GSC Phase Law Tests: Report

GSFC POD Team

IDS Analysis Working Group Meeting

Greenbelt, Maryland

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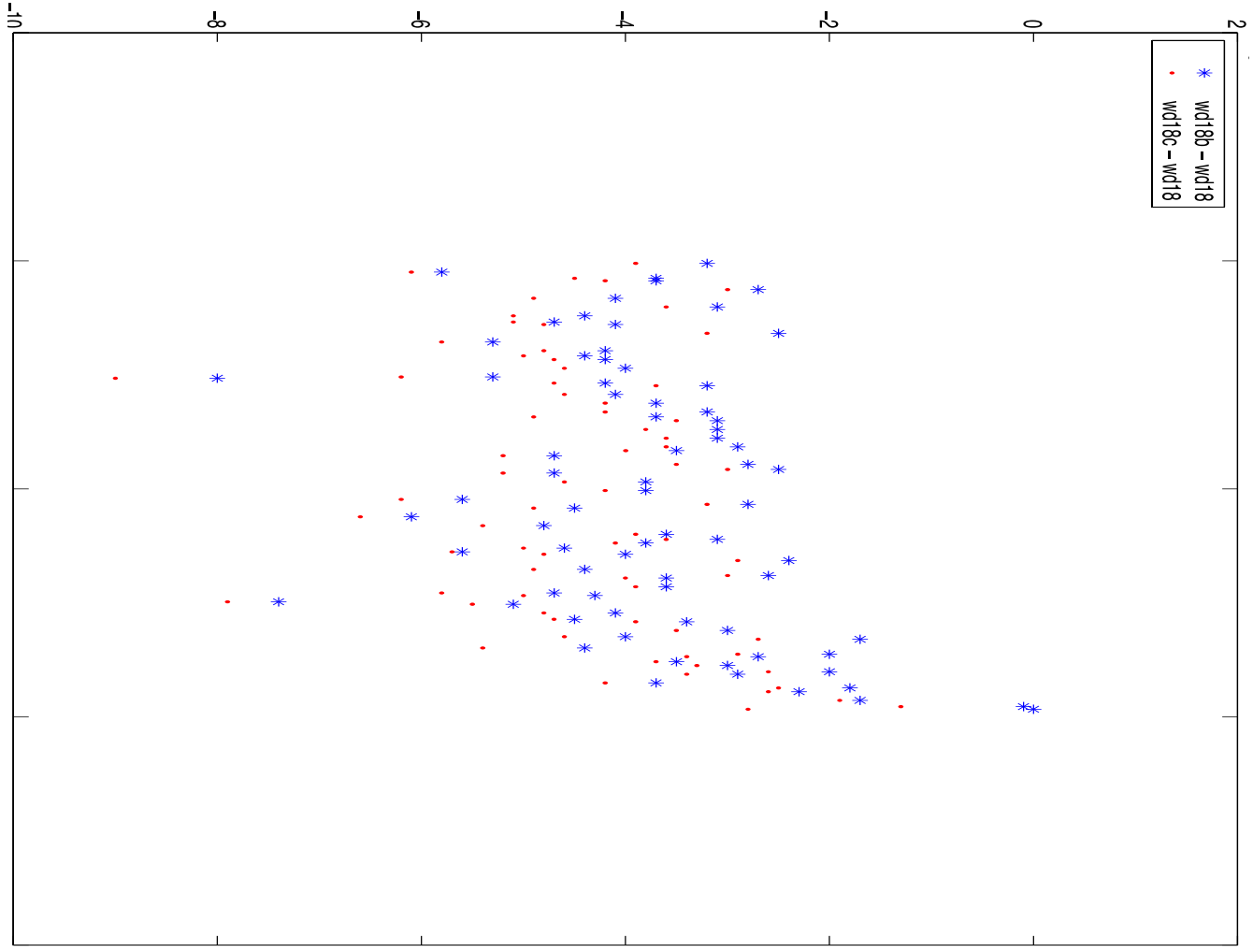
Summary

1. We tested first the approach of applying the OFFSETS and the phase law in separate tests for data in 1995 and 2011.
   wd18 -- baseline
   wd18b – baseline + OFFSETS
   wd18c – baseline + OFFSETS + phase laws.

