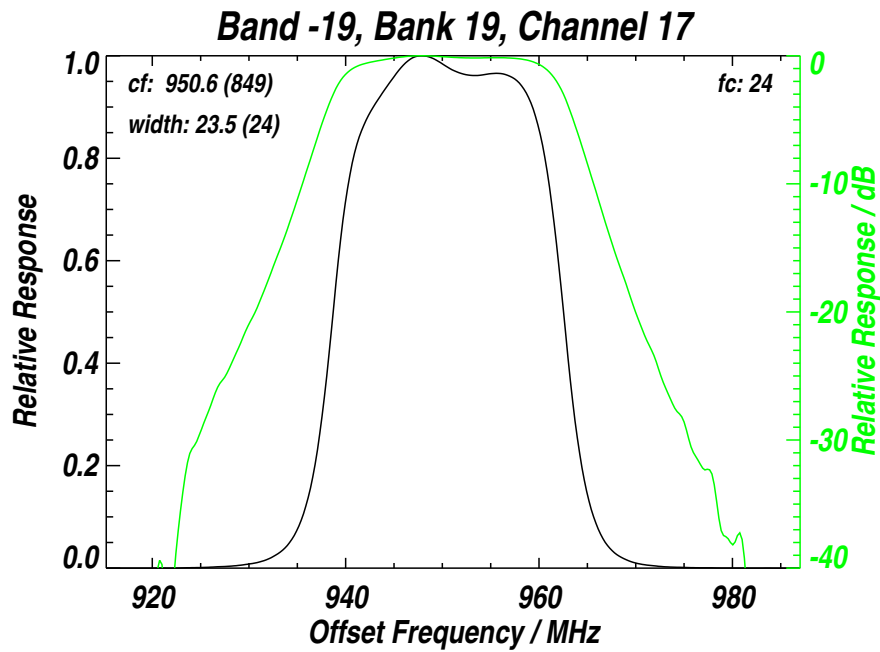


Figure I.38: 1st IF sweep data for Band 19, channels 17 to 20, plotted as the channels appear in the lower sideband. See text for additional details.

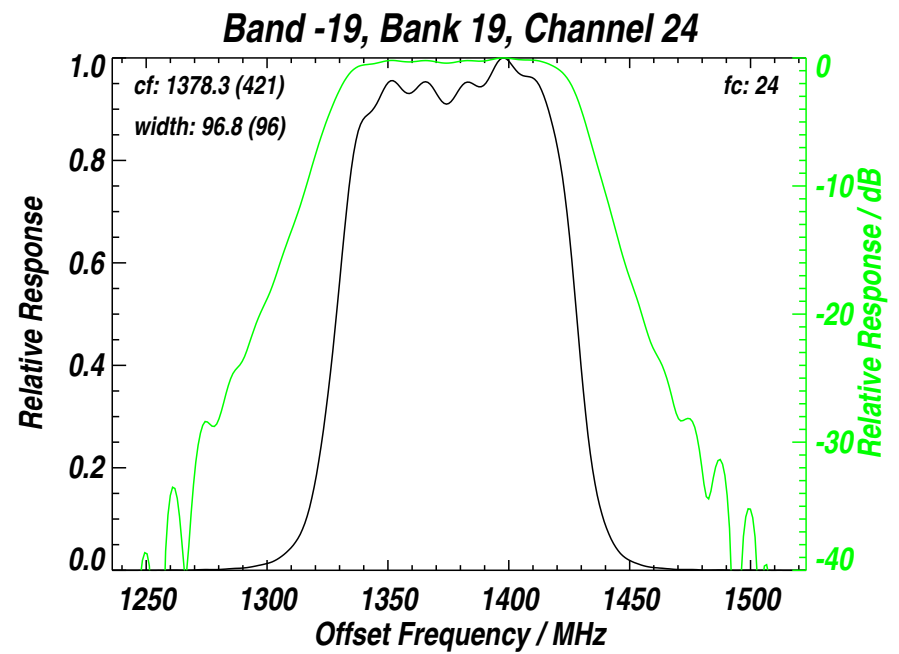
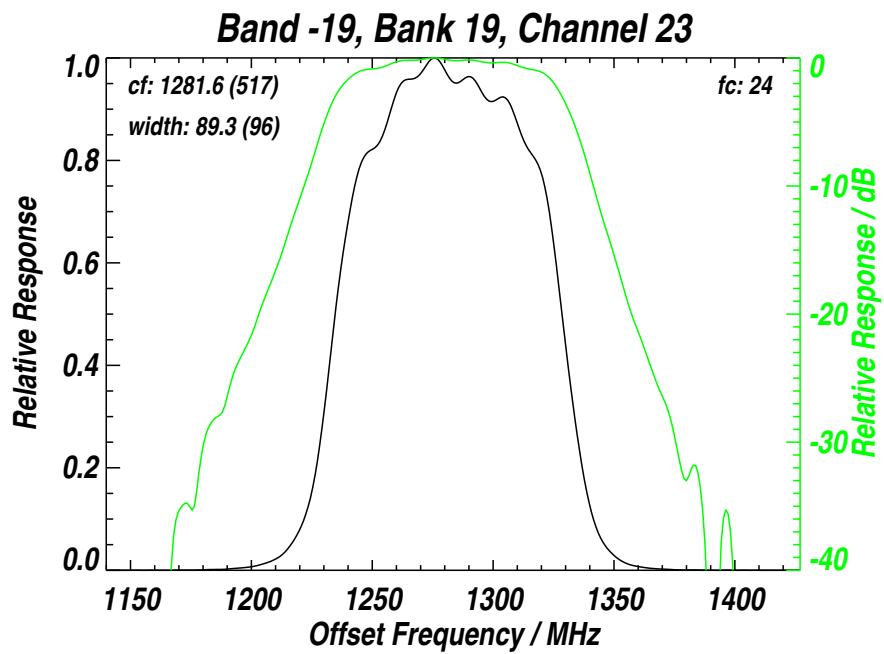
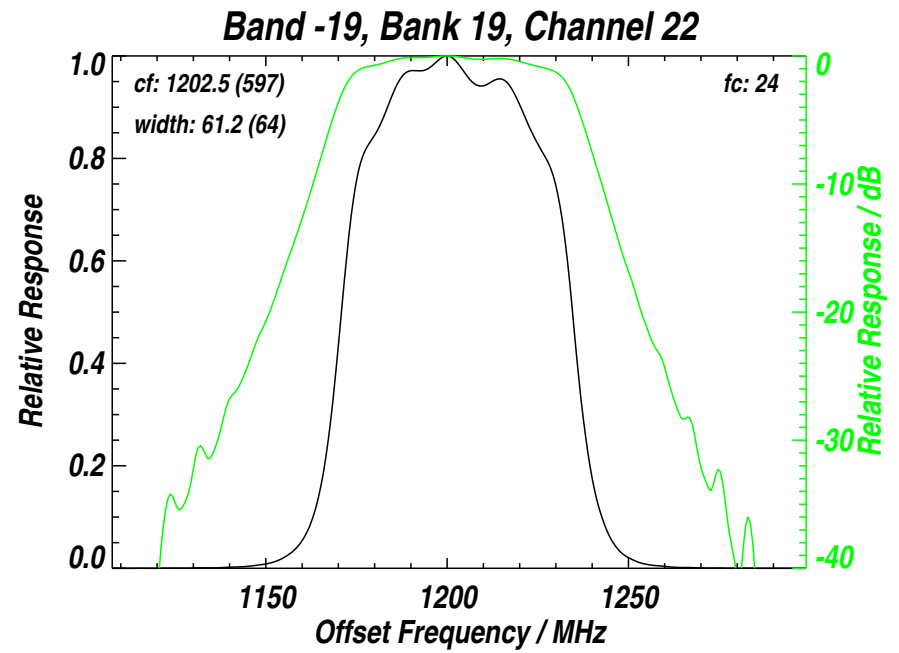
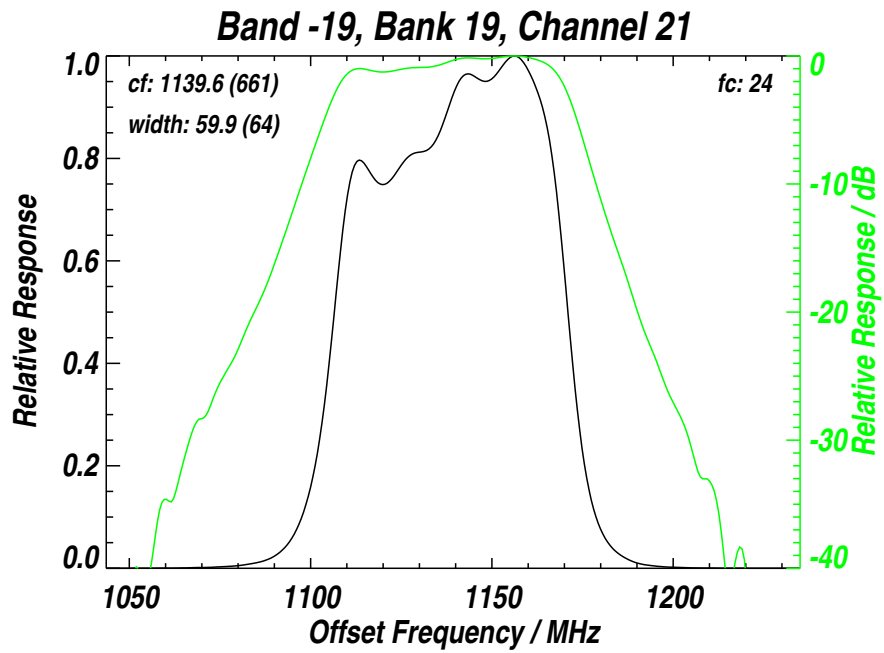
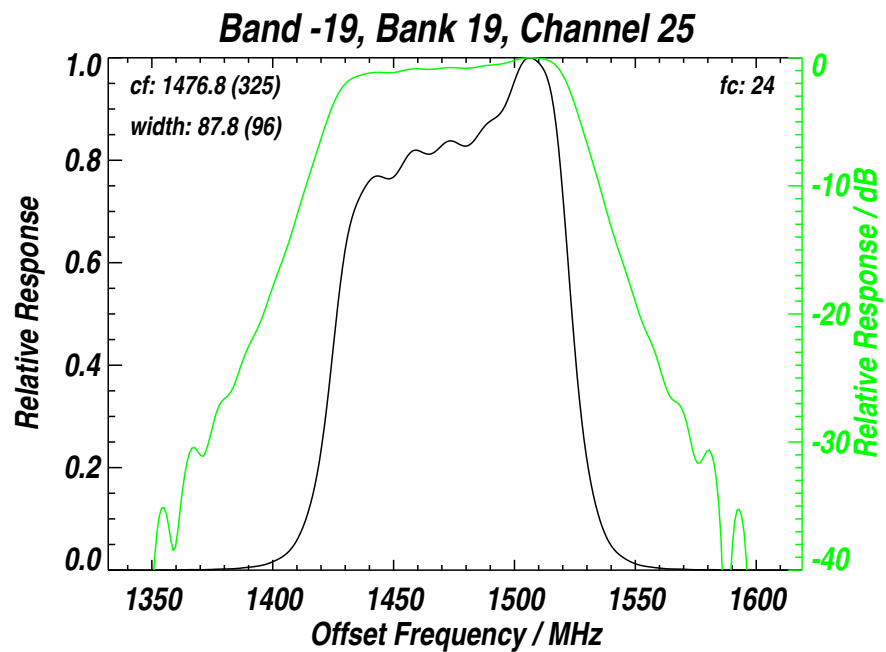


Figure I.39: 1st IF sweep data for Band 19, channels 21 to 24, plotted as the channels appear in the lower sideband. See text for additional details.



**Band 19 (lsb)**  
**Bank 19**  
**Origin = 2509.105700000 GHz**

Figure I.40: 1st IF sweep data for Band 19, channel 25, plotted as the channel appears in the lower sideband. See text for additional details.

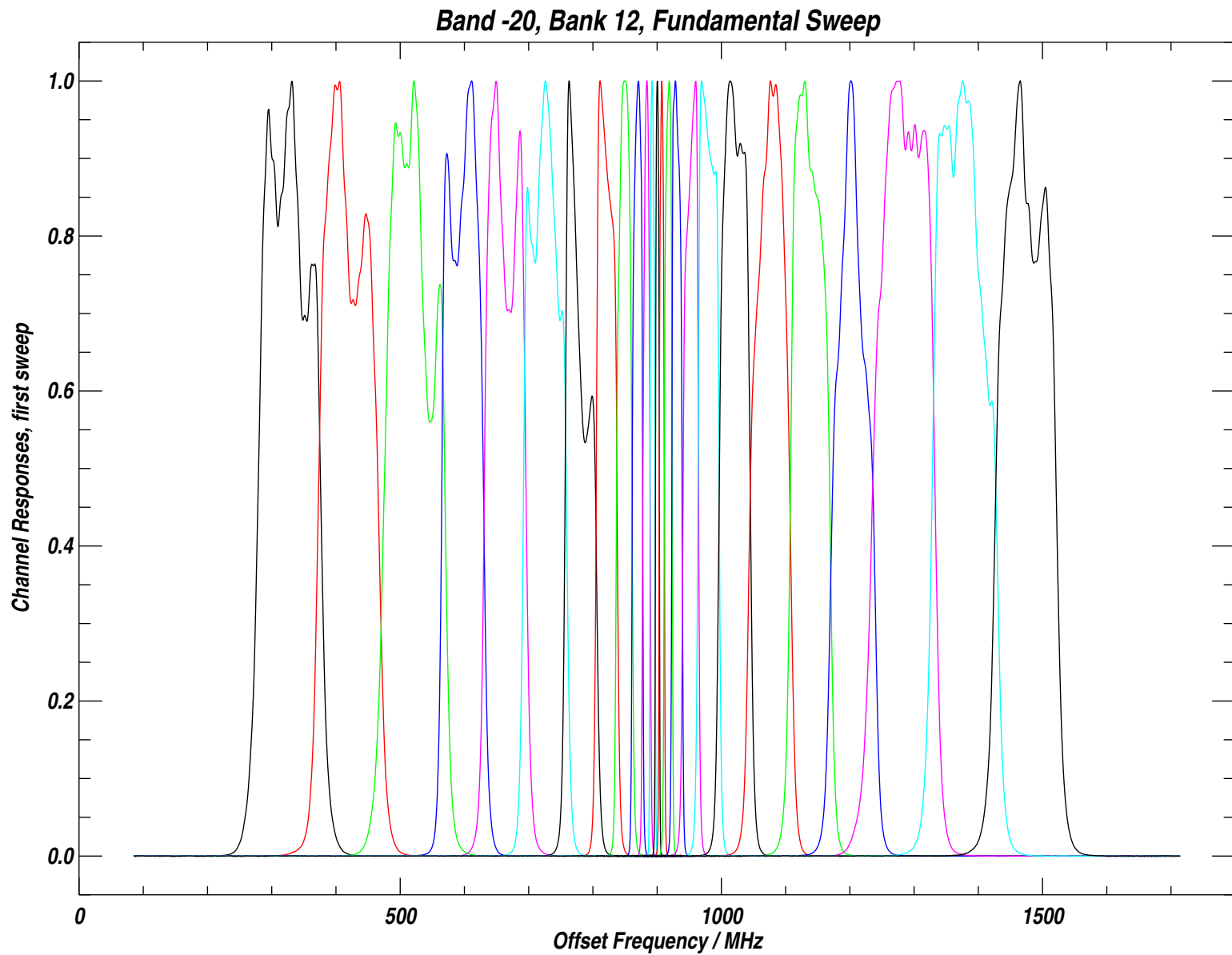


Figure I.41: 1st. IF sweep data for Band 20, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.

