

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 23194 - L2 Version 1
Chandra X-Ray Center

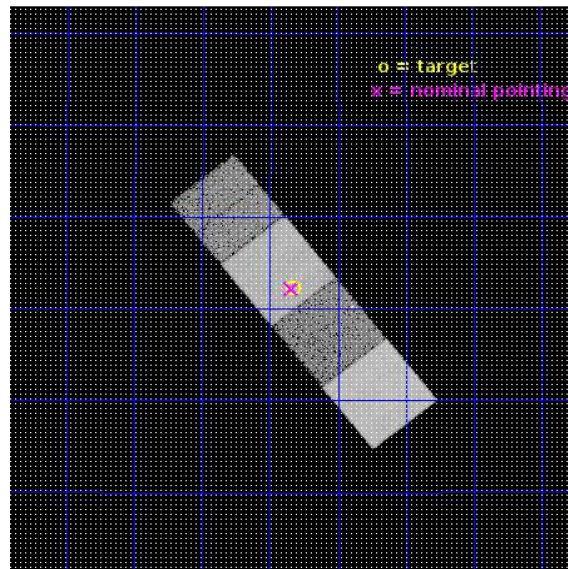
L2 Processing Date : Mar 15 2020

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1 Front

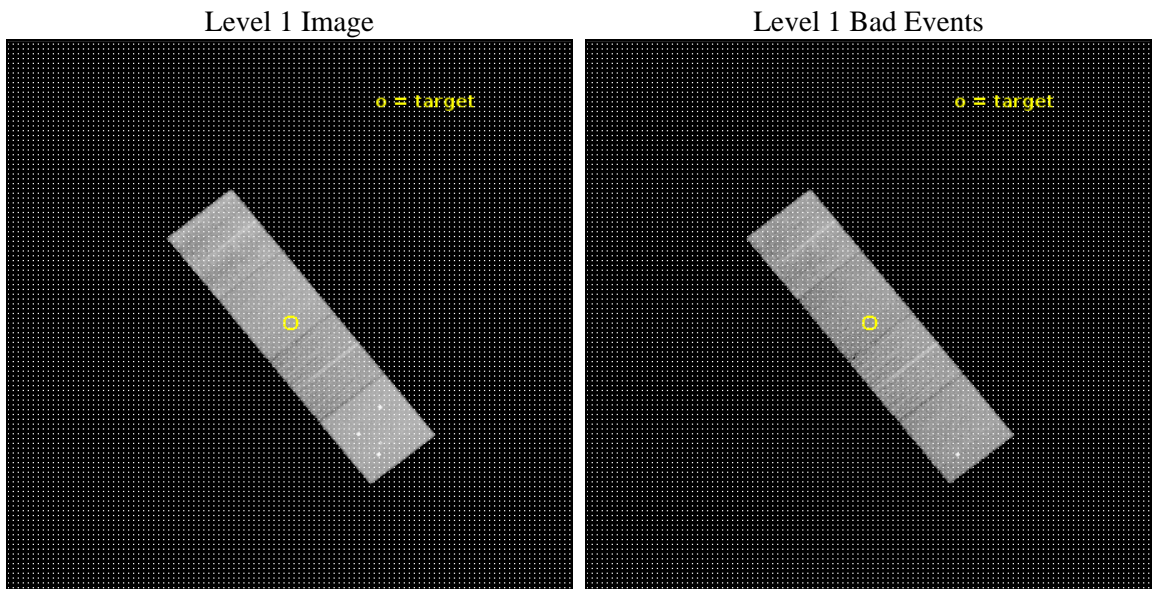
| | | |
|----------|---|---|
| seq_num | 704045 | Sequence number |
| obs_id | 23194 | Observation id |
| title | Calibration of the quasar Hubble diagram with z | Proposal title |
| observer | Francesca Civano | Principal investigator |
| object | SDSSJ102119.95+185213.8 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 155.33316 | Observer's specified target RA [deg] |
| dec_targ | 18.870512 | Observer's specified target Dec [deg] |
| ra_nom | 155.33566745148 | Nominal RA [deg] |
| dec_nom | 18.869782302302 | Nominal Dec [deg] |
| roll_nom | 231.52492699961 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 15062.900115967 | Sum of GTIs [s] |
| livetime | 14866.092236806 | Livetime [s] |
| ontime5 | 15062.900115967 | Sum of GTIs [s] |
| ontime6 | 15062.900115967 | Sum of GTIs [s] |
| ontime7 | 15062.900115967 | Sum of GTIs [s] |
| ontime8 | 15053.476984143 | Sum of GTIs [s] |
| l2events | 179813 | Number of level 2 events |



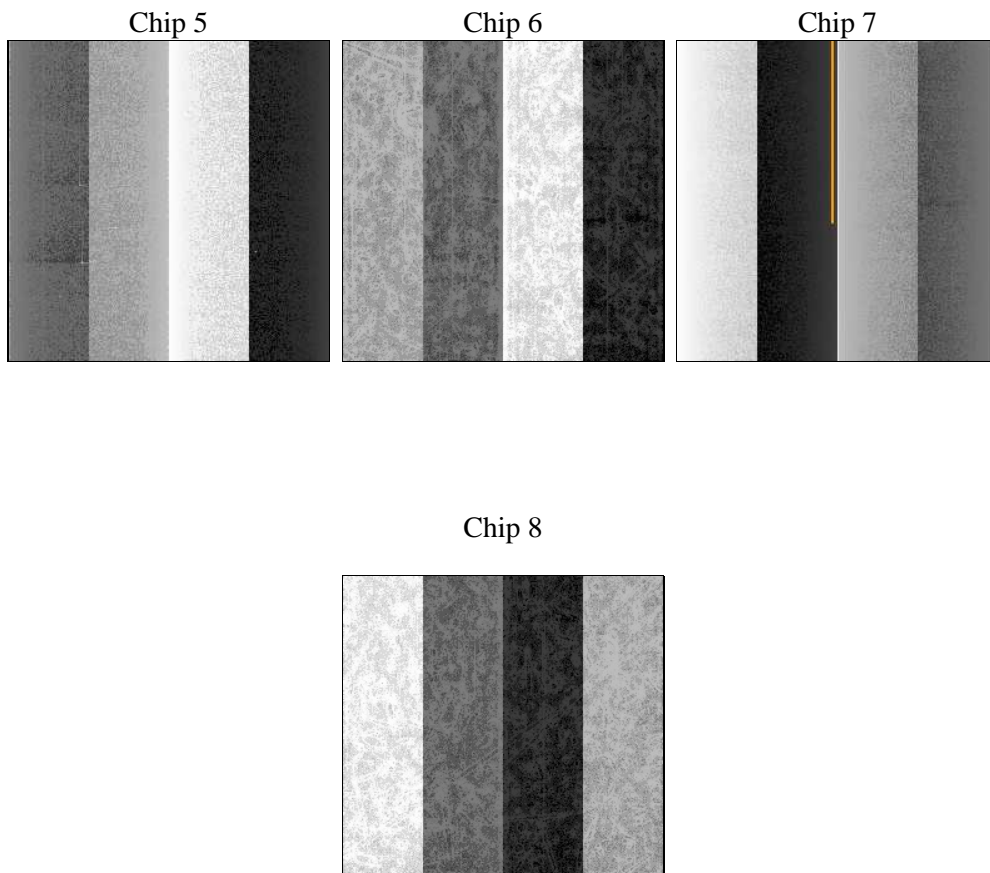
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 15000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.8.1 | Processing system revision | ontime | 15062.900115967 | Sum of GTIs [s] |
| caldsver | 4.8.4.2 | | ontime5 | 15062.900115967 | Sum of GTIs [s] |
| date | 2020-03-15T13:09:39 | Date and time of file creation | ontime6 | 15062.900115967 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime7 | 15062.900115967 | Sum of GTIs [s] |
| | | | ontime8 | 15053.476984143 | Sum of GTIs [s] |
| | | | l1events | 631894 | Number of level 1 events |

