

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 19557 - L2 Version 1
Chandra X-Ray Center

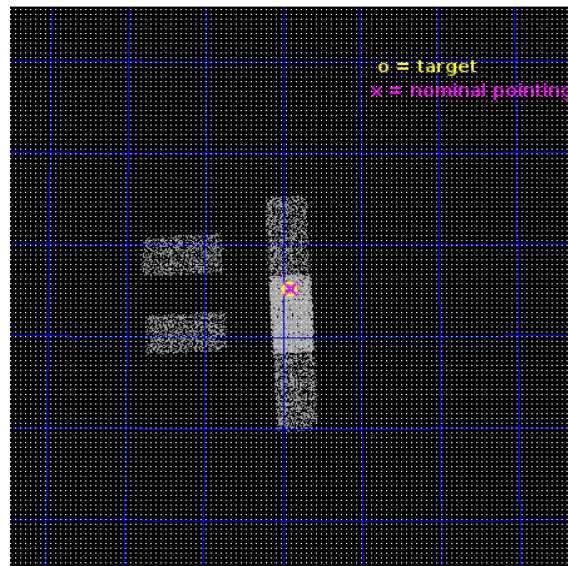
L2 Processing Date : Feb 13 2017

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1 Front

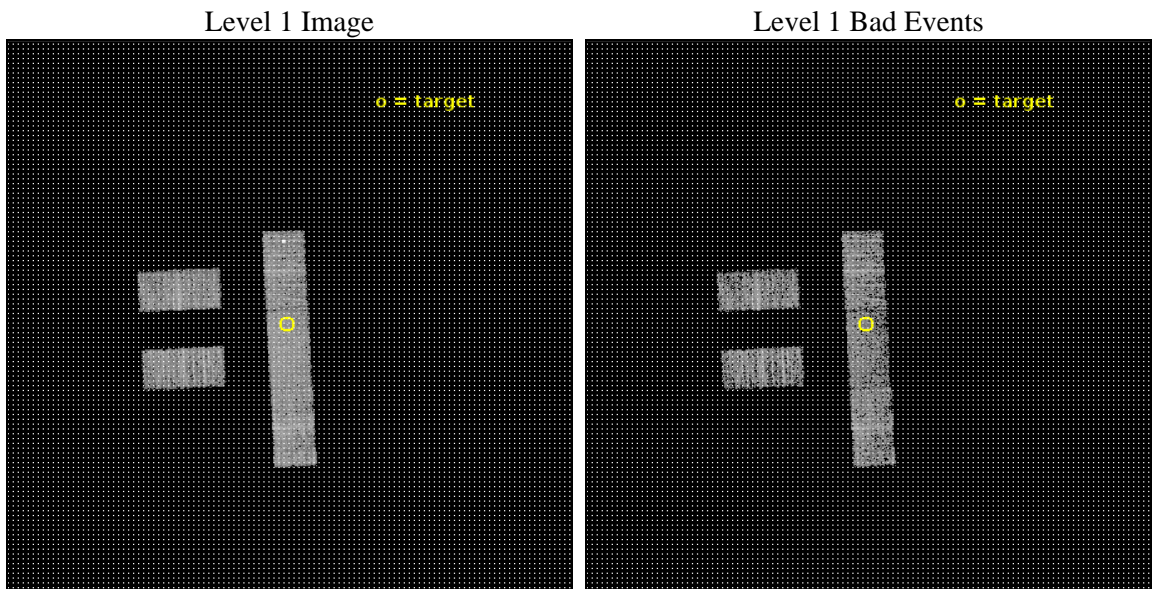
| | | |
|----------|--|---|
| seq_num | 703405 | Sequence number |
| obs_id | 19557 | Observation id |
| title | Investigating X-ray Bias in Low-L, Low-z Quasars | Proposal title |
| observer | Gordon Richards | Principal investigator |
| object | SDSSJ152654.61+565512.3 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 231.7275 | Observer's specified target RA [deg] |
| dec_targ | 56.920111 | Observer's specified target Dec [deg] |
| ra_nom | 231.72258609021 | Nominal RA [deg] |
| dec_nom | 56.921121884206 | Nominal Dec [deg] |
| roll_nom | 87.087399036639 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 3581.9001004696 | Sum of GTIs [s] |
| livetime | 3497.467129301 | Livetime [s] |
| ontime2 | 3581.9001004696 | Sum of GTIs [s] |
| ontime3 | 3581.9001004696 | Sum of GTIs [s] |
| ontime6 | 3581.9001004696 | Sum of GTIs [s] |
| ontime7 | 3581.9001004696 | Sum of GTIs [s] |
| ontime8 | 3581.9001004696 | Sum of GTIs [s] |
| l2events | 12508 | Number of level 2 events |



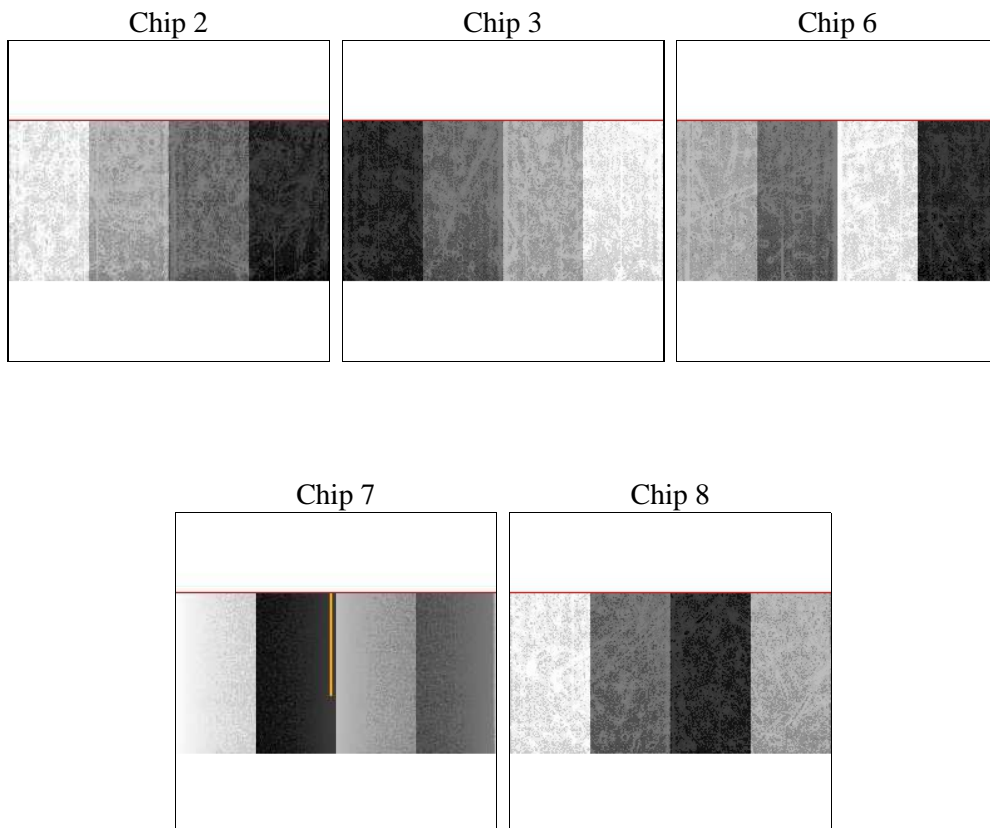
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 3500.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.5.2 | Processing system revision | ontime | 3581.9001004696 | Sum of GTIs [s] |
| caldsver | 4.7.3 | | ontime2 | 3581.9001004696 | Sum of GTIs [s] |
| date | 2017-02-14T01:55:22 | Date and time of file creation | ontime3 | 3581.9001004696 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime6 | 3581.9001004696 | Sum of GTIs [s] |
| | | | ontime7 | 3581.9001004696 | Sum of GTIs [s] |
| | | | ontime8 | 3581.9001004696 | Sum of GTIs [s] |
| | | | l1events | 81431 | Number of level 1 events |

