

V&V Reference Report

L2 ASCDS Version : 8.1.1

Observation 1440 - L2 Version 4

Chandra X-Ray Center

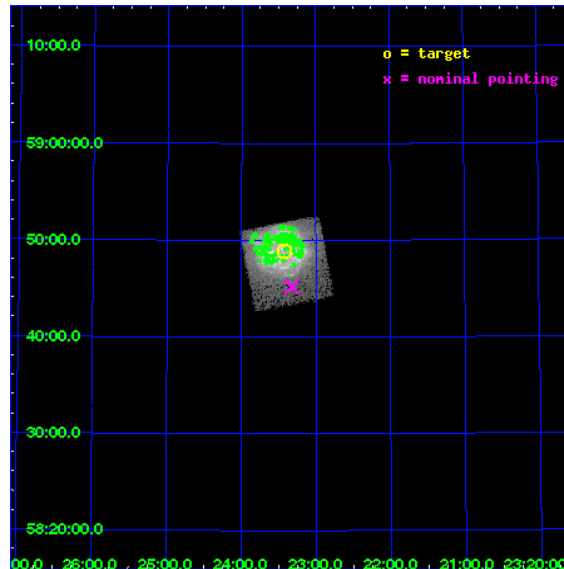
L2 Processing Date : Nov 24 2009

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1 Front

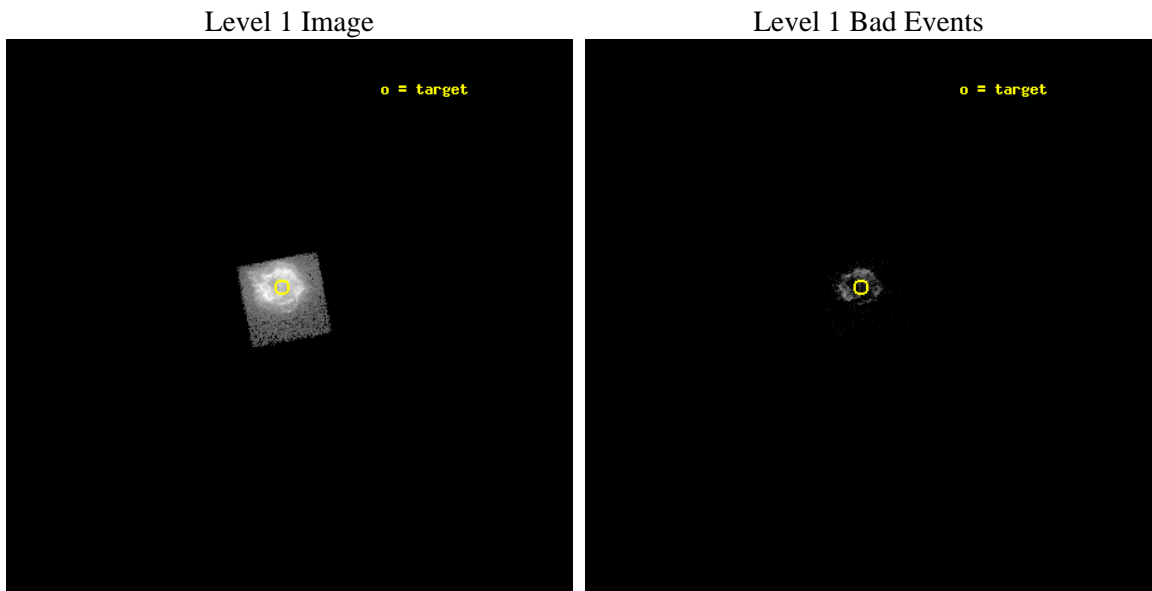
| | | |
|----------|-----------------------------------------|---------------------------------------------|
| seq_num | 580390 | Sequence number |
| obs_id | 1440 | Observation id |
| title | ACIS CHIP RESPONSE TO CAS A, JAN. 99 | Proposal title |
| observer | Dr. CXC Calibration | Principal investigator |
| object | CAS A [Chip S3, T=110, Offsets=-3,0,0] | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 350.8575 | Observer's specified target RA |
| dec_targ | 58.814833 | Observer's specified target Dec |
| ra_nom | 350.830522701 | Nominal RA |
| dec_nom | 58.753193217368 | Nominal Dec |
| roll_nom | 259.25409690113 | Nominal Roll |
| revision | 4 | Processing version of data |
| ontime | 657.92747090012 | Sum of GTIs [s] |
| livetime | 649.59639710722 | Livetime [s] |
| ontime4 | 858.86656548828 | Sum of GTIs [s] |
| ontime5 | 1036.4349635243 | Sum of GTIs [s] |
| ontime6 | 1023.3070225194 | Sum of GTIs [s] |
| ontime7 | 657.92747090012 | Sum of GTIs [s] |
| ontime8 | 997.46145071089 | Sum of GTIs [s] |
| ontime9 | 974.73370916396 | Sum of GTIs [s] |
| l2events | 206697 | Number of level 2 events |



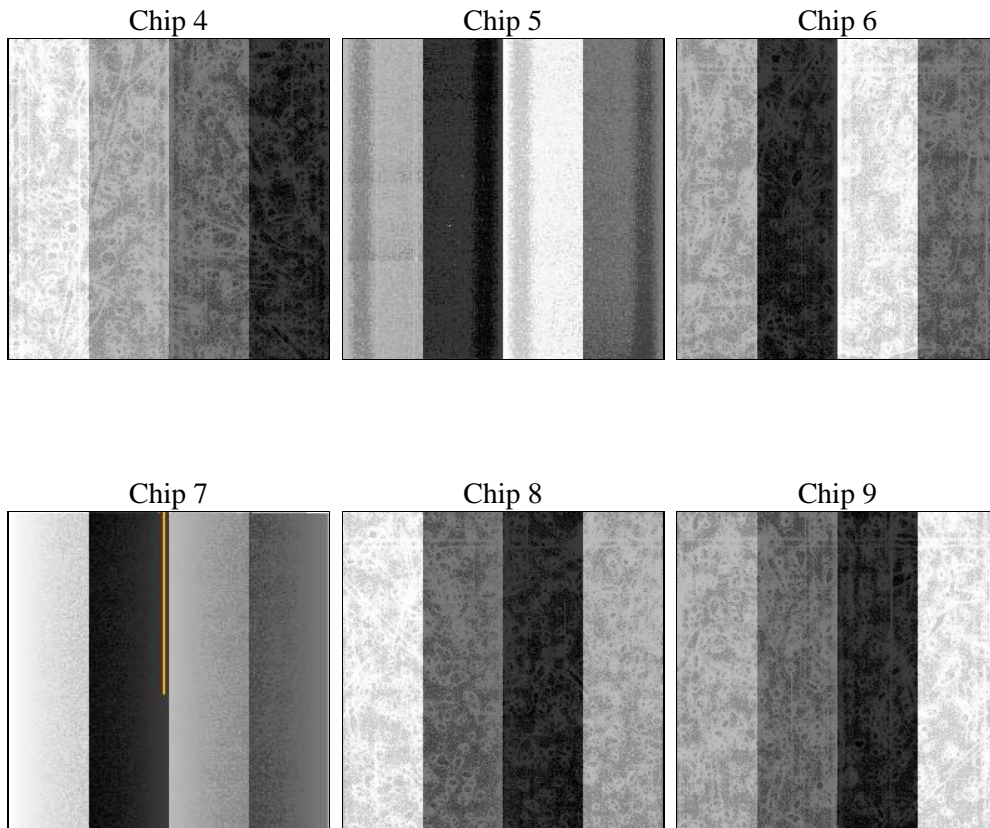
2 OBI

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 | Scheduled observation exposure time |
| ascdsver | 8.1.1 | ASCDS version number | ontime | 657.92747090012 | Sum of GTIs [s] |
| caldsver | 4.1.4 | | ontime4 | 858.86656548828 | Sum of GTIs [s] |
| date | 2009-11-24T13:12:09 | Date and time of file creation | ontime5 | 1036.4349635243 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime6 | 1023.3070225194 | Sum of GTIs [s] |
| | | | ontime7 | 657.92747090012 | Sum of GTIs [s] |
| | | | ontime8 | 997.46145071089 | Sum of GTIs [s] |
| | | | ontime9 | 974.73370916396 | Sum of GTIs [s] |
| | | | l1events | 214346 | Number of level 1 events |

