X-talk measurement data using the SRCA
Along-scan reticle and slit for Day#252 (Itwk/Vdet=79/110)

rtcl.slit.rsp.cmp.1342.2522

This work is in progress

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Summary

- The X-talk was measured on Day#252 (Sep. 8, 2000) using a new I_{twk}/V_{det} of 79/110. The I_{twk} is the same as the prelaunch value (79) and the V_{det} is lower than the prelaunch value (190).

- The Day#252, Day#134(110/226) and Day#173(79/190) tests used the SRCA slit and along-scan reticle with the beam combiner in the filter wheel. For days #134 and #173 the test were also run with the ND filter in lieu of the beam combiner.

- The objective is to determine if the X-talk is improved with I_{twk}/V_{det} =(79/110)

- Five sections are presented here:
  (1) The dn difference between the two subsamples for bands 5 - 7;
  (2) Comparison of ripple component with Day#134(110/226) using slit;
  (3) Comparison of X-talk response with Day#134(110/226) using reticle;
  (4) Comparison of X-talk response with Day#173(79/190) using reticle;
  (5) Comparison of X-talk coefficients with Day#173(79/190) using reticle.

Concluding remarks

- The two subsample dns are different for I_{twk}/V_{det} = 79/110, but the difference is smaller than for I_{twk}/V_{det} = 79/190. The difference is near zero for I_{twk}/V_{det} =110/226.

- With I_{twk} = 79 (prelaunch value), the SRCA slit was used in the Day#252 and Day#173 tests. The band/channel responses show that the ripple component for these days is much smaller than for I_{twk}/V_{det} = 110/226 (a similar ripple component exists for I_{twk}/V_{det} = 100/218 from the Moon data).

- Day#173 X-talk is smaller than that for prelaunch for several bands (I_{twk}/V_{det} = 79/190) as we addressed before.

- Although we have developed a methodology to correct the ripple component, the band response with minimum ripple component will be a favorable choice because the ripple may not be symmetrical and more difficult to correct.

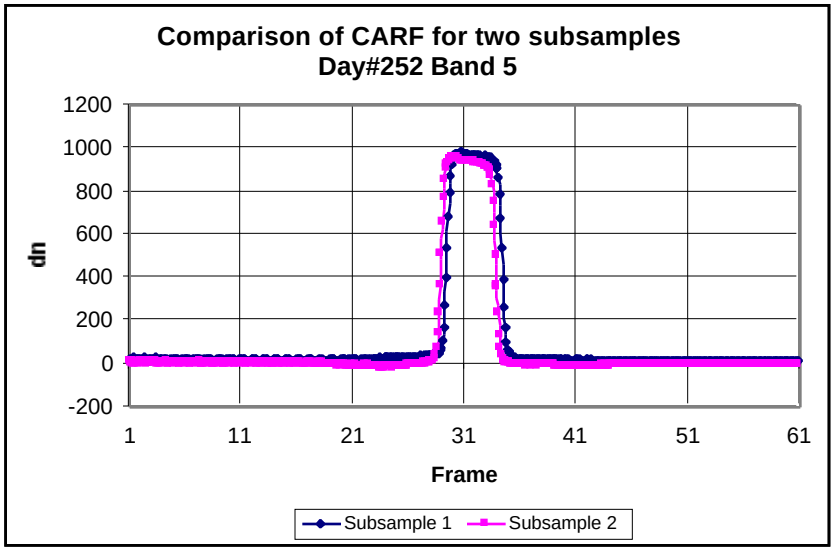
- The X-talk response profile for Day#252 is near the same as for I_{twk}/V_{det} = 79/190. The X-talk is less for I_{twk}/V_{det} = 79/110 than for I_{twk}/V_{det} = 79/190.

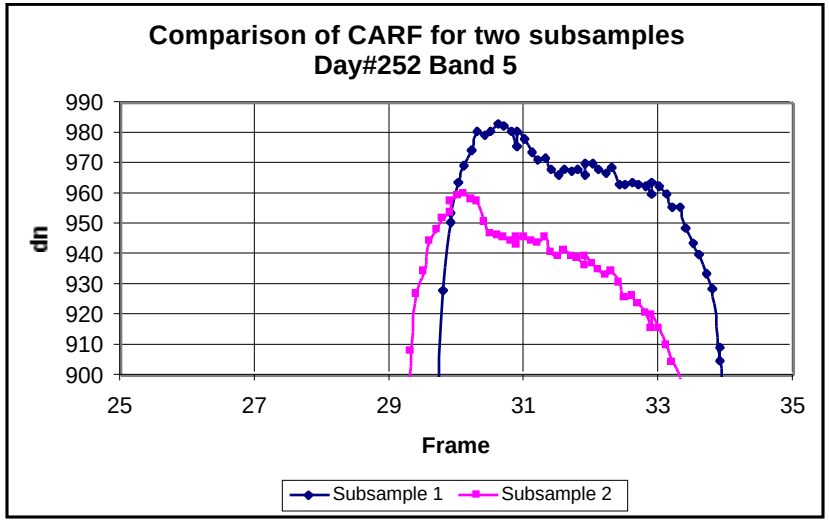
- Hence, the use of lower I_{twk}/V_{det} is recommended.

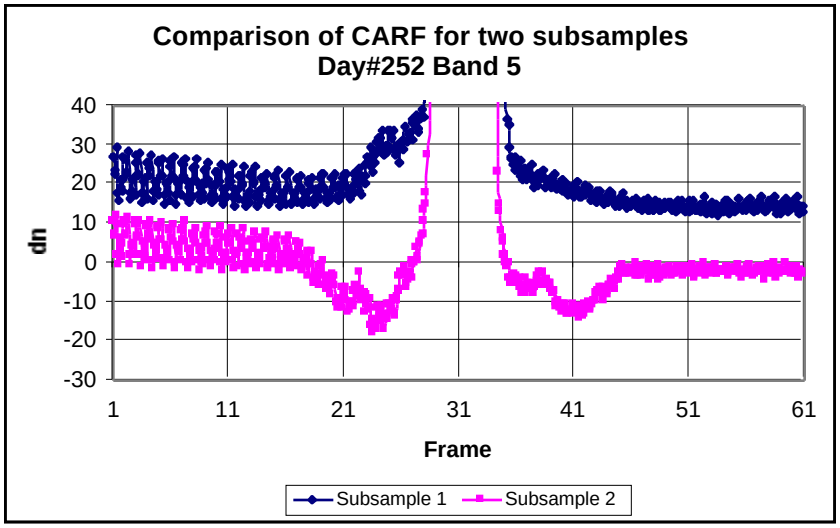
dn_{max} for Day#252

Band	dn_max
5(1)	958.6
5(2)	948.5
6(1)	1014.9
6(2)	1022.4
7(1)	684.5
7(2)	664.2
20	1565.5
21	62.9
22	1791.0
23	1813.4
24	2426.0
25	2295.5
26	1110.5

