

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1638 - L2 Version 3
Chandra X-Ray Center

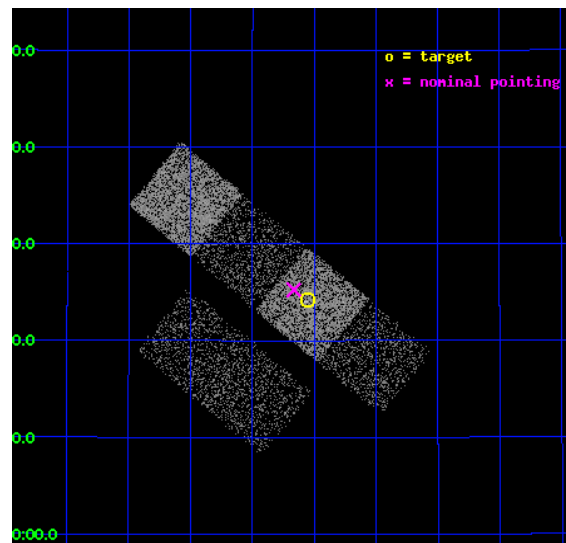
L2 Processing Date : Sep 2 2012

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1 Front

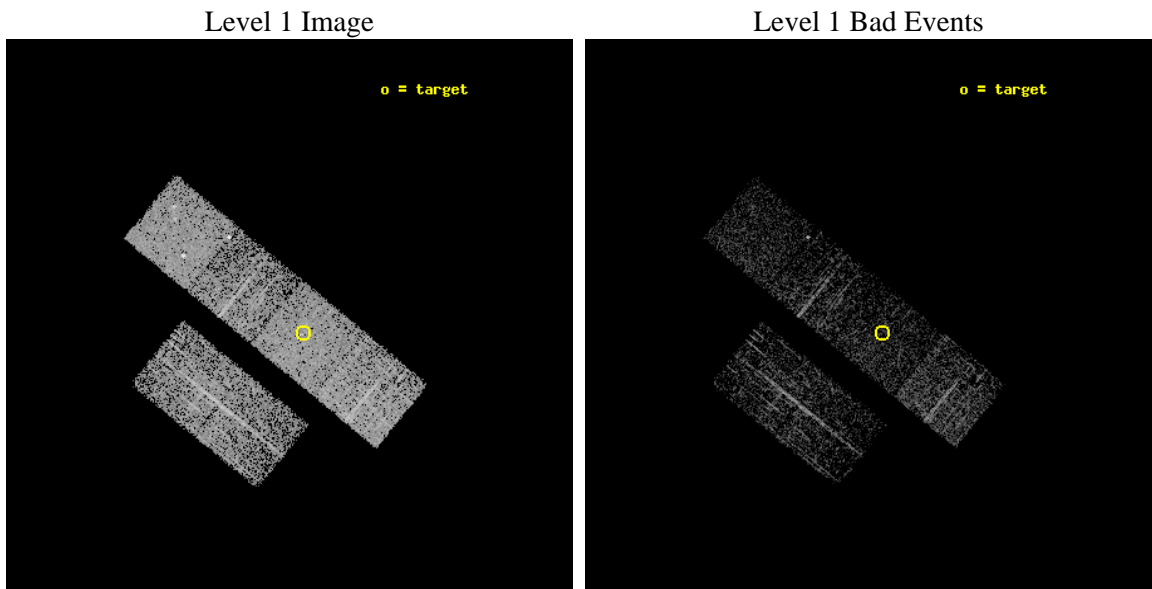
| | | |
|----------|----------------------------------------------------------------------------------|---------------------------------------------|
| seq_num | 700254 | Sequence number |
| obs_id | 1638 | Observation id |
| title | THE X-RAY PROPERTIES OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI IN NEARBY GALAXIES | Proposal title |
| observer | Professor Gordon Garmire | Principal investigator |
| object | NGC 4150 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 182.638333 | Observer's specified target RA [deg] |
| dec_targ | 30.403556 | Observer's specified target Dec [deg] |
| ra_nom | 182.66601197825 | Nominal RA [deg] |
| dec_nom | 30.420818720354 | Nominal Dec [deg] |
| roll_nom | 39.350472626113 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 1759.7338752151 | Sum of GTIs [s] |
| livetime | 1737.4510653026 | Livetime [s] |
| ontime2 | 1759.7749152184 | Sum of GTIs [s] |
| ontime3 | 1759.6107552201 | Sum of GTIs [s] |
| ontime5 | 1759.6928352118 | Sum of GTIs [s] |
| ontime6 | 1759.6517952234 | Sum of GTIs [s] |
| ontime7 | 1759.7338752151 | Sum of GTIs [s] |
| ontime8 | 1756.3287849128 | Sum of GTIs [s] |
| l2events | 16242 | Number of level 2 events |



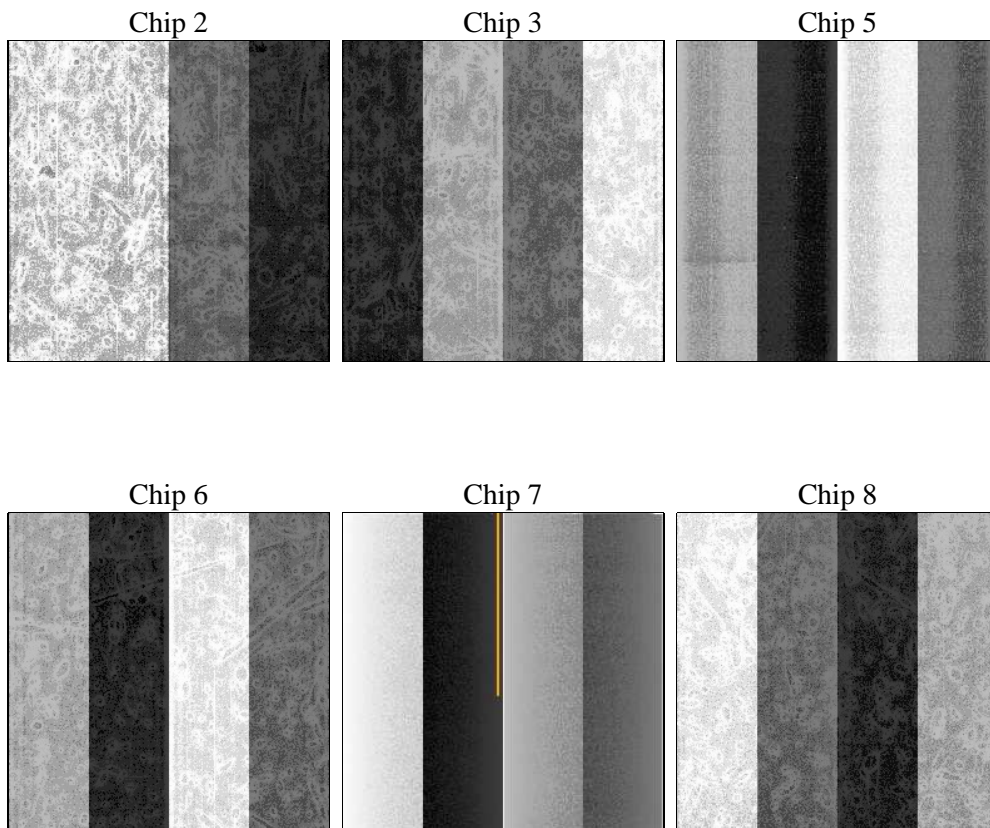
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num | 0 | Obi number | sched_exp_time | 2000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 1759.7338752151 | Sum of GTIs [s] |
| caldsver | 4.5.1.1 | | ontime2 | 1759.7749152184 | Sum of GTIs [s] |
| date | 2012-09-03T00:11:26 | Date and time of file creation | ontime3 | 1759.6107552201 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime5 | 1759.6928352118 | Sum of GTIs [s] |
| | | | ontime6 | 1759.6517952234 | Sum of GTIs [s] |
| | | | ontime7 | 1759.7338752151 | Sum of GTIs [s] |
| | | | ontime8 | 1756.3287849128 | Sum of GTIs [s] |
| | | | l1events | 75852 | Number of level 1 events |