2.1.4 Events

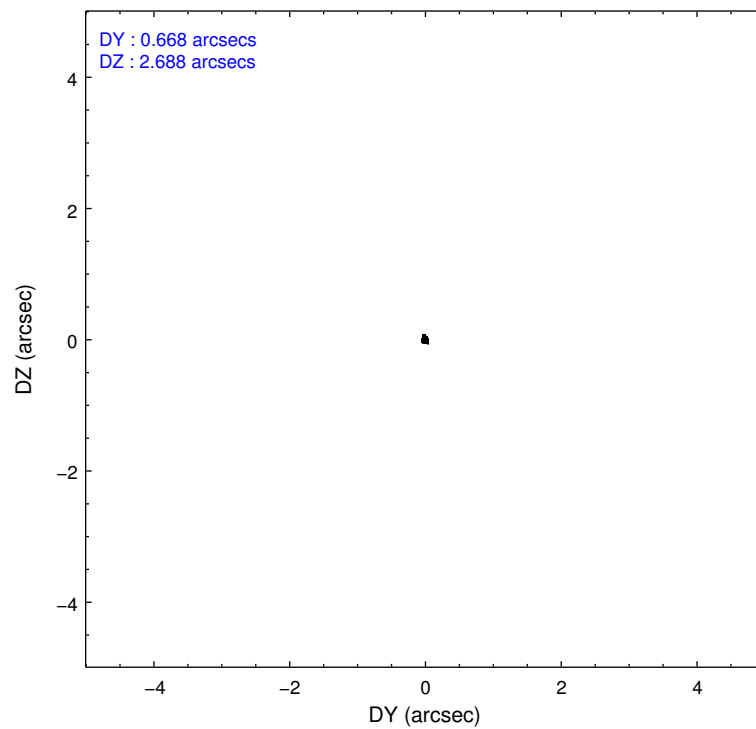
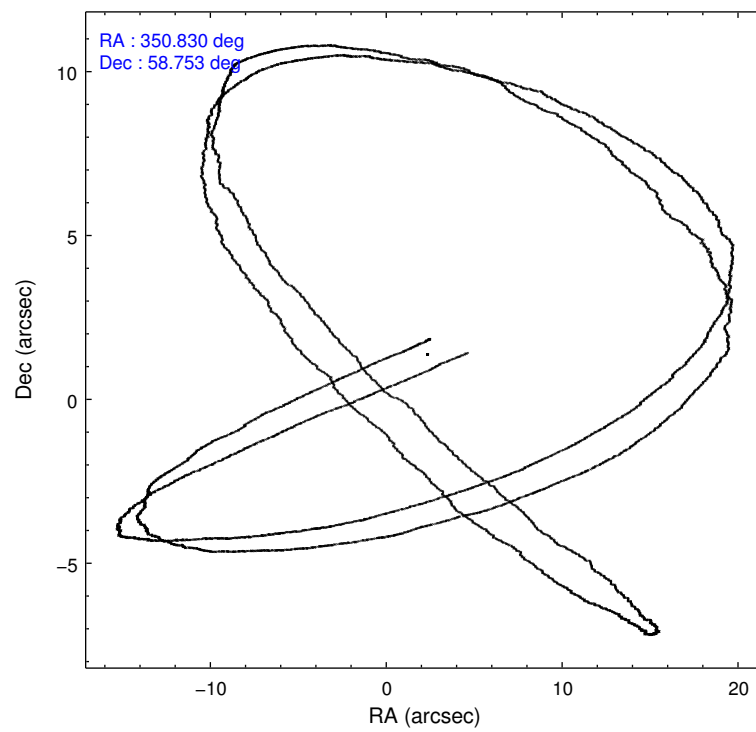
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|--------|-------|-------|
| level 1 events | 0 | 0 | 0 | 214346 | 0 | 0 |
| rejected events | 0 | 0 | 0 | 6070 | 0 | 0 |
| rejected % | 0% | 0% | 0% | 2% | 0% | 0% |