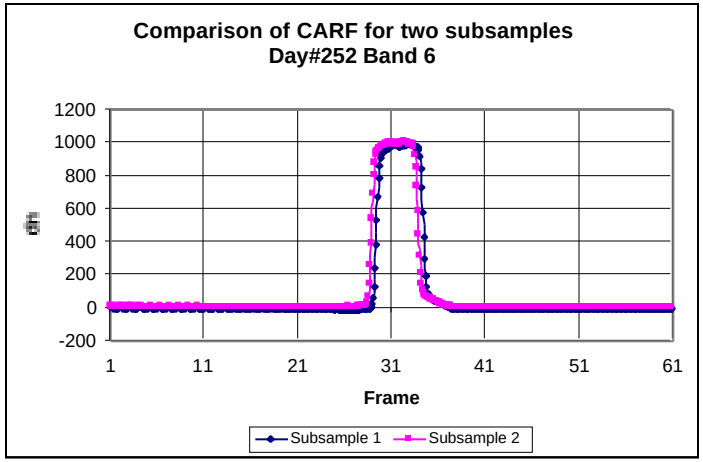
Comparison of CARF for Day#252 bands 5

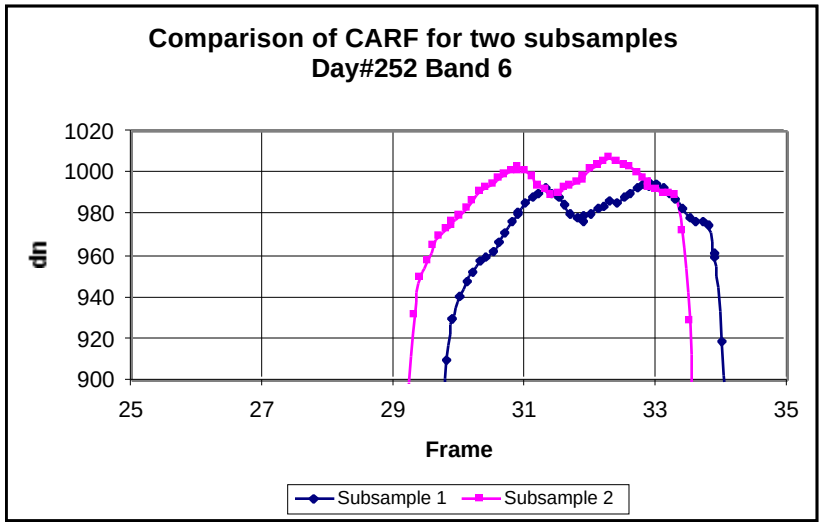


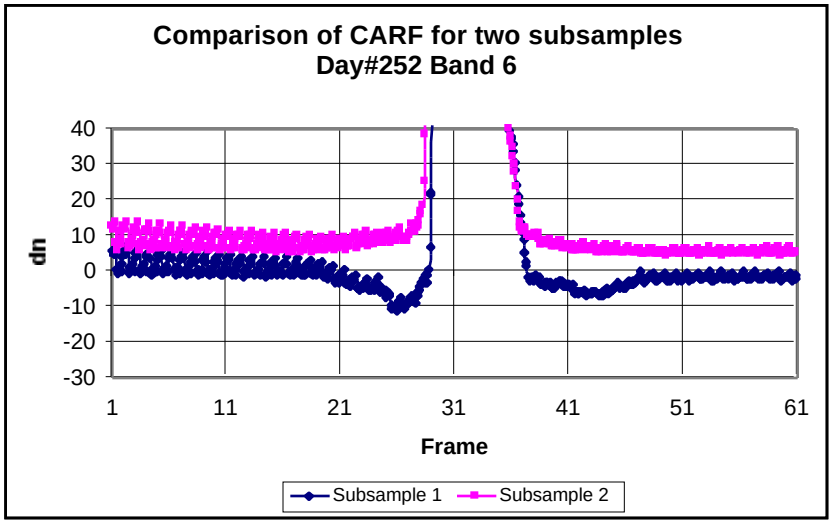




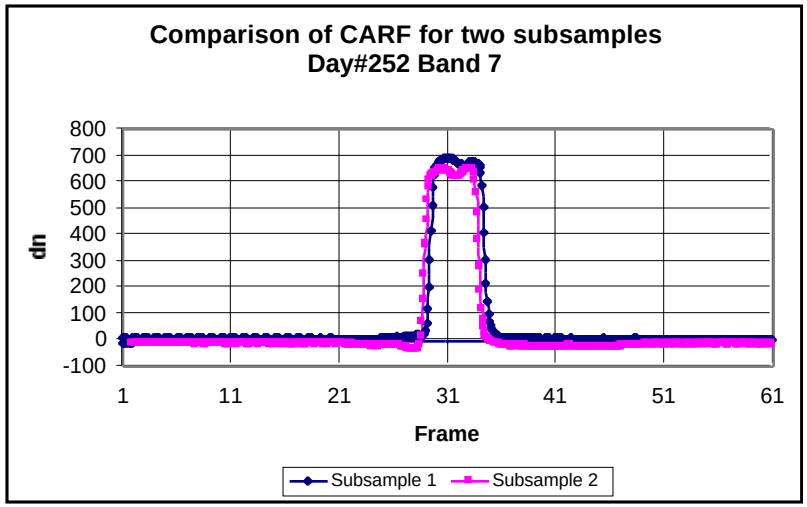
Comparison of CARF for Day#252 bands 6

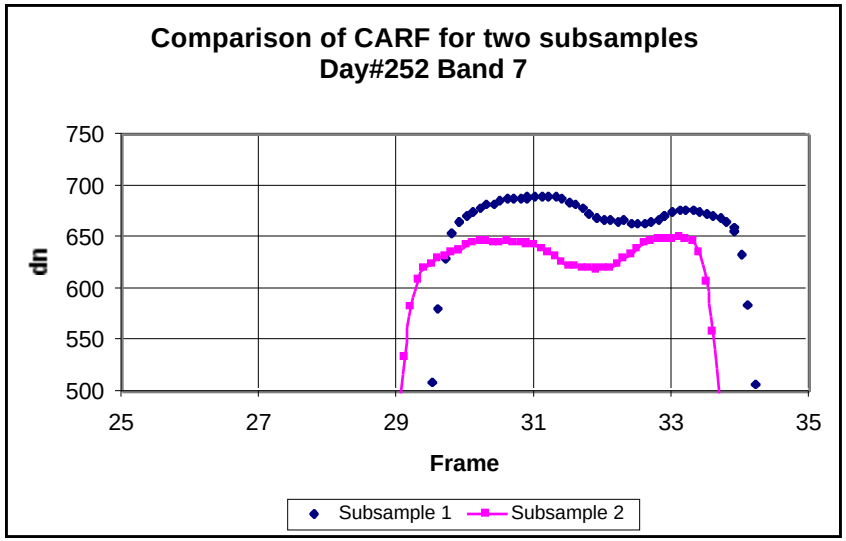


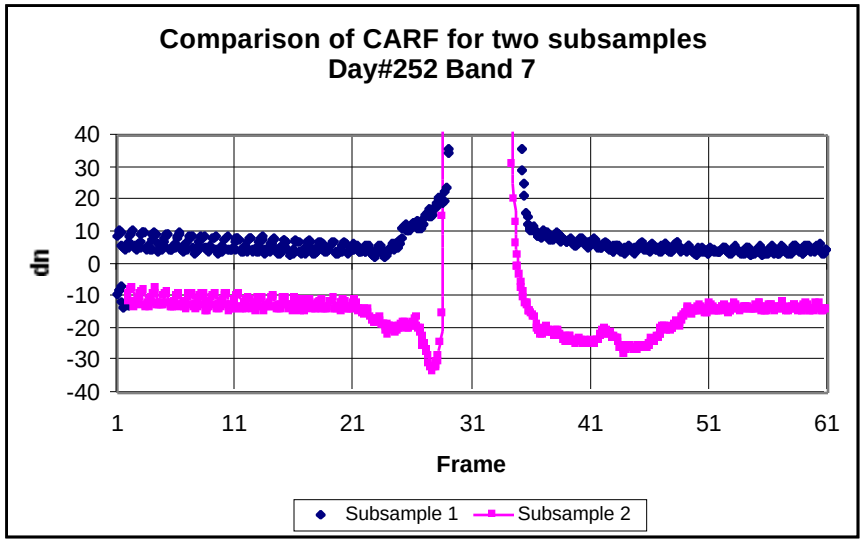




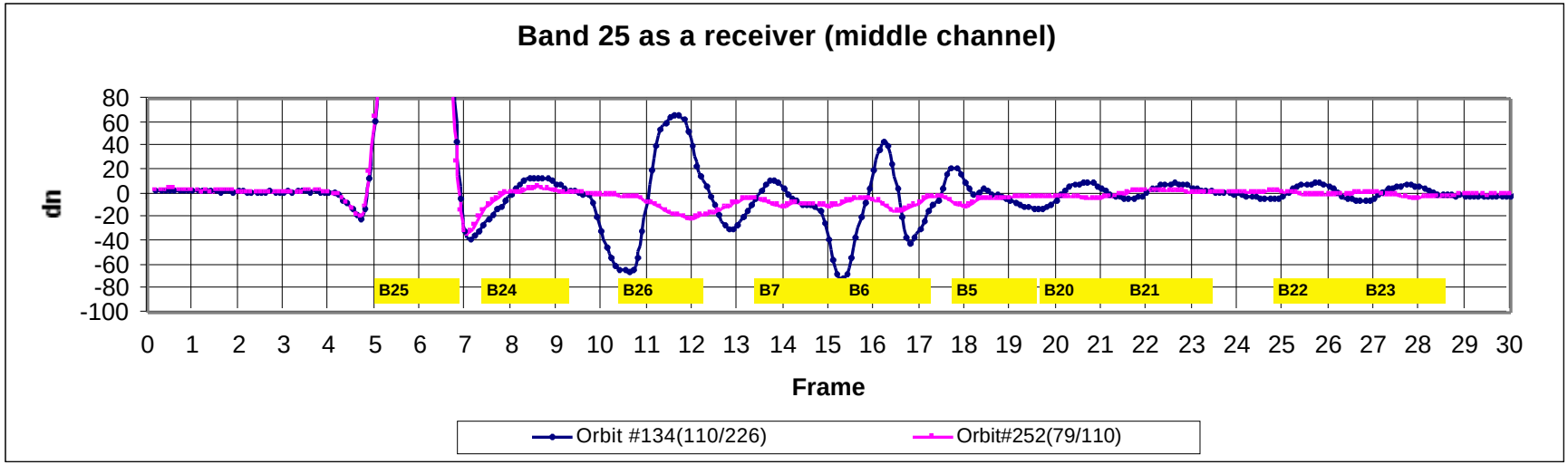
Comparison of CARF for Day#252 bands 7

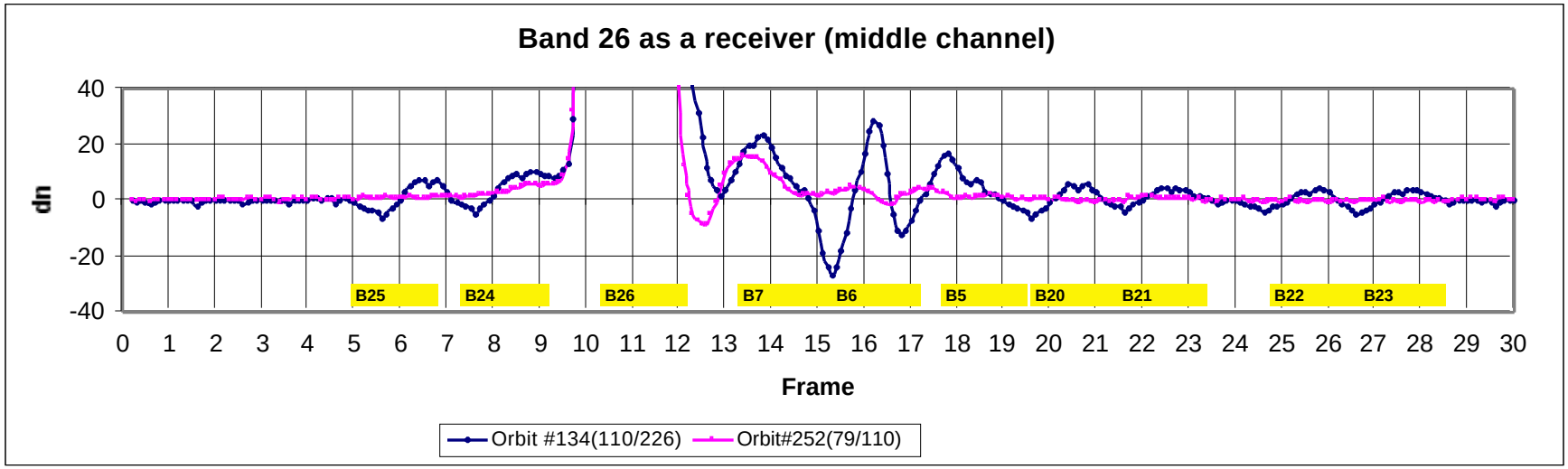






SRCA slit measured X-talk response for Day#134(110/226) and #252(79/110) (1)





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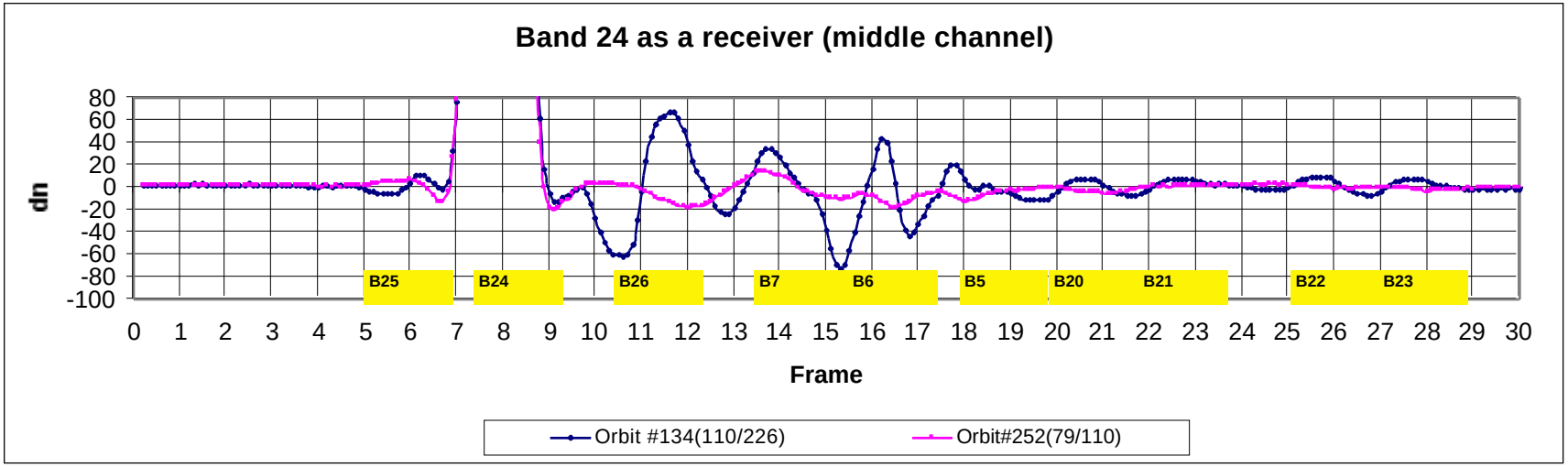
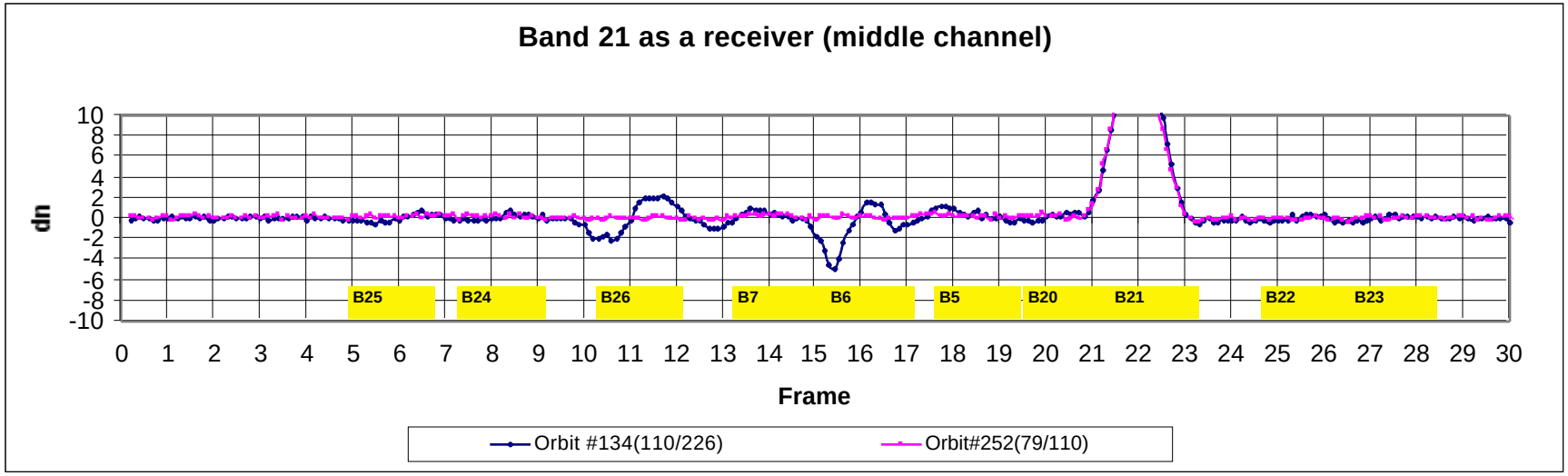
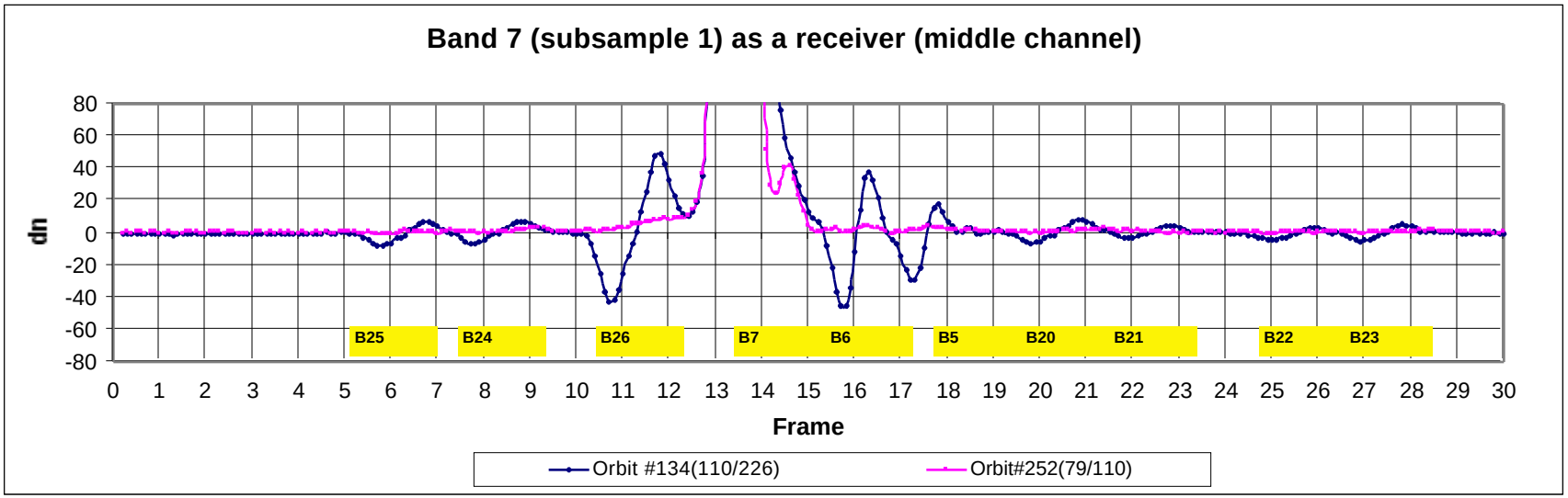
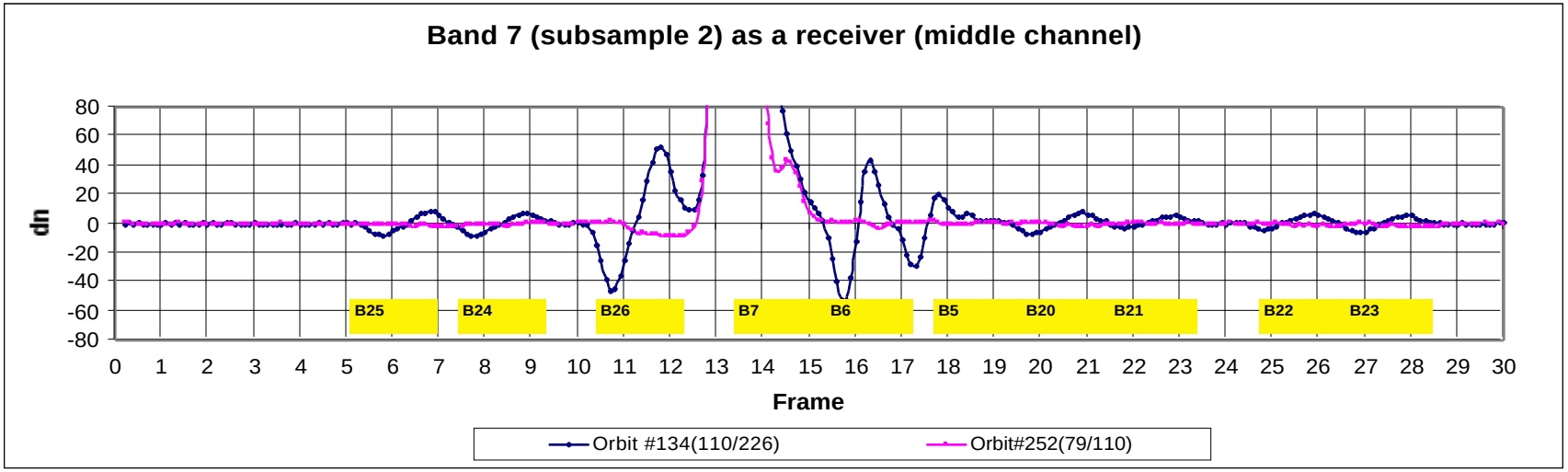


