

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 5438 - L2 Version 4
Chandra X-Ray Center

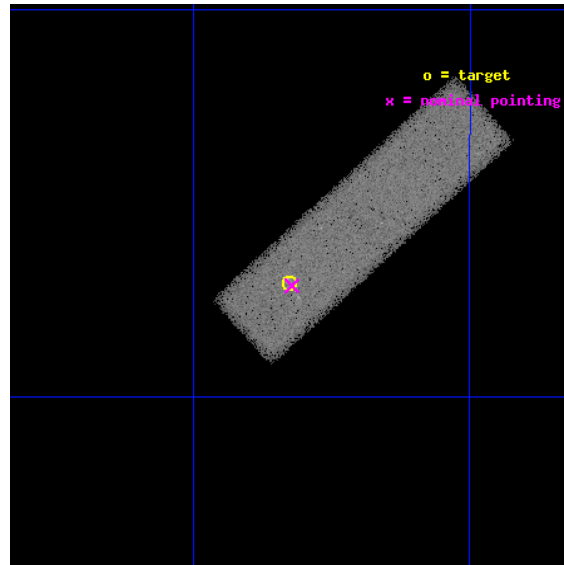
L2 Processing Date : Mar 7 2013

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1 Front

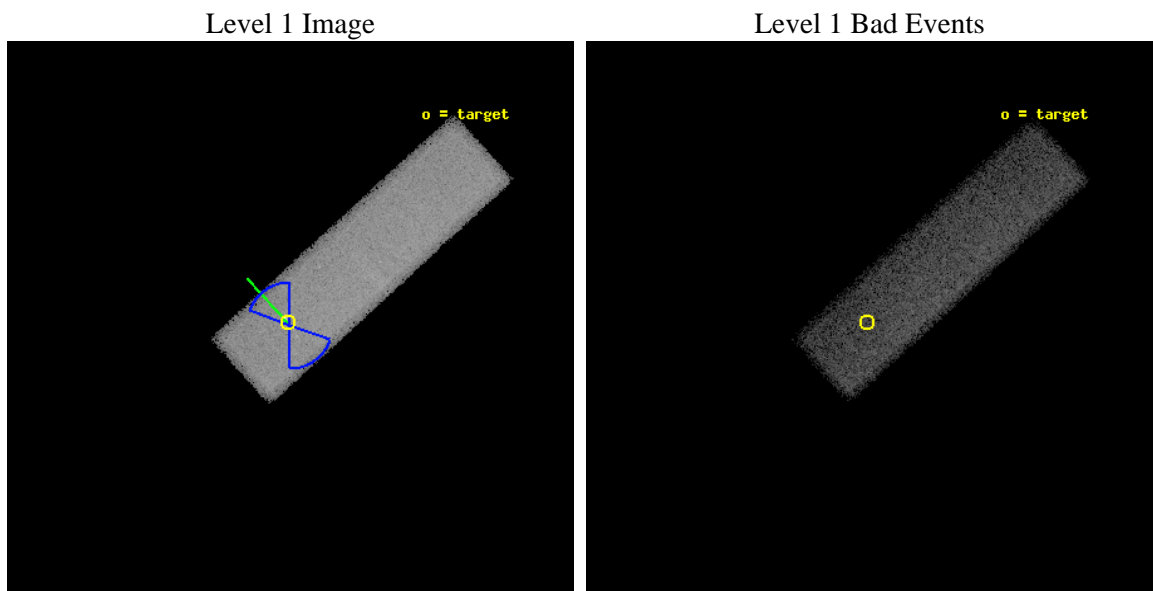
| | | |
|----------|--|---|
| seq_num | 300154 | Sequence number |
| obs_id | 5438 | Observation id |
| title | R Aquarii X-ray Jets: a synoptic study | Proposal title |
| observer | Dr. Edwin Kellogg | Principal investigator |
| object | R Aqr | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 355.956667 | Observer's specified target RA [deg] |
| dec_targ | -15.284361 | Observer's specified target Dec [deg] |
| ra_nom | 355.95552995505 | Nominal RA [deg] |
| dec_nom | -15.285612701542 | Nominal Dec [deg] |
| roll_nom | 317.59655117389 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 70182.401045799 | Sum of GTIs [s] |
| livetime | 66757.729521354 | Livetime [s] |
| ontime7 | 70182.401045799 | Sum of GTIs [s] |
| l2events | 80116 | Number of level 2 events |



2 OBI

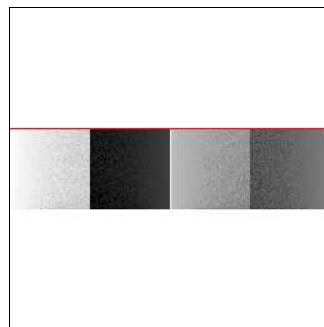
2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 7



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 70000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.5.1.1 | Processing system revision | ontime | 70182.401045799 | Sum of GTIs [s] |
| caldsver | 4.5.6 | | ontime7 | 70182.401045799 | Sum of GTIs [s] |
| date | 2013-03-07T12:10:16 | Date and time of file creation | l1events | 184764 | Number of level 1 events |
| revision | 4 | Processing version of data | | | |

2.1.4 Events

| | |
|-----------------|--------------|
| | ccd 7 |
| level 1 events | 184764 |
| rejected events | 102111 |
| rejected % | 55% |

| | |
|----------------|--------------|
| | ccd 7 |
| grade 0 events | 8990 |
| | 4% |
| grade 1 events | 200 |
| | 0% |
| grade 2 events | 16385 |
| | 8% |
| grade 3 events | 9344 |
| | 5% |
| grade 4 events | 9093 |
| | 4% |
| grade 5 events | 17494 |
| | 9% |
| grade 6 events | 40007 |
| | 21% |
| grade 7 events | 83251 |
| | 45% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|--------------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-7 | ACIS-7 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 355.927864 | 355.9555299550465 | Subarray requested | CUSTOM | 1/4 |
| [deg] Pointing Dec | -15.280117 | -15.28561270154195 | Subarray start row | 384 | 384 |
| [deg] Pointing Roll | 317.432624 | 317.5965511738883 | Subarray row count | 256 | 256 |
| [deg] Roll angle | 325.000000 | 325.000000 | Alternating exposures requested | N | N |
| [deg] Roll tolerance | 35.000000 | 35.000000 | [s] Primary exposure time | 0.000000 | 0.8 |
| Roll constraint allows 180D rotation | Y | Y | | | |
| [s] Window start time (MET) | 243129664.184000 | 243129664.184000 | | | |
| [s] Window stop time (MET) | 245721664.184000 | 245721664.184000 | | | |
| [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) | 245273387.184000 | 245272194.05898 | | | |
| Observation start date | 2005-10-09T19:28:43 | 2005-10-09T19:09:54 | | | |
| [s] Observation end time (MET) | 245343387.184000 | 245344239.26229 | | | |
| Observation end date | 2005-10-10T14:55:23 | 2005-10-10T15:10:39 | | | |
| Read mode | TIMED | TIMED | | | |