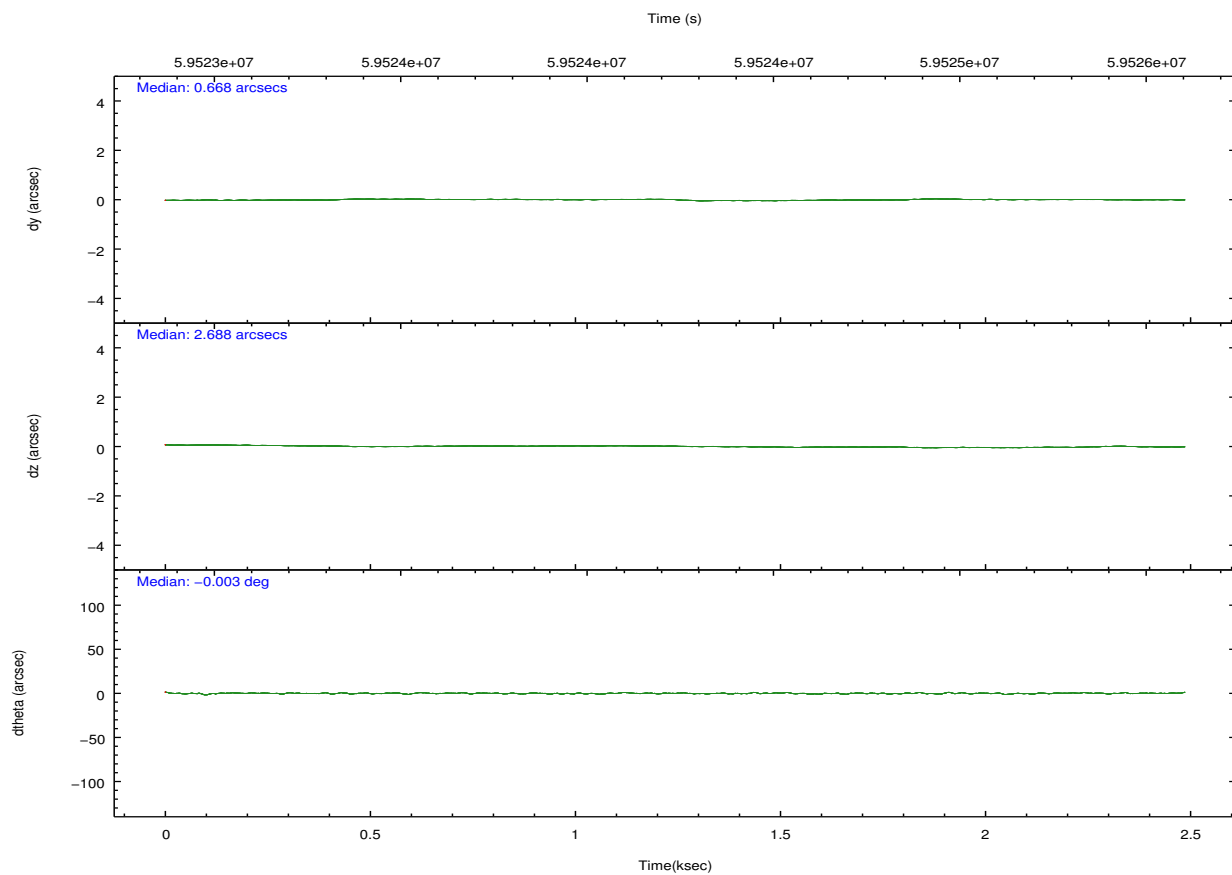
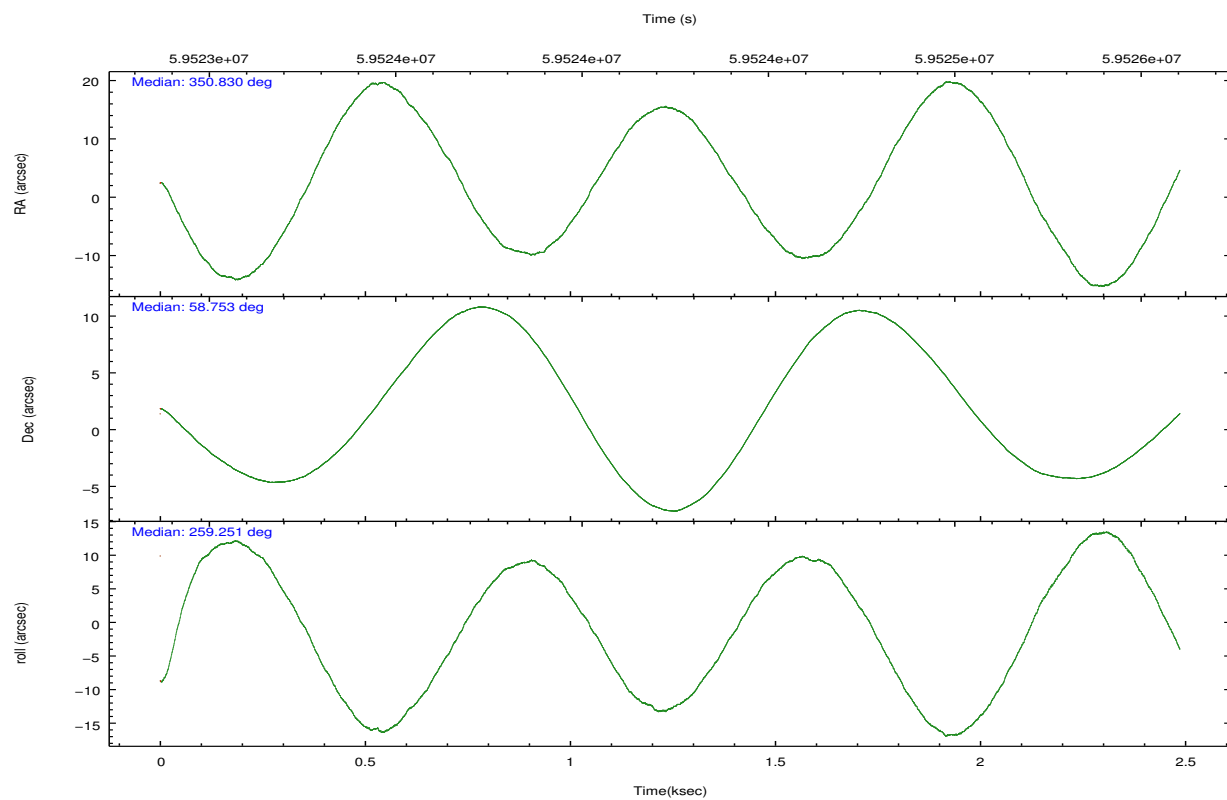
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 0 | 0 | 0 | 46922 | 0 | 0 |
| | 0% | 0% | 0% | 21% | 0% | 0% |
| grade 1 events | 0 | 0 | 0 | 872 | 0 | 0 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 0 | 0 | 0 | 56804 | 0 | 0 |
| | 0% | 0% | 0% | 26% | 0% | 0% |
| grade 3 events | 0 | 0 | 0 | 23857 | 0 | 0 |
| | 0% | 0% | 0% | 11% | 0% | 0% |
| grade 4 events | 0 | 0 | 0 | 23761 | 0 | 0 |
| | 0% | 0% | 0% | 11% | 0% | 0% |
| grade 5 events | 0 | 0 | 0 | 4245 | 0 | 0 |
| | 0% | 0% | 0% | 1% | 0% | 0% |
| grade 6 events | 0 | 0 | 0 | 57885 | 0 | 0 |
| | 0% | 0% | 0% | 27% | 0% | 0% |
| grade 7 events | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0% | 0% | 0% | 0% | 0% | 0% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| Pointing RA | 350.813559 | 350.8305227010033 | Subarray requested | NONE | NONE |
| Pointing Dec | 58.779494 | 58.7531932173675 | Alternating exposures requested | N | N |
| Pointing Roll | 259.111968 | 259.2540969011334 | Primary exposure time | 0.000000 | 3.2 |
| SIM focus pos (mm) | -0.684267 | -0.6828225247311905 | | | |
| SIM defocus (mm) | 0 | 0.001444936568705701 | | | |
| SIM translation stage pos (mm) | -190.132523 | -190.1400660498719 | | | |
| SIM translation stage offset (mm) | 0 | 0.00754346686406393 | | | |
| Observation start time | 59523477.184000 | 59522811.769438 | | | |
| Observation start date | 1999-11-20T22:16:53 | 1999-11-20T22:06:51 | | | |
| Observation end time | 59525477.184000 | 59525612.069539 | | | |
| Observation end date | 1999-11-20T22:50:13 | 1999-11-20T22:53:32 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



