

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2846 - L2 Version 3
Chandra X-Ray Center

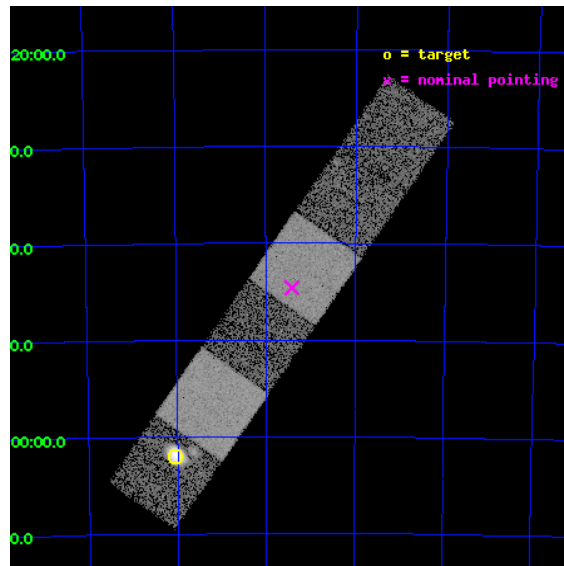
L2 Processing Date : Sep 28 2012

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

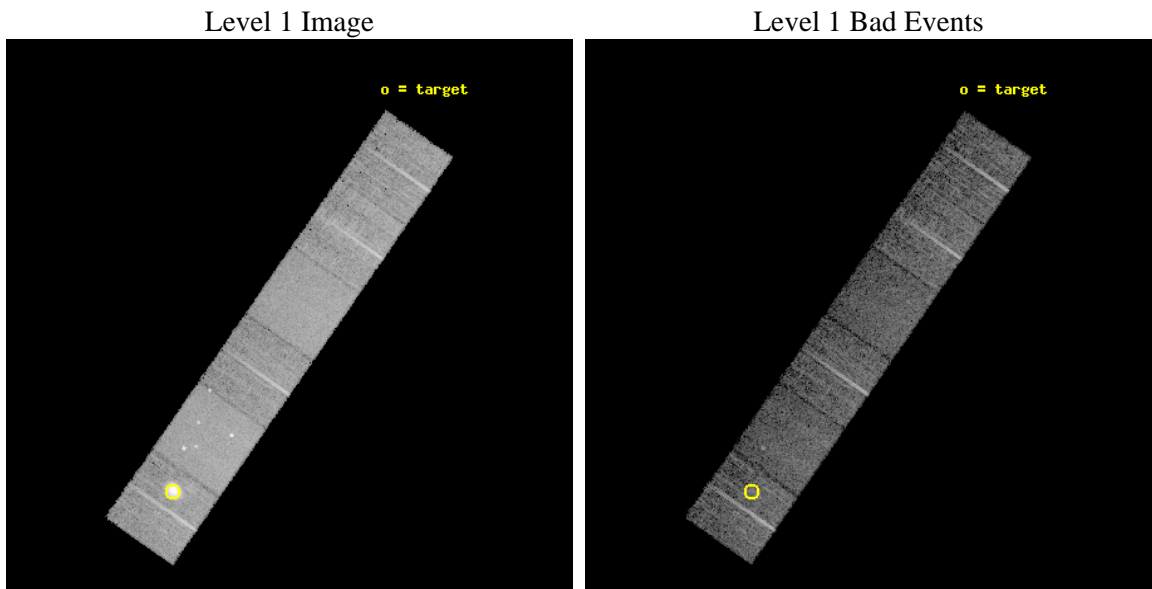
| | | |
|----------|---|---|
| seq_num | 590235 | Sequence number |
| obs_id | 2846 | Observation id |
| title | AO3A ACIS-S CALIBRATION OBSERVATIONS OF E0102-72 | Proposal title |
| observer | Dr. CXC Calibration | Principal investigator |
| object | E0102-72.3 [Chip S0, T=120, Offsets=21,0,0] | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 16.01 | Observer's specified target RA [deg] |
| dec_targ | -72.032028 | Observer's specified target Dec [deg] |
| ra_nom | 15.35424871069 | Nominal RA [deg] |
| dec_nom | -71.743526015254 | Nominal Dec [deg] |
| roll_nom | 304.81307290092 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 7948.800007388 | Sum of GTIs [s] |
| livetime | 7848.1475155017 | Livetime [s] |
| ontime4 | 7948.800007388 | Sum of GTIs [s] |
| ontime5 | 7948.800007388 | Sum of GTIs [s] |
| ontime6 | 7948.800007388 | Sum of GTIs [s] |
| ontime7 | 7948.800007388 | Sum of GTIs [s] |
| ontime8 | 7948.800007388 | Sum of GTIs [s] |
| ontime9 | 7948.800007388 | Sum of GTIs [s] |
| l2events | 97352 | Number of level 2 events |



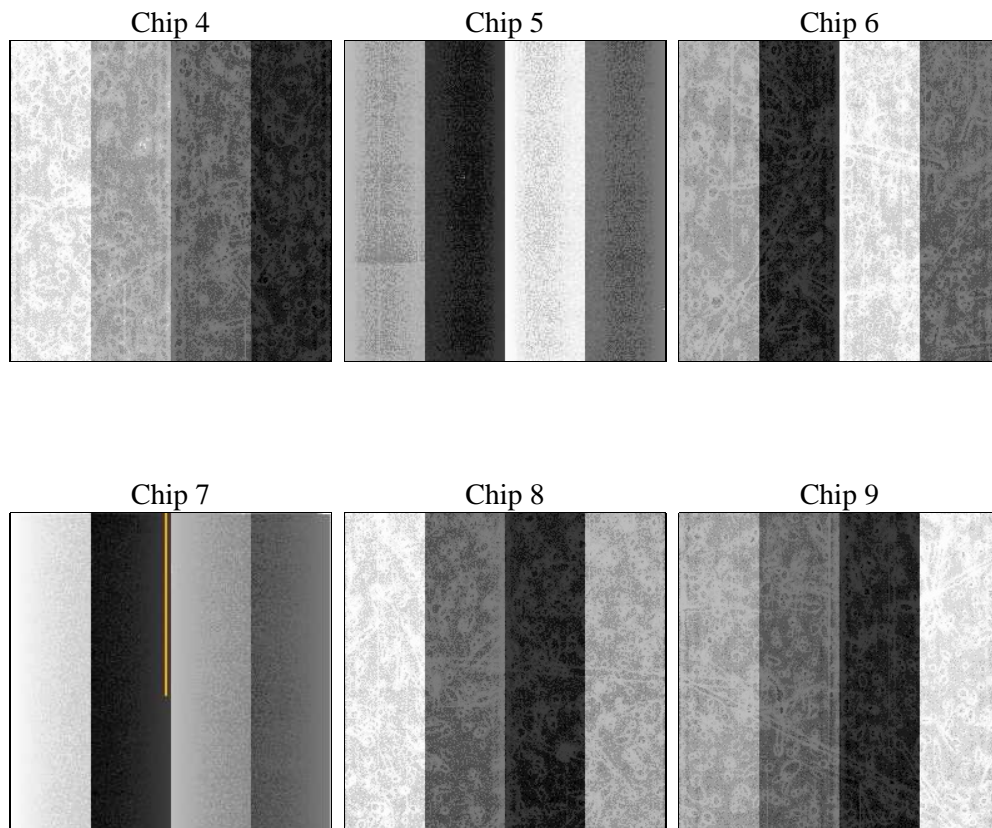
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|----------------|---|
| obi_num | 1 | Obi number | sched_exp_time | 7800.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 7948.800007388 | Sum of GTIs [s] |
| caldsver | 4.5.2 | | ontime4 | 7948.800007388 | Sum of GTIs [s] |
| date | 2012-09-28T22:18:11 | Date and time of file creation | ontime5 | 7948.800007388 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime6 | 7948.800007388 | Sum of GTIs [s] |
| | | | ontime7 | 7948.800007388 | Sum of GTIs [s] |
| | | | ontime8 | 7948.800007388 | Sum of GTIs [s] |
| | | | ontime9 | 7948.800007388 | Sum of GTIs [s] |
| | | | l1events | 379757 | Number of level 1 events |