2.1.4 Events

| | ccd 2 | ccd 3 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events | 13884 | 14387 | 17296 | 17422 | 18442 |
| rejected events | 12469 | 13014 | 13721 | 9724 | 14111 |
| rejected % | 89% | 90% | 79% | 55% | 76% |

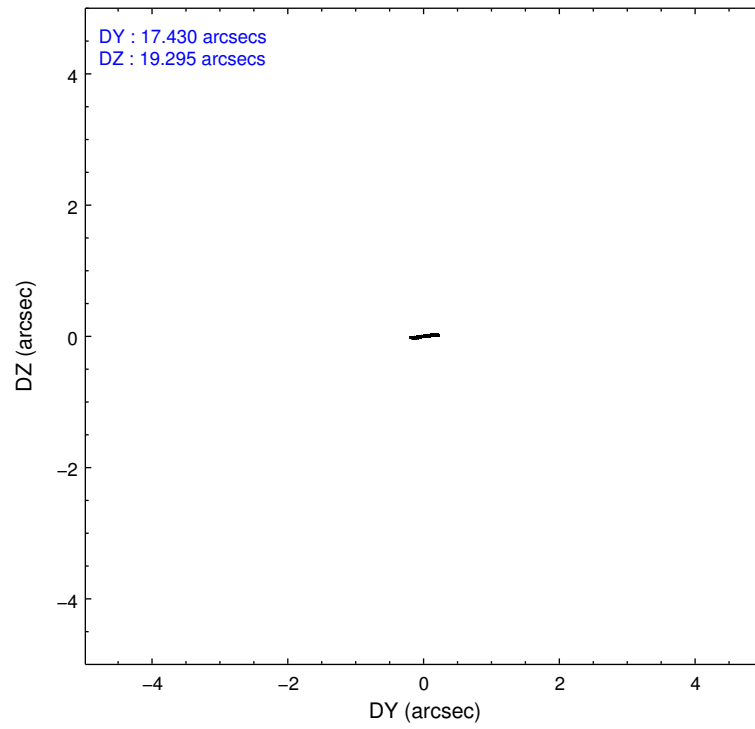
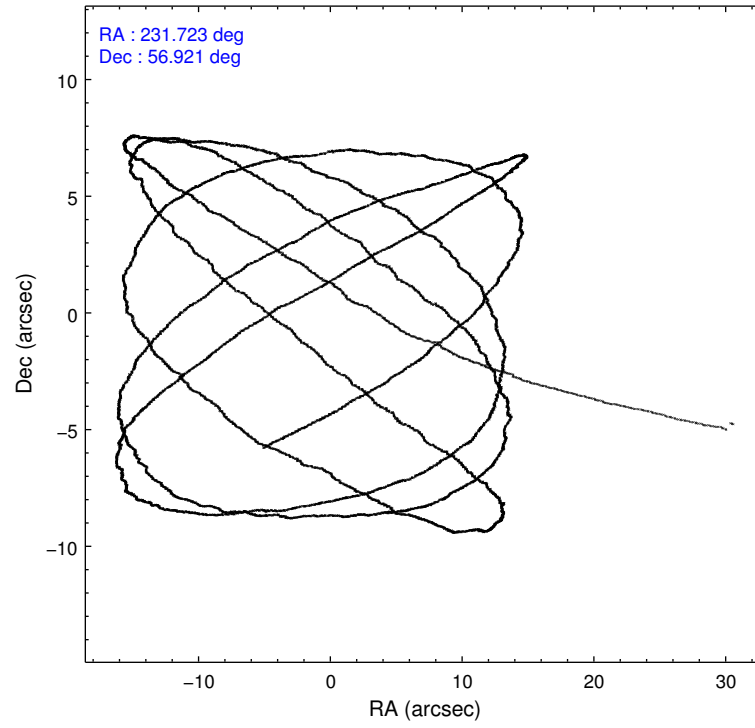
| | ccd 2 | ccd 3 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 481 | 437 | 2453 | 728 | 1174 |
| | 3% | 3% | 14% | 4% | 6% |
| grade 1 events | 3 | 5 | 5 | 26 | 11 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 305 | 284 | 397 | 1652 | 1057 |
| | 2% | 1% | 2% | 9% | 5% |
| grade 3 events | 179 | 171 | 195 | 642 | 509 |
| | 1% | 1% | 1% | 3% | 2% |
| grade 4 events | 175 | 188 | 171 | 645 | 478 |
| | 1% | 1% | 0% | 3% | 2% |
| grade 5 events | 491 | 607 | 609 | 1646 | 976 |
| | 3% | 4% | 3% | 9% | 5% |
| grade 6 events | 275 | 294 | 360 | 4034 | 1114 |
| | 1% | 2% | 2% | 23% | 6% |
| grade 7 events | 11975 | 12401 | 13106 | 8049 | 13123 |
| | 86% | 86% | 75% | 46% | 71% |