2.1.4 Events

| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 11528 | 9914 | 14636 | 10279 | 13515 | 15980 |
| rejected events | 10213 | 8679 | 7562 | 8905 | 7633 | 13270 |
| rejected % | 88% | 87% | 51% | 86% | 56% | 83% |

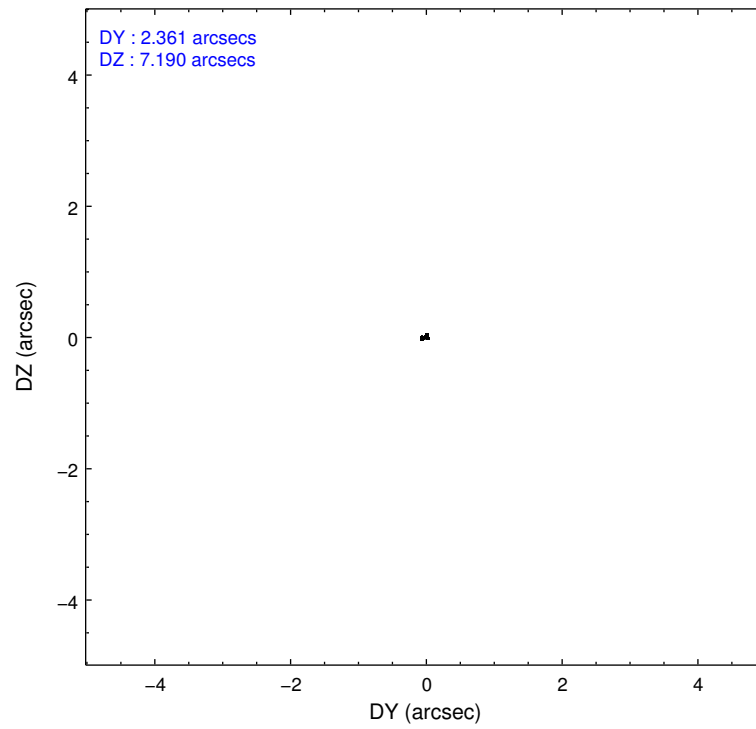
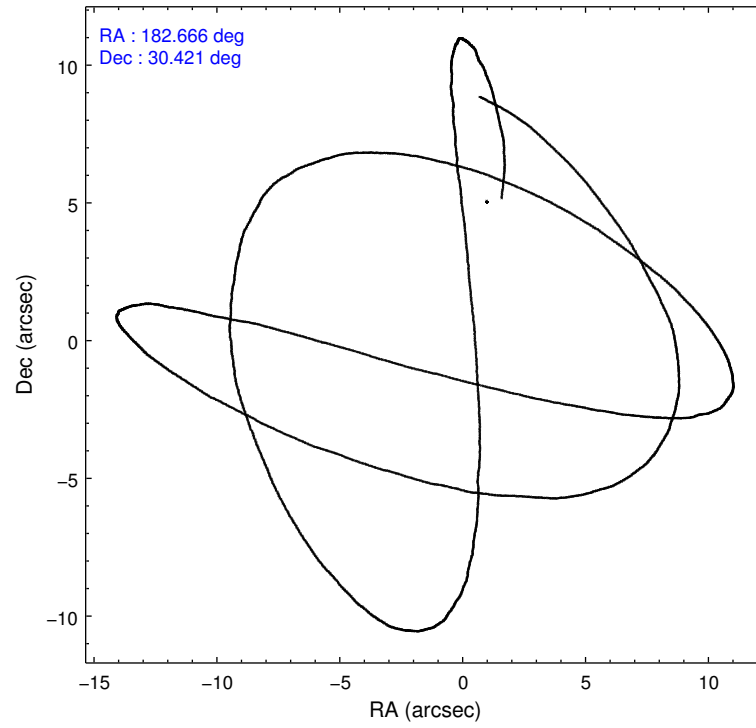
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 582 | 551 | 923 | 606 | 624 | 889 |
| | 5% | 5% | 6% | 5% | 4% | 5% |
| grade 1 events | 4 | 4 | 65 | 5 | 9 | 14 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 283 | 251 | 1955 | 270 | 1248 | 546 |
| | 2% | 2% | 13% | 2% | 9% | 3% |
| grade 3 events | 116 | 99 | 321 | 141 | 535 | 270 |
| | 1% | 0% | 2% | 1% | 3% | 1% |
| grade 4 events | 108 | 125 | 292 | 109 | 571 | 262 |
| | 0% | 1% | 1% | 1% | 4% | 1% |
| grade 5 events | 358 | 382 | 1183 | 429 | 1212 | 500 |
| | 3% | 3% | 8% | 4% | 8% | 3% |
| grade 6 events | 232 | 210 | 3605 | 250 | 2910 | 747 |
| | 2% | 2% | 24% | 2% | 21% | 4% |
| grade 7 events | 9845 | 8292 | 6292 | 8469 | 6406 | 12752 |
| | 85% | 83% | 42% | 82% | 47% | 79% |

