

V&V Reference Report

L2 ASCDS Version : 10.4.2.1

Observation 17087 - L2 Version 1
Chandra X-Ray Center

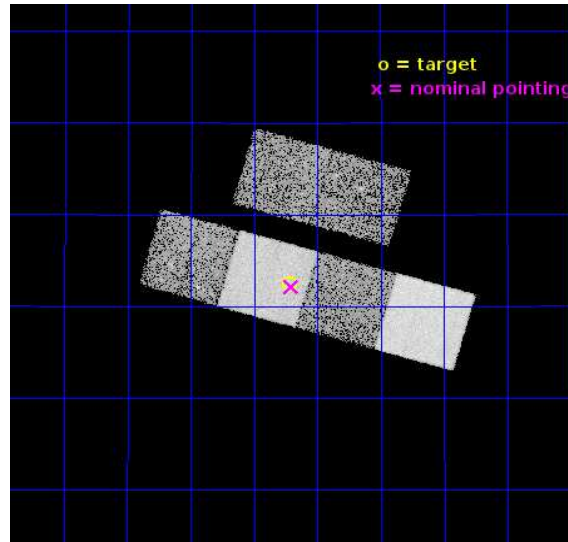
L2 Processing Date : Oct 16 2015

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1 Front

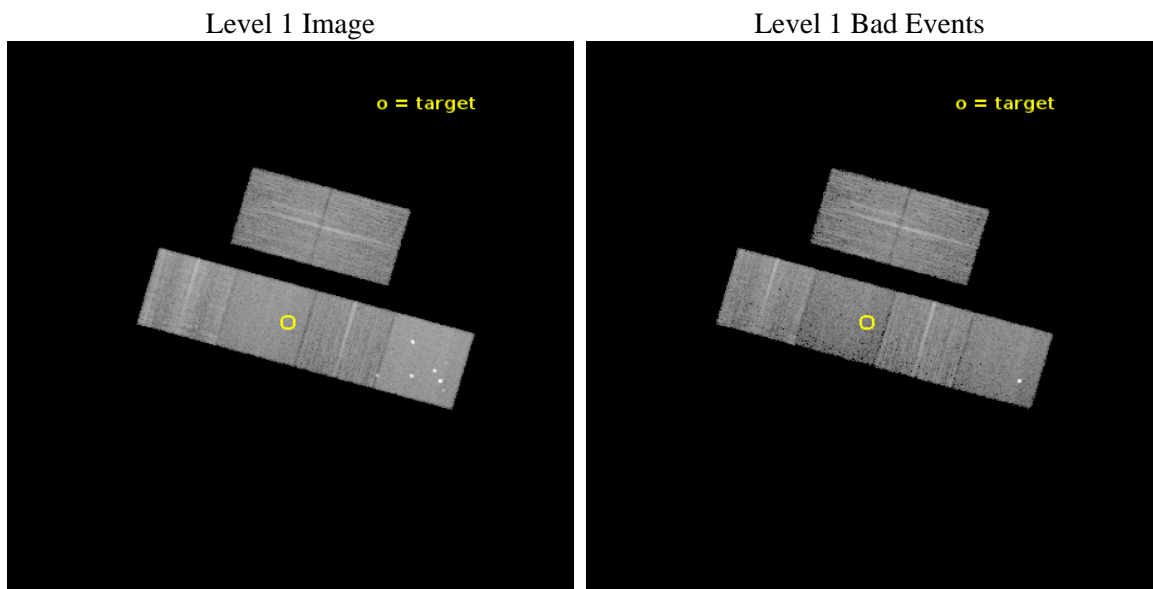
| | | |
|----------|---|---|
| seq_num | 703091 | Sequence number |
| obs_id | 17087 | Observation id |
| title | Explanatory X-ray observation of a hyper-luminous quasar at the end of reionization era | Proposal title |
| observer | Dr Xiaohui Fan | Principal investigator |
| object | SDSS J010013.02+280225.8 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 15.055 | Observer's specified target RA [deg] |
| dec_targ | 28.0405 | Observer's specified target Dec [deg] |
| ra_nom | 15.051494113324 | Nominal RA [deg] |
| dec_nom | 28.036024384168 | Nominal Dec [deg] |
| roll_nom | 195.85828173075 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 14988.65061307 | Sum of GTIs [s] |
| livetime | 14798.855293925 | Livetime [s] |
| ontime2 | 14988.691653013 | Sum of GTIs [s] |
| ontime3 | 14988.527493 | Sum of GTIs [s] |
| ontime5 | 14988.609573007 | Sum of GTIs [s] |
| ontime6 | 14988.568533063 | Sum of GTIs [s] |
| ontime7 | 14988.65061307 | Sum of GTIs [s] |
| ontime8 | 14988.486453056 | Sum of GTIs [s] |
| l2events | 119228 | Number of level 2 events |



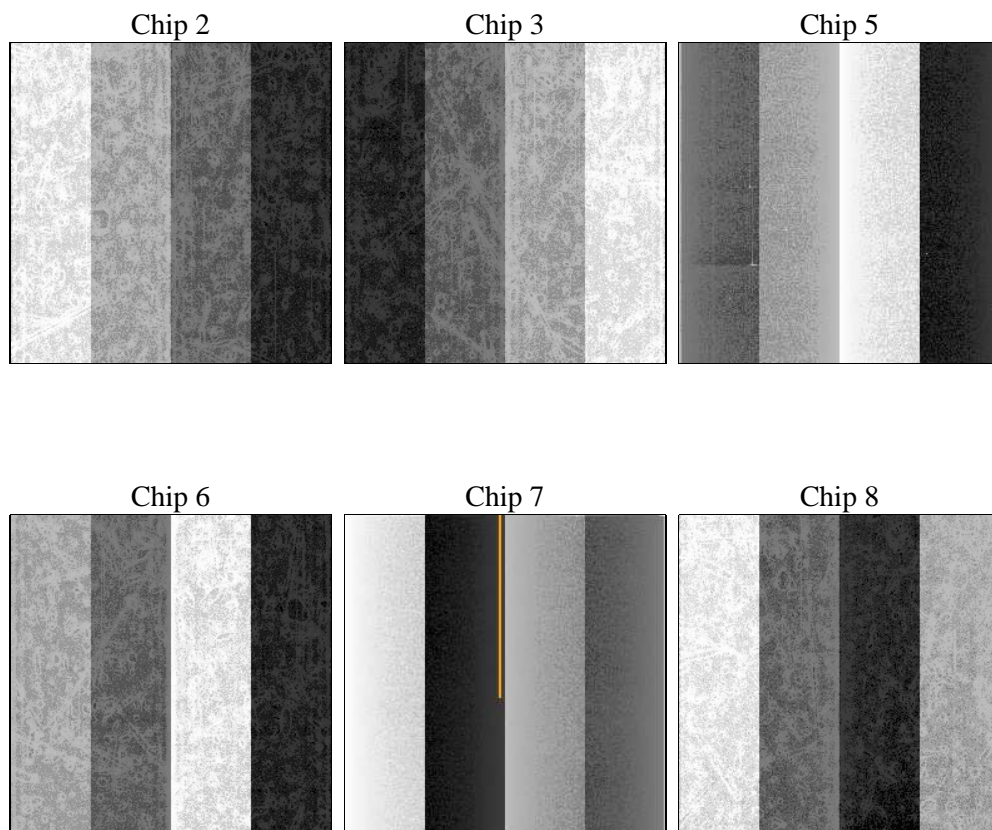
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 15026.888000 | [s] Scheduled observation exposure time |
| ascdsver | 10.4.2.1 | Processing system revision | ontime | 14988.65061307 | Sum of GTIs [s] |
| caldsver | 4.6.10a | | ontime2 | 14988.691653013 | Sum of GTIs [s] |
| date | 2015-10-16T18:12:49 | Date and time of file creation | ontime3 | 14988.527493 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime5 | 14988.609573007 | Sum of GTIs [s] |
| | | | ontime6 | 14988.568533063 | Sum of GTIs [s] |
| | | | ontime7 | 14988.65061307 | Sum of GTIs [s] |
| | | | ontime8 | 14988.486453056 | Sum of GTIs [s] |
| | | | l1events | 510379 | Number of level 1 events |