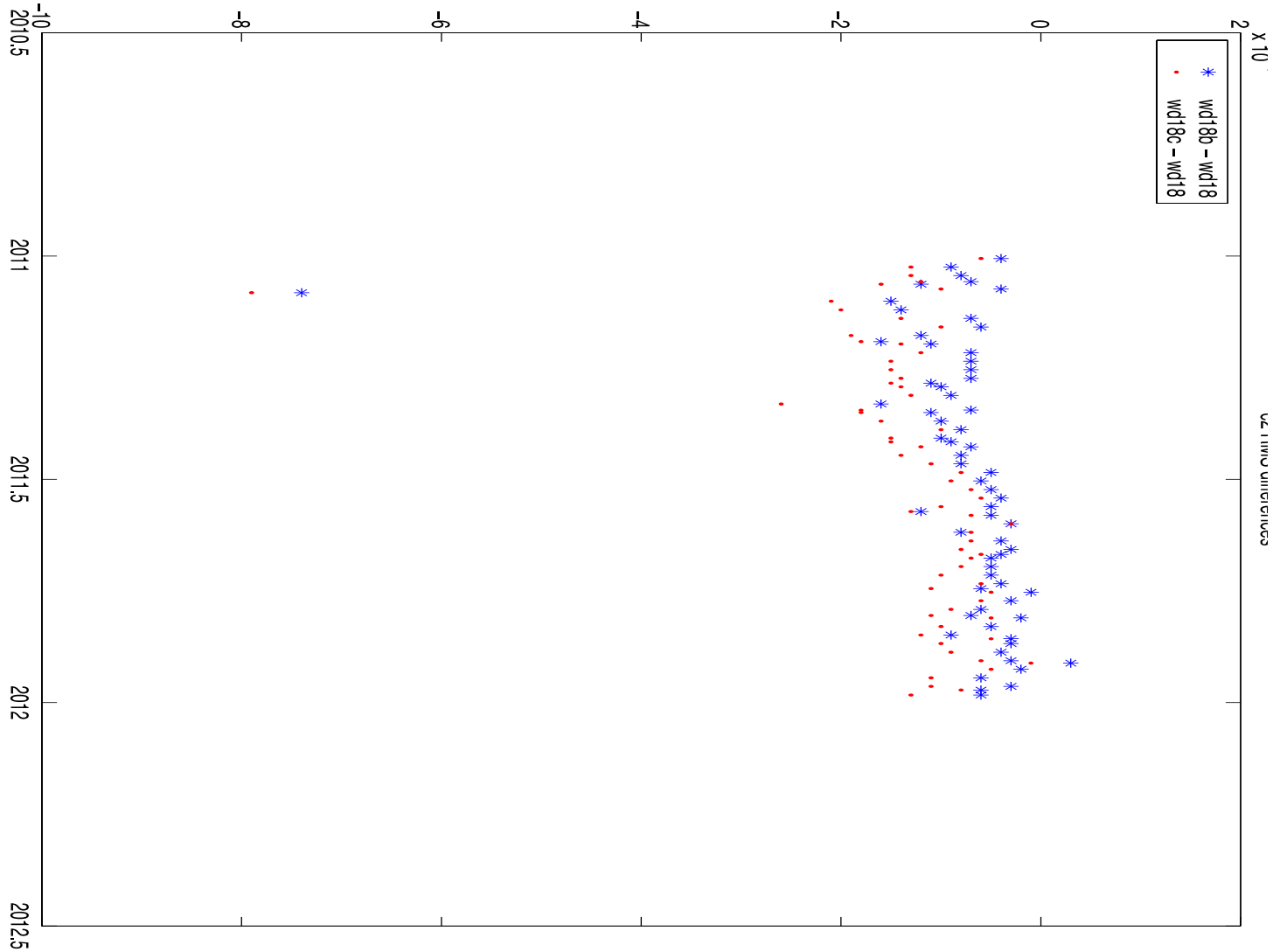
(Tests supplied to Guilhem via combination and single satellite files)

2. In general we saw that the RMS of fit improved or stayed the same for both the application of OFFSETS and Phase Law. This means for some satellites, the GEODYN application of the OFFSETS (with concomitant attitude model) was superior to the use of the C.O.M. corrections on the DORIS data. This was true for Envisat, Cryosat-2, and to some extent for TOPEX. Some anomalous behavior was observed for SPOT-4, SPOT-5 in mid-year 2011; otherwise this was also true for those satellites.