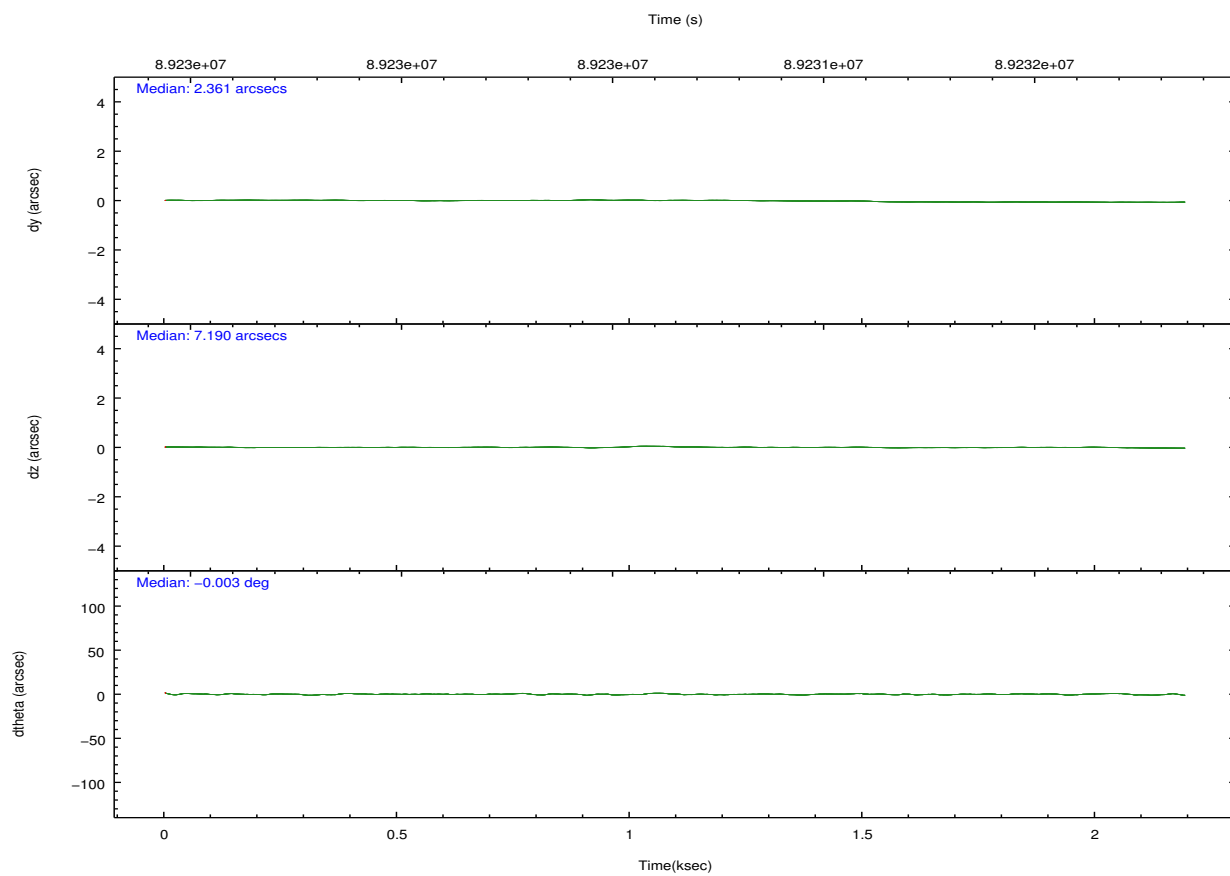
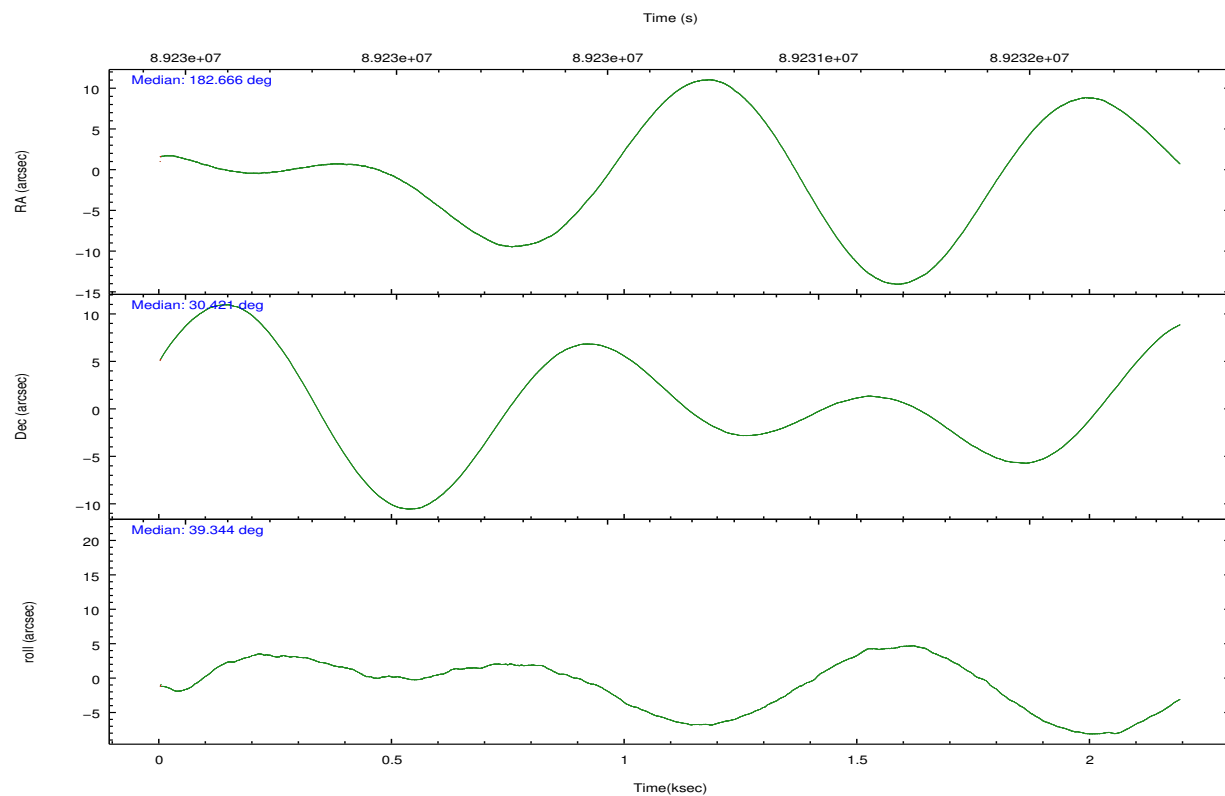
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-235678 | ACIS-235678 |
| Grating | NONE | NONE |
| Data mode | FAINT | FAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 182.654900 | 182.6660119782465 |
| [deg] Pointing Dec | 30.394997 | 30.42081872035389 |
| [deg] Pointing Roll | 39.199475 | 39.35047262611276 |
| [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) | 89229748.184000 | 89229274.25538801 |
| Observation start date | 2000-10-29T18:01:24 | 2000-10-29T17:54:34 |
| [s] Observation end time (MET) | 89231748.184000 | 89232442.01800799 |
| Observation end date | 2000-10-29T18:34:44 | 2000-10-29T18:47:22 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