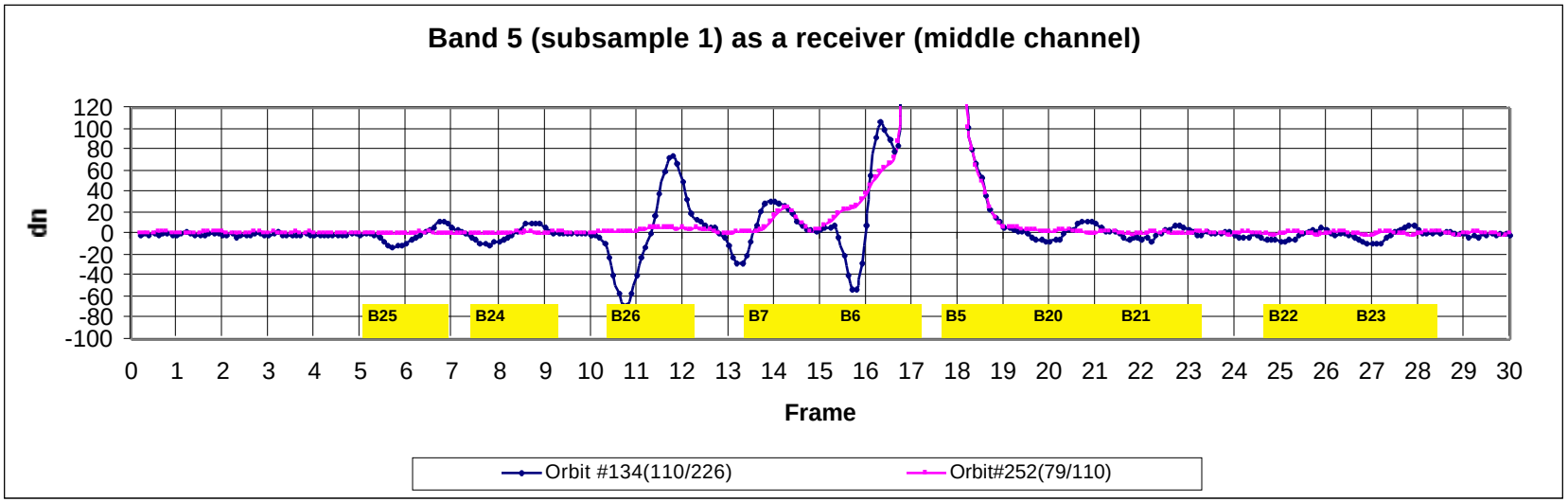


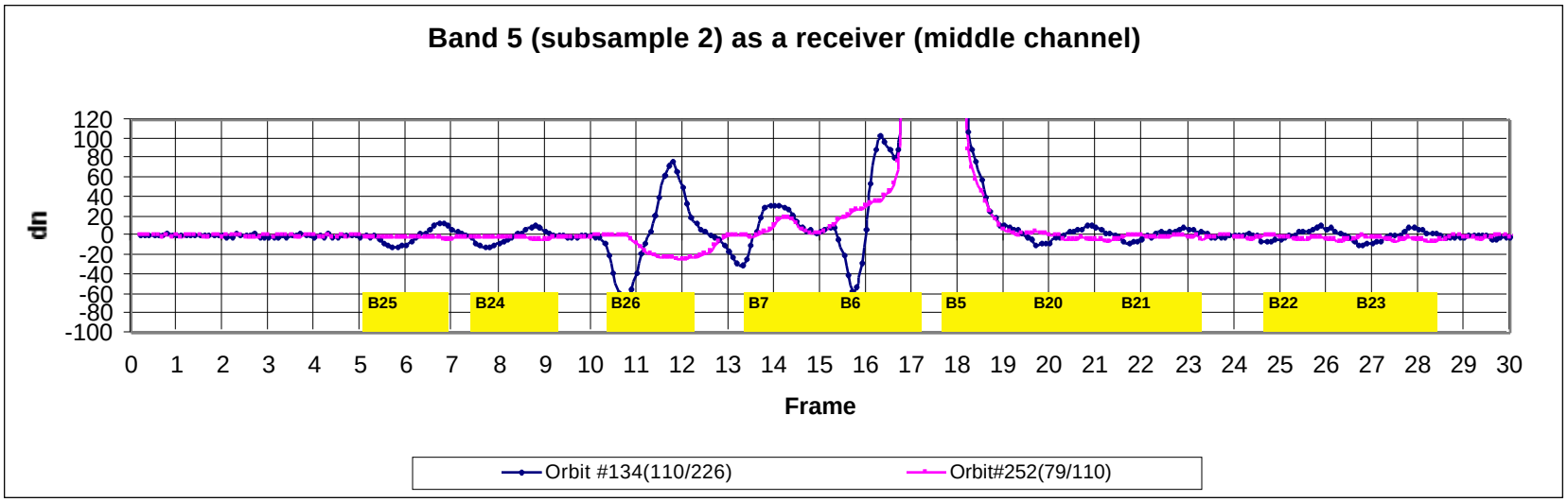
SRCA slit measured X-talk response for Day#134(110/226) and #252(79/110) (3)



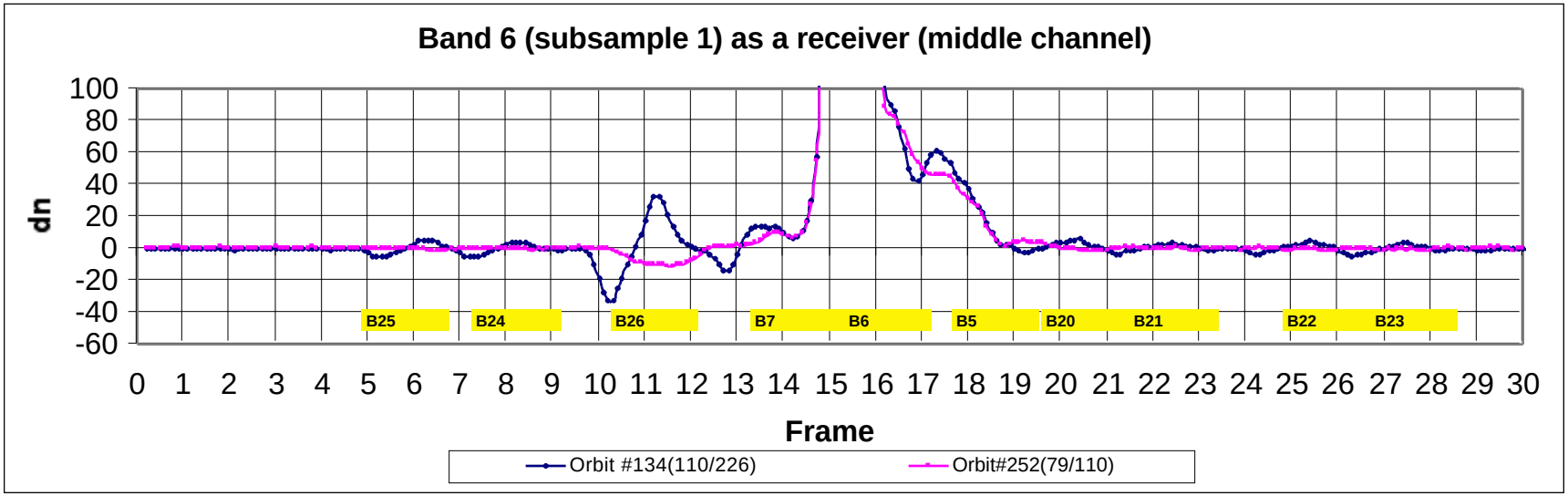


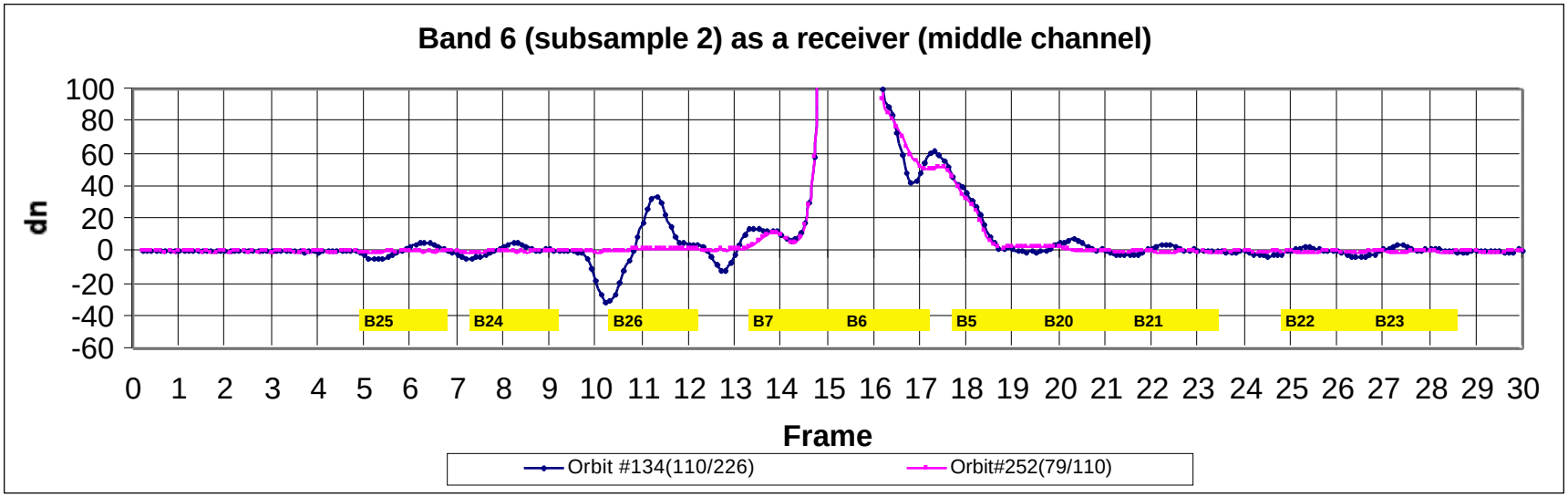
SRCA slit measured X-talk response for Day#134(110/226) and #252(79/110) (4)