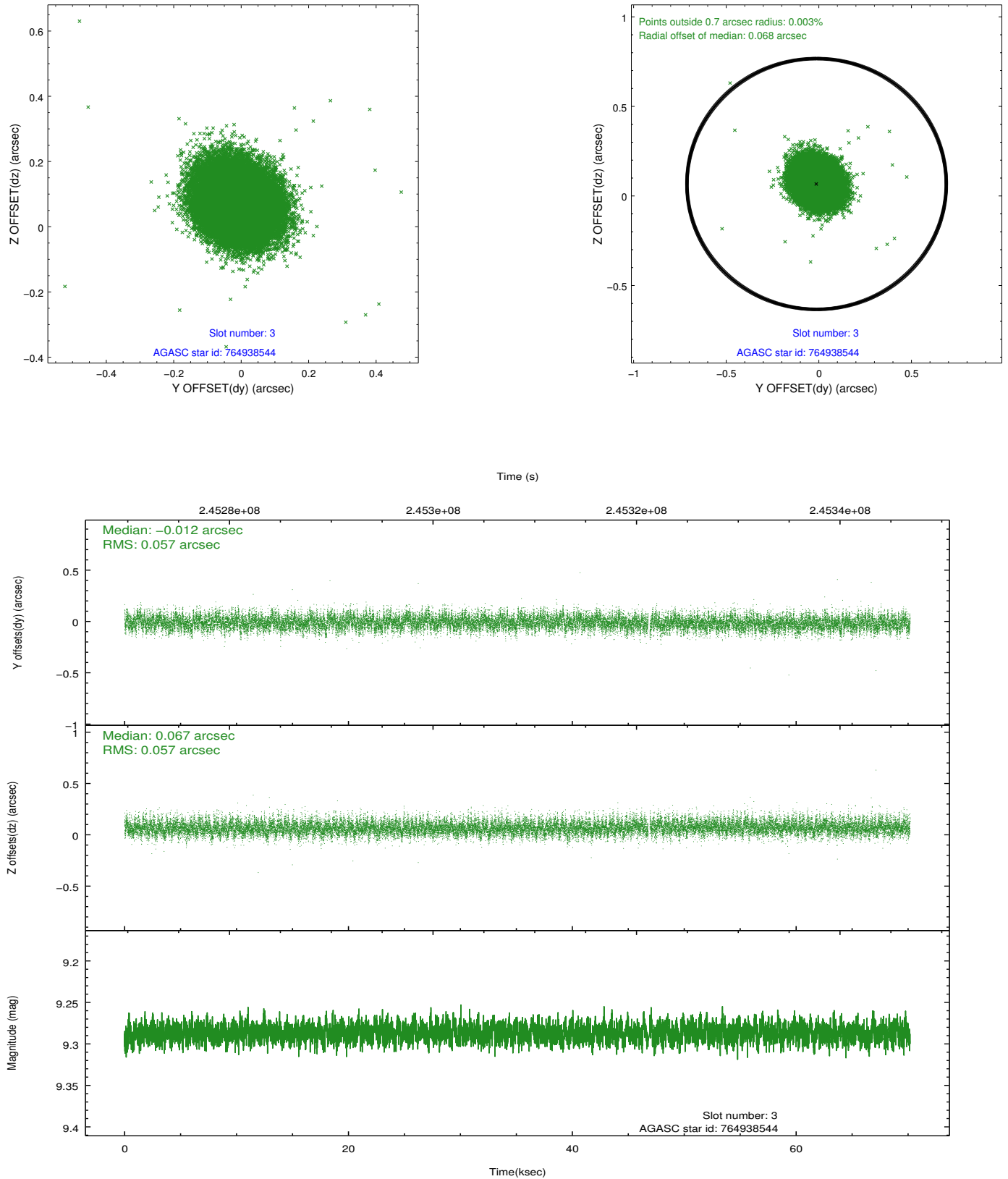
2.3 Aspect

Slot Statistics

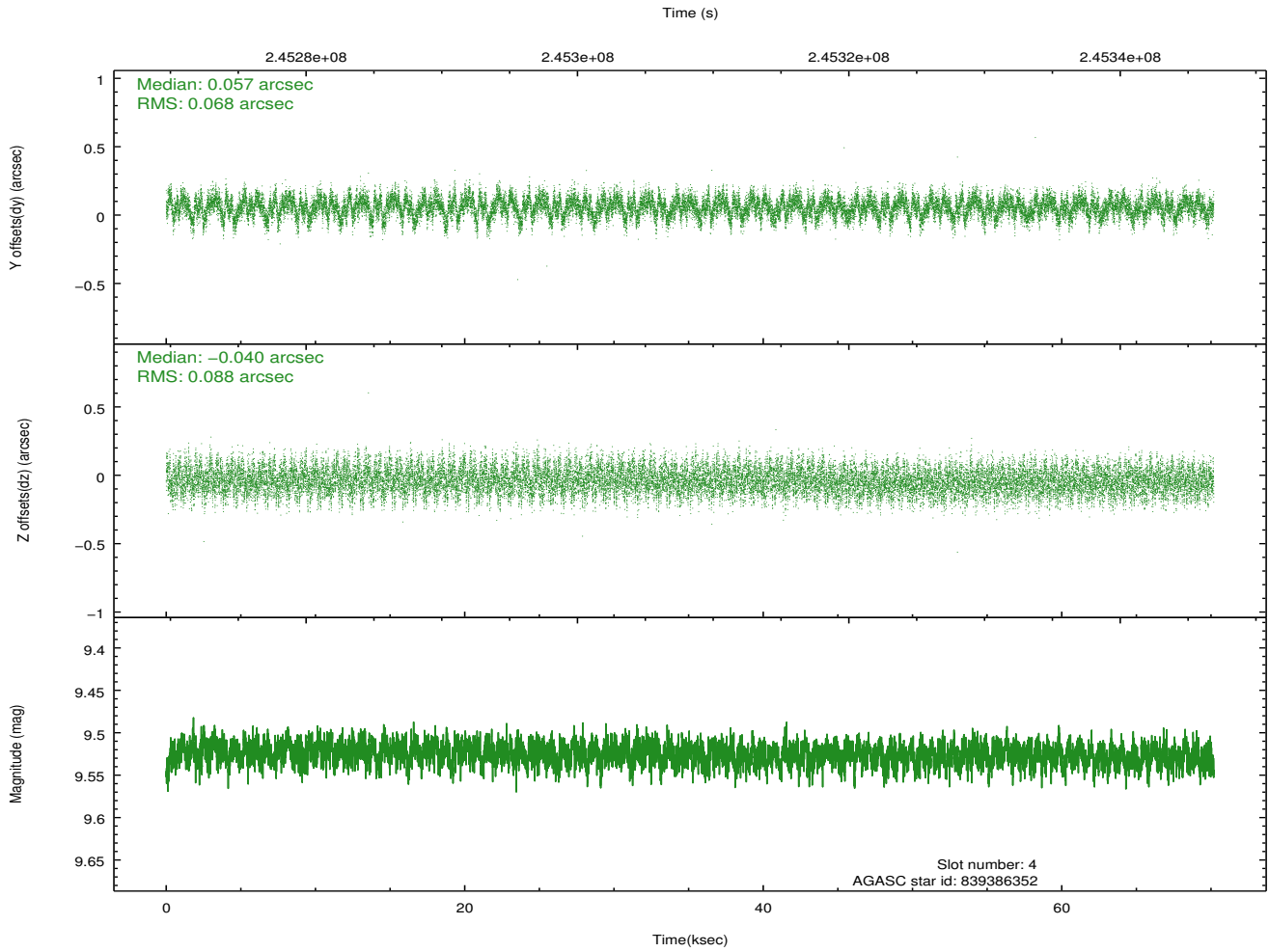
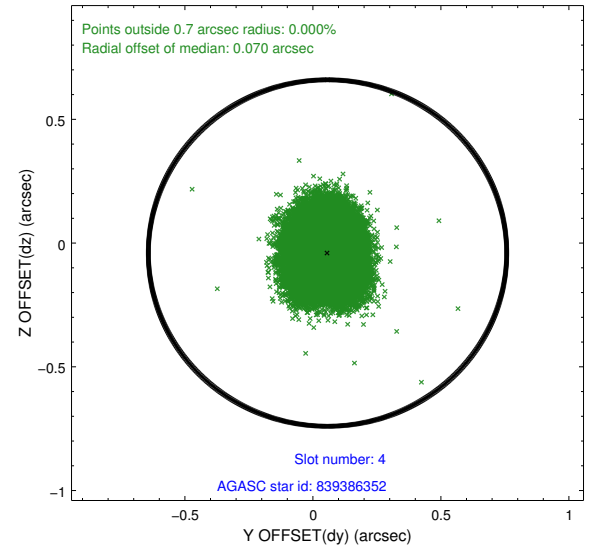
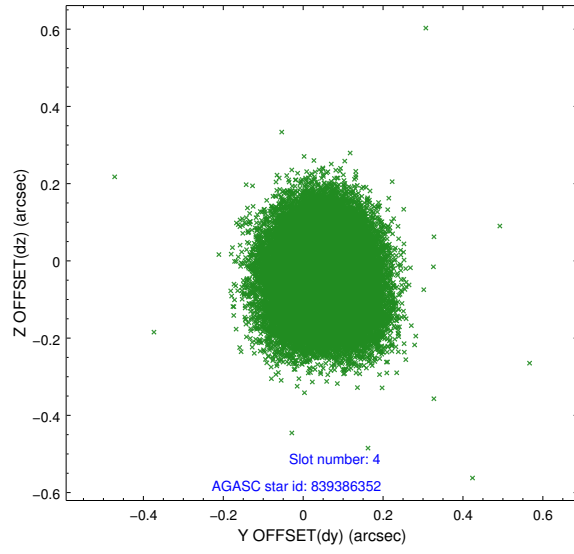
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.10 | 17119 | 0.004 | -0.024 | 0.010 | 0.016 | 0.000000 | 0.000000 | -760.18 | -1731.18 |
| 1 | BAD | ACIS-S-4 | 7.21 | 6975 | 0.122 | -0.024 | 0.024 | 0.041 | 0.000000 | 0.000000 | 2152.74 | 176.73 |
| 2 | FID | ACIS-S-5 | 7.23 | 17117 | -0.023 | 0.028 | 0.010 | 0.016 | 0.000000 | 0.000000 | -1813.18 | 170.99 |
| 3 | GUIDE | 764938544 | 9.29 | 34141 | -0.012 | 0.067 | 0.085 | 0.140 | 355.732535 | -14.577515 | -2211.98 | 1402.45 |
| 4 | GUIDE | 839386352 | 9.53 | 34222 | 0.057 | -0.040 | 0.119 | 0.190 | 355.395782 | -15.624441 | -517.77 | -2162.27 |
| 5 | GUIDE | 839386400 | 9.28 | 34136 | 0.017 | -0.067 | 0.082 | 0.131 | 356.007432 | -15.662506 | 1134.69 | -827.05 |
| 6 | GUIDE | 764942264 | 9.84 | 34199 | -0.058 | 0.038 | 0.120 | 0.194 | 356.098614 | -14.982946 | -286.11 | 1189.68 |
| 7 | BAD | 839385704 | 7.57 | 2 | -6.916 | 8.291 | 0.127 | 0.127 | 355.956087 | -15.284500 | -72.25 | 652.50 |