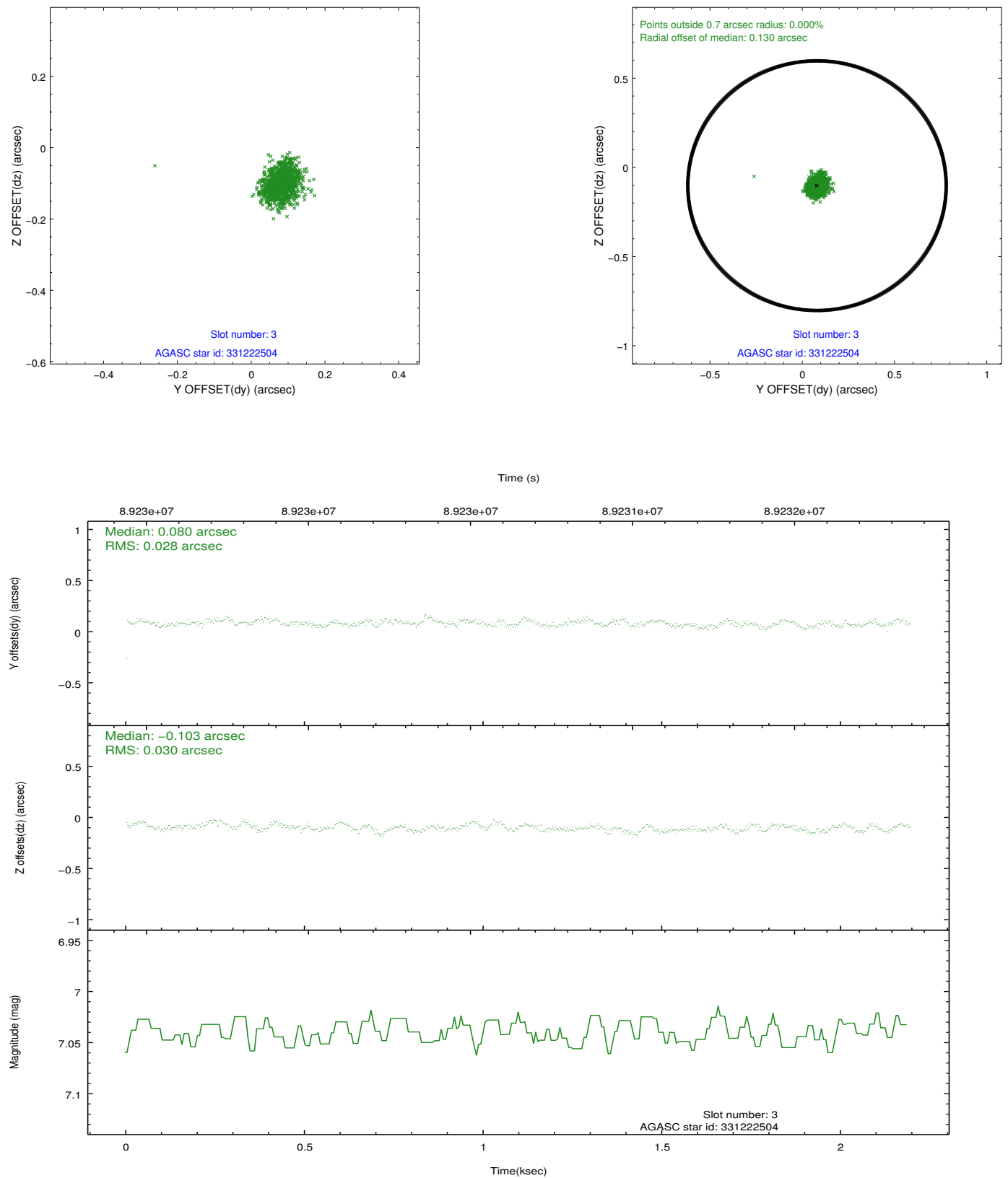


Slot Statistics

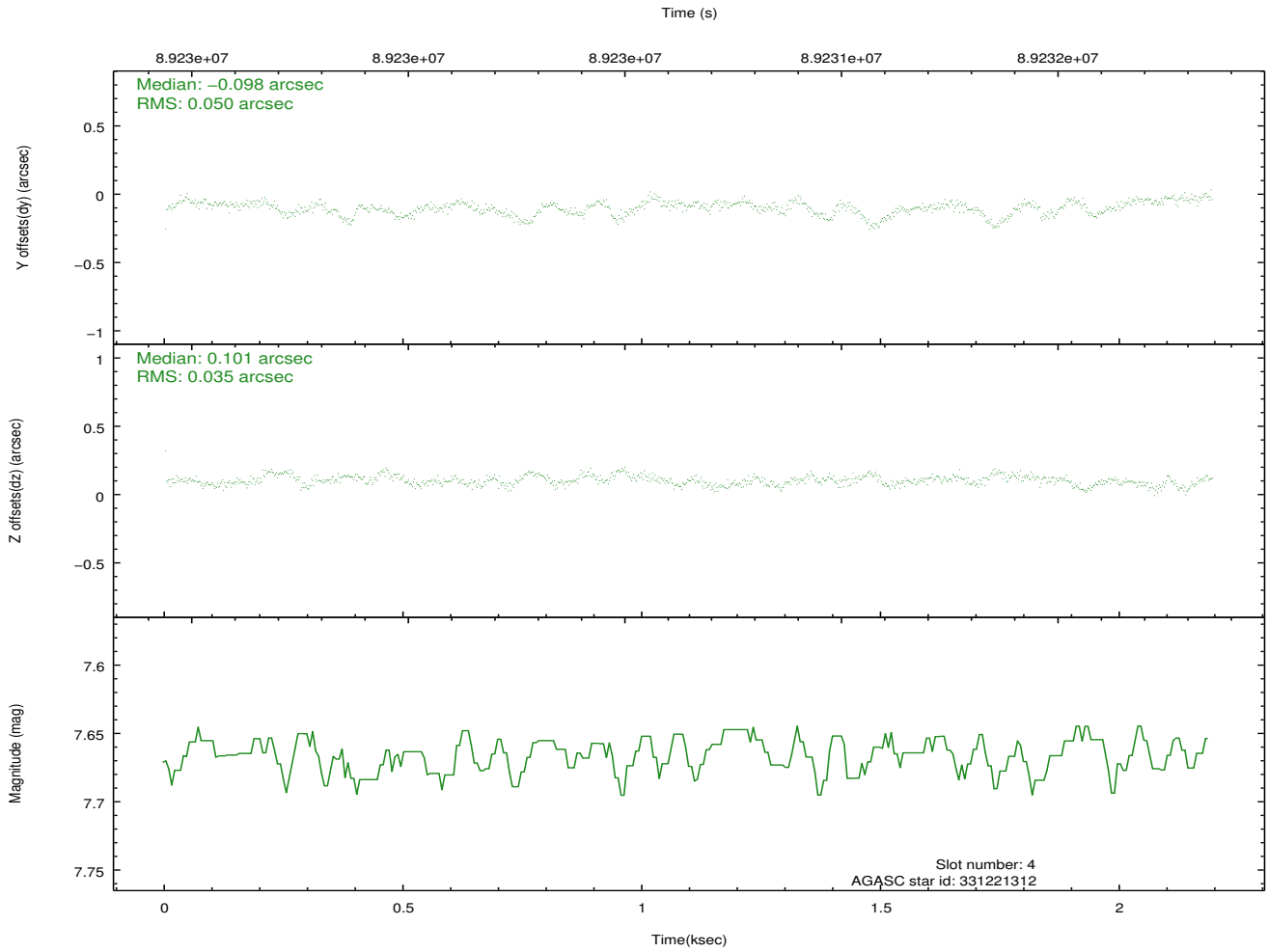
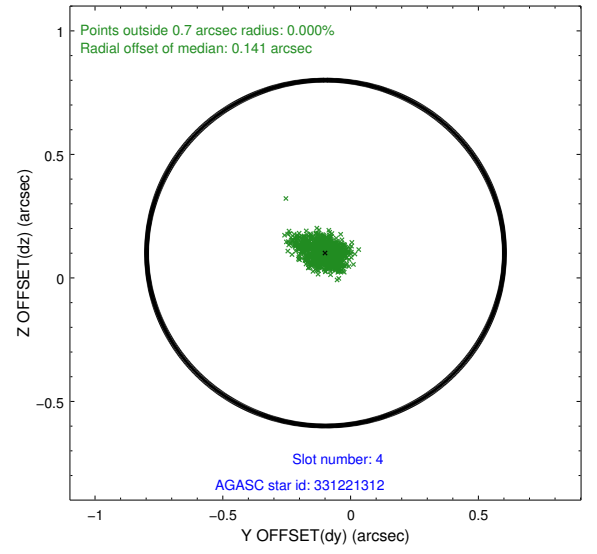
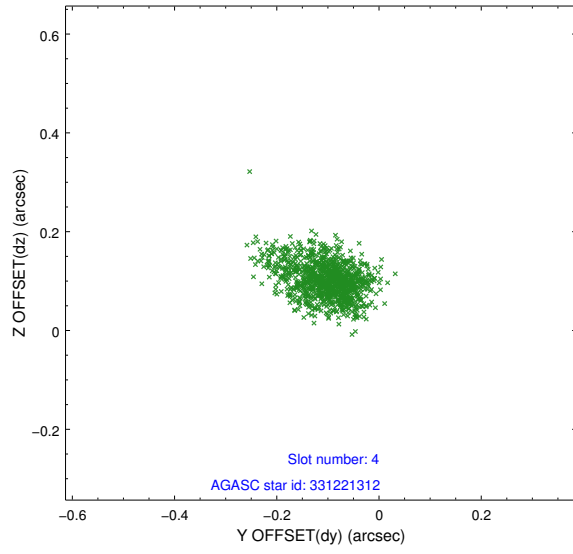
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.11 | 535 | -0.014 | -0.003 | 0.006 | 0.011 | 0.000000 | 0.000000 | -755.00 | -1728.36 |
| 1 | FID | ACIS-S-4 | 7.20 | 535 | -0.034 | 0.007 | 0.005 | 0.009 | 0.000000 | 0.000000 | 2156.93 | 177.04 |
| 2 | FID | ACIS-S-5 | 7.24 | 535 | 0.017 | 0.004 | 0.006 | 0.010 | 0.000000 | 0.000000 | -1803.96 | 174.13 |
| 3 | GUIDE | 331222504 | 7.04 | 1070 | 0.080 | -0.103 | 0.043 | 0.069 | 182.064211 | 30.275360 | -1692.75 | 830.41 |
| 4 | GUIDE | 331221312 | 7.67 | 1070 | -0.098 | 0.101 | 0.062 | 0.108 | 183.320402 | 30.283044 | 1350.50 | -1614.07 |
| 5 | GUIDE | 331224640 | 7.84 | 1070 | 0.110 | -0.066 | 0.103 | 0.144 | 181.937429 | 30.420434 | -1662.92 | 1482.48 |
| 6 | GUIDE | 331220584 | 8.31 | 1070 | -0.226 | 0.106 | 0.067 | 0.108 | 183.394357 | 30.562466 | 2160.08 | -973.94 |
| 7 | GUIDE | 331223656 | 9.35 | 1069 | 0.140 | -0.050 | 0.083 | 0.133 | 182.518902 | 30.395784 | -323.57 | 268.37 |

