

V&V Reference Report

L2 ASCDS Version : 10.4

Observation 17064 - L2 Version 1
Chandra X-Ray Center

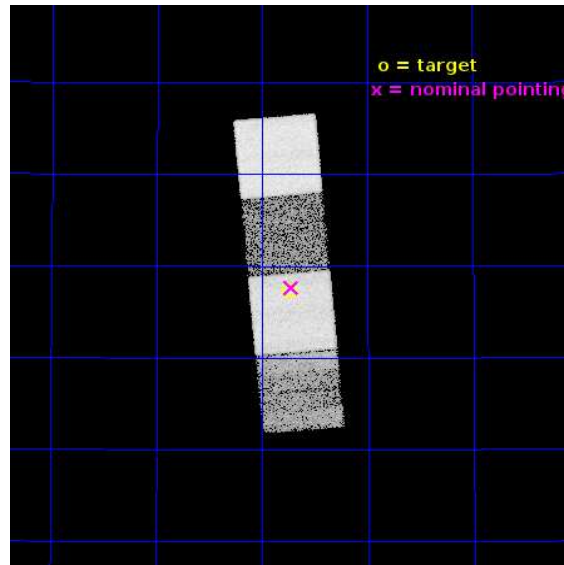
L2 Processing Date : Jun 23 2015

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1 Front

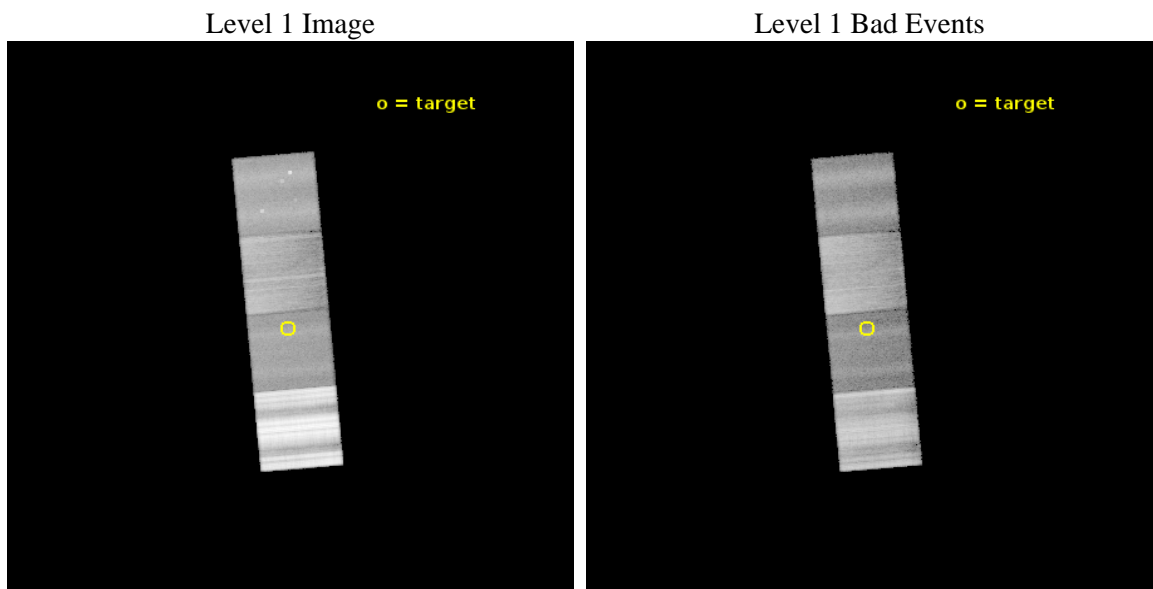
| | | |
|----------|---|---|
| seq_num | 703068 | Sequence number |
| obs_id | 17064 | Observation id |
| title | ULTRAMASSIVE BLACK HOLES: FUNDAMENTAL PLANE AND CORONAE | Proposal t |
| observer | Dr. Kayhan Gultekin | Principal investigator |
| object | UGC 1859 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 36.185 | Observer's specified target RA [deg] |
| dec_targ | 42.622917 | Observer's specified target Dec [deg] |
| ra_nom | 36.180877241233 | Nominal RA [deg] |
| dec_nom | 42.627408612008 | Nominal Dec [deg] |
| roll_nom | 84.843274417615 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 10042.81405437 | Sum of GTIs [s] |
| livetime | 9911.5972953374 | Livetime [s] |
| ontime5 | 10042.773014426 | Sum of GTIs [s] |
| ontime6 | 5701.9142920971 | Sum of GTIs [s] |
| ontime7 | 10042.81405437 | Sum of GTIs [s] |
| ontime8 | 8004.2055066824 | Sum of GTIs [s] |
| l2events | 179193 | Number of level 2 events |



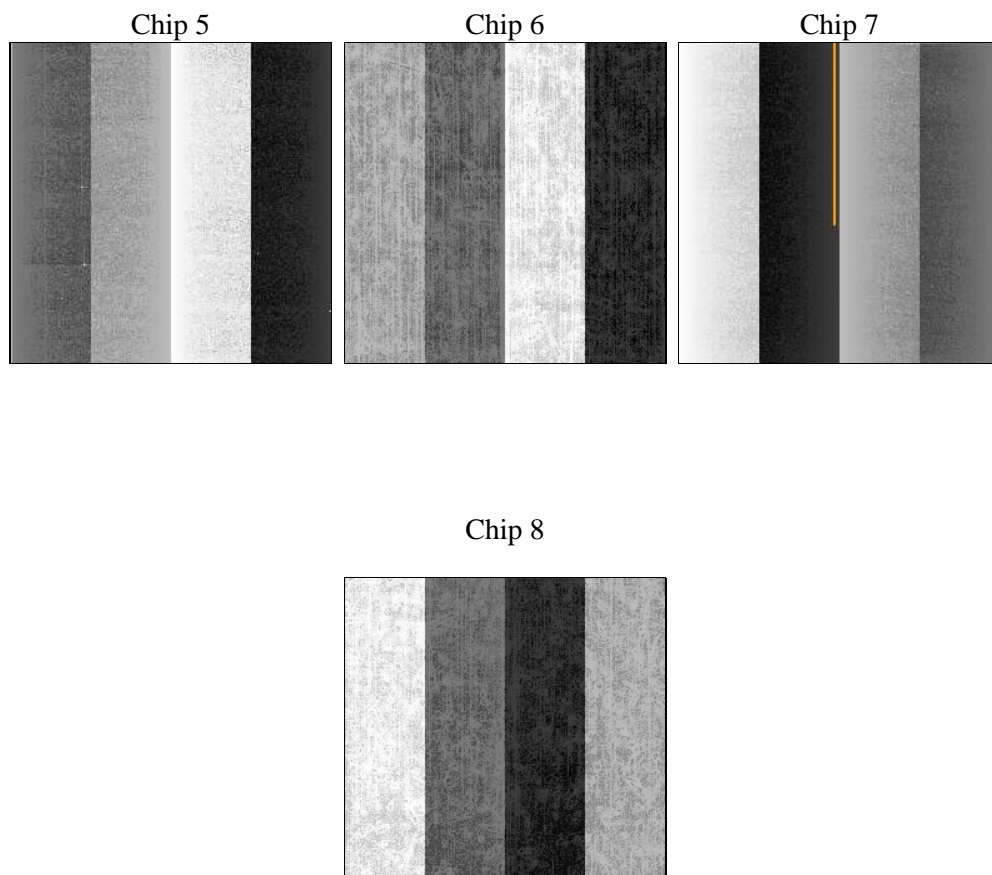
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 1 | Obi number | sched_exp_time | 10000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.4 | Processing system revision | ontime | 10042.81405437 | Sum of GTIs [s] |
| caldsver | 4.6.7 | | ontime5 | 10042.773014426 | Sum of GTIs [s] |
| date | 2015-06-23T03:41:42 | Date and time of file creation | ontime6 | 5701.9142920971 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime7 | 10042.81405437 | Sum of GTIs [s] |
| | | | ontime8 | 8004.2055066824 | Sum of GTIs [s] |
| | | | l1events | 1829966 | Number of level 1 events |