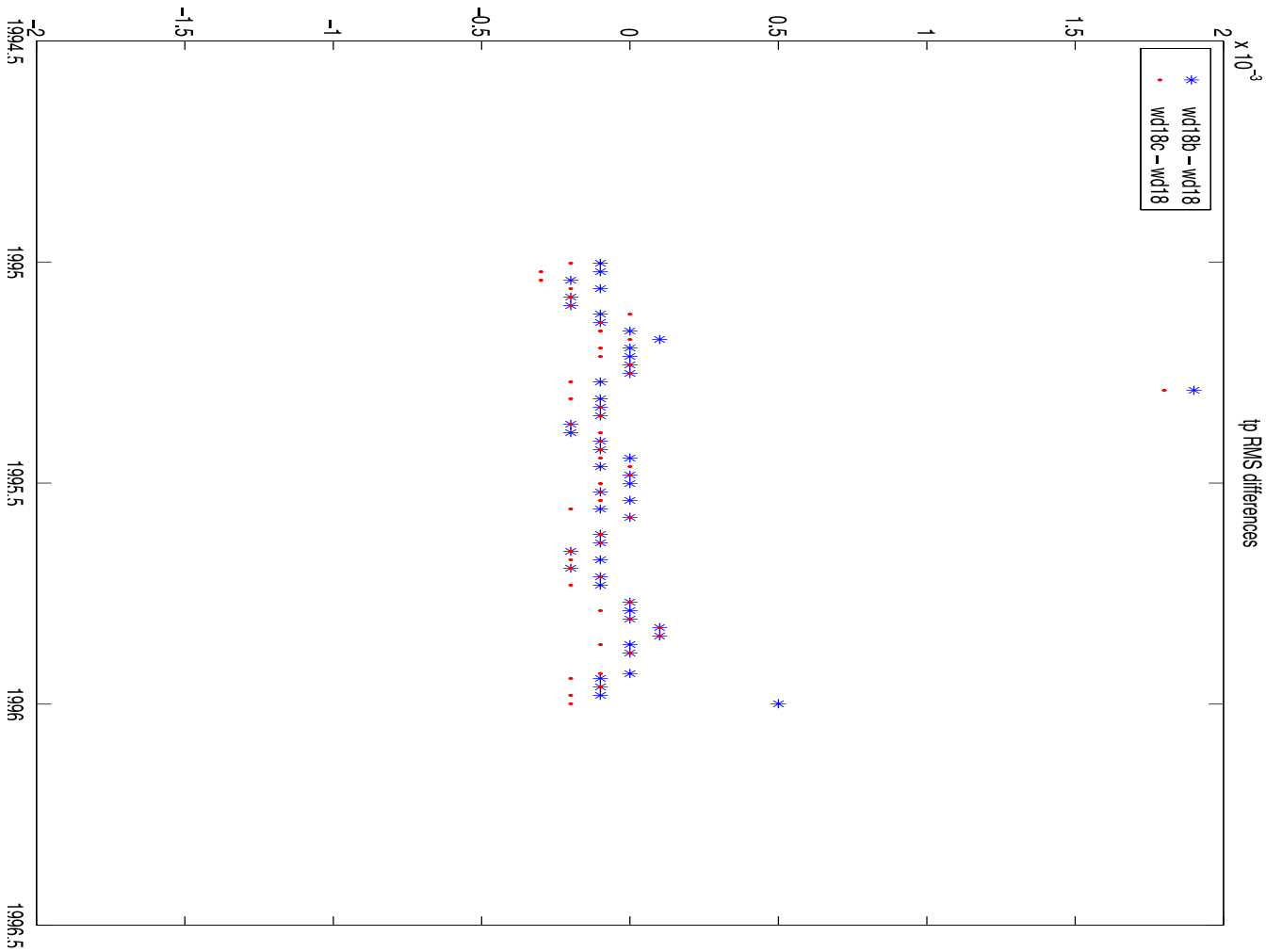
DORIS RMS of fit comparisons (wd18, wd18b,c: 2011, Envisat)