2.1.4 Events

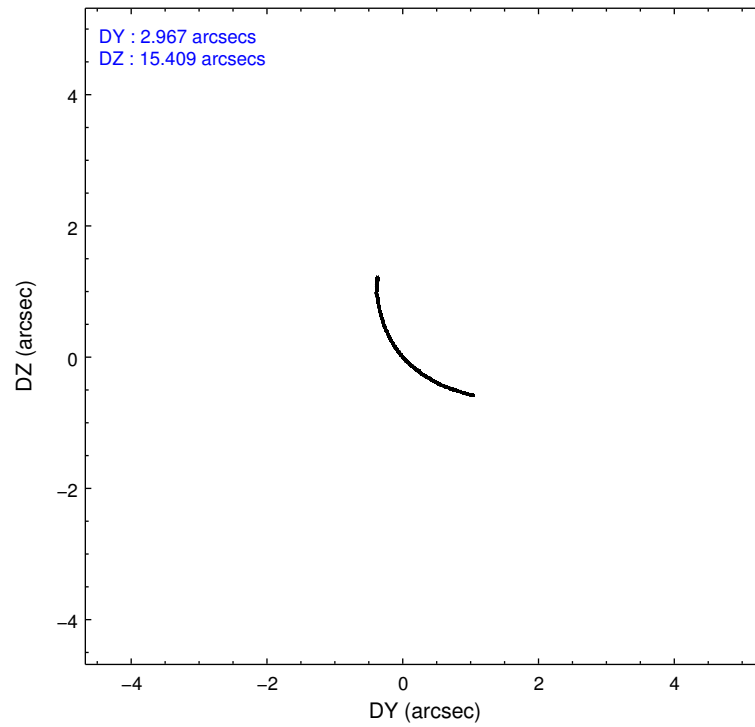
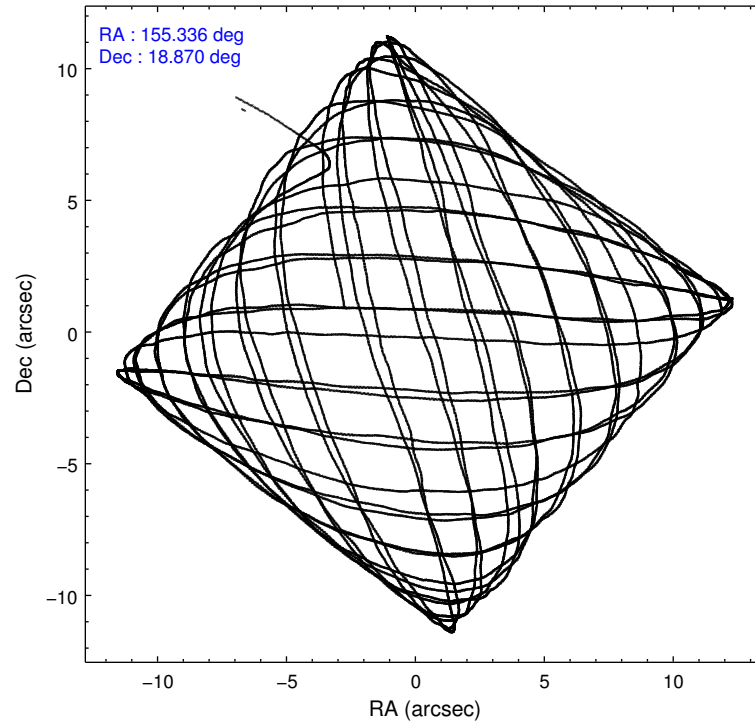
| | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|
| level 1 events | 203968 | 118307 | 154625 | 154994 |
| rejected events | 103009 | 104341 | 87328 | 111300 |
| rejected % | 50% | 88% | 56% | 71% |