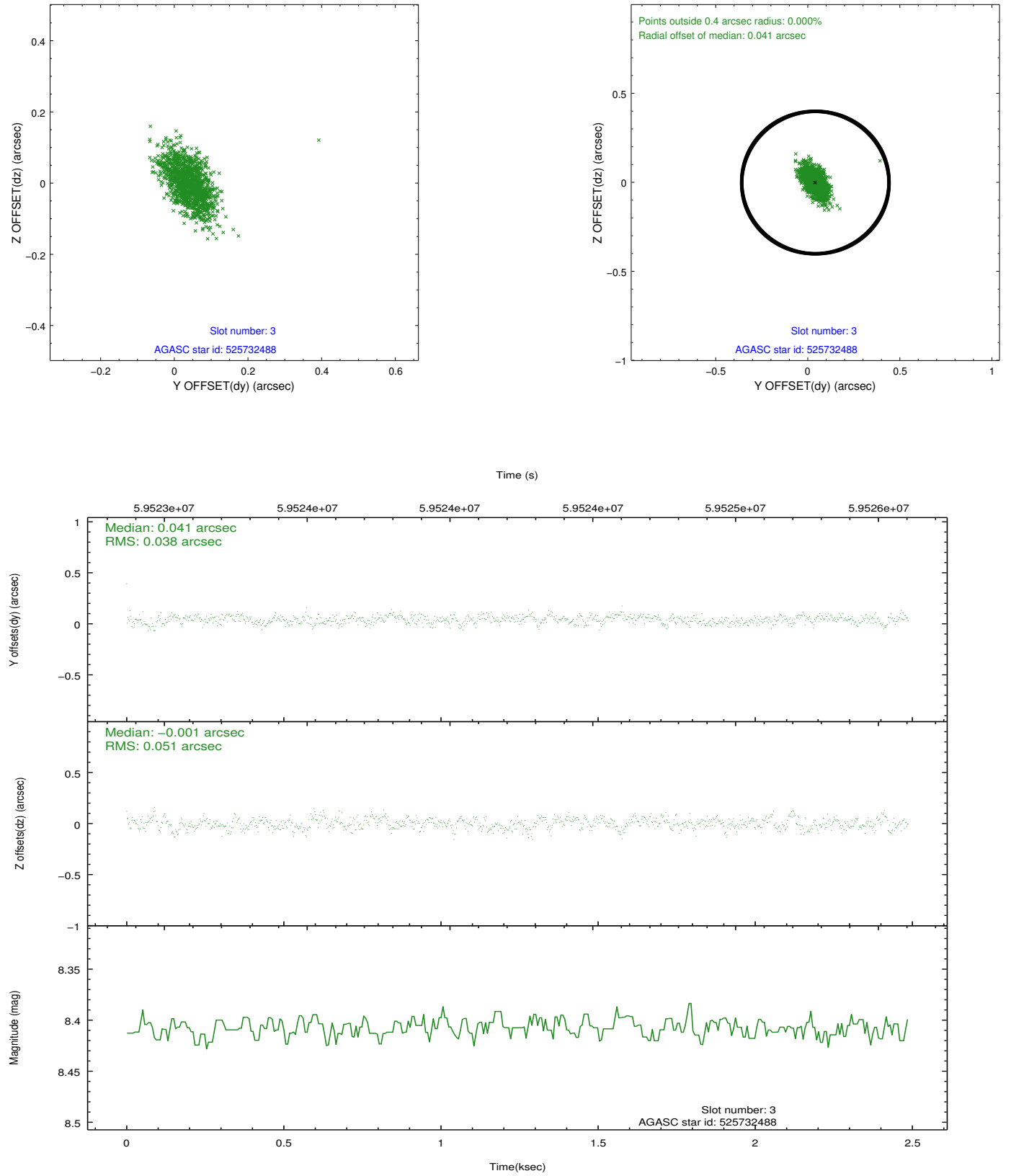


Slot Statistics

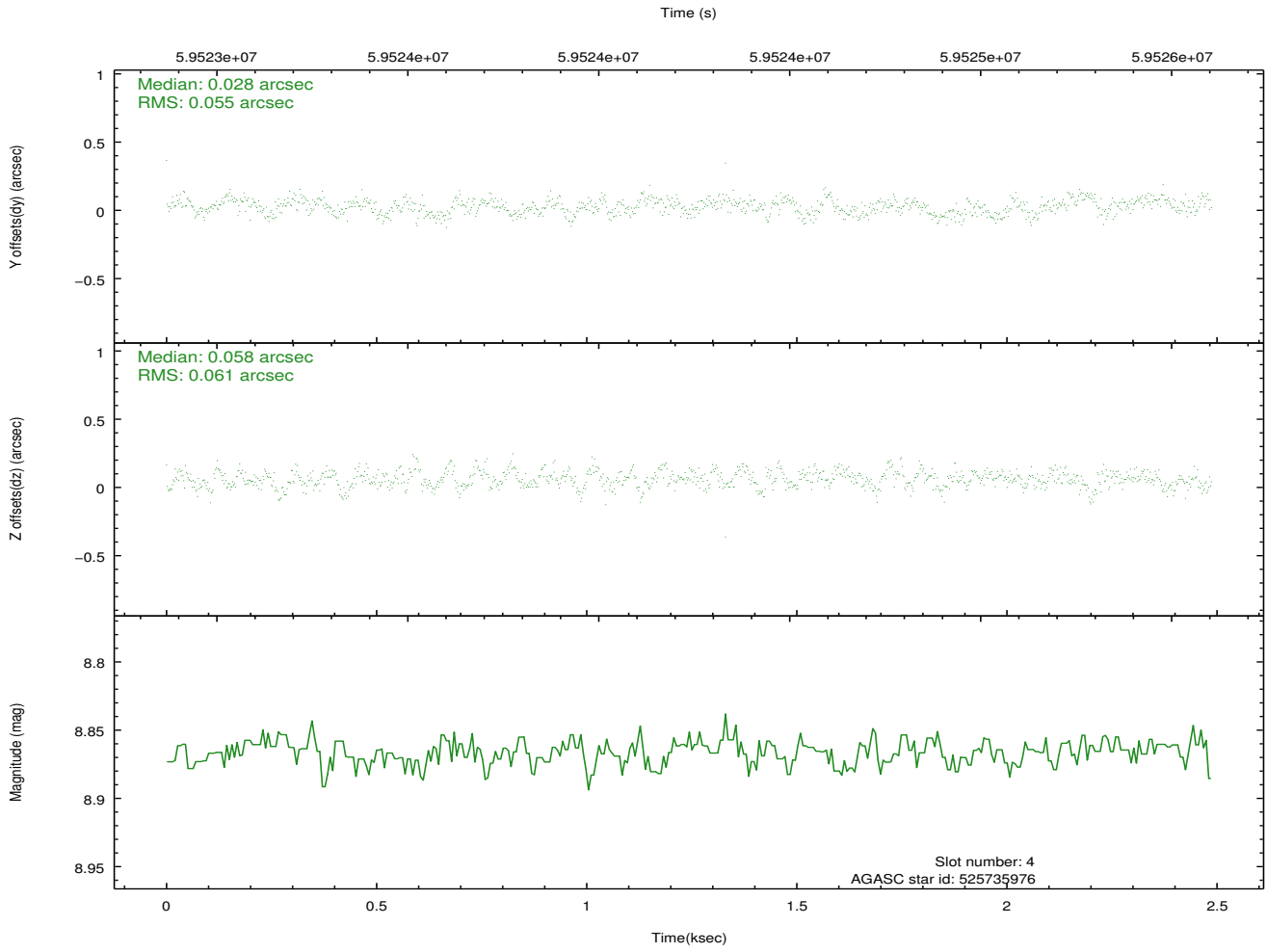
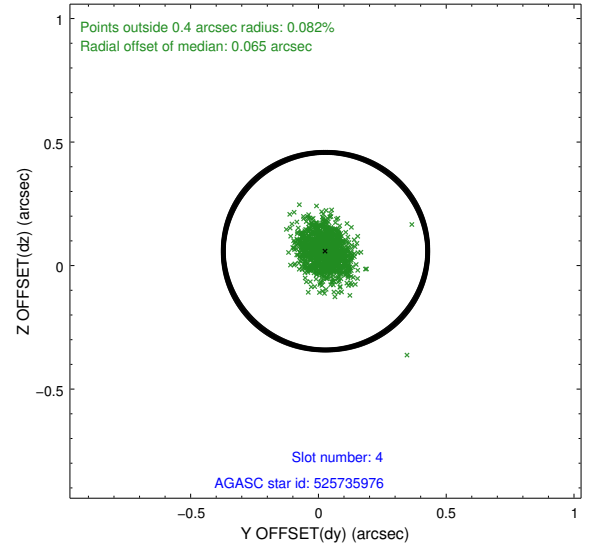
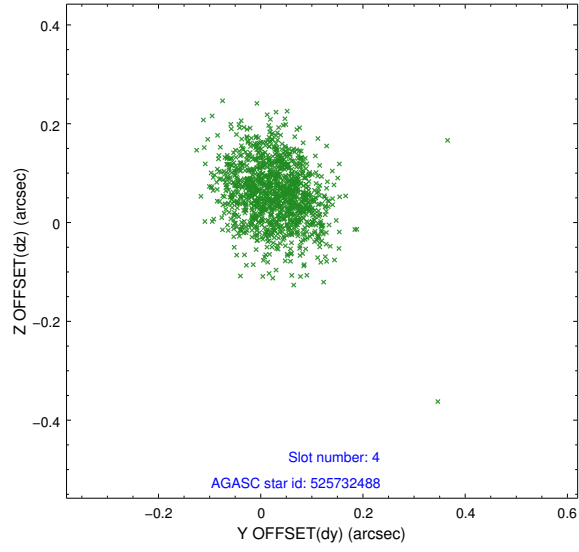
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-1 | 7.19 | 1214 | 0.027 | -0.040 | 0.006 | 0.011 | 0.000000 | 0.000000 | 942.73 | -1719.45 |
| 1 | FID | ACIS-S-5 | 7.25 | 1214 | -0.041 | 0.022 | 0.006 | 0.011 | 0.000000 | 0.000000 | -1805.55 | 177.05 |
| 2 | FID | ACIS-S-6 | 7.36 | 1214 | -0.007 | 0.029 | 0.006 | 0.011 | 0.000000 | 0.000000 | 407.06 | 822.29 |
| 3 | GUIDE | 525732488 | 8.41 | 1212 | 0.041 | -0.001 | 0.065 | 0.111 | 350.087090 | 58.516915 | 1178.90 | -1163.25 |
| 4 | GUIDE | 525735976 | 8.87 | 1214 | 0.028 | 0.058 | 0.086 | 0.140 | 350.142956 | 58.277622 | 2008.63 | -906.49 |
| 5 | GUIDE | 525734296 | 9.49 | 1213 | 0.045 | 0.009 | 0.097 | 0.158 | 351.276372 | 58.418153 | 1111.09 | 1102.11 |
| 6 | GUIDE | 525601208 | 9.21 | 1214 | -0.160 | -0.079 | 0.079 | 0.136 | 349.910779 | 59.483724 | -2188.21 | -2100.17 |
| 7 | GUIDE | 525739240 | 9.63 | 1213 | 0.054 | 0.013 | 0.089 | 0.157 | 350.642893 | 59.099564 | -1074.22 | -528.59 |