2.1.4 Events

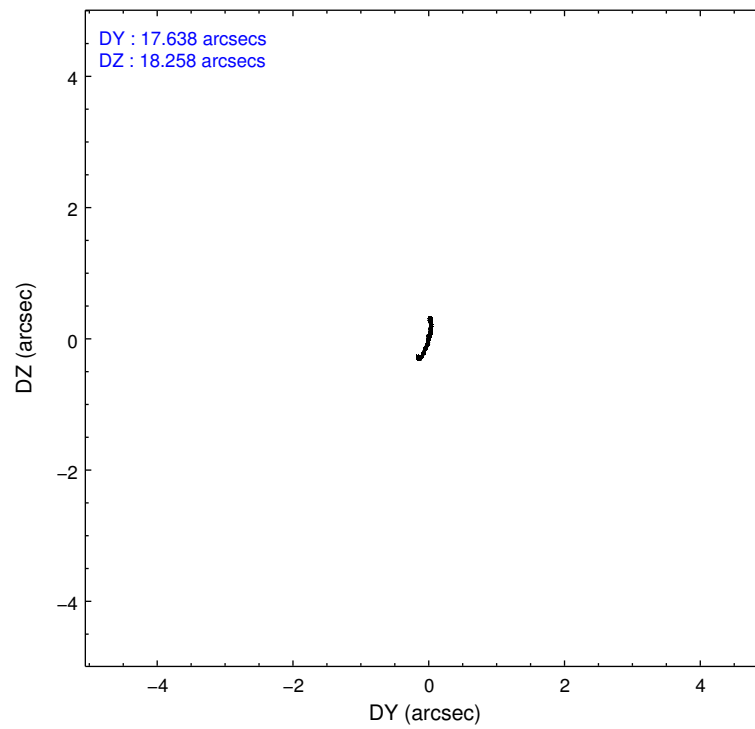
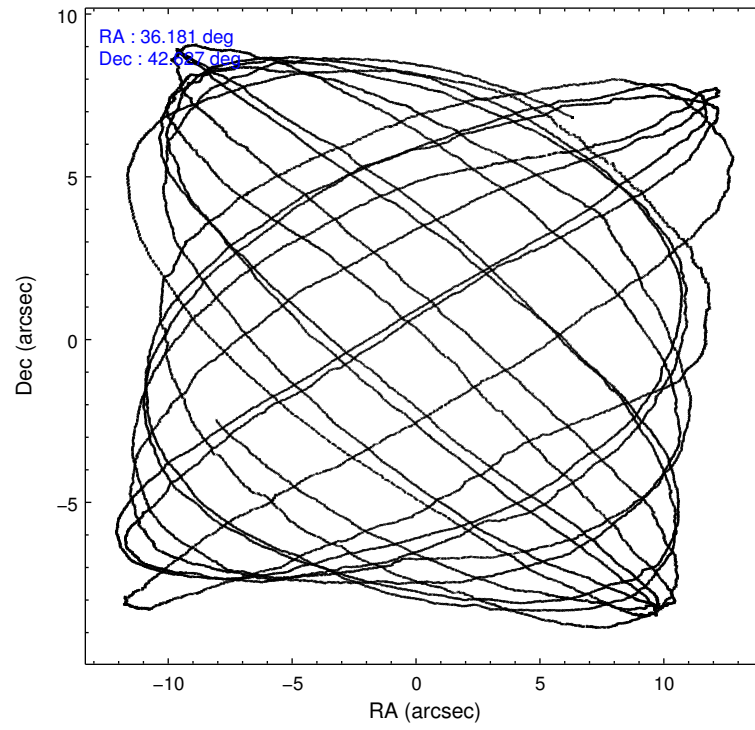
| | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|---------|
| level 1 events | 209594 | 238494 | 148385 | 1233493 |
| rejected events | 111730 | 218398 | 75094 | 357128 |
| rejected % | 53% | 91% | 50% | 28% |