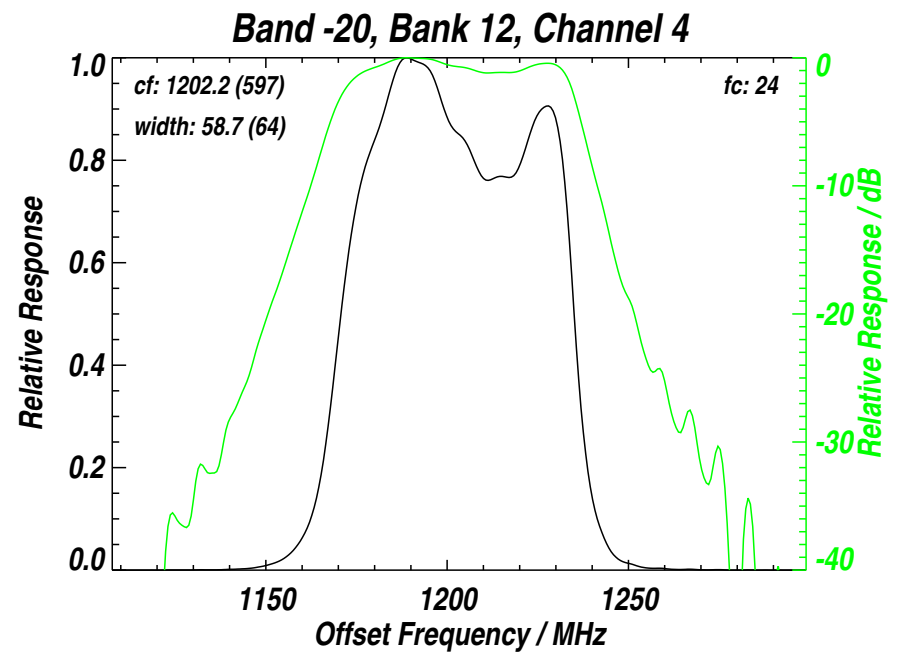
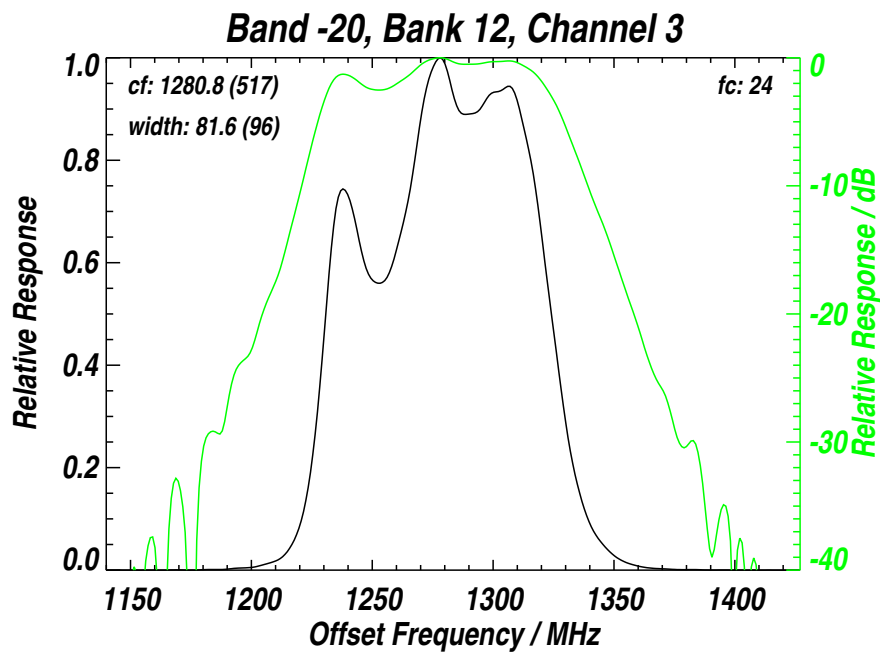
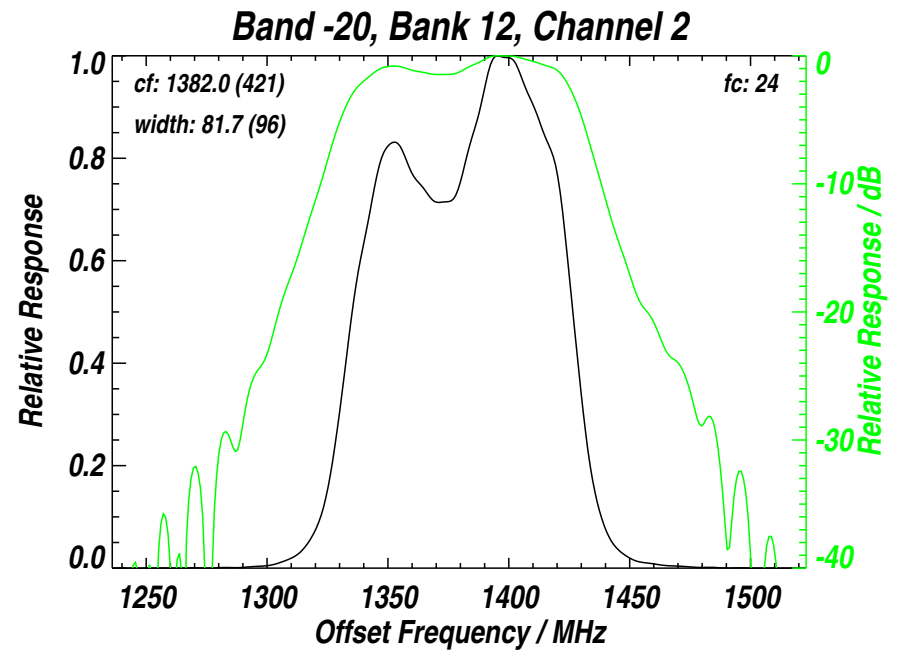
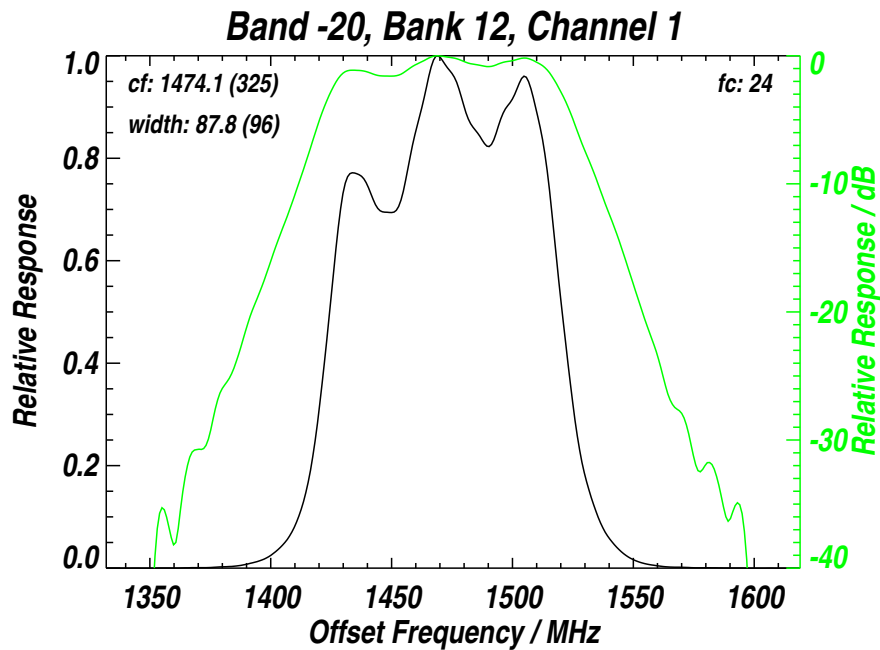


Figure I.42: 1st IF sweep data for Band 20, channels 1 to 4, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.

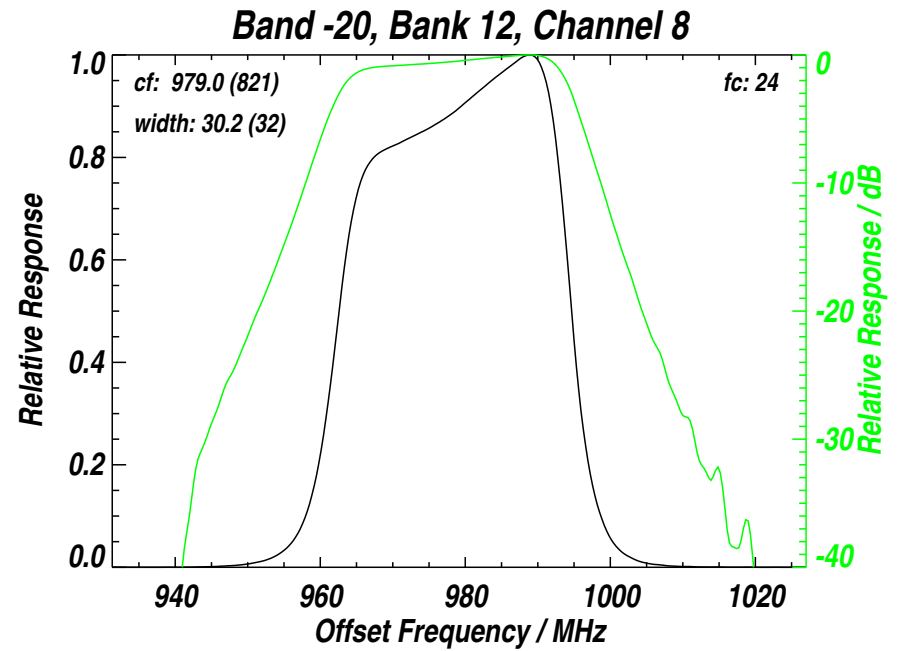
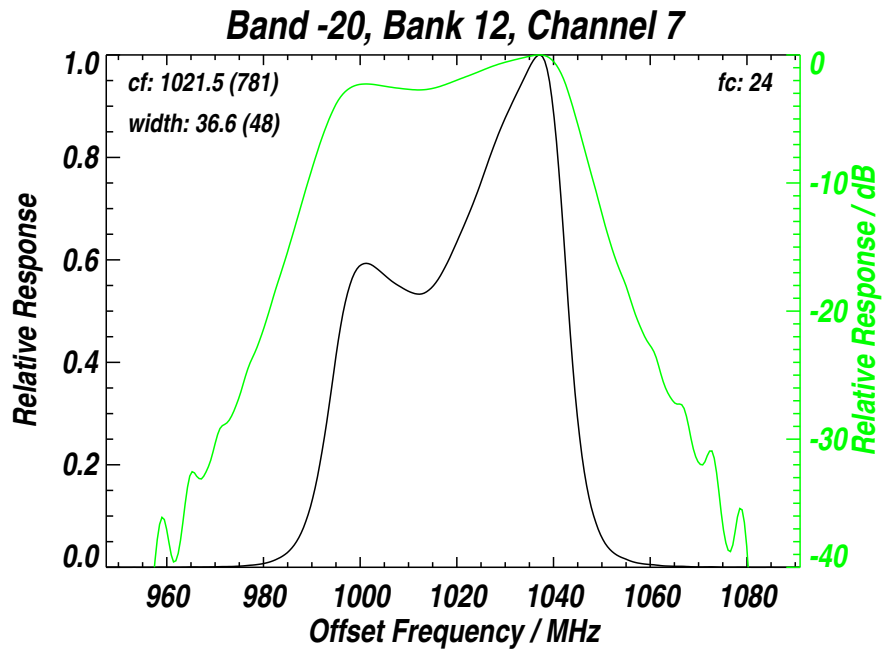
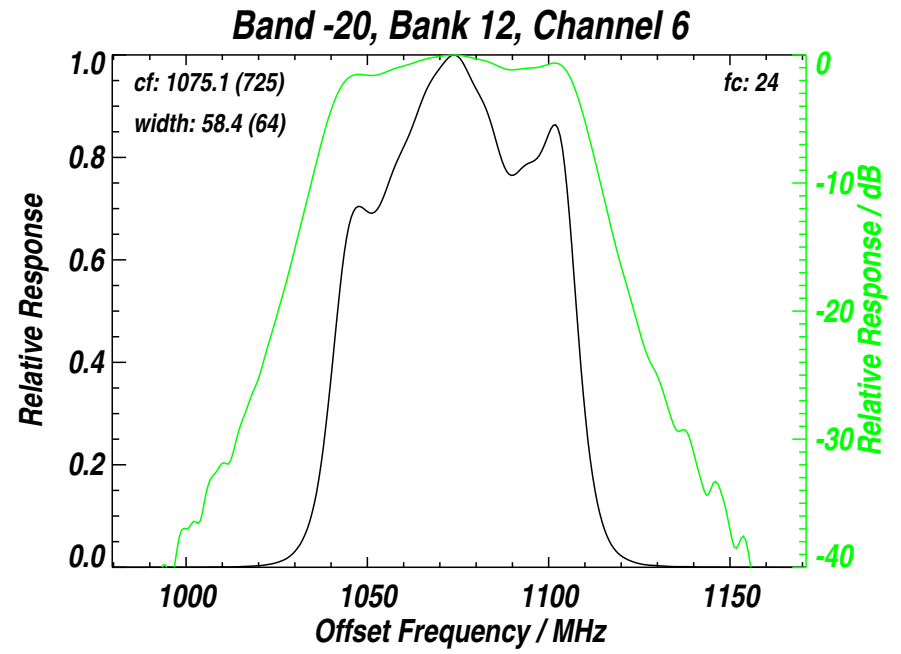
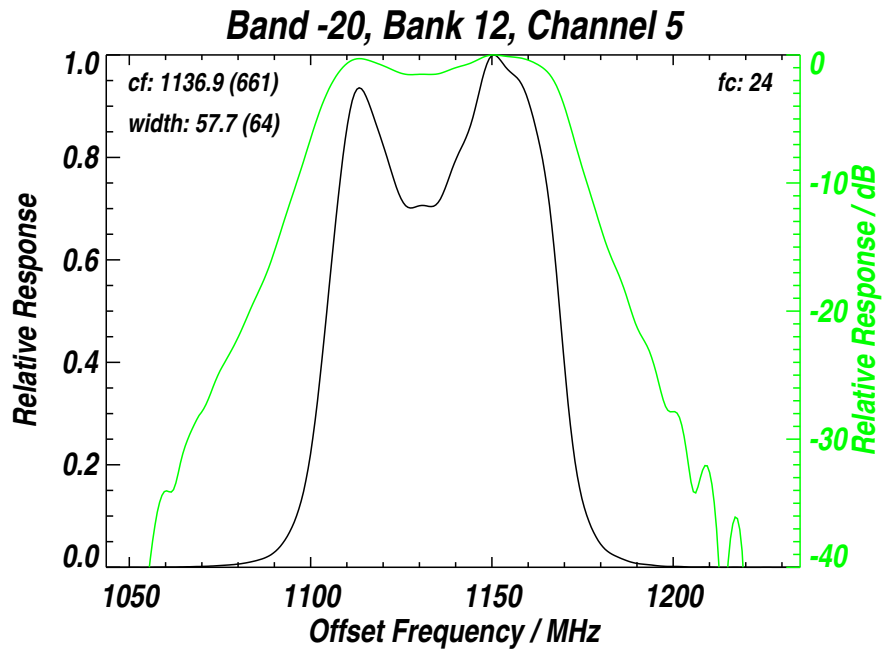


Figure I.43: 1st IF sweep data for Band 20, channels 5 to 8, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.

