

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13466 - L2 Version 2
Chandra X-Ray Center

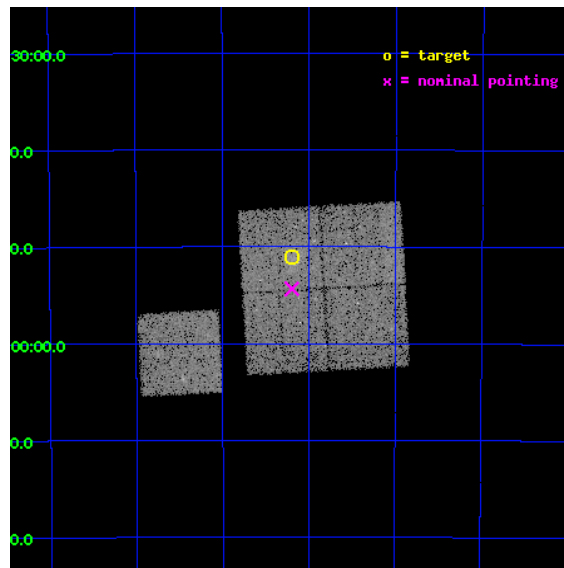
L2 Processing Date : Feb 27 2012

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

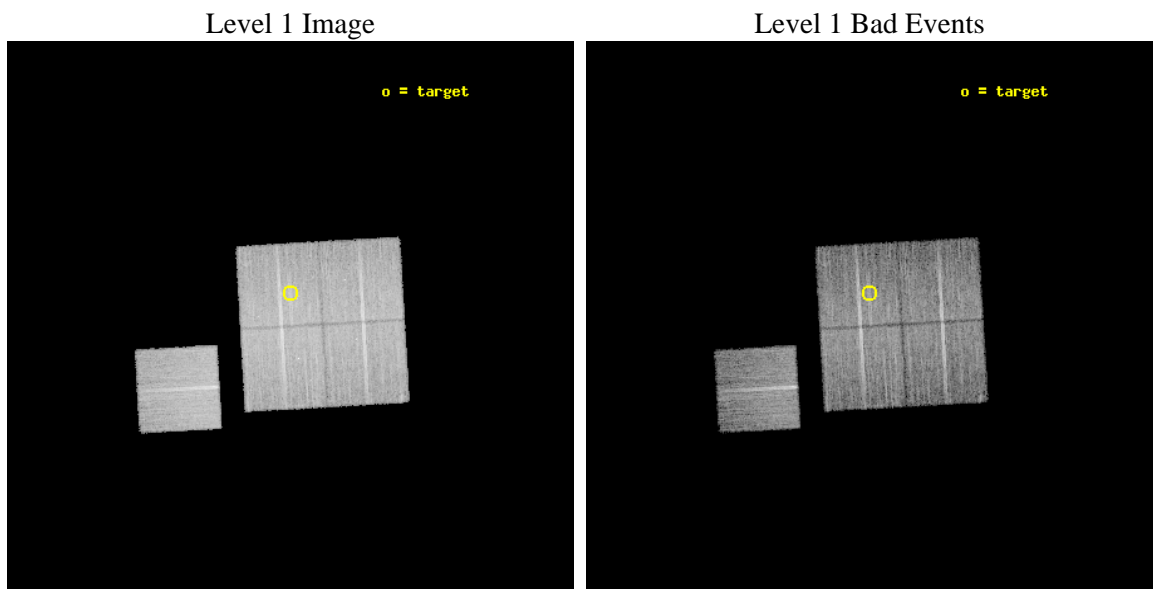
| | | |
|----------|--|---|
| seq_num | 801107 | Sequence number |
| obs_id | 13466 | Observation id |
| title | Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg^2 from the South Pole Telescope Survey | Proposal title |
| observer | Dr Bradford Benson | Principal investigator |
| object | SPT-CLJ2035-5251 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 308.800833 | Observer's specified target RA [deg] |
| dec_targ | -52.8515 | Observer's specified target Dec [deg] |
| ra_nom | 308.79938164887 | Nominal RA [deg] |
| dec_nom | -52.905921971348 | Nominal Dec [deg] |
| roll_nom | 266.7325478599 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 18856.452695012 | Sum of GTIs [s] |
| livetime | 18610.079258633 | Livetime [s] |
| ontime0 | 18846.906624198 | Sum of GTIs [s] |
| ontime1 | 18853.229644656 | Sum of GTIs [s] |
| ontime2 | 18853.270694613 | Sum of GTIs [s] |
| ontime3 | 18856.452695012 | Sum of GTIs [s] |
| ontime6 | 18856.288534999 | Sum of GTIs [s] |
| l2events | 58482 | Number of level 2 events |



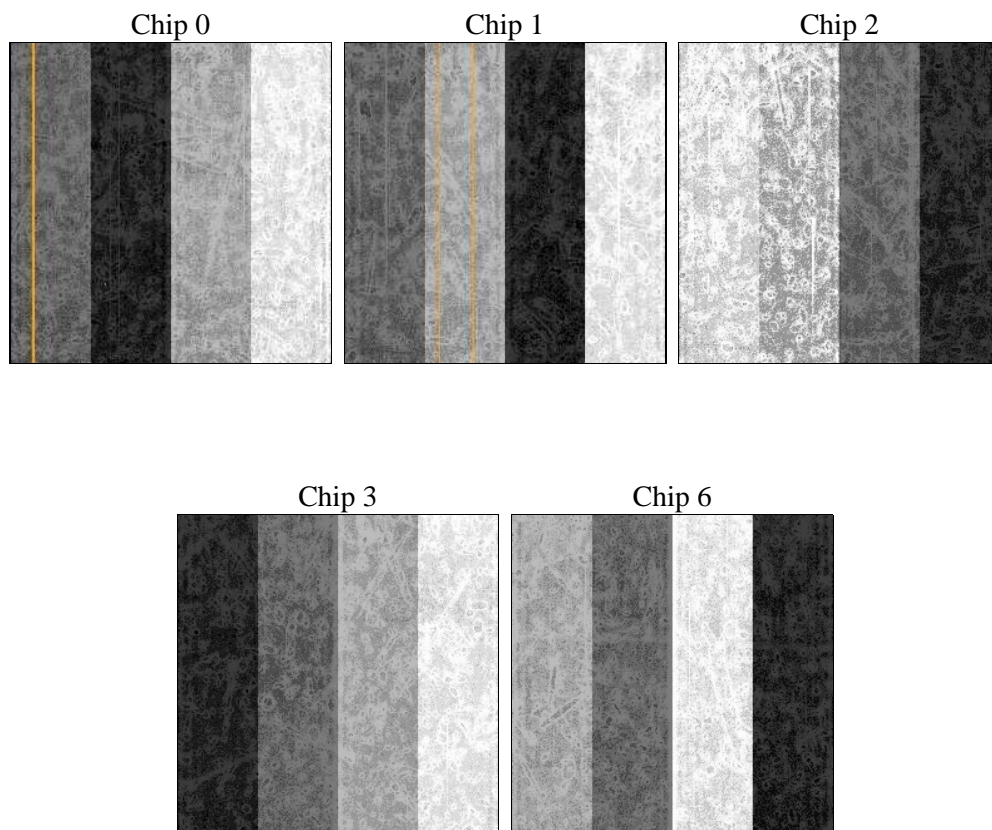
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 1 | Obi number | sched_exp_time | 18800.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.3 | Processing system revision | ontime | 18856.452695012 | Sum of GTIs [s] |
| caldsver | 4.4.8 | | ontime0 | 18846.906624198 | Sum of GTIs [s] |
| date | 2012-02-27T12:21:16 | Date and time of file creation | ontime1 | 18853.229644656 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime2 | 18853.270694613 | Sum of GTIs [s] |
| | | | ontime3 | 18856.452695012 | Sum of GTIs [s] |
| | | | ontime6 | 18856.288534999 | Sum of GTIs [s] |
| | | | l1events | 553031 | Number of level 1 events |