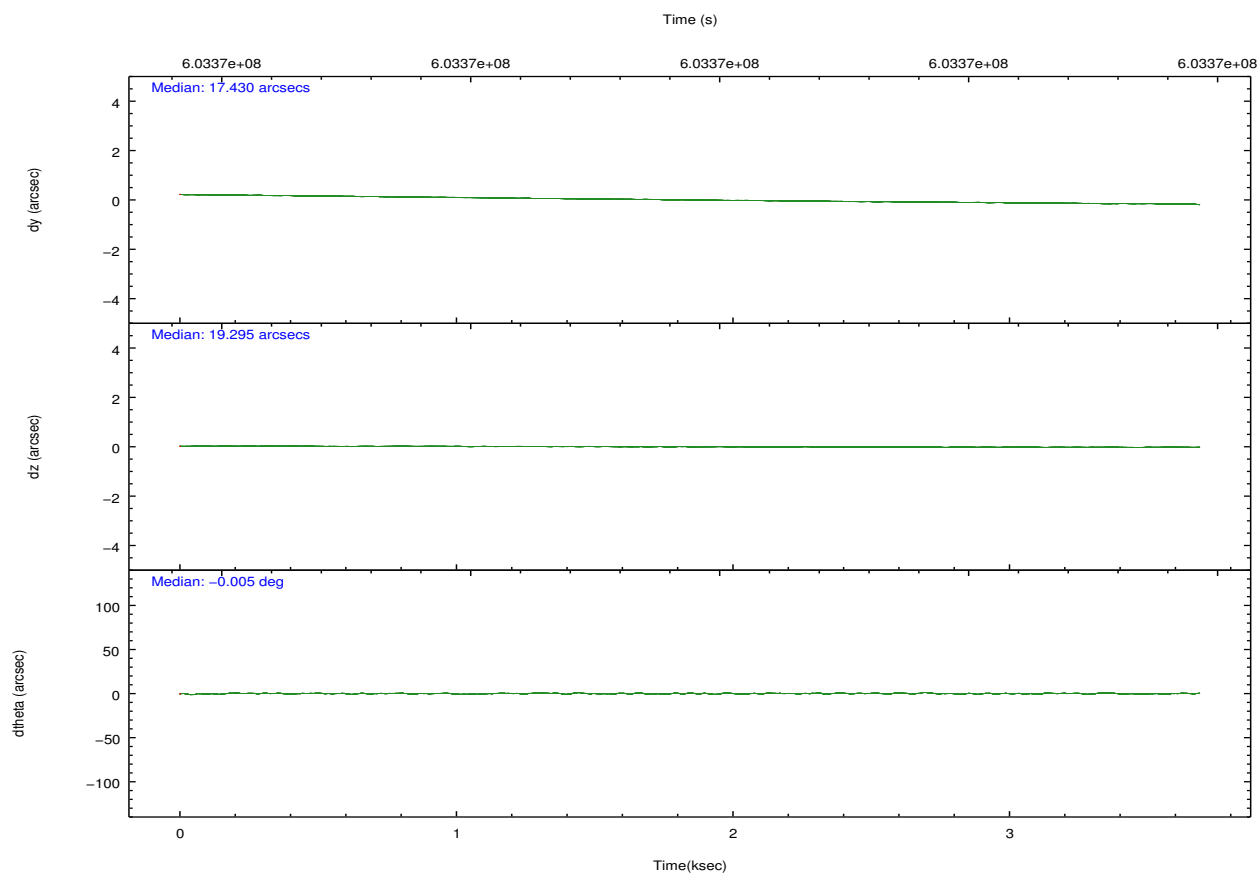
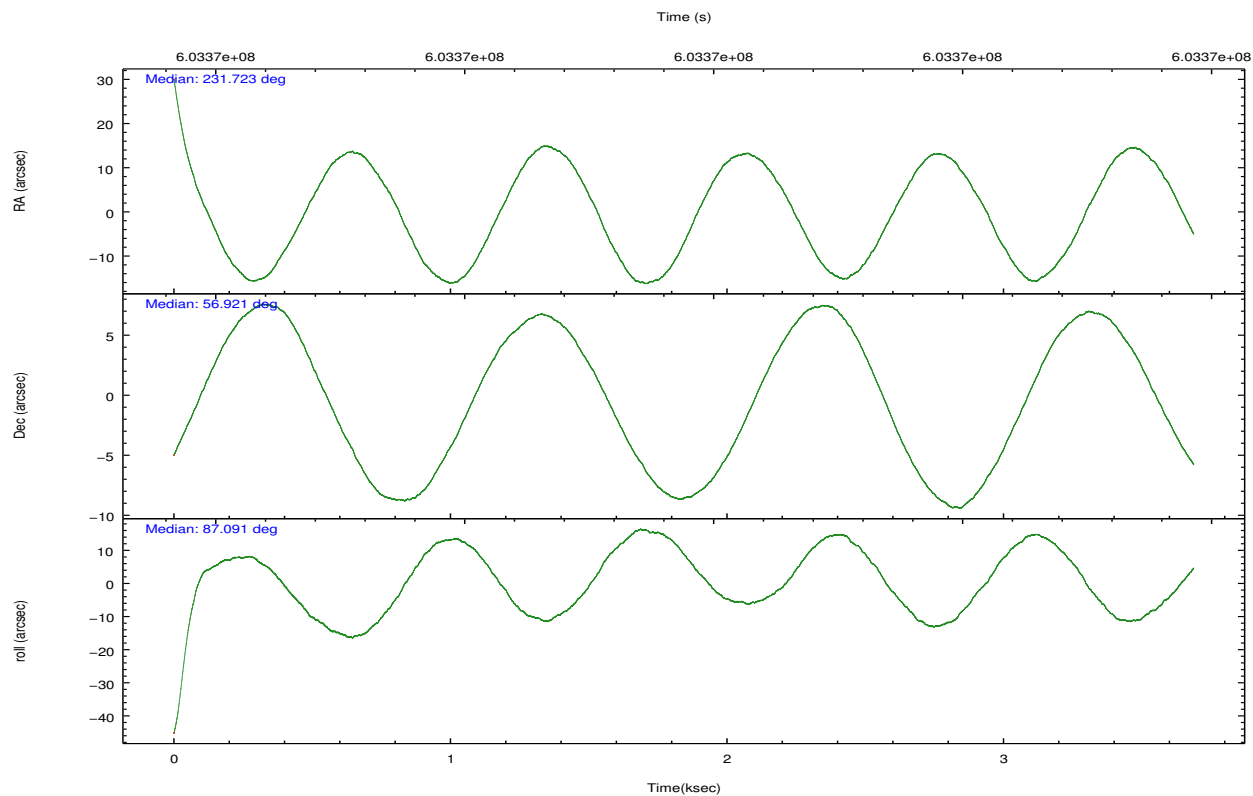
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-23678 | ACIS-23678 |
| Grating | NONE | NONE |
| Data mode | FAINT | FAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 231.745965 | 231.7225860902055 |
| [deg] Pointing Dec | 56.896697 | 56.92112188420646 |
| [deg] Pointing Roll | 86.911273 | 87.08739903663907 |
| [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) | 603369222.184000 | 603368188.30563 |
| Observation start date | 2017-02-13T10:32:33 | 2017-02-13T10:16:28 |
| [s] Observation end time (MET) | 603372722.184000 | 603373976.9934601 |
| Observation end date | 2017-02-13T11:30:53 | 2017-02-13T11:52:56 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| CCD I0 on | N | N |
| CCD I1 on | N | N |
| CCD I2 on | O1 | Y |
| CCD I3 on | Y | Y |
| CCD S0 on | N | N |
| CCD S1 on | N | N |
| CCD S2 on | Y | Y |
| CCD S3 on | Y | Y |
| CCD S4 on | Y | Y |
| CCD S5 on | N | N |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | CUSTOM | 1/2 |
| Subarray start row | 257 | 257 |
| Subarray row count | 512 | 512 |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 1.7 |

2.3 Aspect



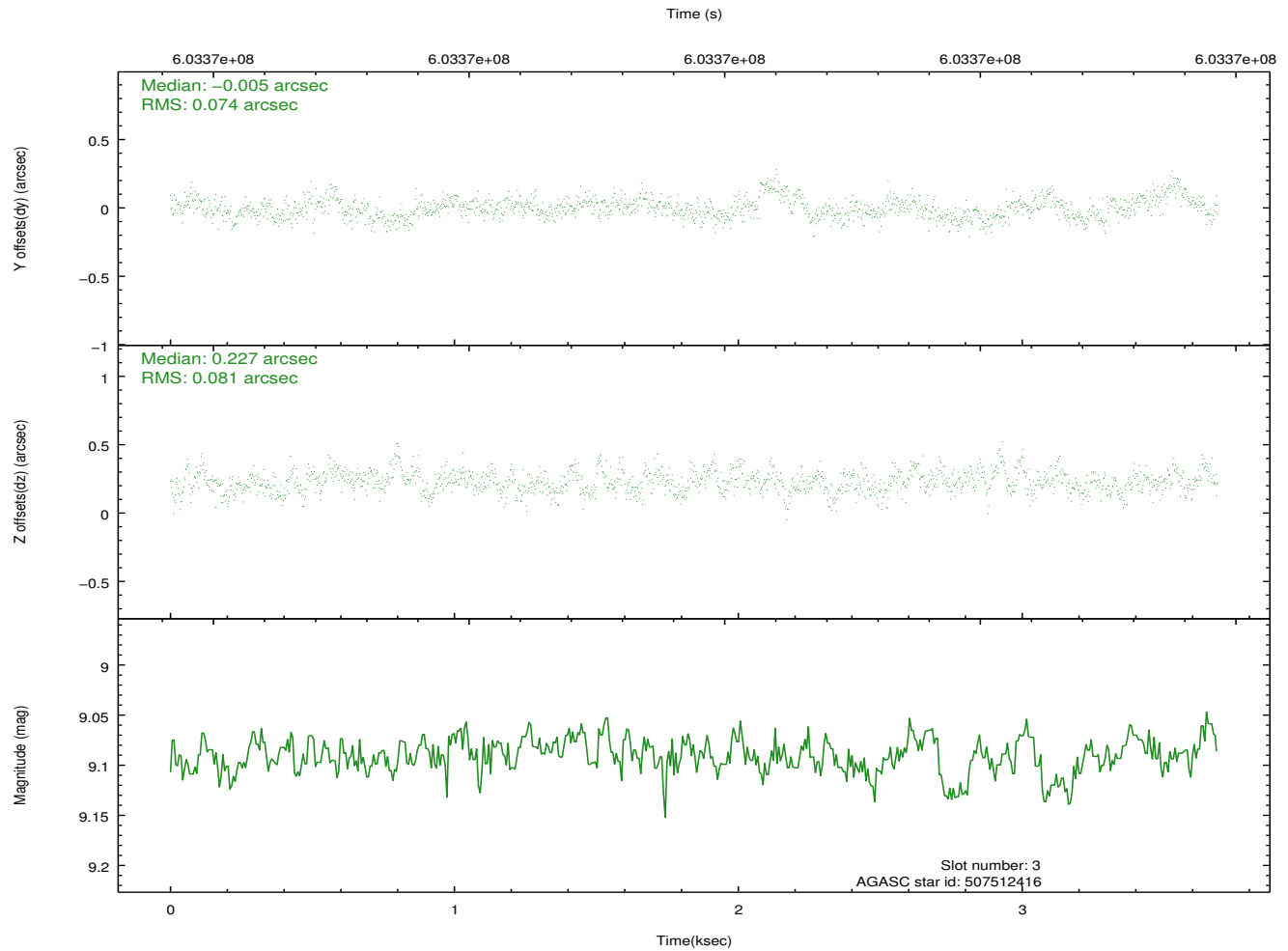
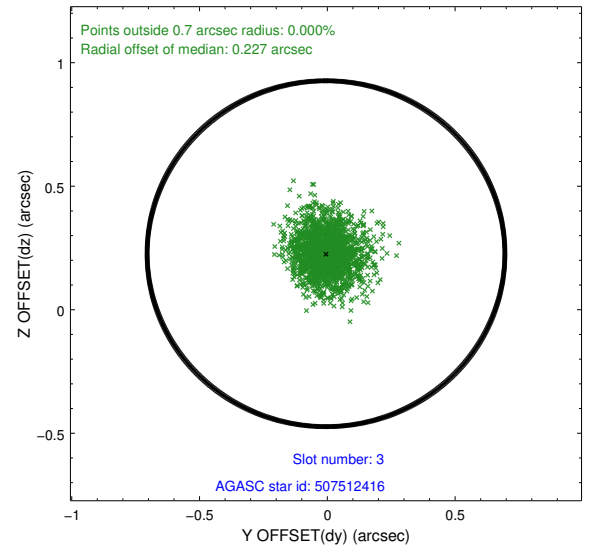
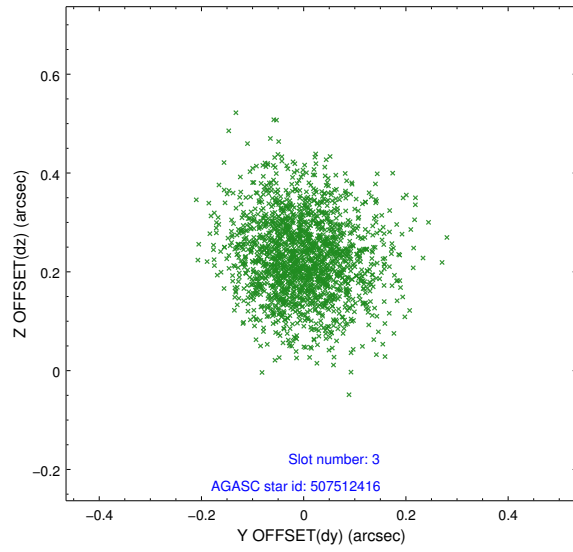