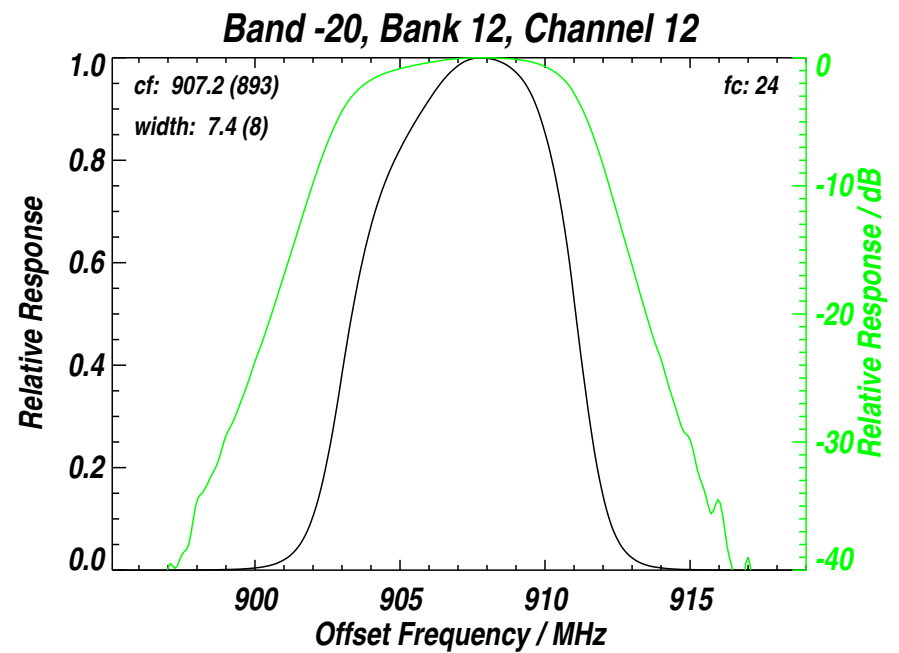
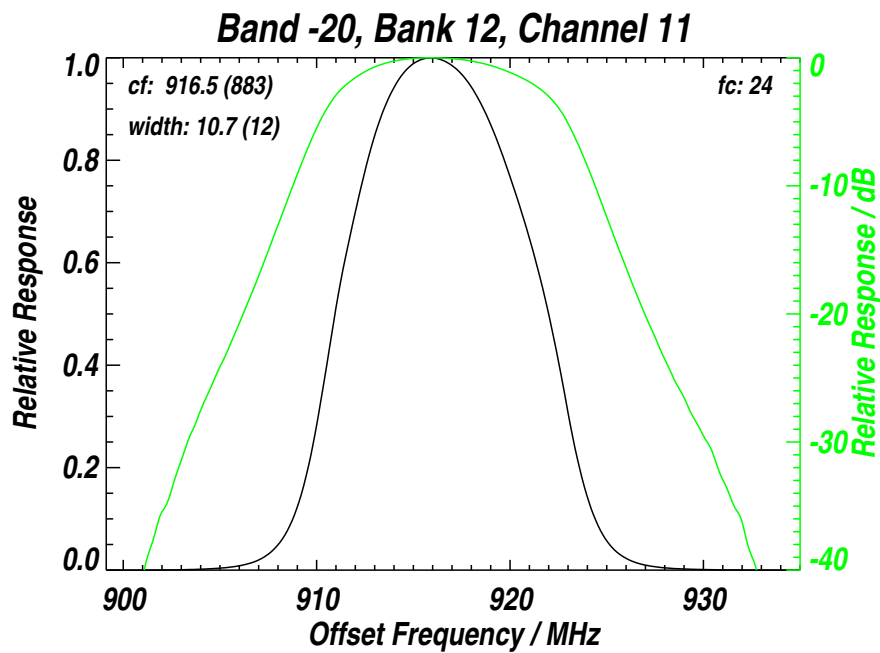
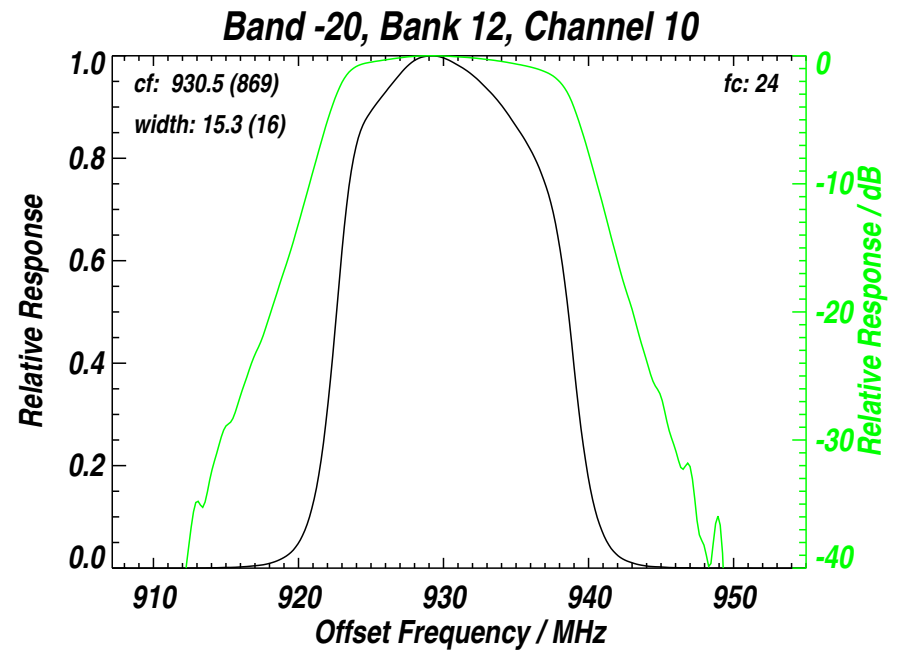
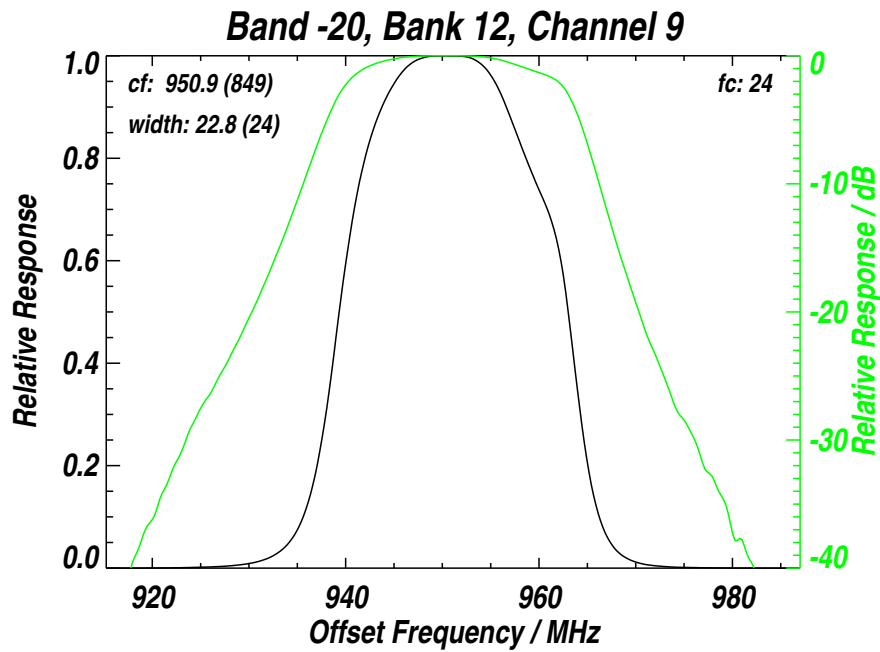


Figure I.44: 1st IF sweep data for Band 20, channels 9 to 12, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.



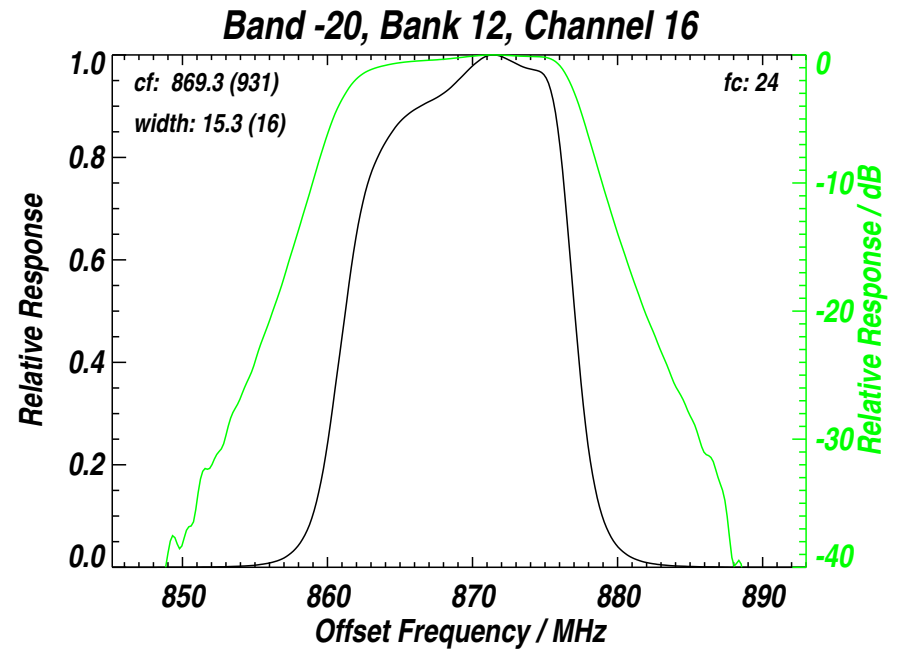
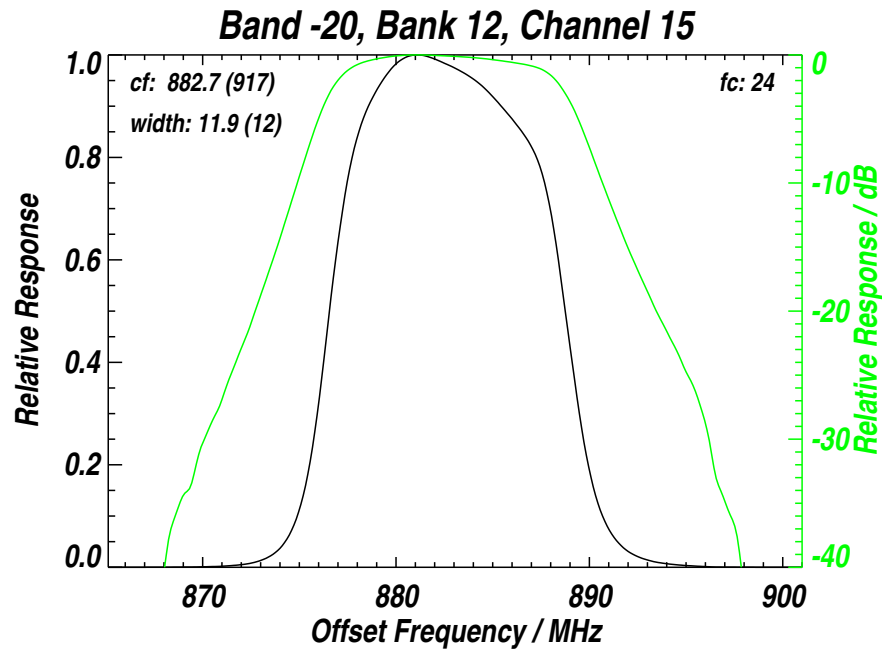
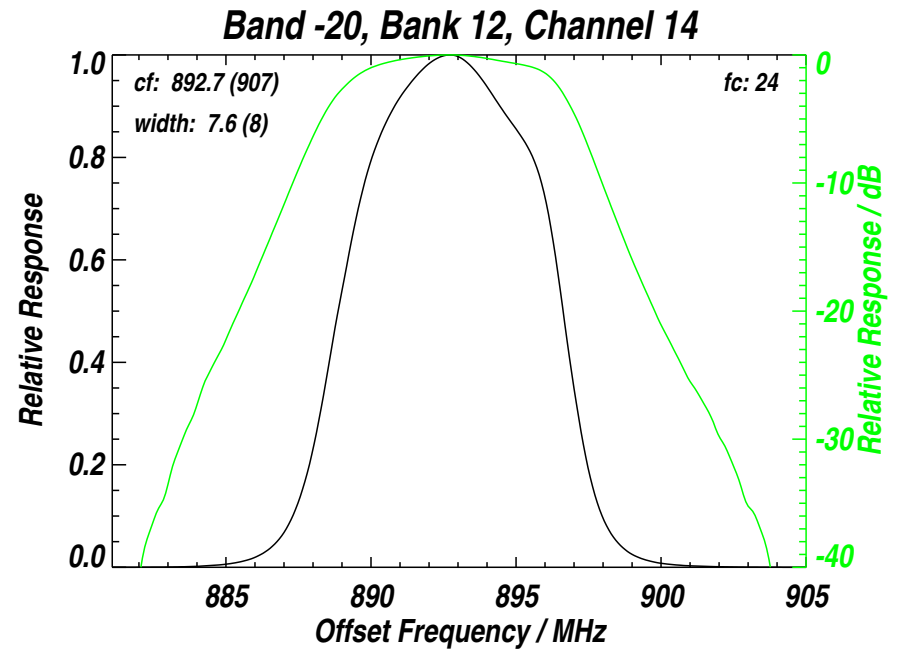
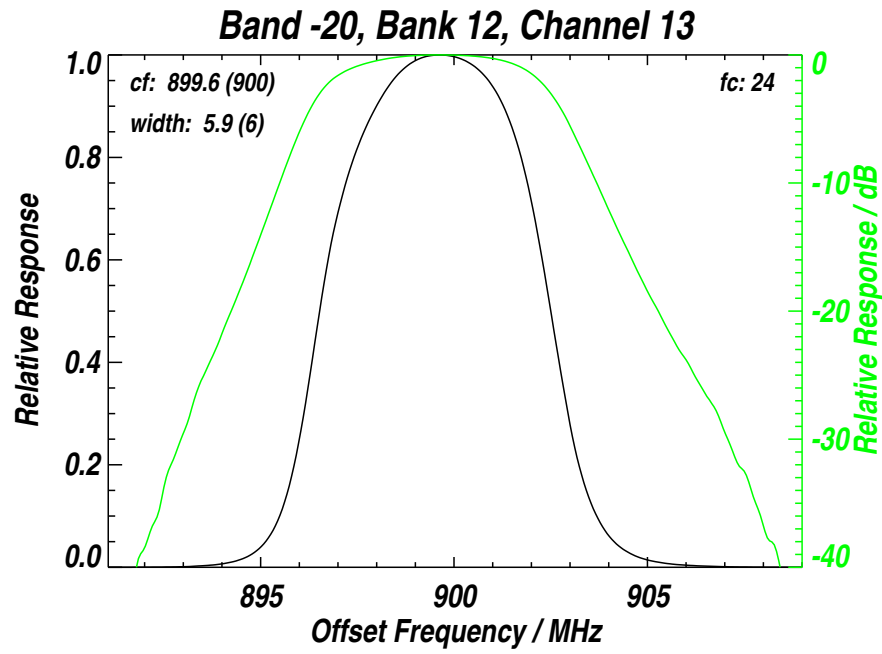