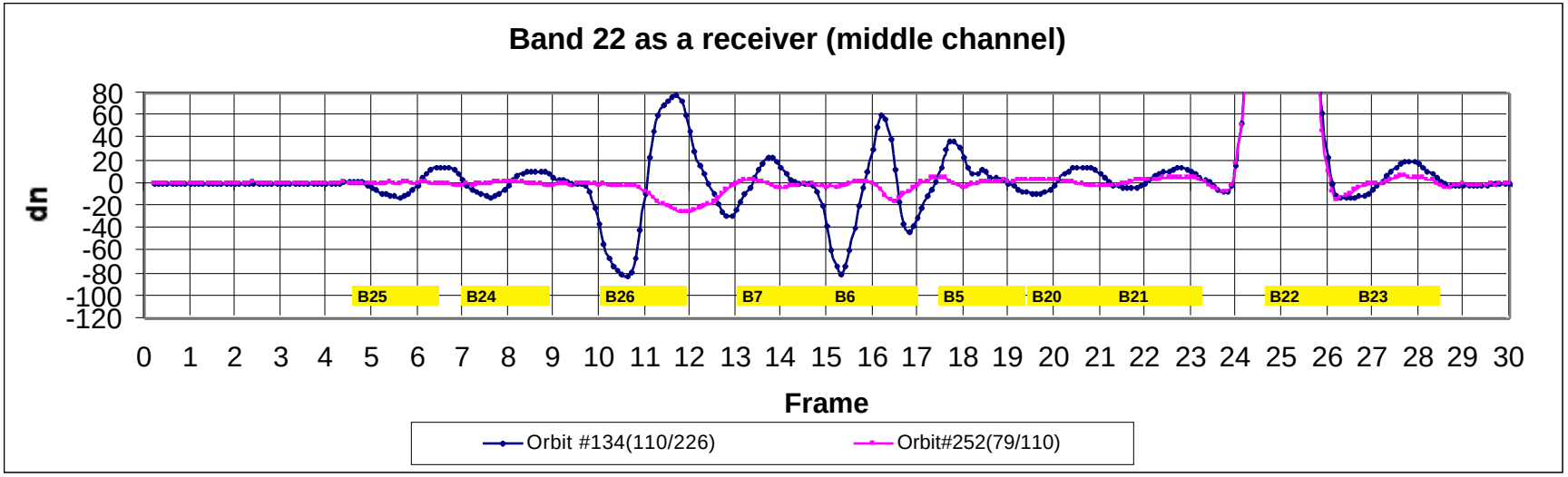


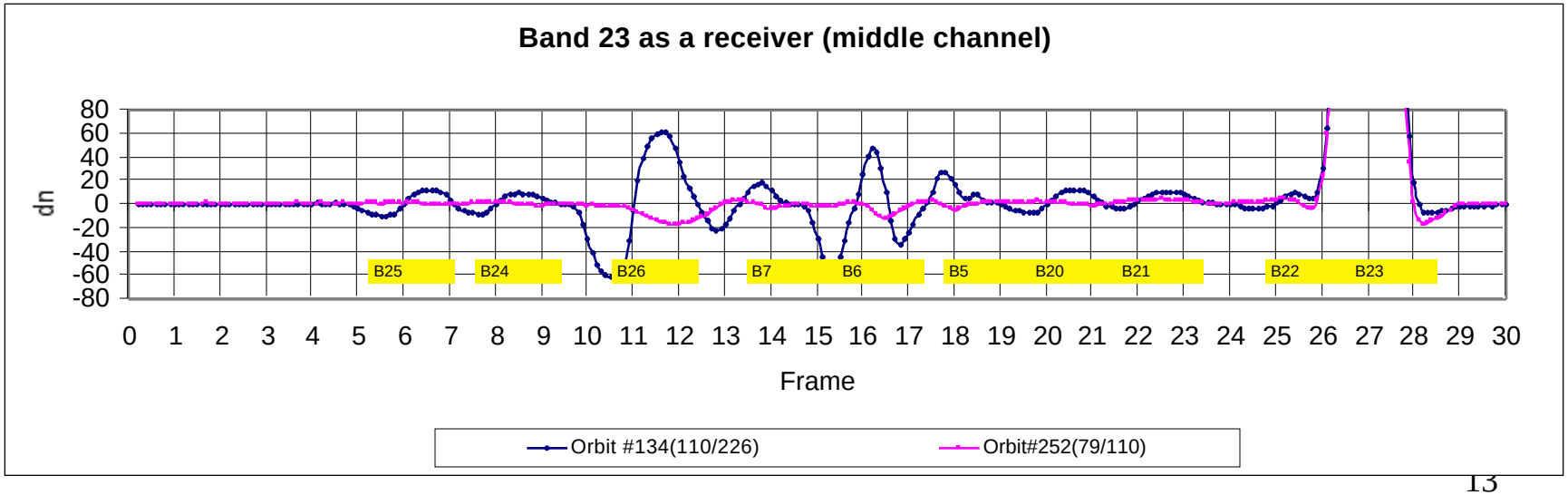
SRCA slit measured X-talk response for Day#134(110/226) and #252(79/110) (5)



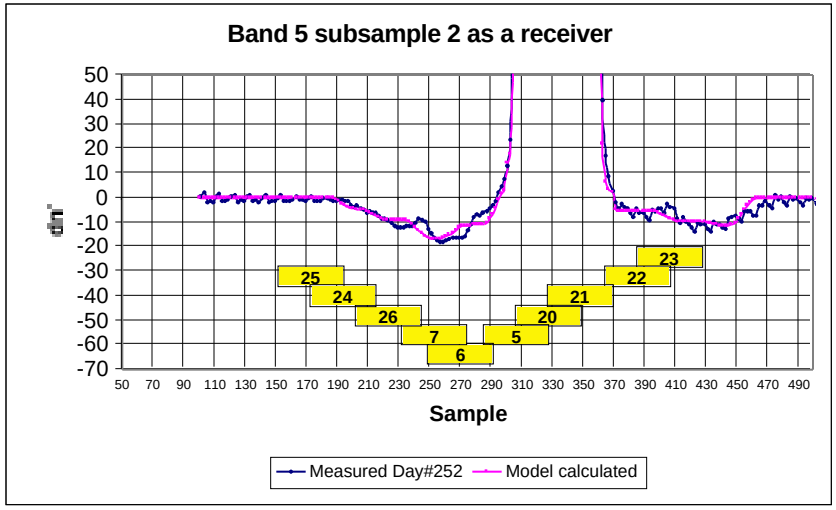


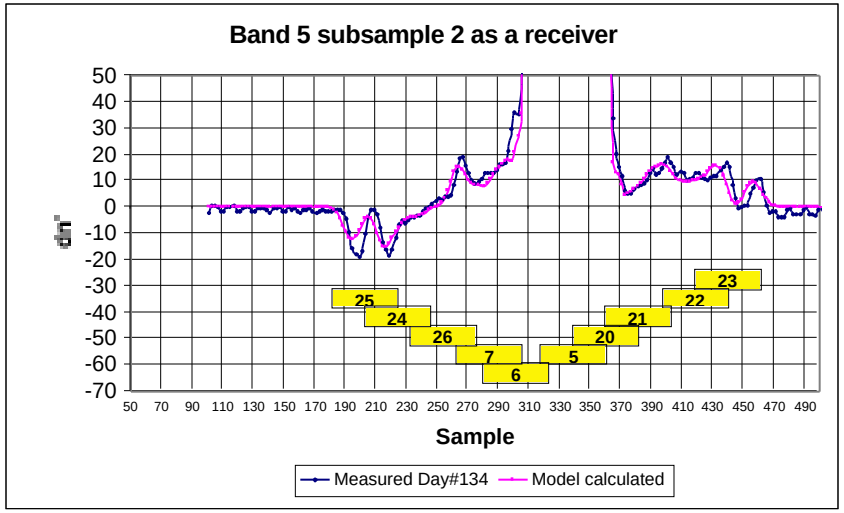
SRCA slit measured X-talk response for Day#134(110/226) and #252(79/110) (6)

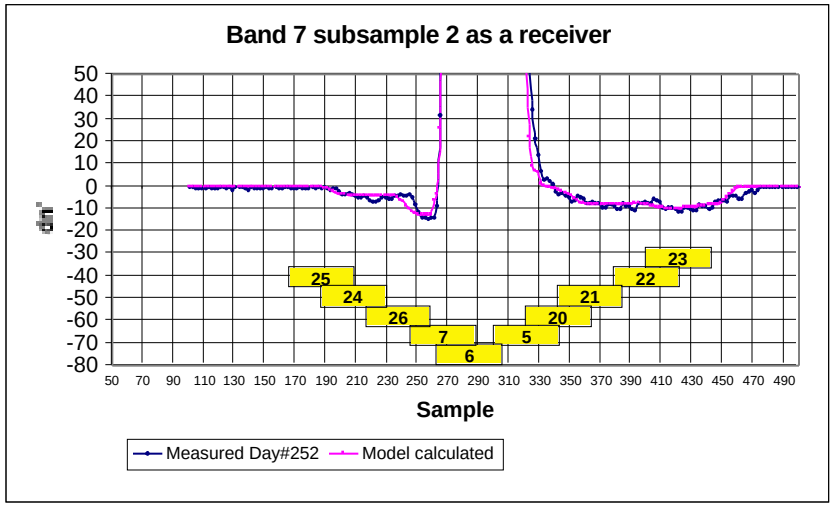


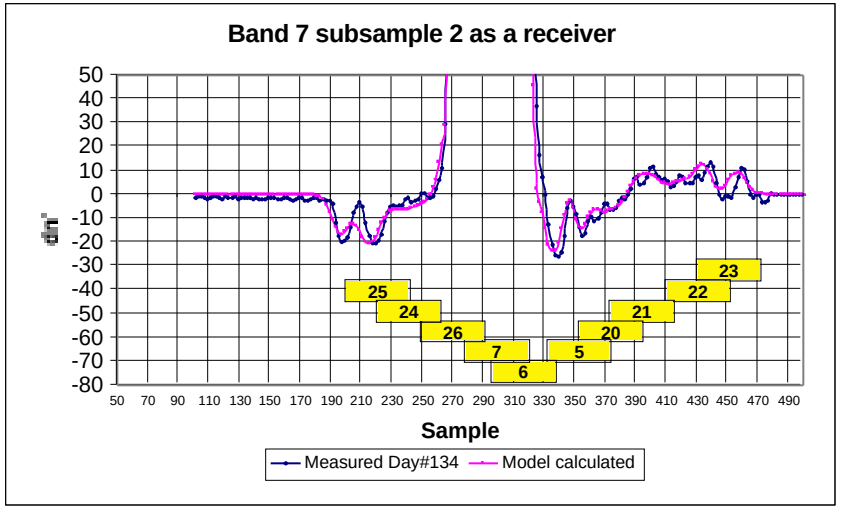


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #134(110/226) (1)