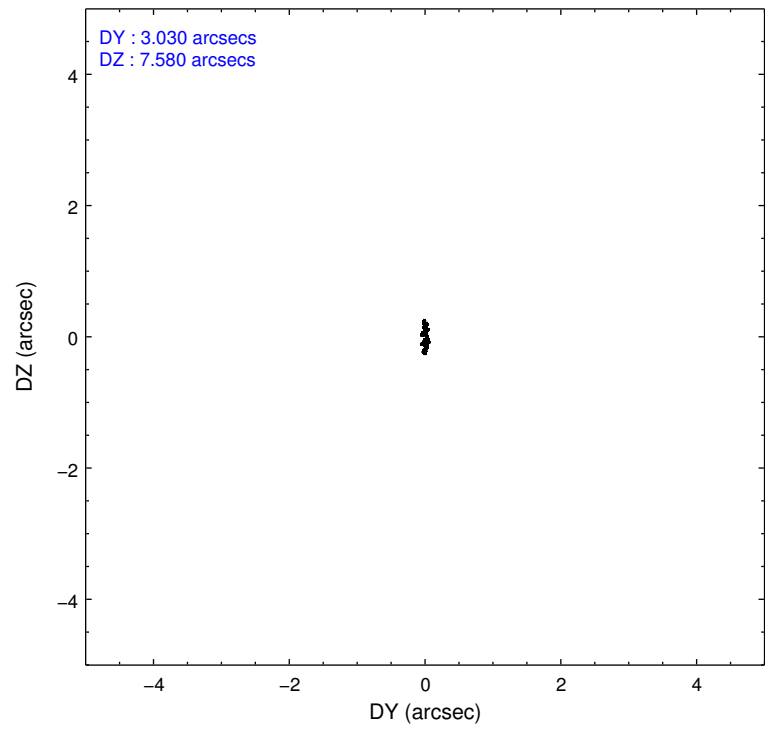
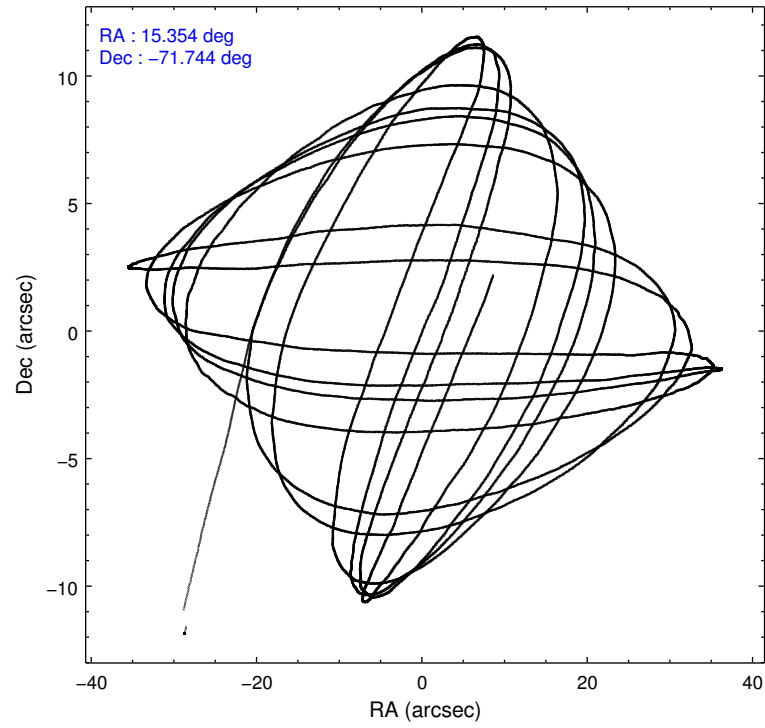
2.1.4 Events