2.4 Star Slots

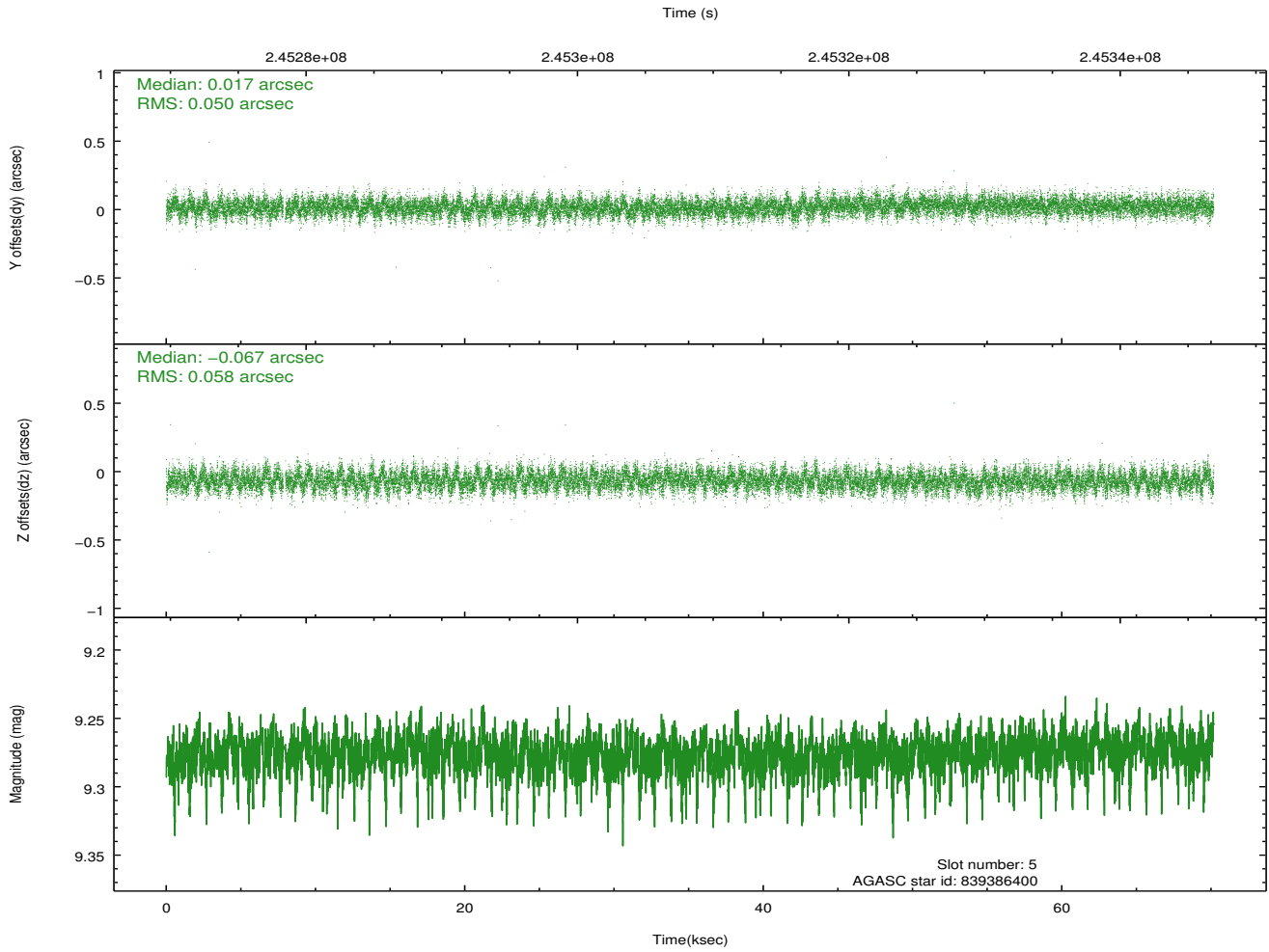
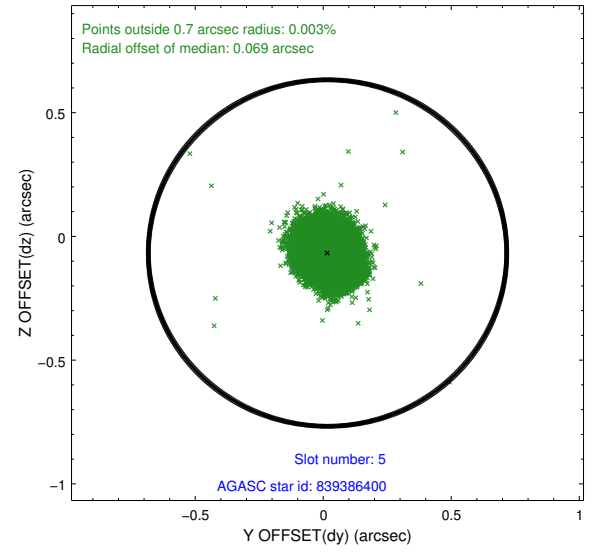
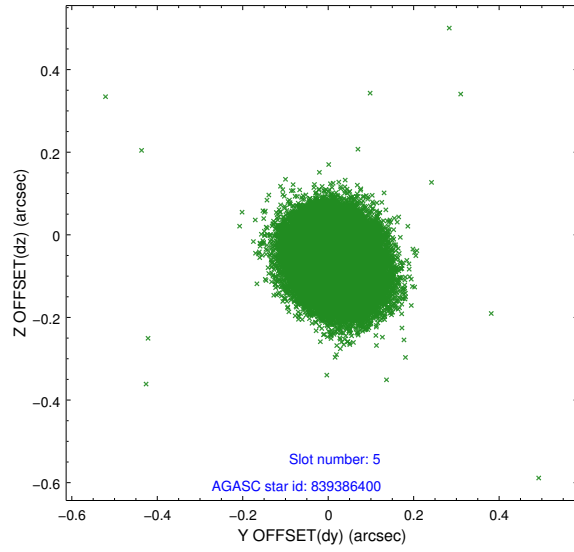
2.4.1 Slot 3