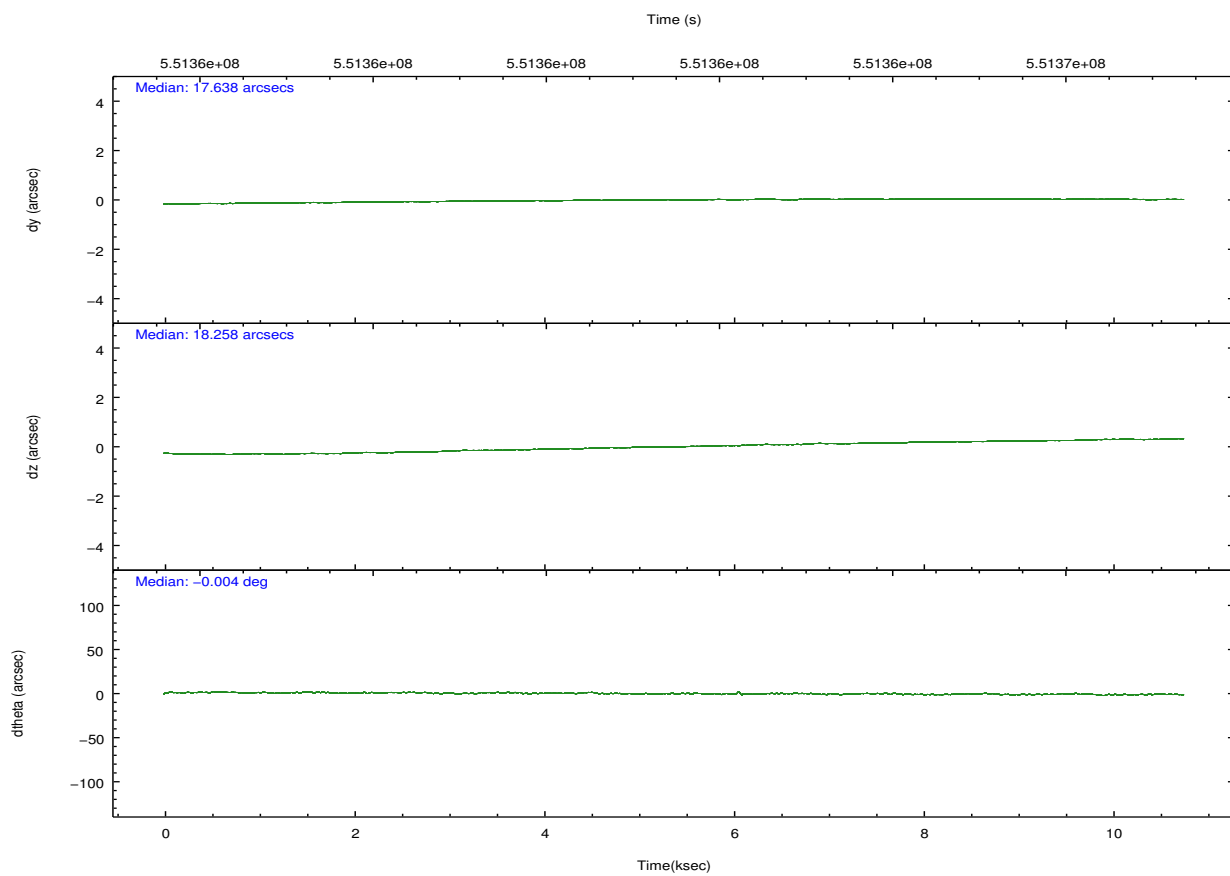
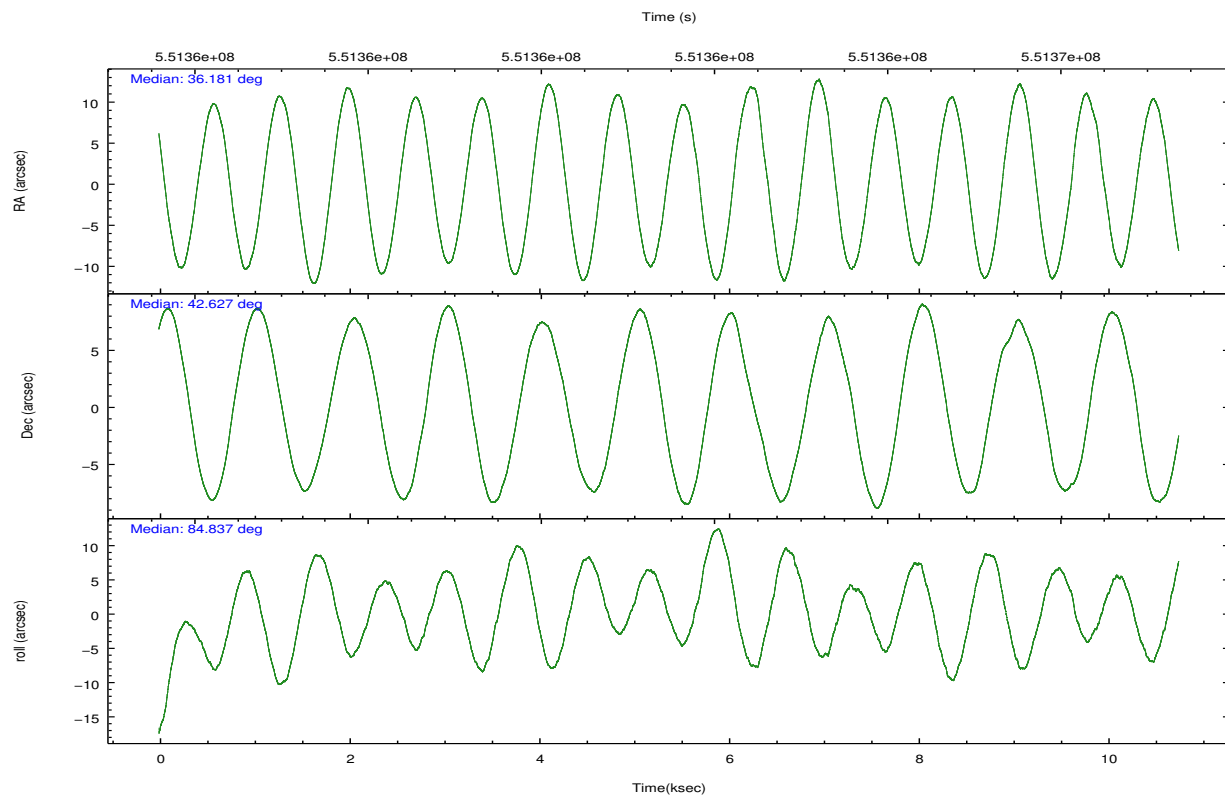
| | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|--------|-------|--------|
| grade 0 events | 15926 | 8216 | 10434 | 234209 |
| | 7% | 3% | 7% | 18% |
| grade 1 events | 1353 | 111 | 845 | 2113 |
| | 0% | 0% | 0% | 0% |
| grade 2 events | 37098 | 9986 | 27116 | 130802 |
| | 17% | 4% | 18% | 10% |
| grade 3 events | 8614 | 454 | 6662 | 153070 |
| | 4% | 0% | 4% | 12% |
| grade 4 events | 8281 | 415 | 6732 | 142785 |
| | 3% | 0% | 4% | 11% |
| grade 5 events | 11631 | 1583 | 10930 | 17951 |
| | 5% | 0% | 7% | 1% |
| grade 6 events | 28016 | 1040 | 22385 | 216146 |
| | 13% | 0% | 15% | 17% |
| grade 7 events | 98675 | 216689 | 63281 | 336417 |
| | 47% | 90% | 42% | 27% |

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 | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 36.196998 | 36.18087724123301 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 42.602681 | 42.62740861200838 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 84.675732 | 84.84327441761519 | [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) | 551356830.184000 | 551355556.42353 | | | |
| Observation start date | 2015-06-22T10:39:23 | 2015-06-22T10:19:16 | | | |
| [s] Observation end time (MET) | 551366830.184000 | 551367627.84921 | | | |
| Observation end date | 2015-06-22T13:26:03 | 2015-06-22T13:40:27 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