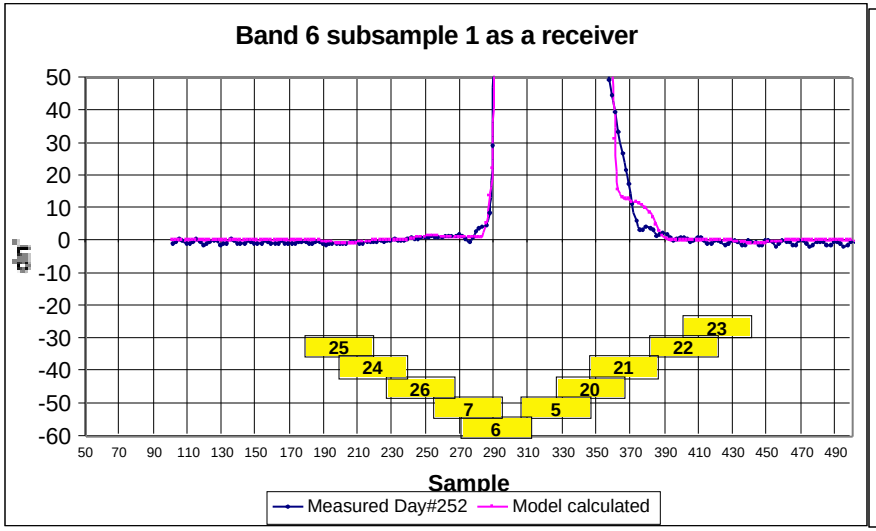


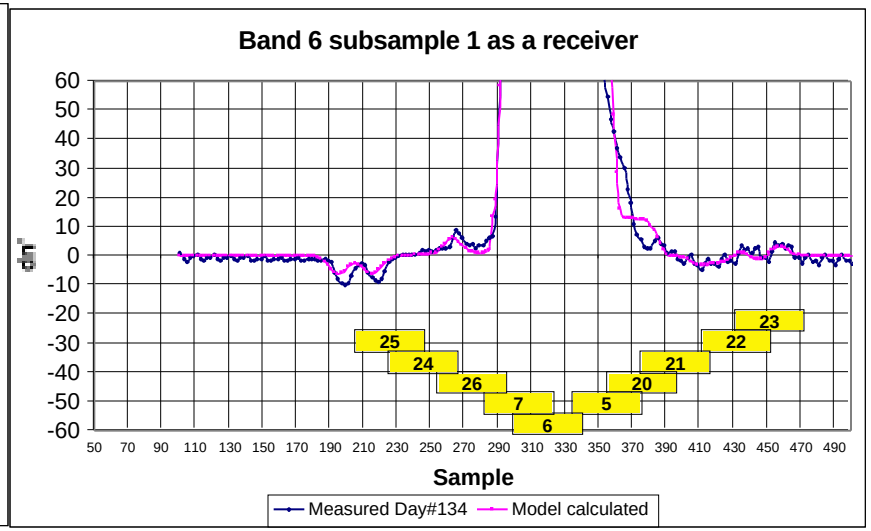


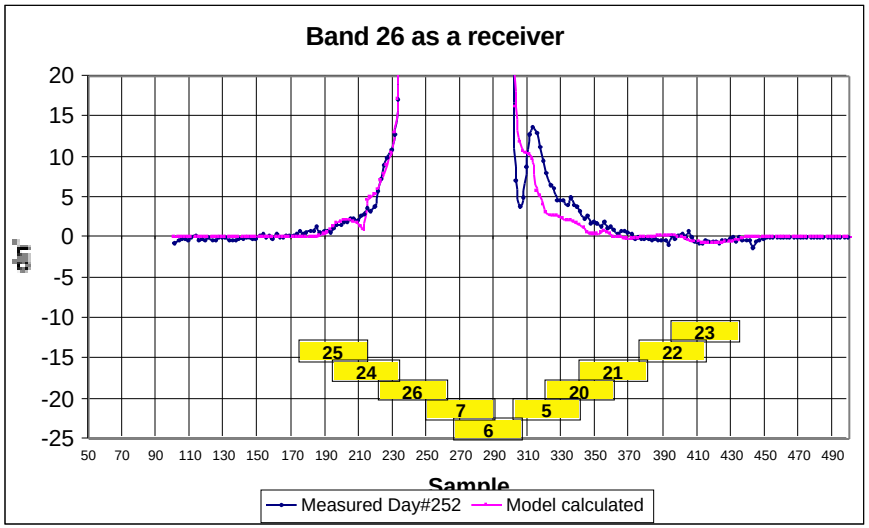


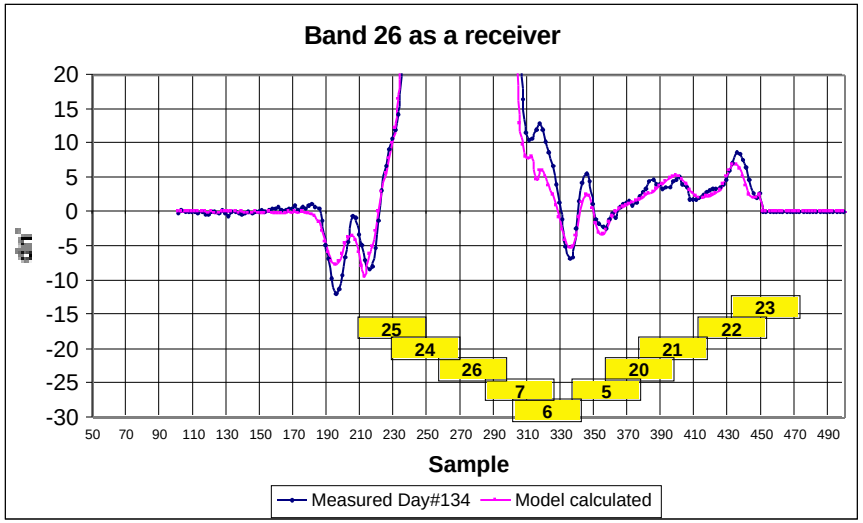


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #134(110/226) (2)

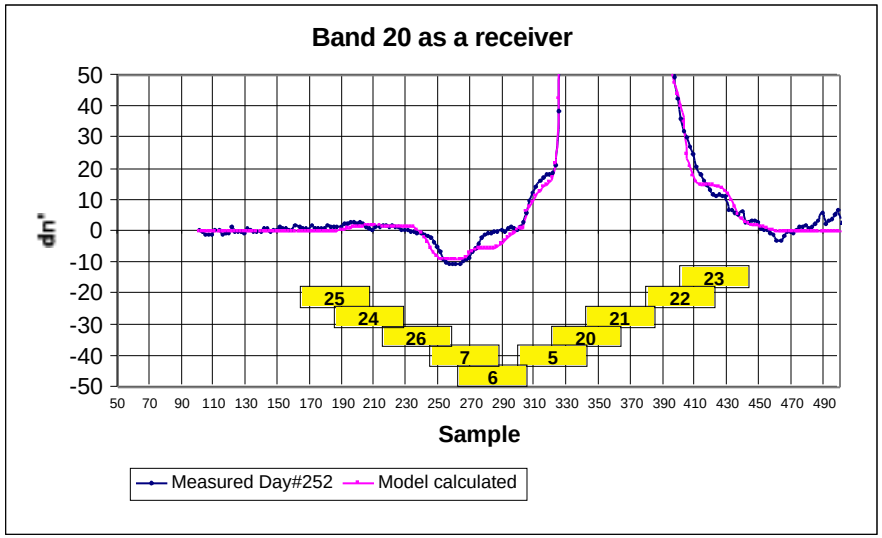


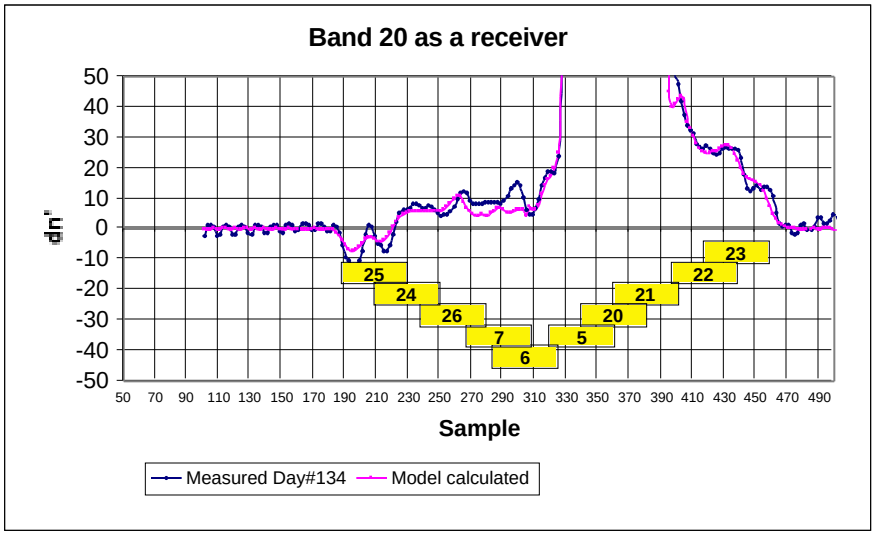


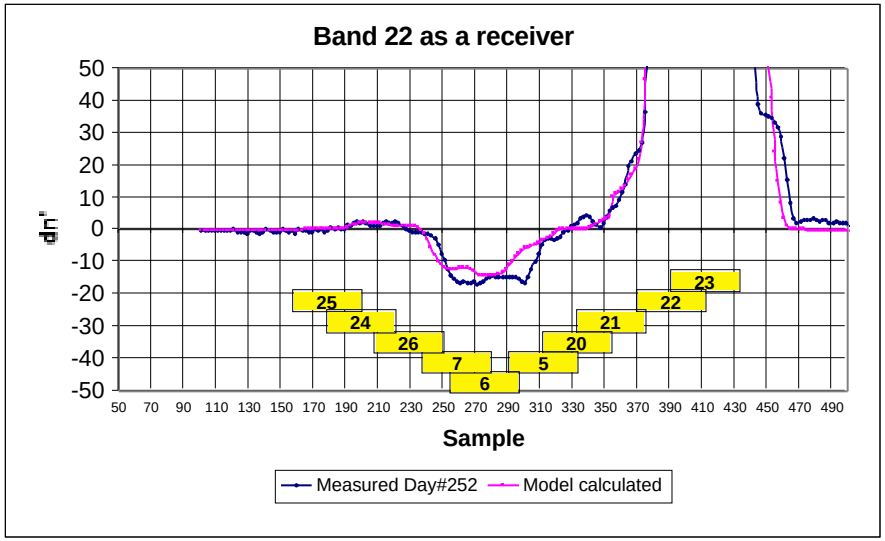


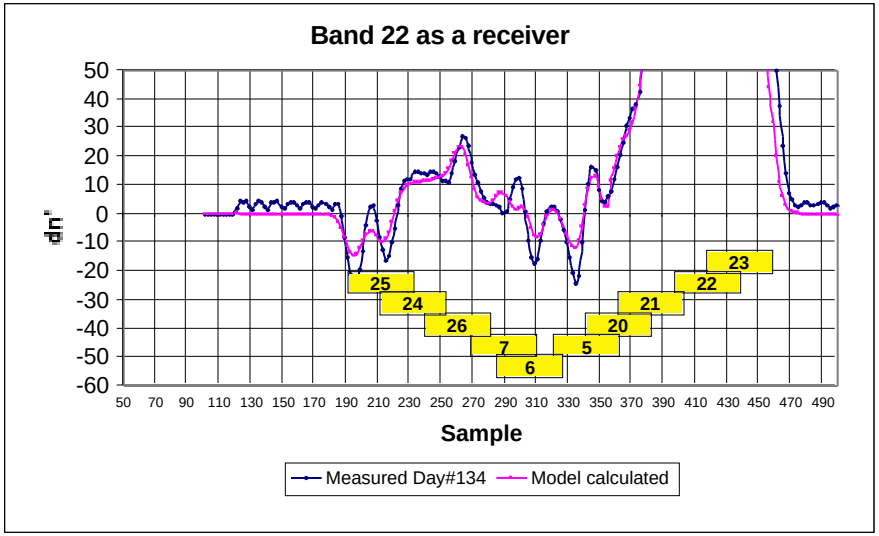


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #134(110/226) (3)