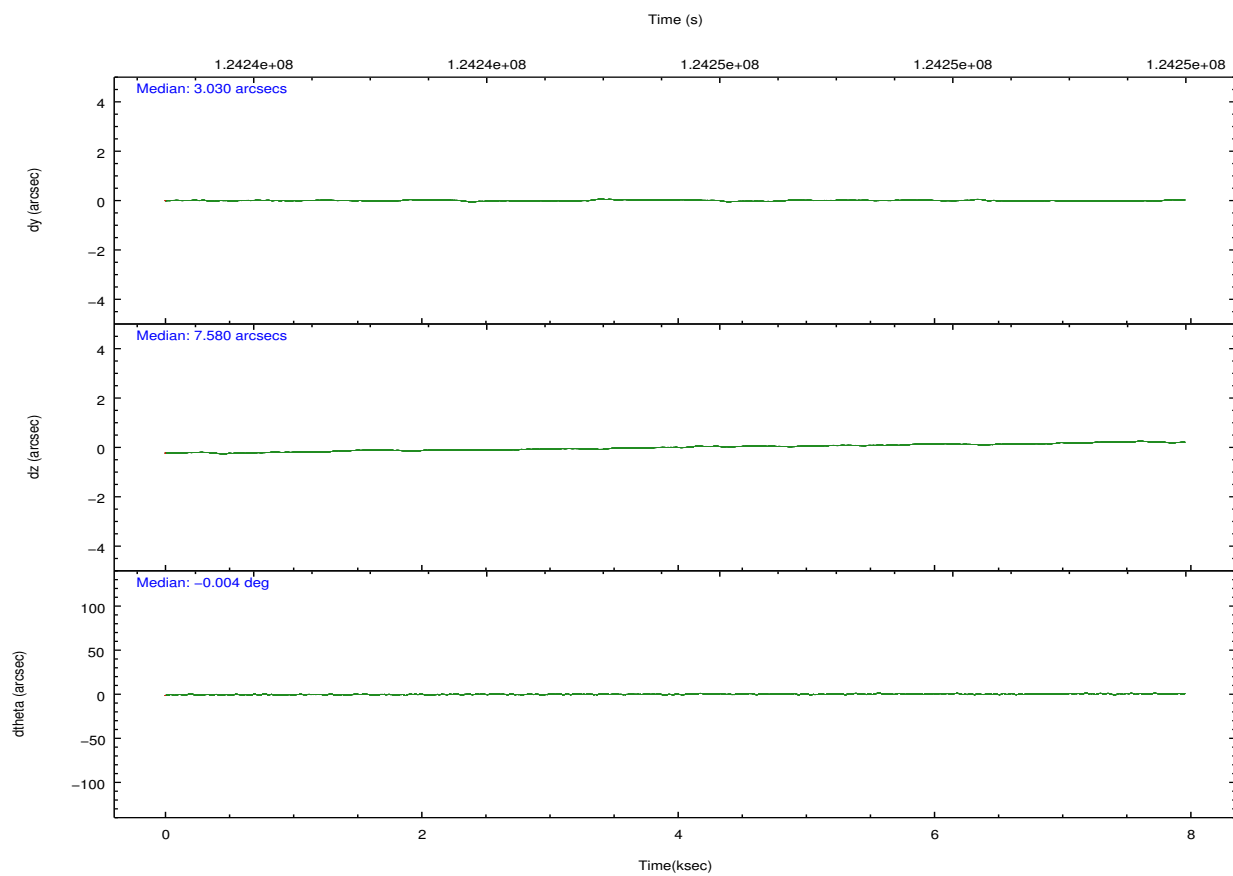
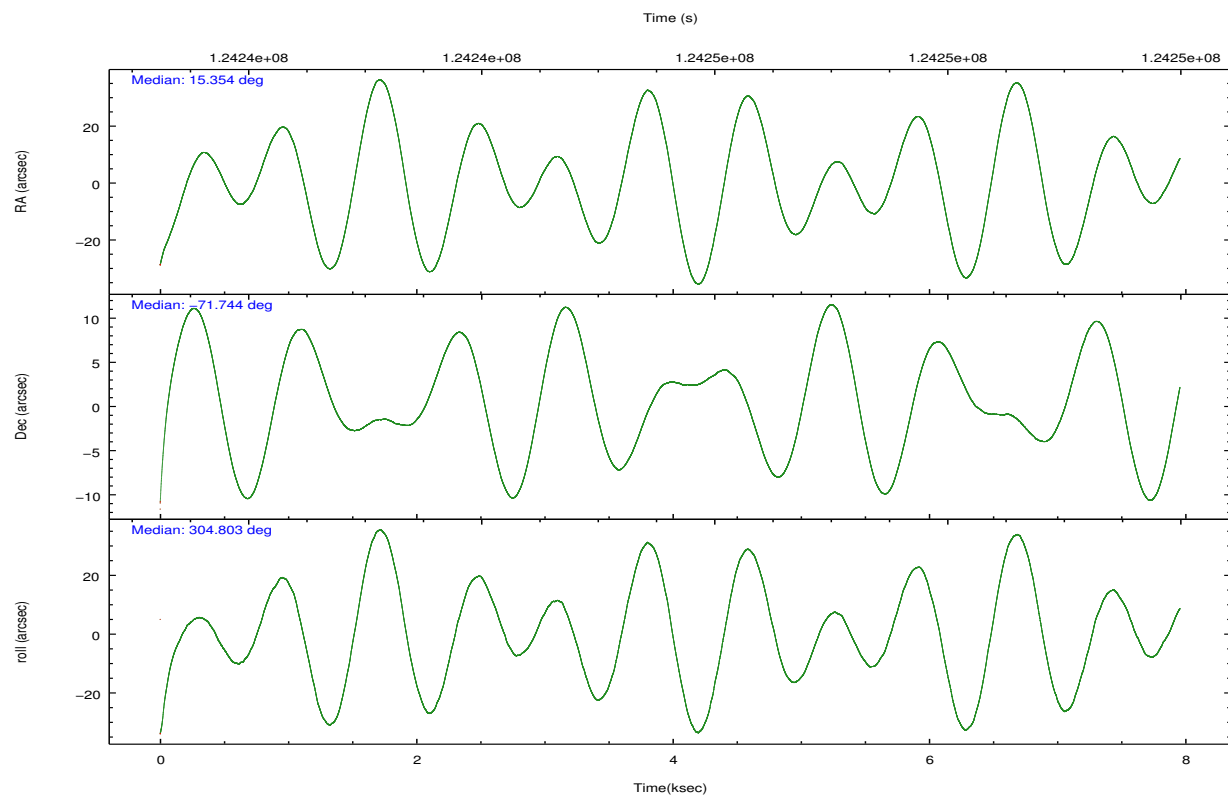
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 | | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 75465 | 74597 | 51213 | 65687 | 62926 | 49869 | grade 0 events | 21205 | 5599 | 2505 | 2750 | 4283 | 2475 |
| rejected events | 48841 | 40016 | 45285 | 38495 | 50029 | 43801 | | 28% | 7% | 4% | 4% | 6% | 4% |
| rejected % | 64% | 53% | 88% | 58% | 79% | 87% | grade 1 events | 105 | 249 | 29 | 63 | 40 | 20 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 2923 | 9540 | 1219 | 5480 | 2714 | 1297 |
| | | | | | | | | 3% | 12% | 2% | 8% | 4% | 2% |
| | | | | | | | grade 3 events | 883 | 1394 | 609 | 2496 | 1507 | 613 |
| | | | | | | | | 1% | 1% | 1% | 3% | 2% | 1% |
| | | | | | | | grade 4 events | 877 | 1291 | 563 | 2420 | 1415 | 557 |
| | | | | | | | | 1% | 1% | 1% | 3% | 2% | 1% |
| | | | | | | | grade 5 events | 1884 | 5336 | 2174 | 6217 | 2776 | 2182 |
| | | | | | | | | 2% | 7% | 4% | 9% | 4% | 4% |
| | | | | | | | grade 6 events | 1165 | 17267 | 1108 | 14426 | 3207 | 1228 |
| | | | | | | | | 1% | 23% | 2% | 21% | 5% | 2% |
| | | | | | | | grade 7 events | 46423 | 33921 | 43006 | 31835 | 46984 | 41497 |
| | | | | | | | | 61% | 45% | 83% | 48% | 74% | 83% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 15.275158 | 15.35424871069006 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -71.732198 | -71.74352601525392 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 304.581368 | 304.8130729009191 | [s] Primary exposure time | 0.000000 | 3.2 |
| [s] Window start time (MET) | 123552064.184000 | 123552064.184000 | | | |
| [s] Window stop time (MET) | 126144064.184000 | 126144064.184000 | | | |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | | | |
| [mm] SIM defocus | 0 | 0.001444936568705701 | | | |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 | | | |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 | | | |
| [s] Observation start time (MET) | 124241794.184000 | 124240677.75709 | | | |
| Observation start date | 2001-12-08T23:35:30 | 2001-12-08T23:17:57 | | | |
| [s] Observation end time (MET) | 124249594.184000 | 124249727.99495 | | | |
| Observation end date | 2001-12-09T01:45:30 | 2001-12-09T01:48:47 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