2.1.4 Events

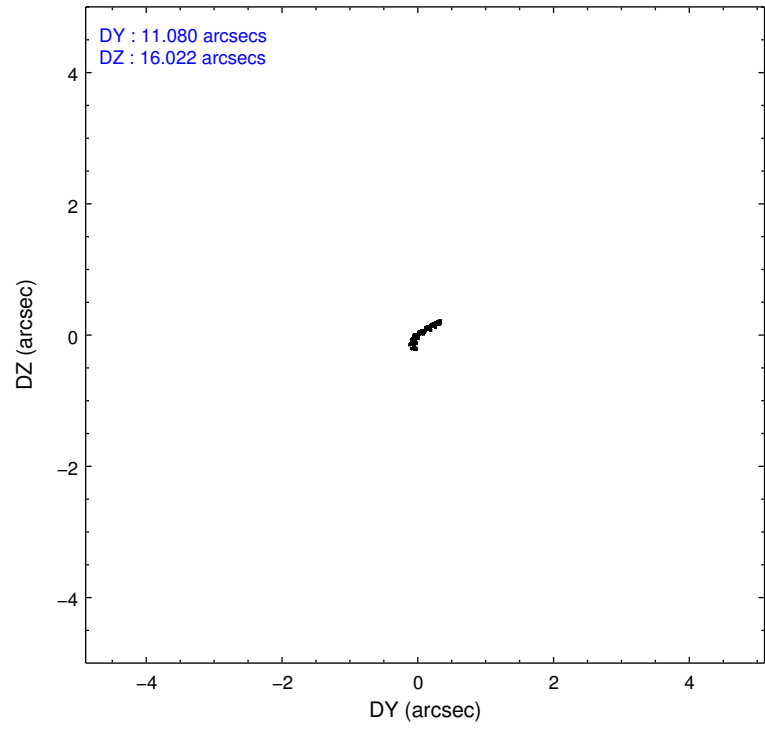
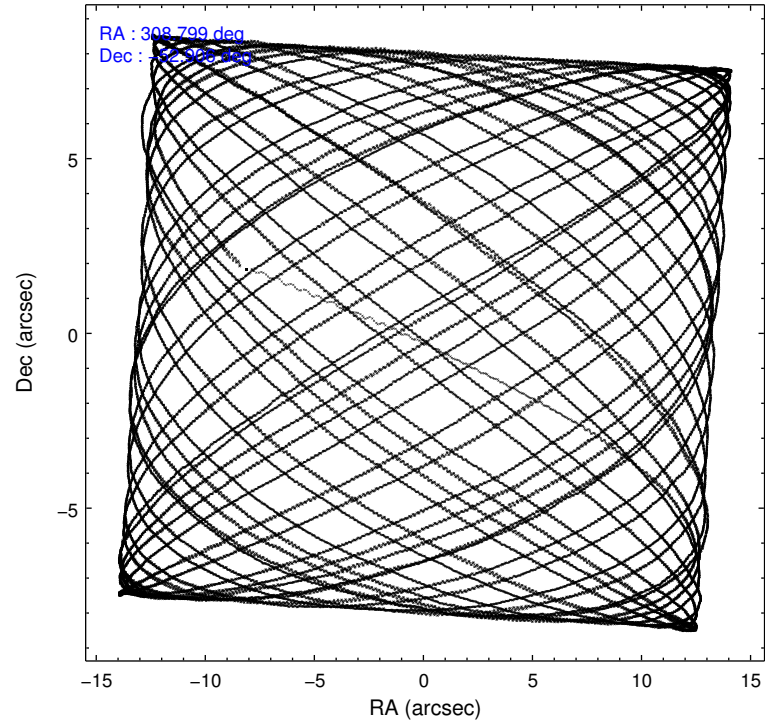
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|-----------------|--------|--------|--------|--------|--------|
| level 1 events | 102277 | 105487 | 117933 | 111191 | 116143 |
| rejected events | 89100 | 90505 | 104426 | 97389 | 102503 |
| rejected % | 87% | 85% | 88% | 87% | 88% |