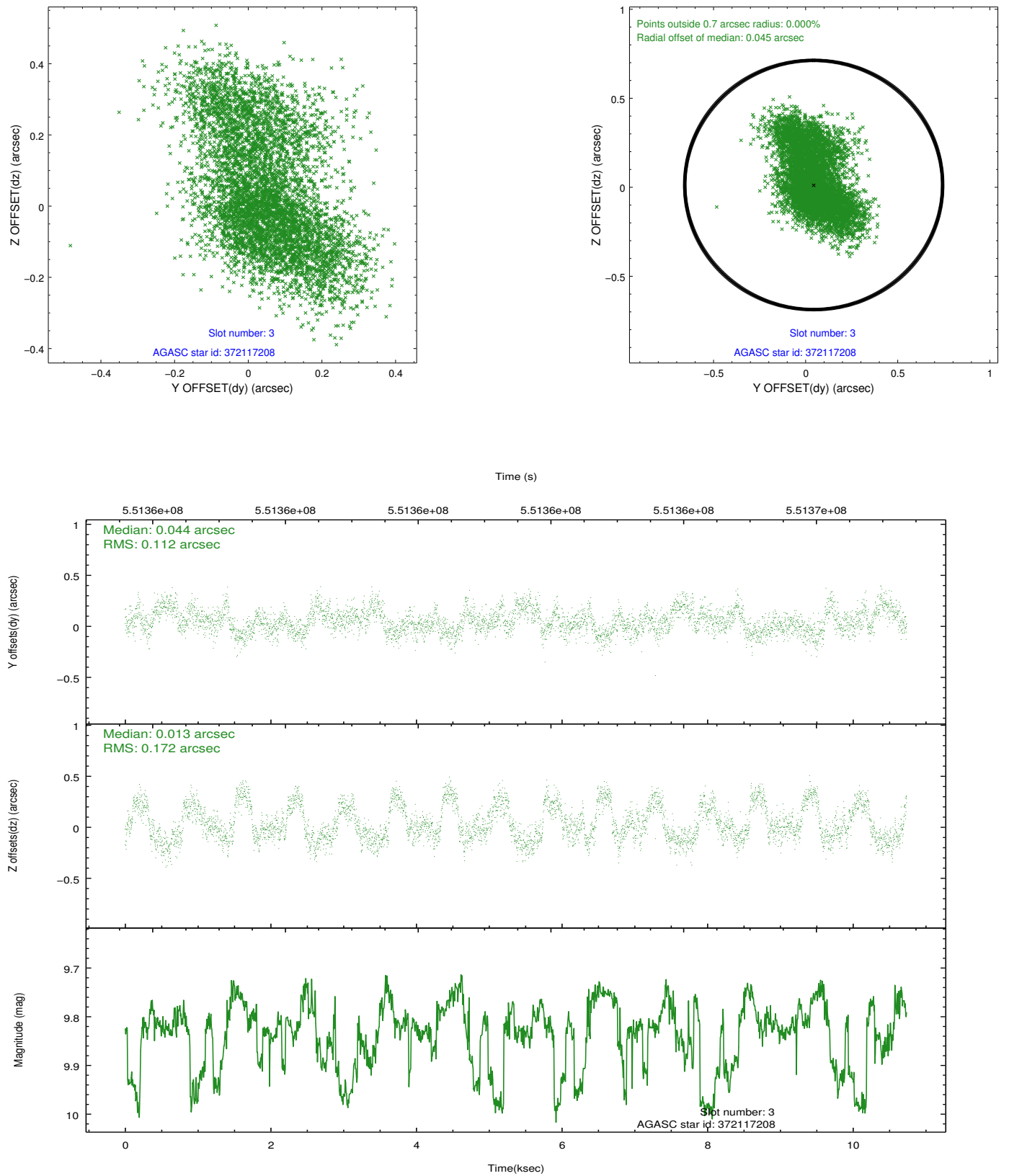


Slot Statistics

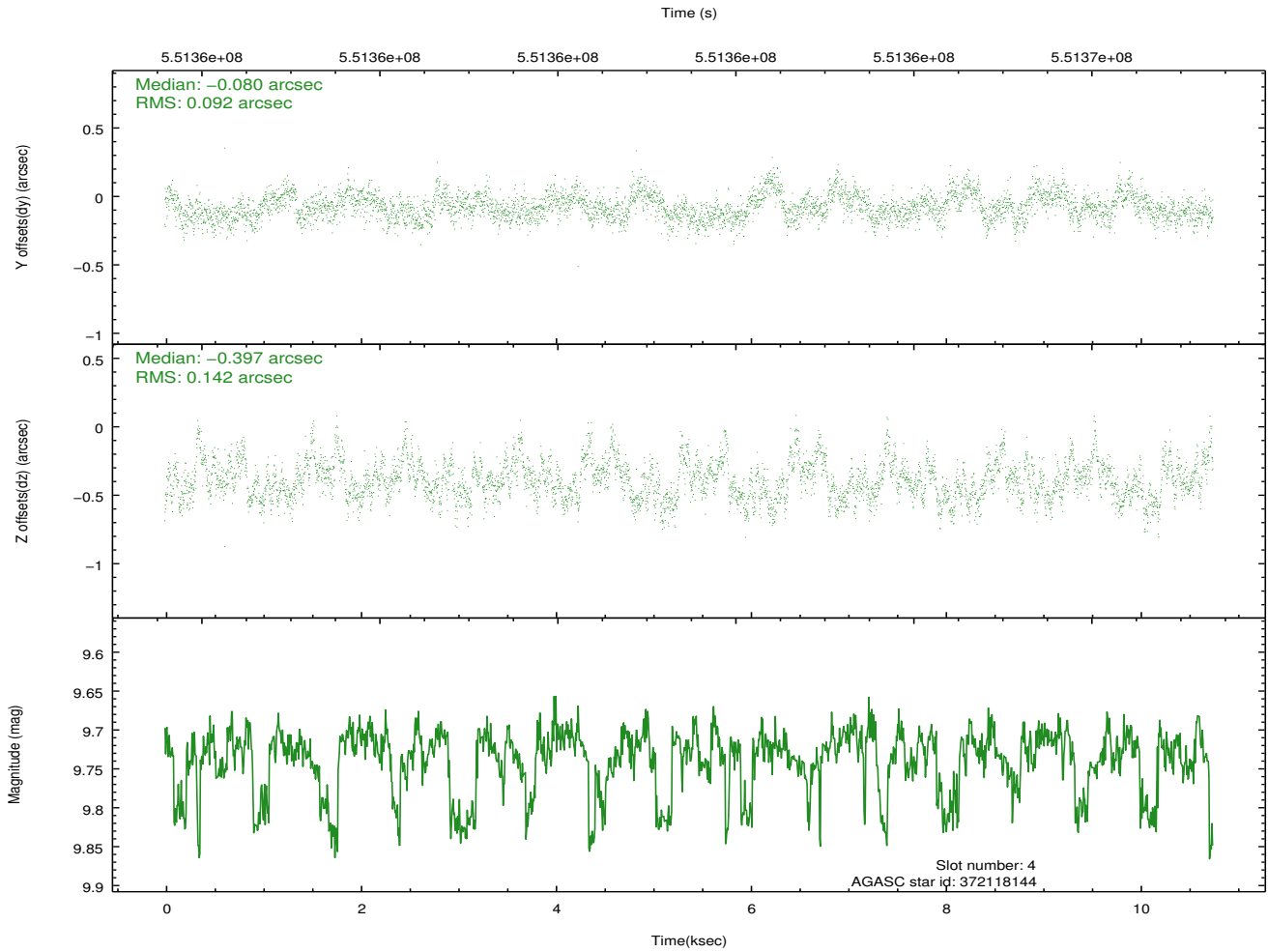
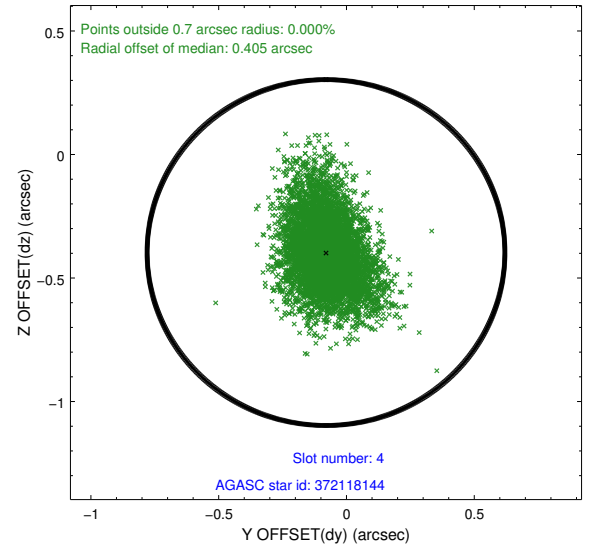
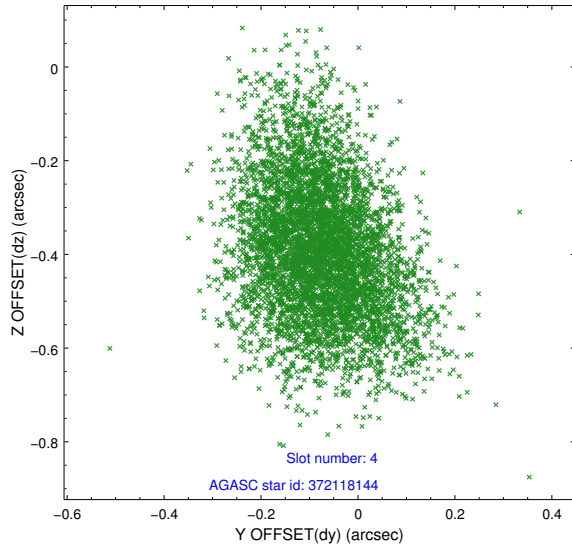
| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0 | FID | | ACIS-S-2 | 6.86 | 2623 | -0.084 | -0.063 | 0.009 | 0.014 | 0.000000 | 0.000000 | -770.75 | -1739.78 |
| 1 | FID | | ACIS-S-4 | 6.95 | 2623 | 0.284 | 0.058 | 0.007 | 0.013 | 0.000000 | 0.000000 | 2142.69 | 168.31 |
| 2 | FID | | ACIS-S-5 | 6.96 | 2623 | -0.232 | 0.014 | 0.011 | 0.019 | 0.000000 | 0.000000 | -1823.11 | 162.50 |
| 3 | GUIDE | used | 372117208 | 9.83 | 5232 | 0.044 | 0.013 | 0.224 | 0.358 | 36.627858 | 43.074737 | 1800.36 | -969.57 |
| 4 | GUIDE | used | 372118144 | 9.73 | 5242 | -0.080 | -0.397 | 0.176 | 0.301 | 35.566889 | 42.622149 | -78.56 | 1668.67 |
| 5 | GUIDE | used | 372131456 | 8.57 | 5245 | 0.289 | 0.501 | 0.104 | 0.169 | 36.920249 | 42.012213 | -1928.25 | -2121.76 |
| 6 | GUIDE | used | 372642872 | 8.72 | 5244 | -0.392 | 0.082 | 0.102 | 0.164 | 36.621364 | 43.186601 | 2198.80 | -913.69 |
| 7 | GUIDE | used | 372117744 | 9.19 | 5241 | 0.138 | -0.217 | 0.178 | 0.303 | 35.244211 | 42.008785 | -2350.76 | 2340.10 |

