

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10562 - L2 Version 2
Chandra X-Ray Center

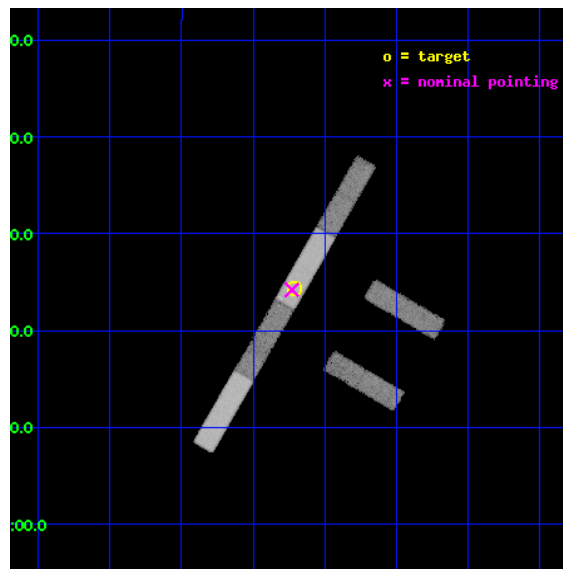
L2 Processing Date : May 24 2012

Contents

| | | |
|----------|-------------------------------|-----------|
| 1 | Front | 2 |
| 2 | OBI | 3 |
| 2.1 | OBI | 3 |
| 2.1.1 | Images | 3 |
| 2.1.2 | Bias | 3 |
| 2.1.3 | Parameters | 4 |
| 2.1.4 | Events | 4 |
| 2.2 | Compared Parameters | 5 |
| 2.3 | Aspect | 6 |
| 2.4 | Star Slots | 9 |
| 2.4.1 | Slot 3 | 9 |
| 2.4.2 | Slot 4 | 10 |
| 2.4.3 | Slot 5 | 11 |
| 2.4.4 | Slot 6 | 12 |
| 2.4.5 | Slot 7 | 13 |
| 2.5 | FID Slots | 14 |
| 2.5.1 | Slot 0 | 14 |
| 2.5.2 | Slot 1 | 15 |
| 2.5.3 | Slot 2 | 16 |
| A | Summary | 17 |
| A.1 | Status | 17 |
| A.2 | Comments | 17 |

1 Front

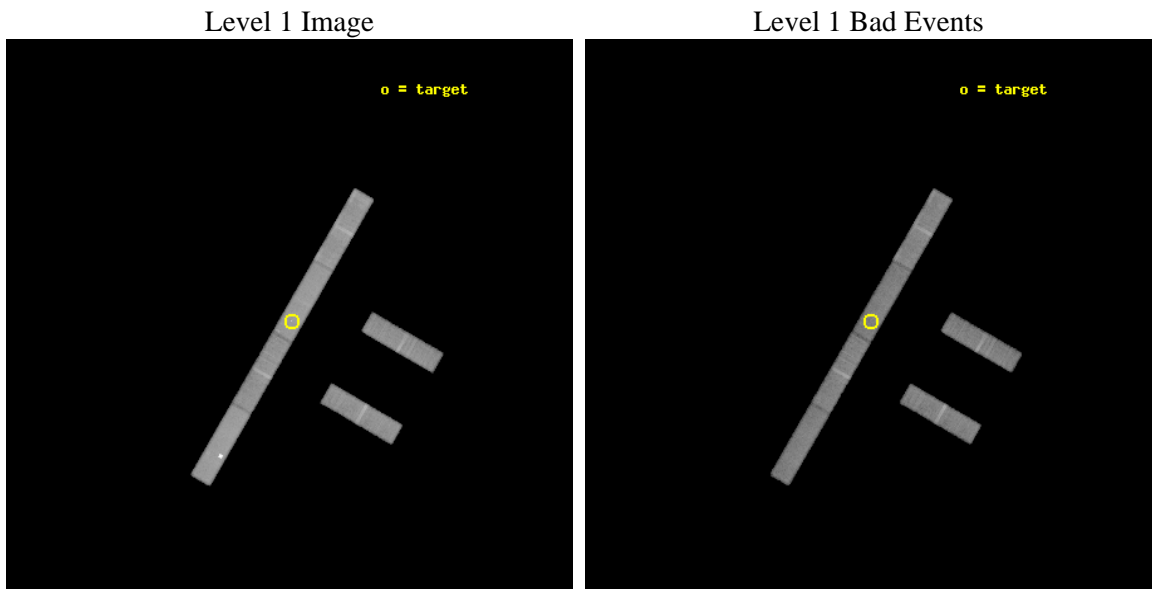
| | | |
|----------|-----------------------------|--|
| seq_num | 600755 | Sequence number |
| obs_id | 10562 | Observation id |
| title | Hyperluminous X-ray sources | Proposal title |
| observer | Dr Timothy Roberts | Principal investigator |
| object | NGC 470 HLX-1 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 19.927917 | Observer's specified target RA [deg] |
| dec_targ | 3.405833 | Observer's specified target Dec [deg] |
| ra_nom | 19.932207188712 | Nominal RA [deg] |
| dec_nom | 3.4035323442855 | Nominal Dec [deg] |
| roll_nom | 300.06786697096 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 29178.600632429 | Sum of GTIs [s] |
| livetime | 28129.128422905 | Livetime [s] |
| ontime2 | 29177.459592342 | Sum of GTIs [s] |
| ontime3 | 29178.600632429 | Sum of GTIs [s] |
| ontime5 | 29178.600632429 | Sum of GTIs [s] |
| ontime6 | 29178.600632429 | Sum of GTIs [s] |
| ontime7 | 29178.600632429 | Sum of GTIs [s] |
| ontime8 | 29178.600632429 | Sum of GTIs [s] |
| l2events | 134520 | Number of level 2 events |



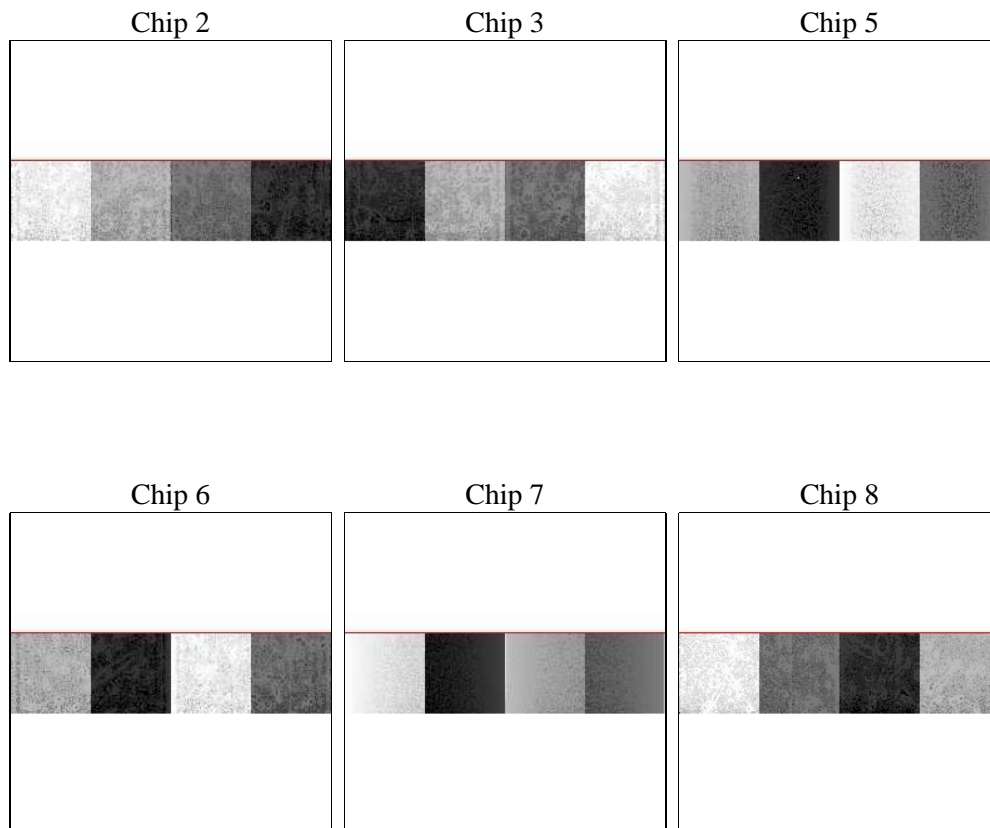
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 29000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.4 | Processing system revision | ontime | 29178.600632429 | Sum of GTIs [s] |
| caldbver | 4.4.9 | | ontime2 | 29177.459592342 | Sum of GTIs [s] |
| date | 2012-05-24T02:52:09 | Date and time of file creation | ontime3 | 29178.600632429 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime5 | 29178.600632429 | Sum of GTIs [s] |
| | | | ontime6 | 29178.600632429 | Sum of GTIs [s] |
| | | | ontime7 | 29178.600632429 | Sum of GTIs [s] |
| | | | ontime8 | 29178.600632429 | Sum of GTIs [s] |
| | | | l1events | 647400 | Number of level 1 events |