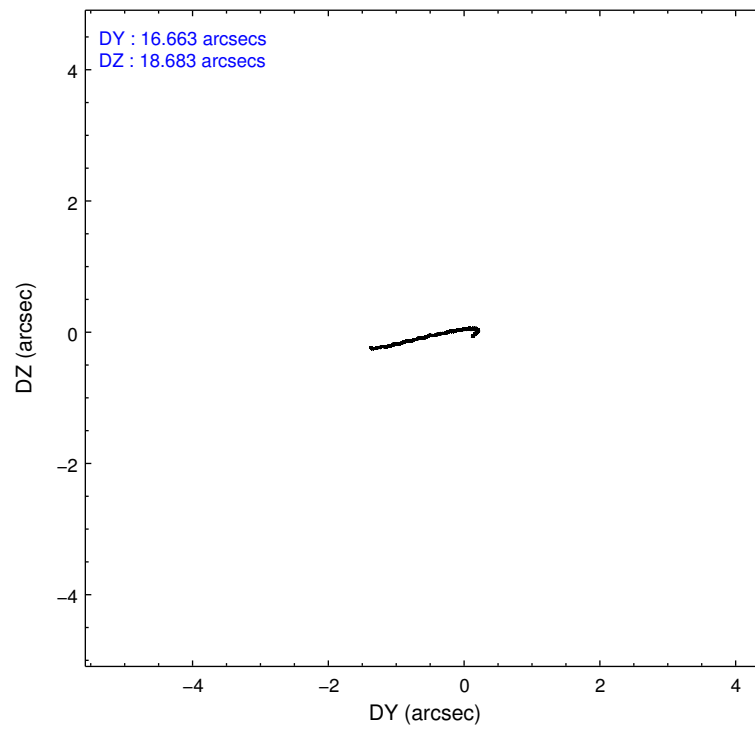
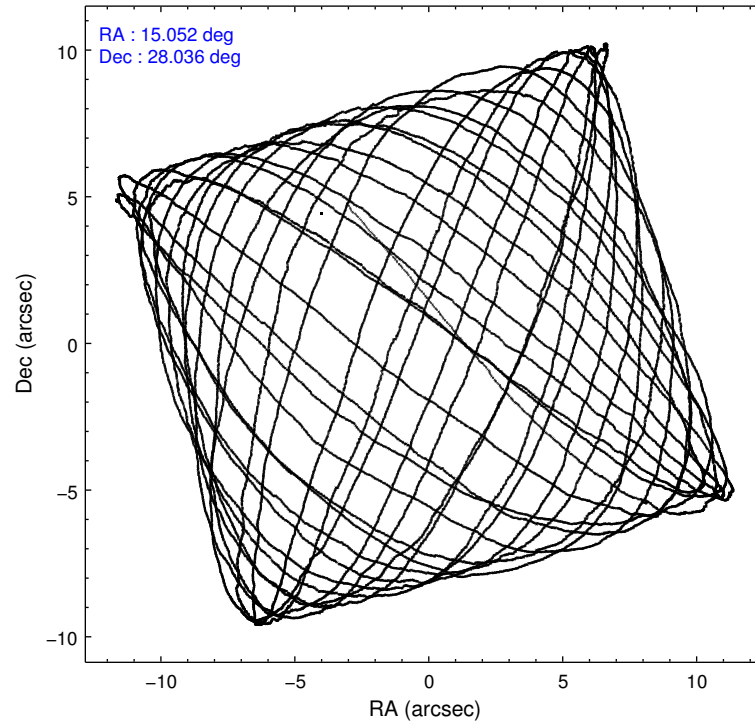
2.1.4 Events

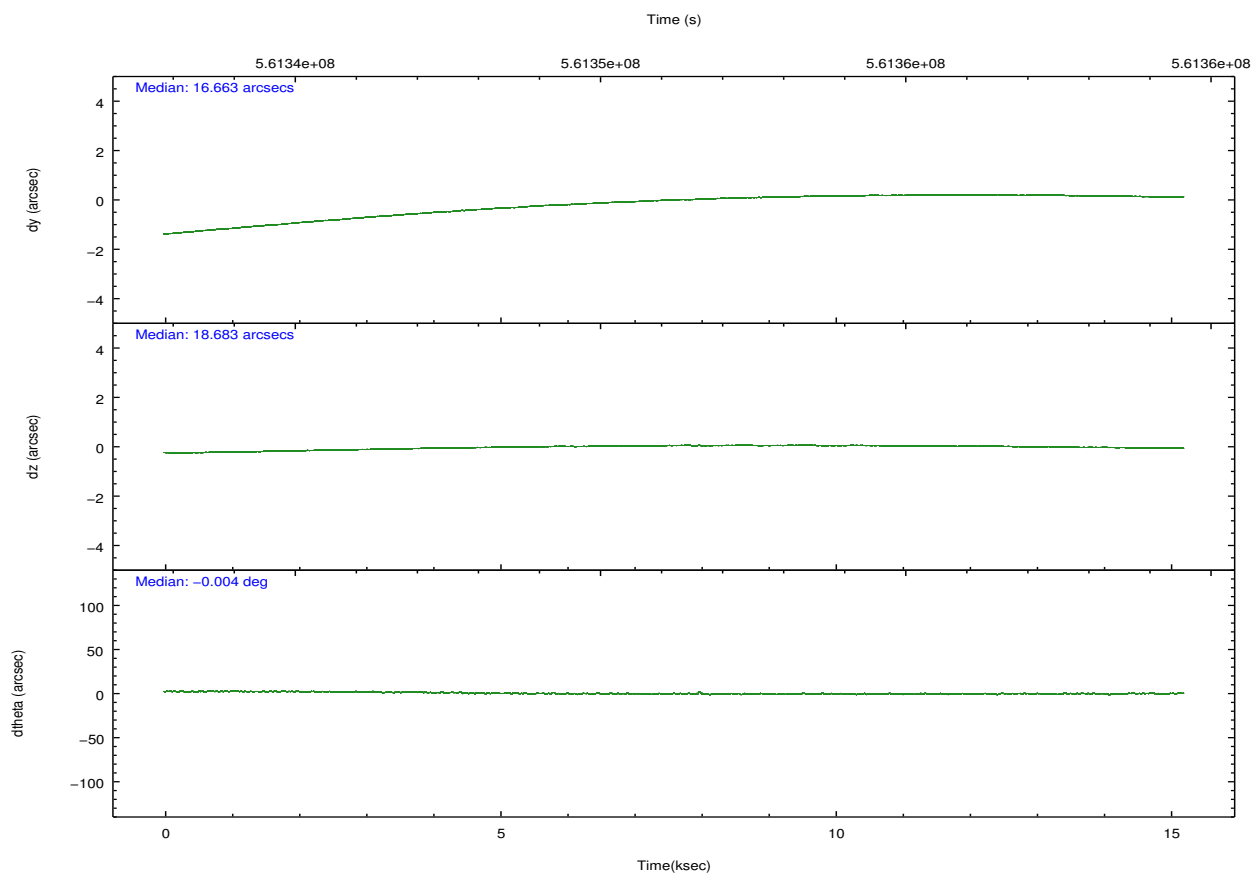
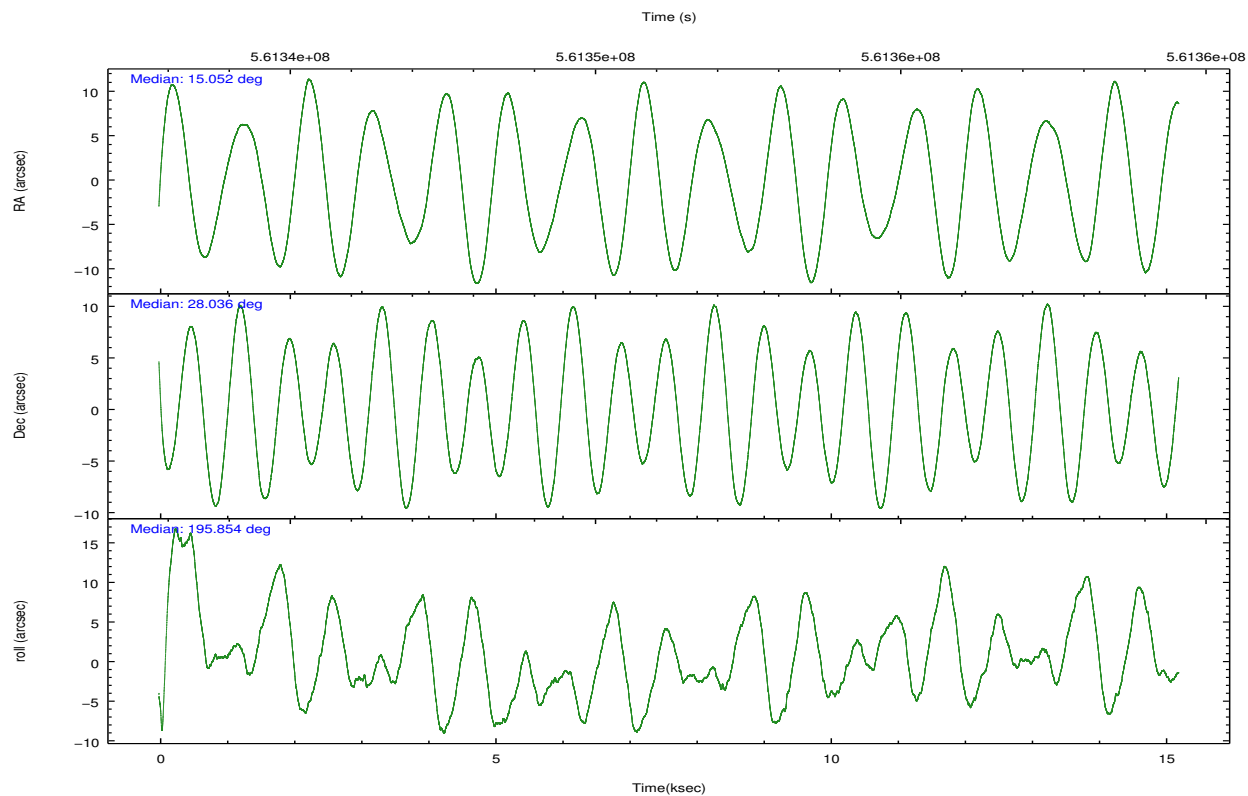
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|--------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 70051 | 68314 | 123347 | 70596 | 83458 | 94613 | grade 0 events | 2858 | 2896 | 14164 | 2946 | 3705 | 7363 |
| rejected events | 62070 | 60521 | 57332 | 62118 | 44397 | 67885 | | 4% | 4% | 11% | 4% | 4% | 7% |
| rejected % | 88% | 88% | 46% | 87% | 53% | 71% | grade 1 events | 35 | 50 | 277 | 46 | 146 | 83 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 1991 | 1756 | 18354 | 1993 | 8679 | 6689 |
| | | | | | | | | 2% | 2% | 14% | 2% | 10% | 7% |
| | | | | | | | grade 3 events | 782 | 833 | 2043 | 868 | 3326 | 2636 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 4 events | 821 | 799 | 1841 | 869 | 3246 | 2612 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 5 events | 2555 | 3153 | 7977 | 3289 | 8785 | 4994 |
| | | | | | | | | 3% | 4% | 6% | 4% | 10% | 5% |
| | | | | | | | grade 6 events | 1530 | 1511 | 29621 | 1805 | 20116 | 7429 |
| | | | | | | | | 2% | 2% | 24% | 2% | 24% | 7% |
| | | | | | | | grade 7 events | 59479 | 57316 | 49070 | 58780 | 35455 | 62807 |
| | | | | | | | | 84% | 83% | 39% | 83% | 42% | 66% |