Slot Statistics

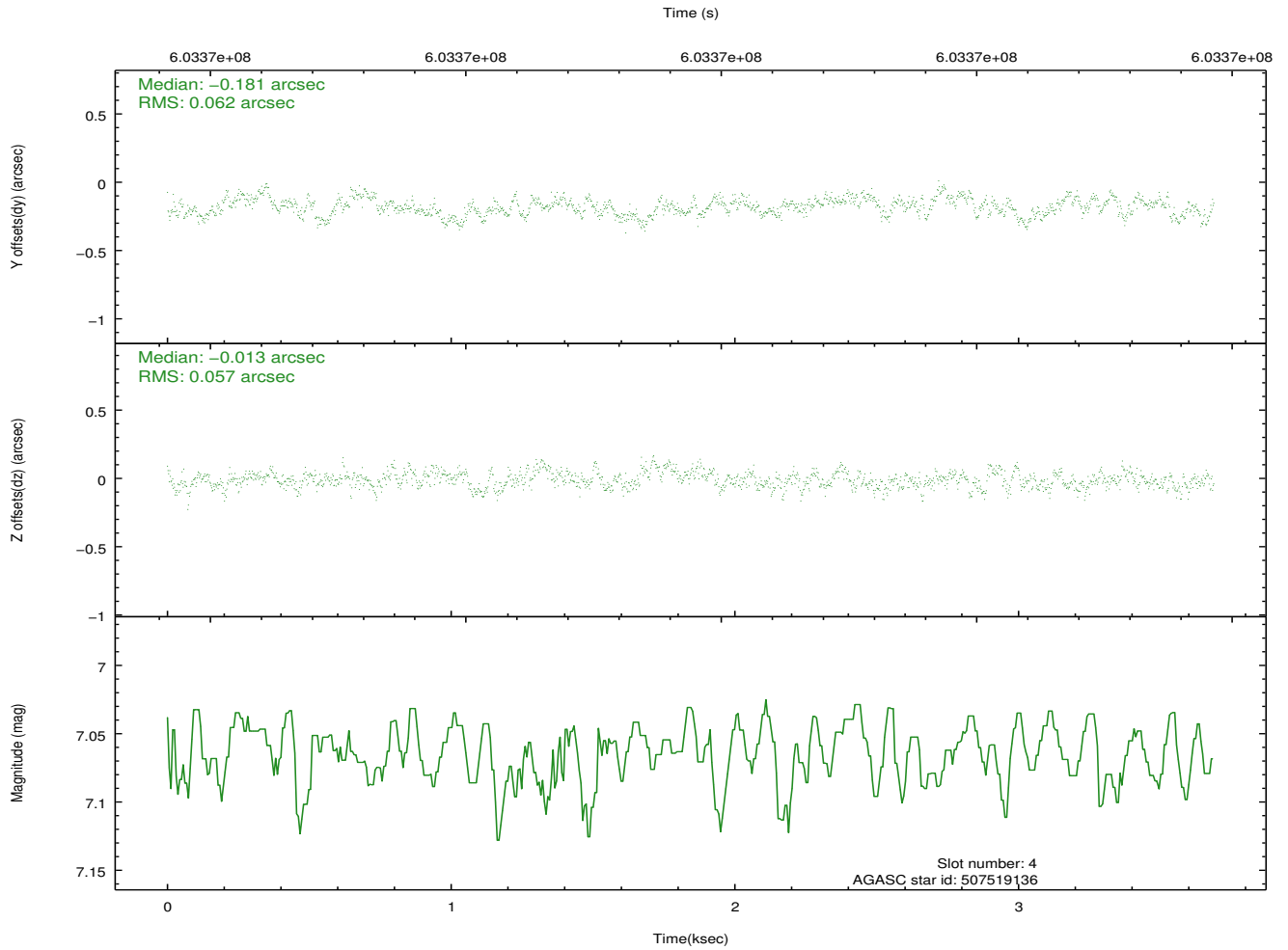
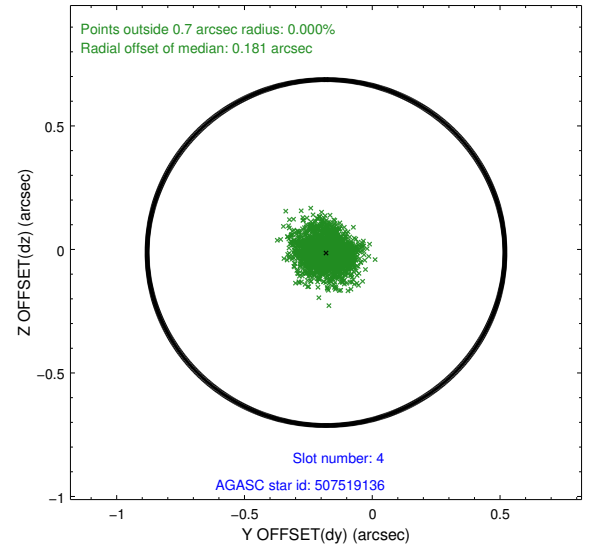
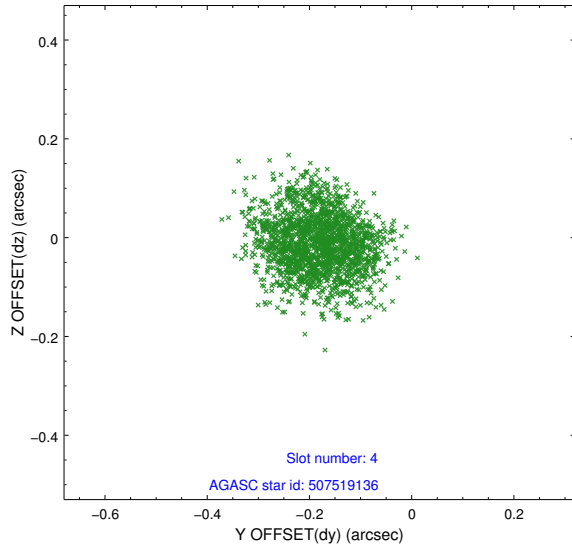
| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | | ACIS-S-2 | 7.14 | 900 | -0.198 | -0.144 | 0.006 | 0.012 | 0.000000 | 0.000000 | -770.65 | -1740.89 |
| 1 | FID | | ACIS-S-4 | 7.25 | 900 | 0.503 | 0.134 | 0.006 | 0.010 | 0.000000 | 0.000000 | 2142.52 | 166.13 |
| 2 | FID | | ACIS-S-5 | 7.24 | 900 | -0.336 | 0.019 | 0.006 | 0.012 | 0.000000 | 0.000000 | -1821.47 | 161.58 |
| 3 | GUIDE | used | 507512416 | 9.09 | 1799 | -0.005 | 0.227 | 0.115 | 0.192 | 232.223877 | 56.596385 | -1025.42 | -1003.67 |
| 4 | GUIDE | used | 507519136 | 7.06 | 1799 | -0.181 | -0.013 | 0.091 | 0.142 | 232.216369 | 57.445181 | 2025.52 | -799.55 |
| 5 | GUIDE | used | 507521136 | 9.37 | 1798 | 0.274 | -0.328 | 0.167 | 0.262 | 231.603167 | 56.747406 | -550.02 | 252.17 |
| 6 | GUIDE | used | 507521192 | 8.05 | 1799 | -0.036 | 0.212 | 0.106 | 0.168 | 232.890923 | 57.166663 | 1109.21 | -2177.70 |
| 7 | GUIDE | used | 507386040 | 8.96 | 1796 | -0.050 | -0.105 | 0.149 | 0.234 | 230.550425 | 56.909736 | -58.68 | 2348.49 |