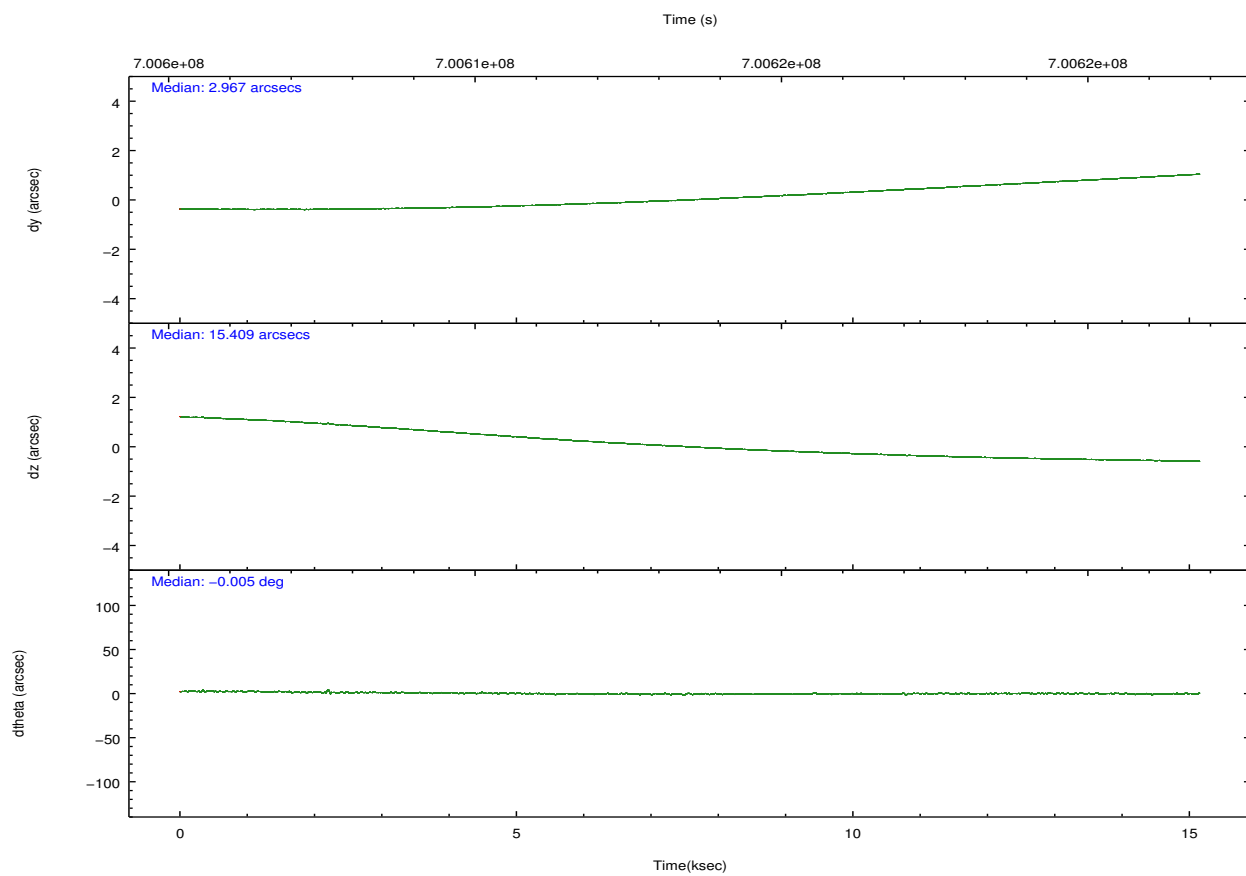
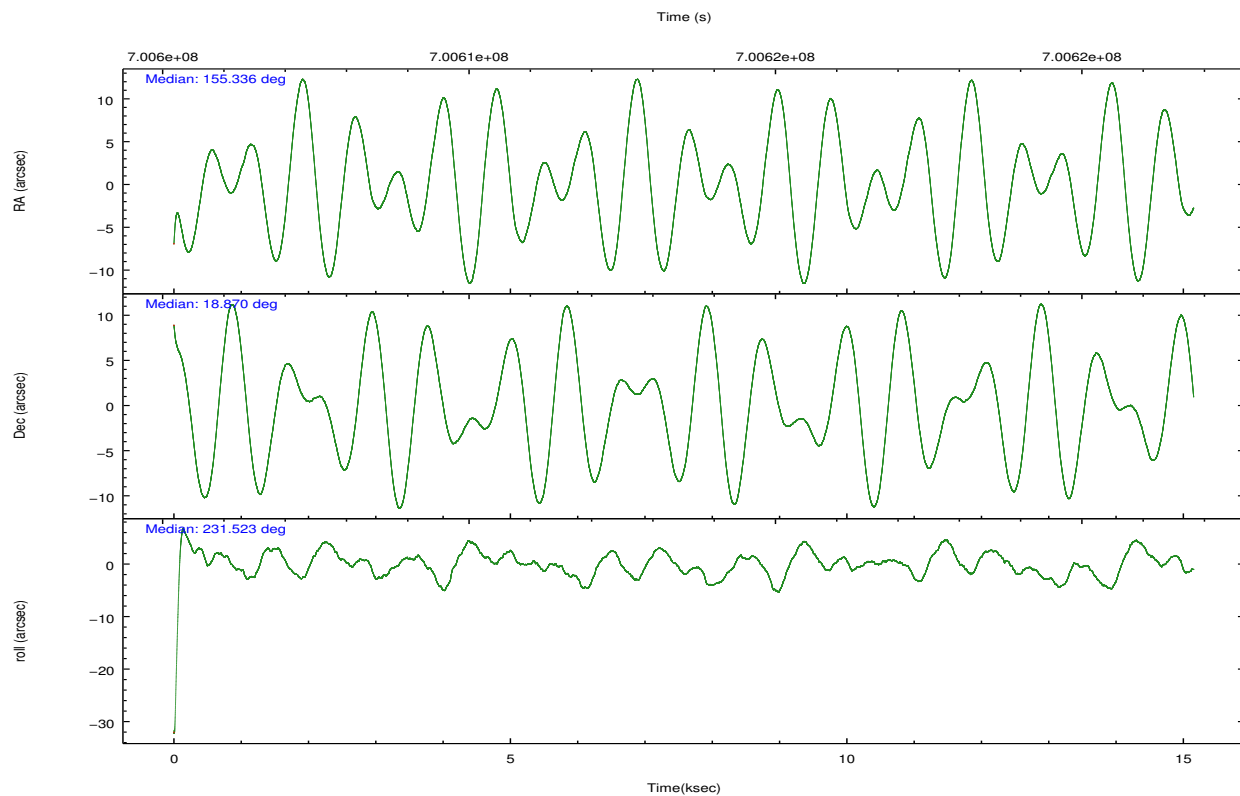
| | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|--------|
| grade 0 events | 14813 | 4711 | 5588 | 12232 |
| | 7% | 3% | 3% | 7% |
| grade 1 events | 483 | 46 | 209 | 147 |
| | 0% | 0% | 0% | 0% |
| grade 2 events | 30367 | 3193 | 14908 | 10897 |
| | 14% | 2% | 9% | 7% |
| grade 3 events | 2853 | 1322 | 5061 | 4376 |
| | 1% | 1% | 3% | 2% |
| grade 4 events | 2646 | 1410 | 5040 | 4083 |
| | 1% | 1% | 3% | 2% |
| grade 5 events | 13712 | 5513 | 15098 | 8415 |
| | 6% | 4% | 9% | 5% |
| grade 6 events | 50311 | 3332 | 36712 | 12107 |
| | 24% | 2% | 23% | 7% |
| grade 7 events | 88783 | 98780 | 72009 | 102737 |
| | 43% | 83% | 46% | 66% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-5678 | ACIS-5678 | 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 | 155.339590 | 155.335667451481 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 18.896955 | 18.86978230230234 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 231.367057 | 231.524926999609 | [s] Primary exposure time | 0.000000 | 3.1 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | | | |
| [mm] SIM defocus | 0 | 0.001444936568705701 | | | |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | | | |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | | | |
| [s] Observation start time (MET) | 700606097.184000 | 700604790.9667799 | | | |
| Observation start date | 2020-03-14T20:47:08 | 2020-03-14T20:26:30 | | | |
| [s] Observation end time (MET) | 700621097.184000 | 700622588.04286 | | | |
| Observation end date | 2020-03-15T00:57:08 | 2020-03-15T01:23:08 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