2.4 Star Slots

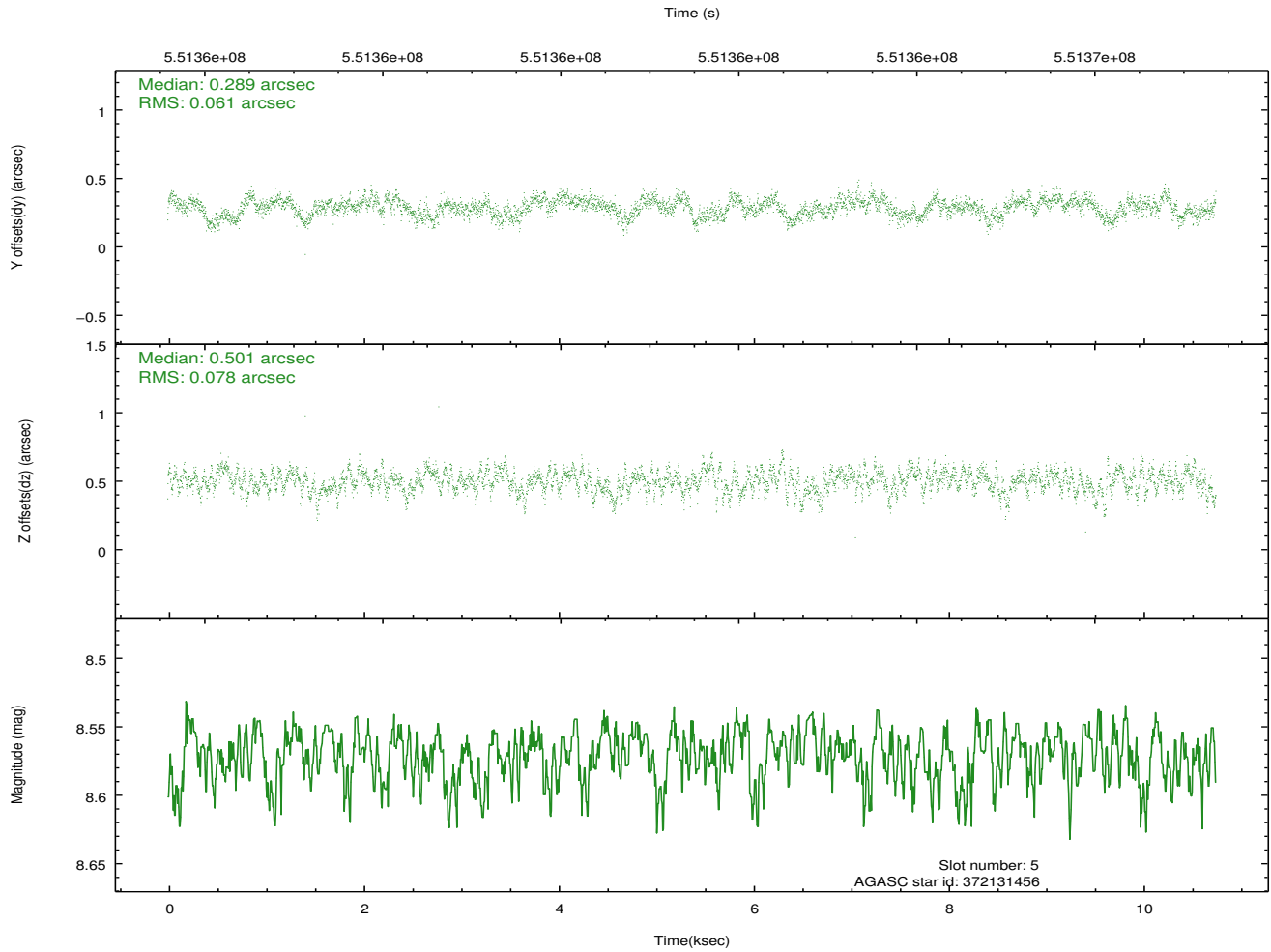
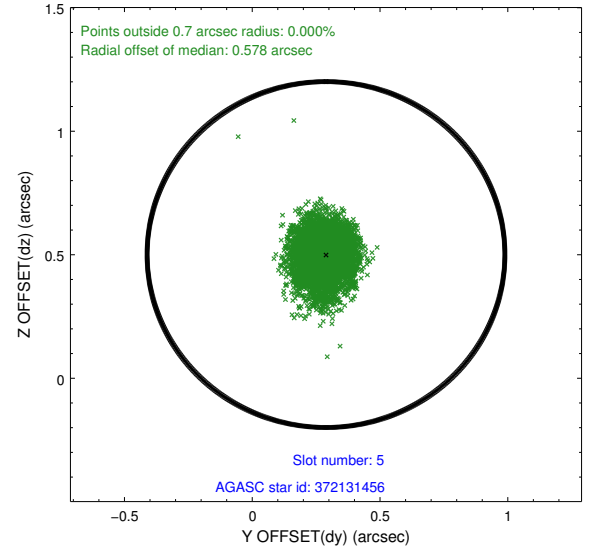
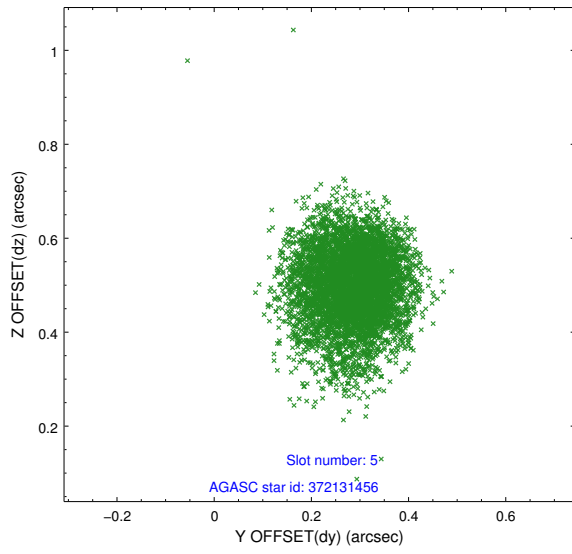
2.4.1 Slot 3