2.4 Star Slots

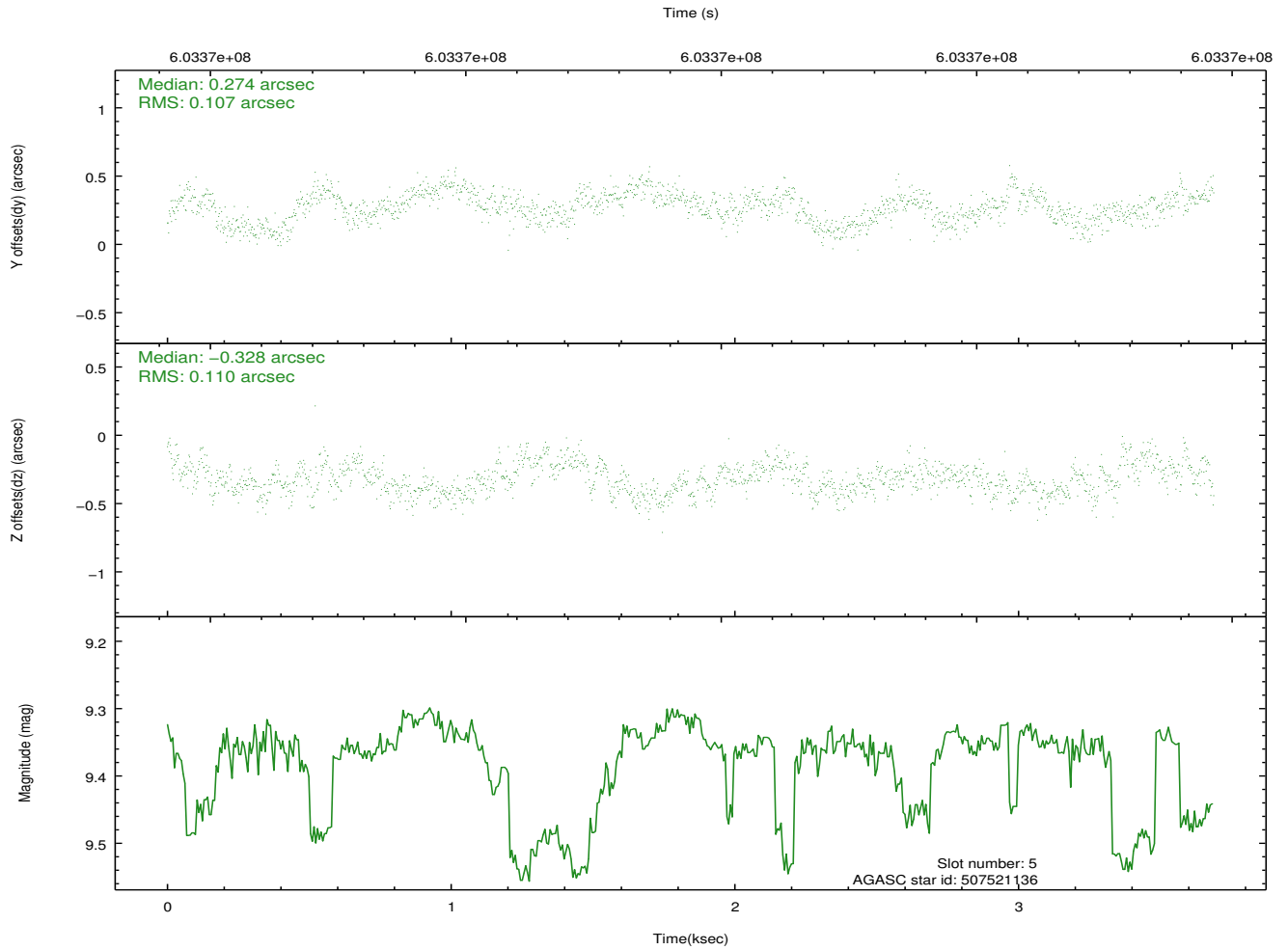
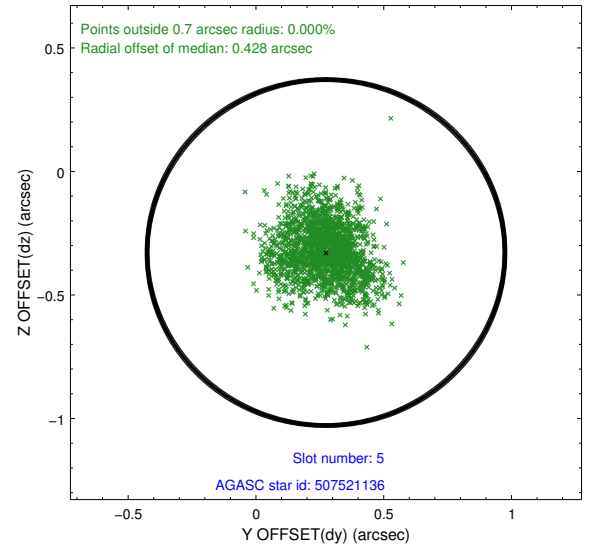
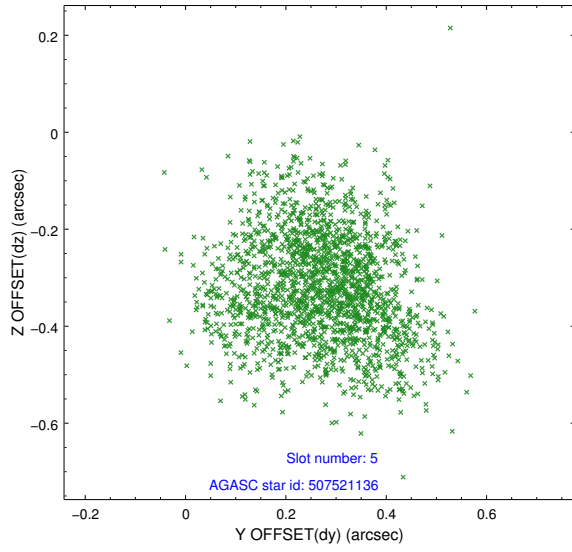
2.4.1 Slot 3