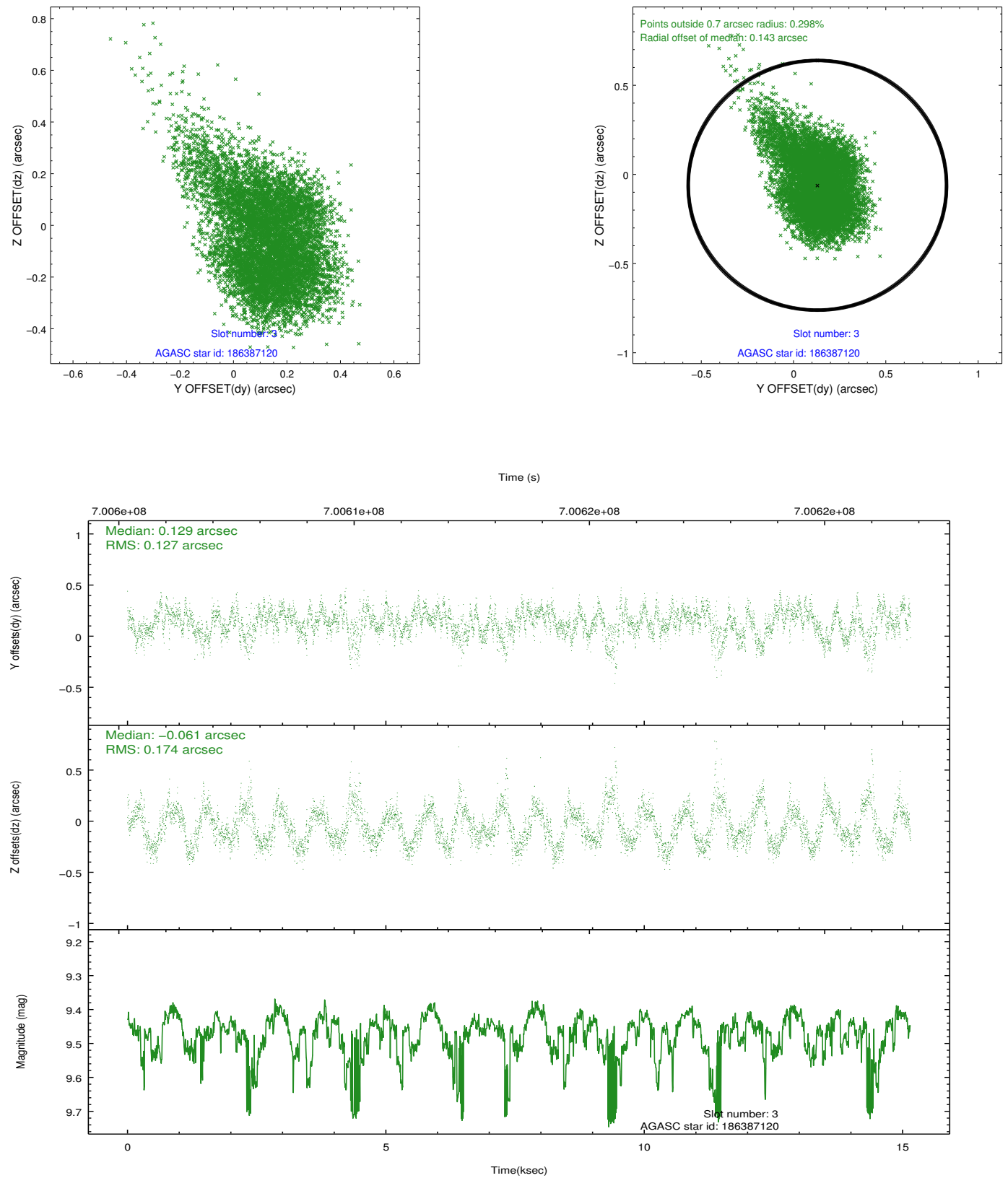


Slot Statistics

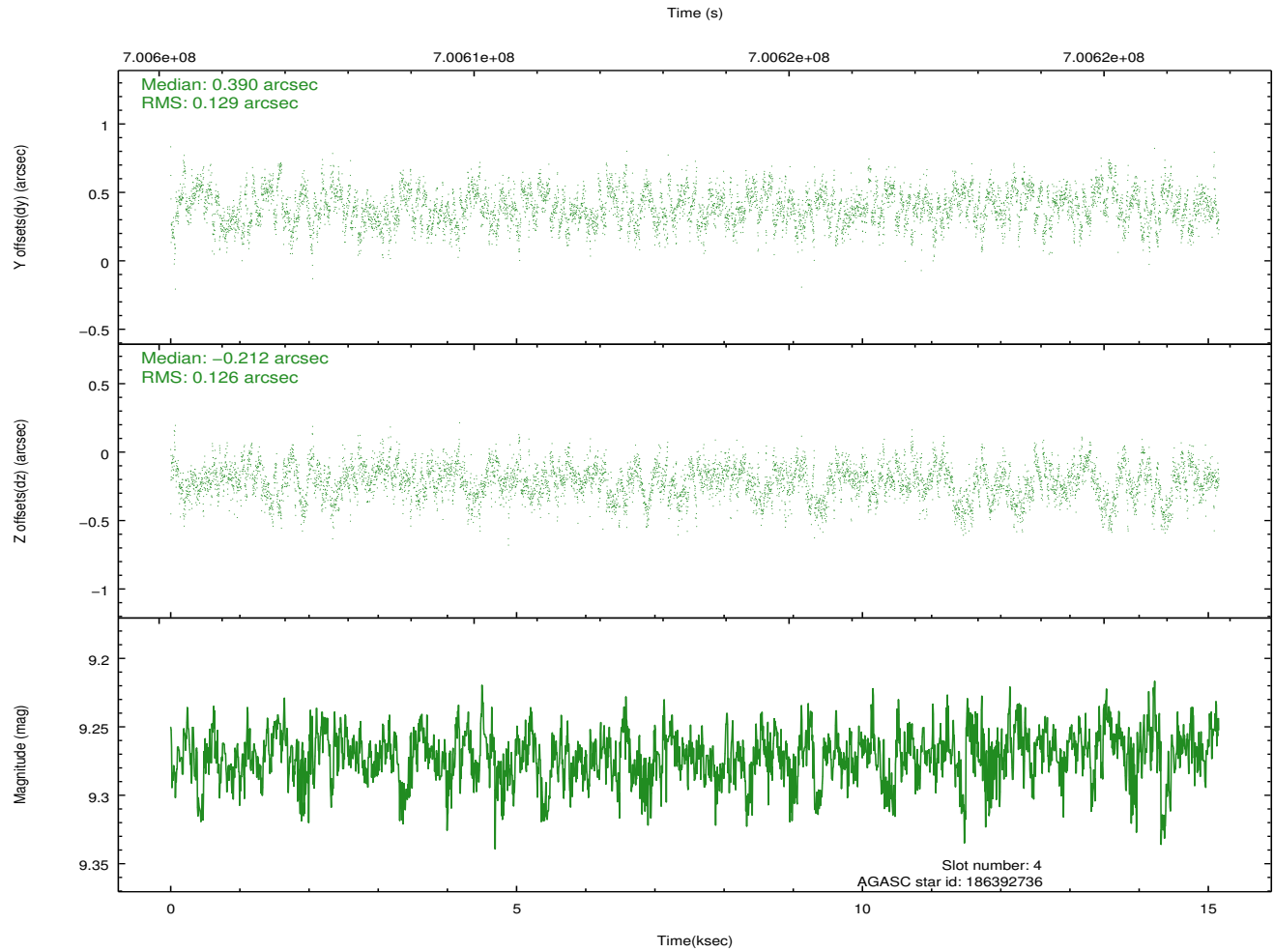
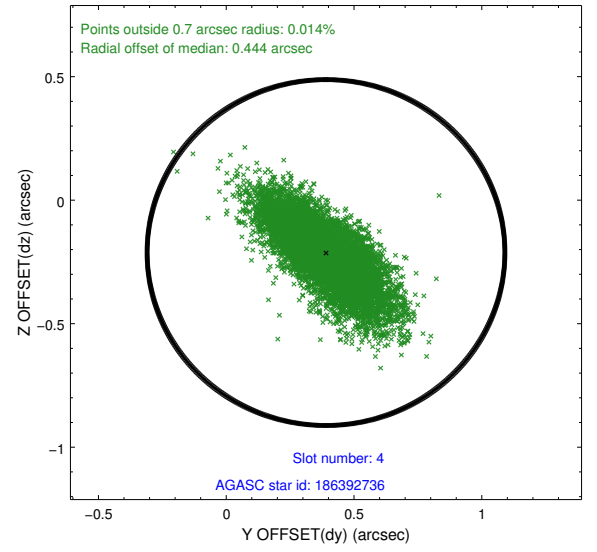
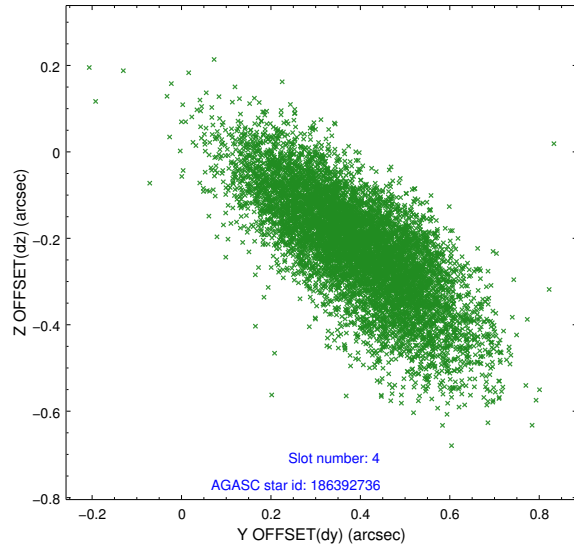
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|-------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0 | FID | | ACIS-S-3 | 7.22 | 3697 | 1.000 | -0.208 | -0.150 | 0.019 | 0.031 | 0.000000 | 0.000000 | 57.30 | -1866 |
| 1 | FID | | ACIS-S-4 | 7.10 | 3697 | 1.000 | 0.465 | 0.179 | 0.029 | 0.044 | 0.000000 | 0.000000 | 2158.10 | 171 |
| 2 | FID | | ACIS-S-5 | 7.09 | 3697 | 1.000 | -0.282 | -0.021 | 0.025 | 0.043 | 0.000000 | 0.000000 | -1808.48 | 165 |
| 3 | GUIDE | used | 186387120 | 9.47 | 7376 | 1.000 | 0.129 | -0.061 | 0.218 | 0.370 | 154.569064 | 18.975371 | 1414.66 | -2230 |
| 4 | GUIDE | used | 186392736 | 9.27 | 7387 | 1.000 | 0.390 | -0.212 | 0.185 | 0.333 | 154.383114 | 18.793126 | 2321.58 | -2318 |
| 5 | GUIDE | used | 186517504 | 8.27 | 7391 | 1.000 | 0.053 | 0.238 | 0.134 | 0.231 | 155.199091 | 19.538995 | -1506.61 | -1815 |
| 6 | GUIDE | used | 186519112 | 6.99 | 7392 | 1.000 | -0.150 | -0.040 | 0.098 | 0.176 | 155.746796 | 19.130951 | -1523.75 | 554 |
| 7 | GUIDE | used | 186522712 | 10.15 | 7338 | 1.000 | -0.418 | 0.082 | 0.303 | 0.499 | 154.805892 | 18.837742 | 1299.56 | -1288 |