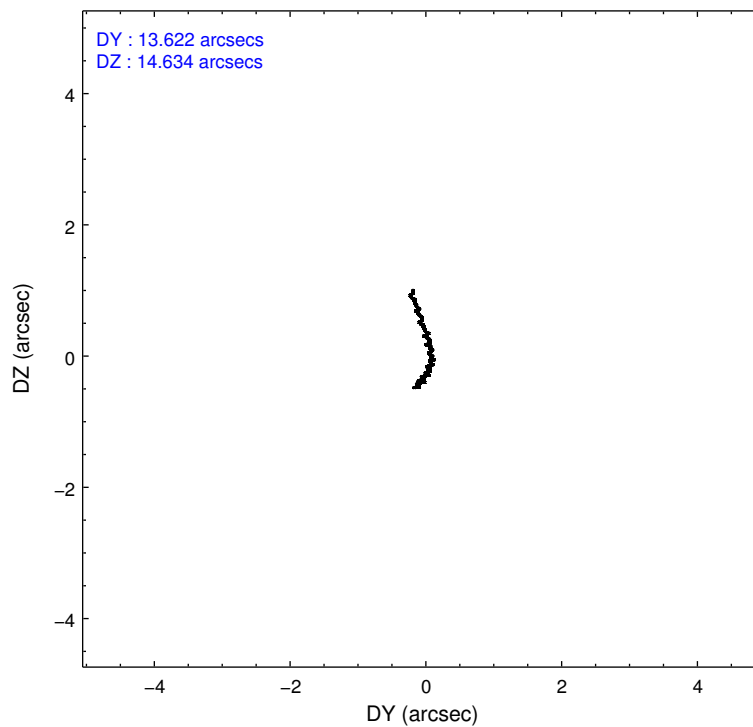
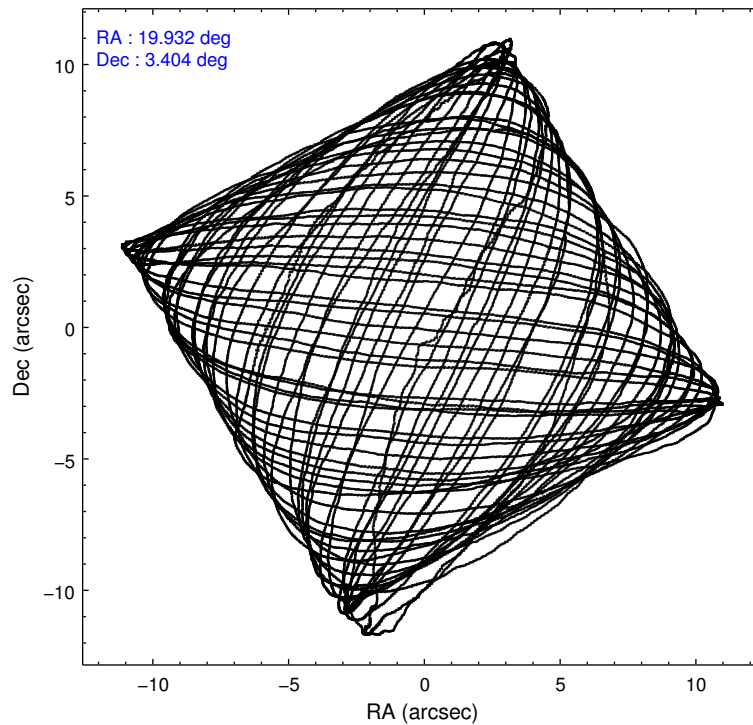
2.1.4 Events