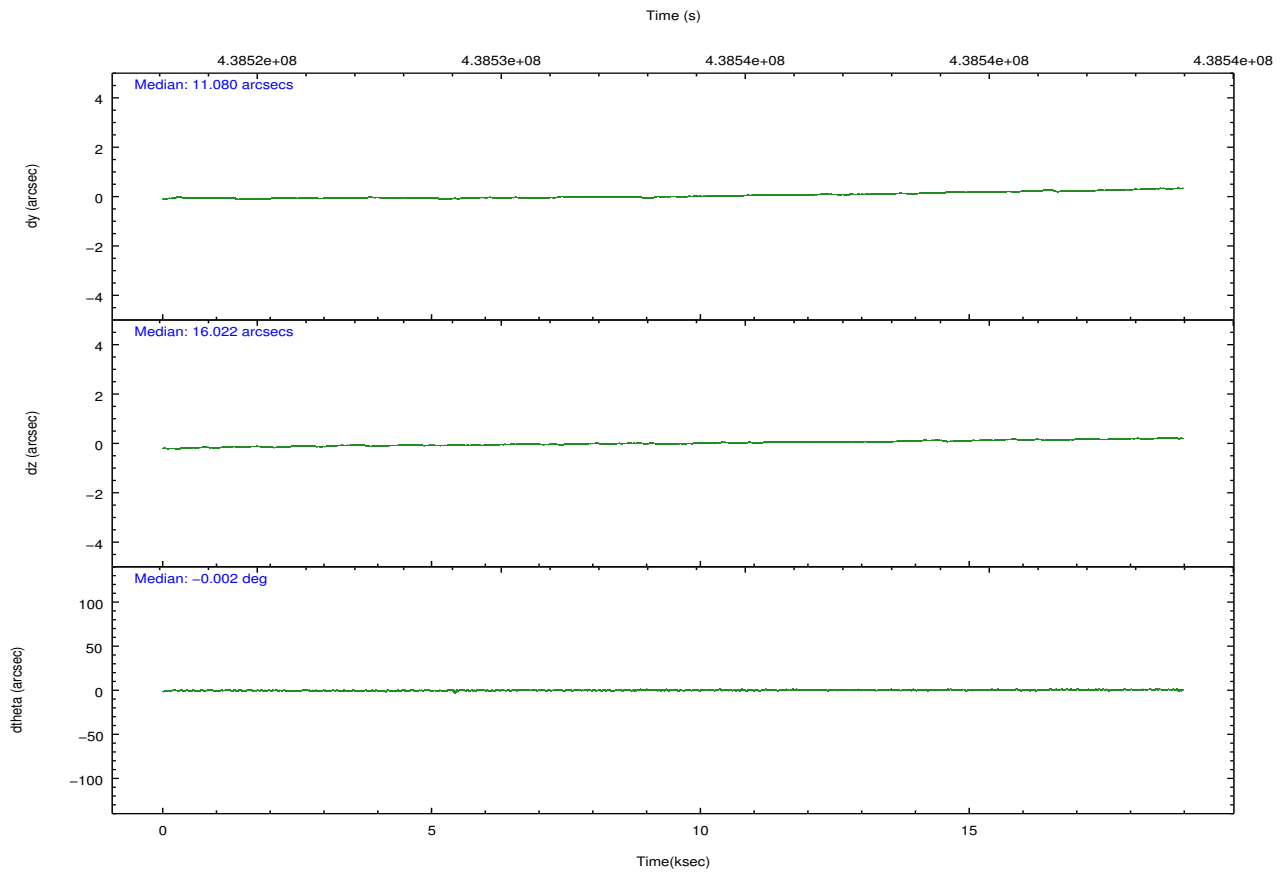
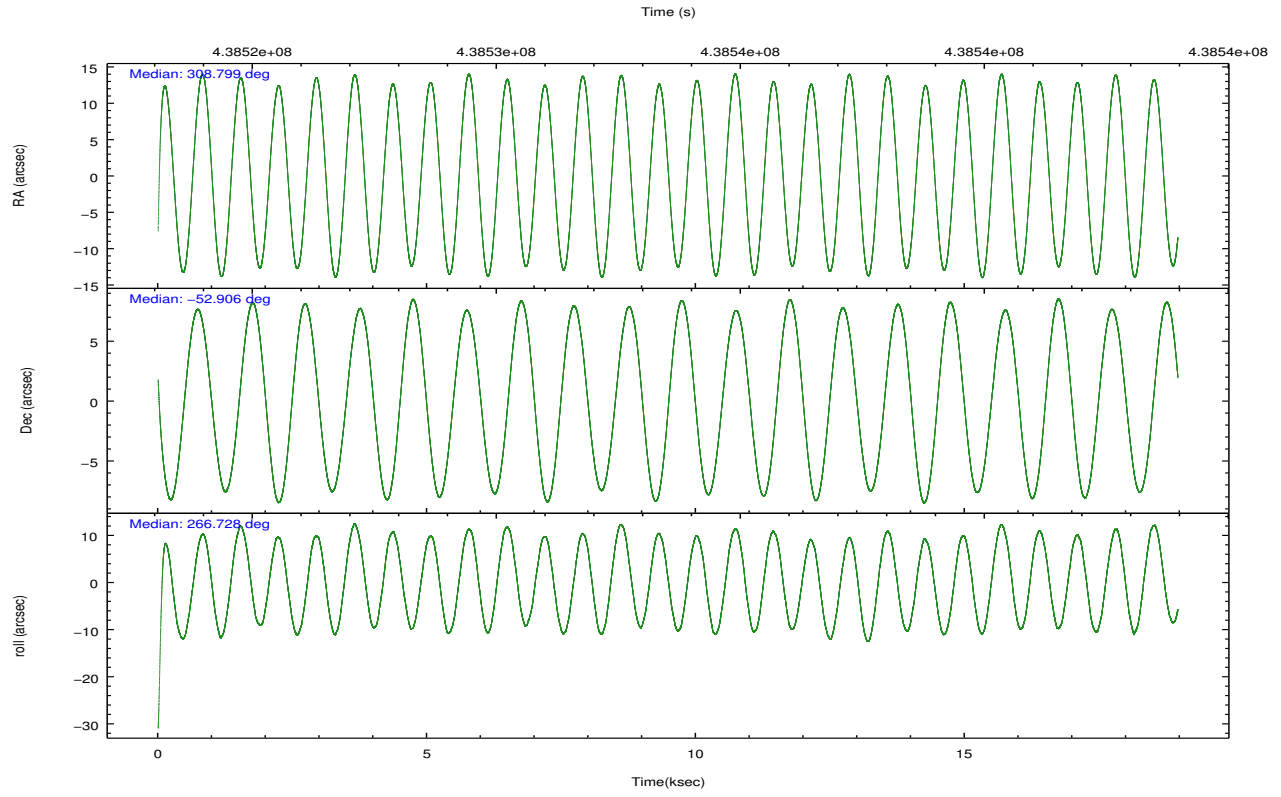
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 4603 | 5317 | 4948 | 5390 | 4828 |
| | 4% | 5% | 4% | 4% | 4% |
| grade 1 events | 74 | 48 | 82 | 73 | 61 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 3282 | 3642 | 3234 | 3007 | 2981 |
| | 3% | 3% | 2% | 2% | 2% |
| grade 3 events | 1410 | 1428 | 1368 | 1446 | 1453 |
| | 1% | 1% | 1% | 1% | 1% |
| grade 4 events | 1221 | 1499 | 1379 | 1350 | 1401 |
| | 1% | 1% | 1% | 1% | 1% |
| grade 5 events | 5003 | 5300 | 4850 | 5605 | 5519 |
| | 4% | 5% | 4% | 5% | 4% |
| grade 6 events | 2668 | 3100 | 2587 | 2612 | 2982 |
| | 2% | 2% | 2% | 2% | 2% |
| grade 7 events | 84016 | 85153 | 99485 | 91708 | 96918 |
| | 82% | 80% | 84% | 82% | 83% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-01236 | ACIS-01236 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | CCD I0 on | Y | Y |
| Observation mode | POINTING | POINTING | CCD I1 on | Y | Y |
| [deg] Pointing RA | 308.778727 | 308.7993816488697 | CCD I2 on | Y | Y |
| [deg] Pointing Dec | -52.881414 | -52.90592197134836 | CCD I3 on | Y | Y |
| [deg] Pointing Roll | 266.507411 | 266.7325478599032 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.782348 | -0.7809083437167272 | CCD S1 on | N | N |
| [mm] SIM defocus | 0 | 0.001439871863259334 | CCD S2 on | O1 | Y |
| [mm] SIM translation stage pos | -225.842463 | -225.8433433320239 | CCD S3 on | N | N |
| [mm] SIM translation stage offset | -7.75 | -7.749109670905796 | CCD S4 on | N | N |
| [s] Observation start time (MET) | 438524207.184000 | 438523131.56236 | CCD S5 on | N | N |
| Observation start date | 2011-11-24T12:15:41 | 2011-11-24T11:58:51 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 438543007.184000 | 438544080.00097 | On-chip summing requested | N | N |
| Observation end date | 2011-11-24T17:29:01 | 2011-11-24T17:48:00 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.1 |