2.4 Star Slots

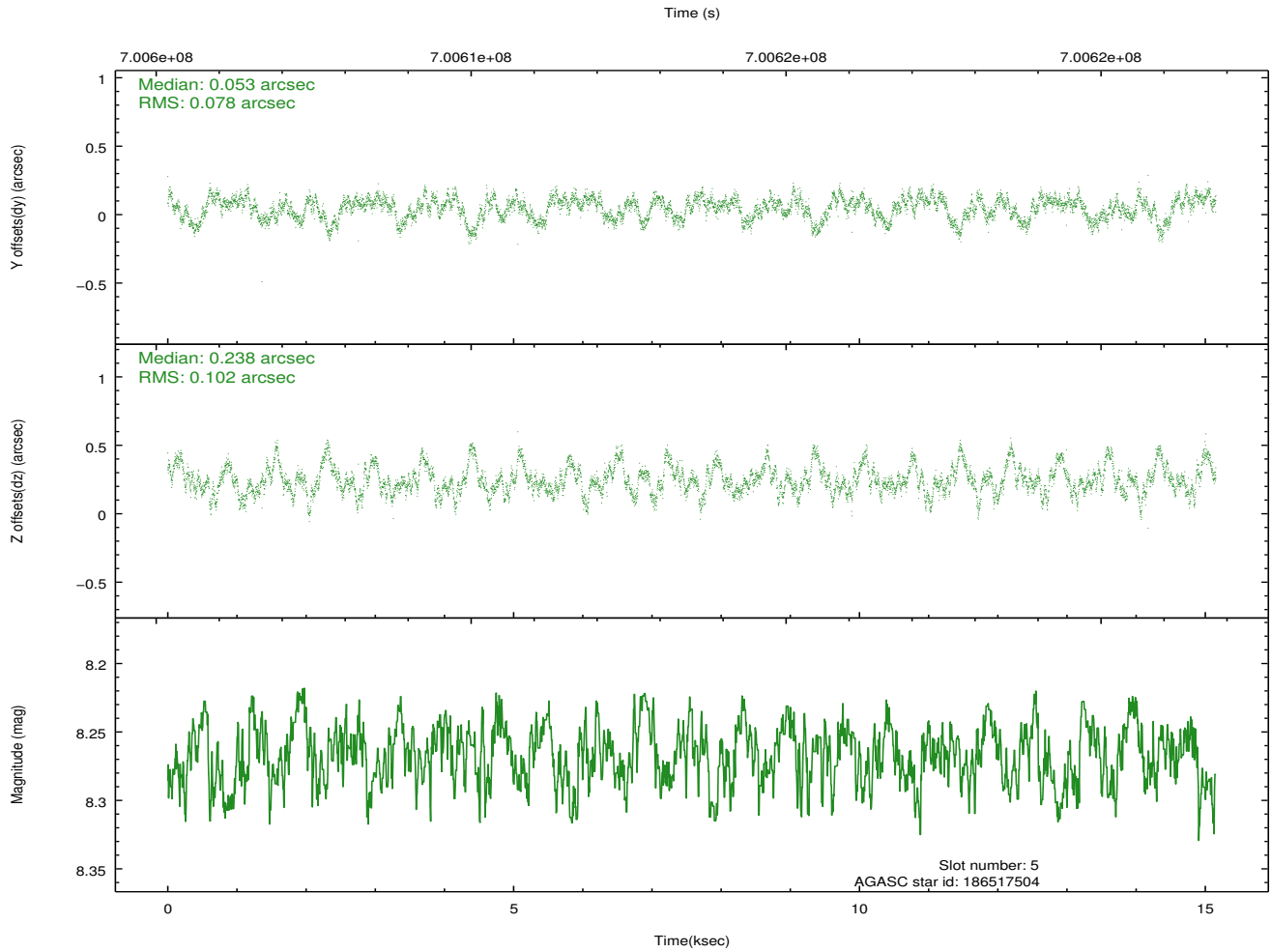
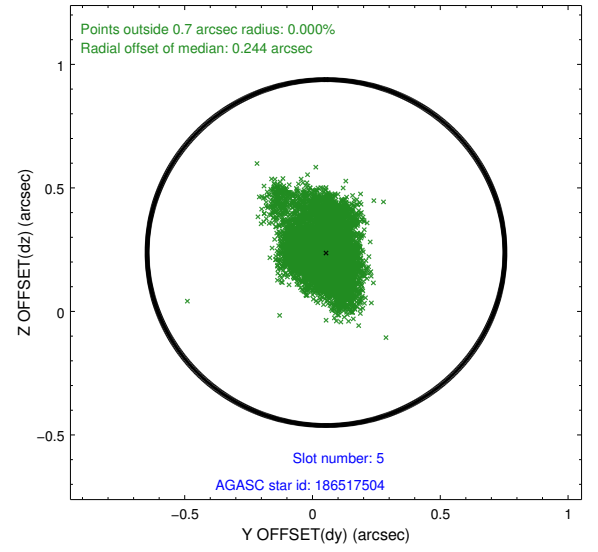
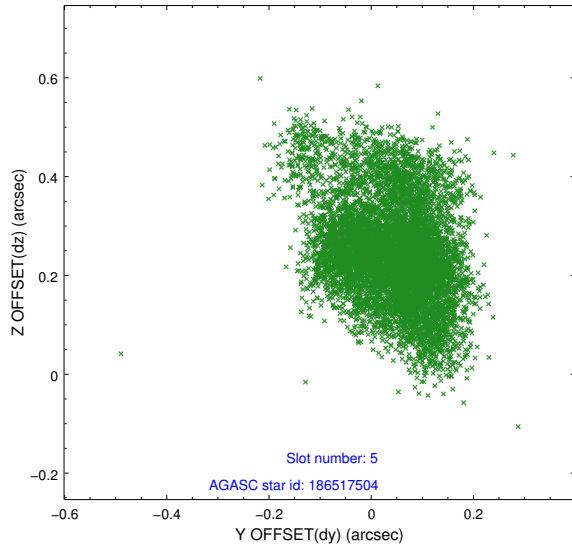
2.4.1 Slot 3