Figure I.45: 1st IF sweep data for Band 20, channels 13 to 16, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.

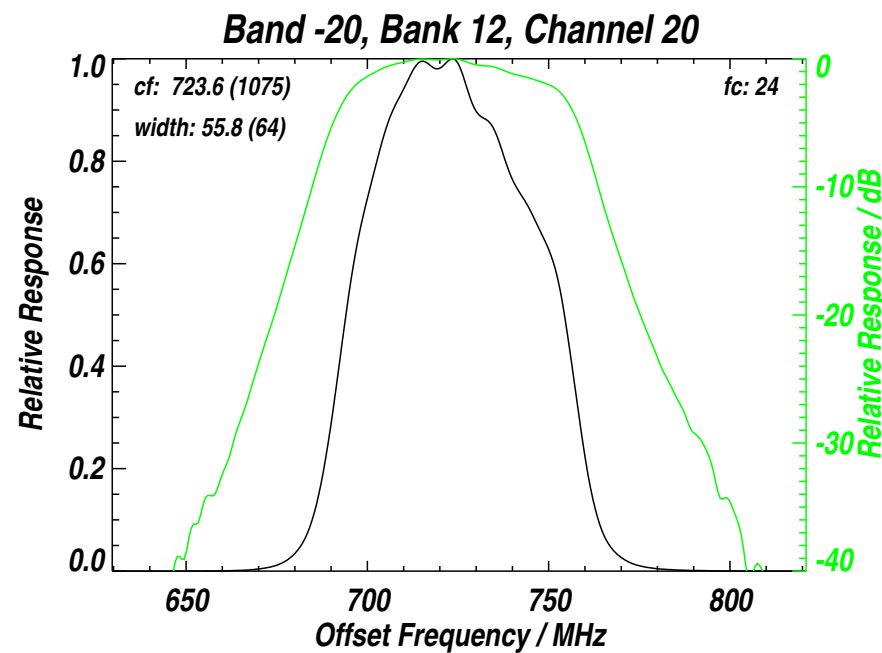
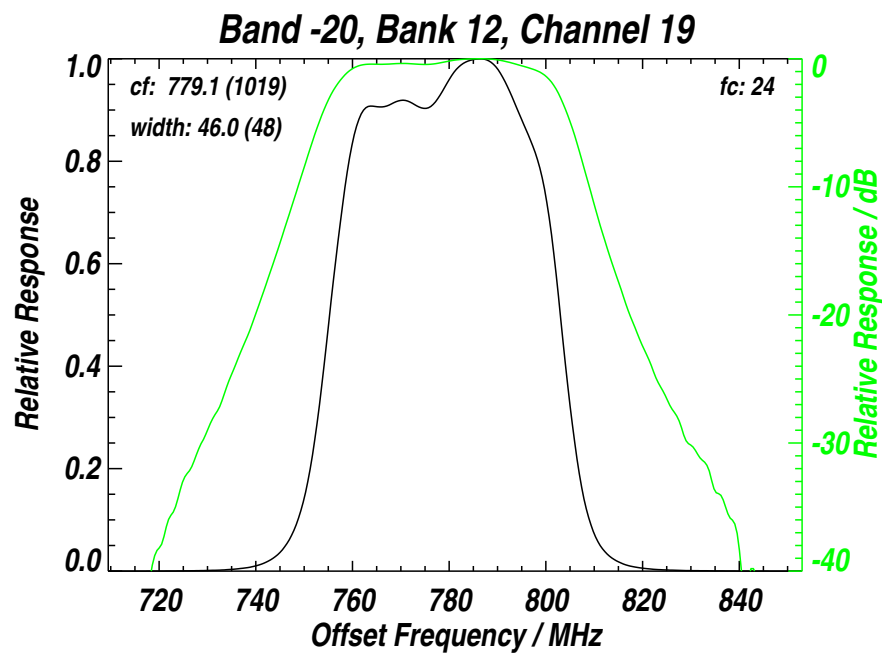
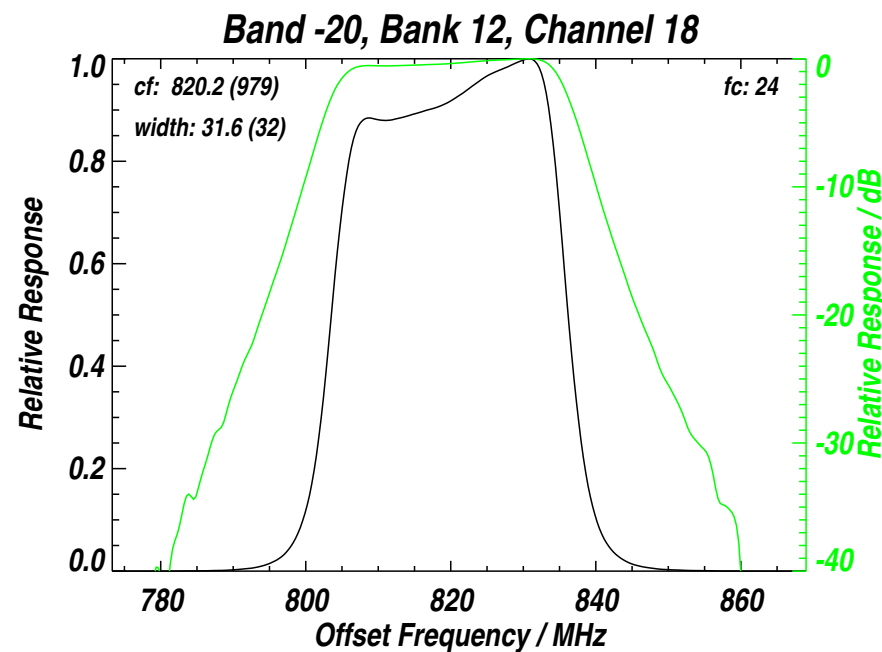
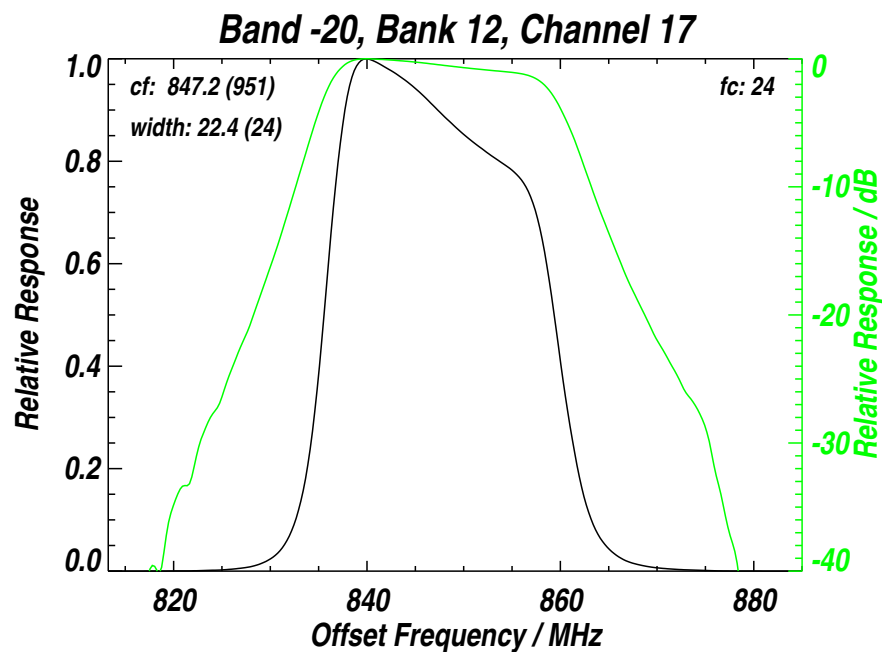
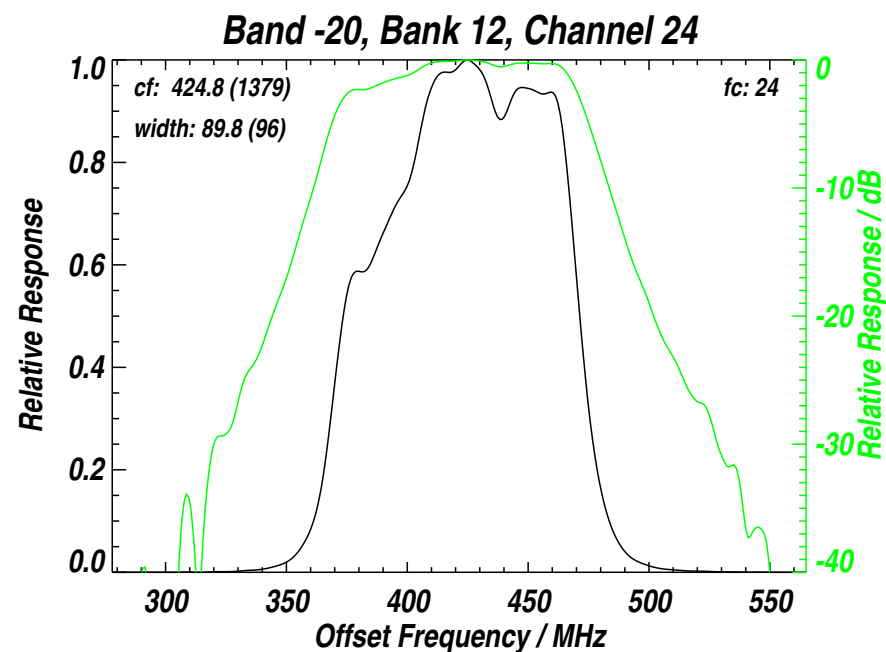
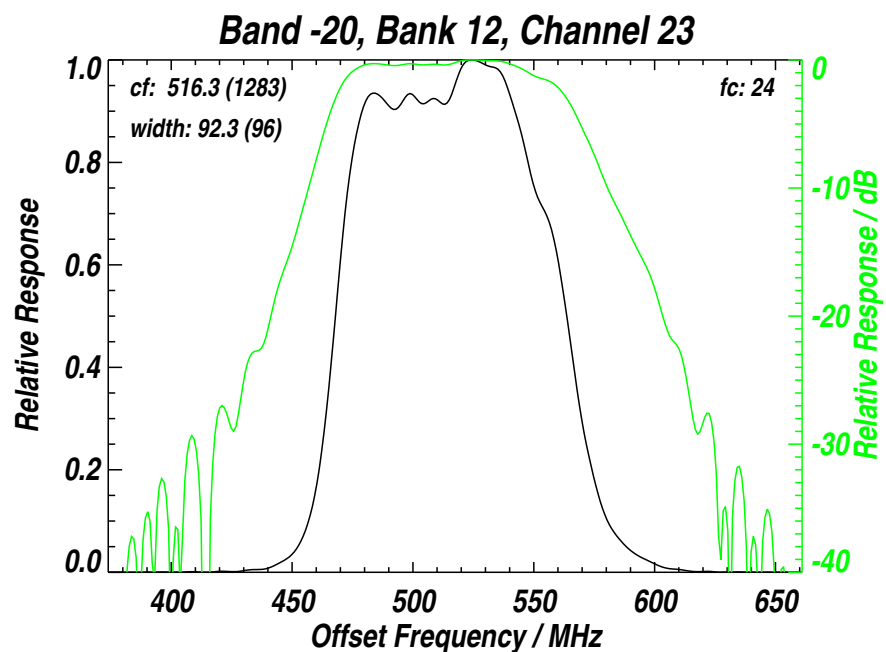
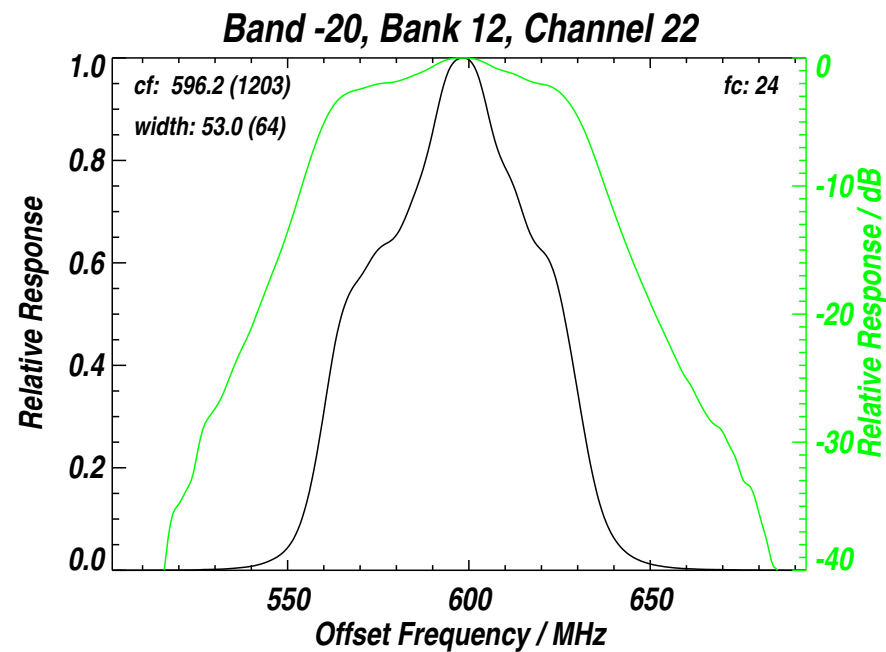
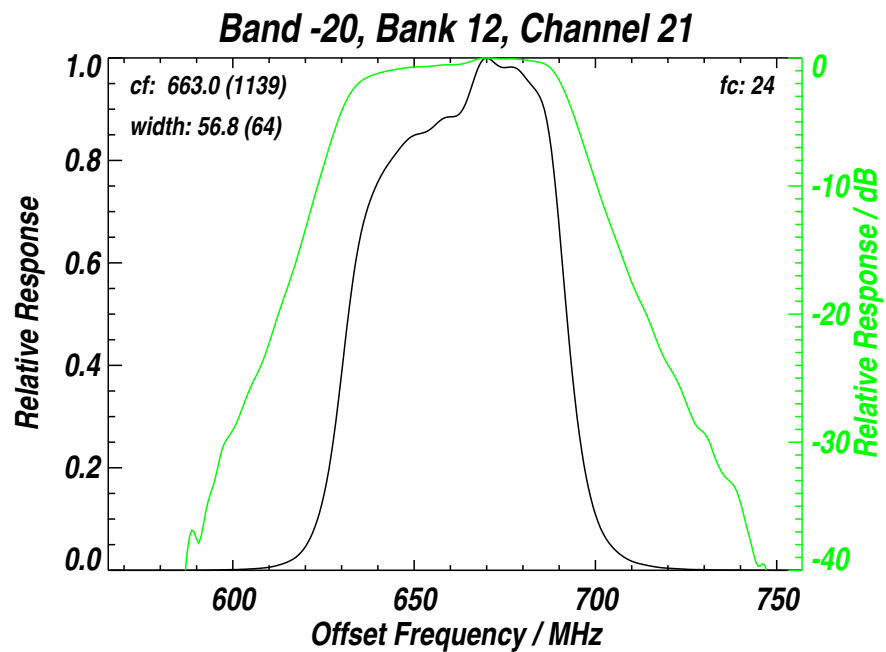