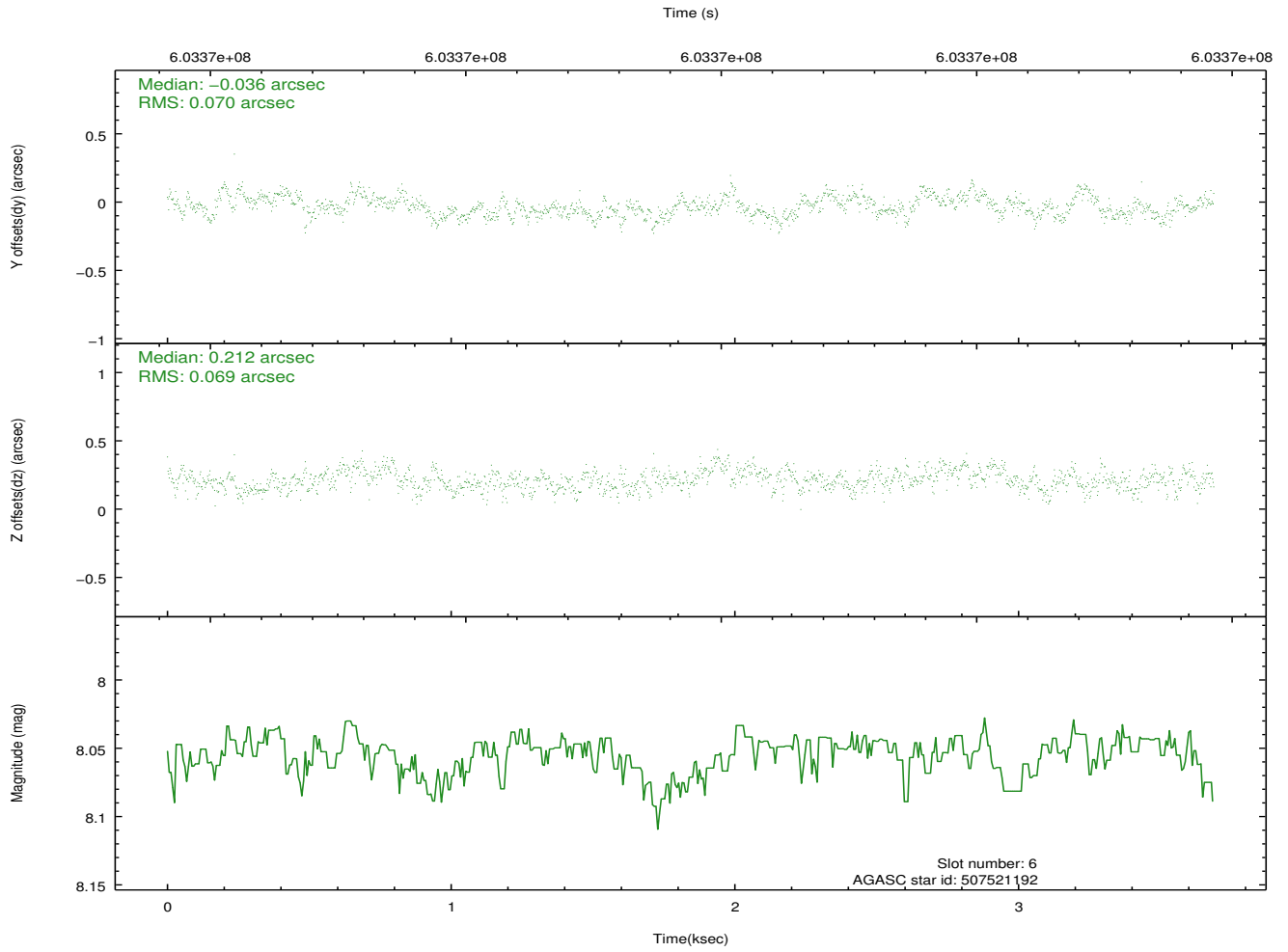
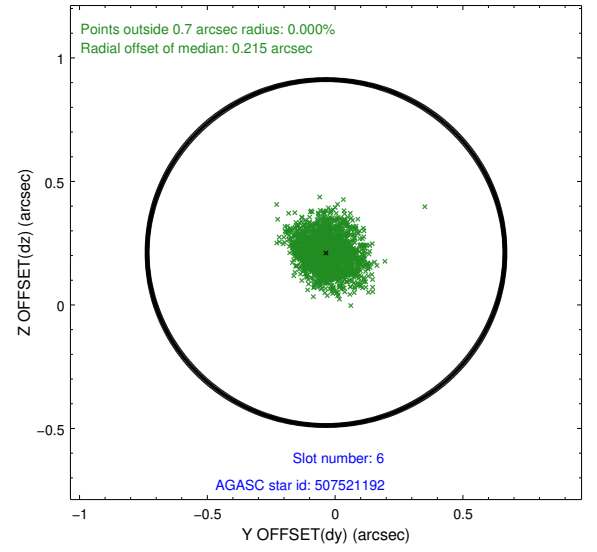
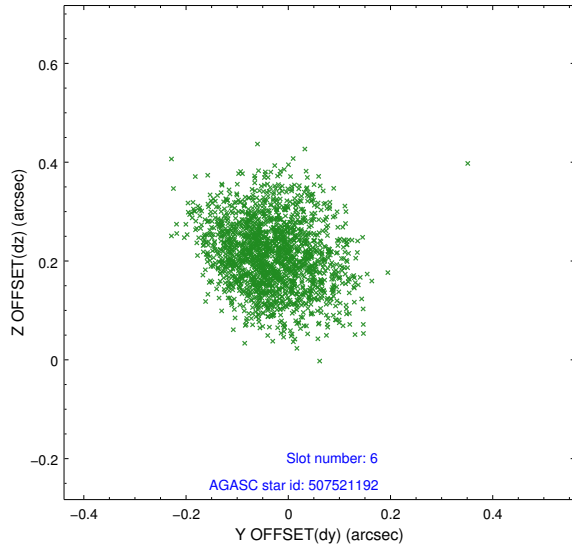
2.4.2 Slot 4