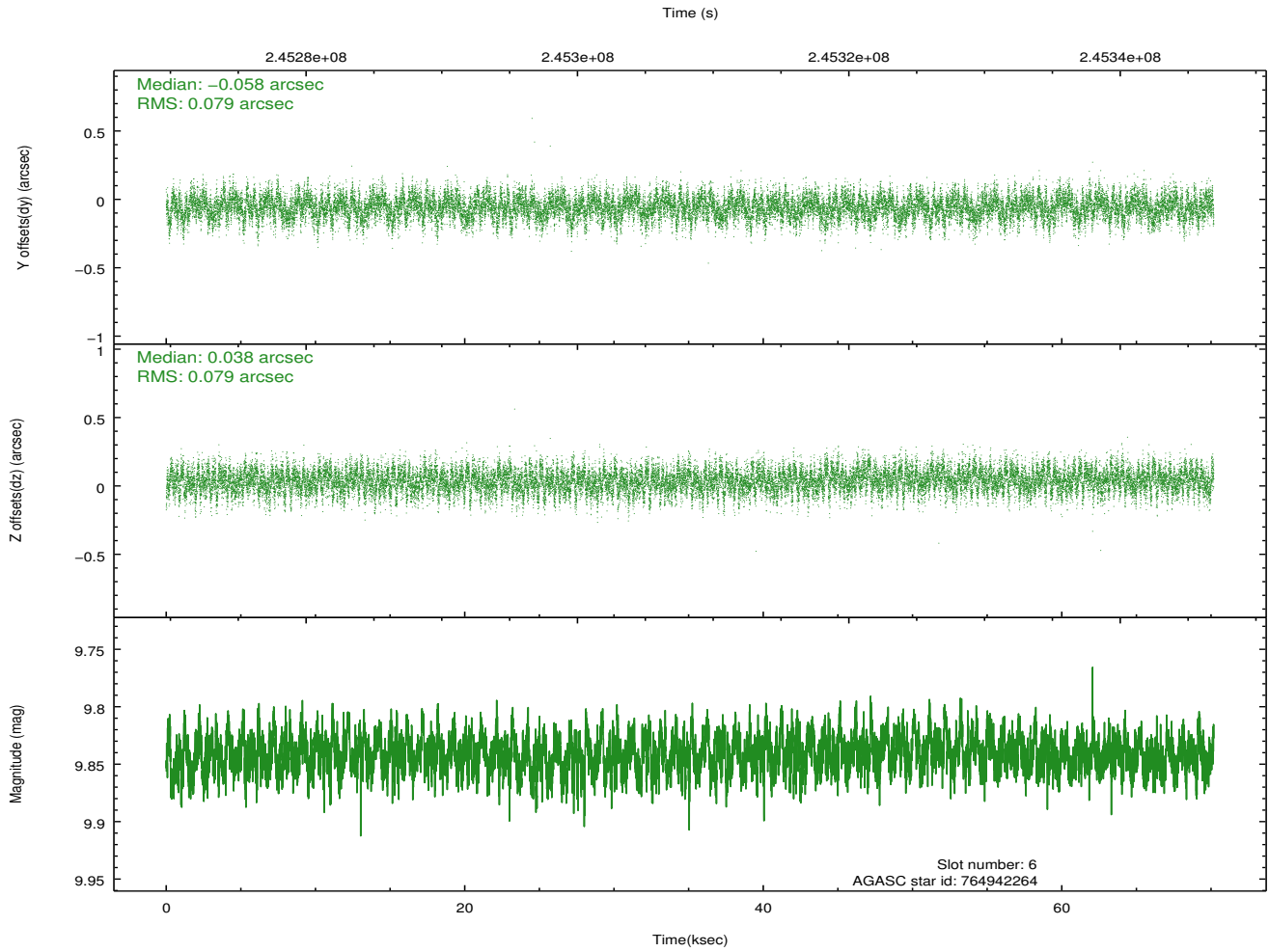
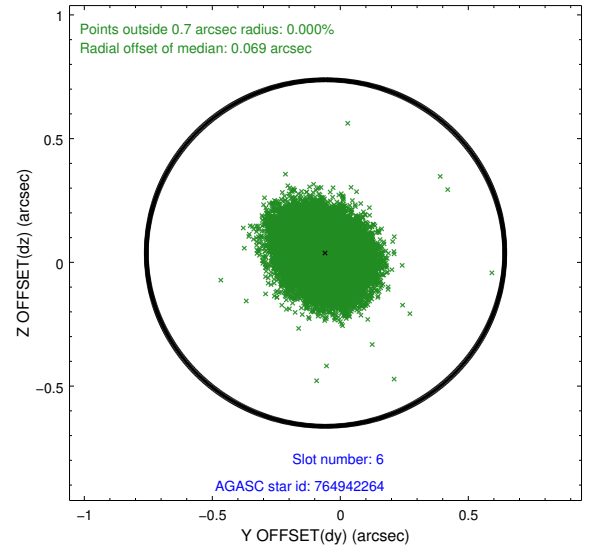
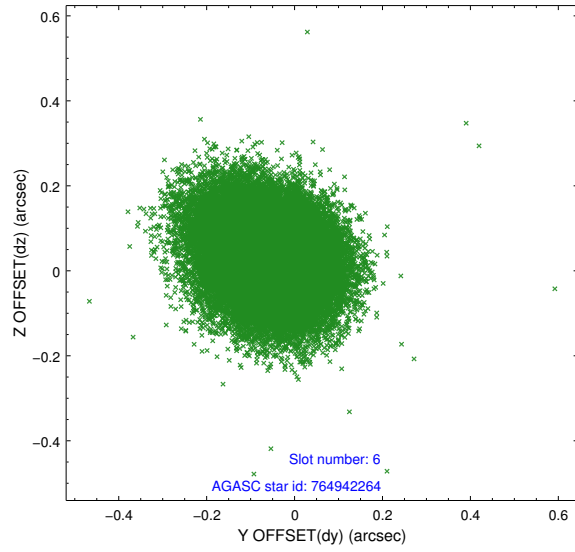
2.4.2 Slot 4