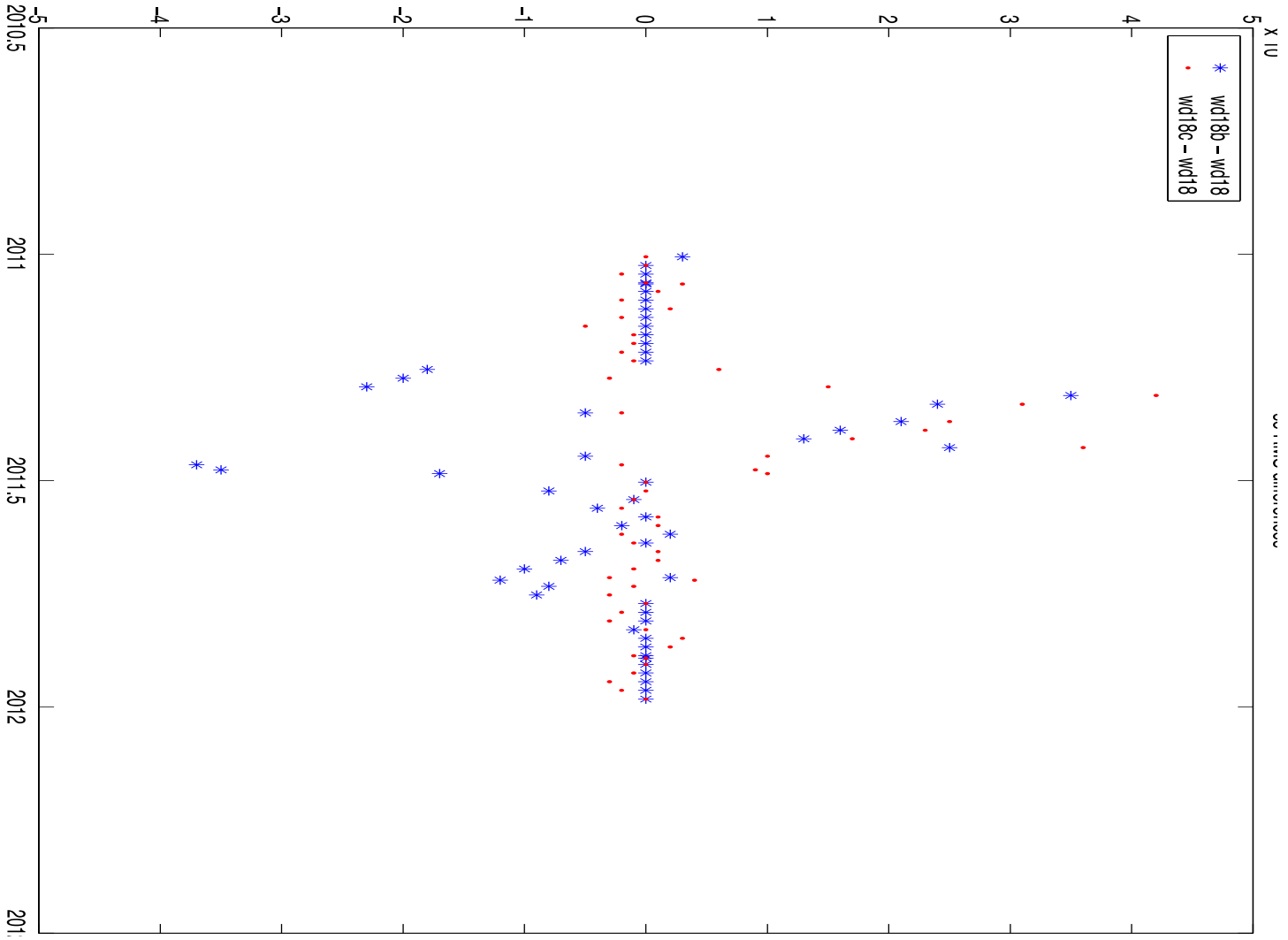
DORIS RMS of fit comparisons (wd18, wd18b,c: 2011, Cryosat-2)