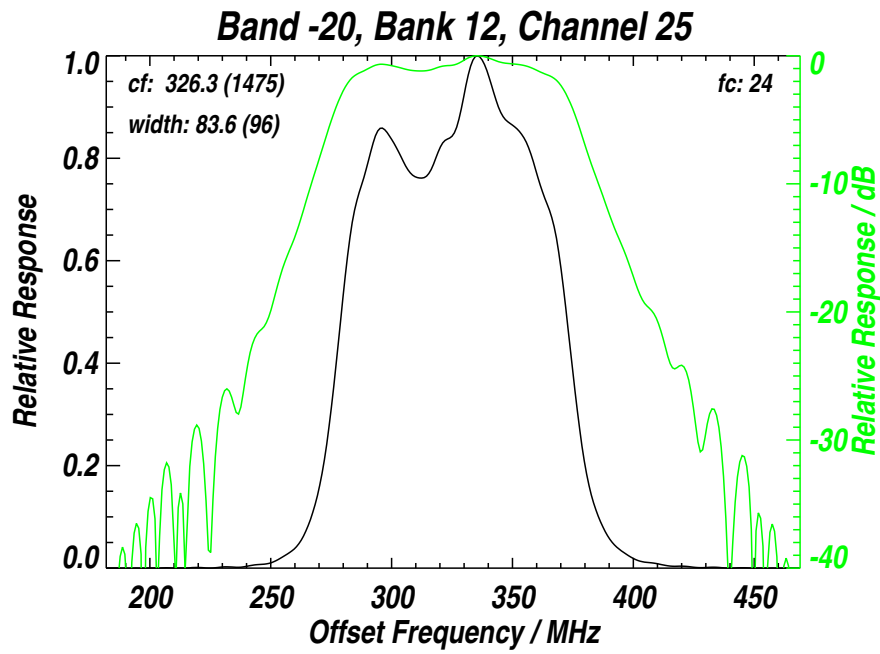
Figure I.46: 1st IF sweep data for Band 20, channels 17 to 20, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.



500

THz High Resolution Spectral Sweeps

Figure I.47: 1st IF sweep data for Band 20, channels 21 to 24, plotted as the channels appear in the lower sideband. These data are from filterbank 12. See text for additional details.



**Band 20 (lsb)**  
**Bank 12**  
**Origin = 2501.480400000 GHz**

Figure I.48: 1st IF sweep data for Band 20, channel 25, plotted as the channel appears in the lower sideband. These data are from filterbank 12. See text for additional details.

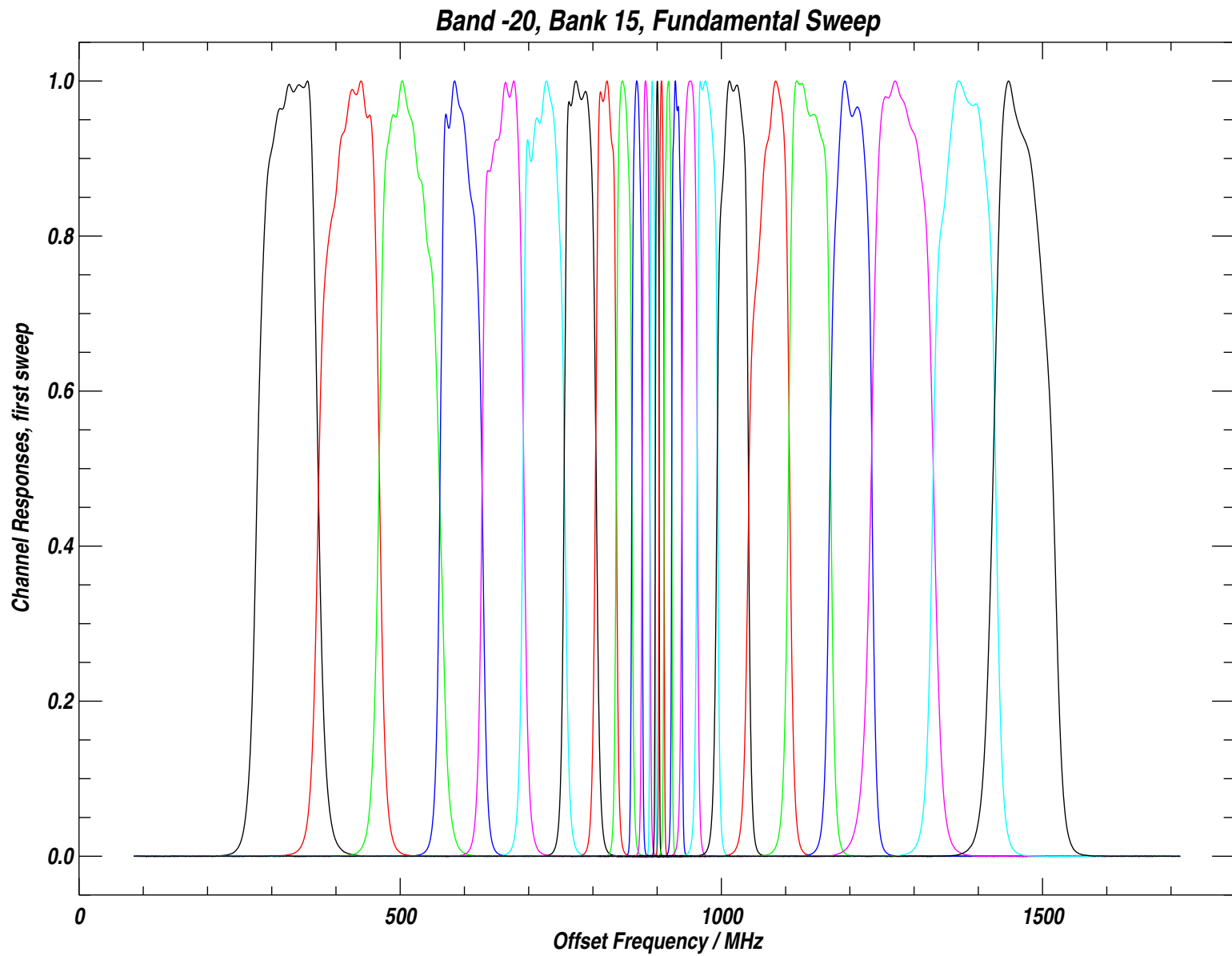


Figure I.49: 1st. IF sweep data for Band 20, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.

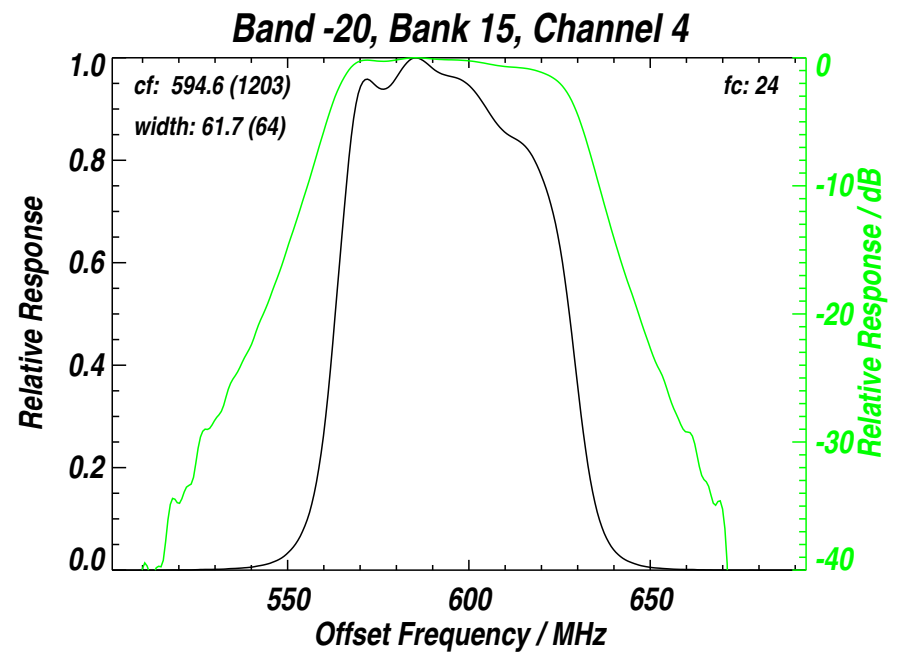
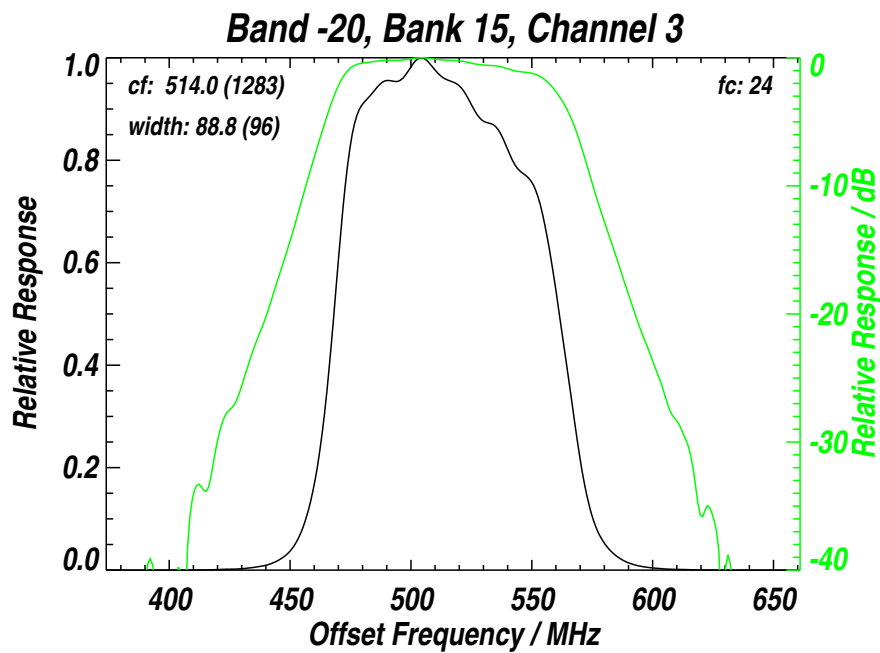
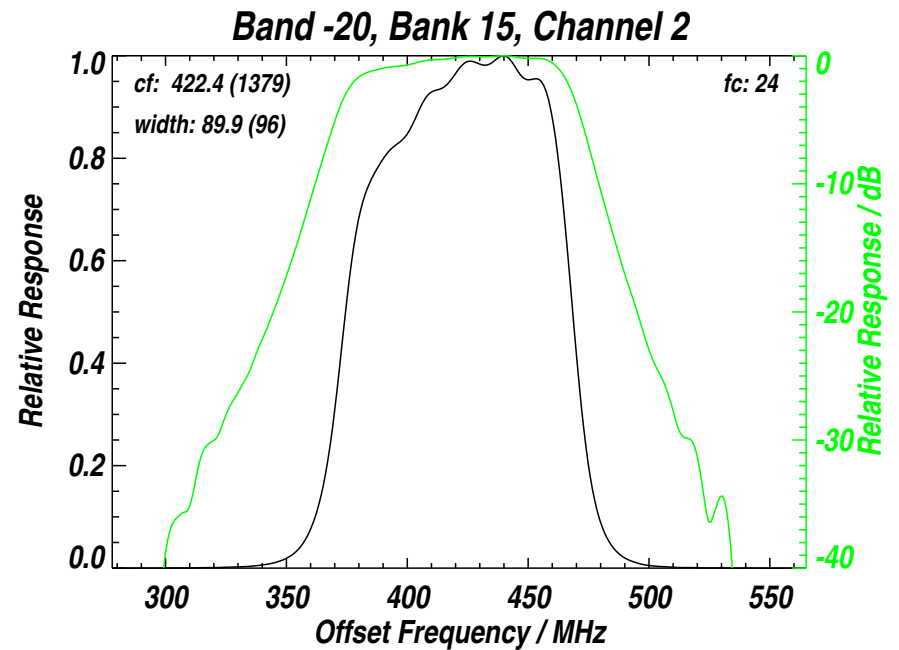
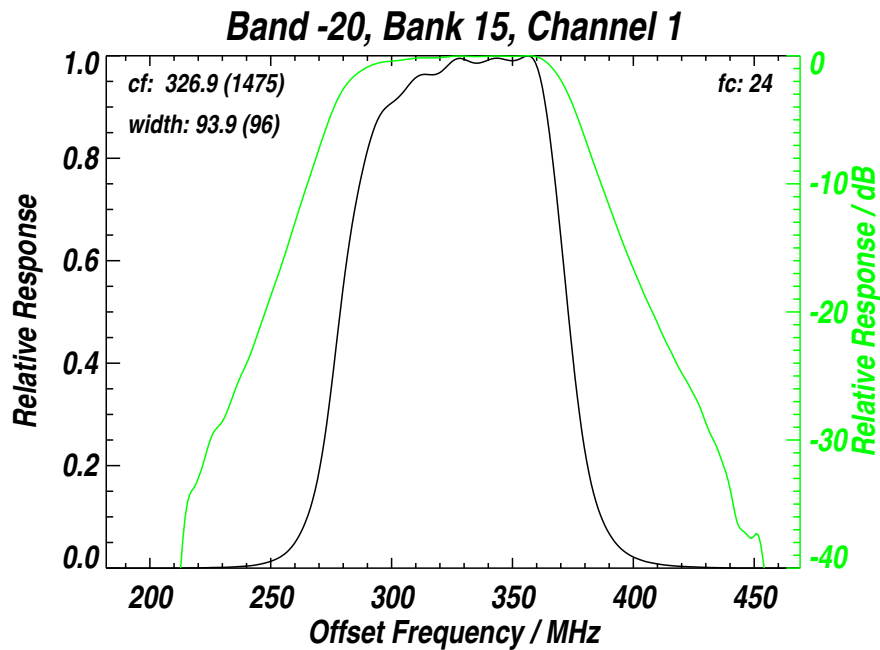