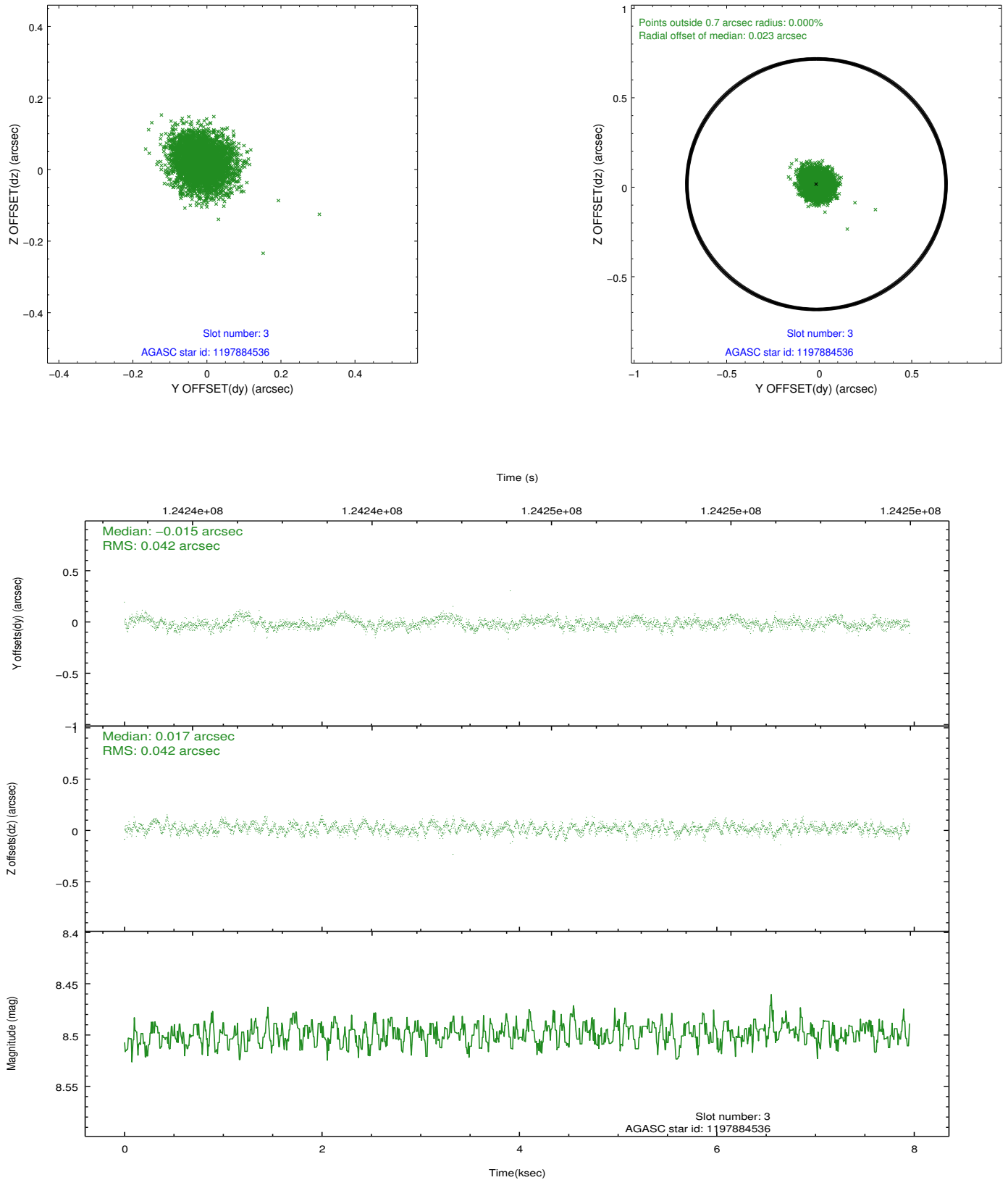


Slot Statistics

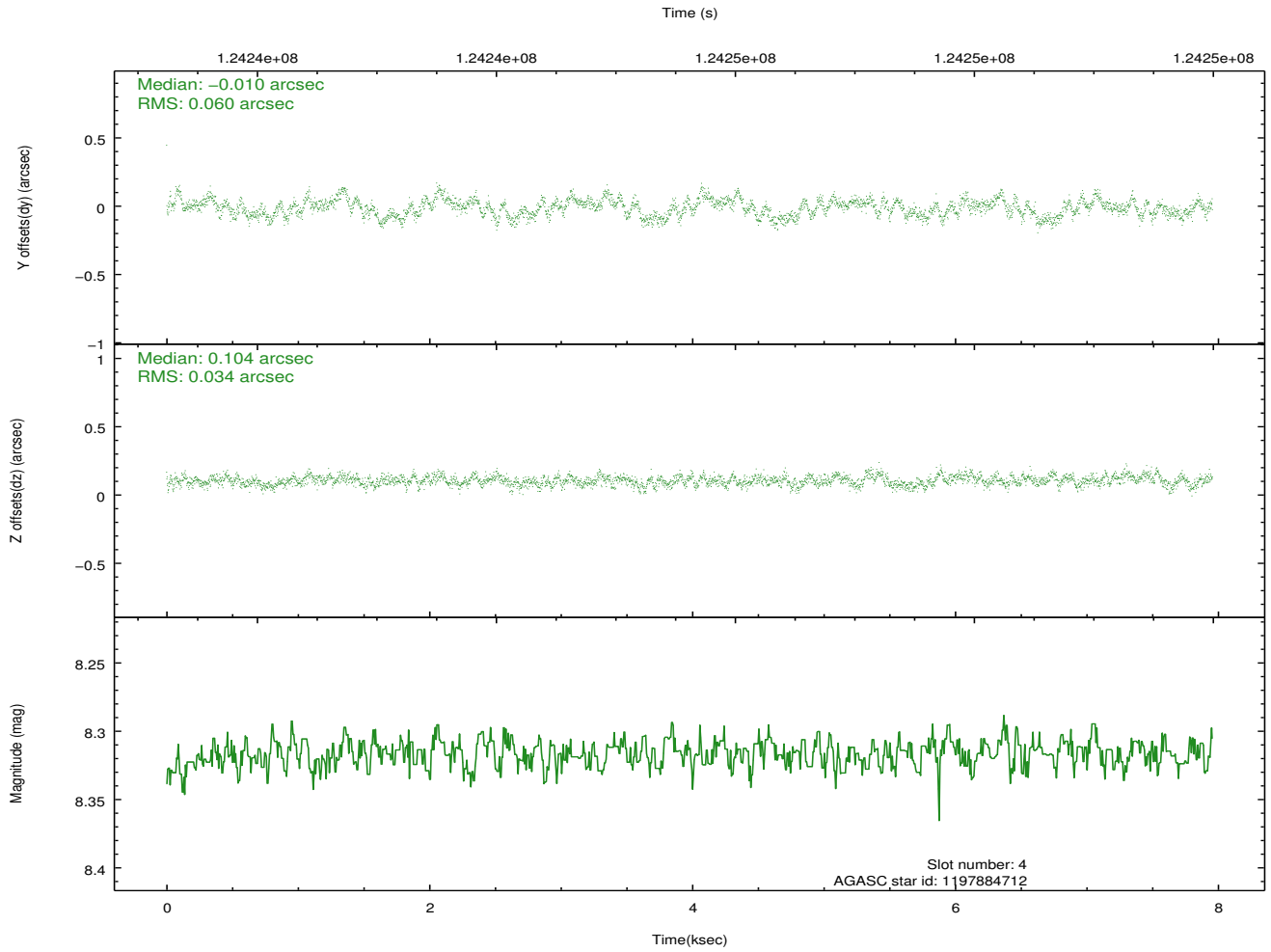
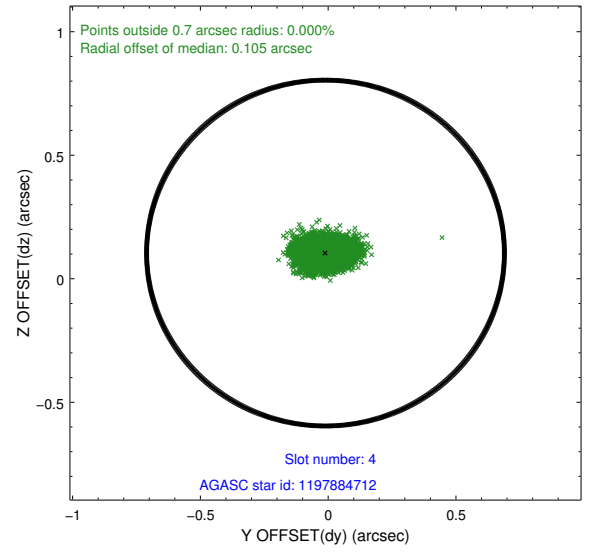
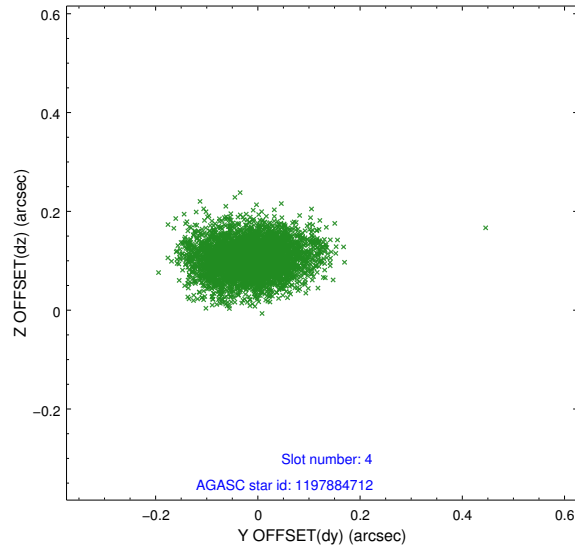
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------------|-------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.11 | 1941 | -0.005 | 0.000 | 0.007 | 0.012 | 0.000000 | 0.000000 | -755.69 | -1728.70 |
| 1 | FID | ACIS-S-4 | 7.20 | 1941 | -0.034 | 0.002 | 0.006 | 0.011 | 0.000000 | 0.000000 | 2157.25 | 179.05 |
| 2 | FID | ACIS-S-5 | 7.24 | 1941 | 0.008 | 0.006 | 0.006 | 0.011 | 0.000000 | 0.000000 | -1807.60 | 173.54 |
| 3 | GUIDE | 1197884536 | 8.50 | 3881 | -0.015 | 0.017 | 0.063 | 0.100 | 17.160729 | -71.835289 | 1533.91 | 1513.57 |
| 4 | GUIDE | 1197884712 | 8.32 | 3881 | -0.010 | 0.104 | 0.073 | 0.123 | 16.087398 | -72.252690 | 2054.44 | -331.60 |
| 5 | GUIDE | 1197878768 | 9.62 | 3880 | 0.084 | -0.053 | 0.121 | 0.205 | 16.656786 | -71.304581 | -346.94 | 2176.50 |
| 6 | GUIDE | 1197749416 | 10.27 | 3875 | 0.017 | -0.100 | 0.142 | 0.228 | 13.610513 | -71.871242 | -624.24 | -1832.51 |
| 7 | GUIDE | 1197750160 | 10.25 | 3878 | -0.070 | 0.023 | 0.150 | 0.242 | 12.997994 | -71.773722 | -1291.50 | -2222.82 |