2.4 Star Slots

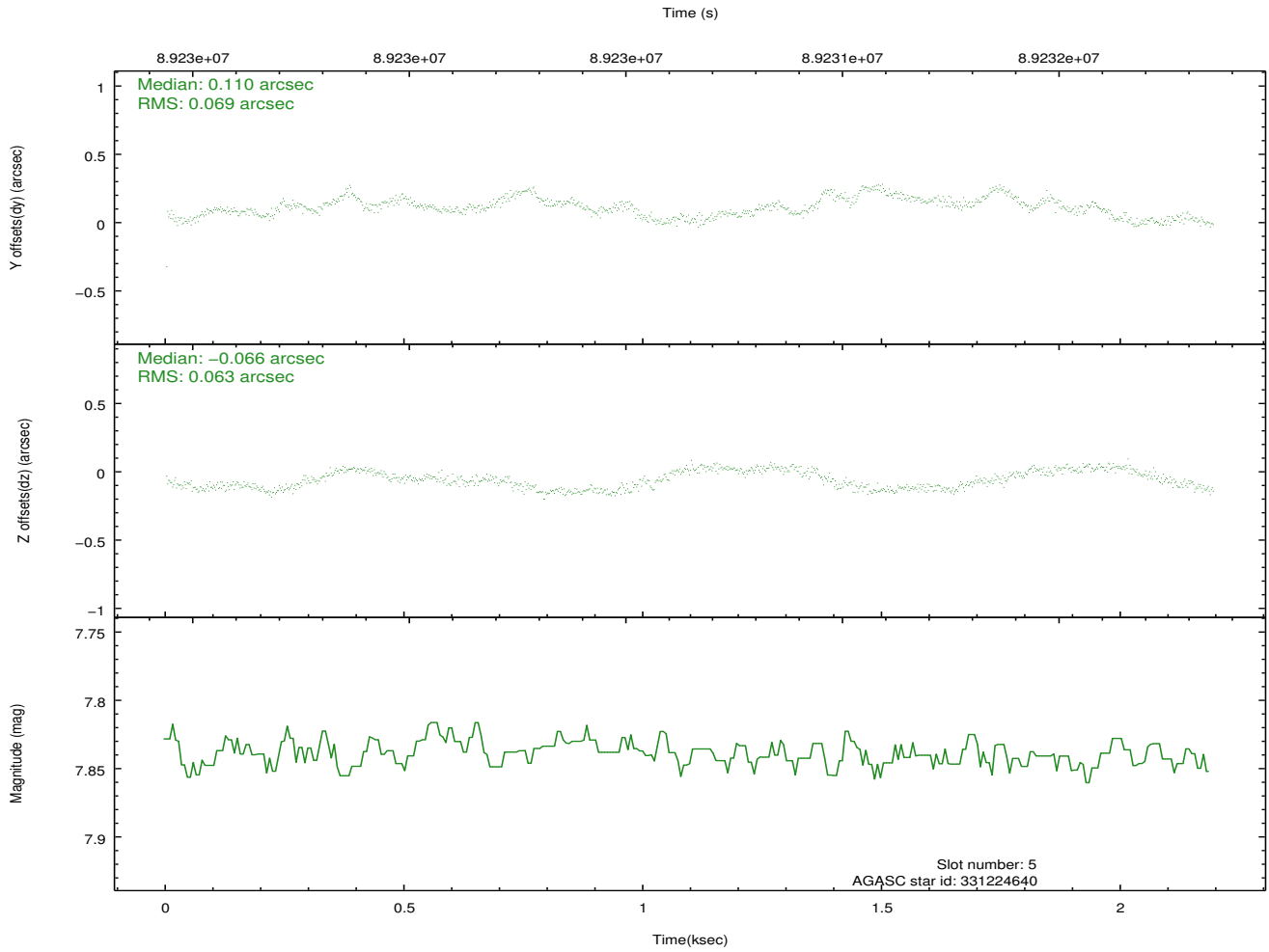
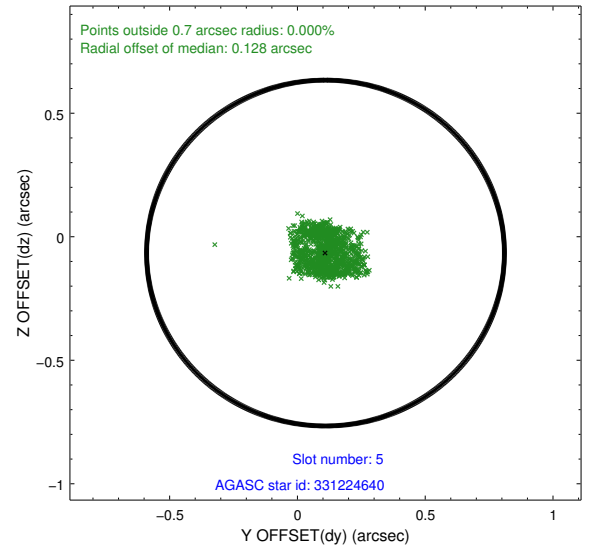
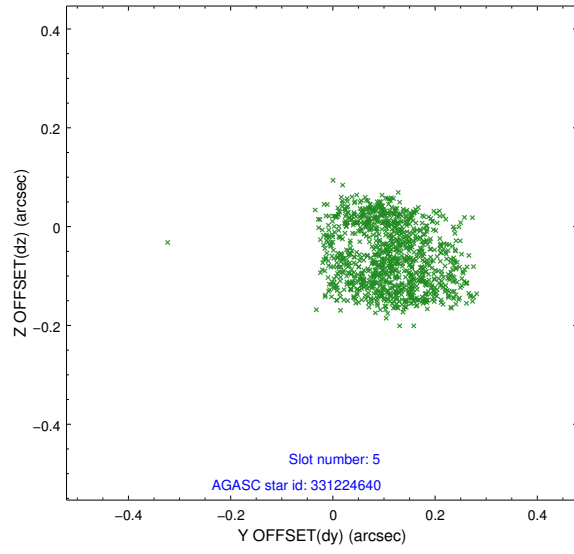
2.4.1 Slot 3