Figure I.50: 1st IF sweep data for Band 20, channels 1 to 4, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.

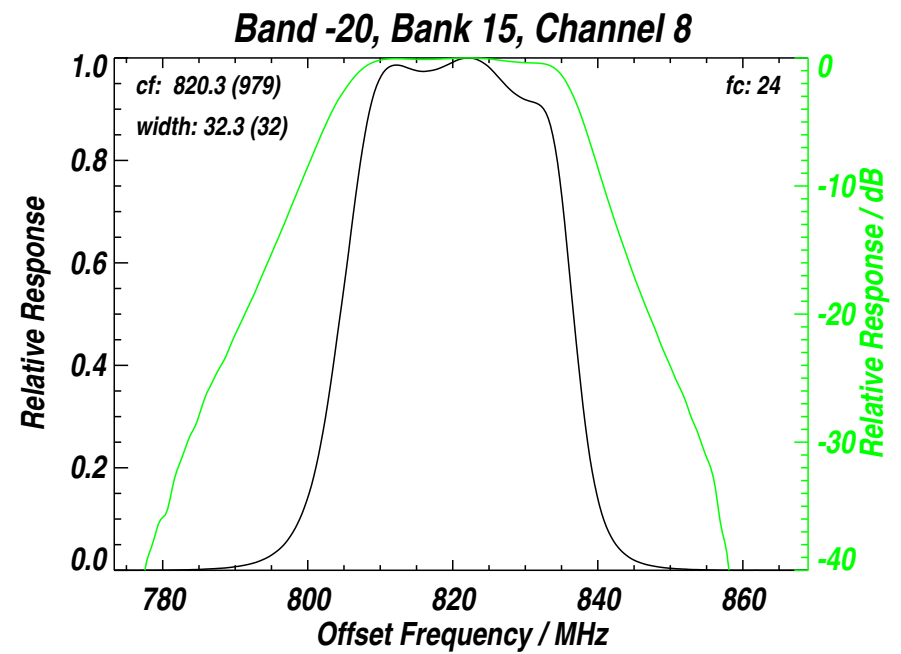
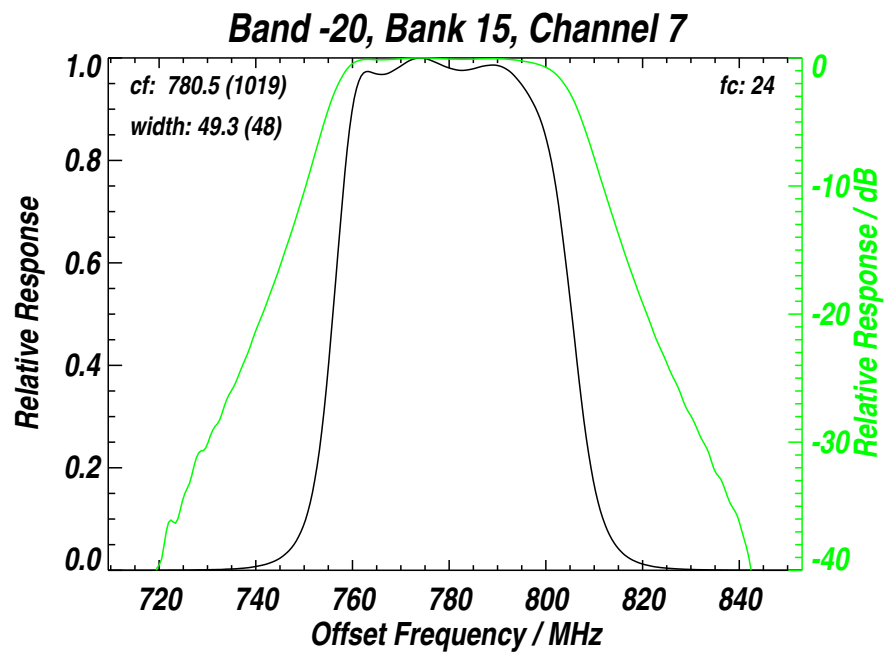
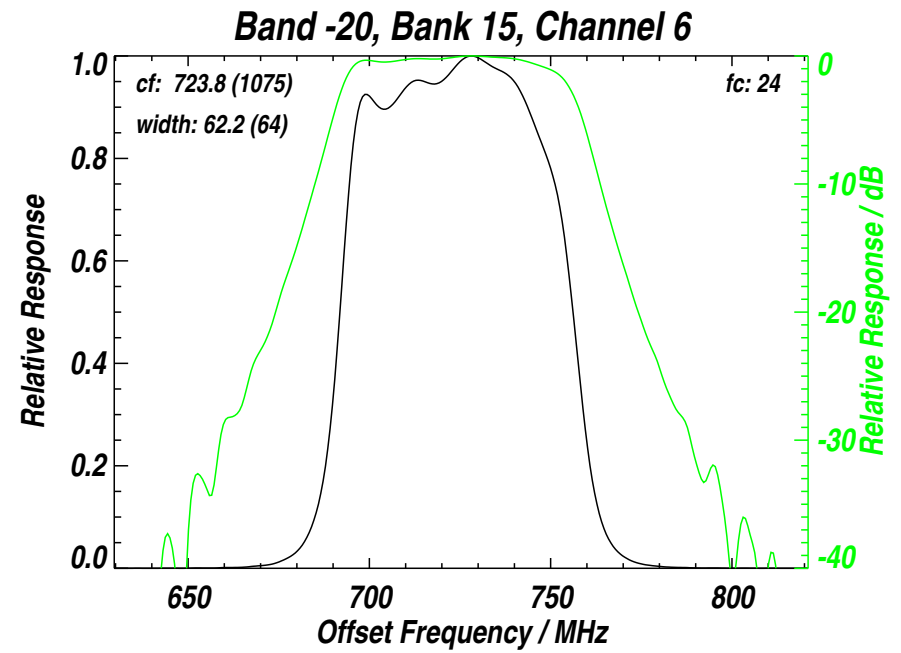
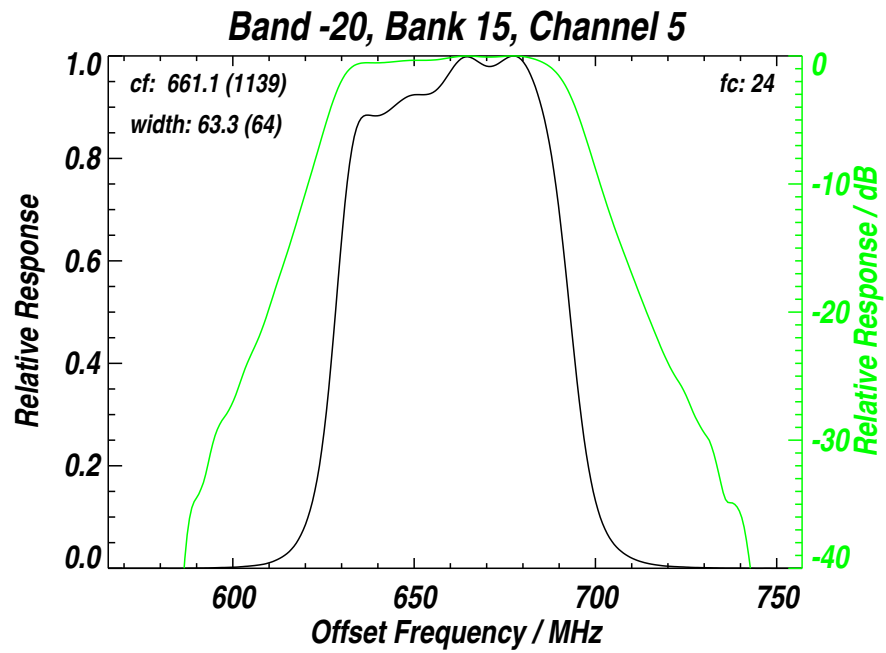


Figure I.51: 1st IF sweep data for Band 20, channels 5 to 8, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.

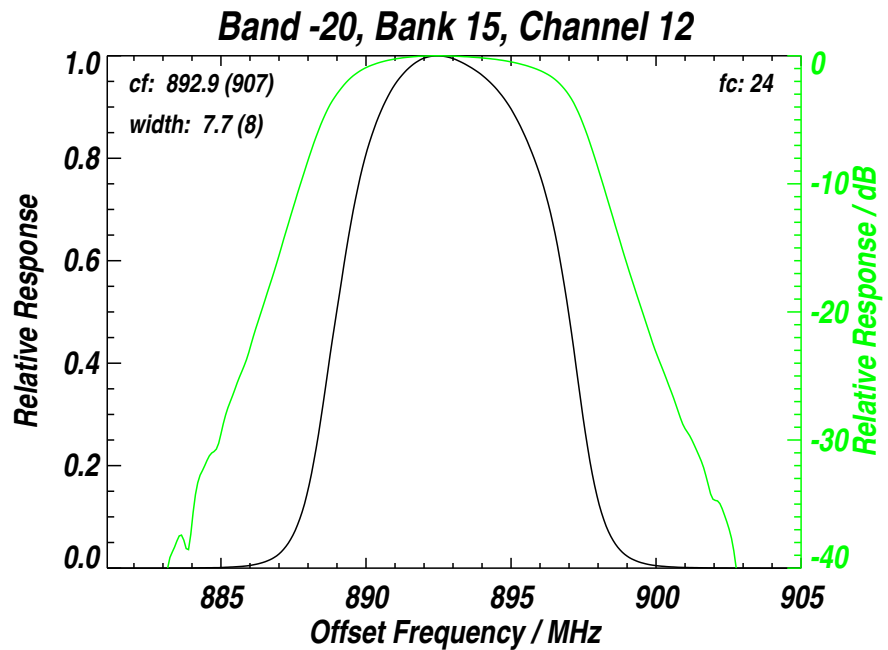
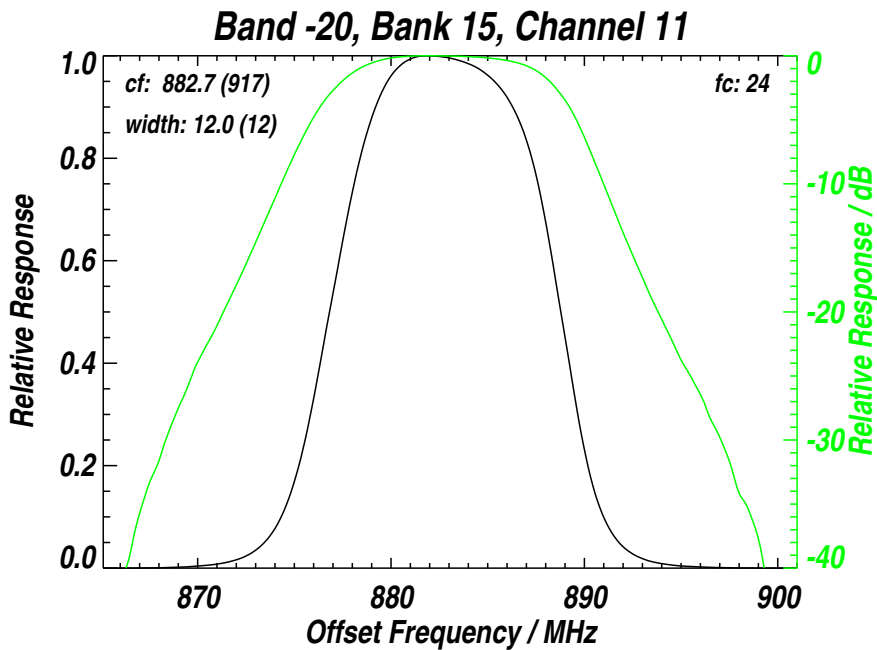
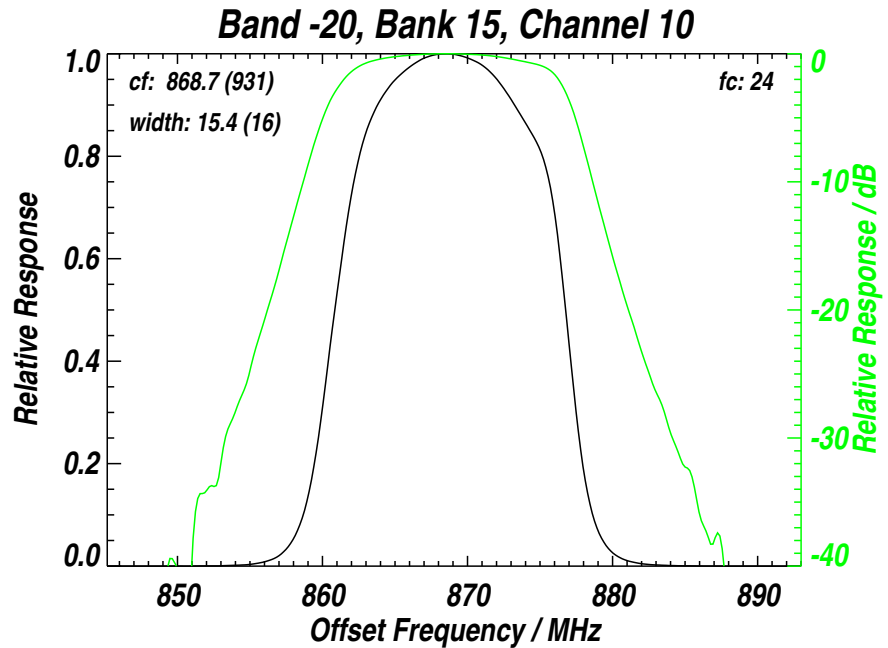
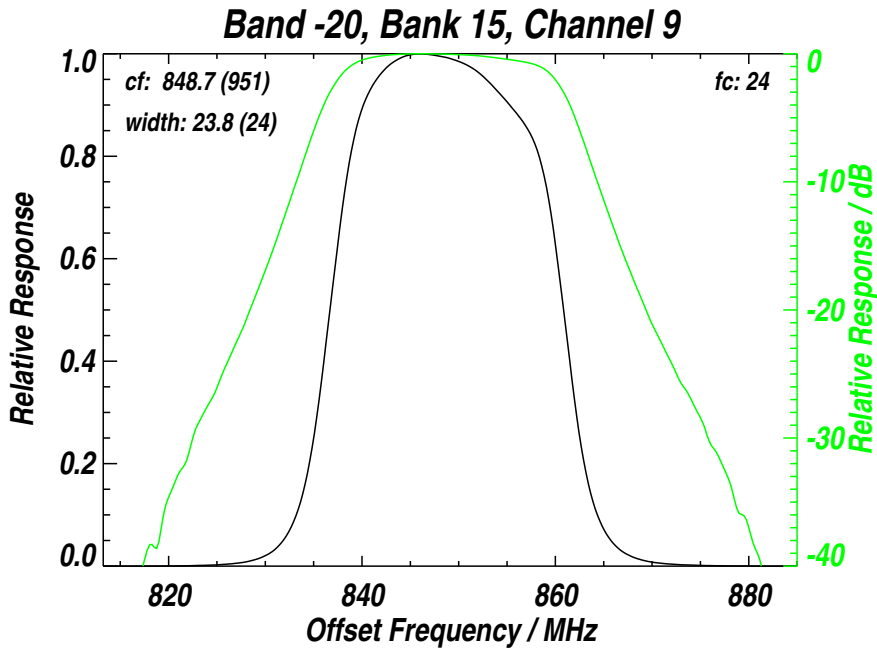