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 | 15.072821 | 15.05149411332377 | CCD I2 on | Y | Y |
| [deg] Pointing Dec | 28.056005 | 28.03602438416801 | CCD I3 on | Y | Y |
| [deg] Pointing Roll | 195.691647 | 195.8582817307485 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | O1 | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | Y | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 | CCD S4 on | Y | Y |
| [s] Observation start time (MET) | 561343770.184000 | 561342739.06313 | CCD S5 on | N | N |
| Observation start date | 2015-10-16T00:48:22 | 2015-10-16T00:32:19 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 561358796.184000 | 561359018.62655 | On-chip summing requested | N | N |
| Observation end date | 2015-10-16T04:58:48 | 2015-10-16T05:03:38 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



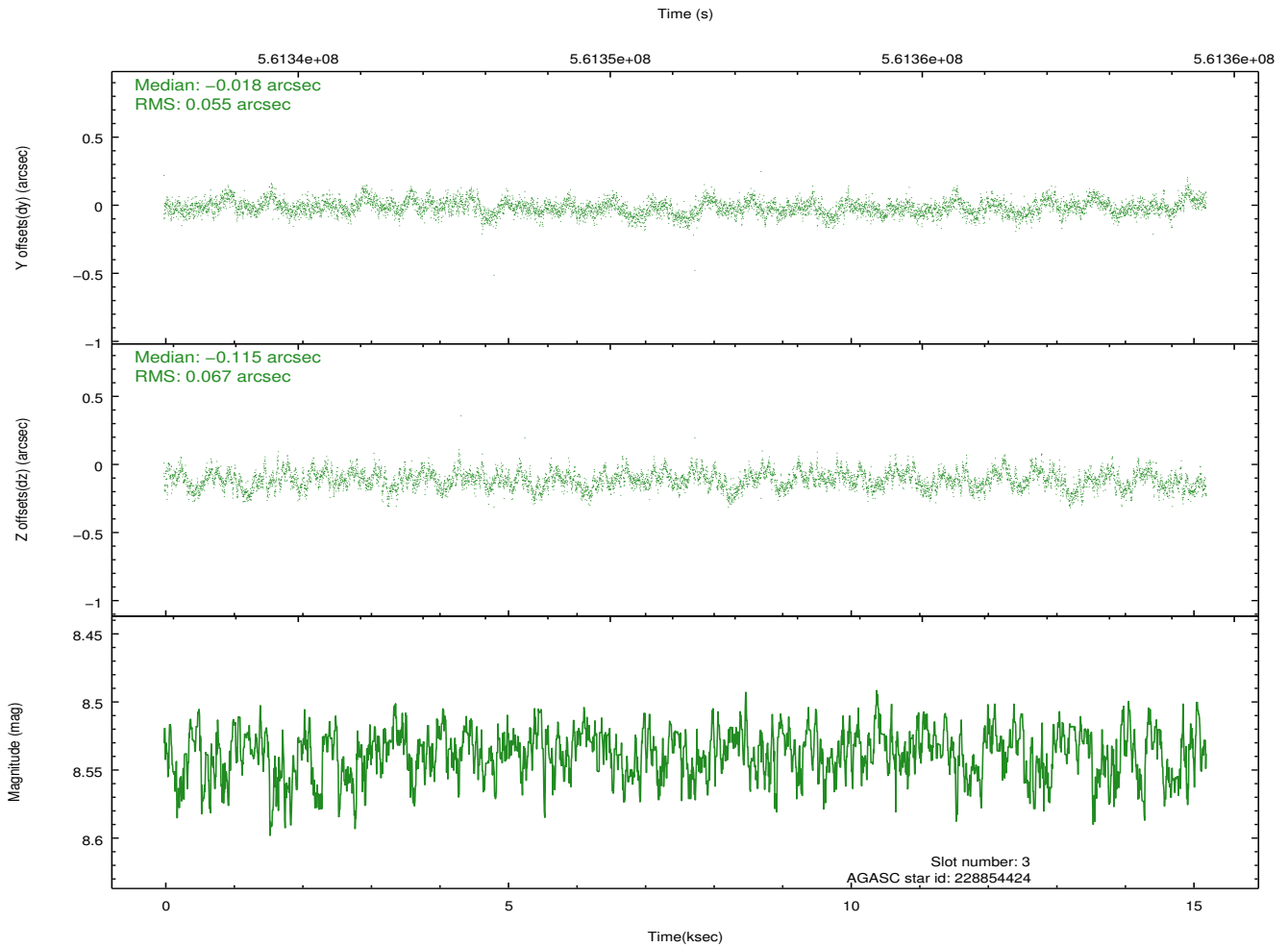
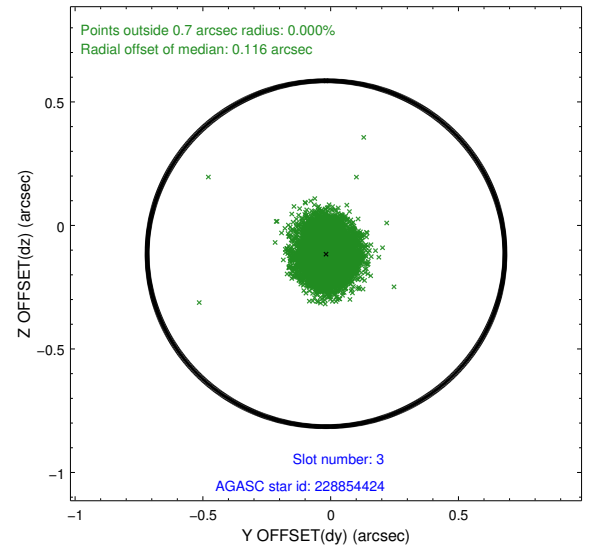
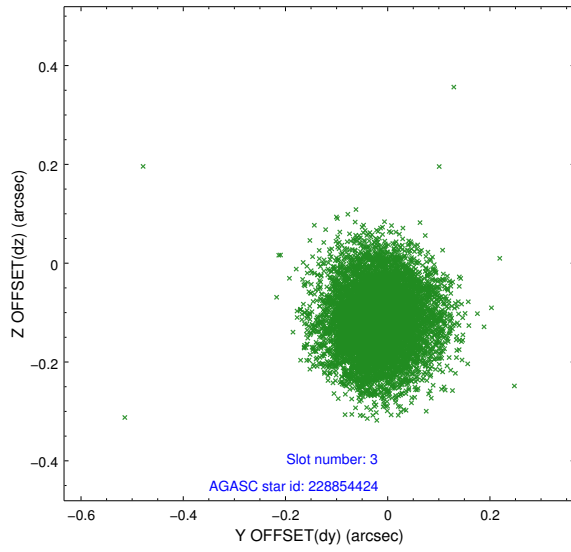