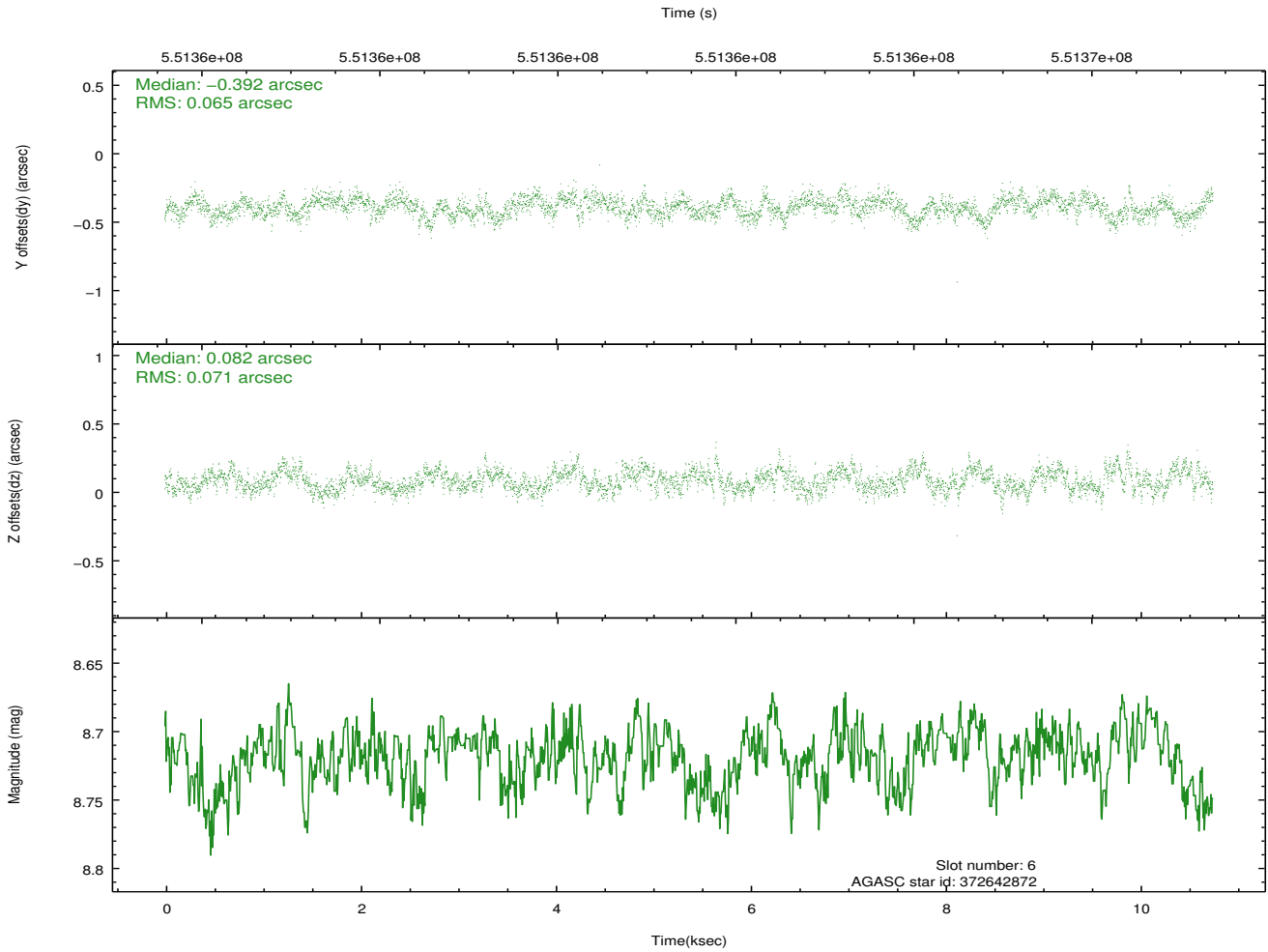
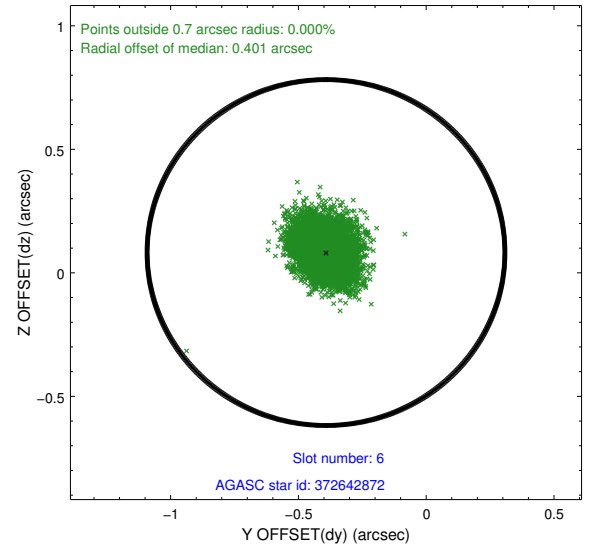
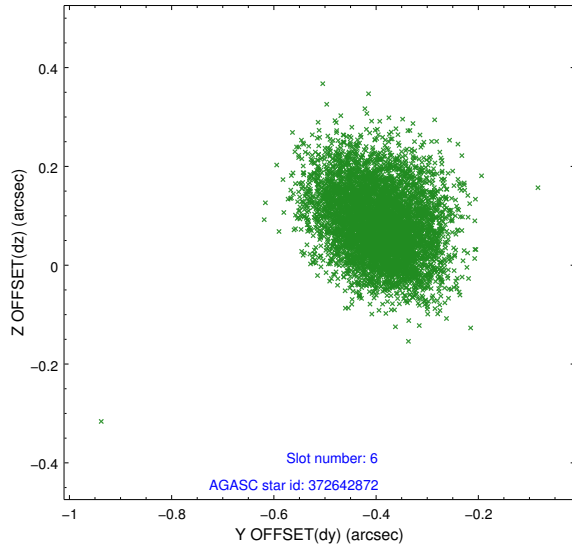
2.4.2 Slot 4