2.3 Aspect



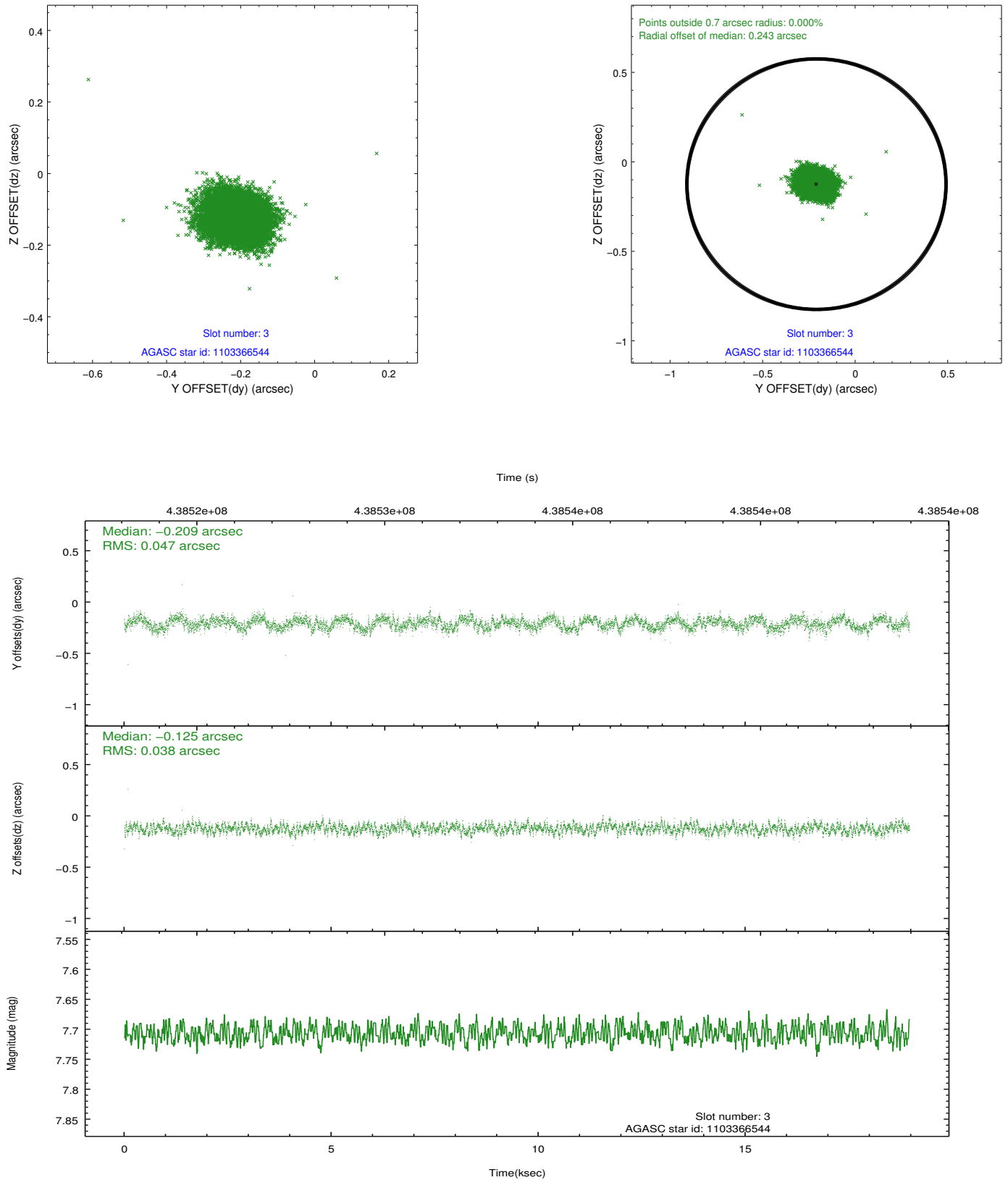


Slot Statistics

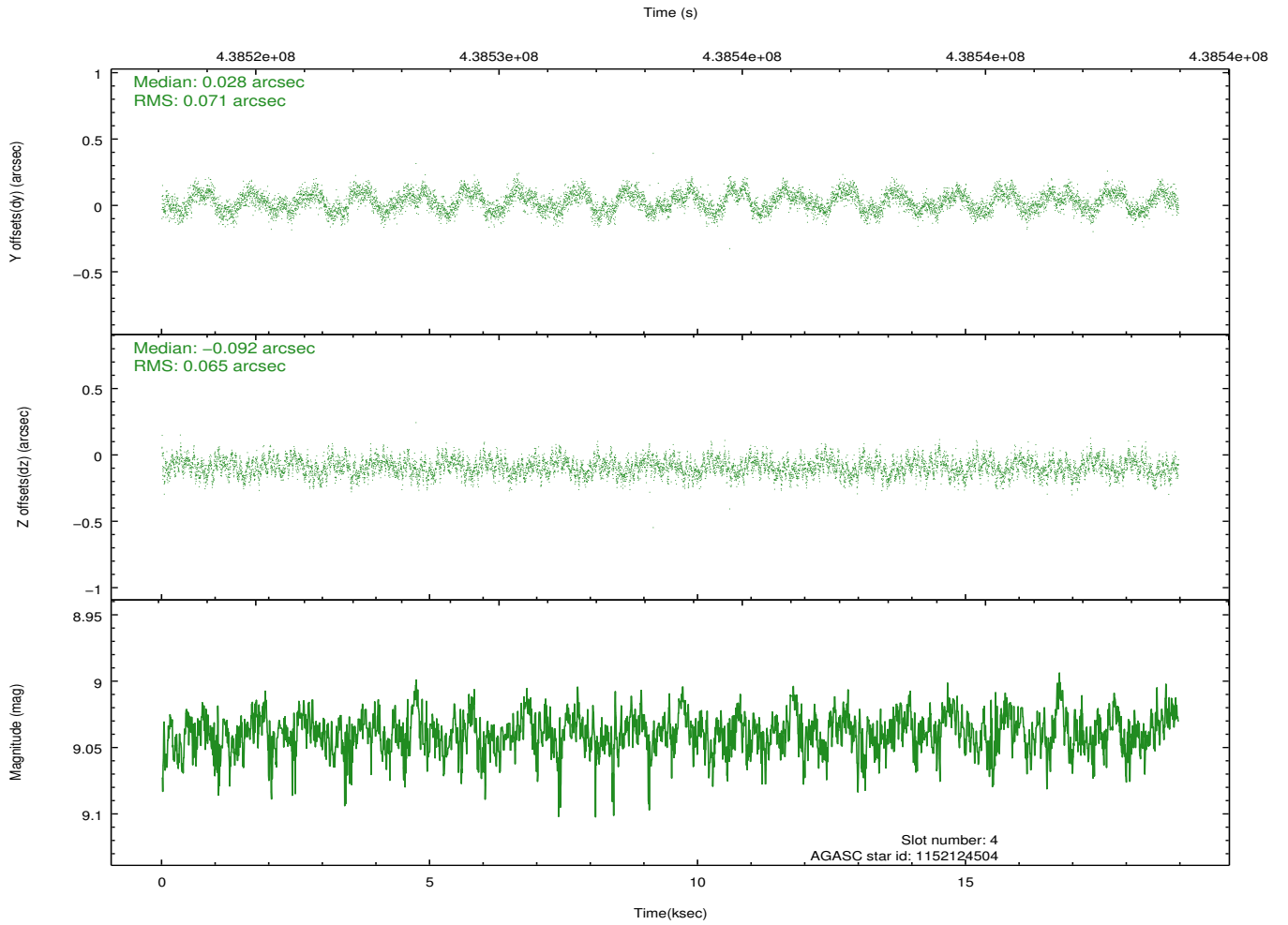
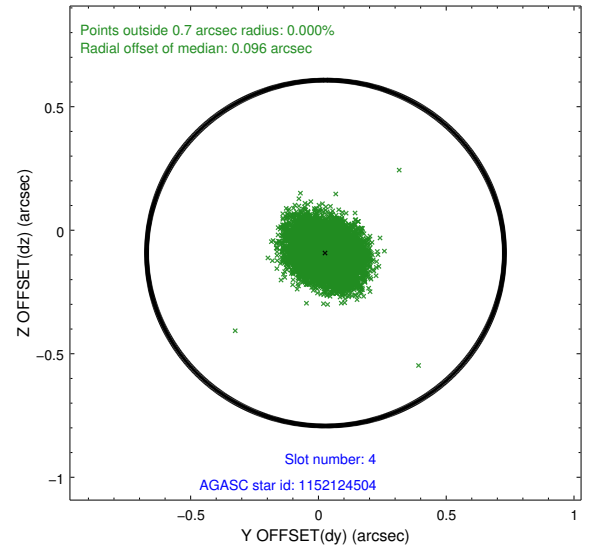
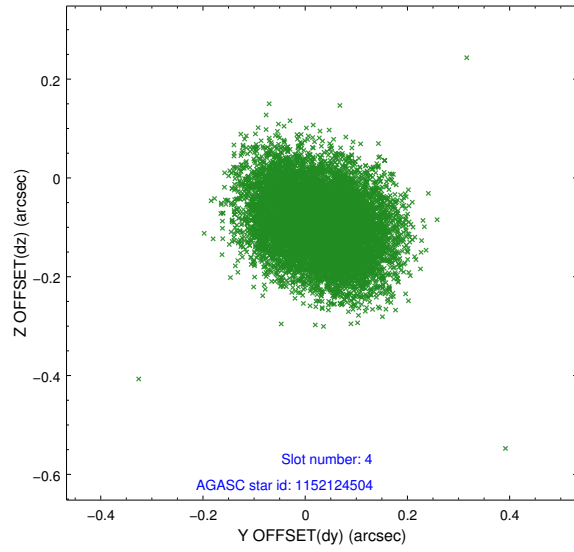
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | ACIS-I-1 | 7.01 | 4626 | 0.164 | -0.144 | 0.007 | 0.012 | 0.000000 | 0.000000 | 928.45 | -998.89 |
| 1 | FID | ACIS-I-5 | 7.00 | 4625 | -0.281 | 0.134 | 0.007 | 0.011 | 0.000000 | 0.000000 | -1819.98 | 898.75 |
| 2 | FID | ACIS-I-6 | 7.03 | 4625 | 0.026 | 0.081 | 0.007 | 0.013 | 0.000000 | 0.000000 | 393.64 | 1543.43 |
| 3 | GUIDE | 1103366544 | 7.71 | 9252 | -0.209 | -0.125 | 0.065 | 0.100 | 308.844129 | -52.492777 | -1404.80 | 57.81 |
| 4 | GUIDE | 1152124504 | 9.04 | 9249 | 0.028 | -0.092 | 0.105 | 0.161 | 309.335624 | -53.062766 | 583.08 | 1242.65 |
| 5 | GUIDE | 1152125424 | 8.49 | 9250 | 0.019 | 0.225 | 0.057 | 0.094 | 309.473950 | -52.739272 | -595.43 | 1482.16 |
| 6 | GUIDE | 1152127968 | 7.39 | 9253 | -0.057 | -0.029 | 0.053 | 0.088 | 307.702548 | -52.808052 | -102.83 | -2352.05 |
| 7 | GUIDE | 1152136904 | 8.04 | 9251 | 0.224 | 0.022 | 0.066 | 0.110 | 308.414156 | -53.497865 | 2265.89 | -643.12 |