Slot Statistics

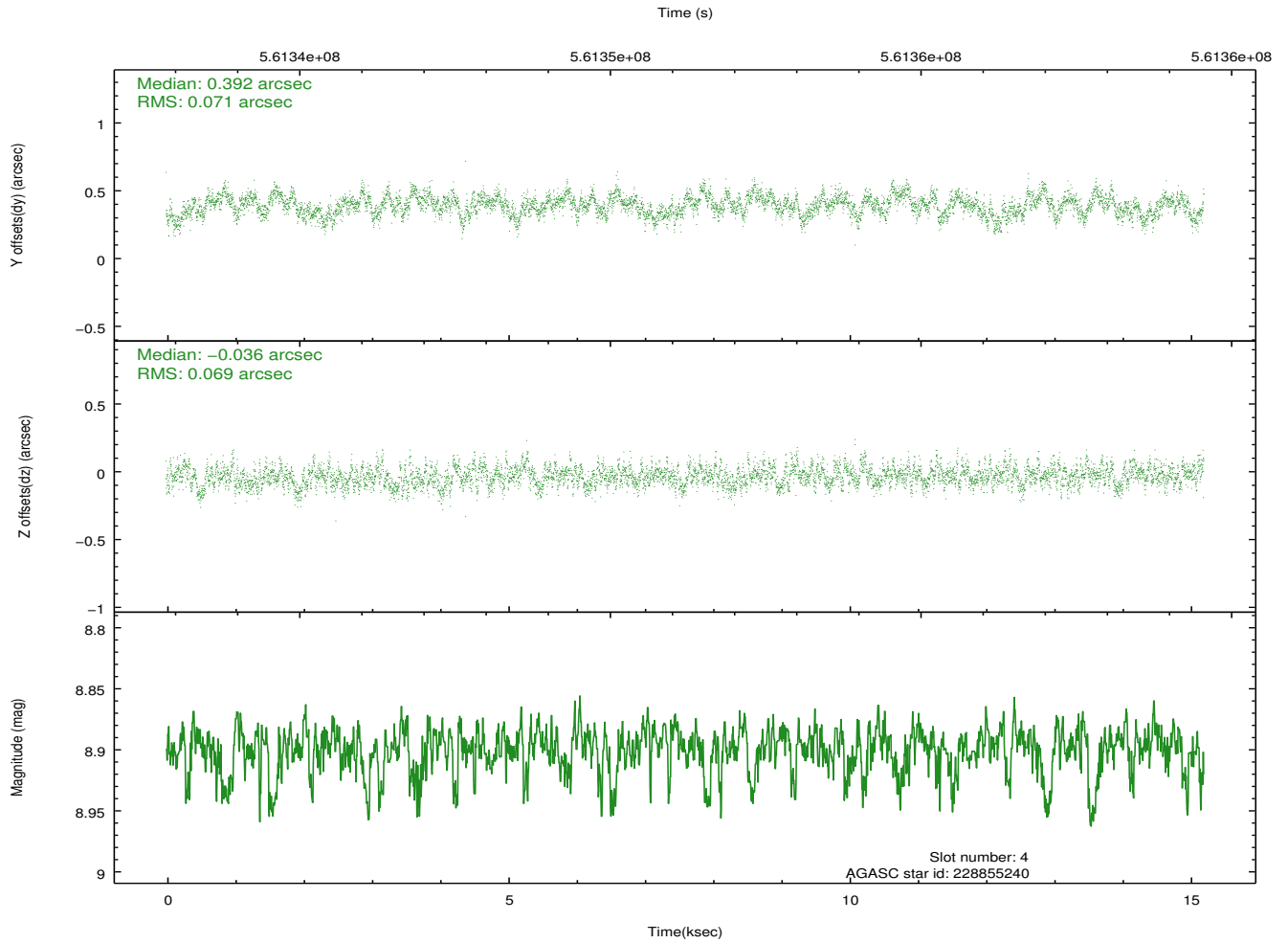
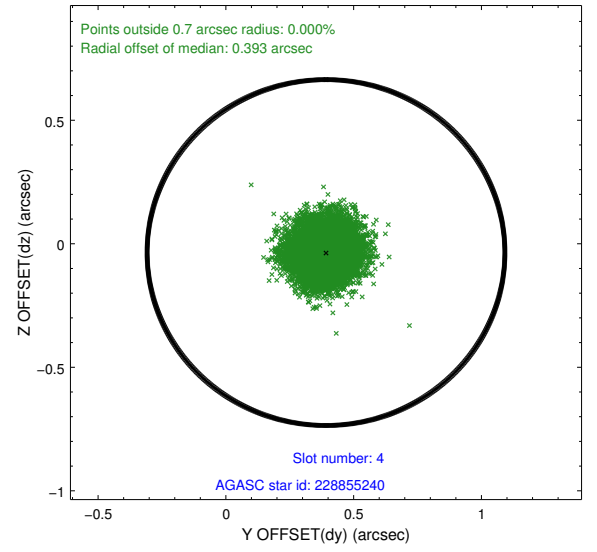
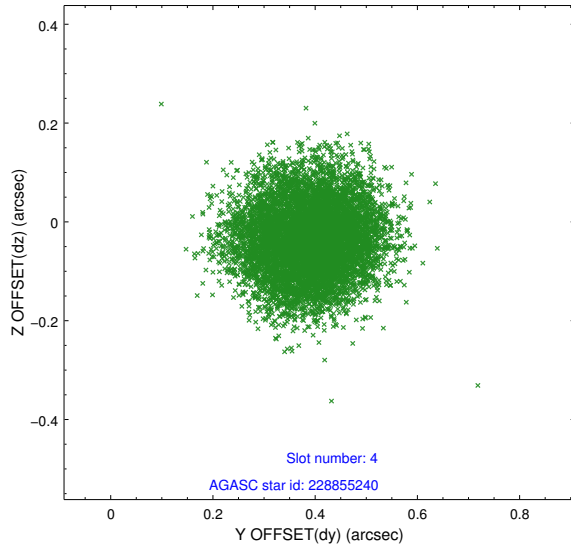
| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0 | FID | | ACIS-S-2 | 7.12 | 3709 | -0.165 | -0.147 | 0.010 | 0.017 | 0.000000 | 0.000000 | -769.62 | -1740.22 |
| 1 | FID | | ACIS-S-4 | 7.21 | 3709 | 0.434 | 0.119 | 0.008 | 0.013 | 0.000000 | 0.000000 | 2144.13 | 168.21 |
| 2 | FID | | ACIS-S-5 | 7.23 | 3708 | -0.299 | 0.037 | 0.013 | 0.019 | 0.000000 | 0.000000 | -1822.21 | 162.15 |
| 3 | GUIDE | used | 228854424 | 8.54 | 7416 | -0.018 | -0.115 | 0.092 | 0.146 | 14.530085 | 27.982619 | 1731.86 | -214.46 |
| 4 | GUIDE | used | 228855240 | 8.90 | 7416 | 0.392 | -0.036 | 0.108 | 0.167 | 14.983382 | 28.678278 | -332.69 | -2233.22 |
| 5 | GUIDE | used | 228857672 | 9.73 | 7415 | -0.468 | -0.047 | 0.189 | 0.291 | 14.603234 | 28.138505 | 1354.08 | -692.09 |
| 6 | GUIDE | used | 228859704 | 8.65 | 7413 | 0.019 | -0.040 | 0.128 | 0.210 | 15.393224 | 28.317142 | -1230.62 | -630.95 |
| 7 | GUIDE | used | 228864344 | 9.67 | 7392 | 0.079 | 0.229 | 0.193 | 0.305 | 15.575104 | 28.778630 | -2229.52 | -2078.47 |