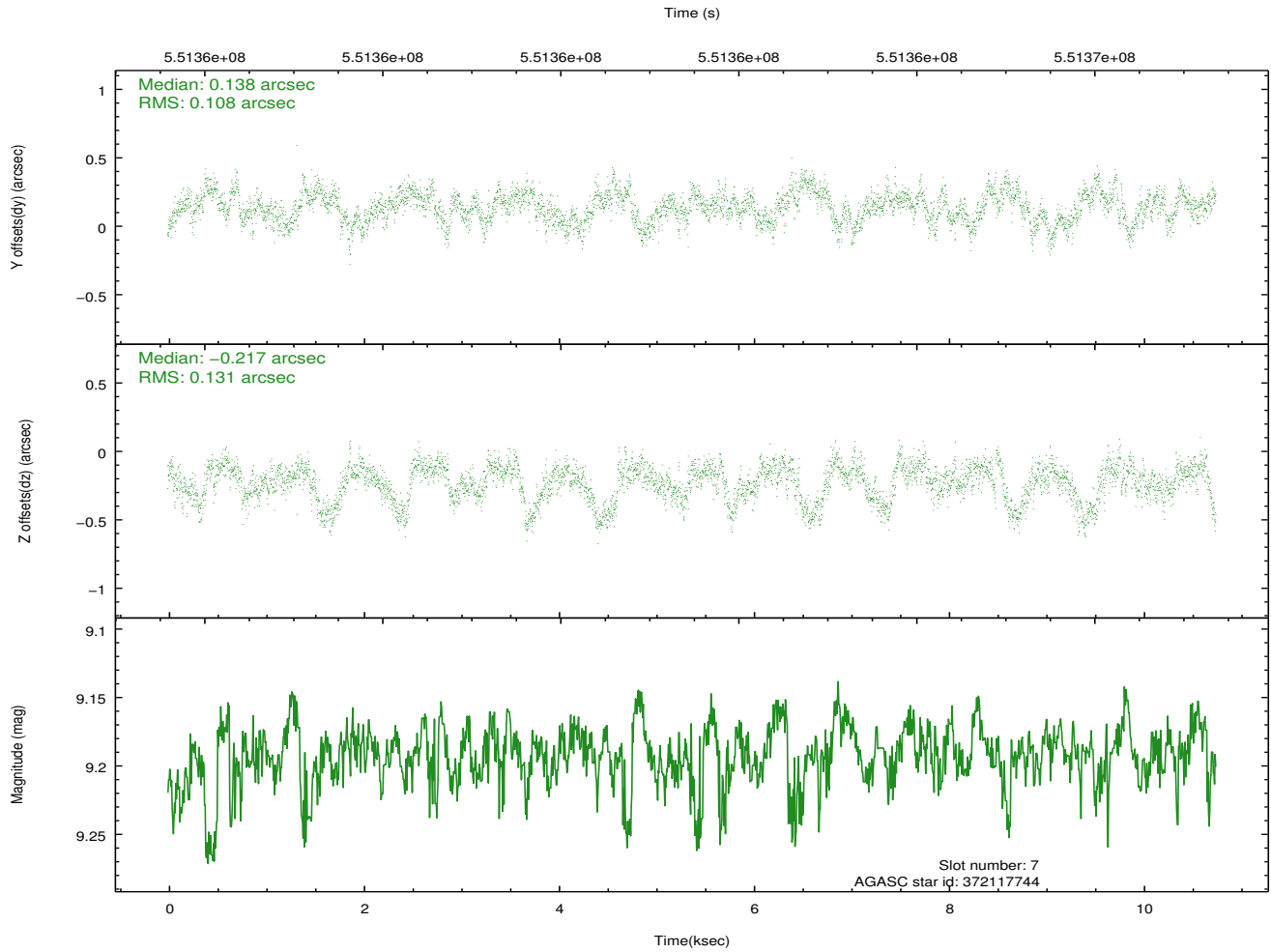
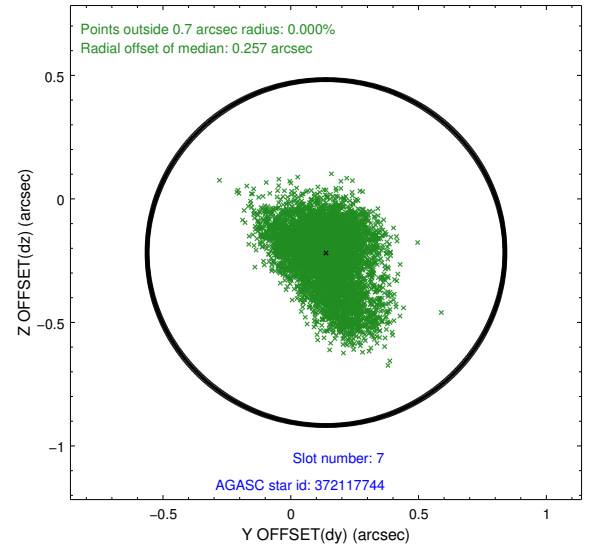
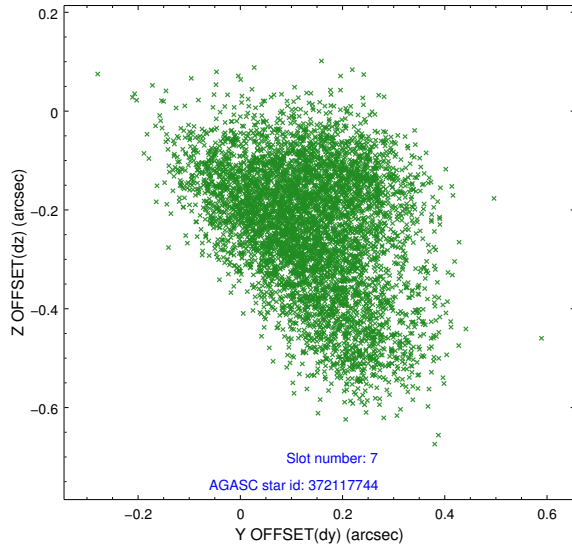
2.4.3 Slot 5