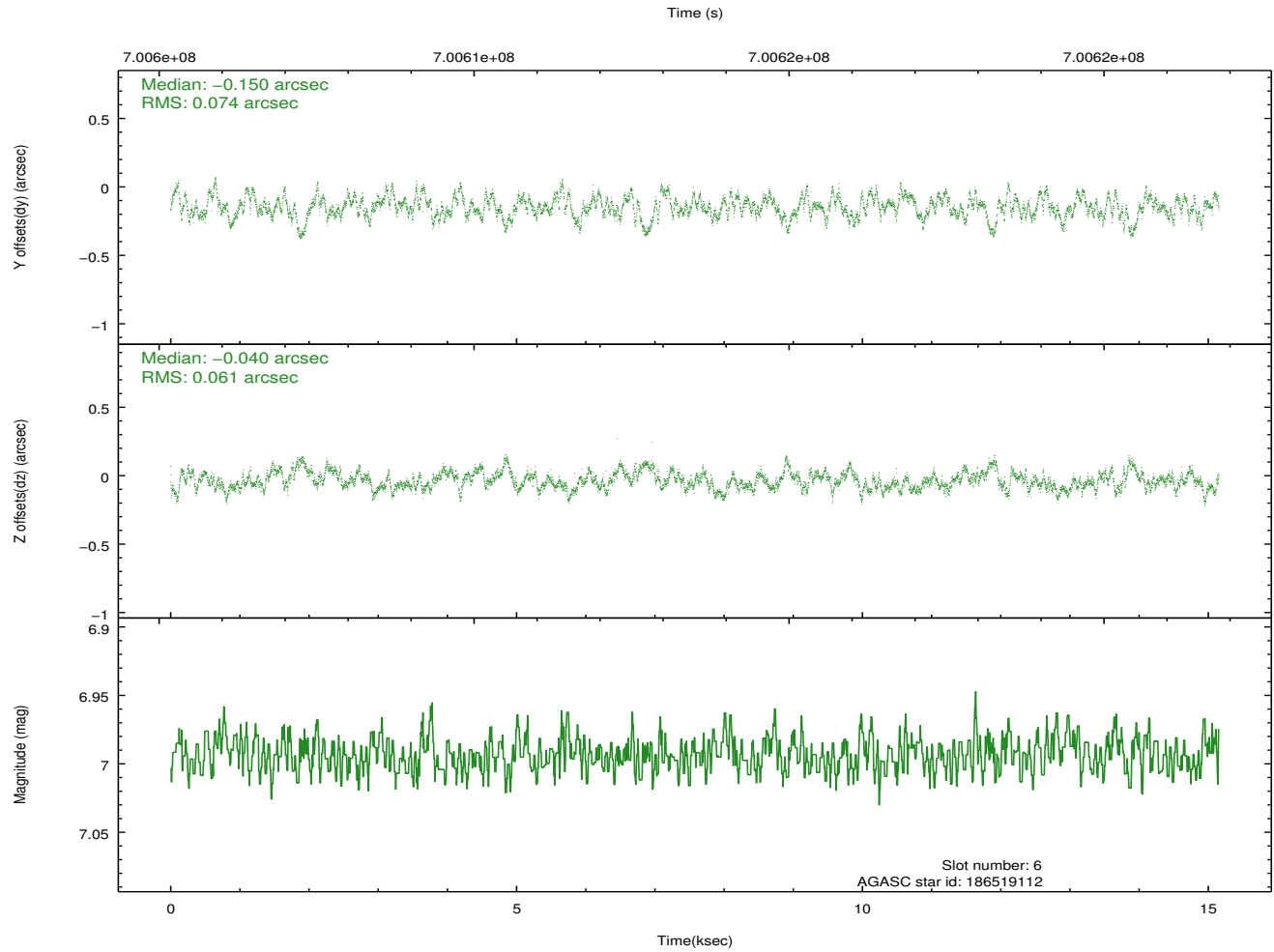
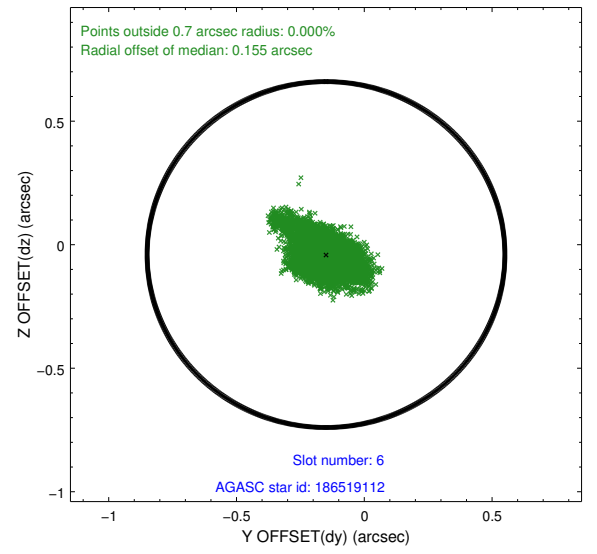
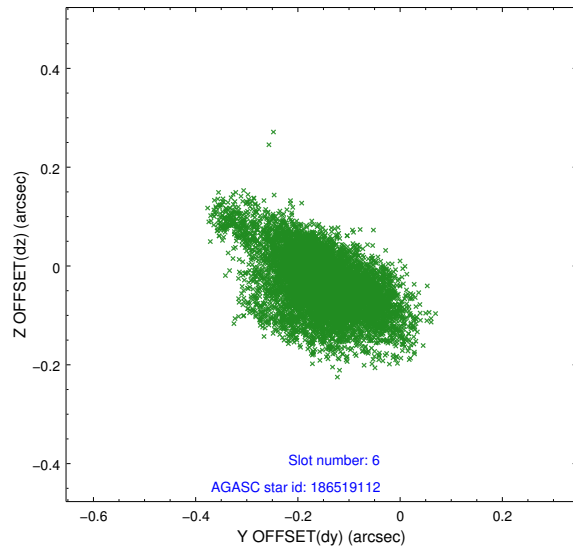
2.4.2 Slot 4