2.4 Star Slots

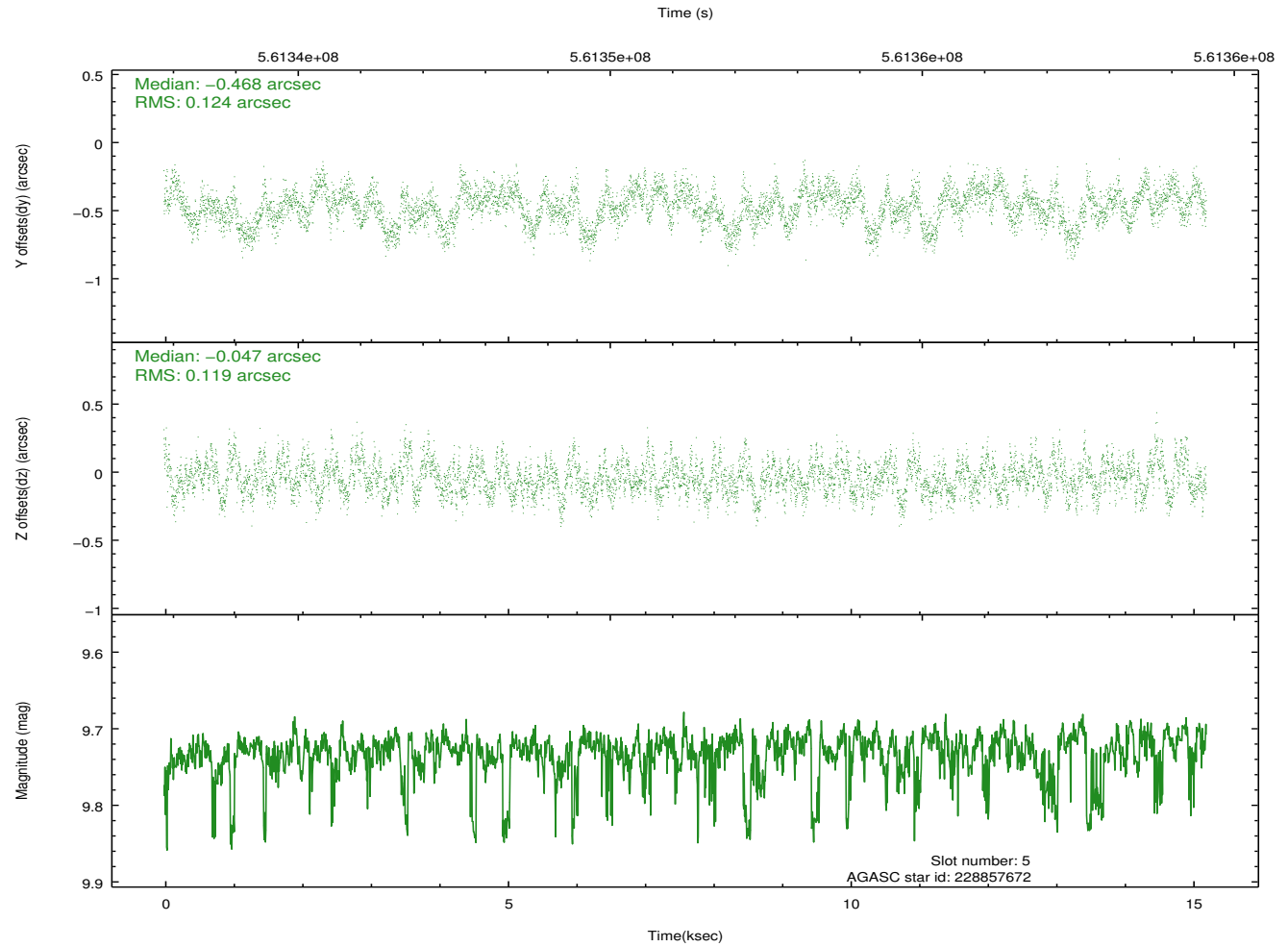
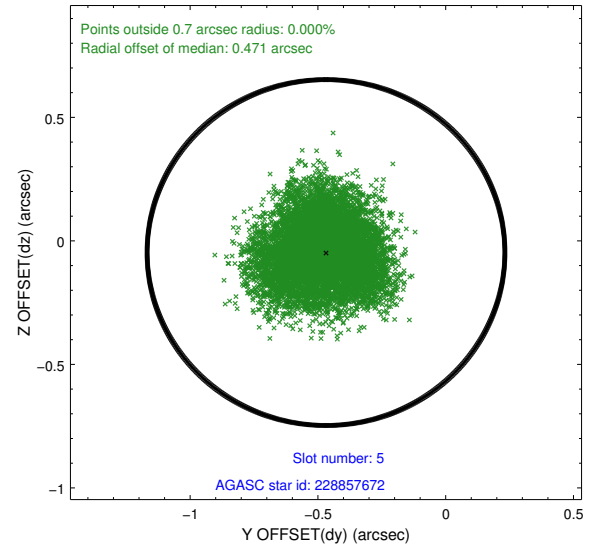
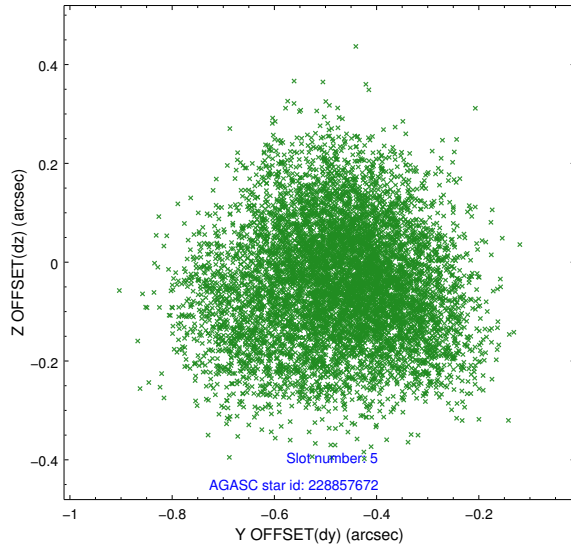
2.4.1 Slot 3