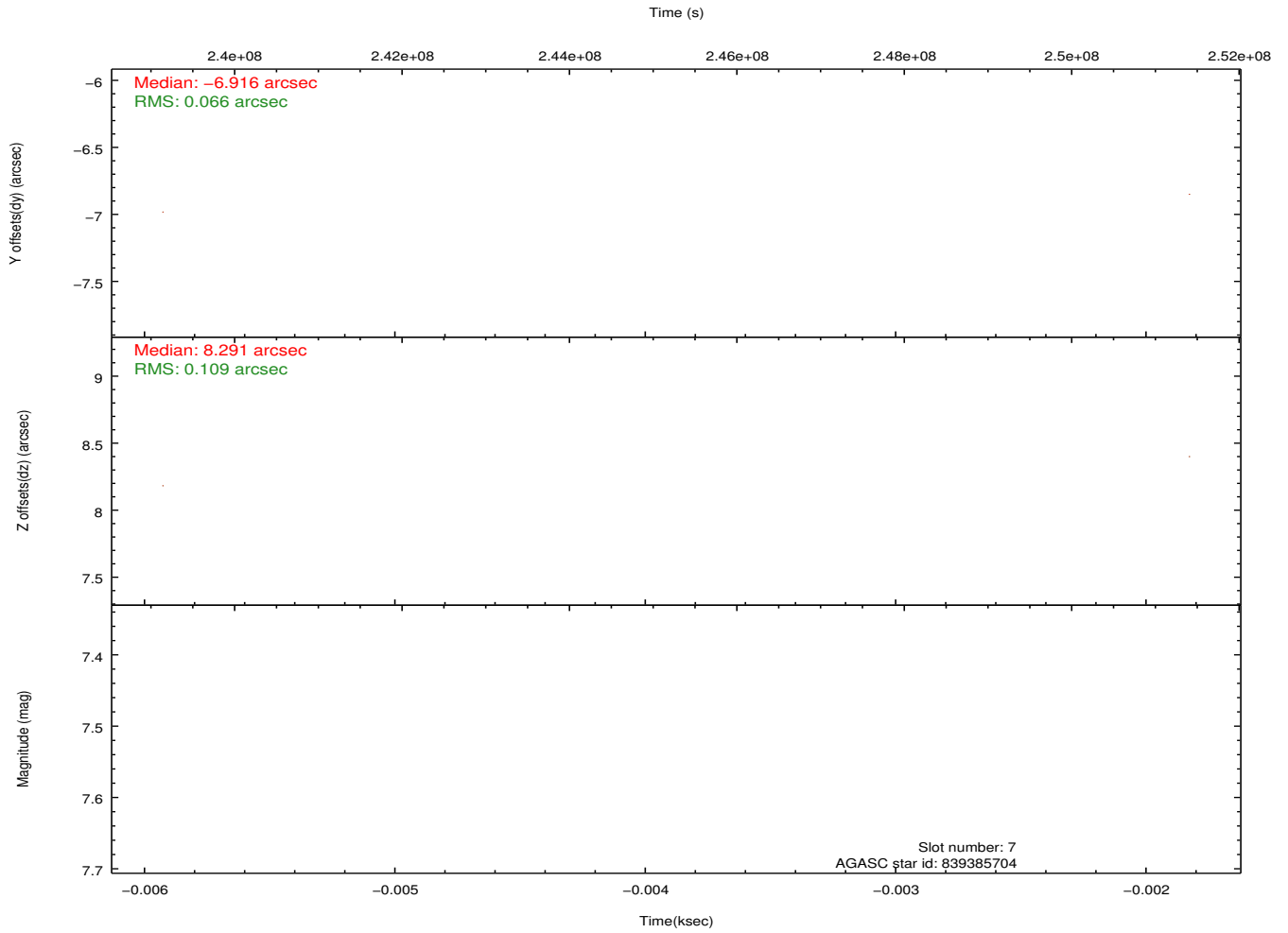
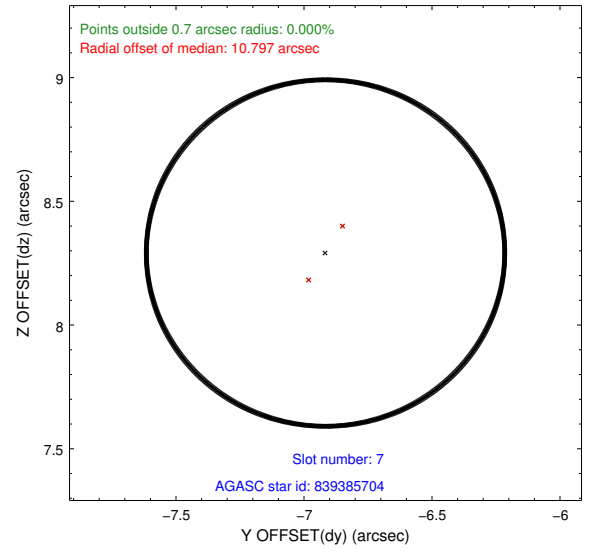
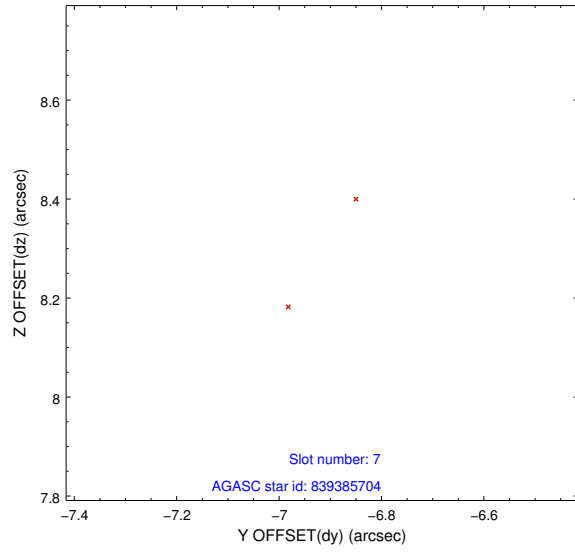
2.4.3 Slot 5