Figure I.52: 1st IF sweep data for Band 20, channels 9 to 12, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.



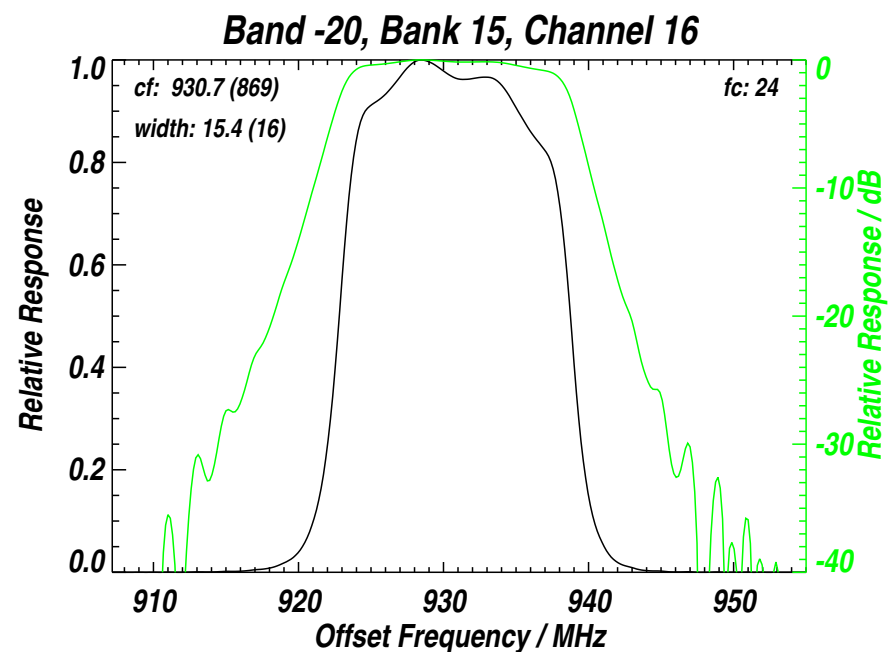
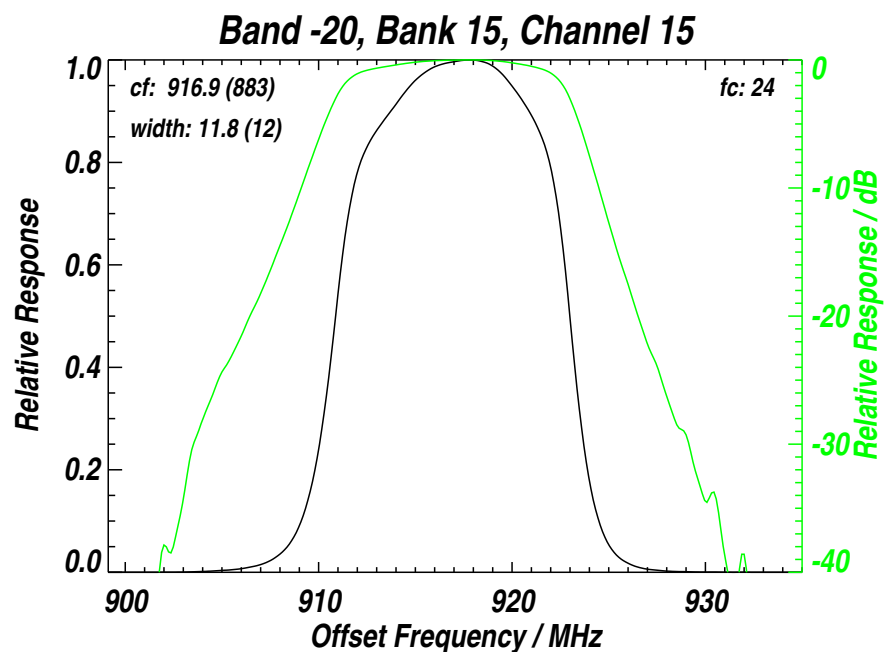
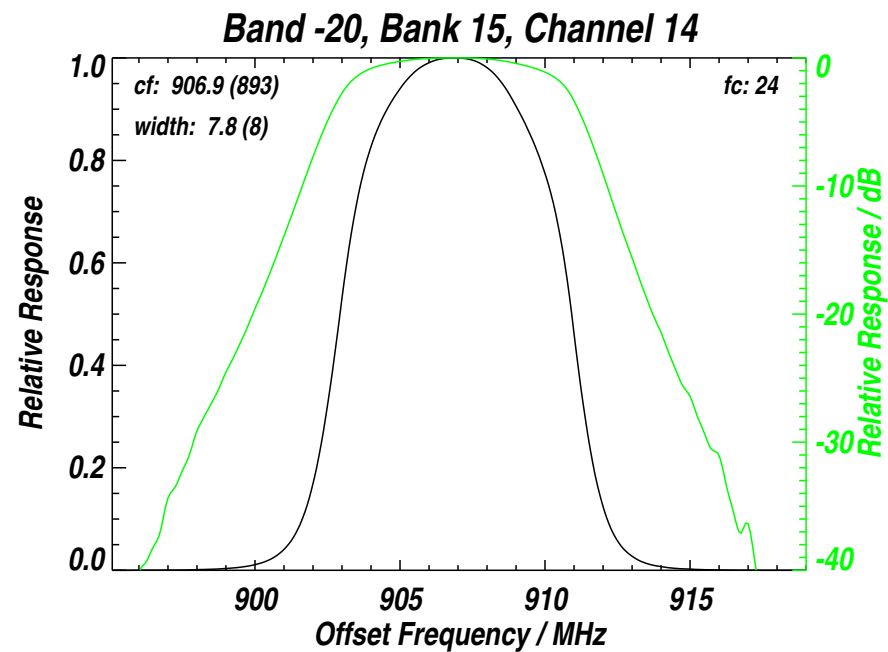
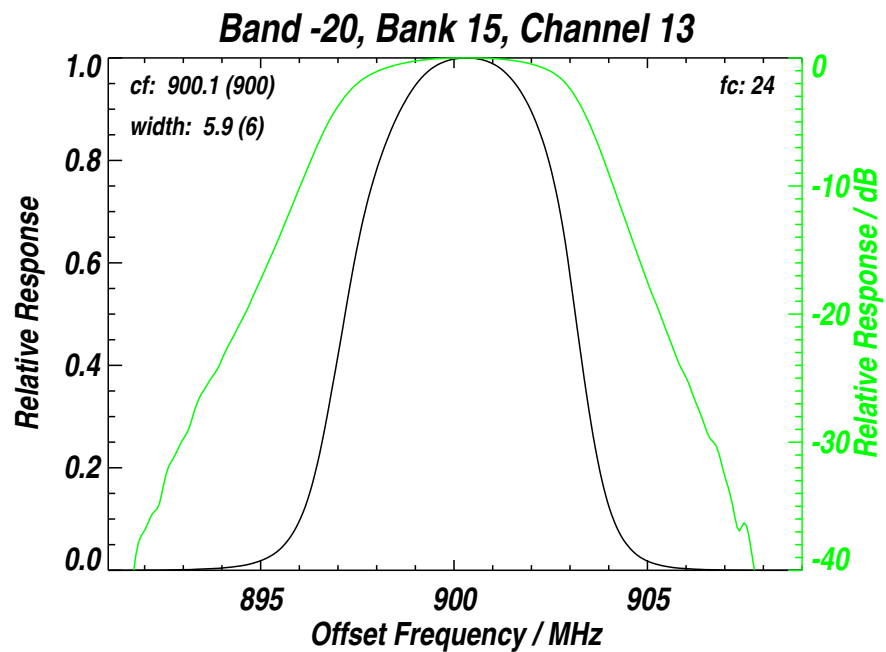


Figure I.53: 1st IF sweep data for Band 20, channels 13 to 16, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.