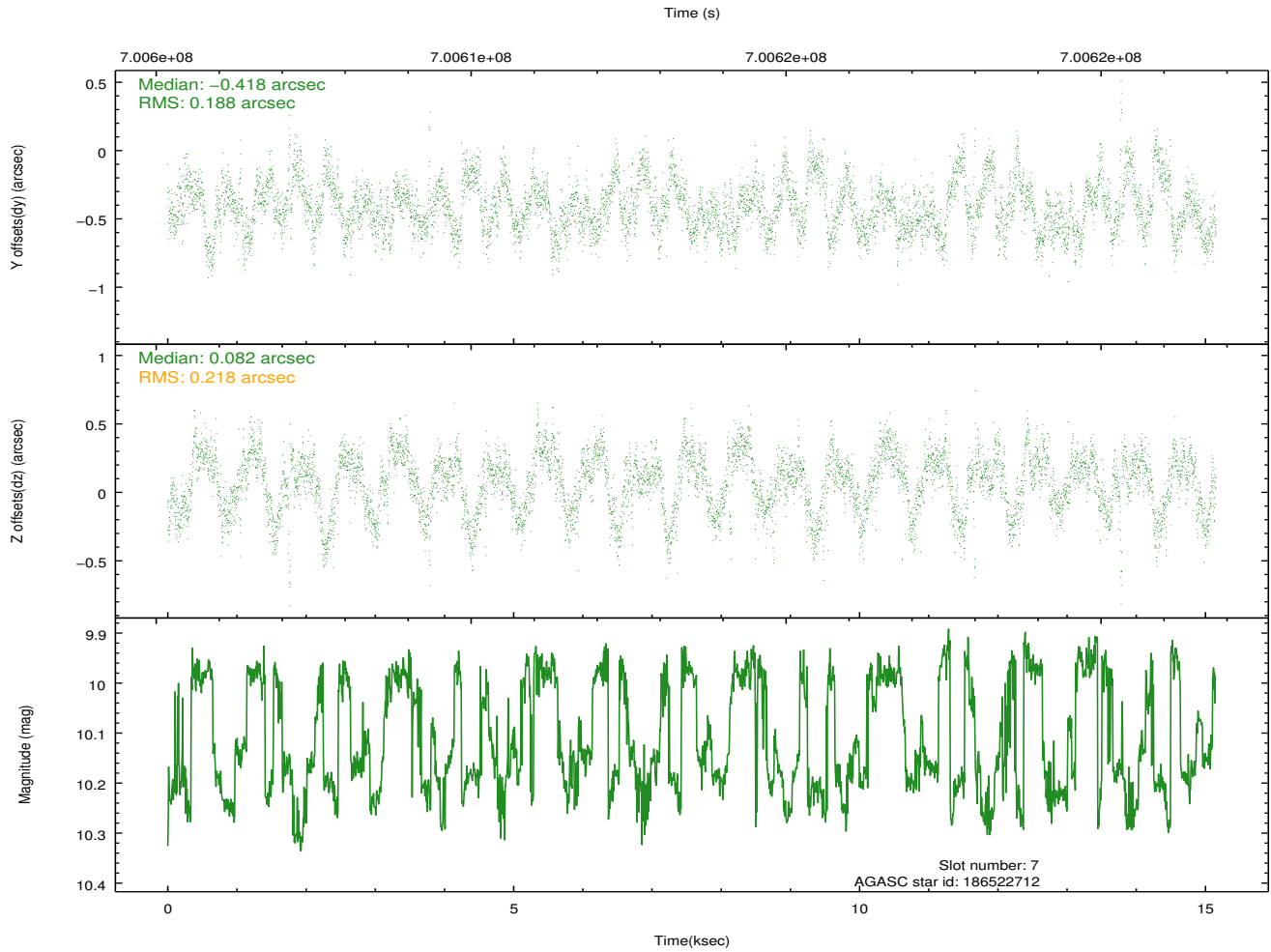
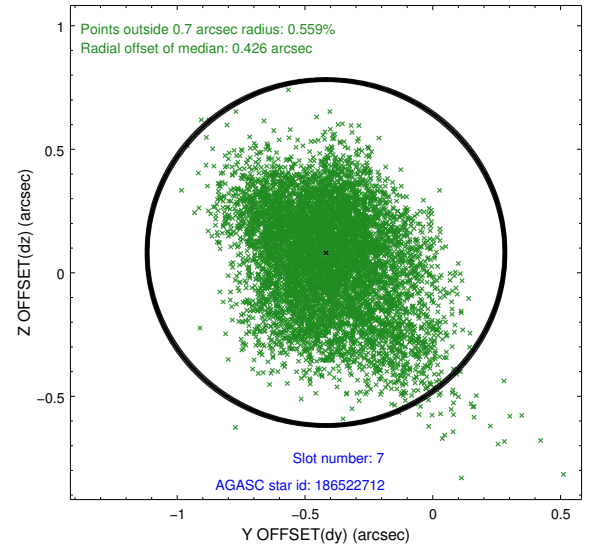
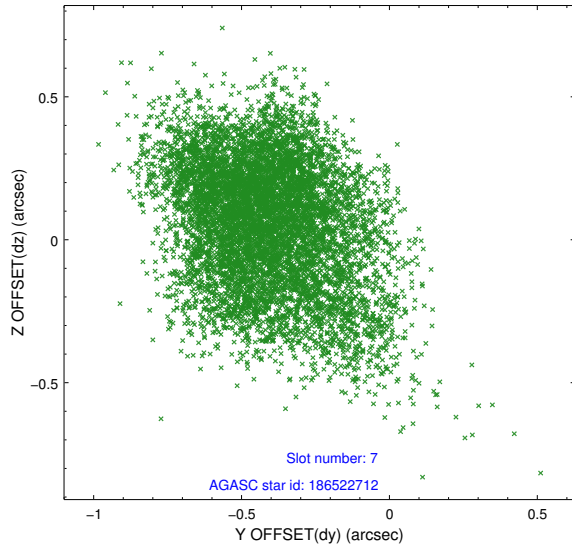
2.4.3 Slot 5