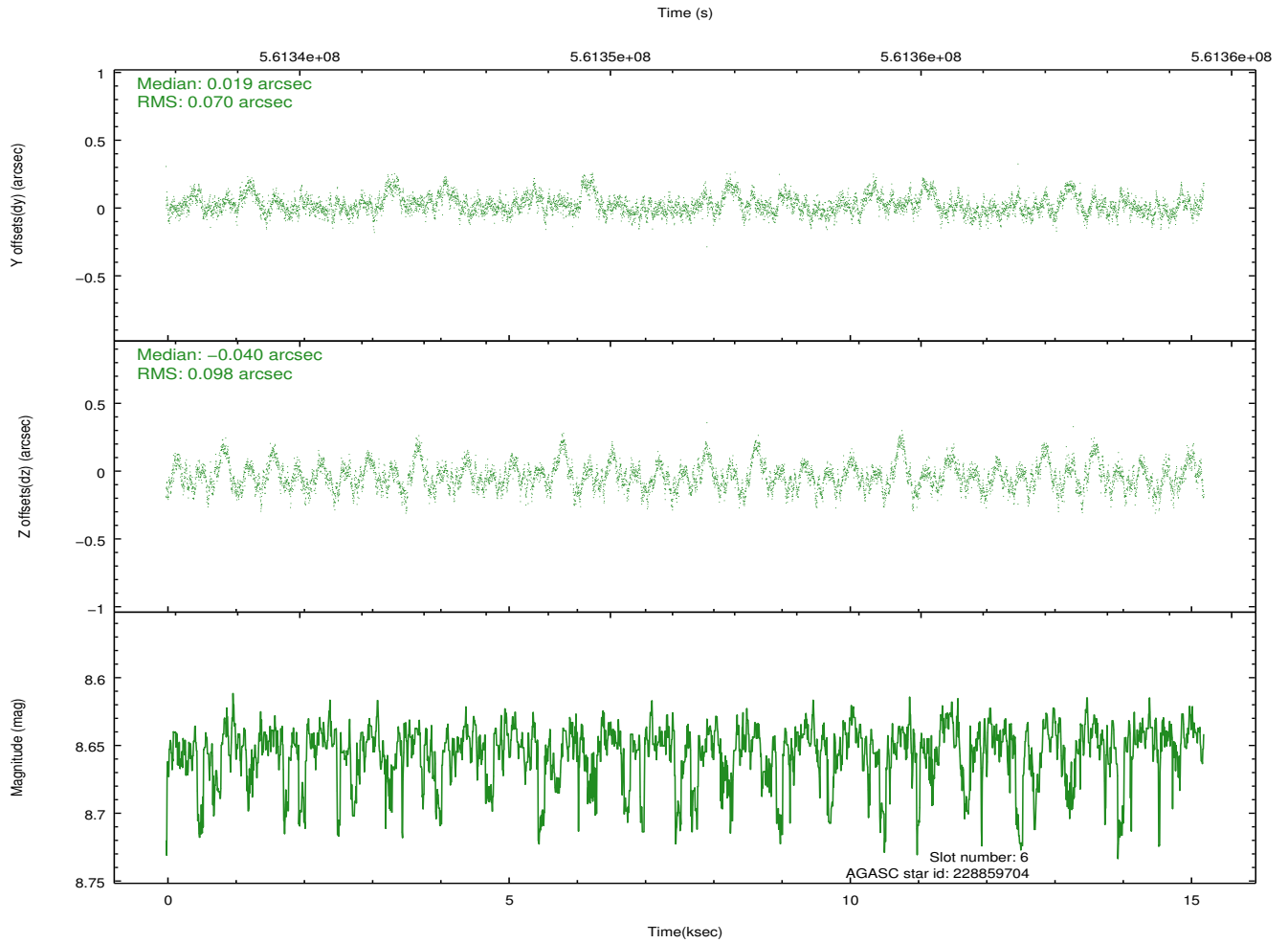
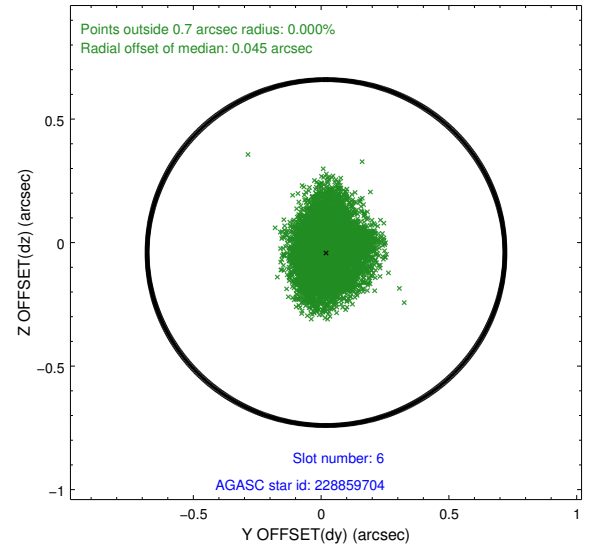
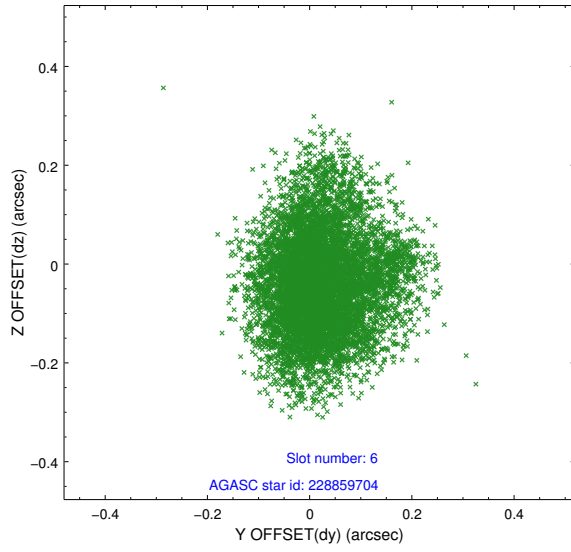
2.4.2 Slot 4



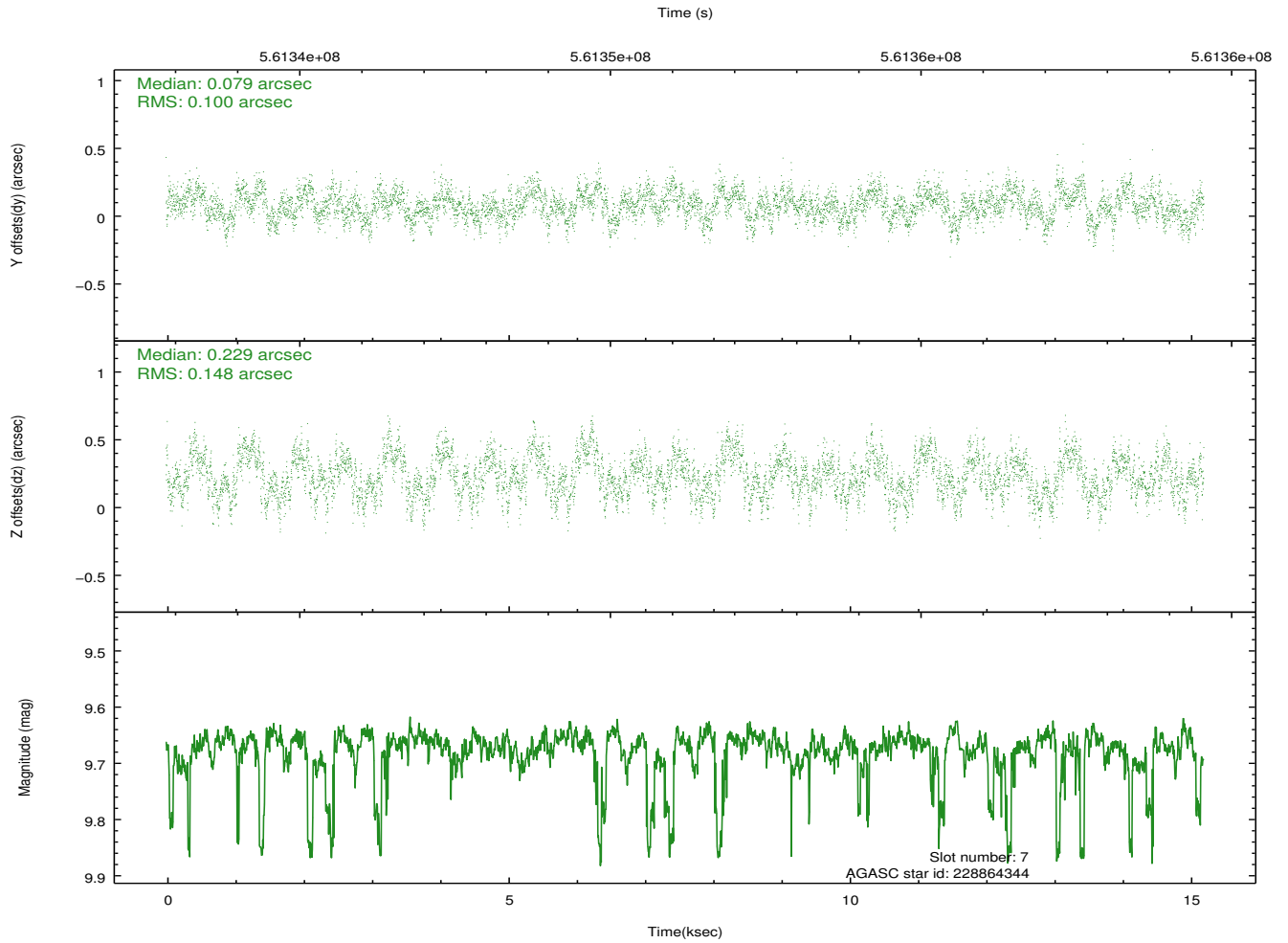
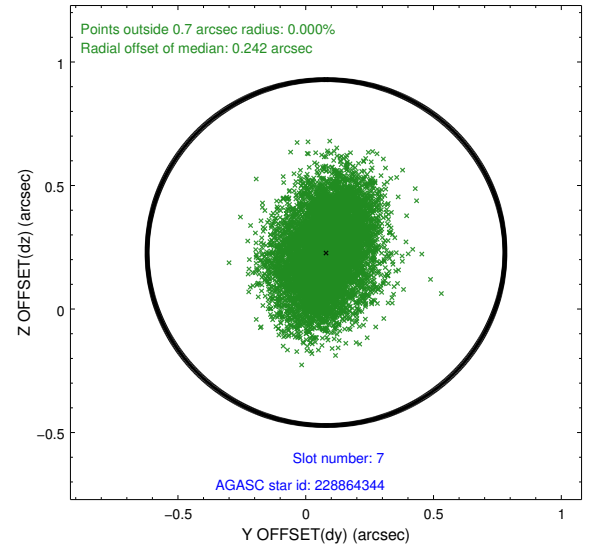
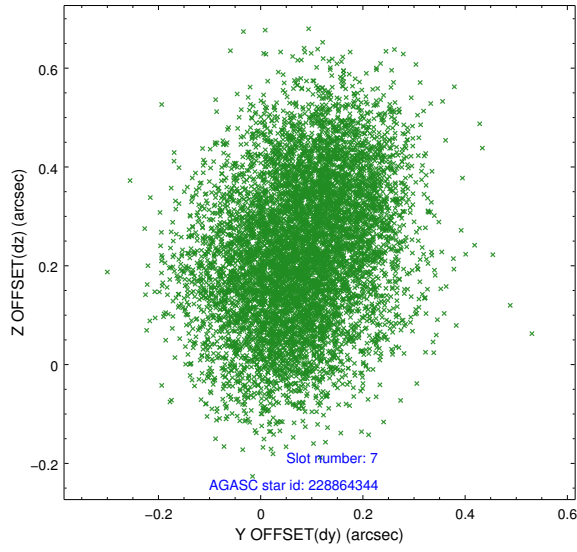
2.4.3 Slot 5