2.4 Star Slots

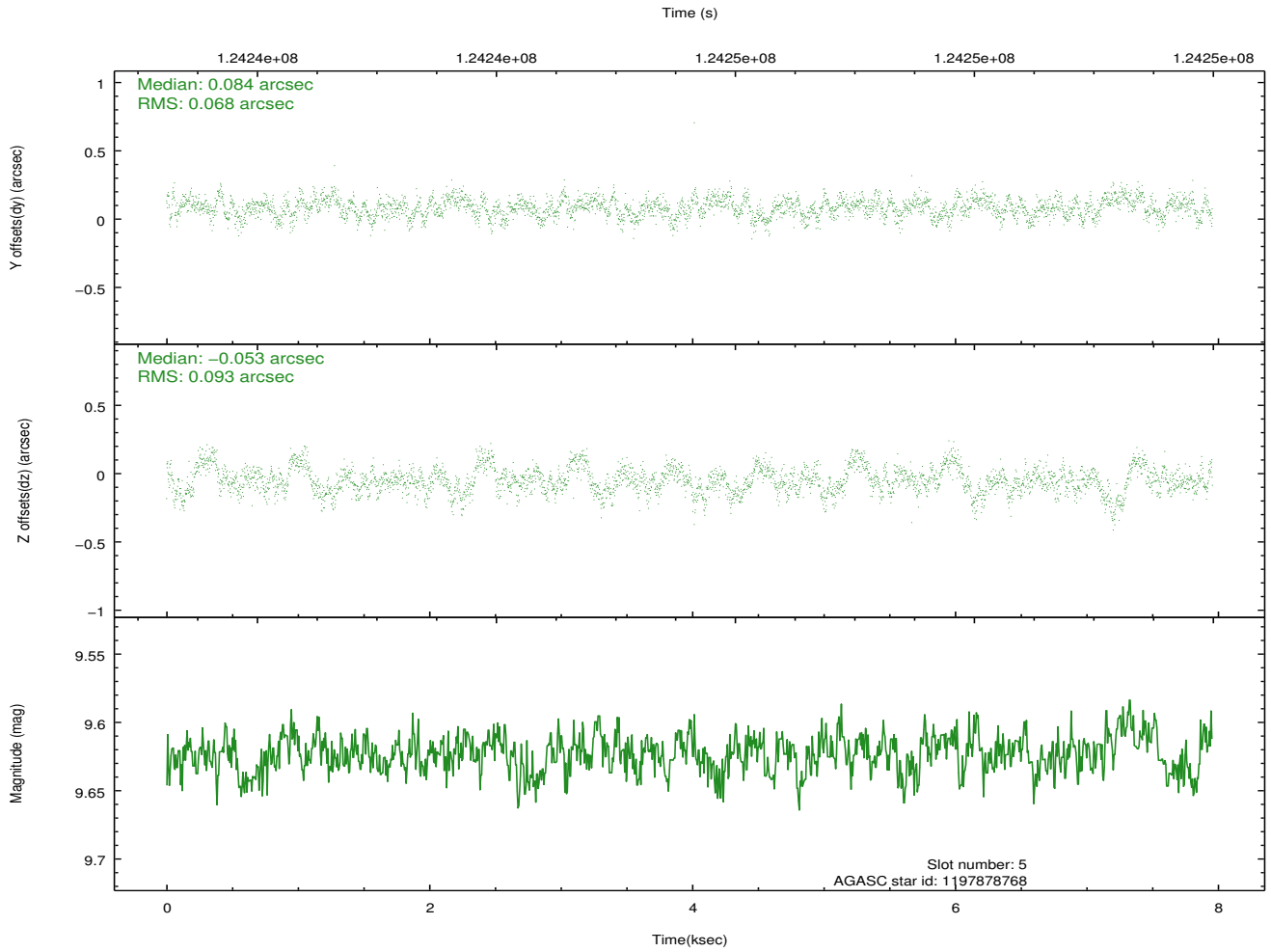
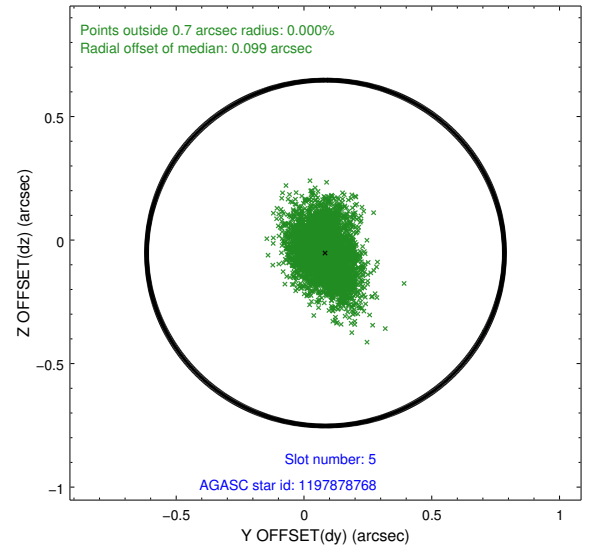
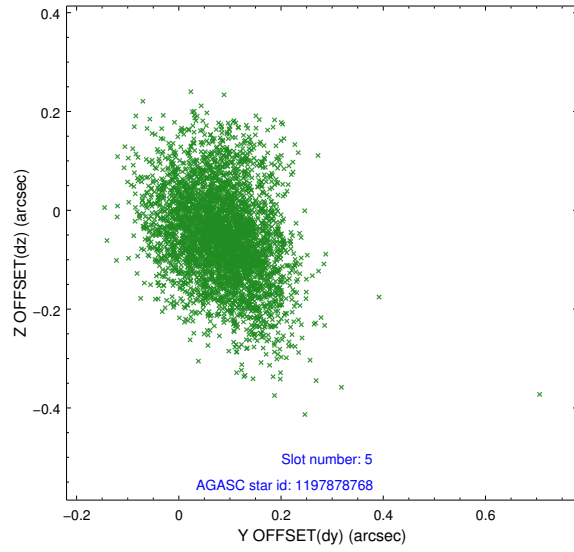
2.4.1 Slot 3