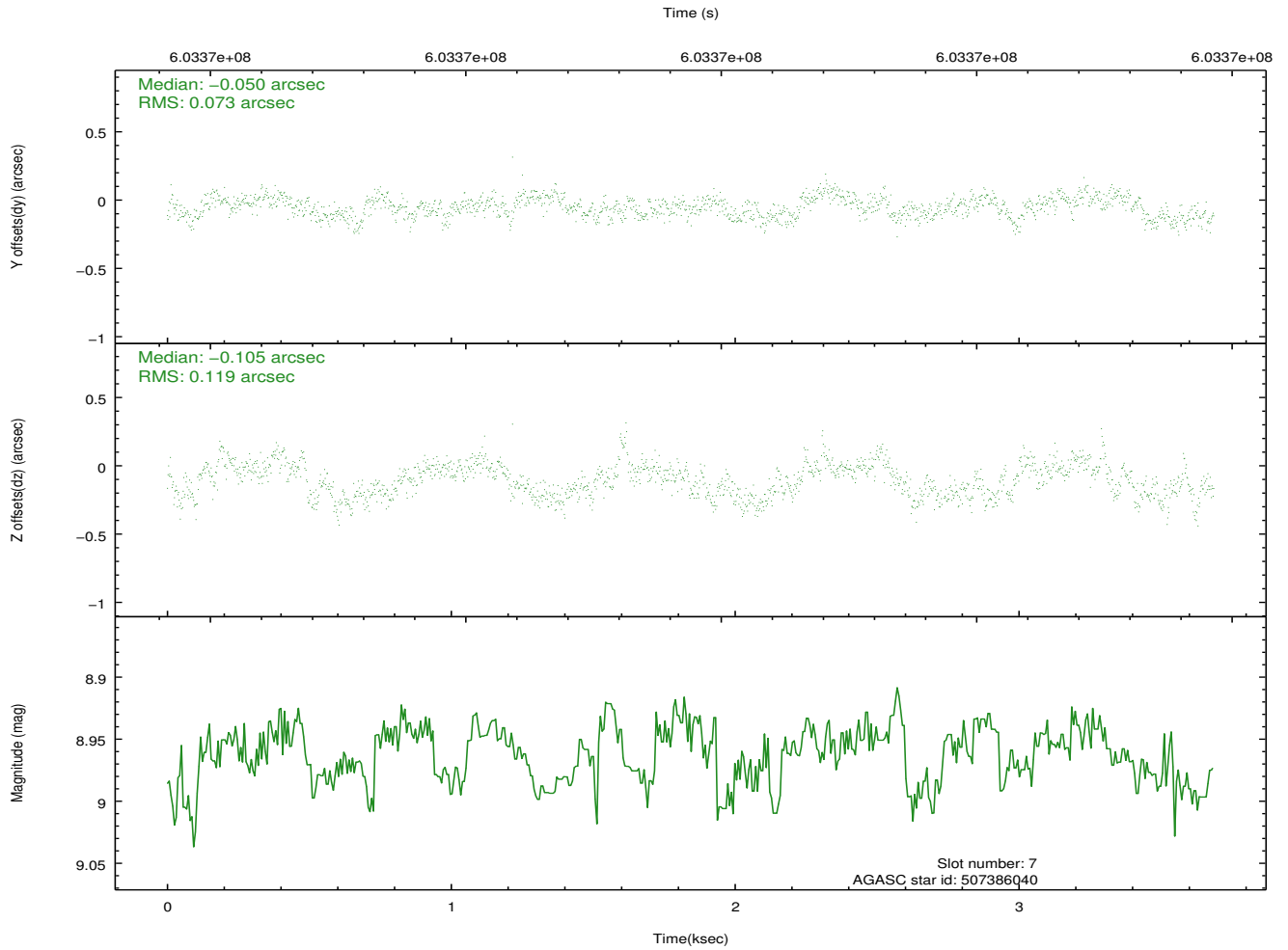
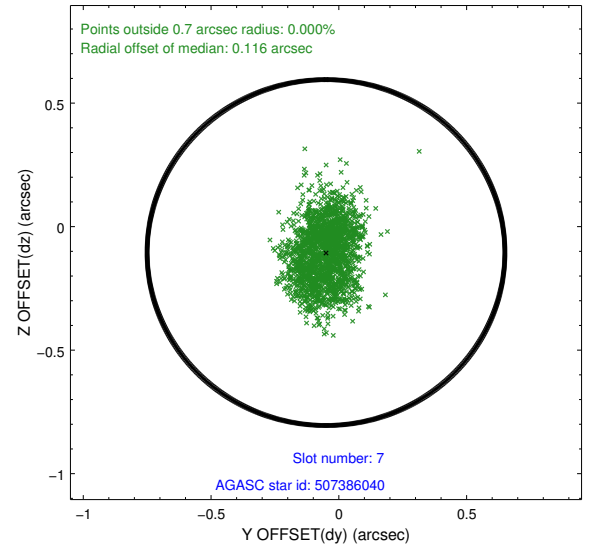
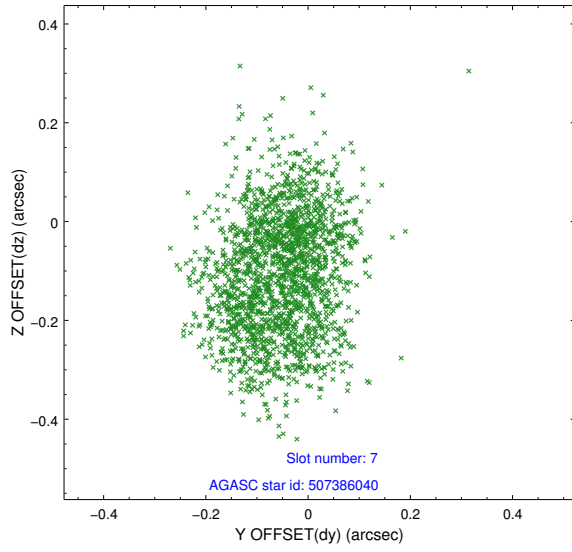
2.4.3 Slot 5