2.4.4 Slot 6

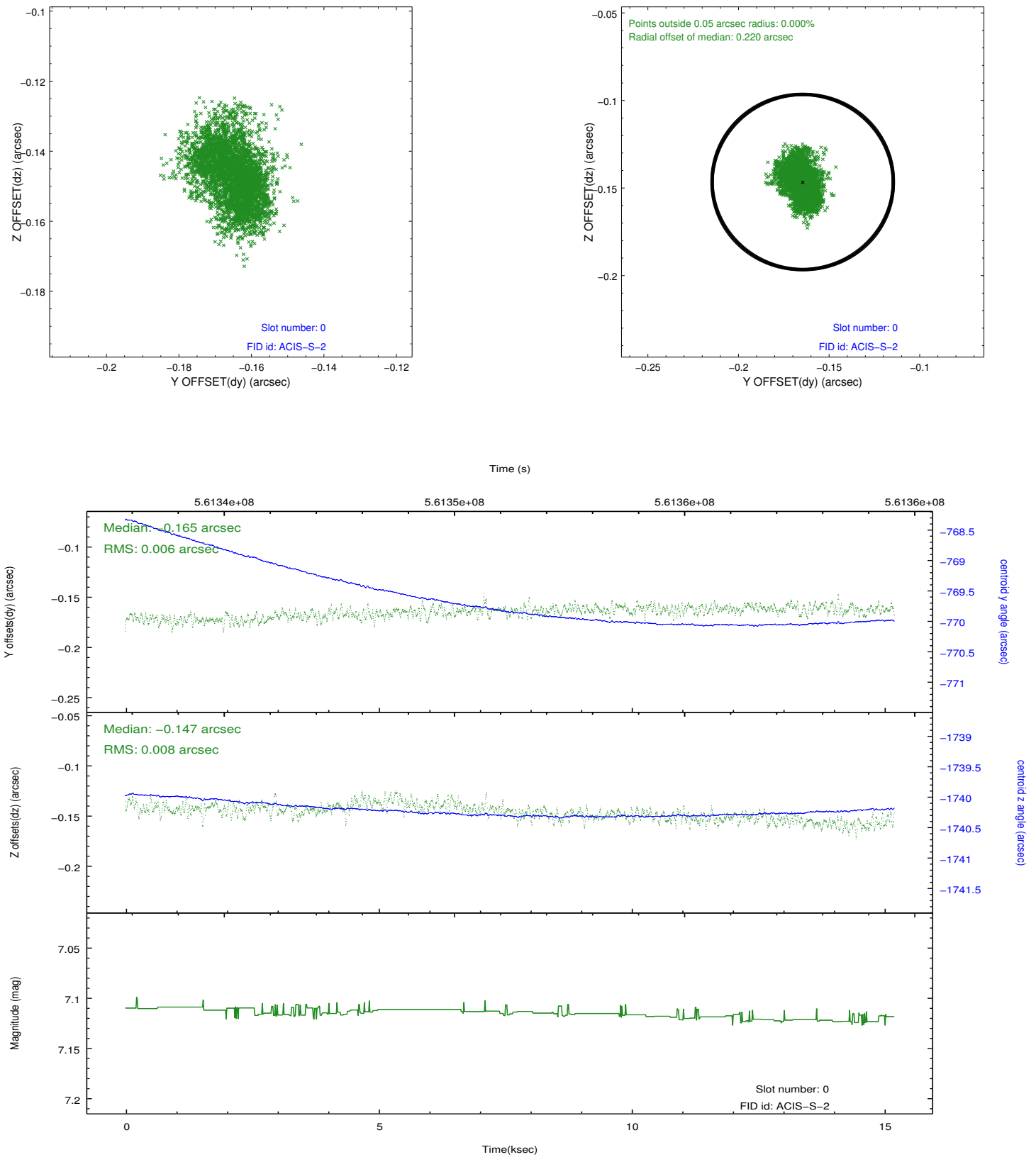


2.4.5 Slot 7

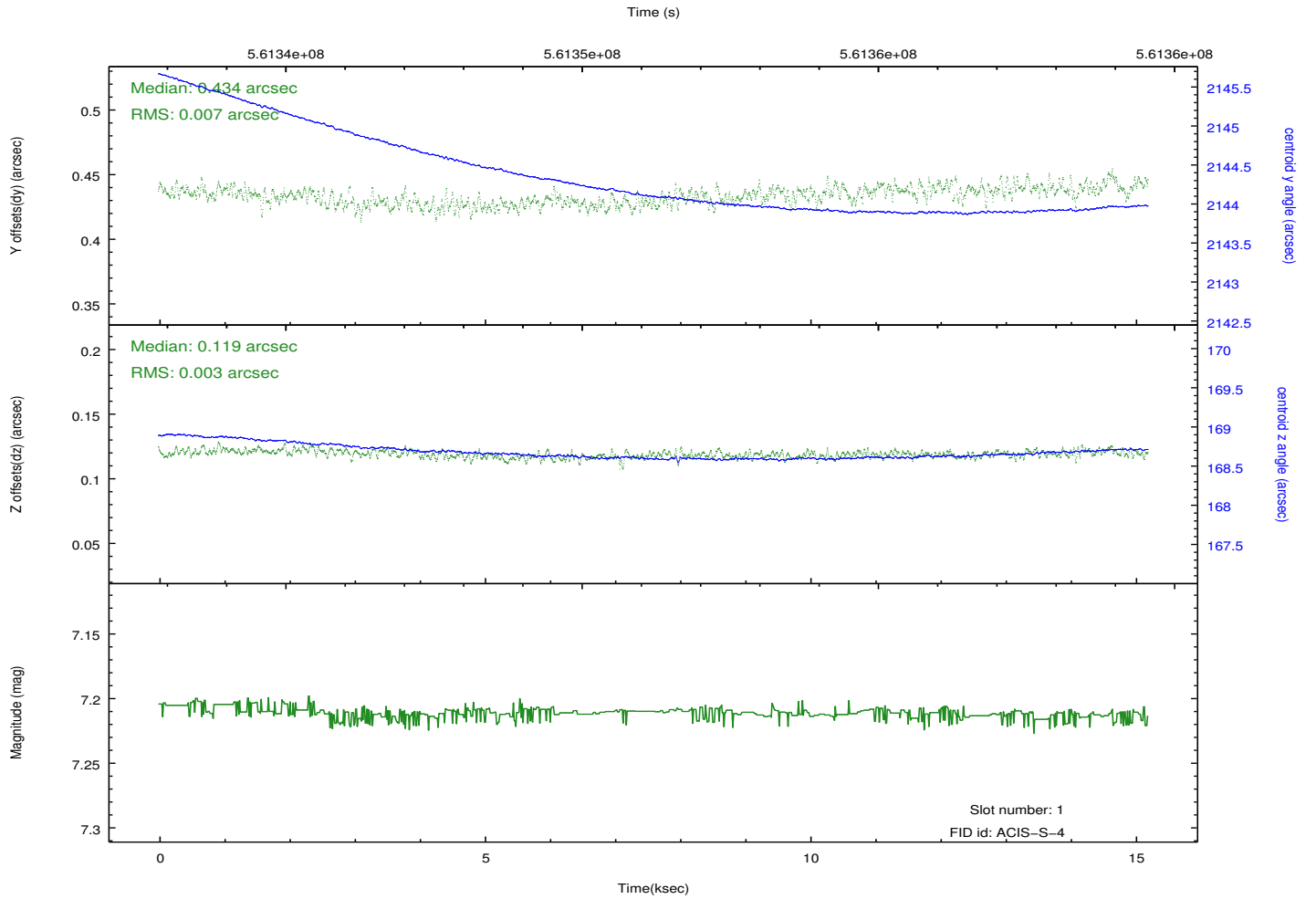
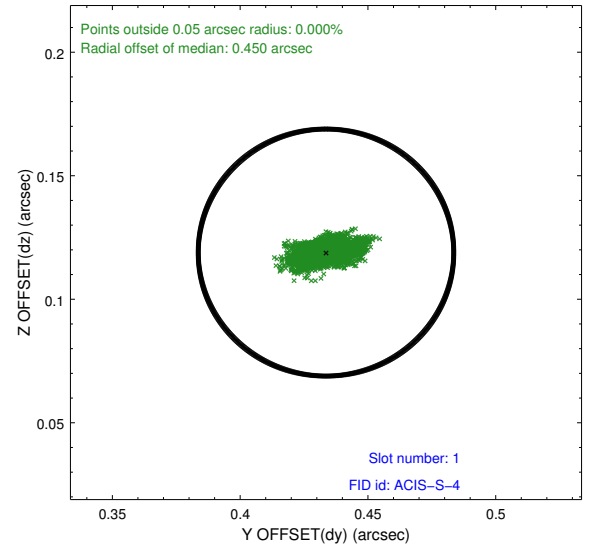
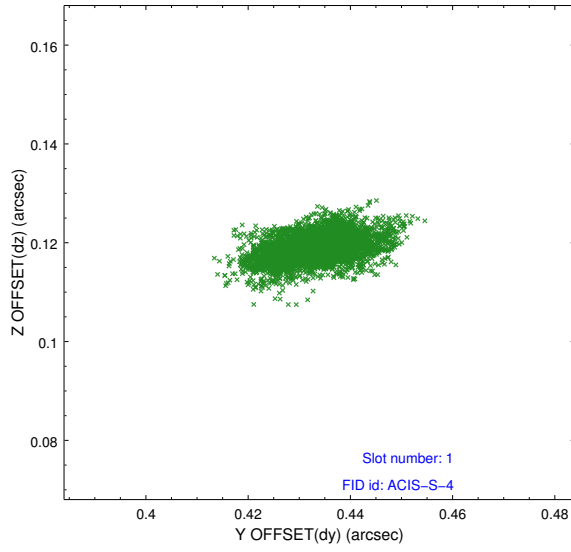


2.5 FID Slots