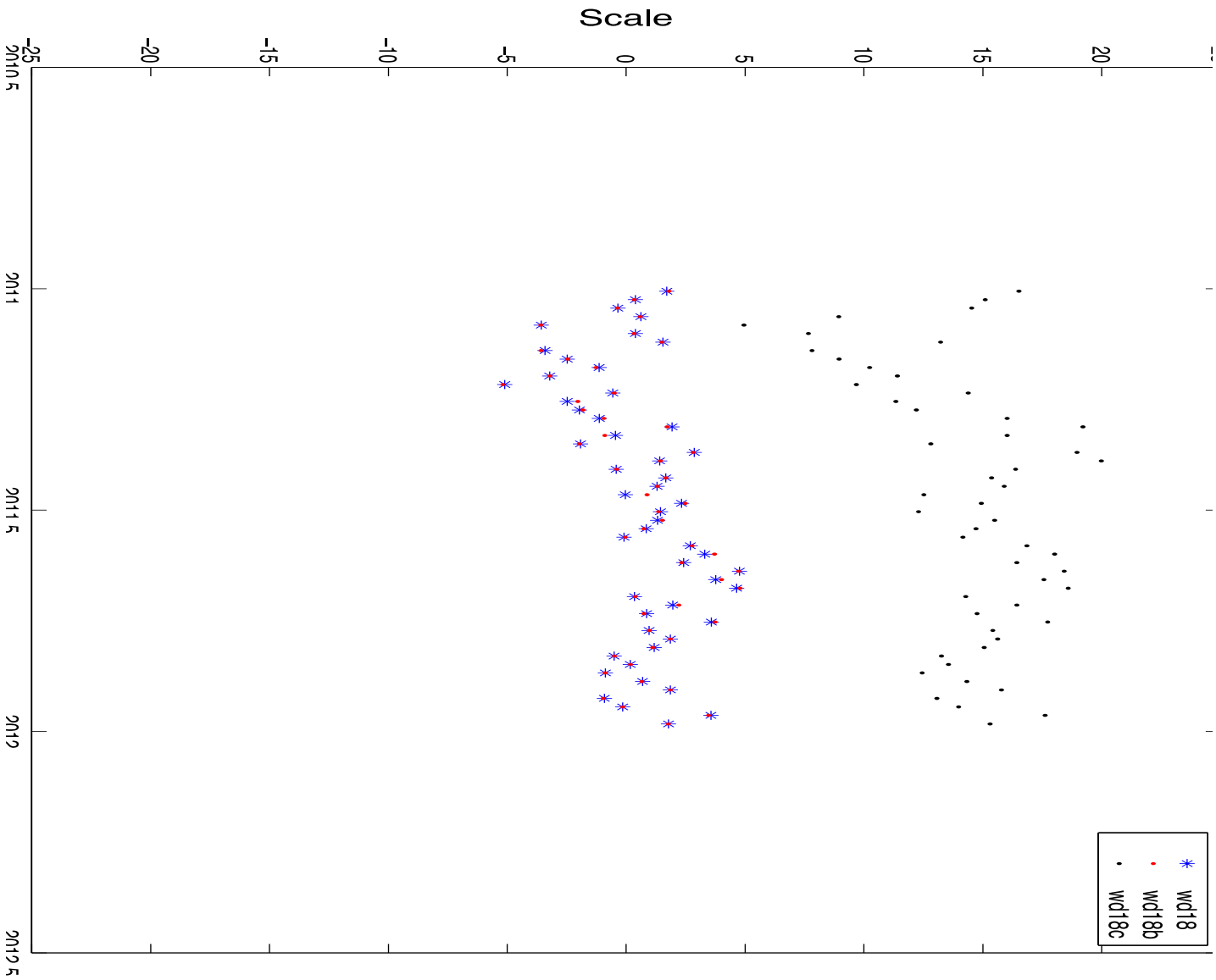
DORIS RMS of fit comparisons (wd18, wd18b,c: 1995, TOPEX)