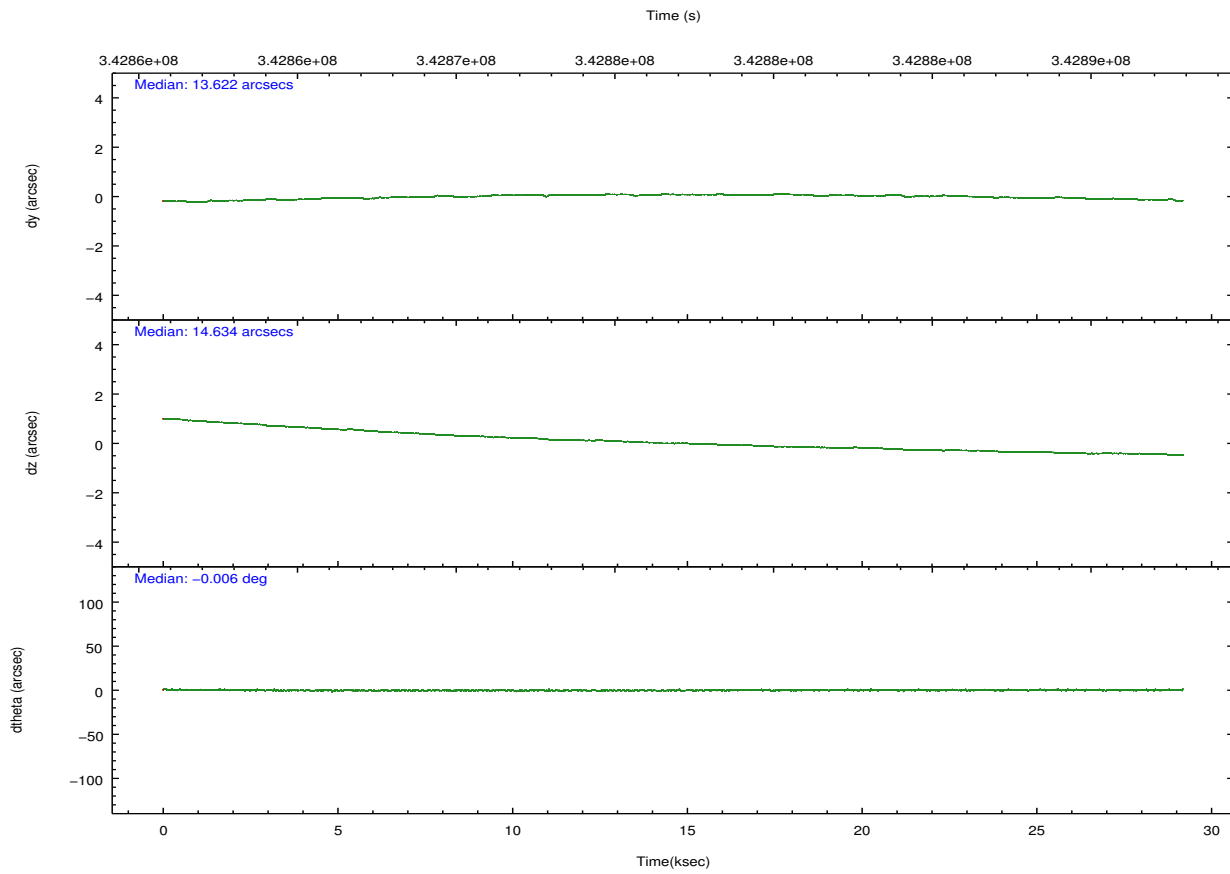
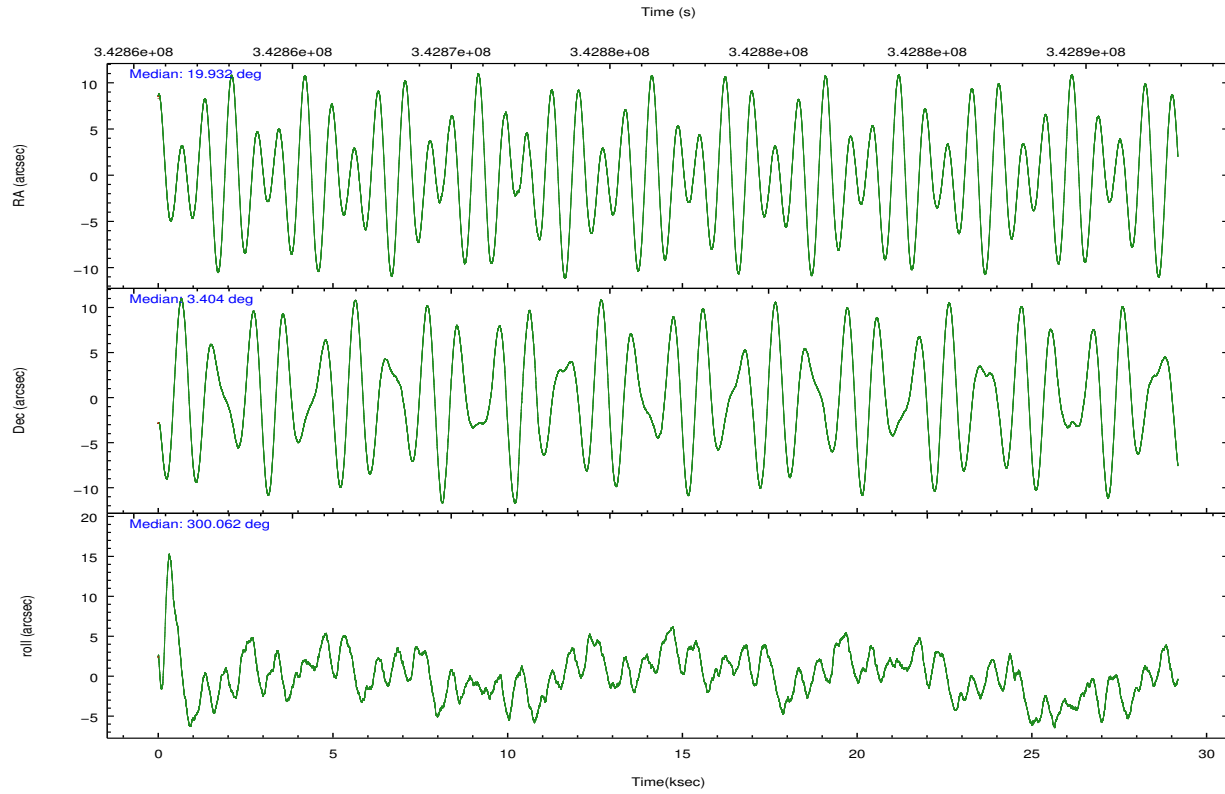
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|--------|-------|--------|--------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 91920 | 83613 | 148880 | 90688 | 116570 | 115729 | grade 0 events | 4229 | 4522 | 28428 | 3974 | 5150 | 7408 |
| rejected events | 81739 | 73426 | 72000 | 80182 | 68291 | 92122 | | 4% | 5% | 19% | 4% | 4% | 6% |
| rejected % | 88% | 87% | 48% | 88% | 58% | 79% | grade 1 events | 44 | 45 | 223 | 36 | 138 | 46 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 2139 | 1837 | 17198 | 2113 | 10630 | 5470 |
| | | | | | | | | 2% | 2% | 11% | 2% | 9% | 4% |
| | | | | | | | grade 3 events | 1310 | 1370 | 3123 | 1480 | 5208 | 2737 |
| | | | | | | | | 1% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 4 events | 1282 | 1323 | 3018 | 1403 | 4943 | 2589 |
| | | | | | | | | 1% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 5 events | 3527 | 3704 | 10146 | 3911 | 10892 | 5032 |
| | | | | | | | | 3% | 4% | 6% | 4% | 9% | 4% |
| | | | | | | | grade 6 events | 1794 | 1700 | 28994 | 2115 | 24867 | 6750 |
| | | | | | | | | 1% | 2% | 19% | 2% | 21% | 5% |
| | | | | | | | grade 7 events | 77595 | 69112 | 57750 | 75656 | 54742 | 85697 |
| | | | | | | | | 84% | 82% | 38% | 83% | 46% | 74% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-235678 | ACIS-235678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | CCD I0 on | N | N |
| Observation mode | POINTING | POINTING | CCD I1 on | N | N |
| [deg] Pointing RA | 19.908269 | 19.93220718871218 | CCD I2 on | O1 | Y |
| [deg] Pointing Dec | 3.416858 | 3.403532344285491 | CCD I3 on | O2 | Y |
| [deg] Pointing Roll | 299.912660 | 300.0678669709581 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | Y | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | Y | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | CCD S4 on | Y | Y |
| [s] Observation start time (MET) | 342862419.184000 | 342860681.898 | CCD S5 on | N | N |
| Observation start date | 2008-11-12T07:32:34 | 2008-11-12T07:04:41 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 342891419.184000 | 342892914.56209 | On-chip summing requested | N | N |
| Observation end date | 2008-11-12T15:35:54 | 2008-11-12T16:01:54 | Subarray requested | CUSTOM | 1/4 |
| Read mode | TIMED | TIMED | Subarray start row | 385 | 385 |
| | | | Subarray row count | 256 | 256 |
| | | | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 1.1 |

2.3 Aspect



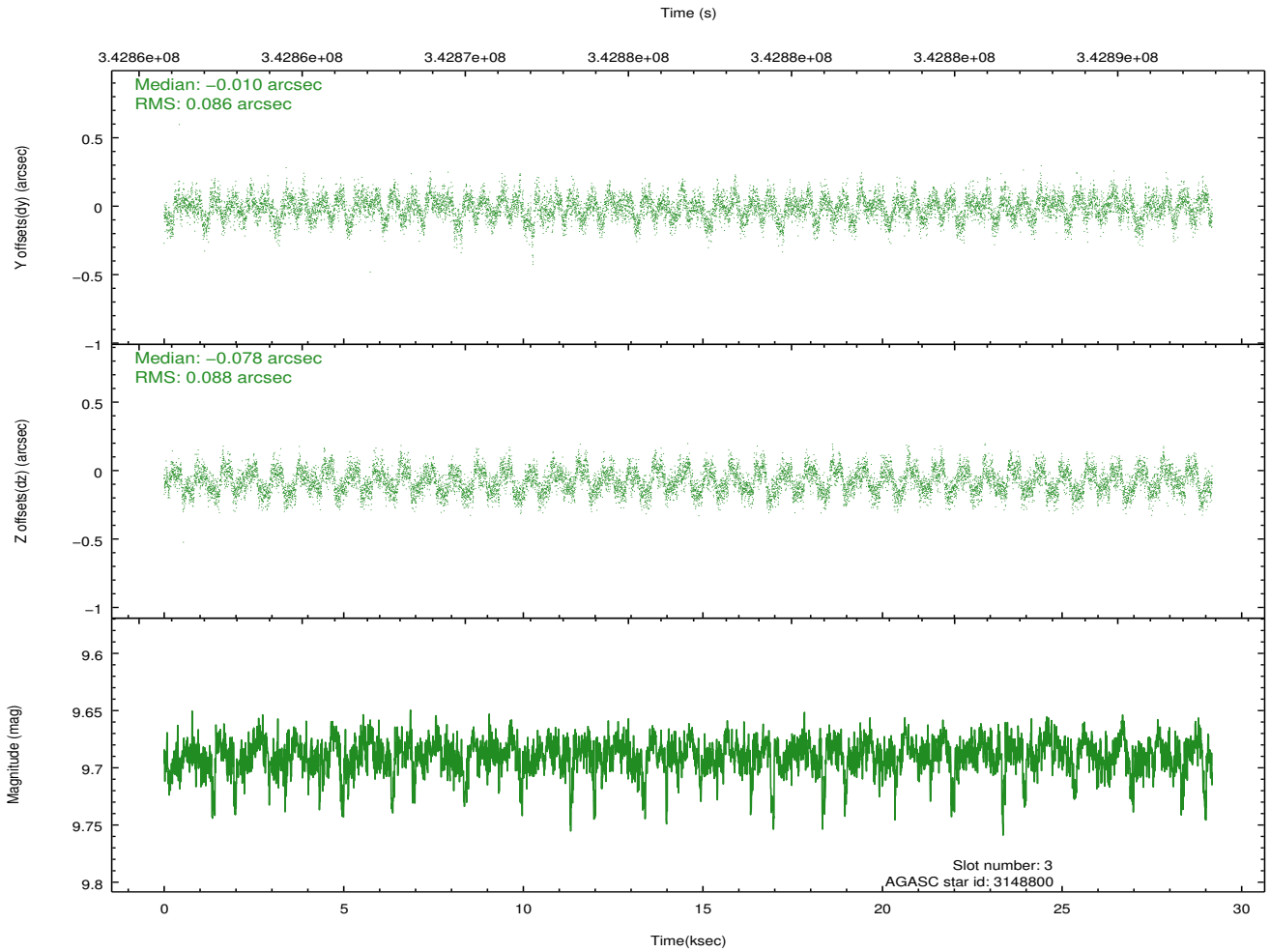
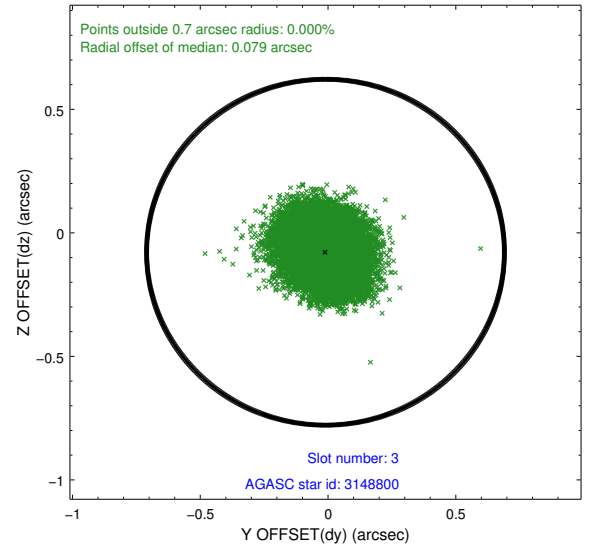
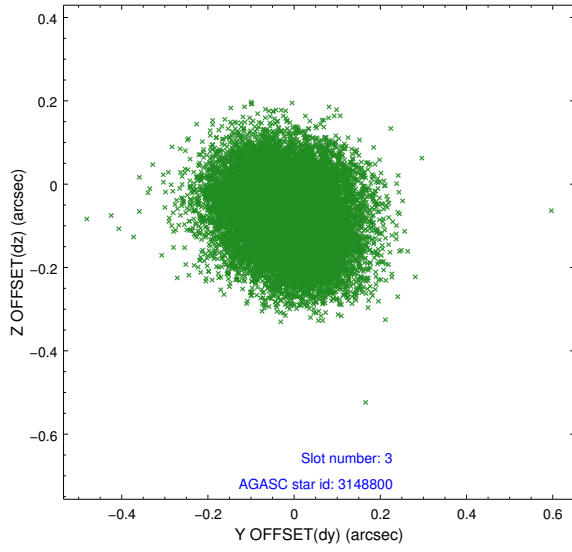