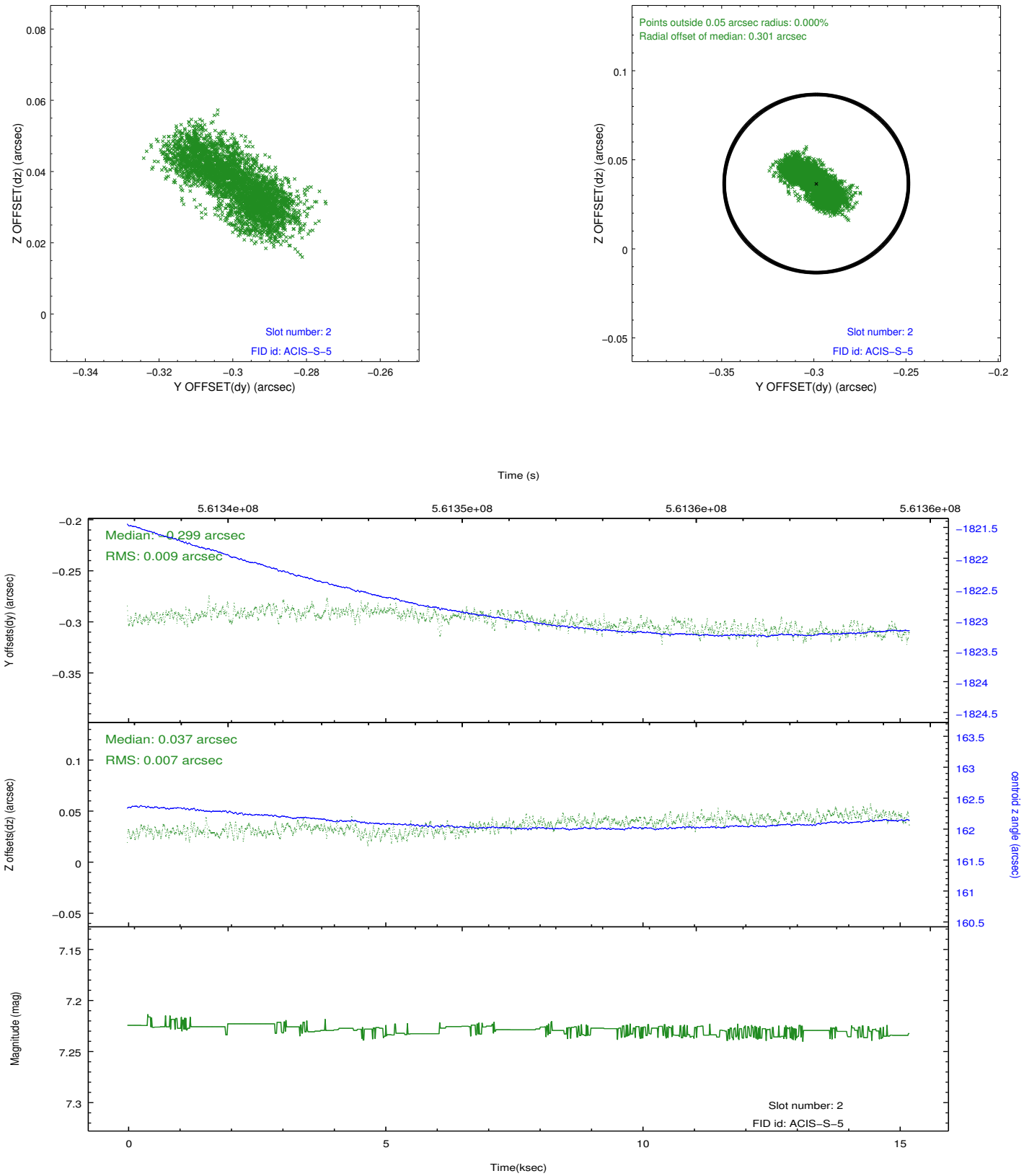
2.5.1 Slot 0



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) | 2015.10.16 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 14.98865061307 |

A.2 Comments