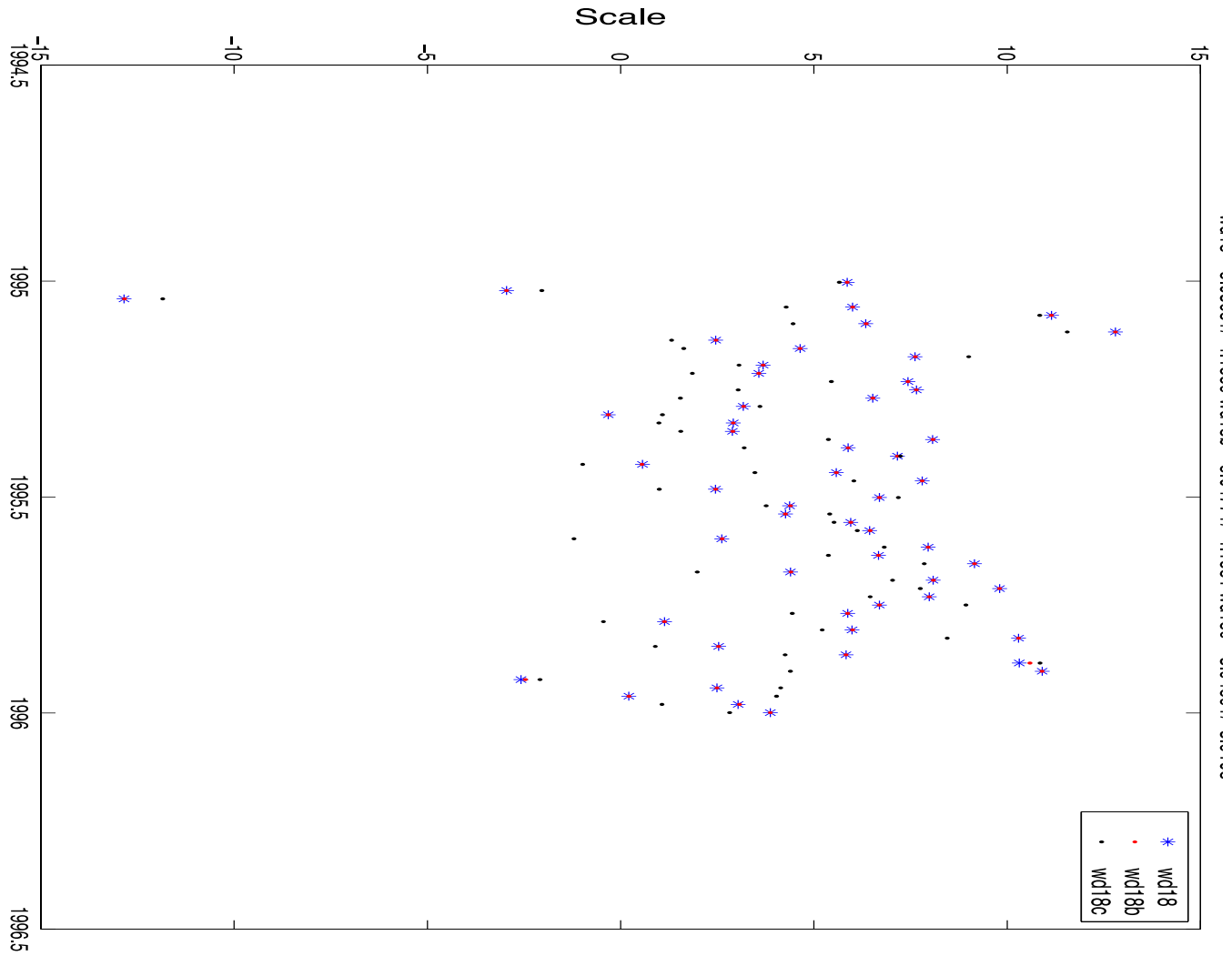
DORIS RMS of fit comparisons (wd18, wd18b,c: 2011, SPOT-5)