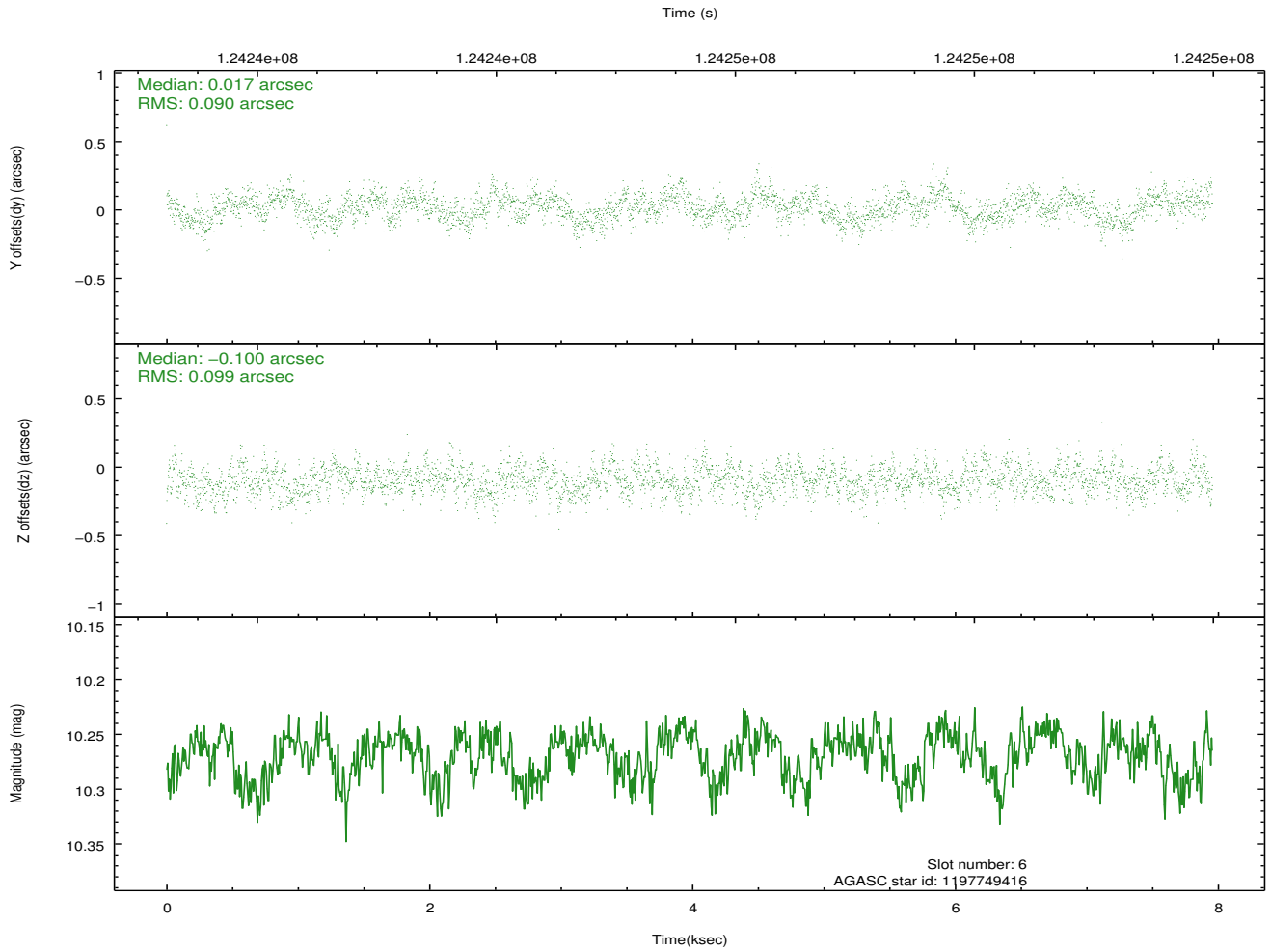
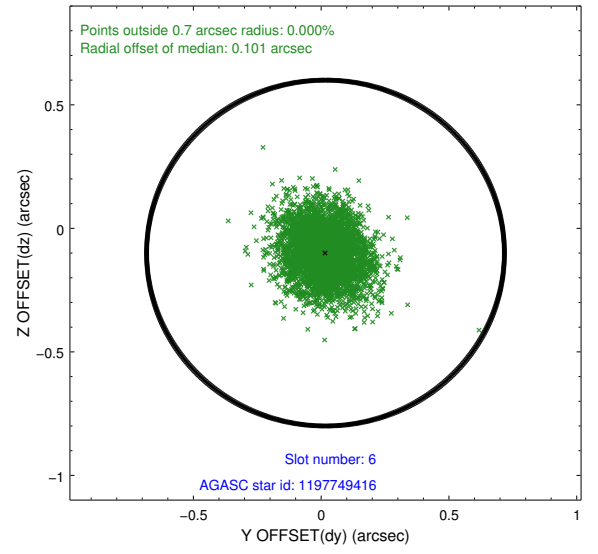
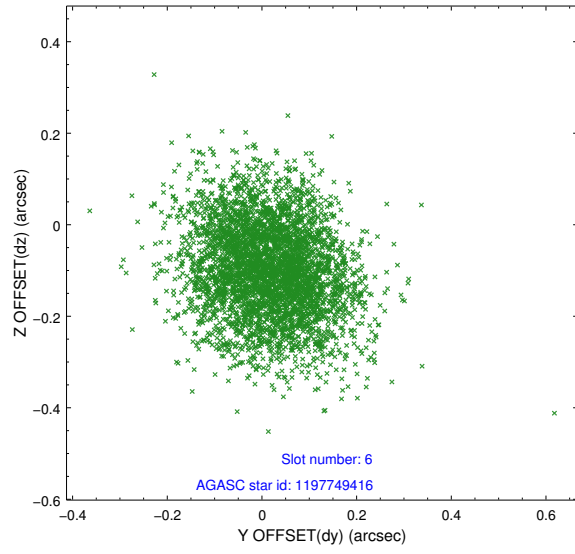
2.4.2 Slot 4