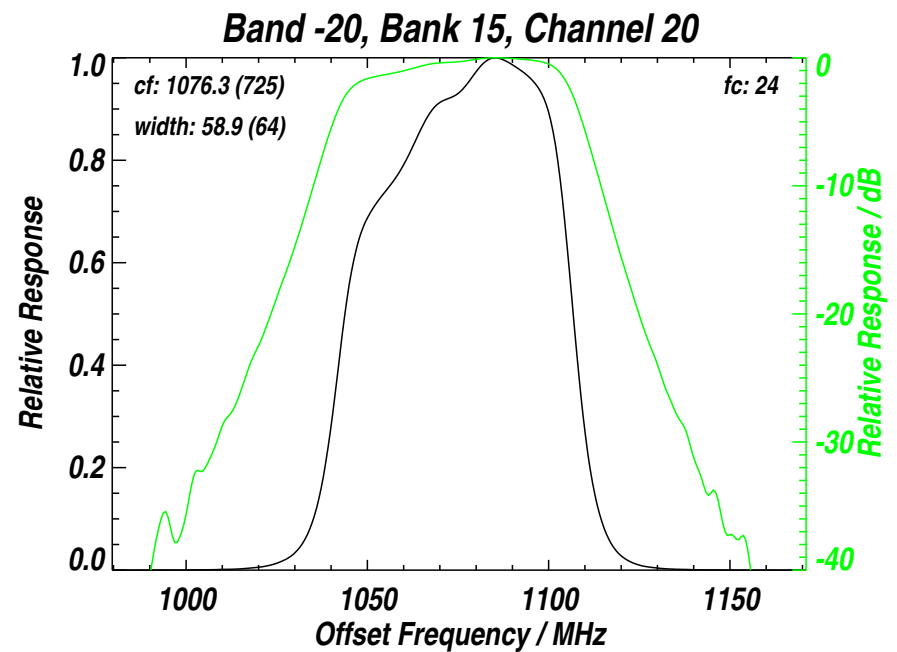
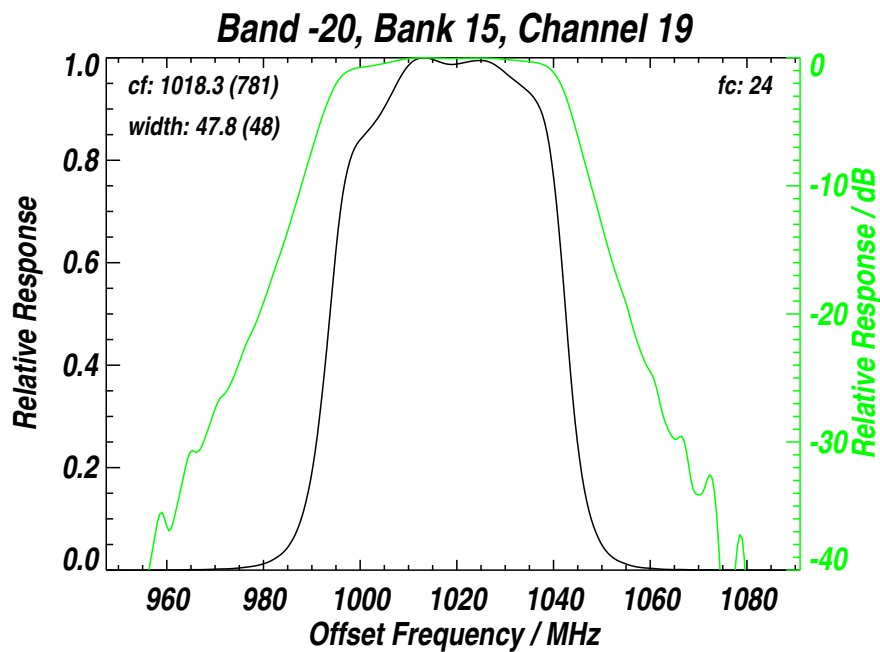
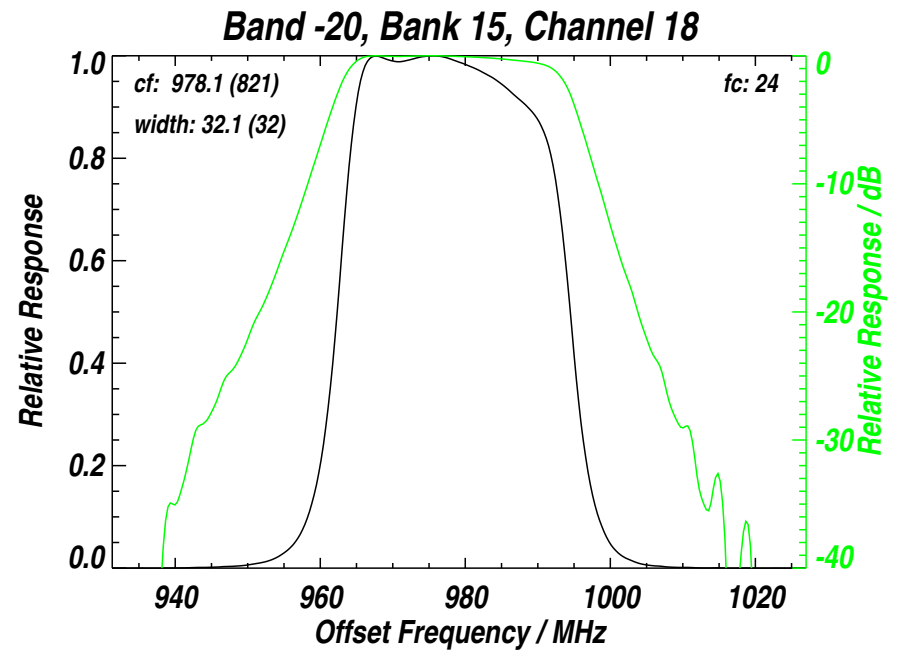
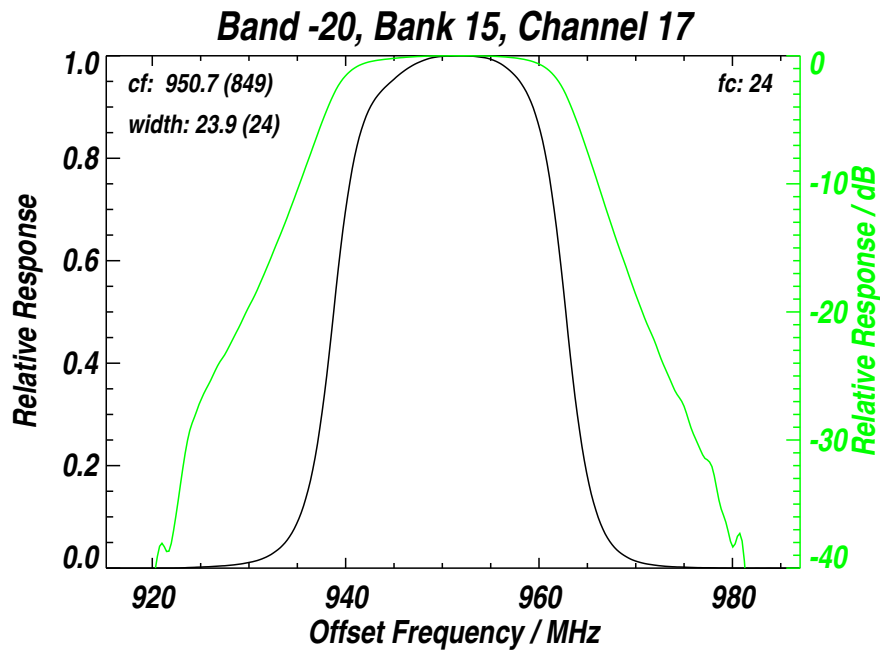


Figure I.54: 1st IF sweep data for Band 20, channels 17 to 20, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.

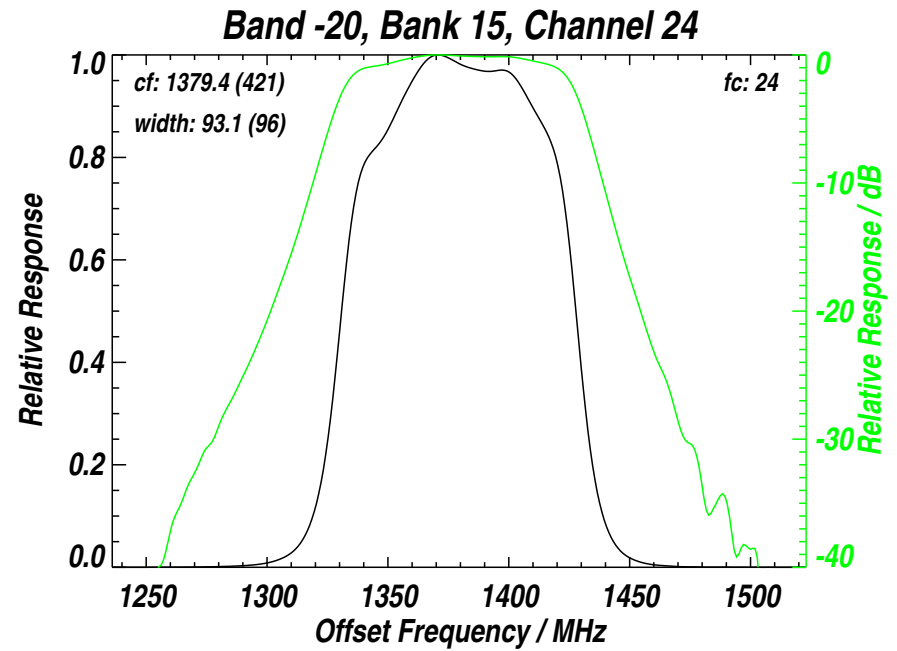
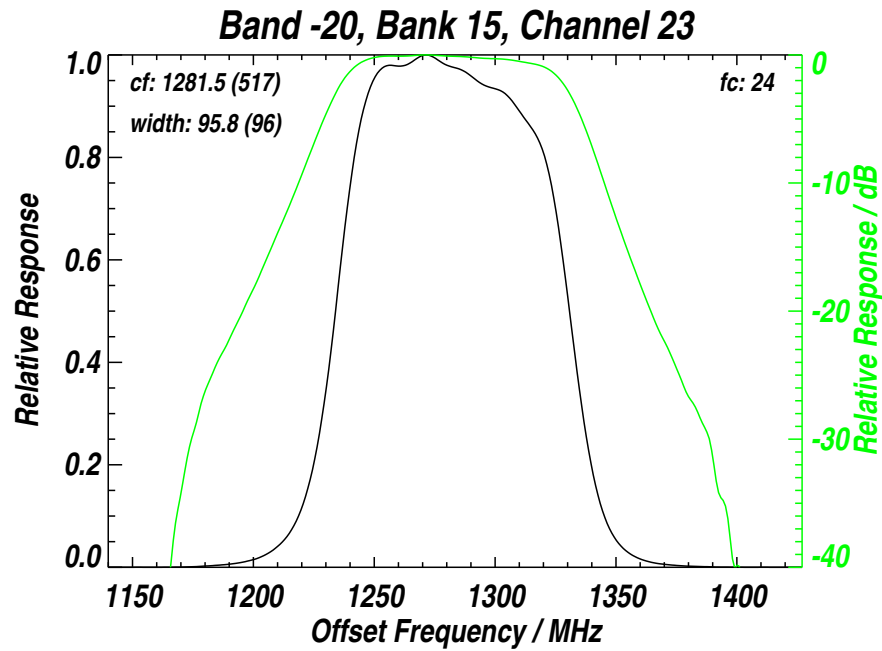
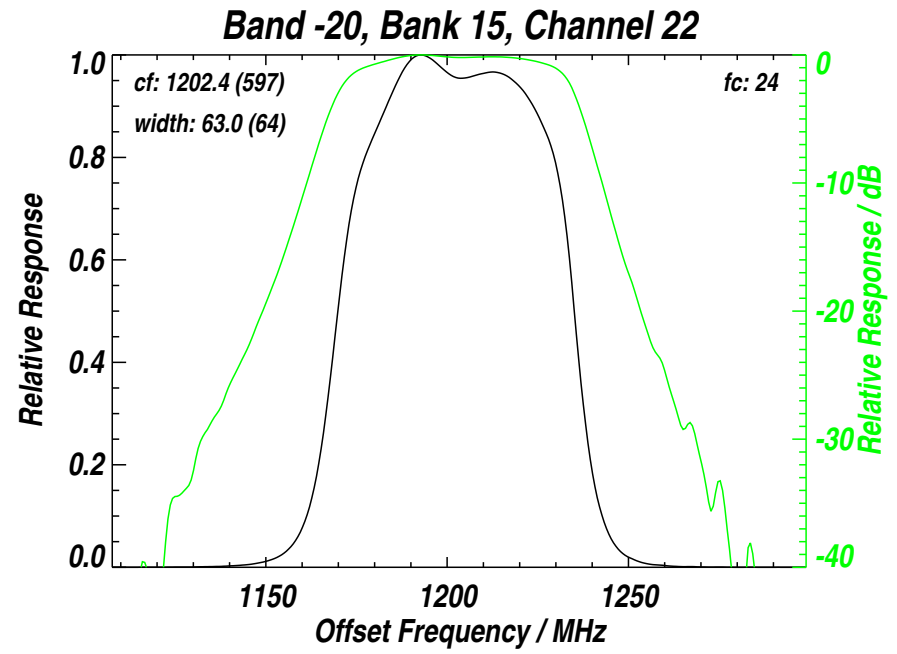
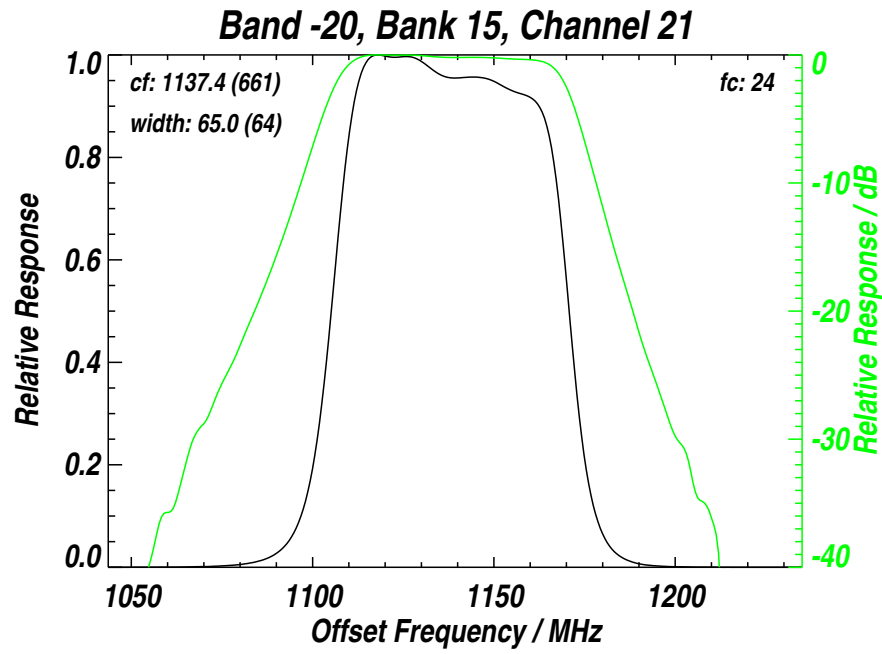
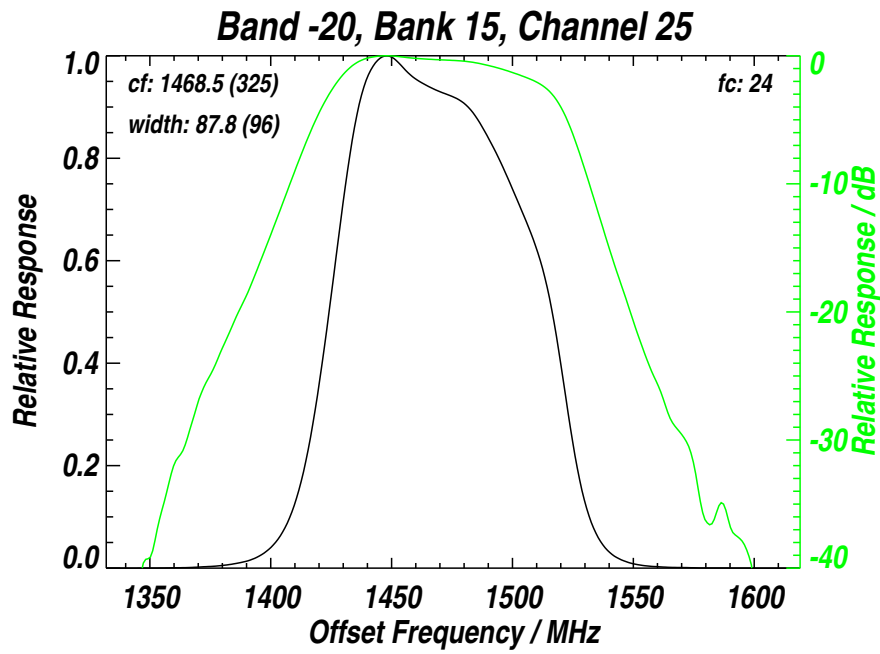


Figure I.55: 1st IF sweep data for Band 20, channels 21 to 24, plotted as the channels appear in the lower sideband. These data are from filterbank 15. See text for additional details.



**Band 20 (lsb)**  
**Bank 15**  
**Origin = 2501.480400000 GHz**

Figure I.56: 1st IF sweep data for Band 20, channel 25, plotted as the channel appears in the lower sideband. These data are from filterbank 15. See text for additional details.