2.4 Star Slots

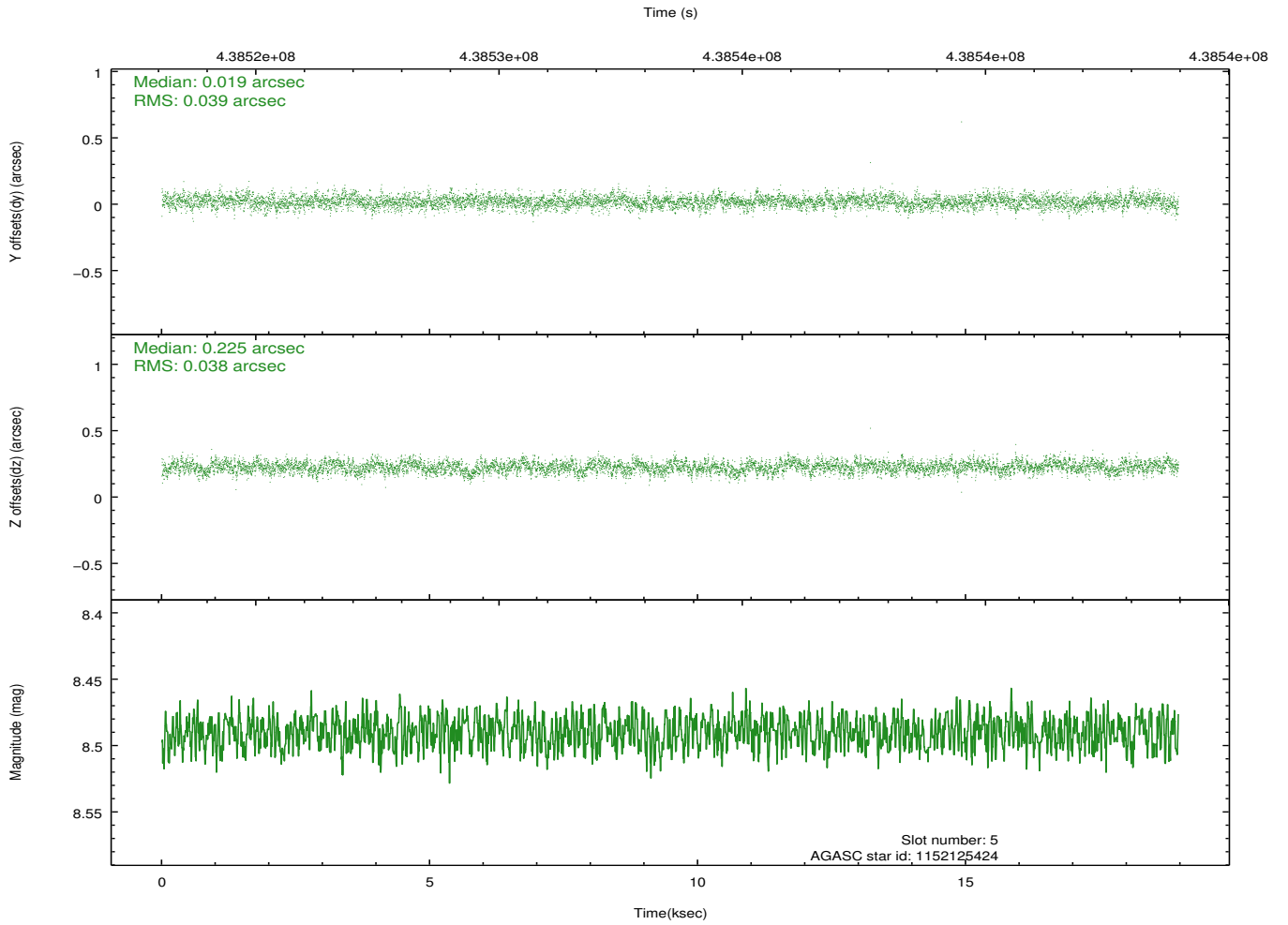
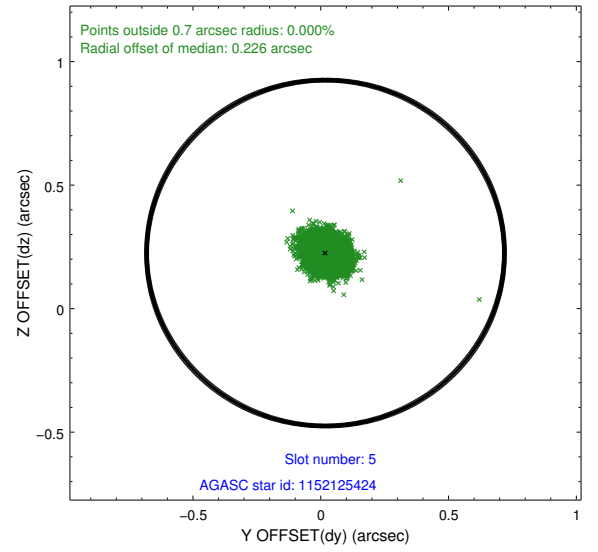
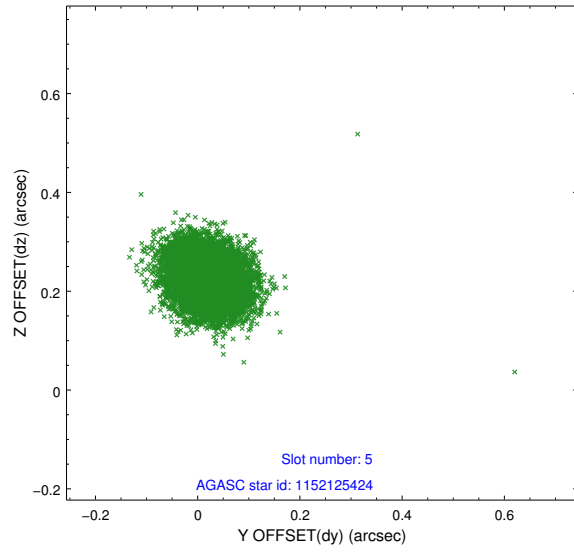
2.4.1 Slot 3