Slot Statistics

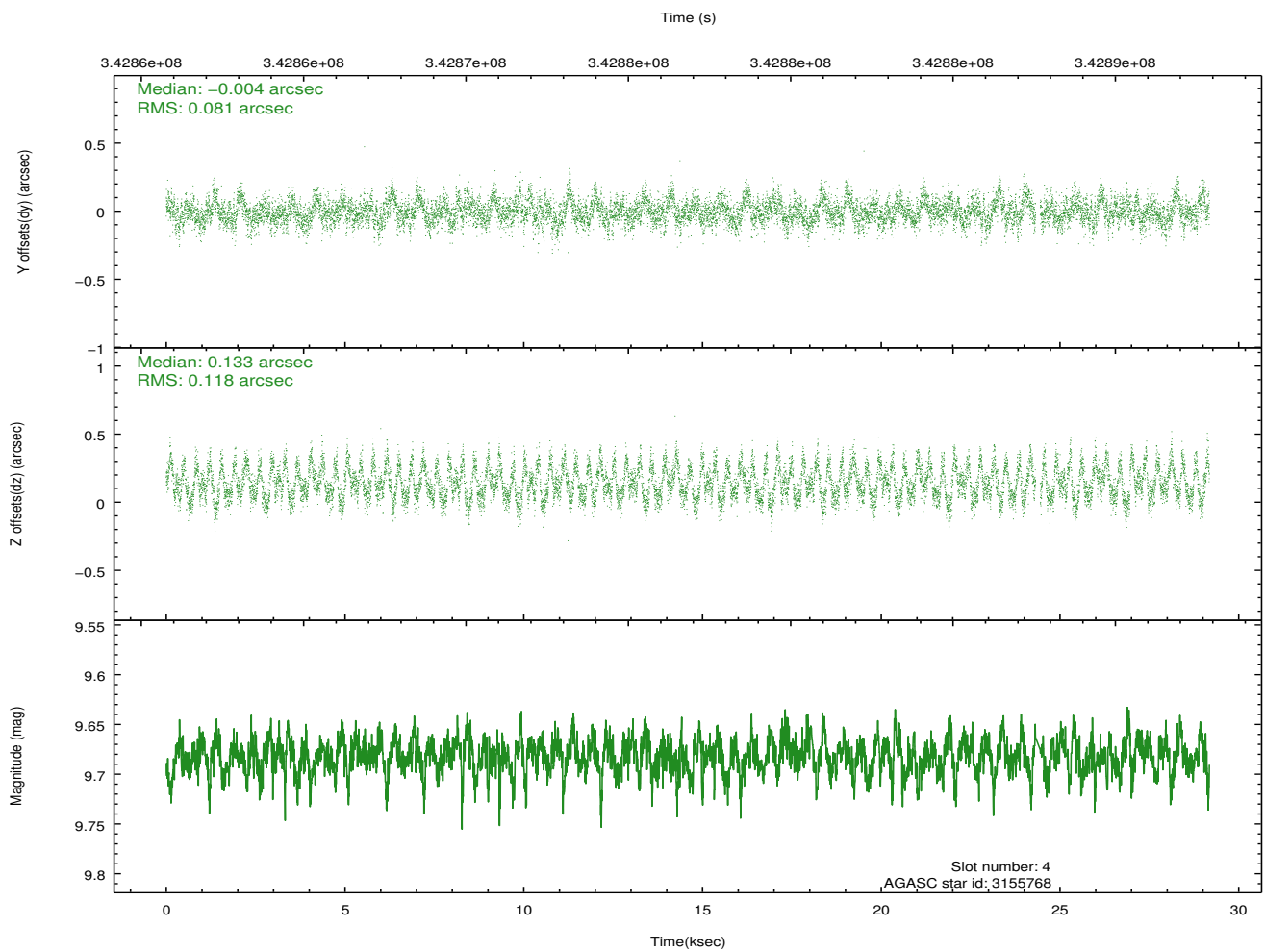
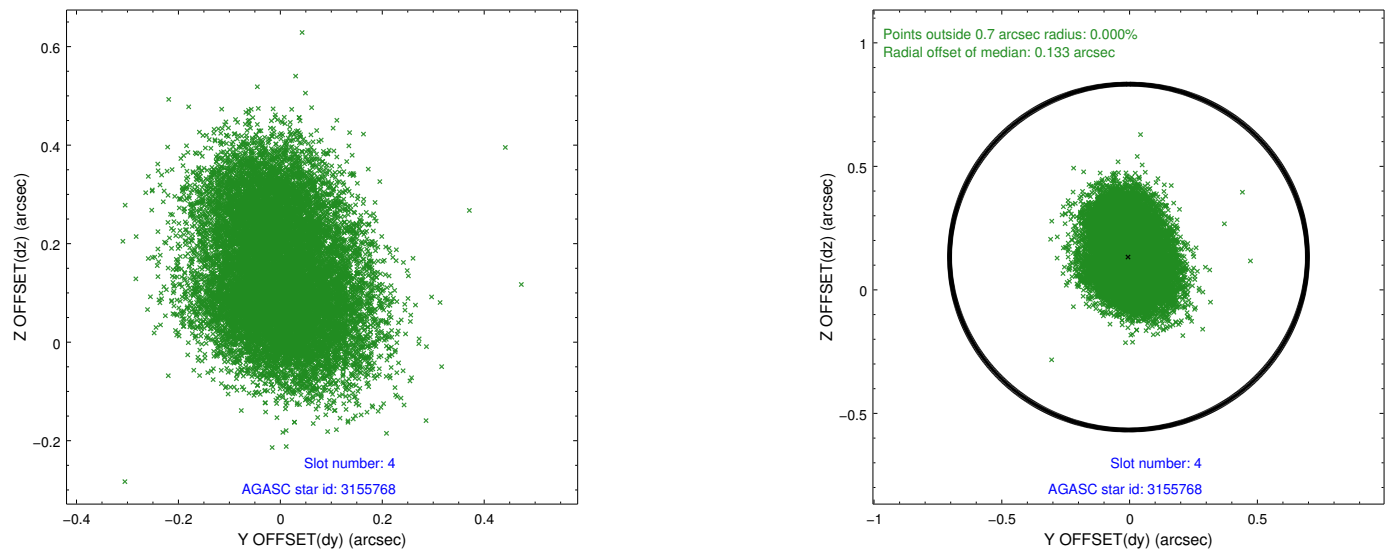
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|----------|-------|-------|--------|--------|-------|-------|-----------|----------|----------|----------|
| 0 | FID | ACIS-S-1 | 7.01 | 7118 | 0.066 | -0.031 | 0.016 | 0.042 | 0.000000 | 0.000000 | 929.60 | -1731.75 |
| 1 | FID | ACIS-S-5 | 7.04 | 7117 | -0.139 | 0.040 | 0.007 | 0.012 | 0.000000 | 0.000000 | -1819.59 | 165.75 |
| 2 | FID | ACIS-S-6 | 7.14 | 7117 | 0.052 | 0.005 | 0.021 | 0.041 | 0.000000 | 0.000000 | 395.01 | 809.81 |
| 3 | GUIDE | 3148800 | 9.69 | 14216 | -0.010 | -0.078 | 0.133 | 0.205 | 20.319611 | 3.284674 | 1149.77 | 1044.68 |
| 4 | GUIDE | 3155768 | 9.68 | 14157 | -0.004 | 0.133 | 0.155 | 0.241 | 20.050650 | 3.065747 | 1351.34 | -186.21 |
| 5 | GUIDE | 3015976 | 10.30 | 14202 | -0.102 | -0.049 | 0.188 | 0.297 | 19.598941 | 3.132687 | 333.36 | -1473.46 |
| 6 | GUIDE | 3023736 | 10.18 | 14191 | 0.110 | -0.041 | 0.261 | 0.422 | 19.619469 | 3.785896 | -1668.47 | -236.76 |
| 7 | GUIDE | 3024336 | 10.37 | 14214 | 0.011 | -0.025 | 0.187 | 0.306 | 19.963081 | 4.030288 | -1815.36 | 1272.38 |