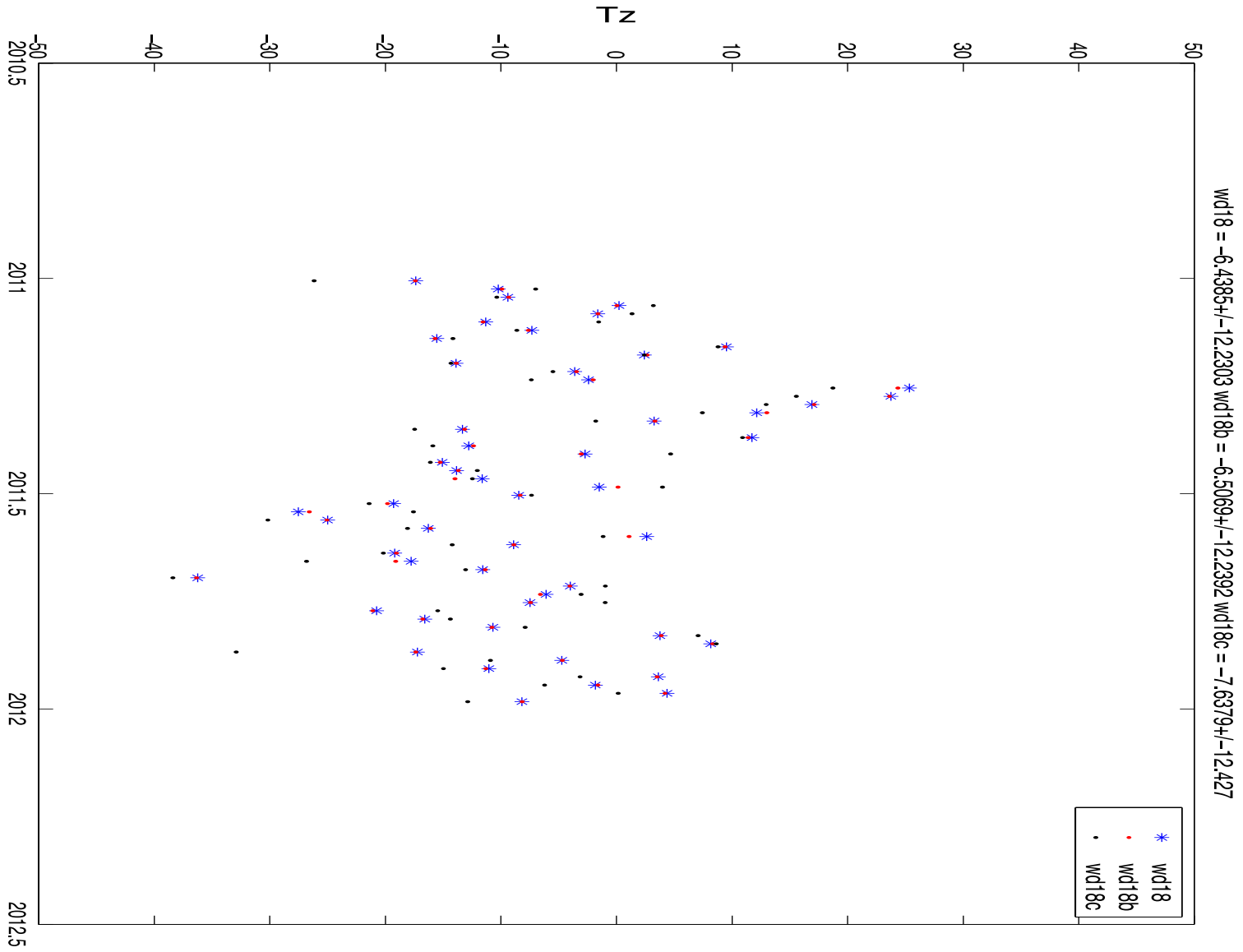
Scale Comparisons (wd18, wd18b,c: 2011)



Scale Comparisons (wd18, wd18b,c: 1995)



Tz Comparisons (wd18, wd18b,c: 2011)



Tz Comparisons (wd18, wd18b,c: 1995)