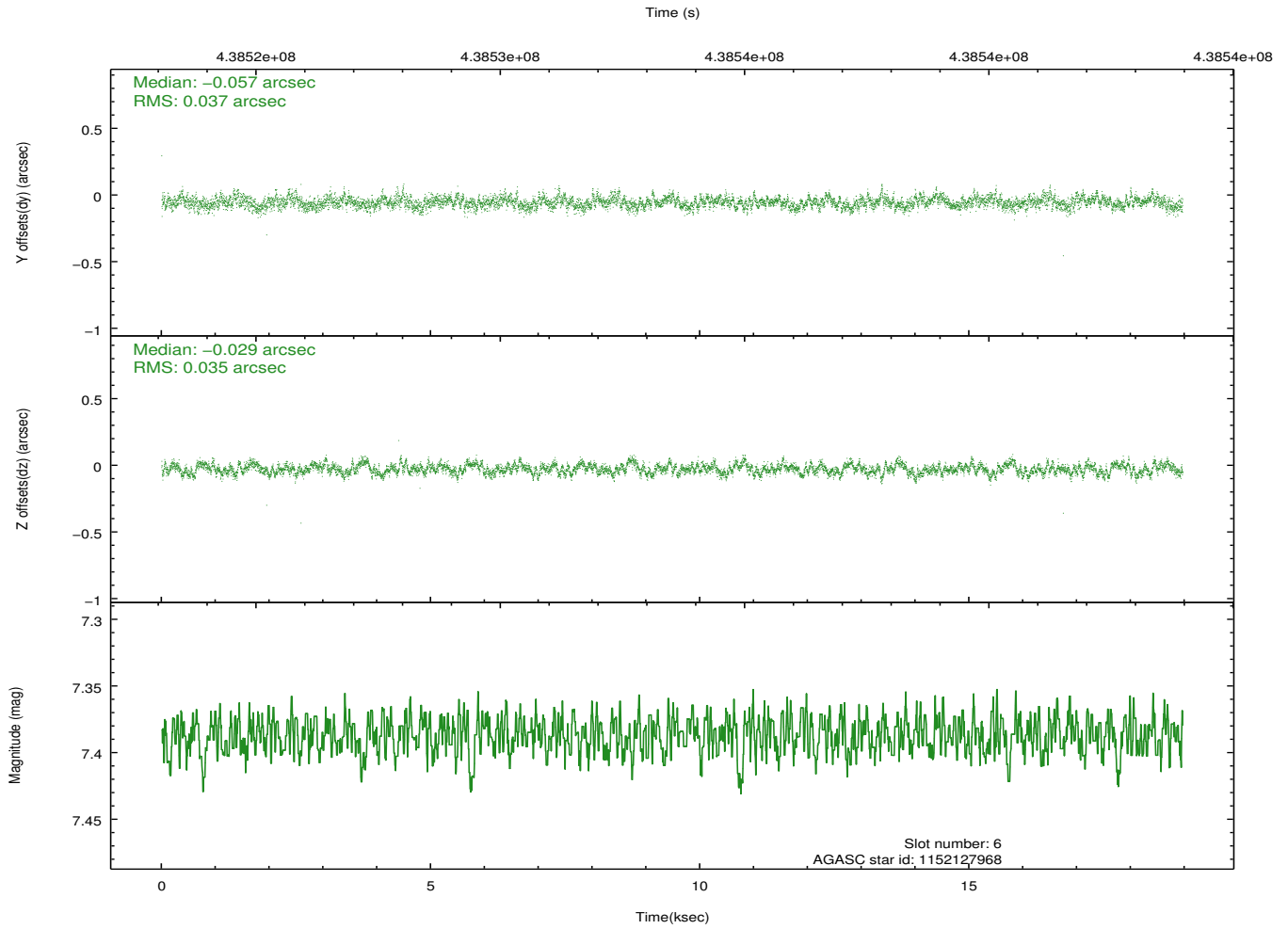
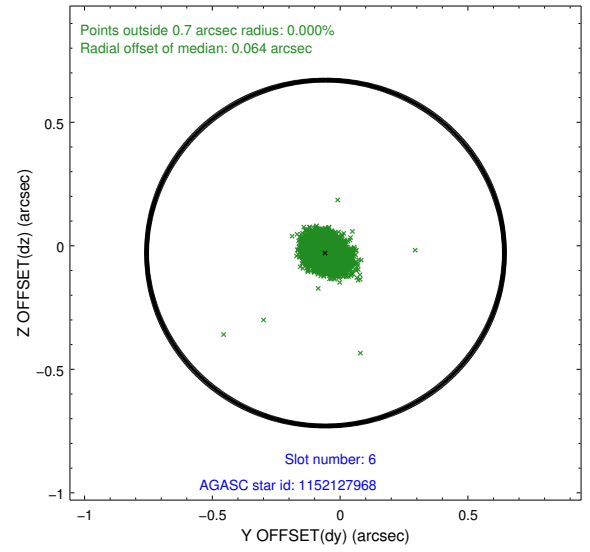
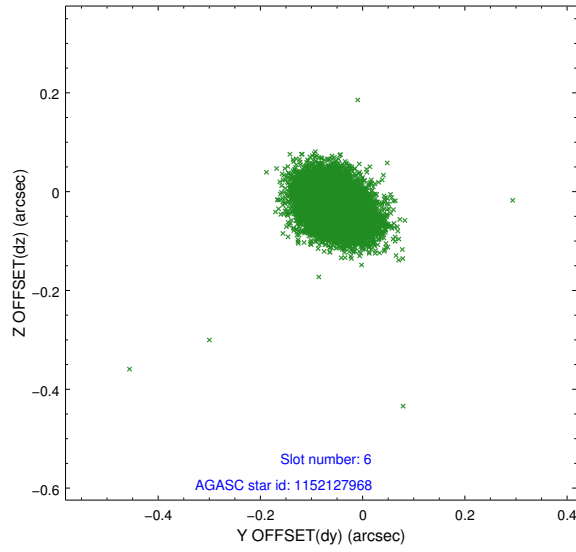
2.4.2 Slot 4