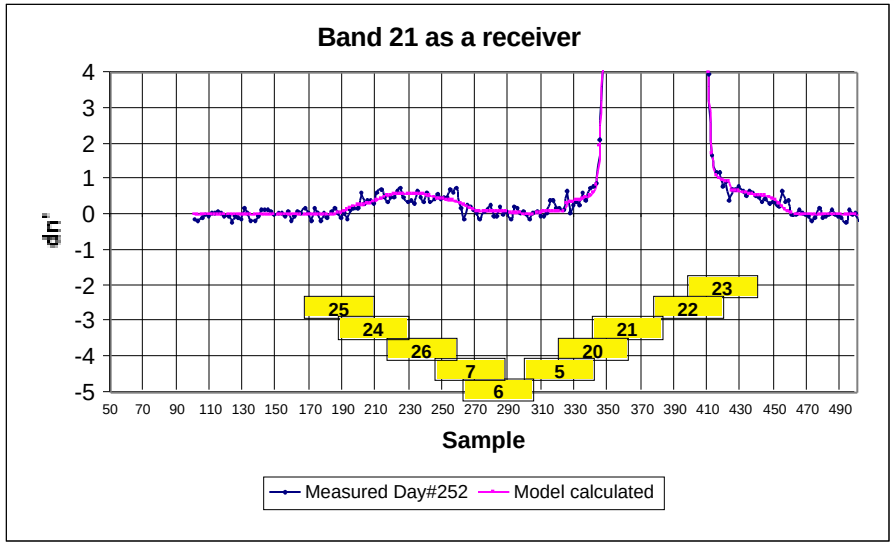


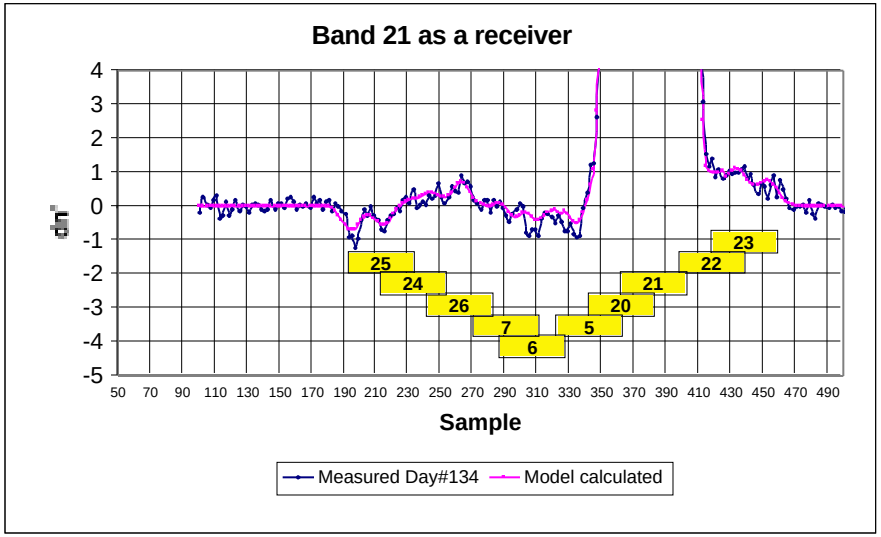


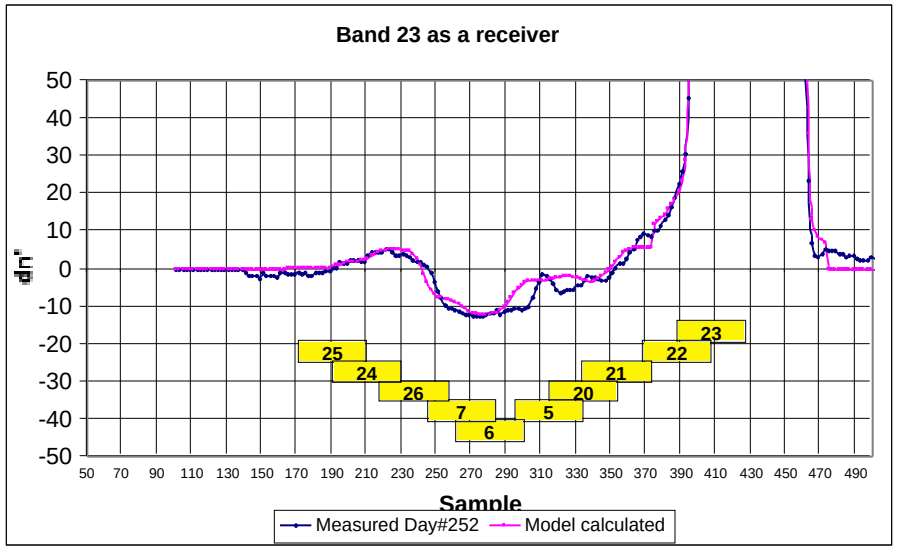


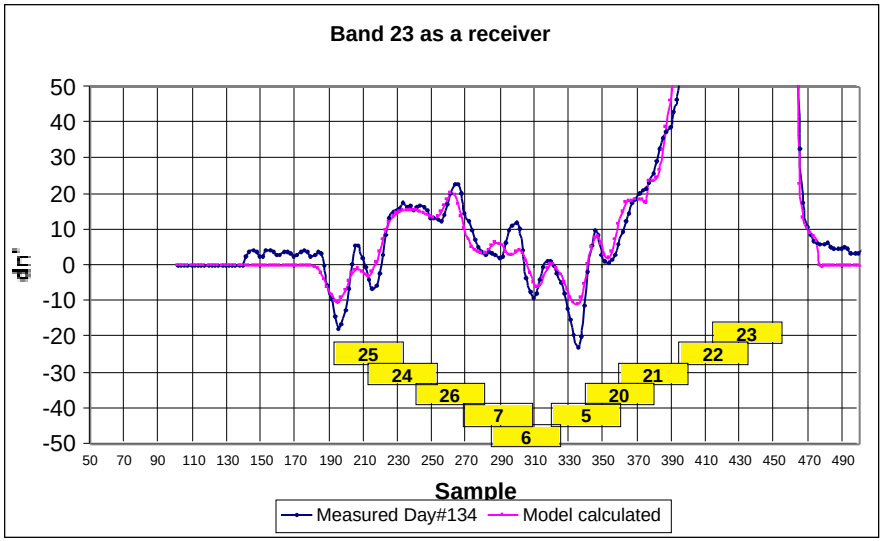


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #134(110/226) (4)

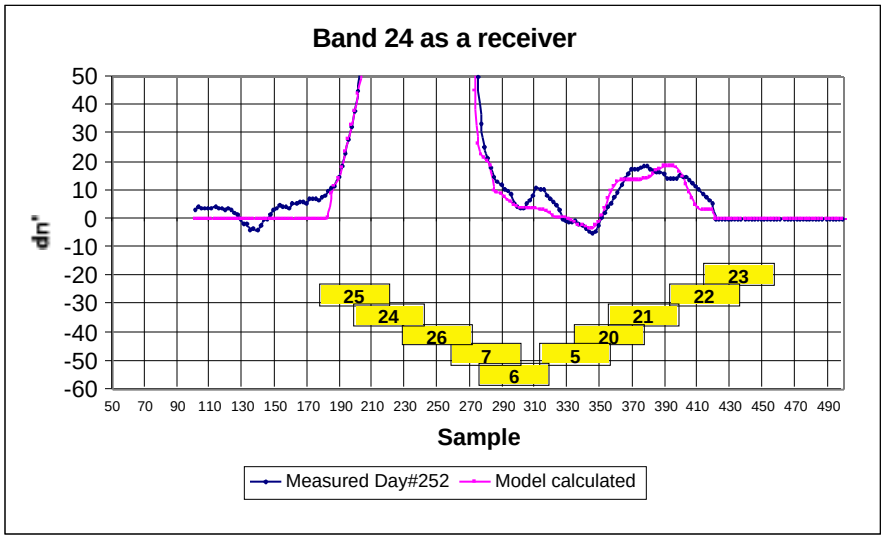


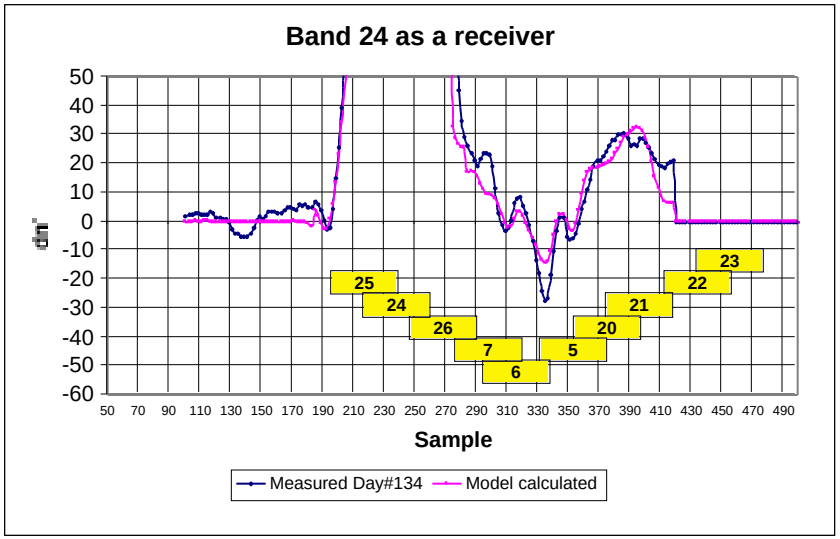


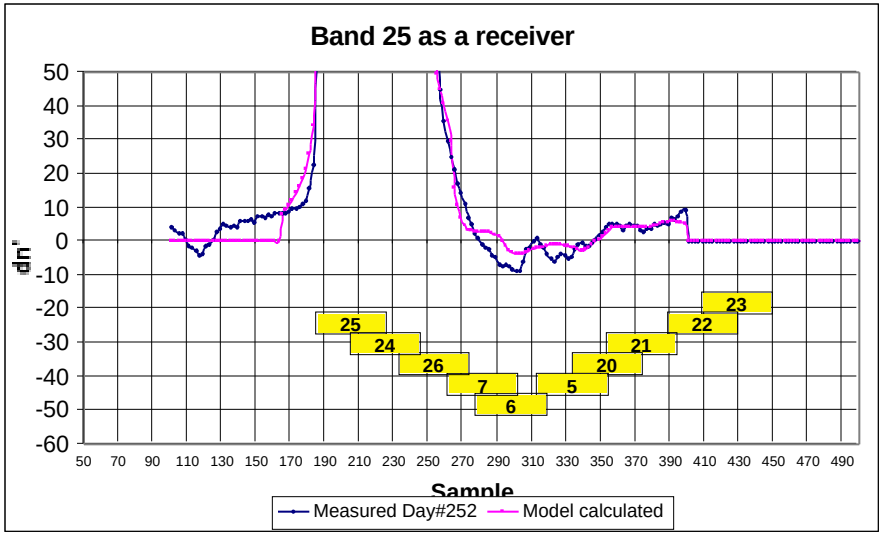


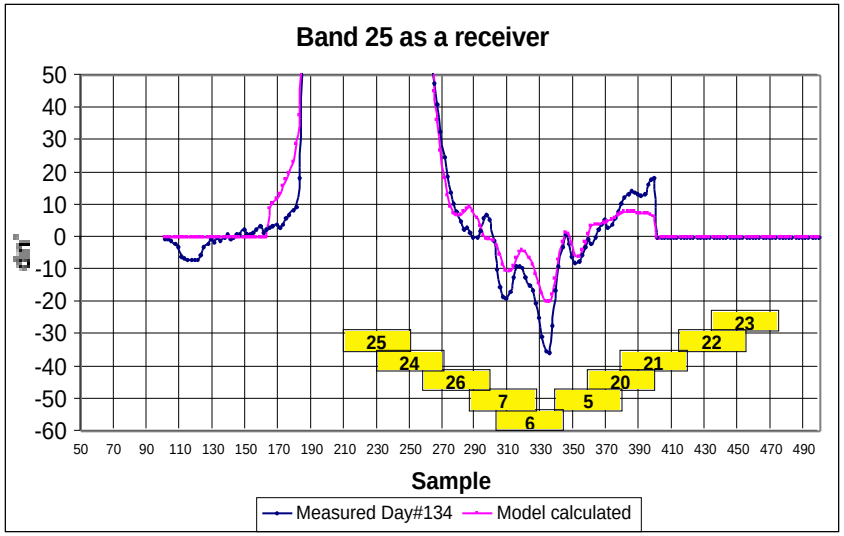


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #134(110/226) (5)