2.4 Star Slots

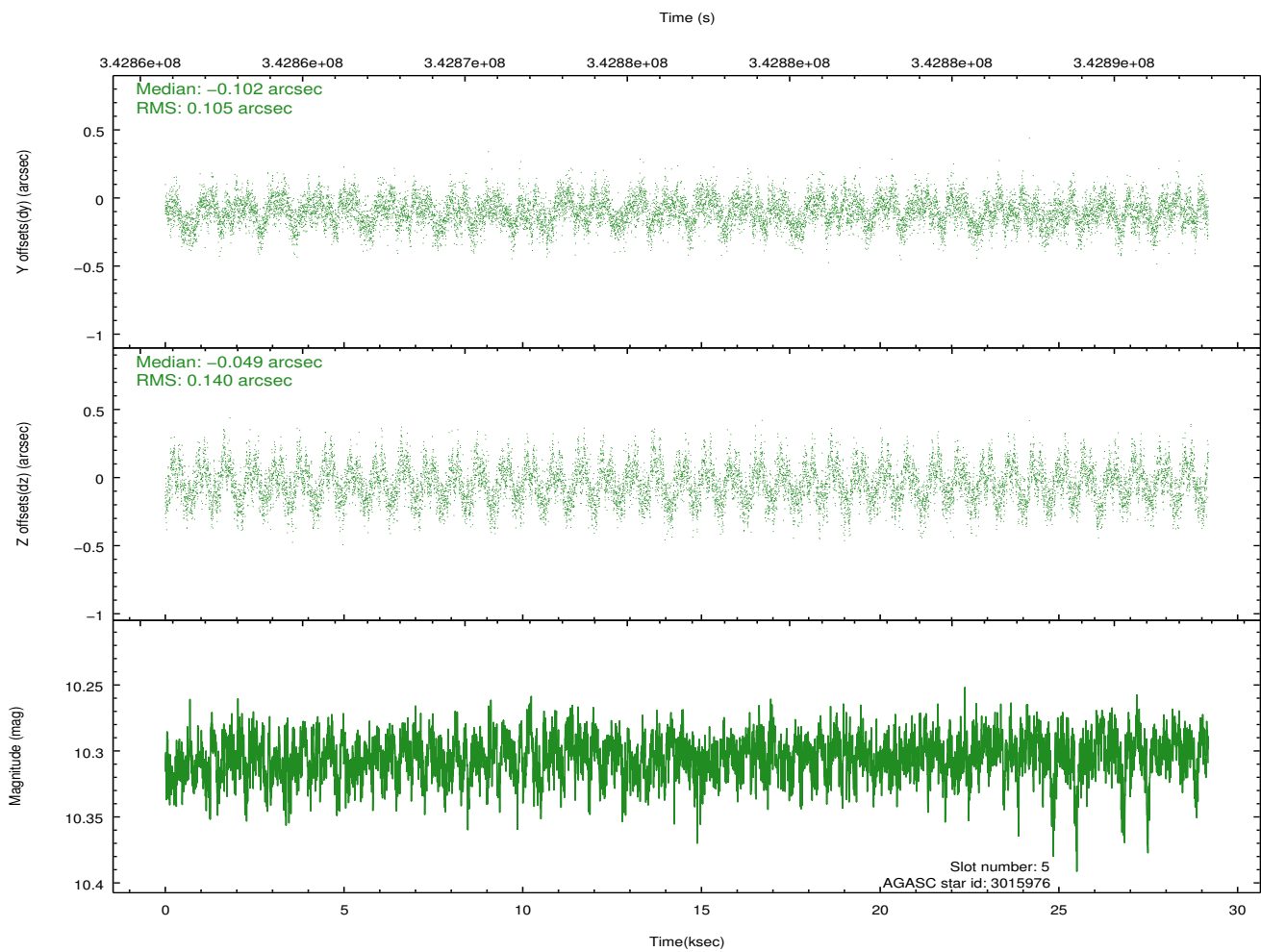
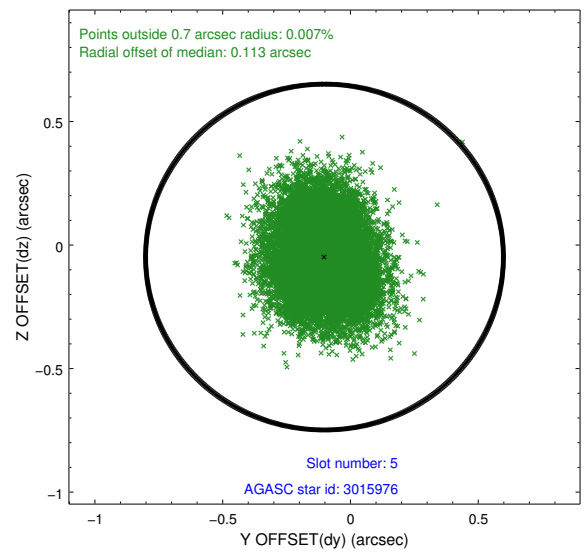
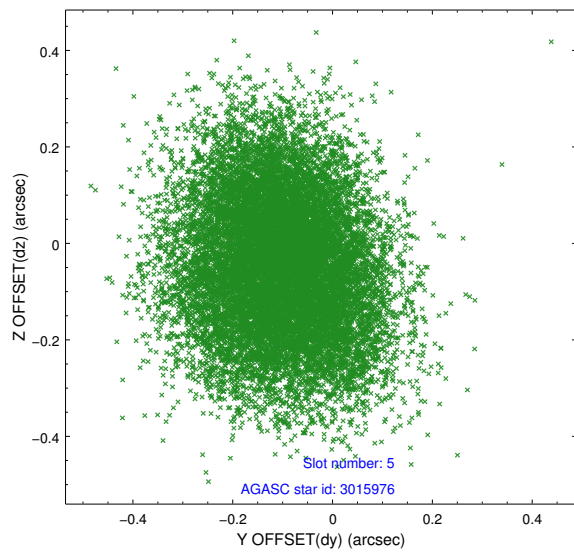
2.4.1 Slot 3