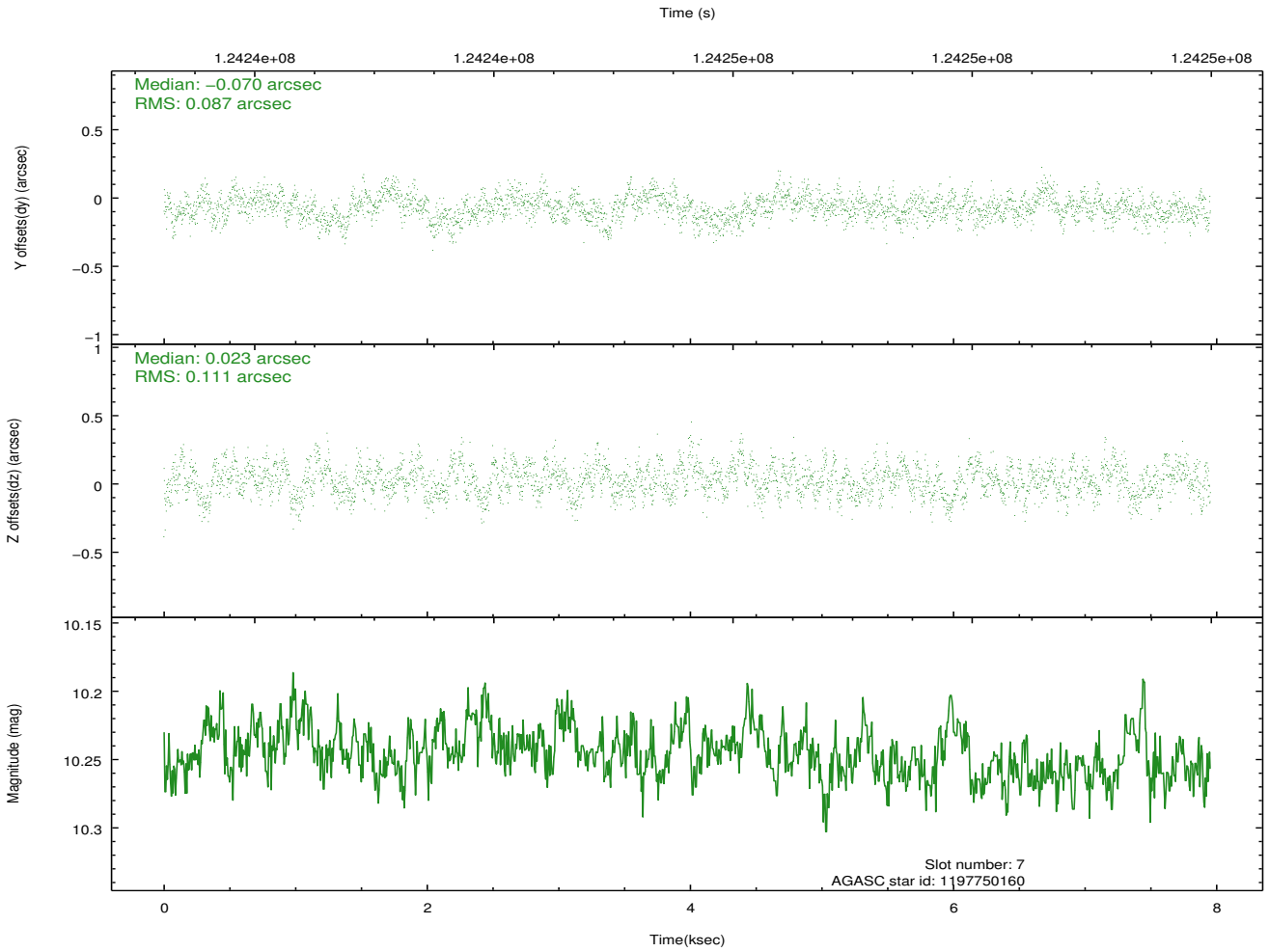
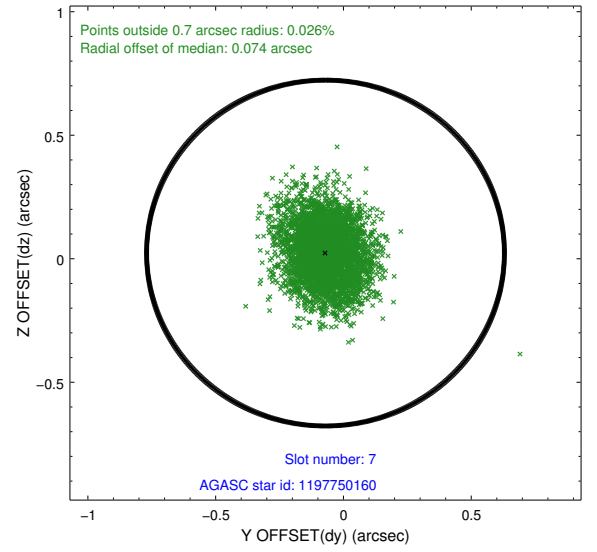
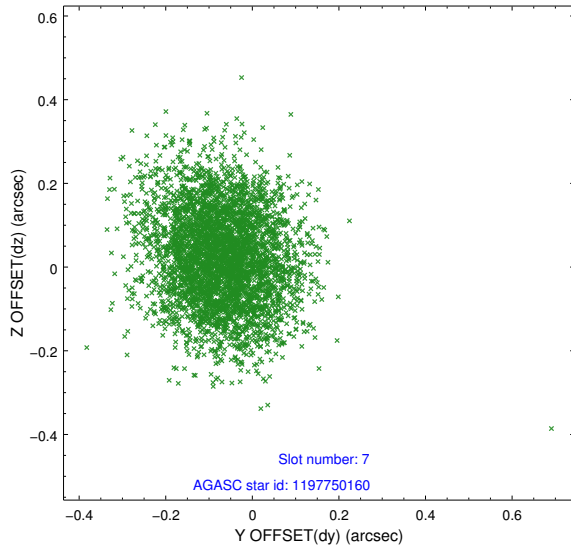
2.4.3 Slot 5