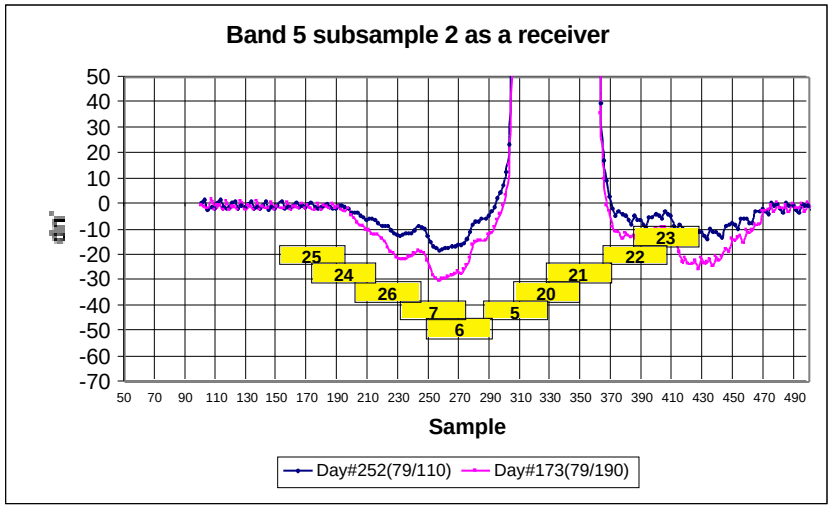


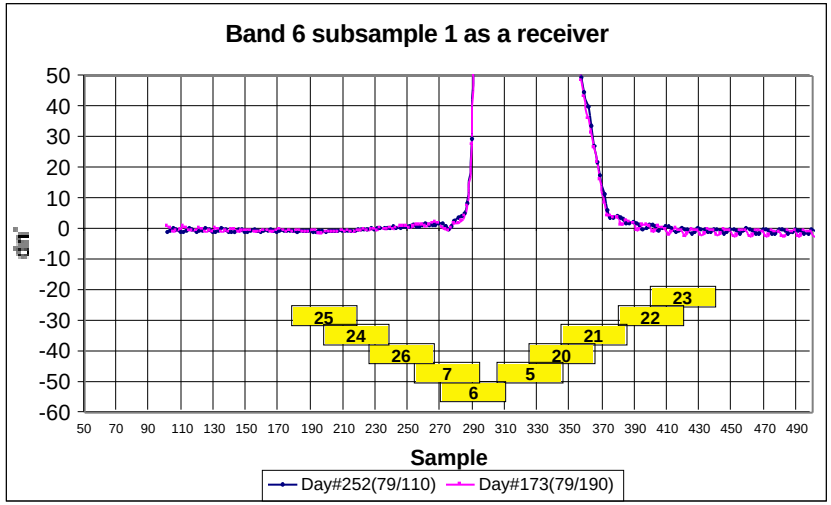


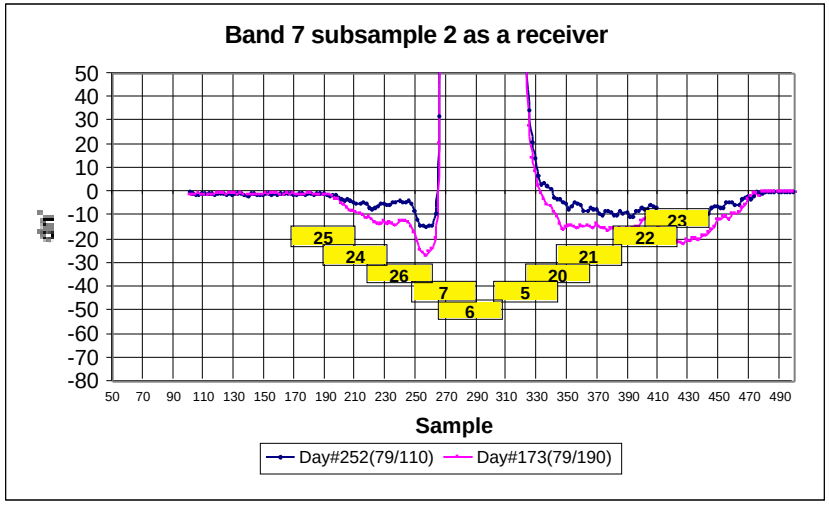


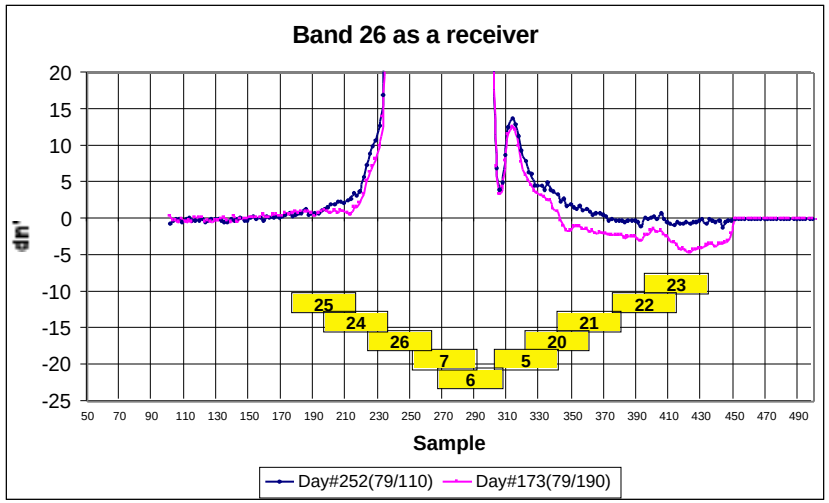


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #173(79/190) (1)

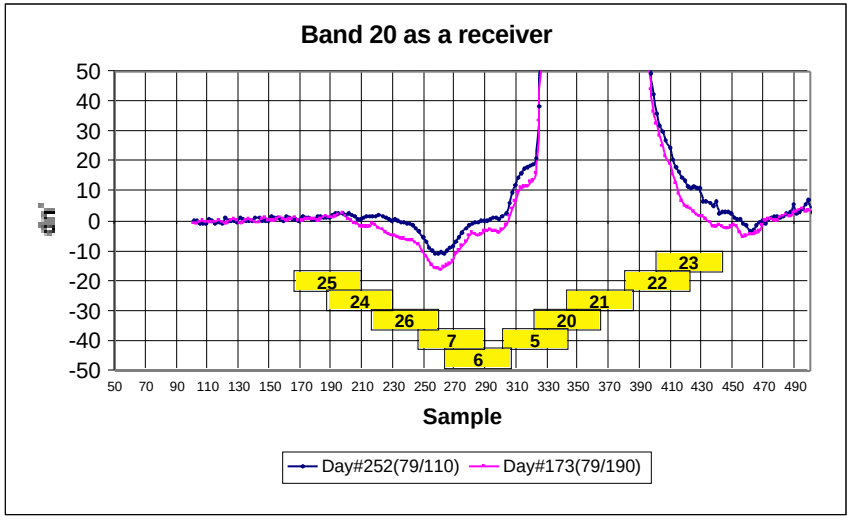


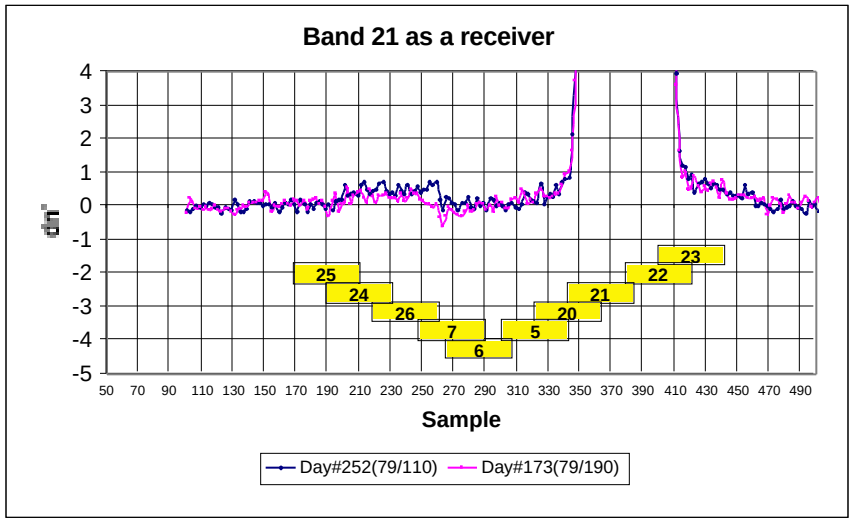


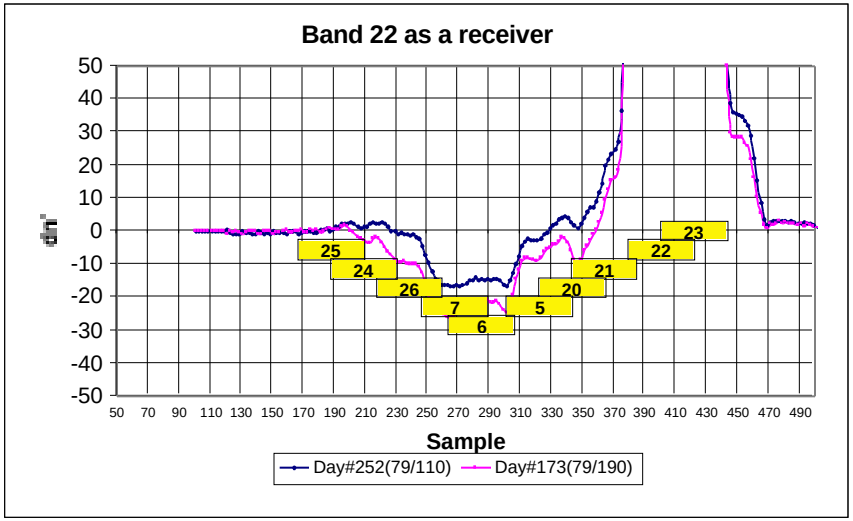


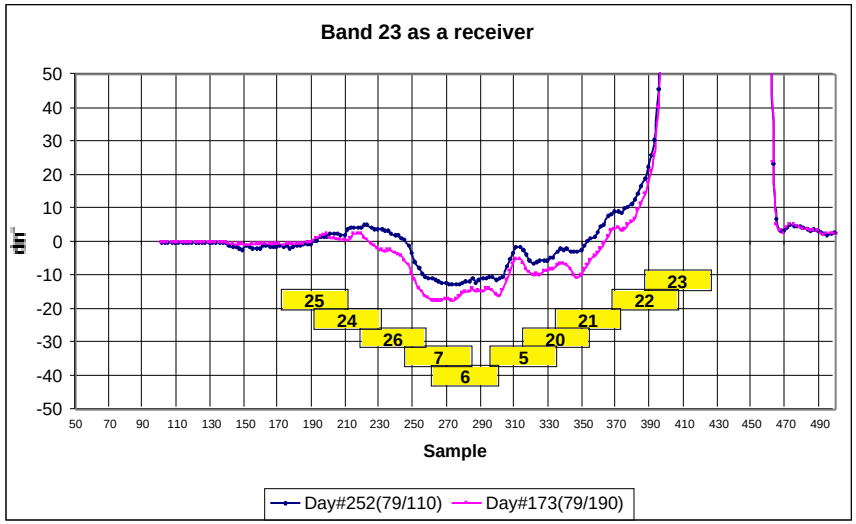


Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #173(79/190) (2)

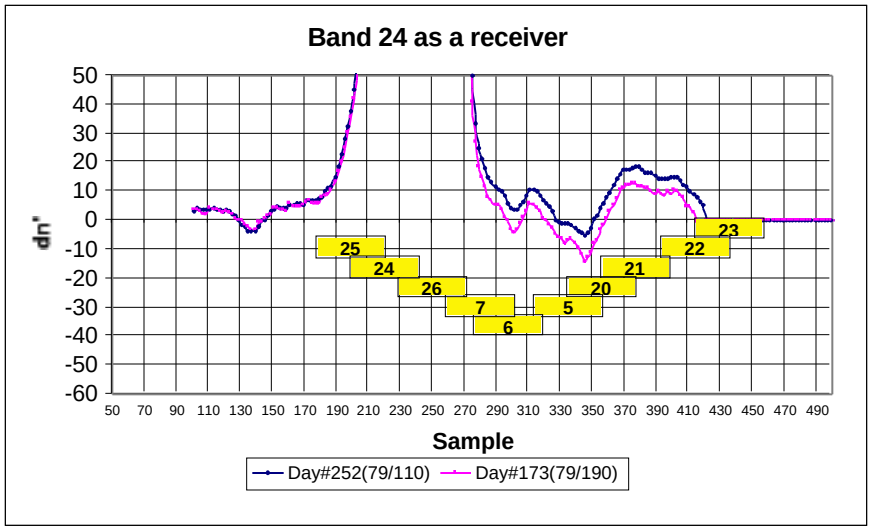


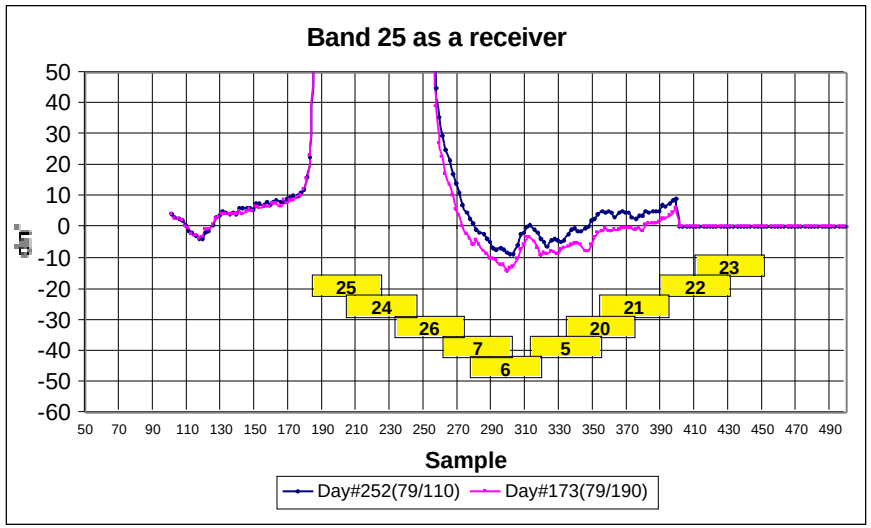




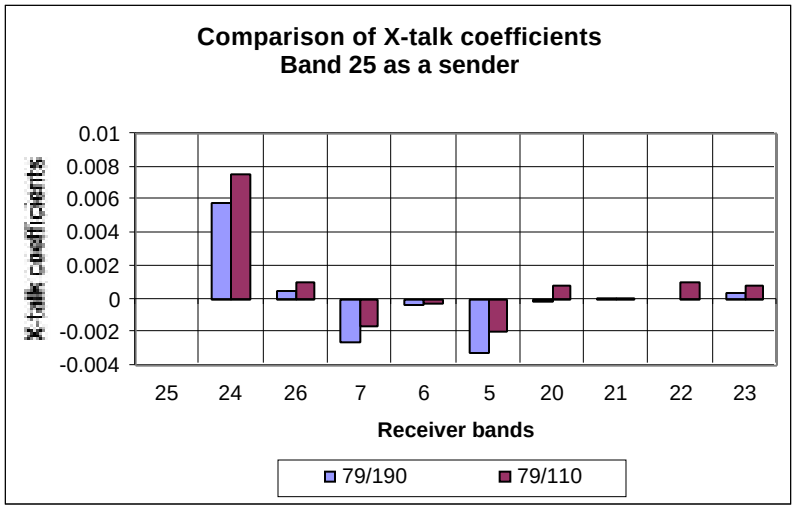


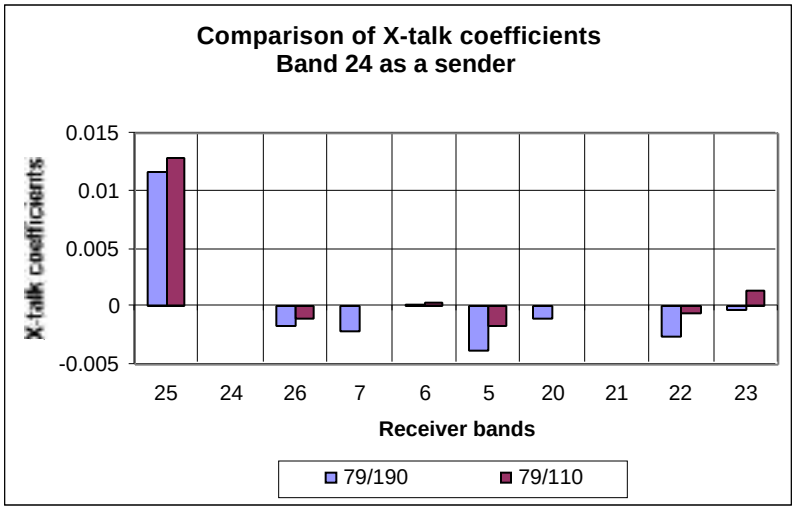
Comparison of X-talk response using the SRCA reticle for Day#252 (79/110) and #173(79/190) (3)