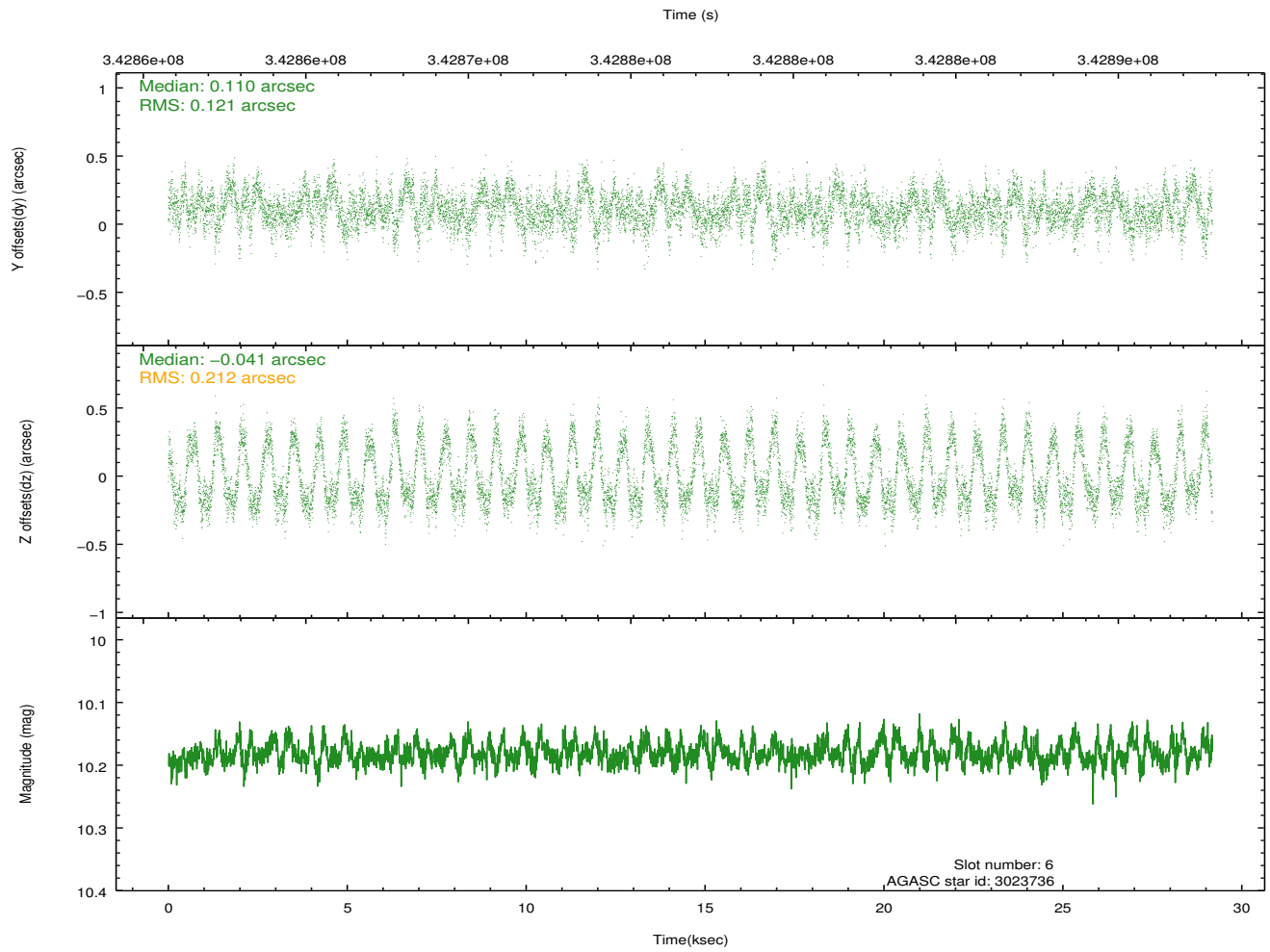
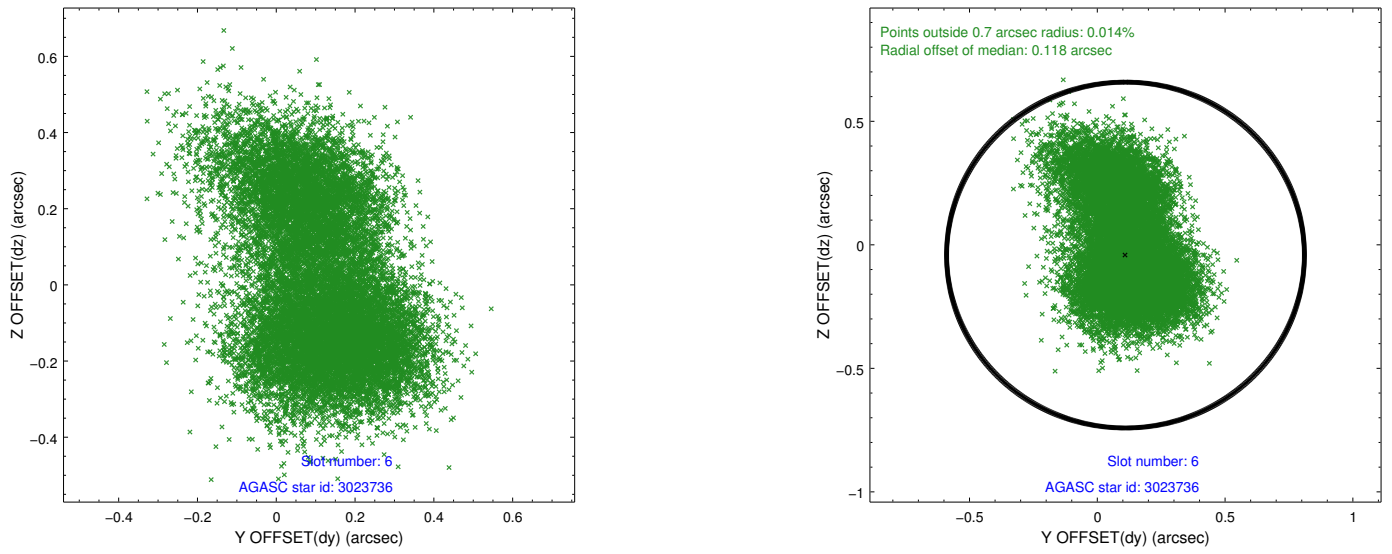
2.4.2 Slot 4