2.4 Star Slots

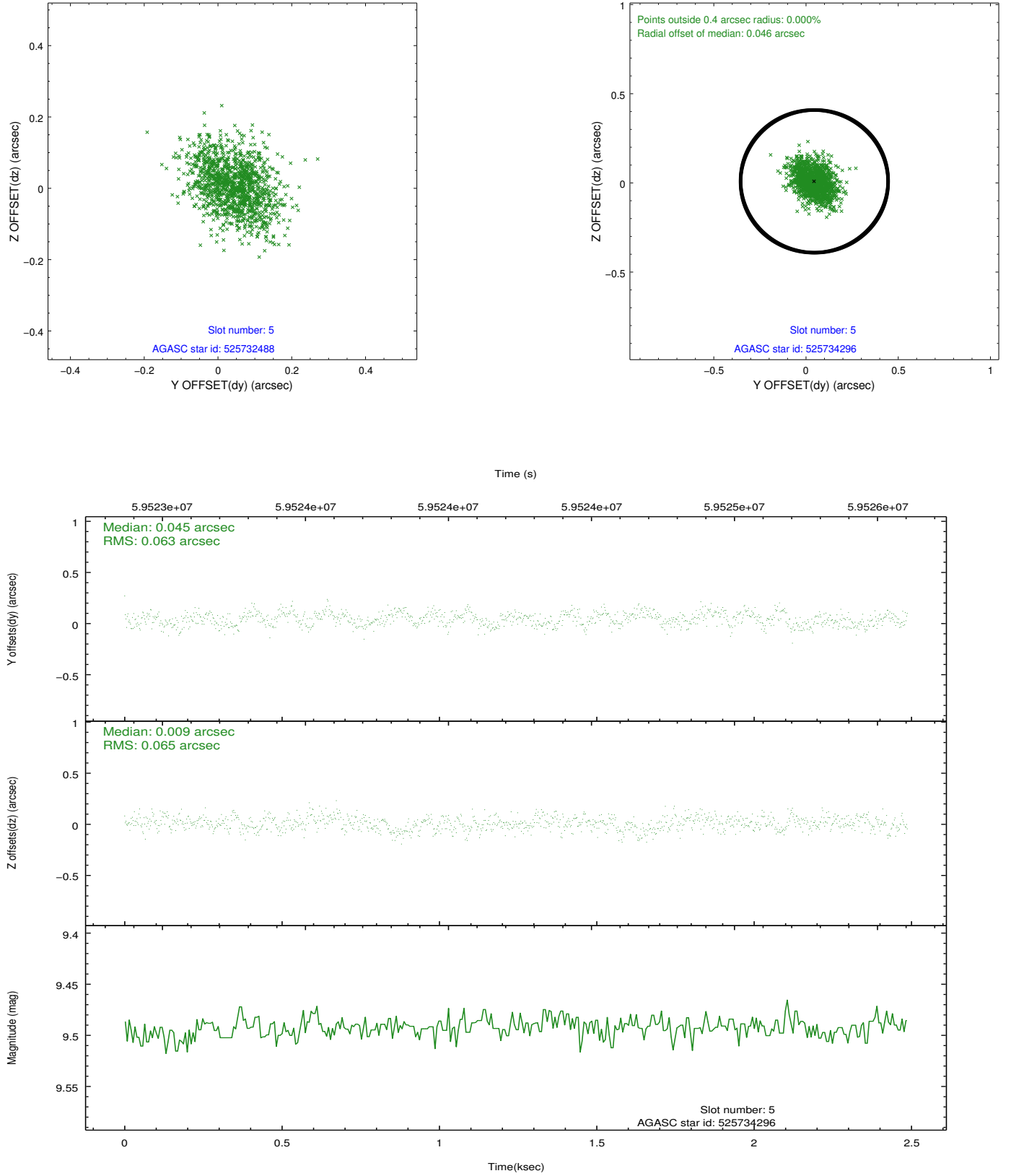
2.4.1 Slot 3



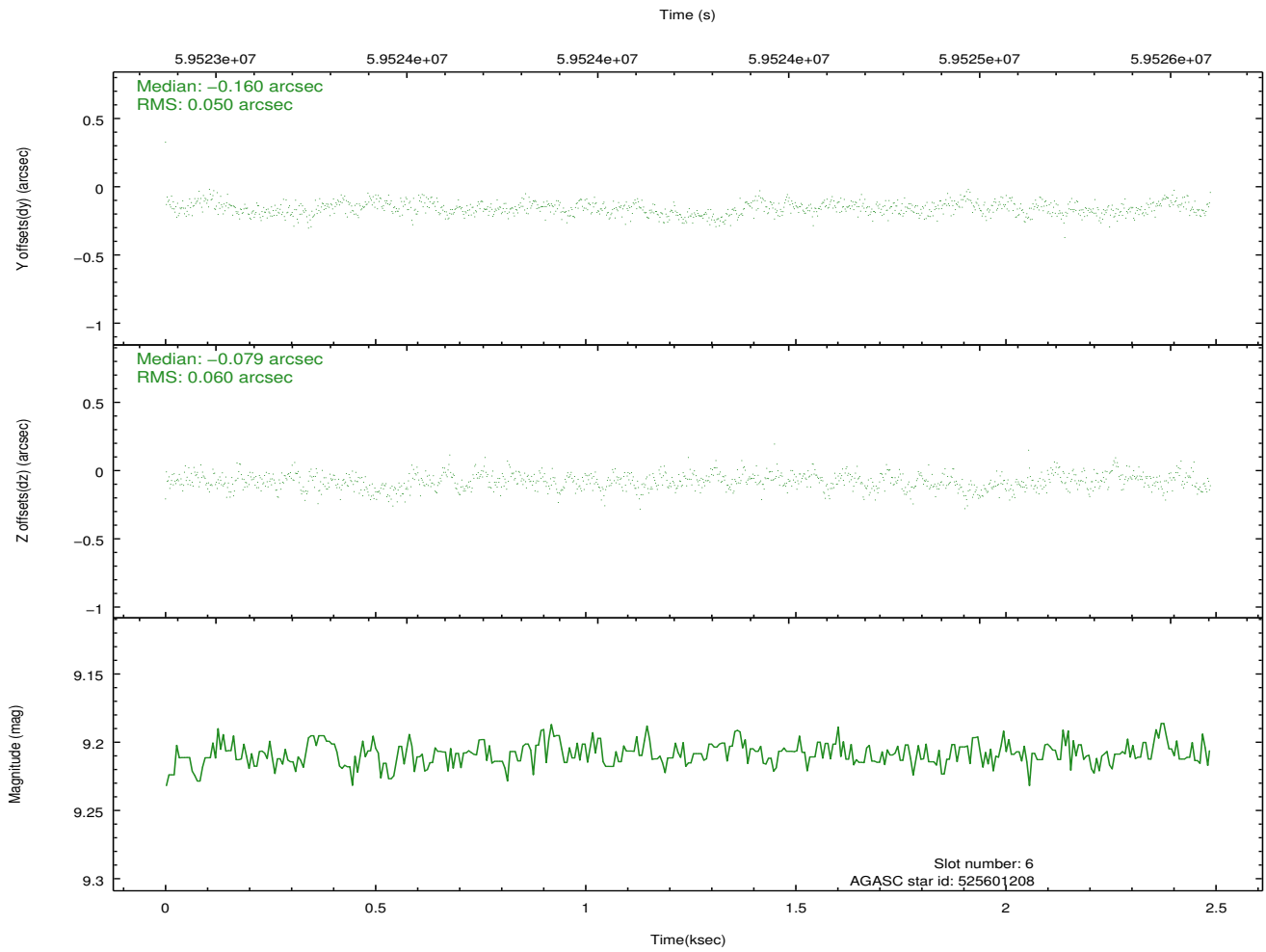
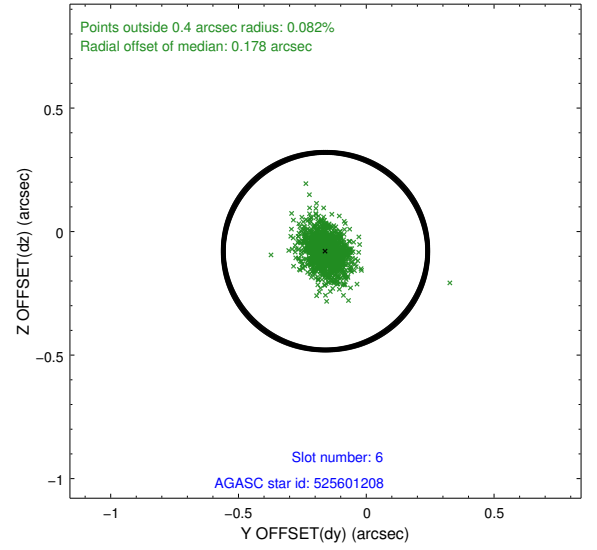
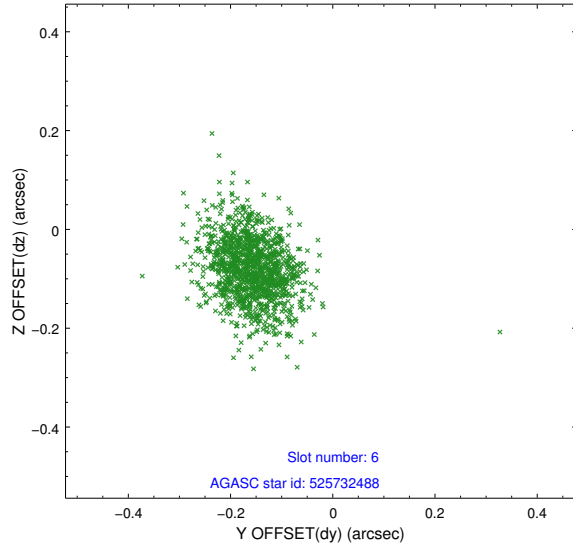
2.4.2 Slot 4