2.4.4 Slot 6

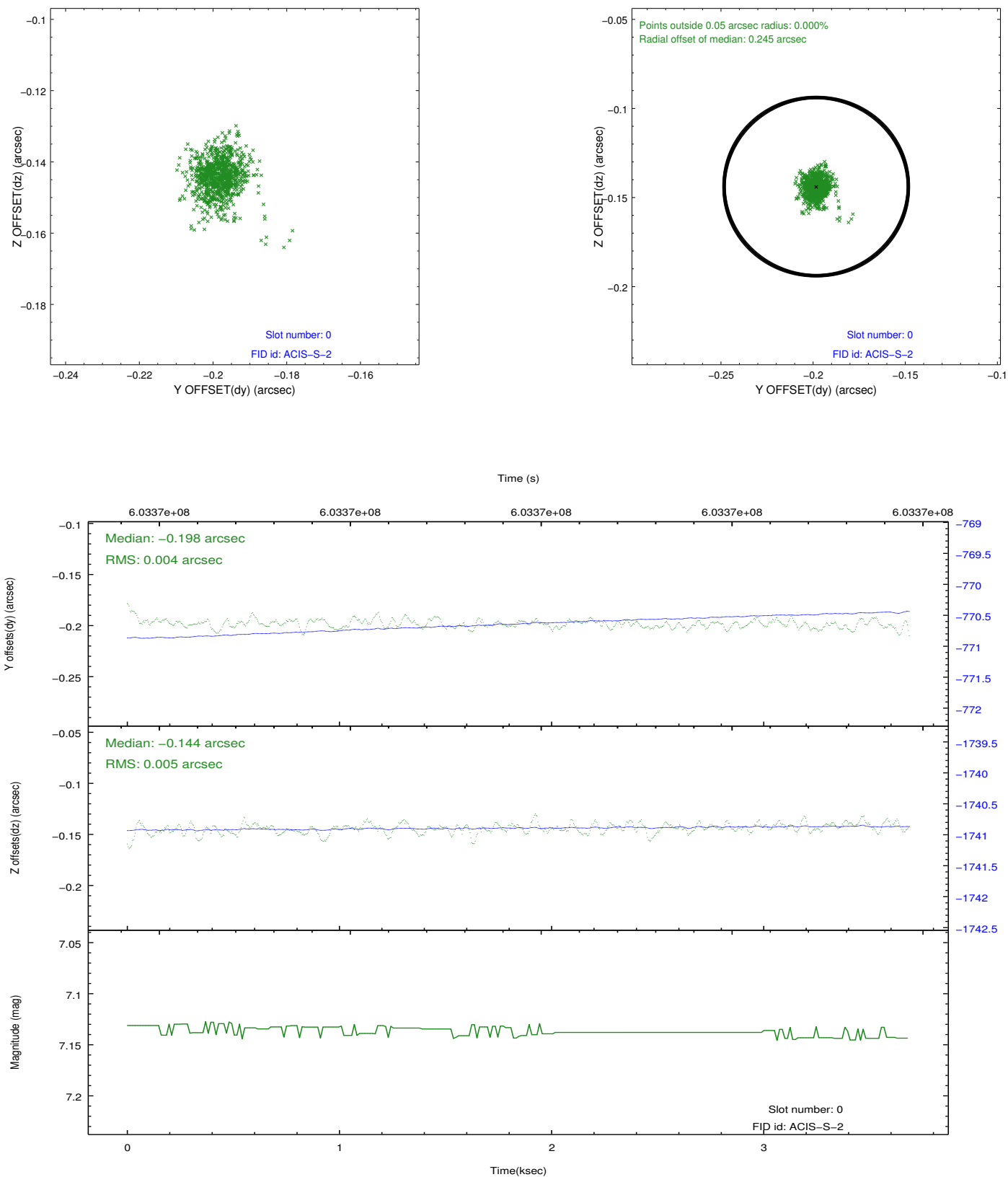


2.4.5 Slot 7

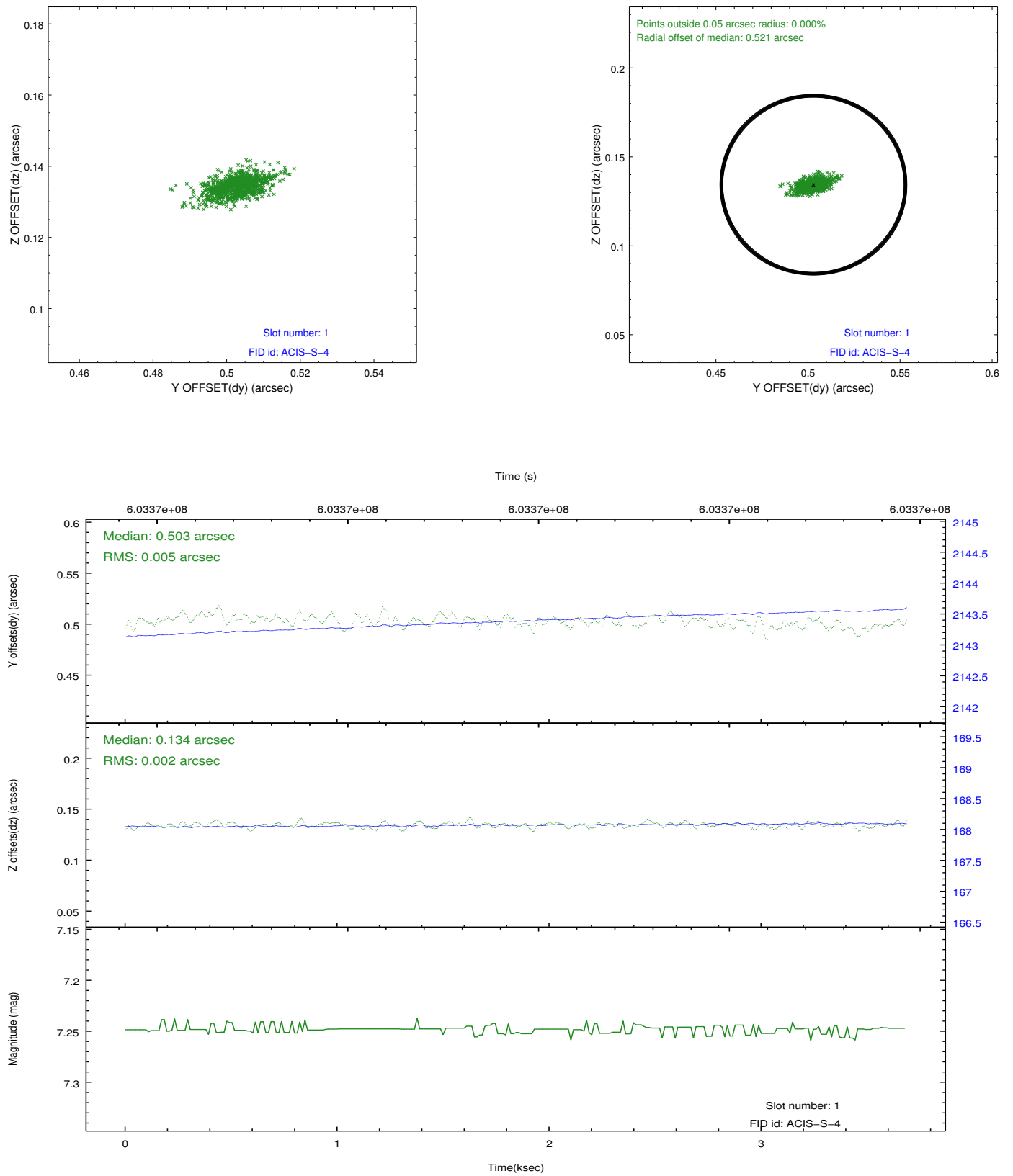


2.5 FID Slots

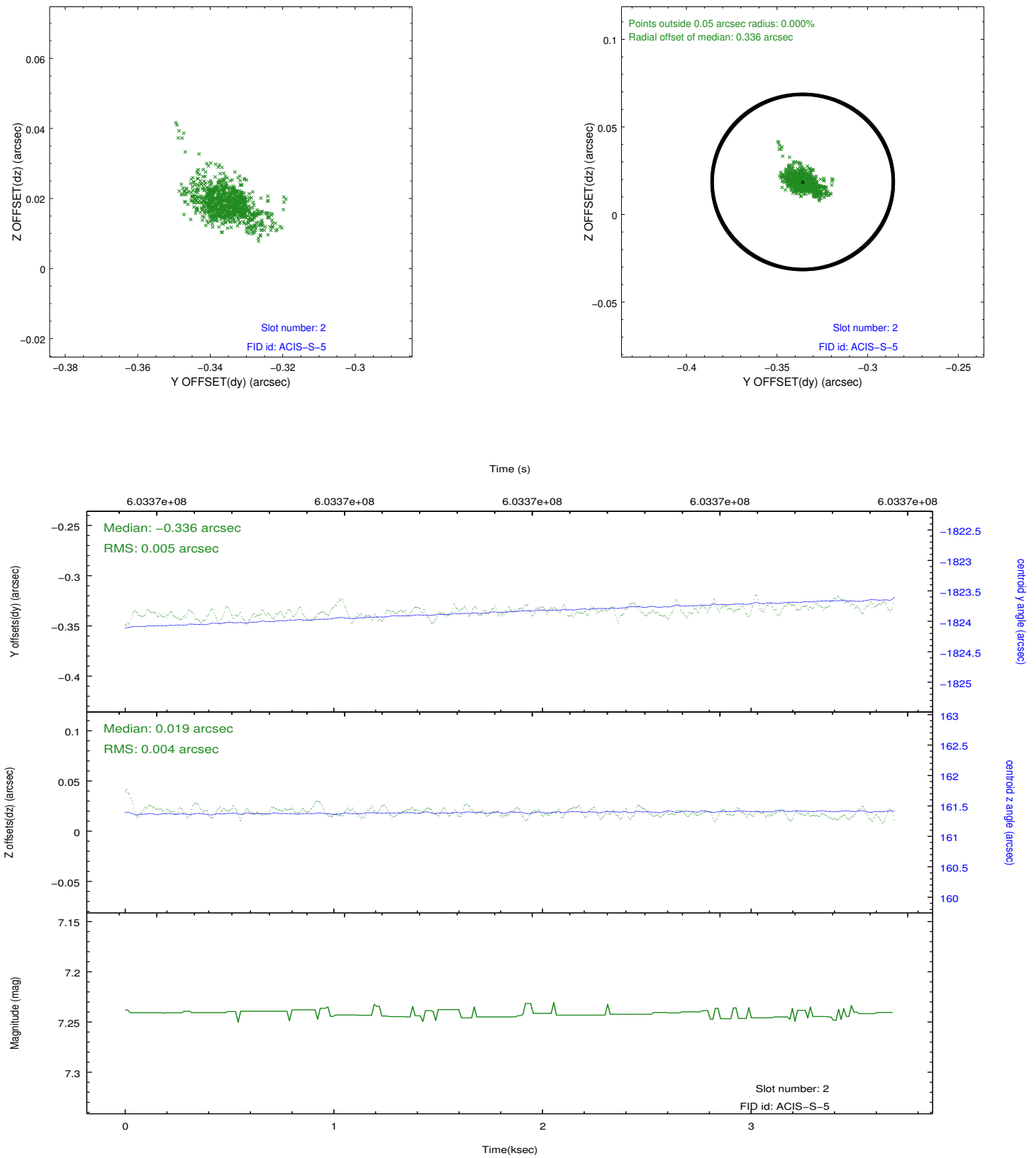
2.5.1 Slot 0



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) | 2017.02.14 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 3.5819001004696 |

A.2 Comments