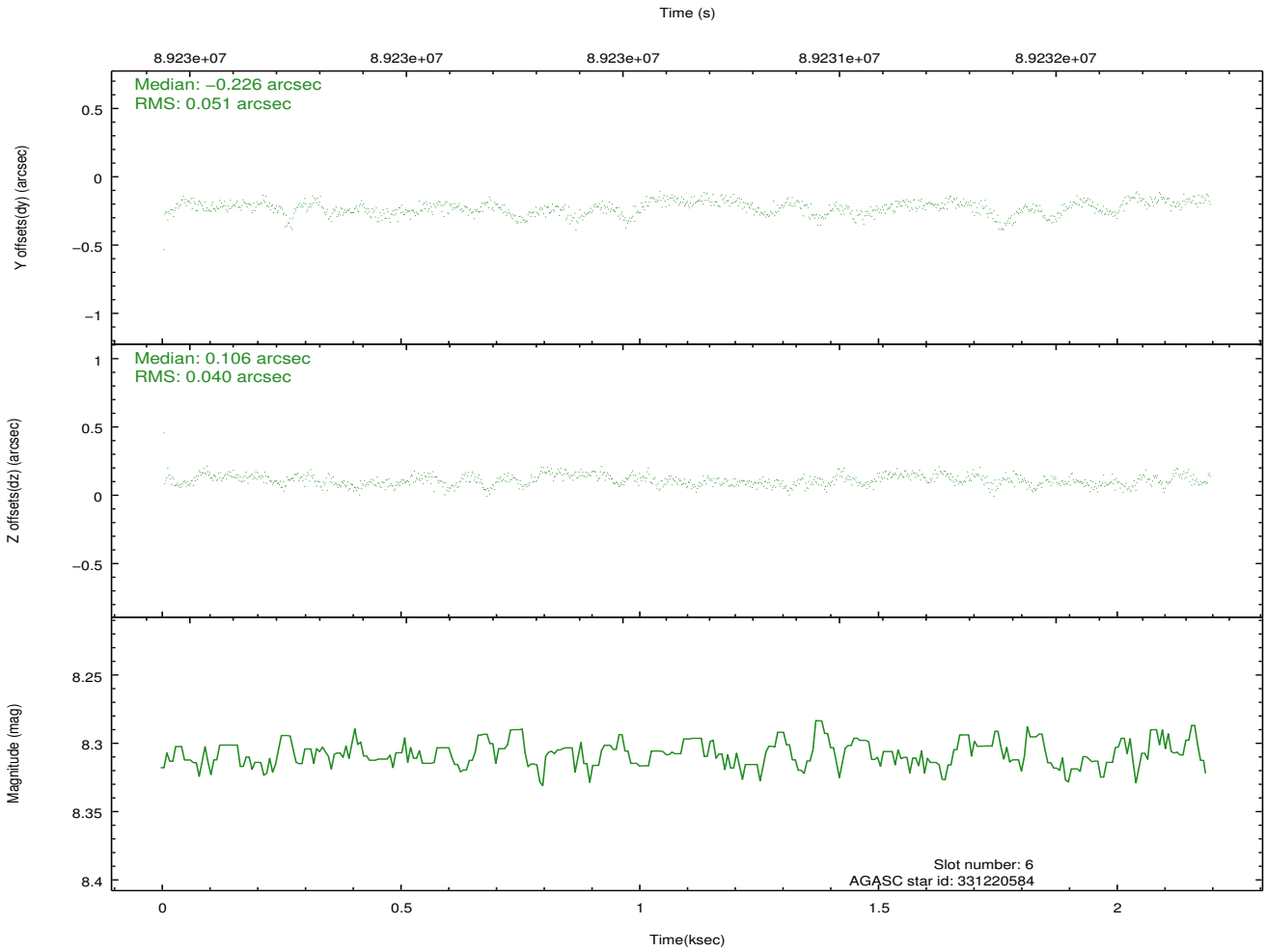
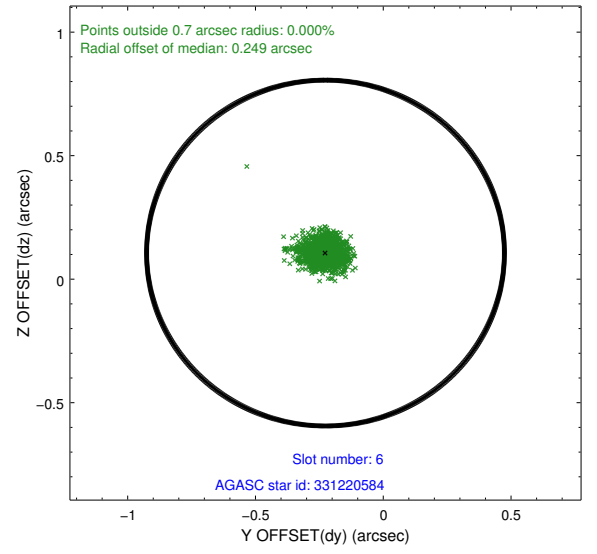
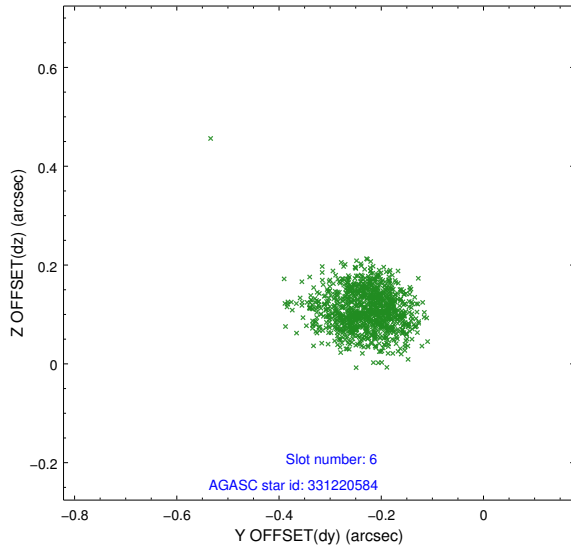
2.4.2 Slot 4