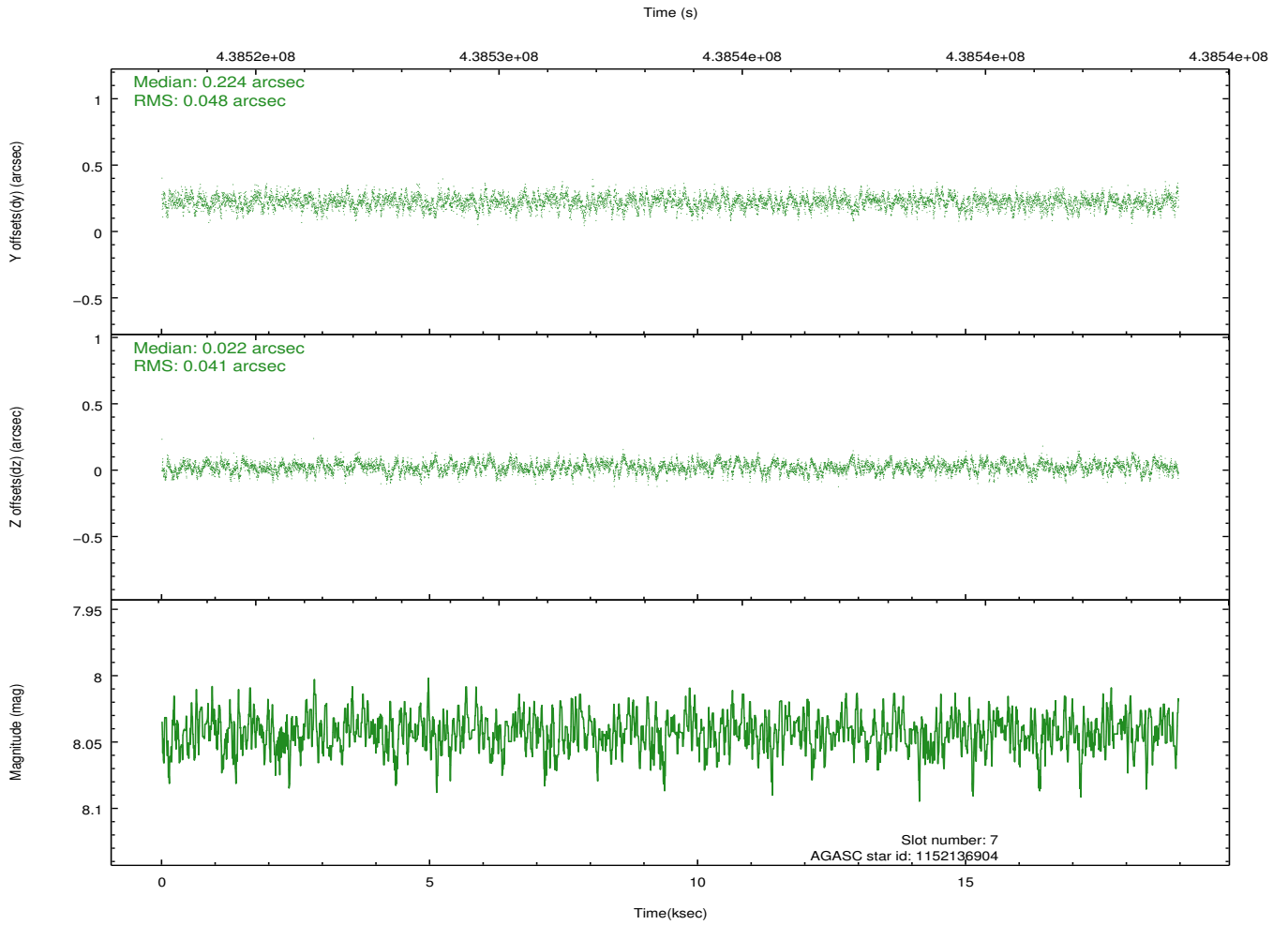
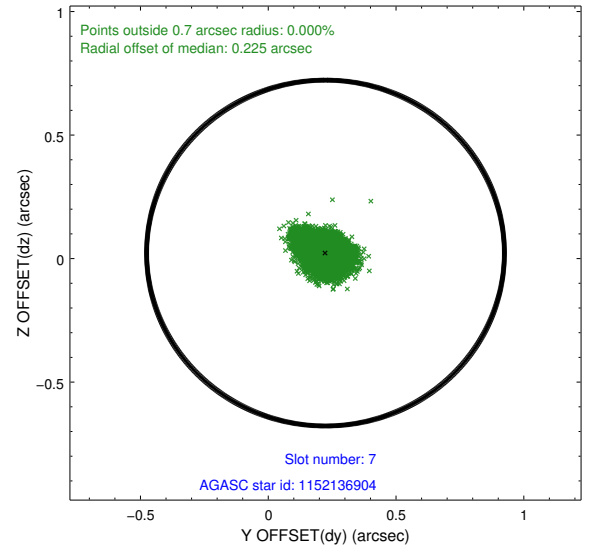
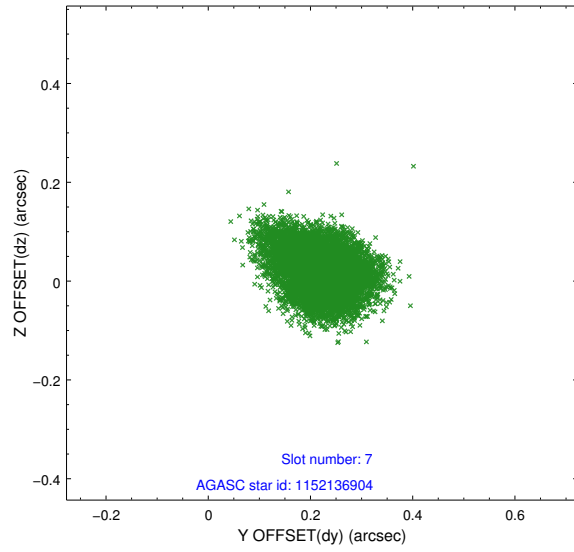
2.4.3 Slot 5