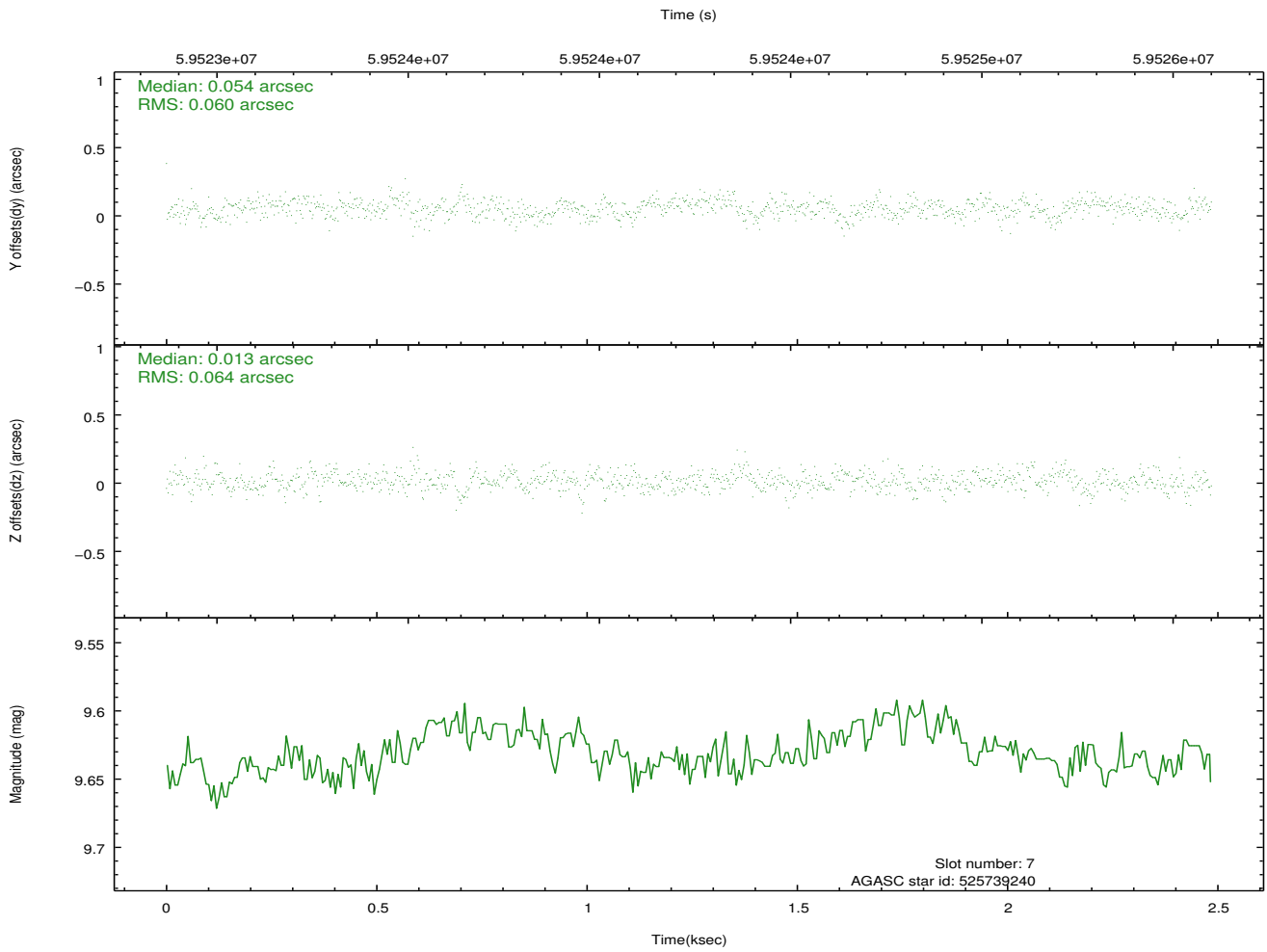
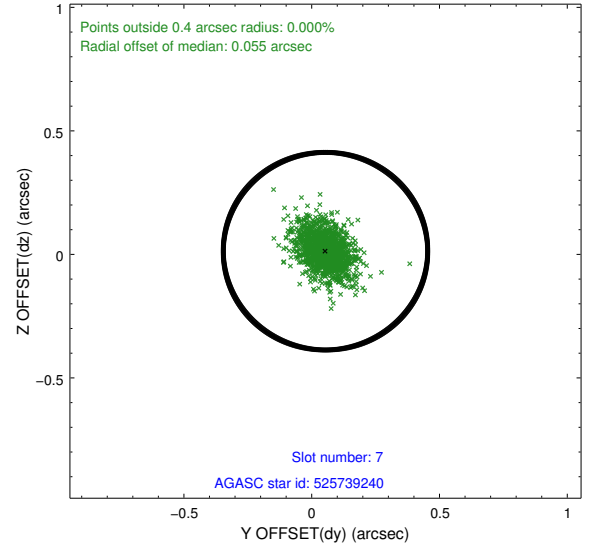
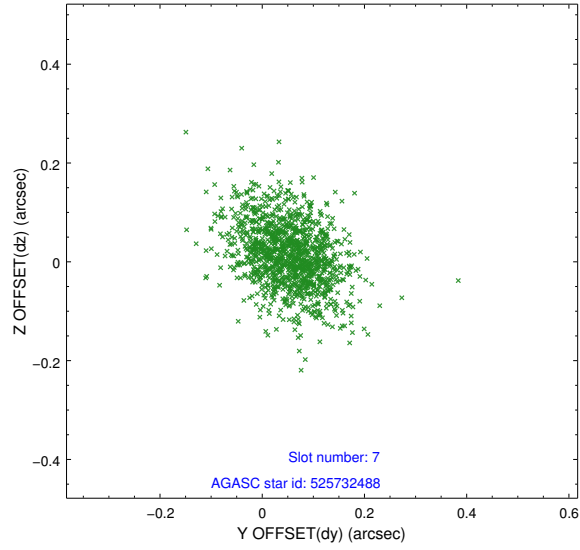
2.4.3 Slot 5