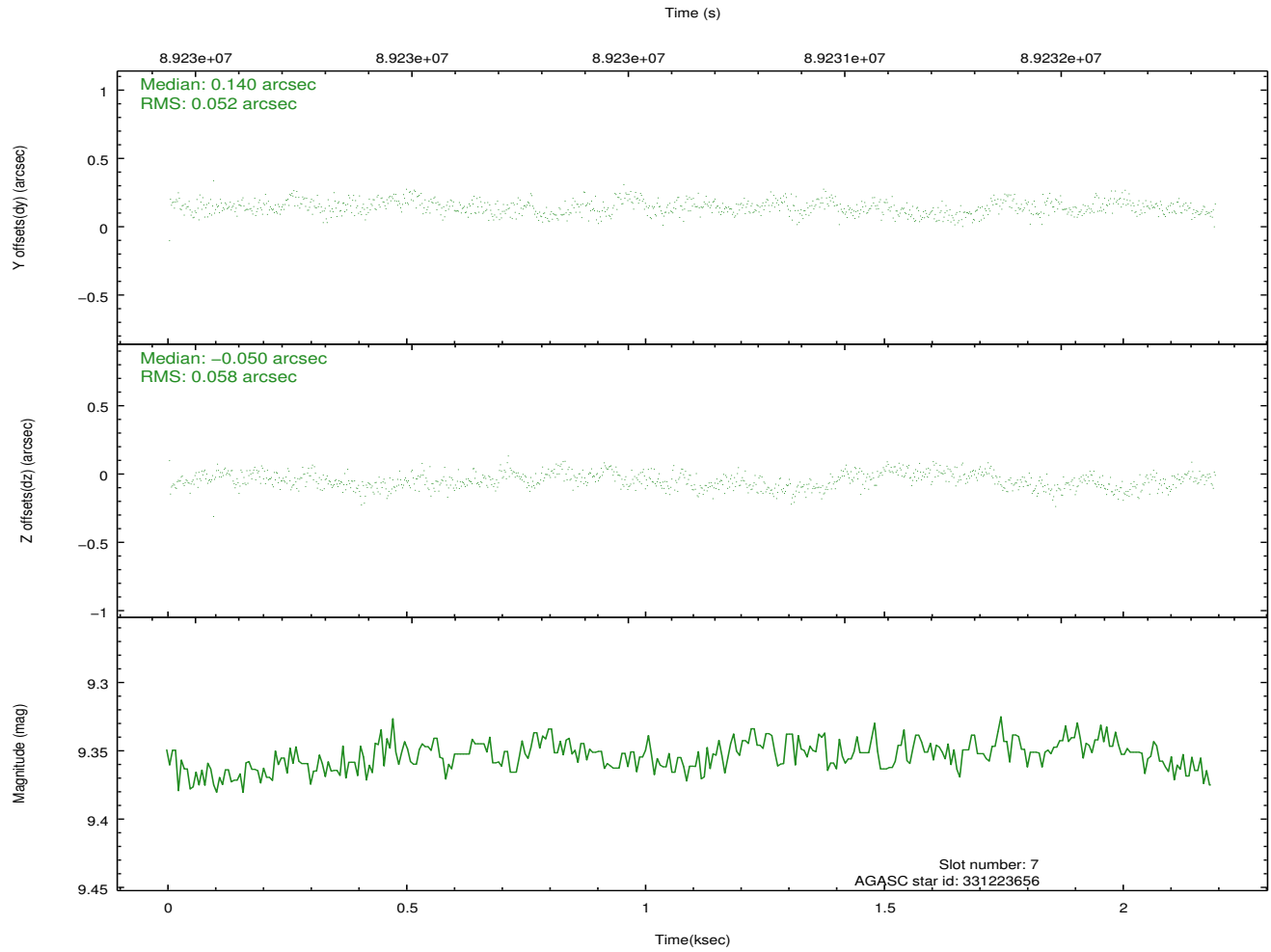
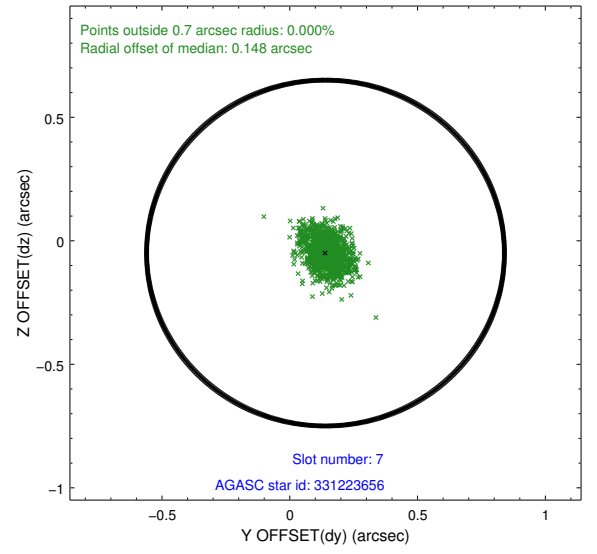
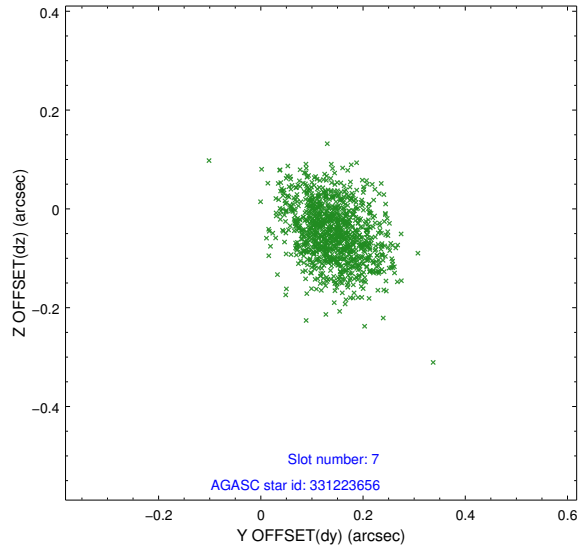
2.4.3 Slot 5