2.4.4 Slot 6

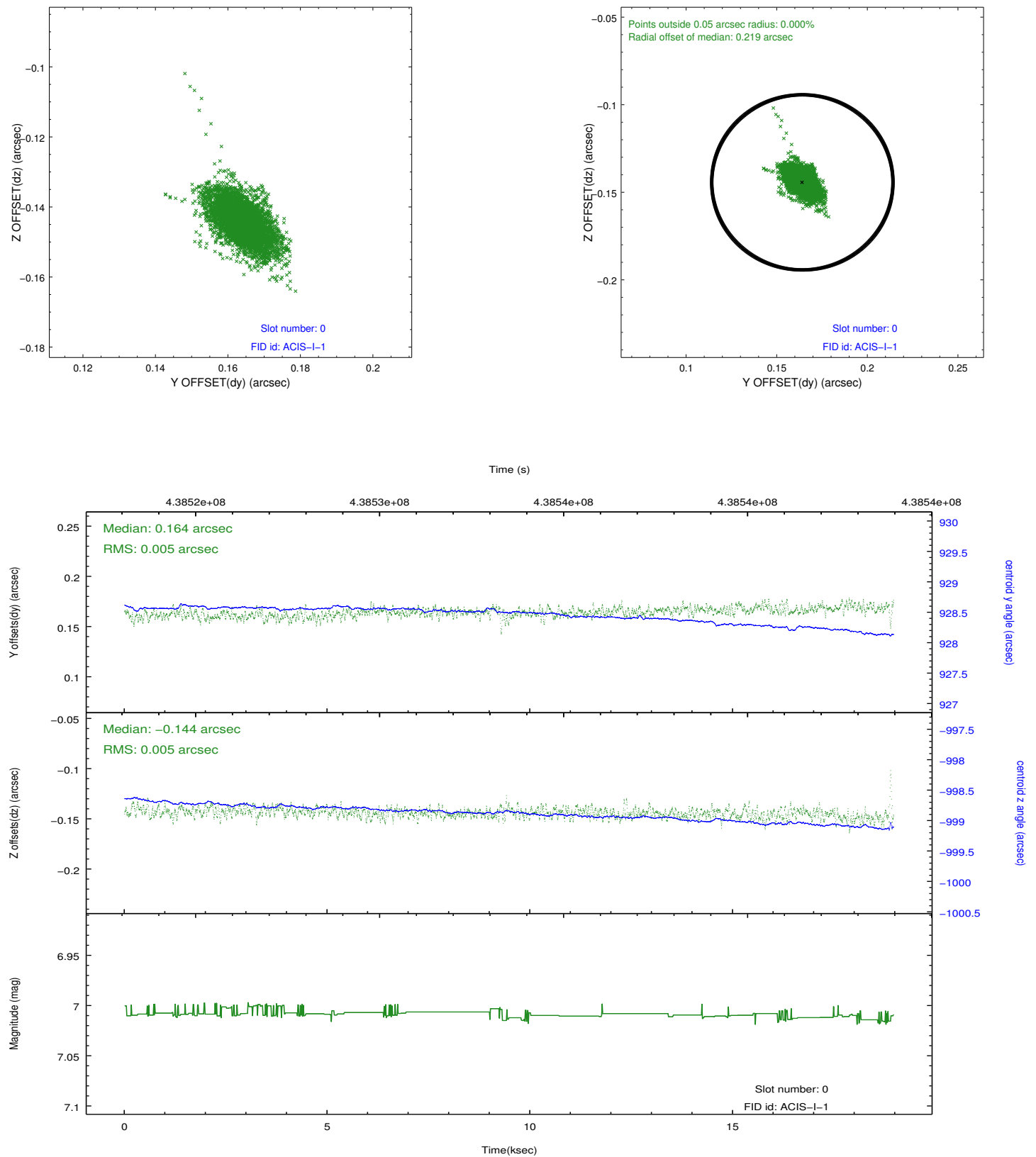


2.4.5 Slot 7

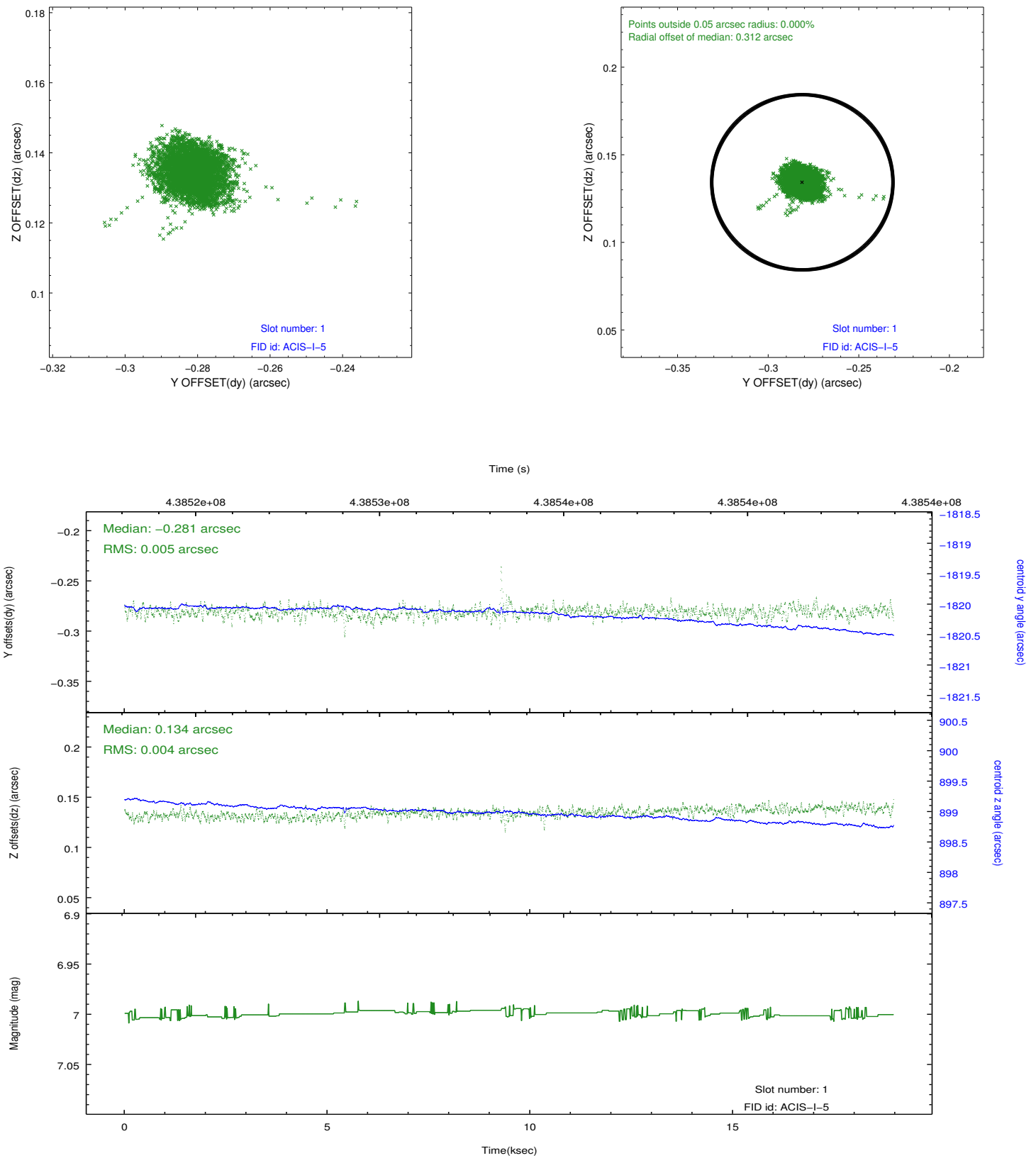


2.5 FID Slots

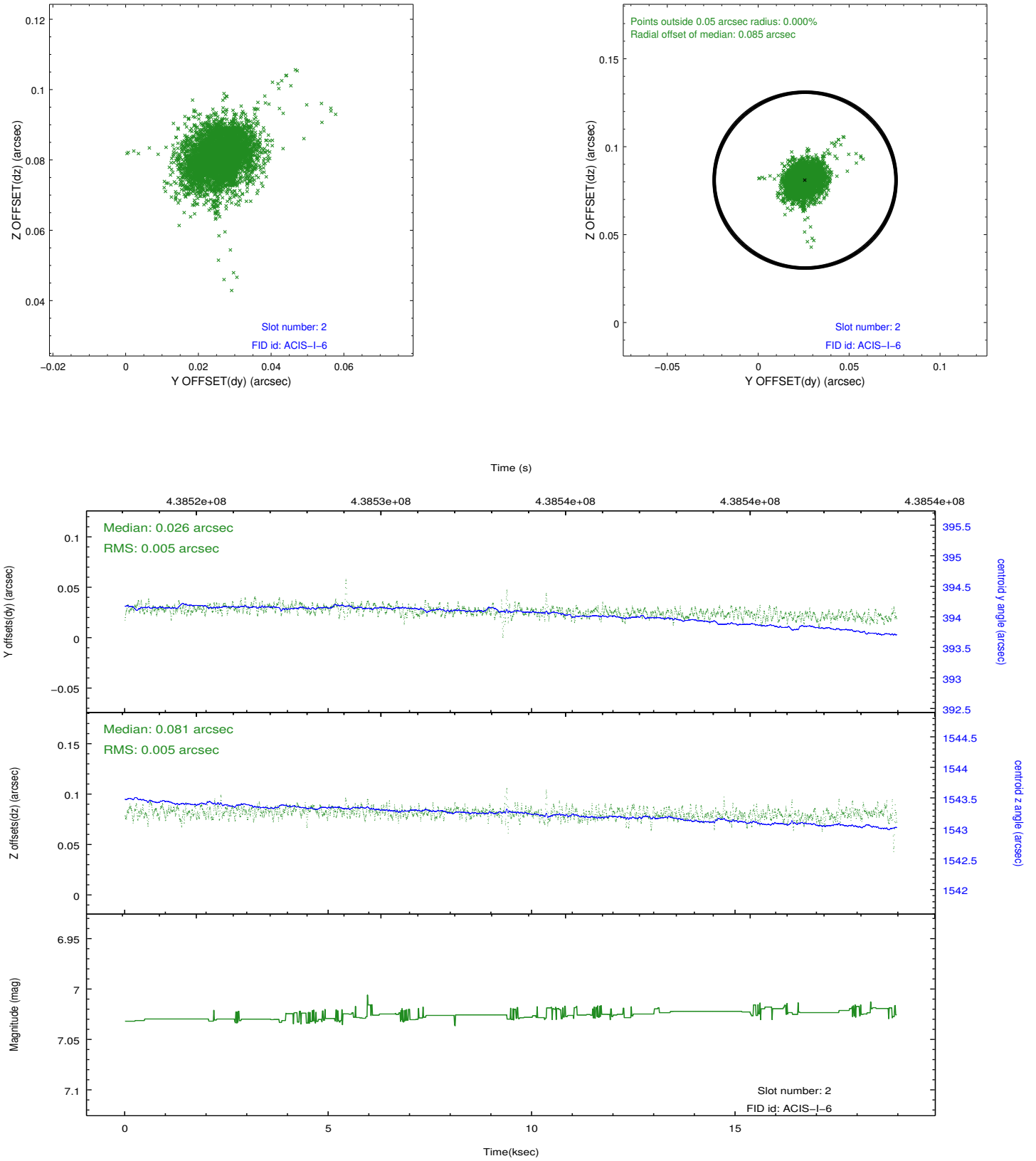
2.5.1 Slot 0



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) | 2012.02.29 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 18.856452698529 |

A.2 Comments