2.4.4 Slot 6

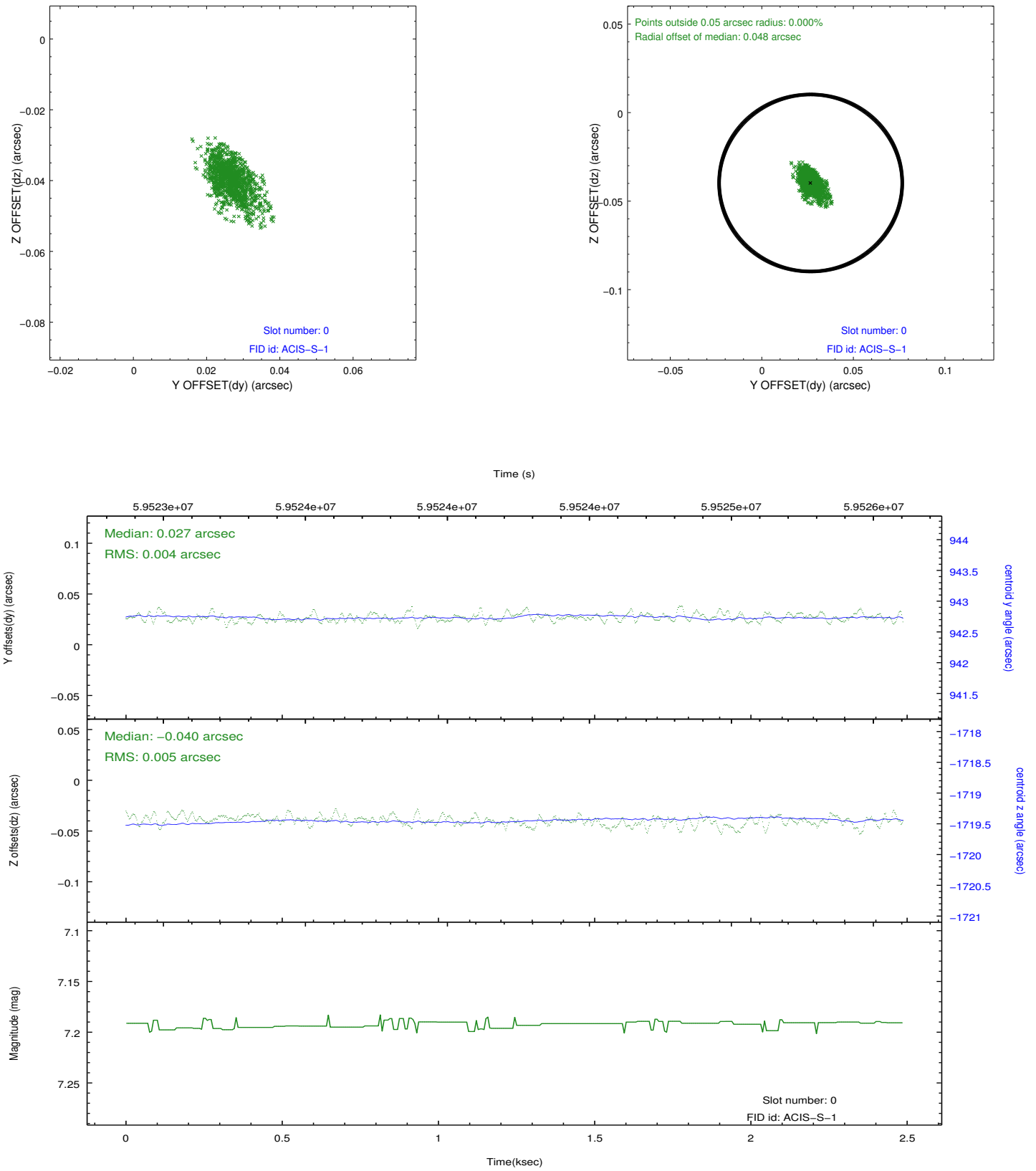


2.4.5 Slot 7

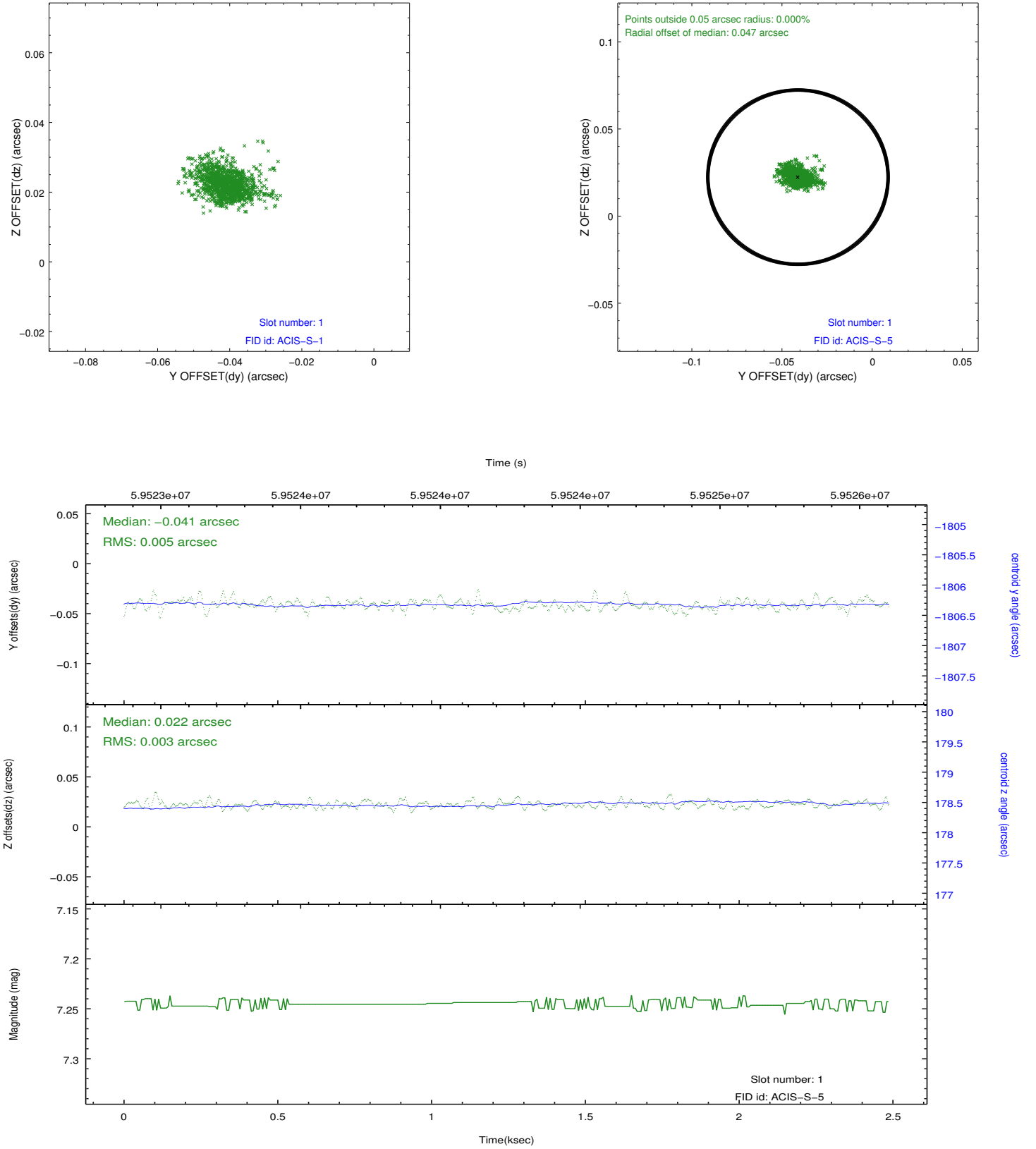


2.5 FID Slots

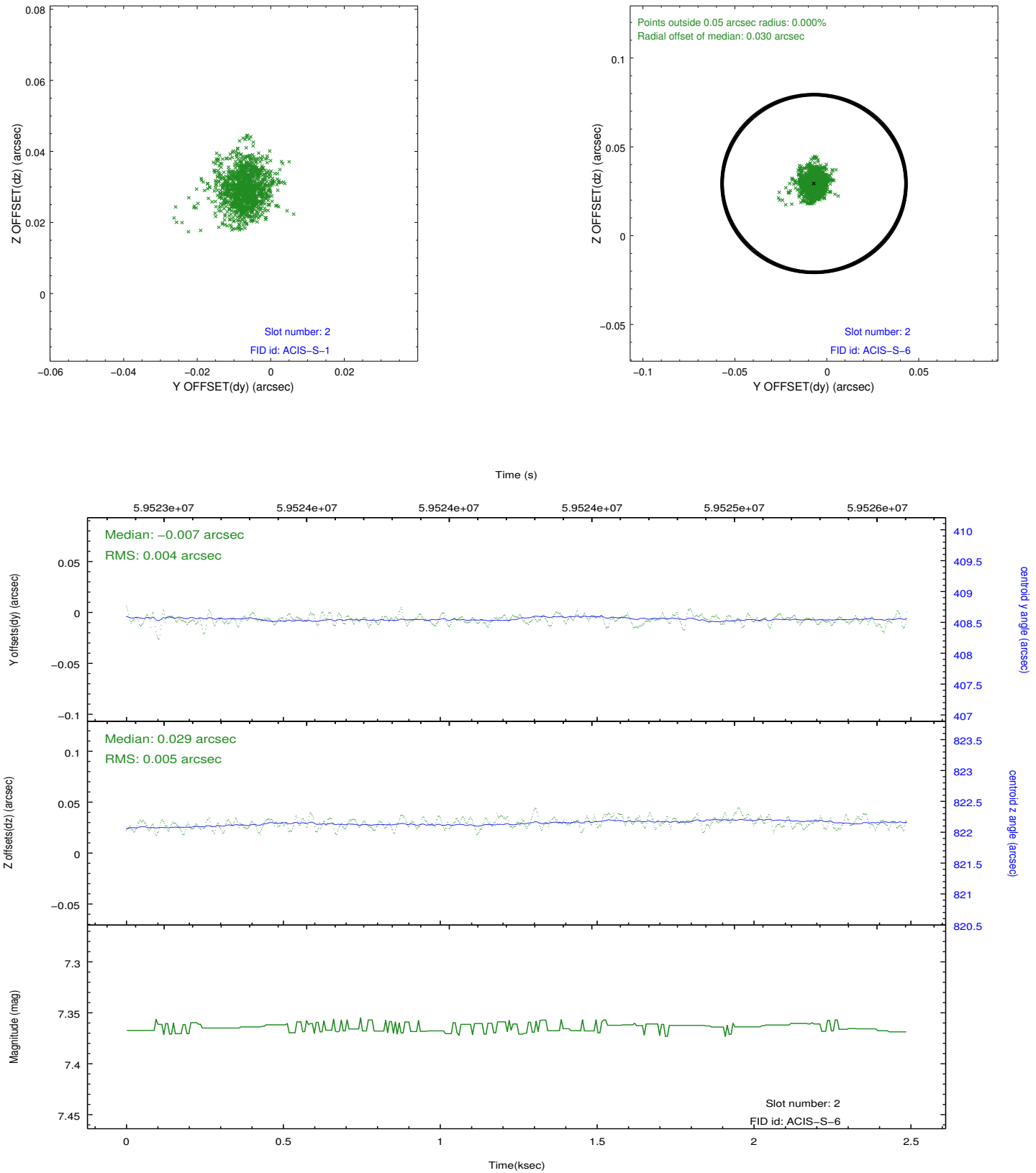
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



3 Point Sources

A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2010.03.31 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 0.659 |

A.2 Comments

ACIS response to Cas A on chip S3. Only S3 chip was read out.

===

Pileup throughout most of observation.

===

Charge time for this ObsId remains at previous value of 0.659 ksec, although with the current processing the charge time would have been 0.657 ksec.

==

The focal plane temperature is approximately -110 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.