2.4.4 Slot 6

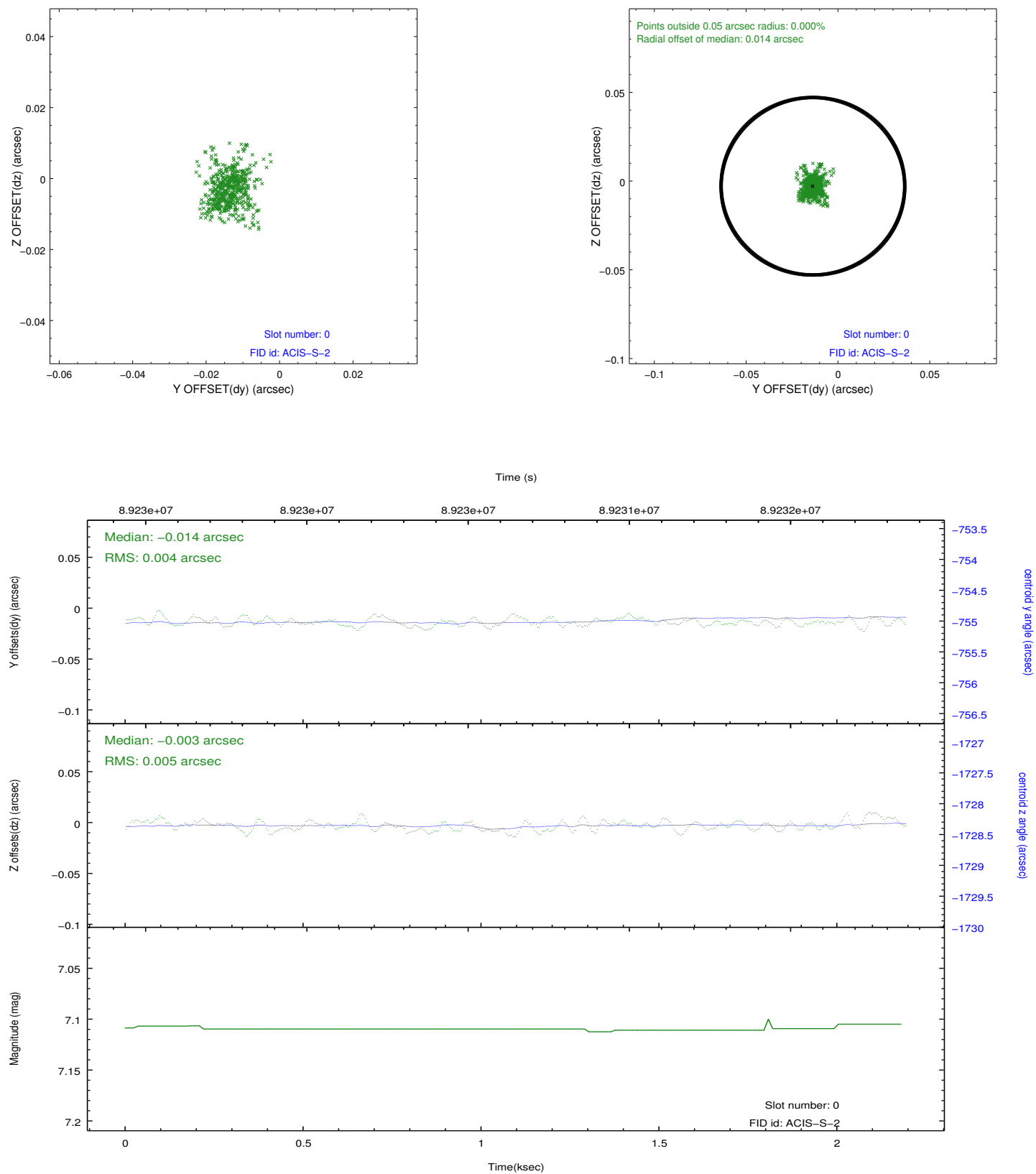


2.4.5 Slot 7

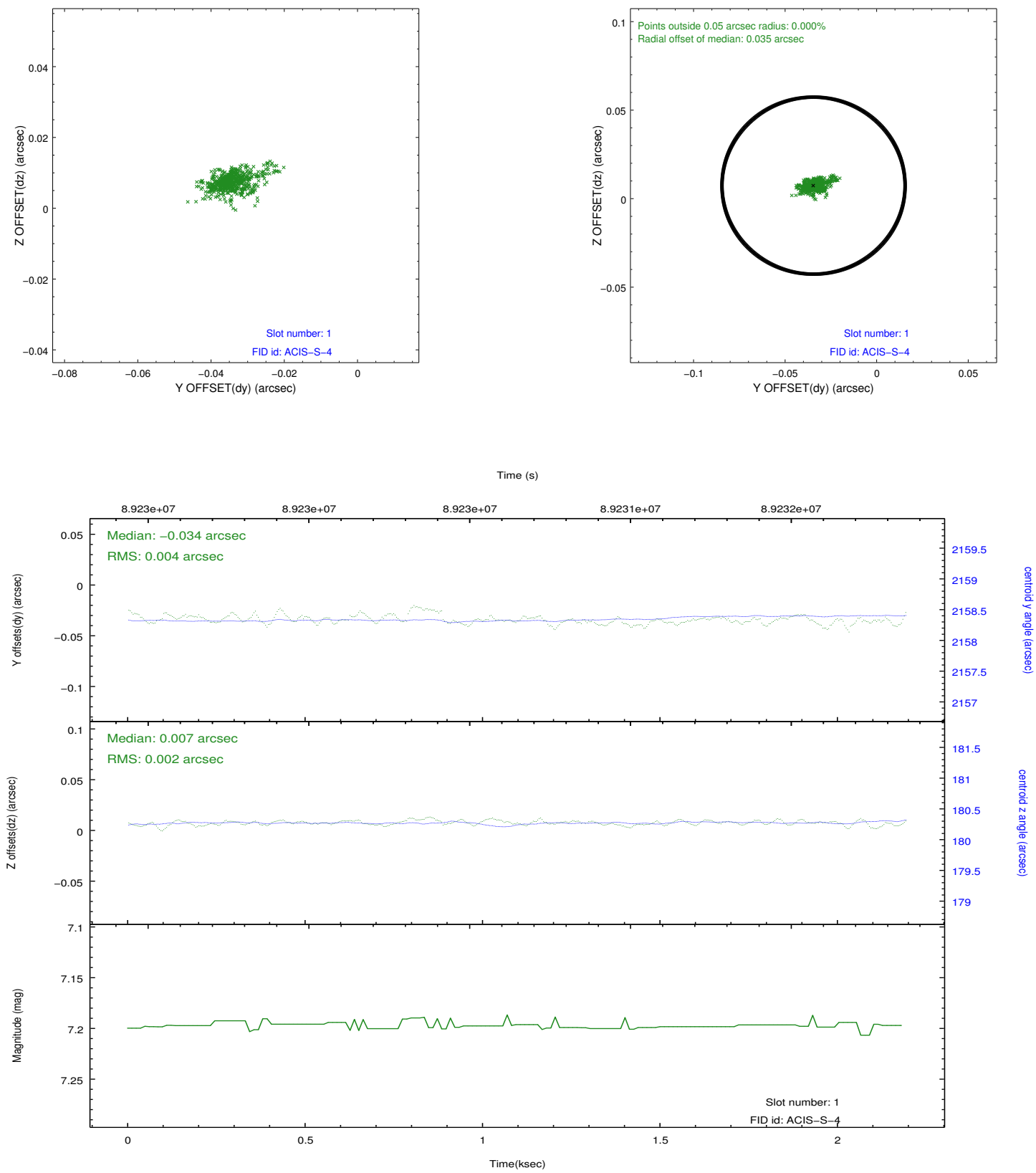


2.5 FID Slots

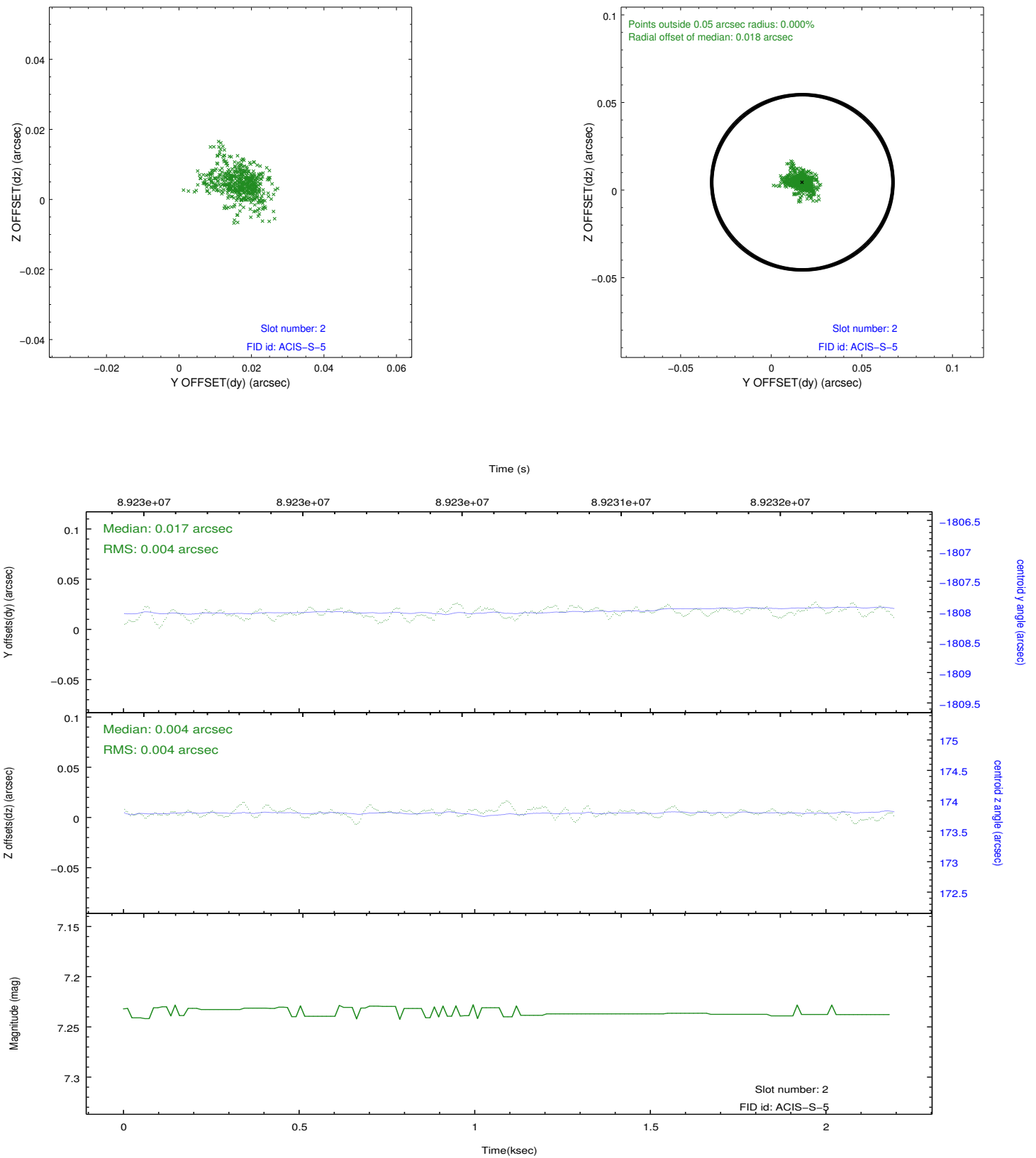
2.5.1 Slot 0



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) | 2012.09.10 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 1.76 |

A.2 Comments