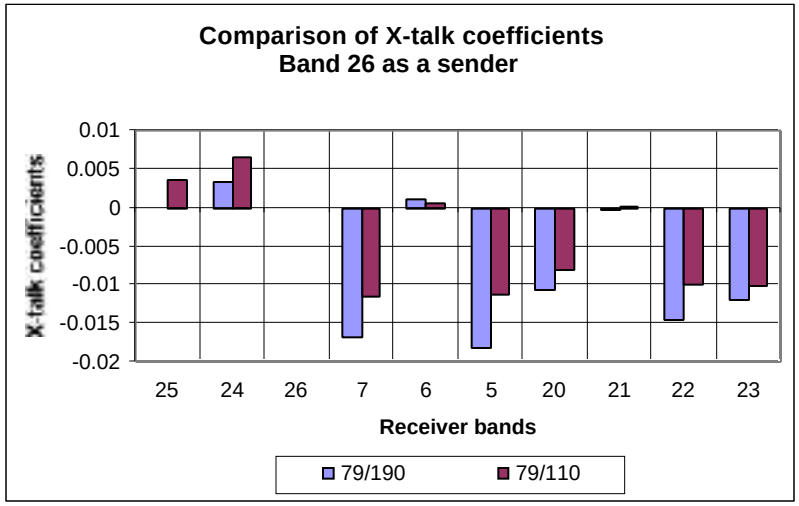


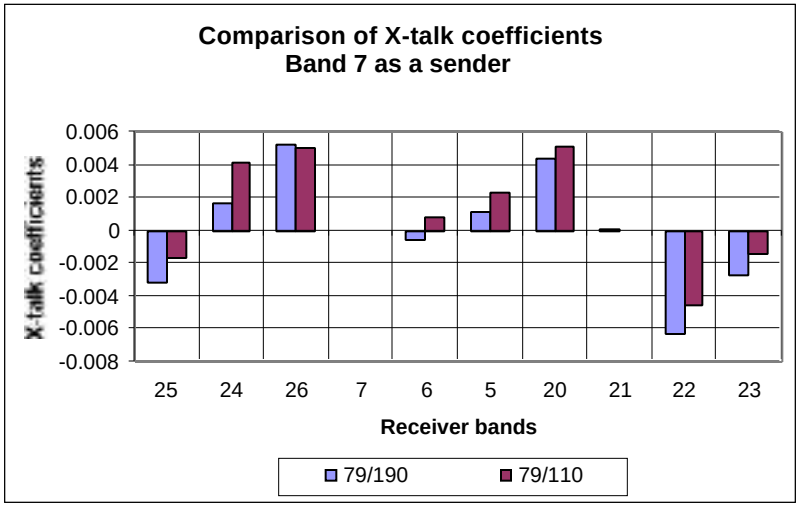


Comparison of X-talk coefficients using the SRCA reticle for Day#252 (79/110) and #173(79/190) (1)

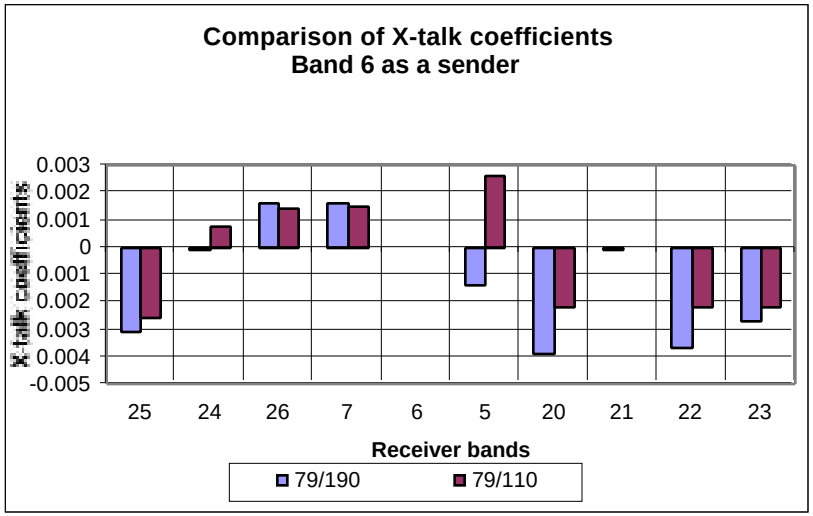


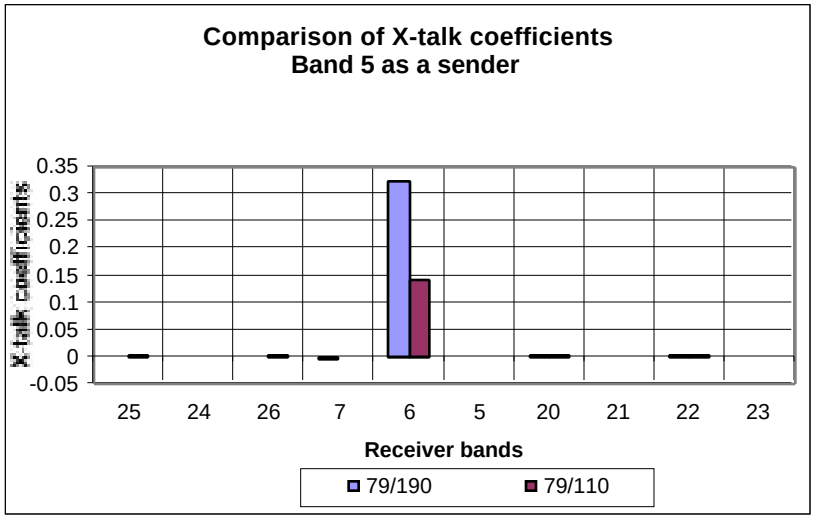


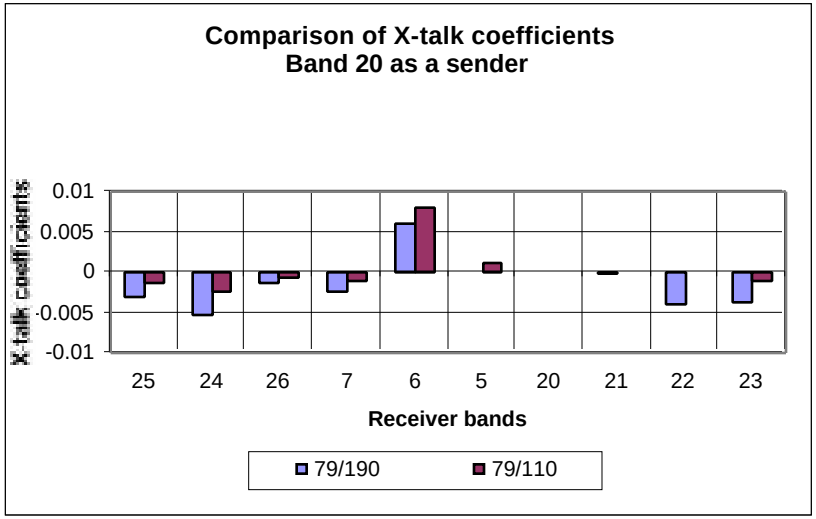


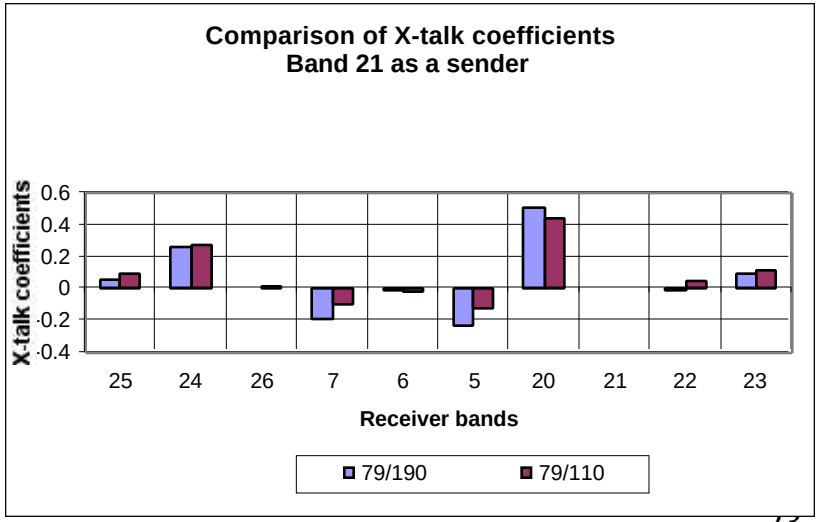
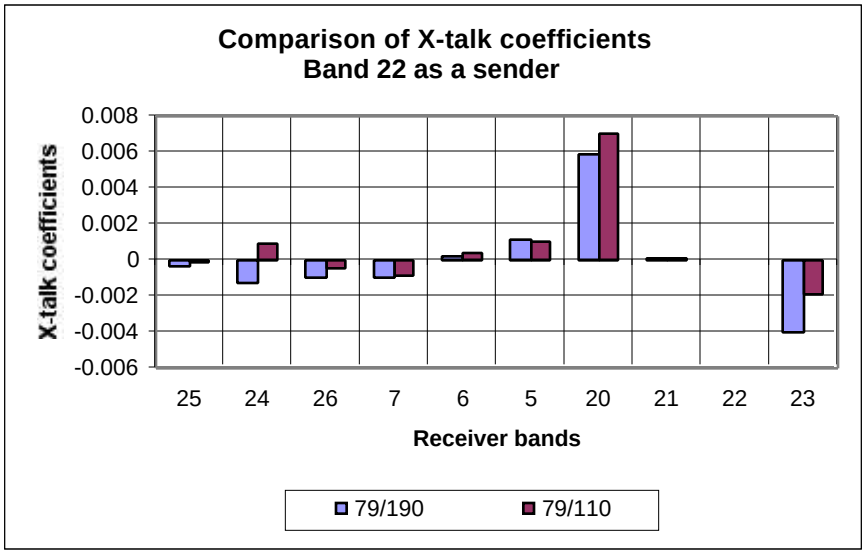
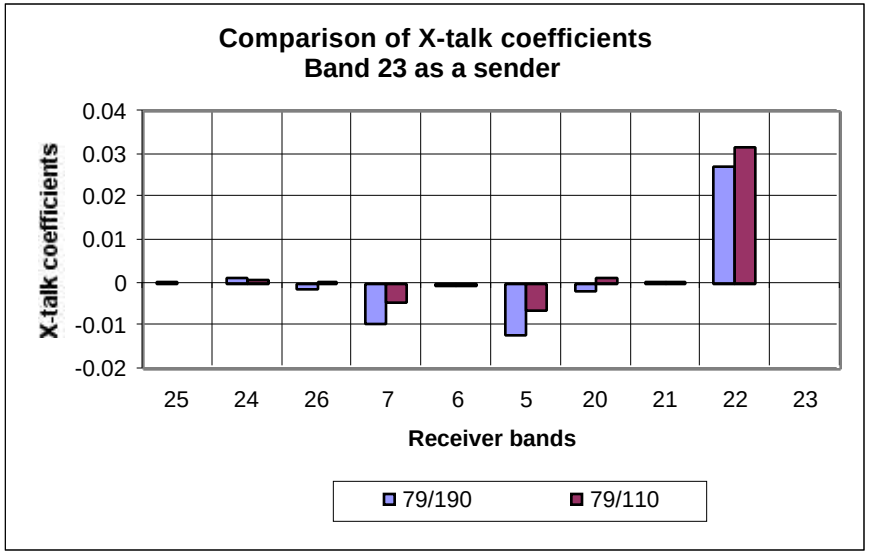


Comparison of X-talk coefficients using the SRCA reticle for Day#252 (79/110) and #173(79/190) (2)









Comparison of X-talk coefficients using the SRCA reticle for Day#252 (79/110) and #173(79/190) (3)