2.4.4 Slot 6

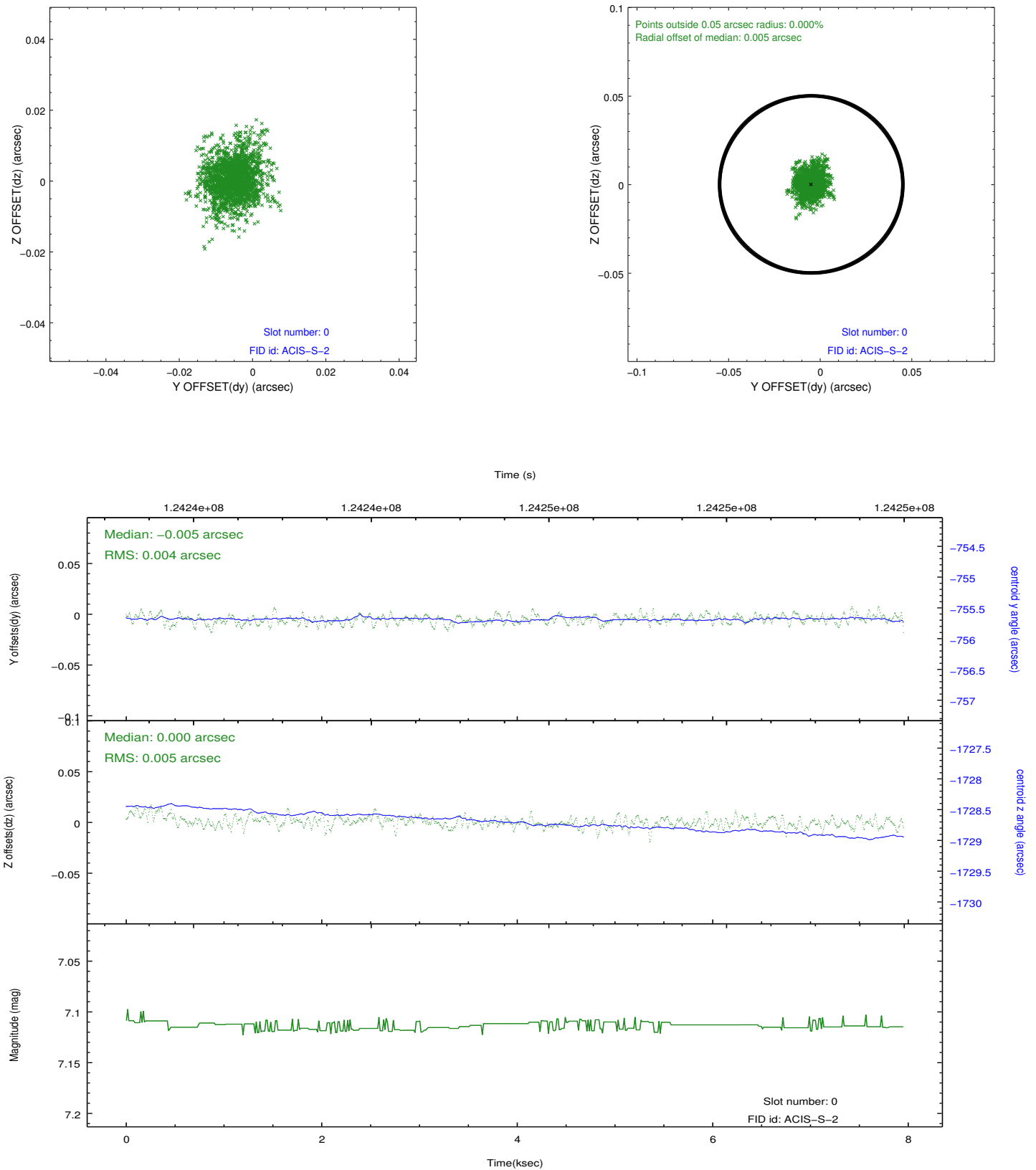


2.4.5 Slot 7

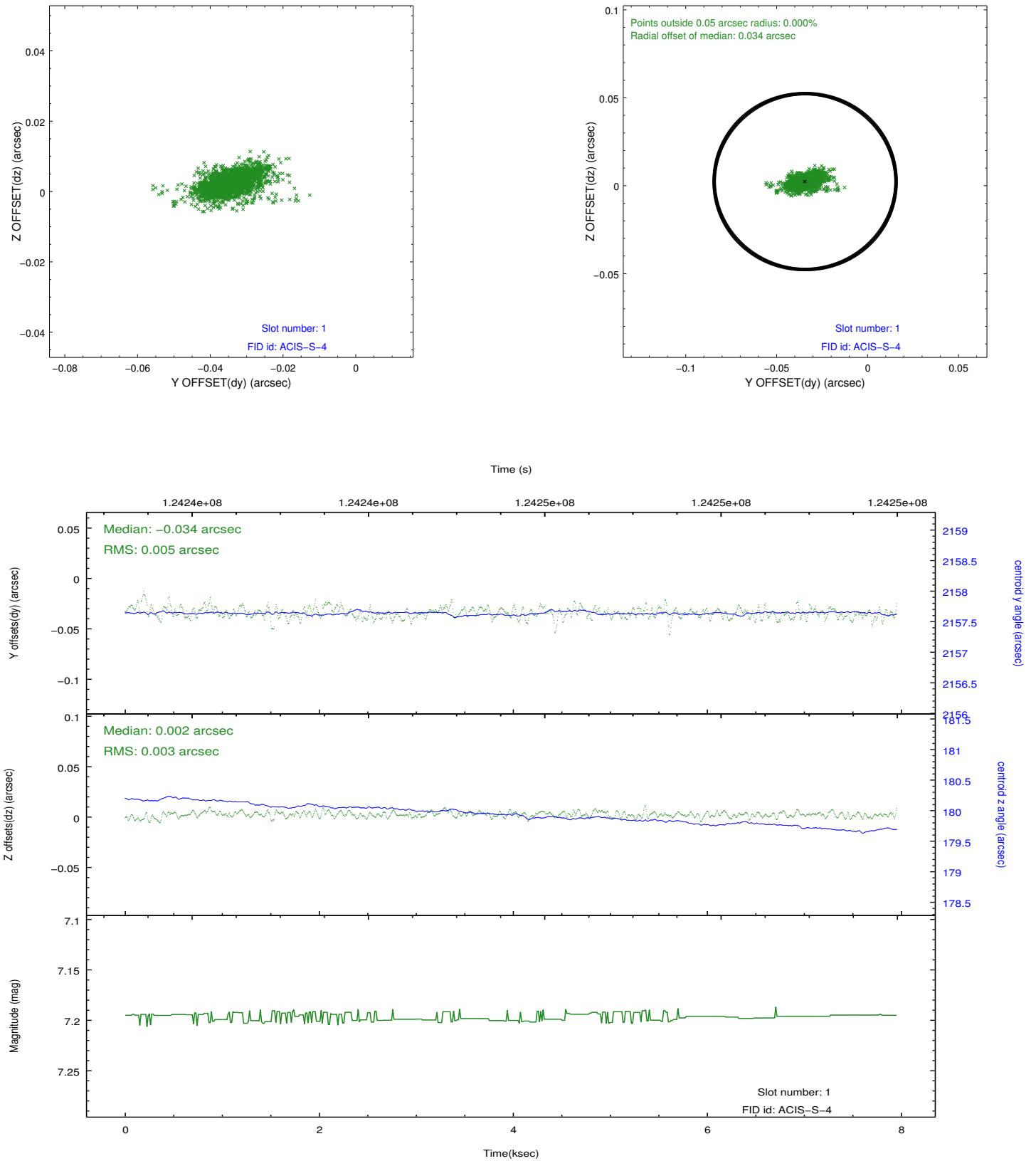


2.5 FID Slots

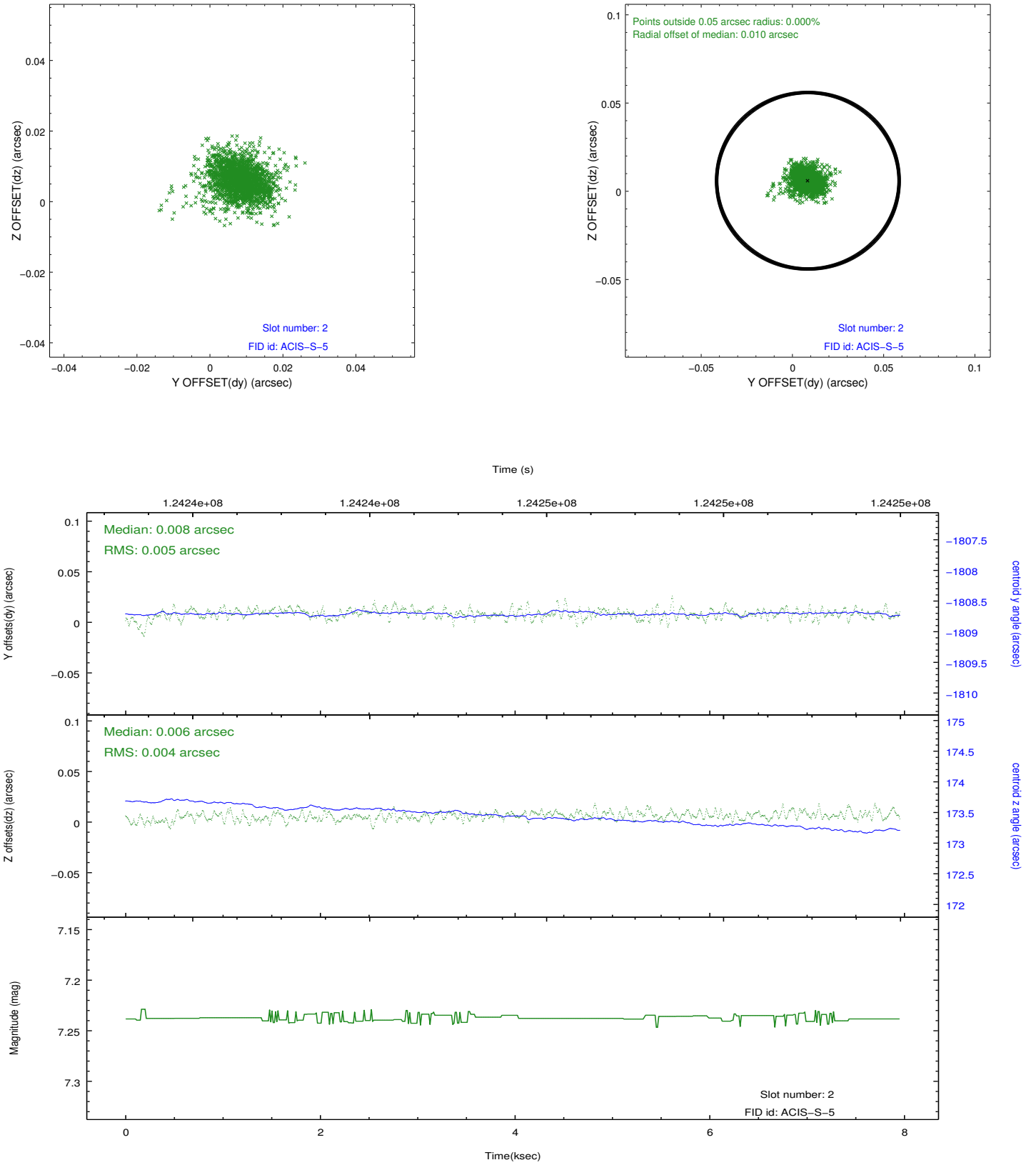
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2012.09.30 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 7.948 |

A.2 Comments

Window constraint met.