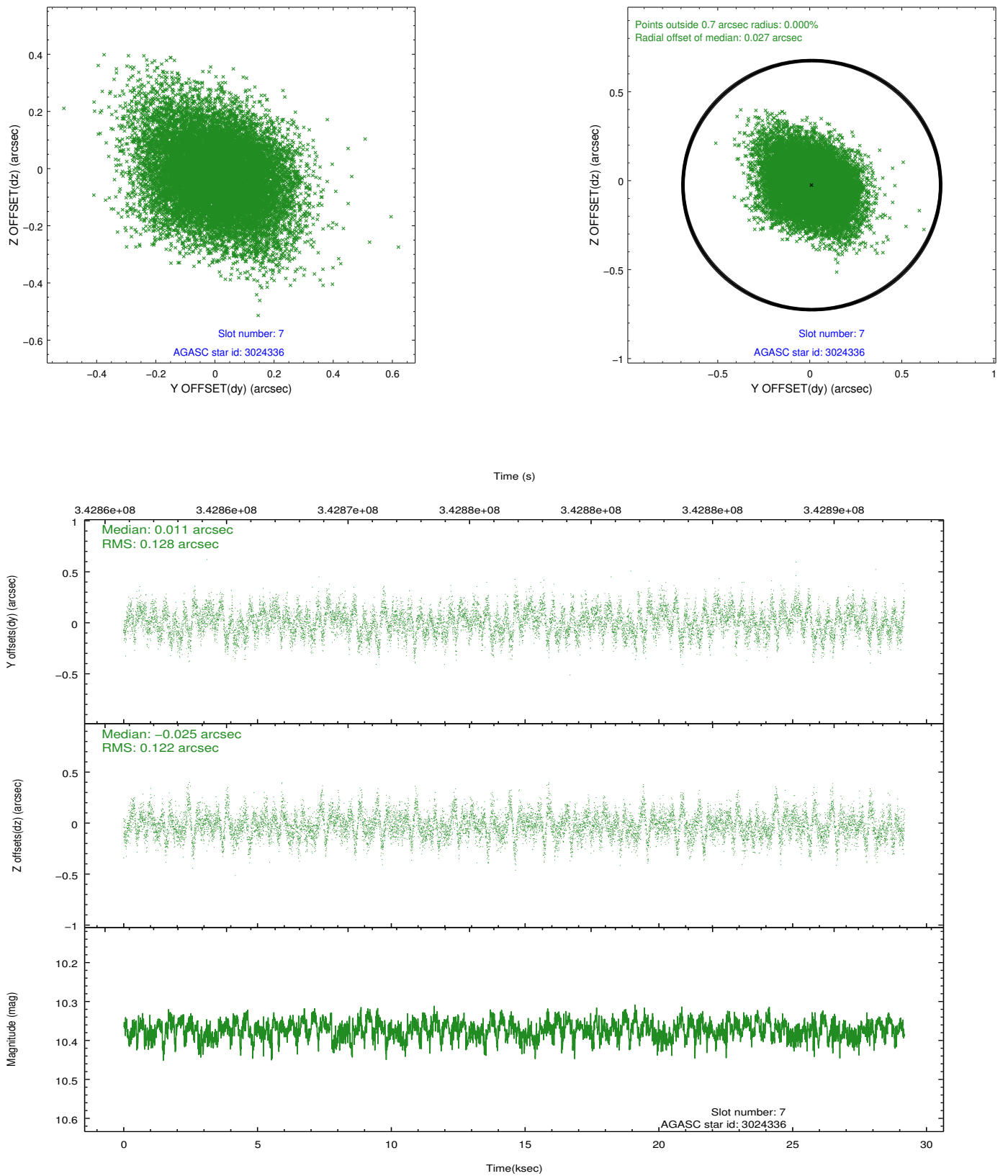
2.4.3 Slot 5



2.4.4 Slot 6

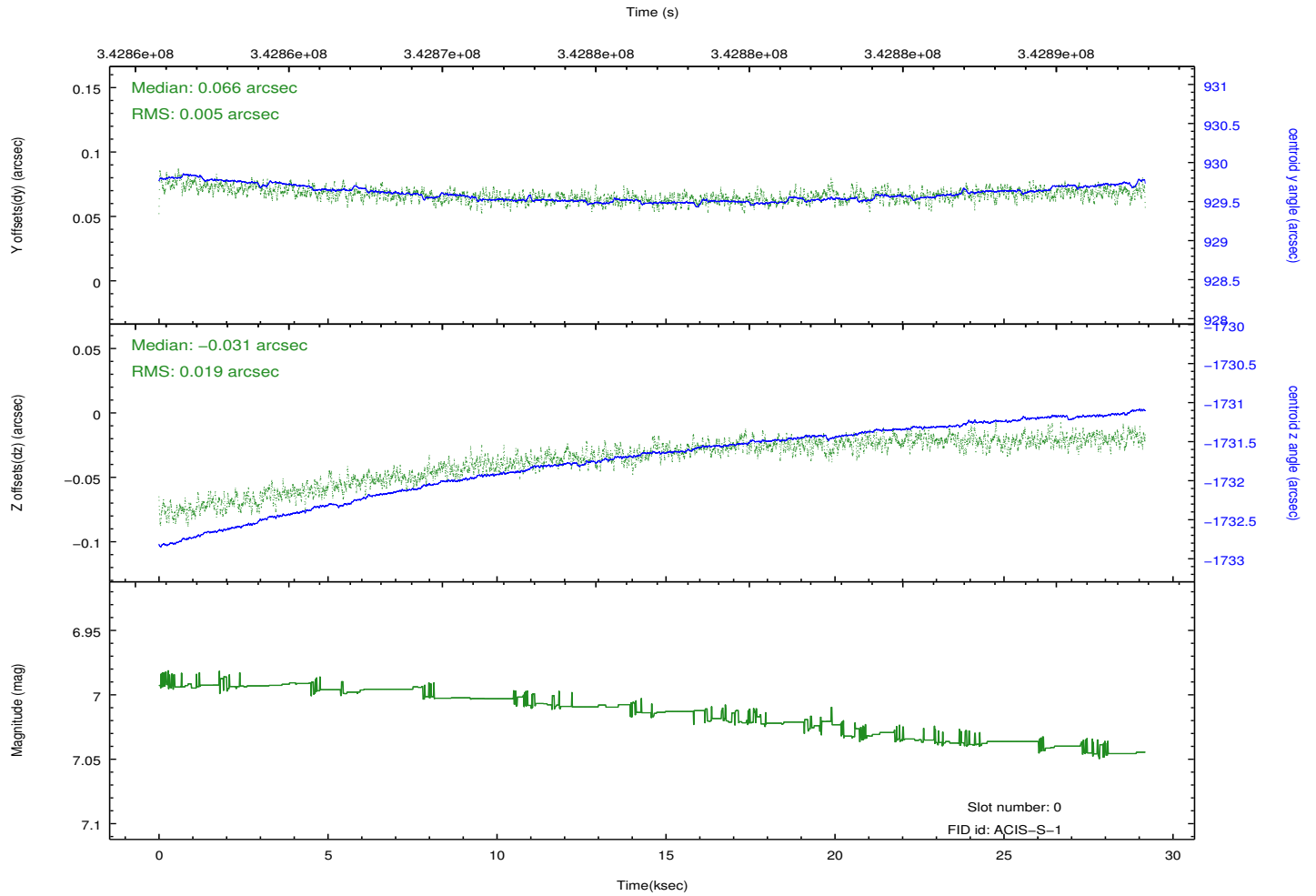
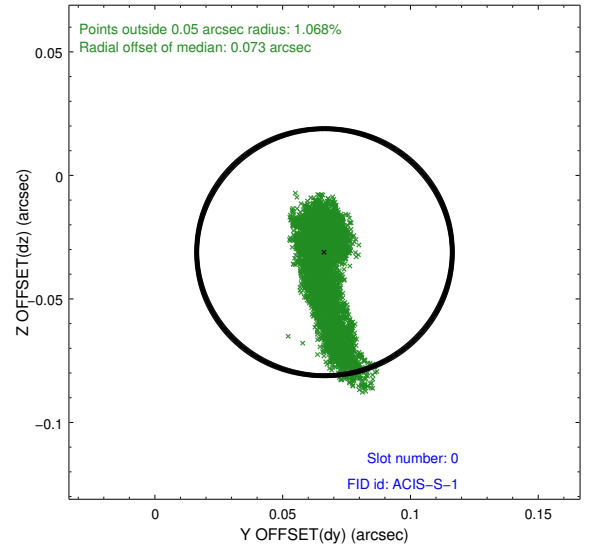
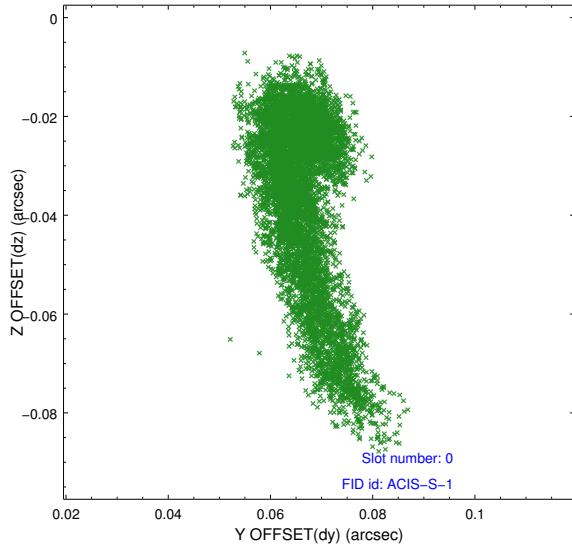