2.4.4 Slot 6

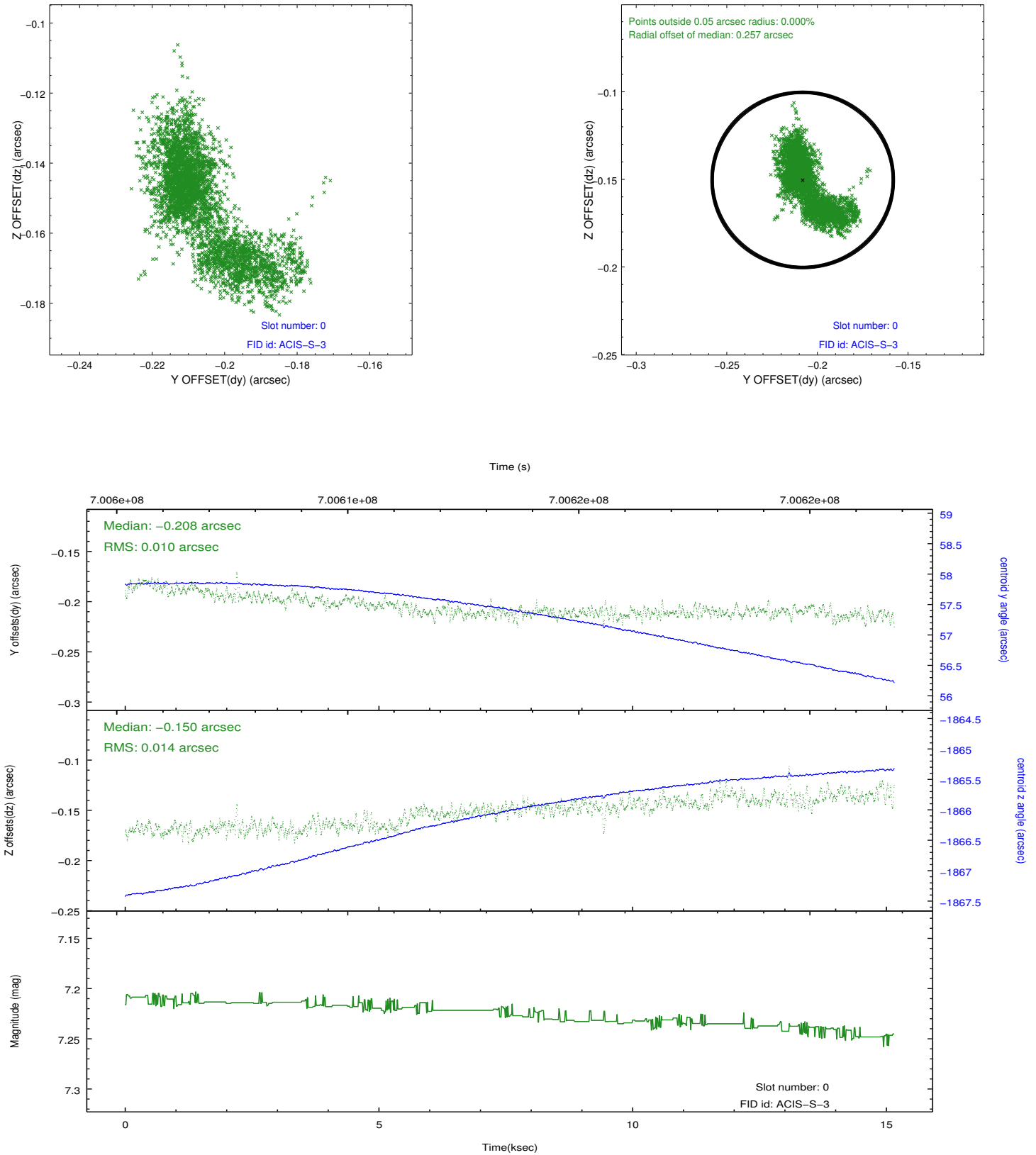


2.4.5 Slot 7

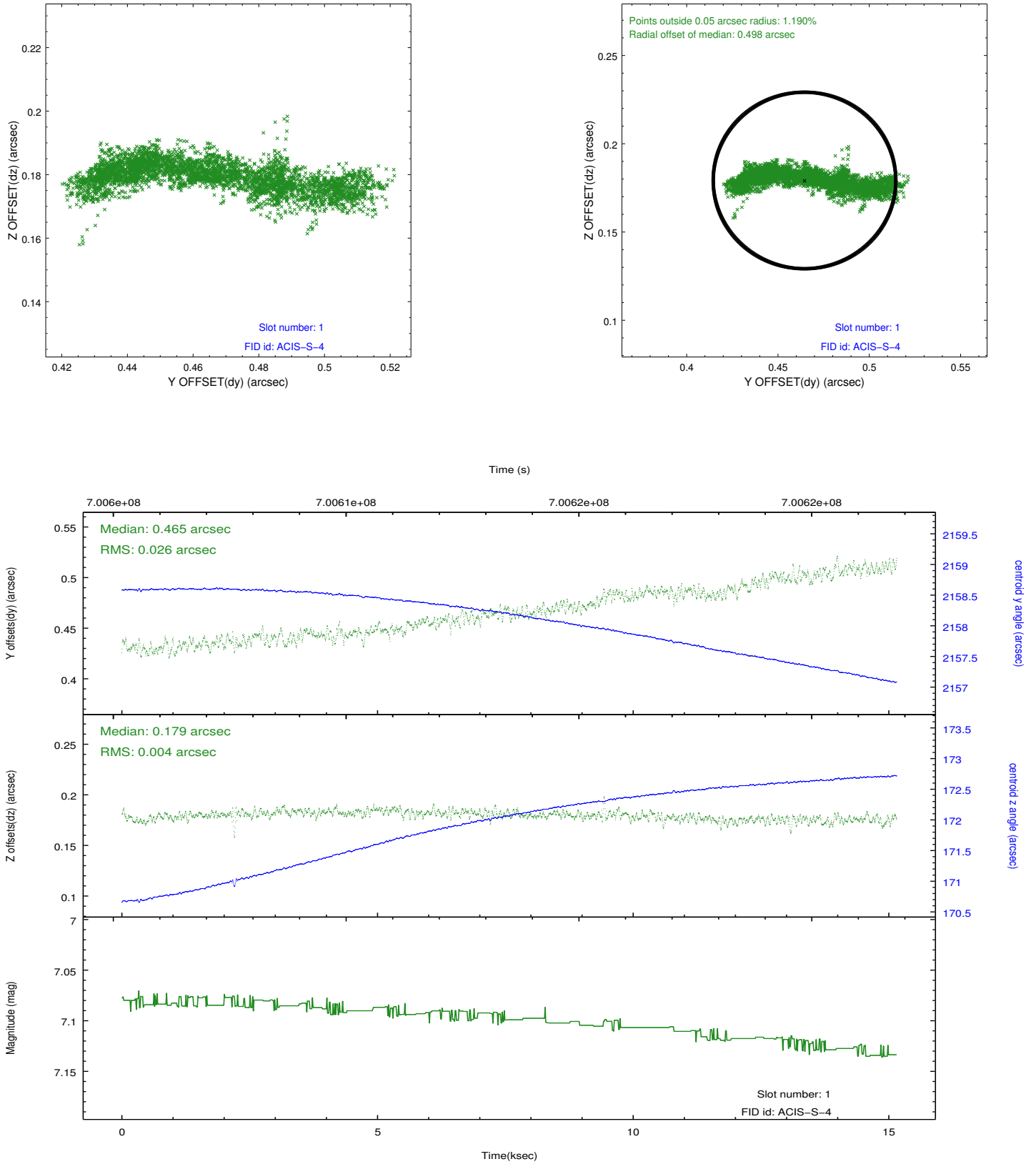


2.5 FID Slots

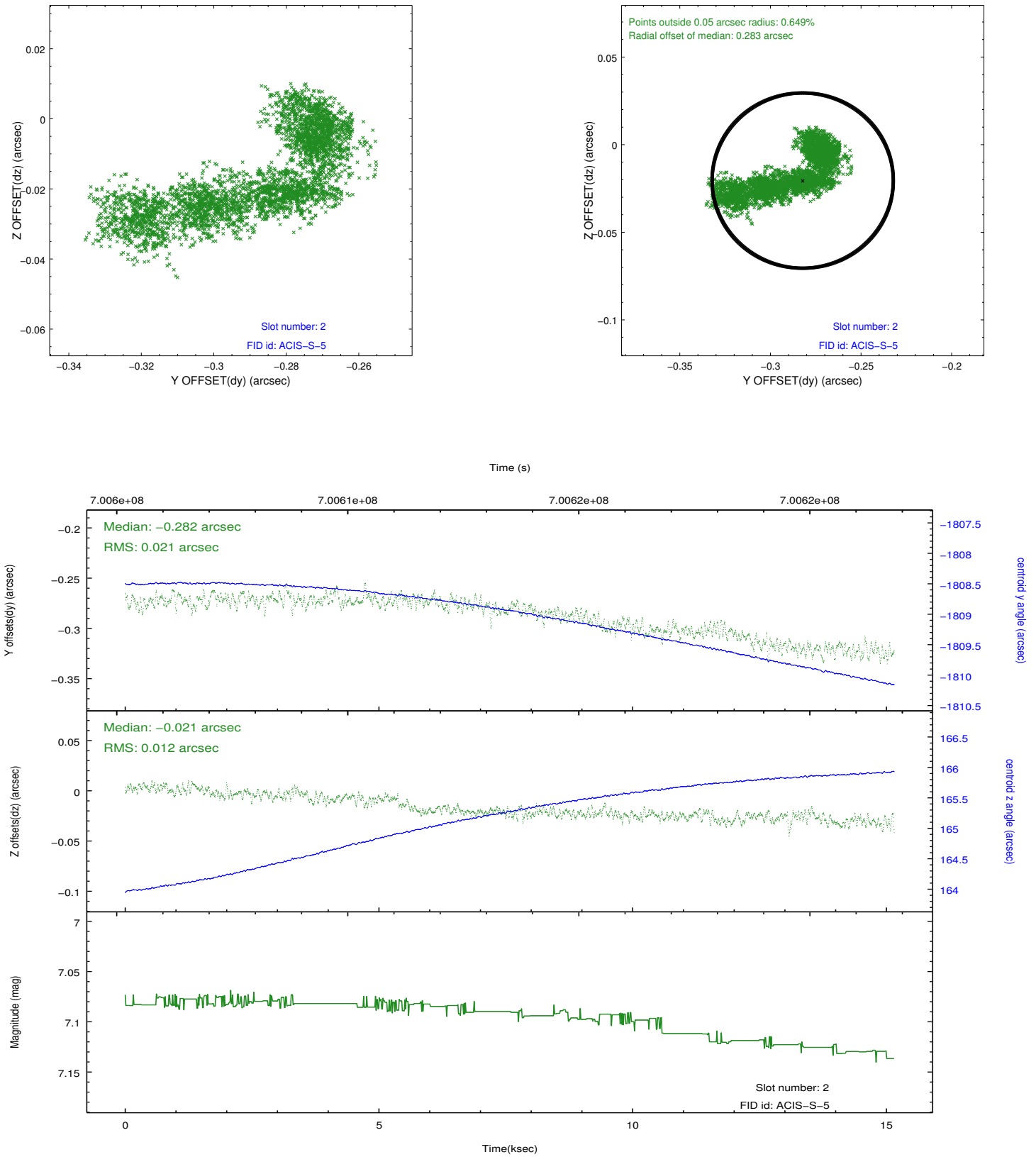
2.5.1 Slot 0



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) | 2020.03.15 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 15.062900115967 |

A.2 Comments