2.4.4 Slot 6

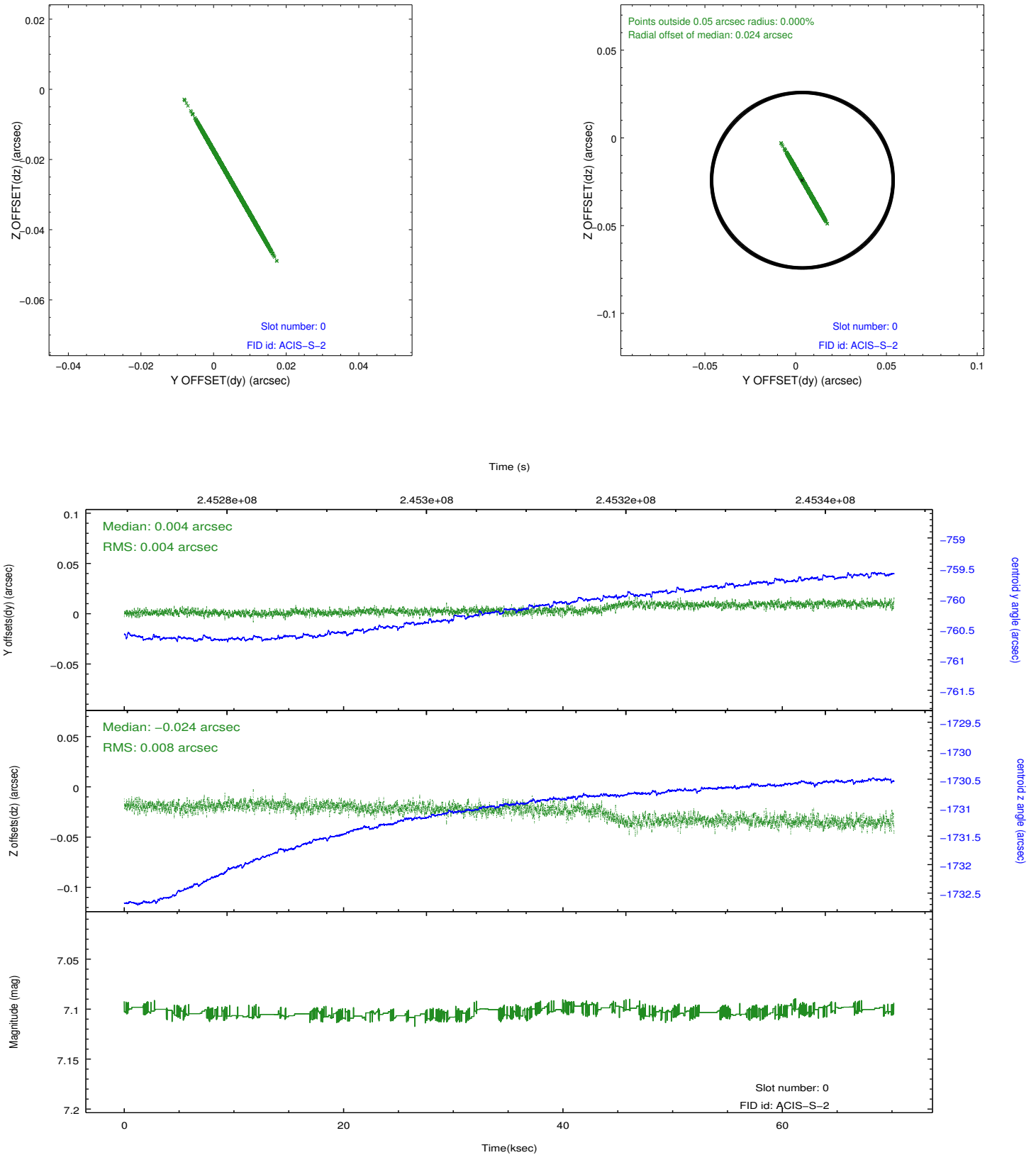


2.4.5 Slot 7

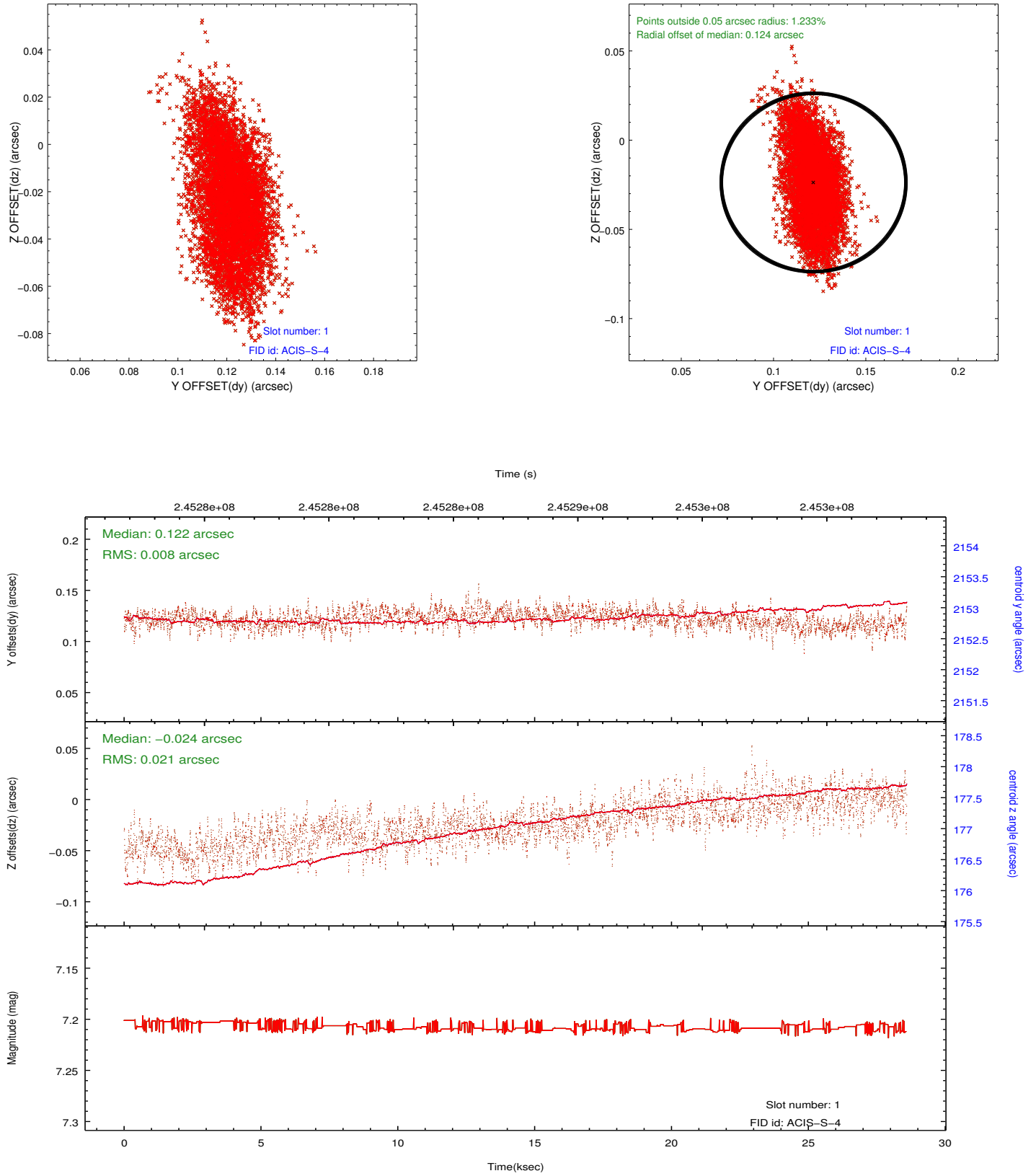


2.5 FID Slots

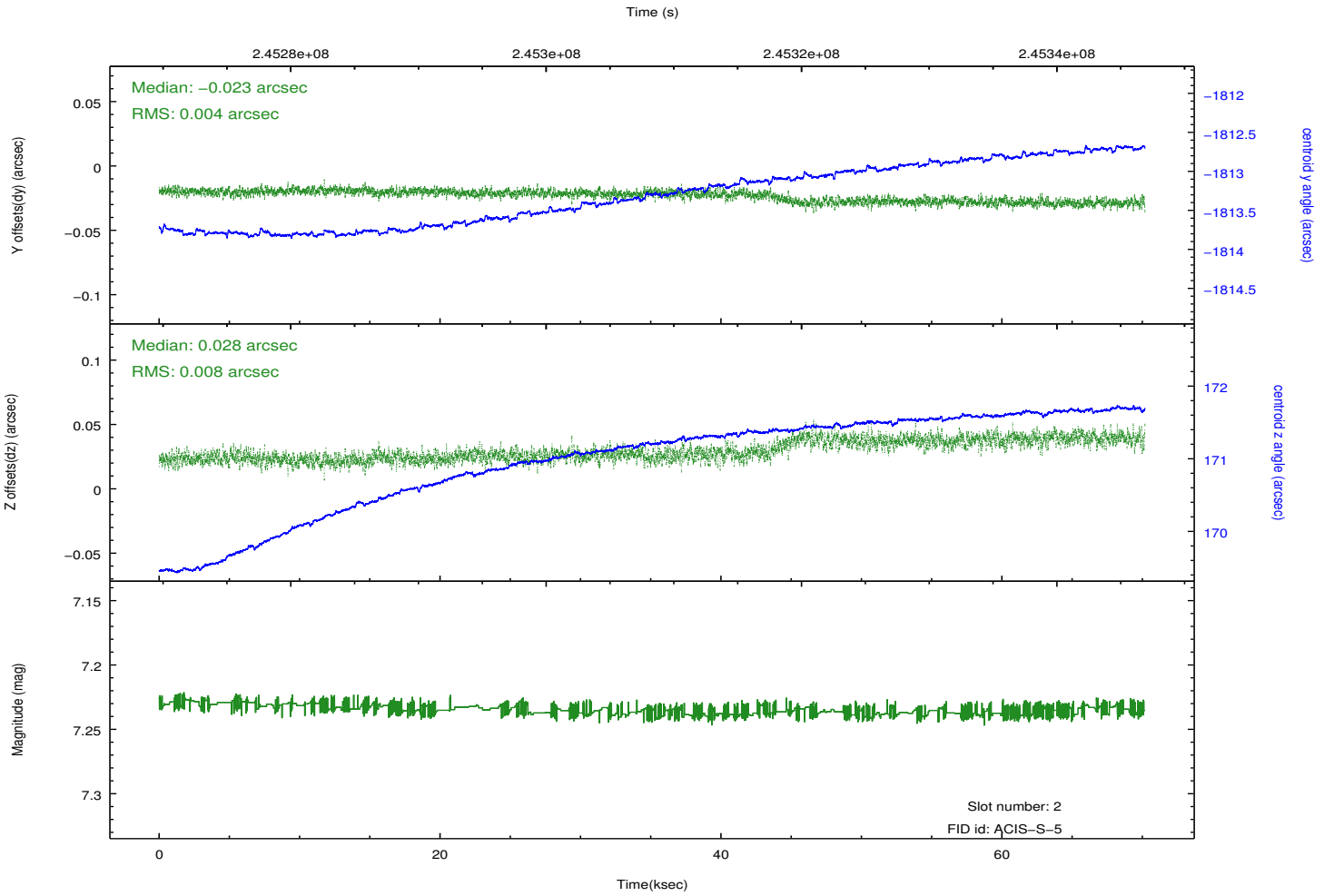
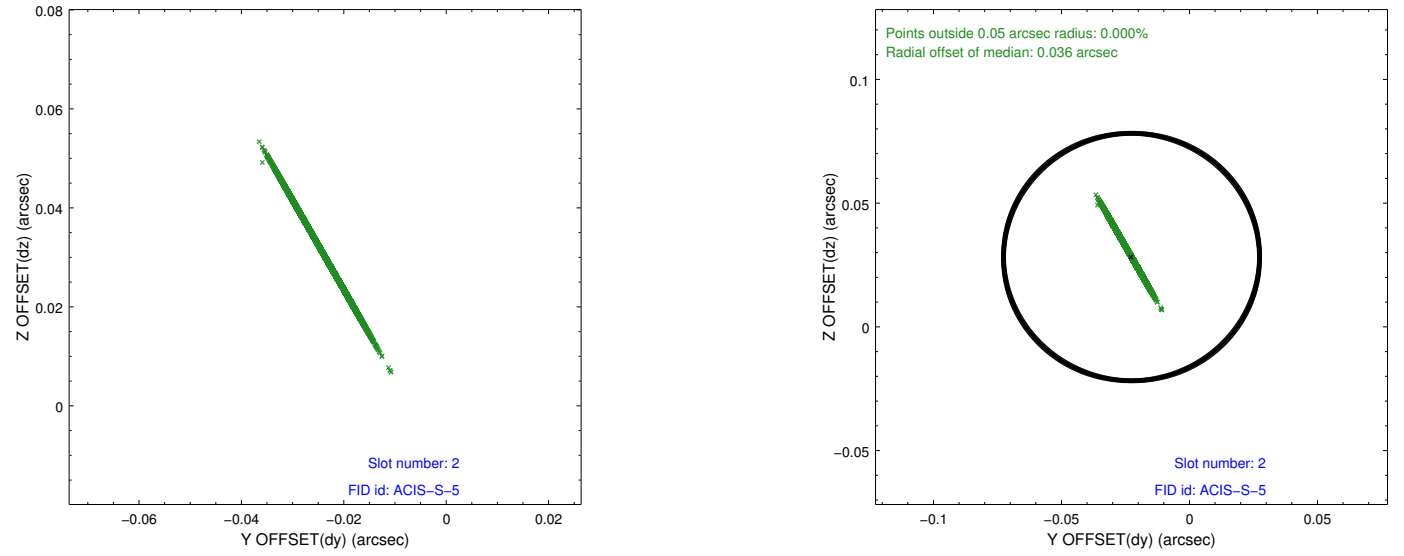
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2013.03.08 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 70.1824 |

A.2 Comments

Comments for Obi 0

Star in slot 7 radial offset > 1.500000 arcsec

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As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files are incorrect by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct. If using the FP temp values in the headers of data files (some CIAO tools require this information), investigators should subtract 1.3 degrees from the reported temperature to determine the true temperature.

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Joint Proposal: NRAO. Window constraint met. Roll constraint met.

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The guide star in slot 7 and the fid light in slot 1 were automatically removed from the aspect solution due to poor data quality. The aspect solution is not degraded by the removal of this guide star and fid light from the solution.