2.4.5 Slot 7

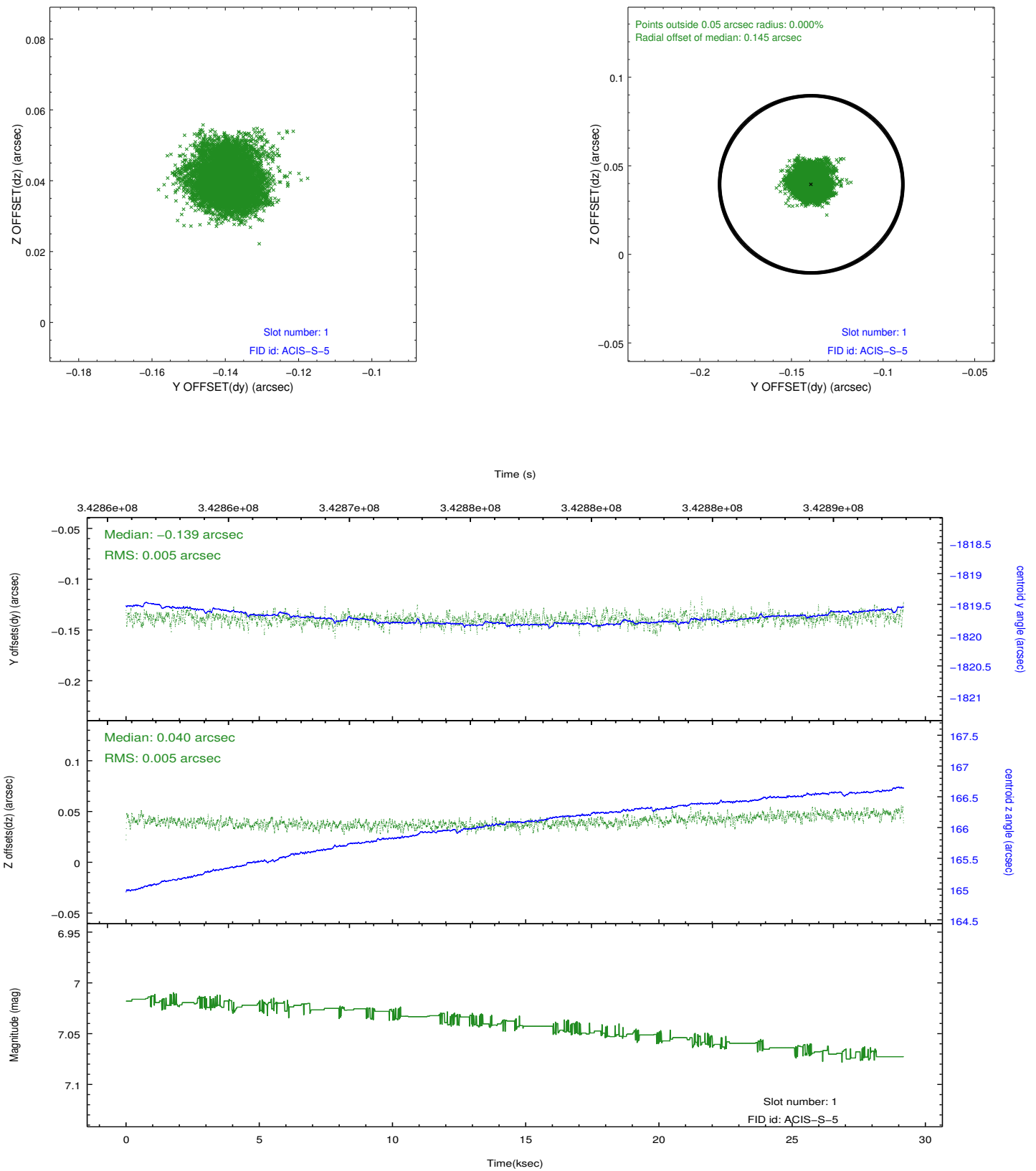


2.5 FID Slots

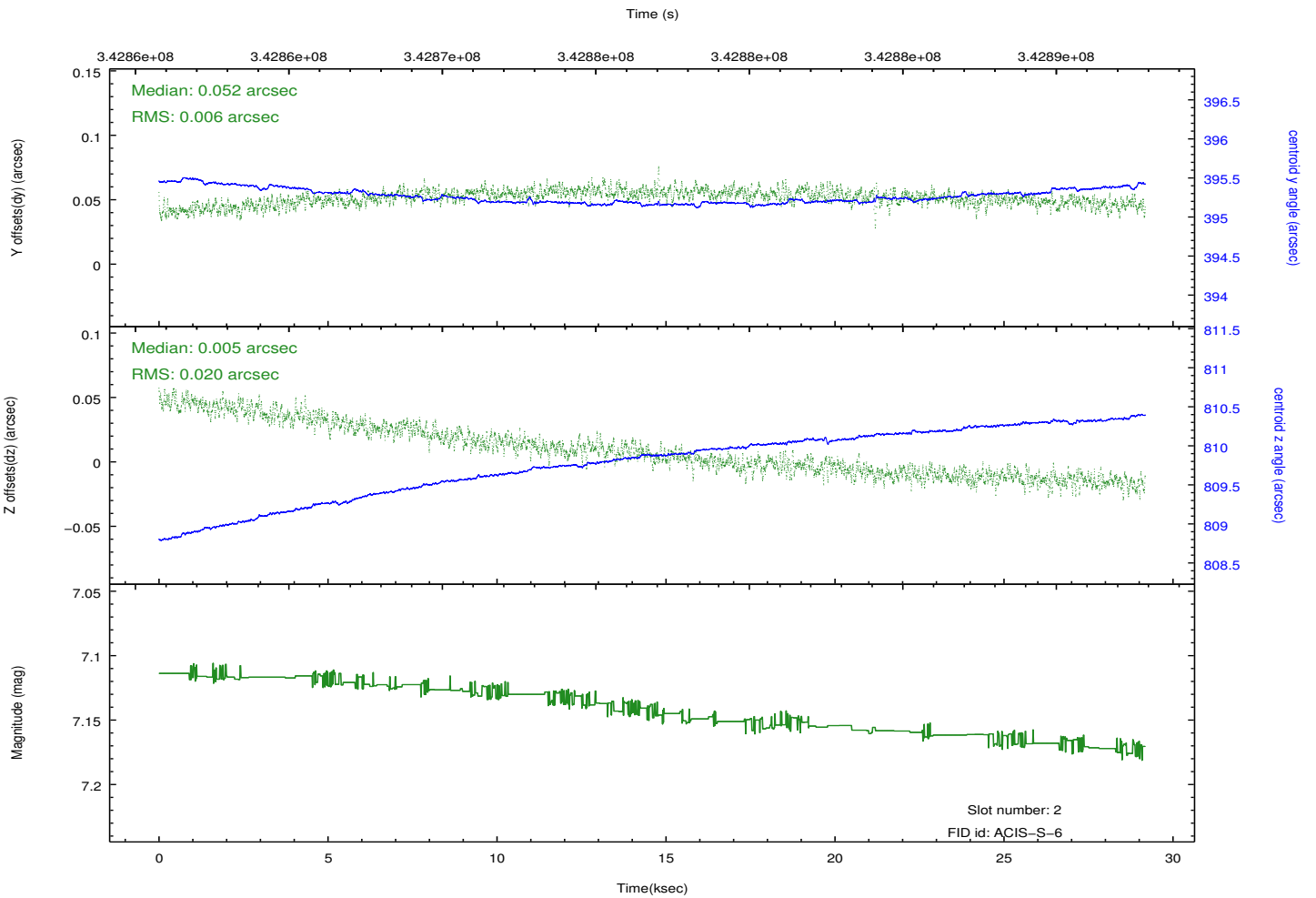
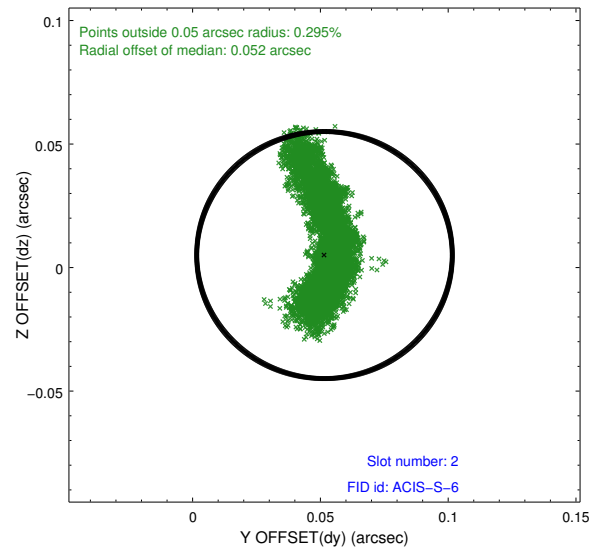
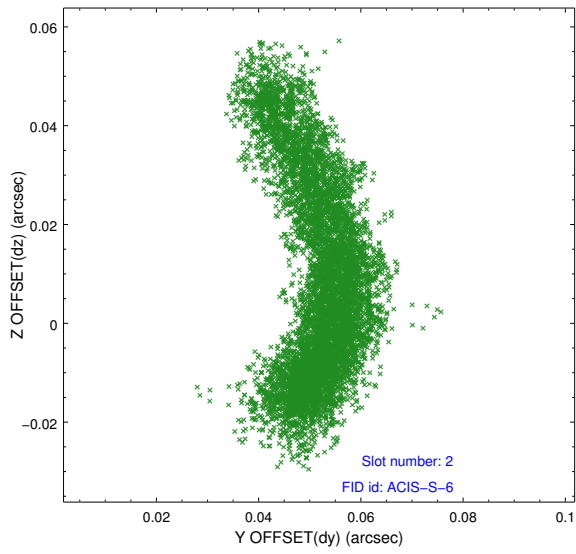
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2012.05.31 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 29.1786006 |

A.2 Comments