2.4.4 Slot 6

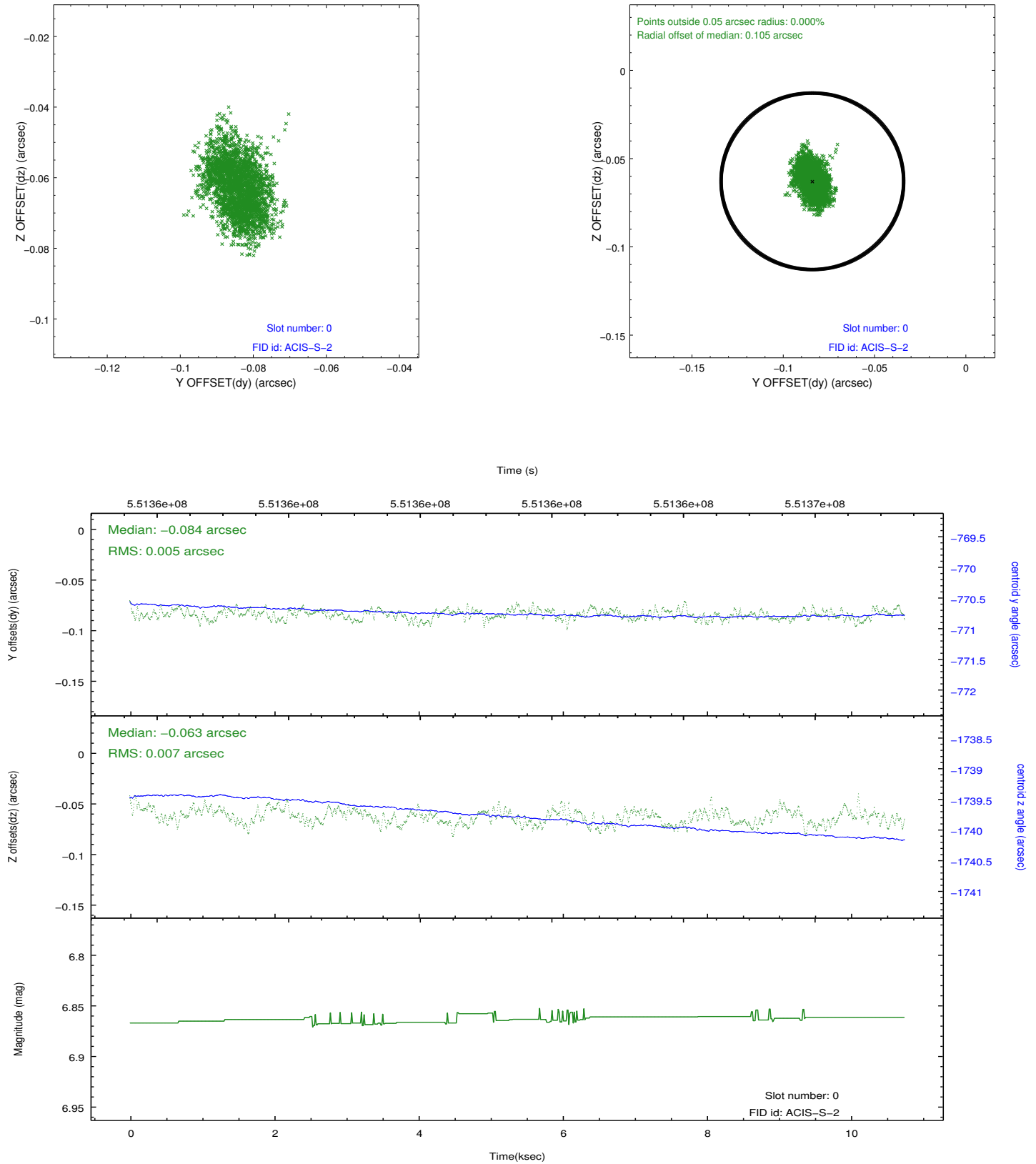


2.4.5 Slot 7

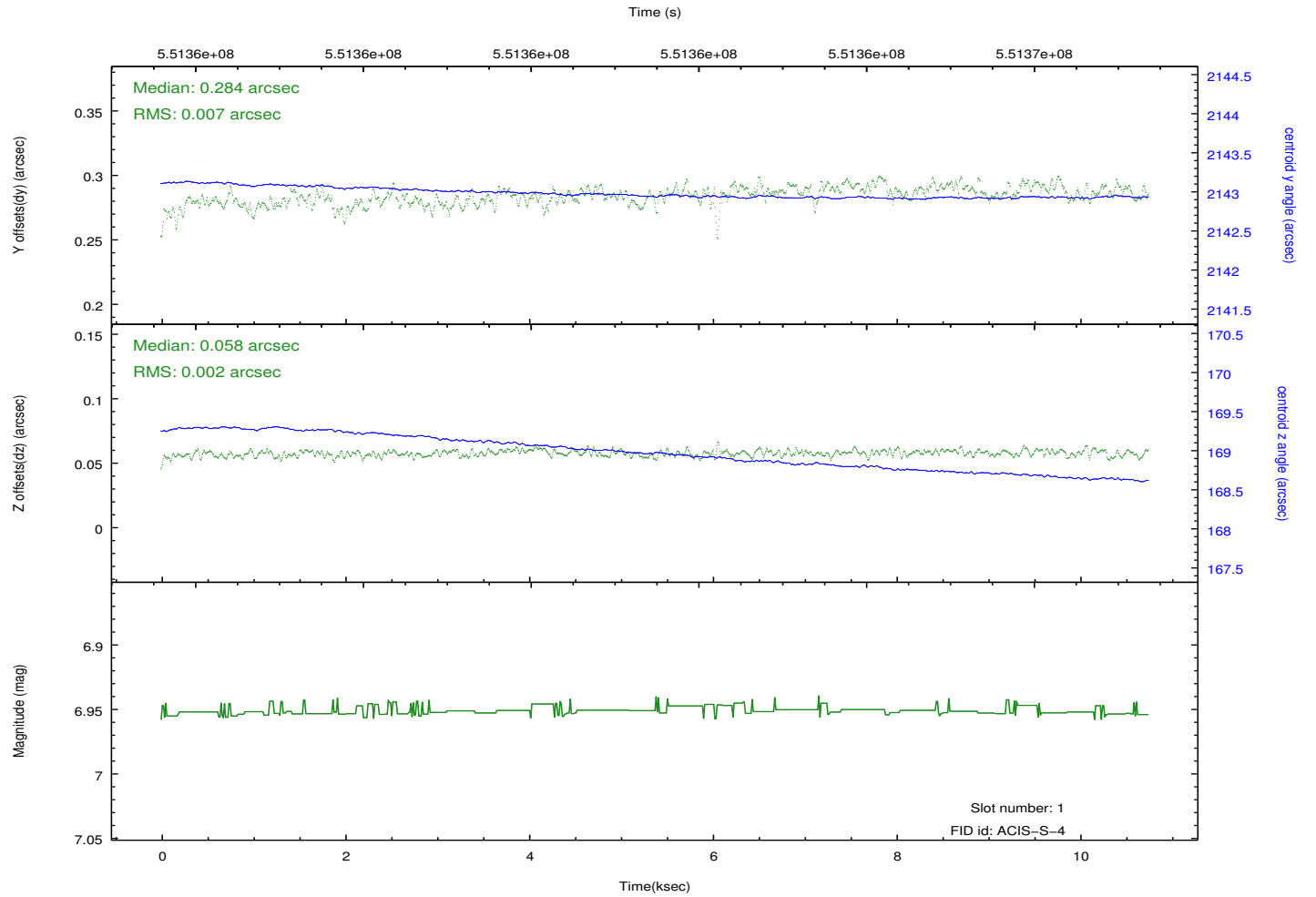
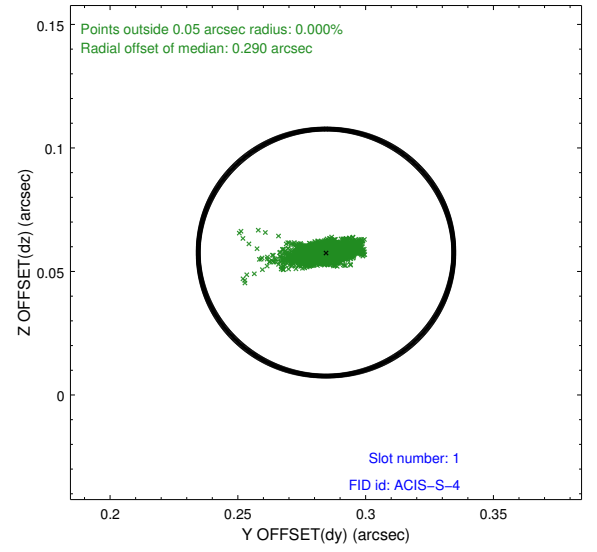
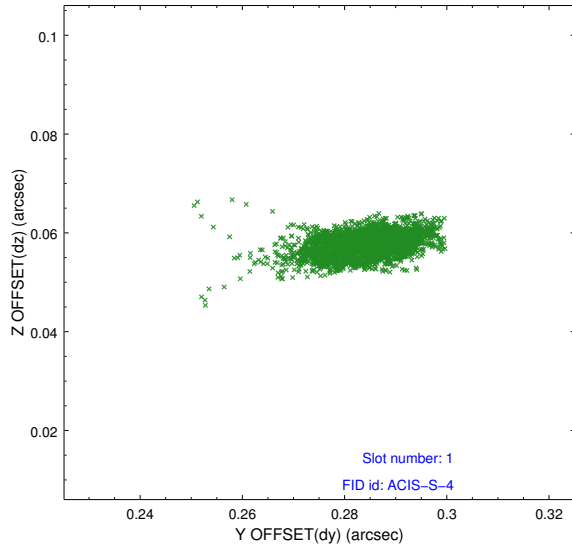


2.5 FID Slots

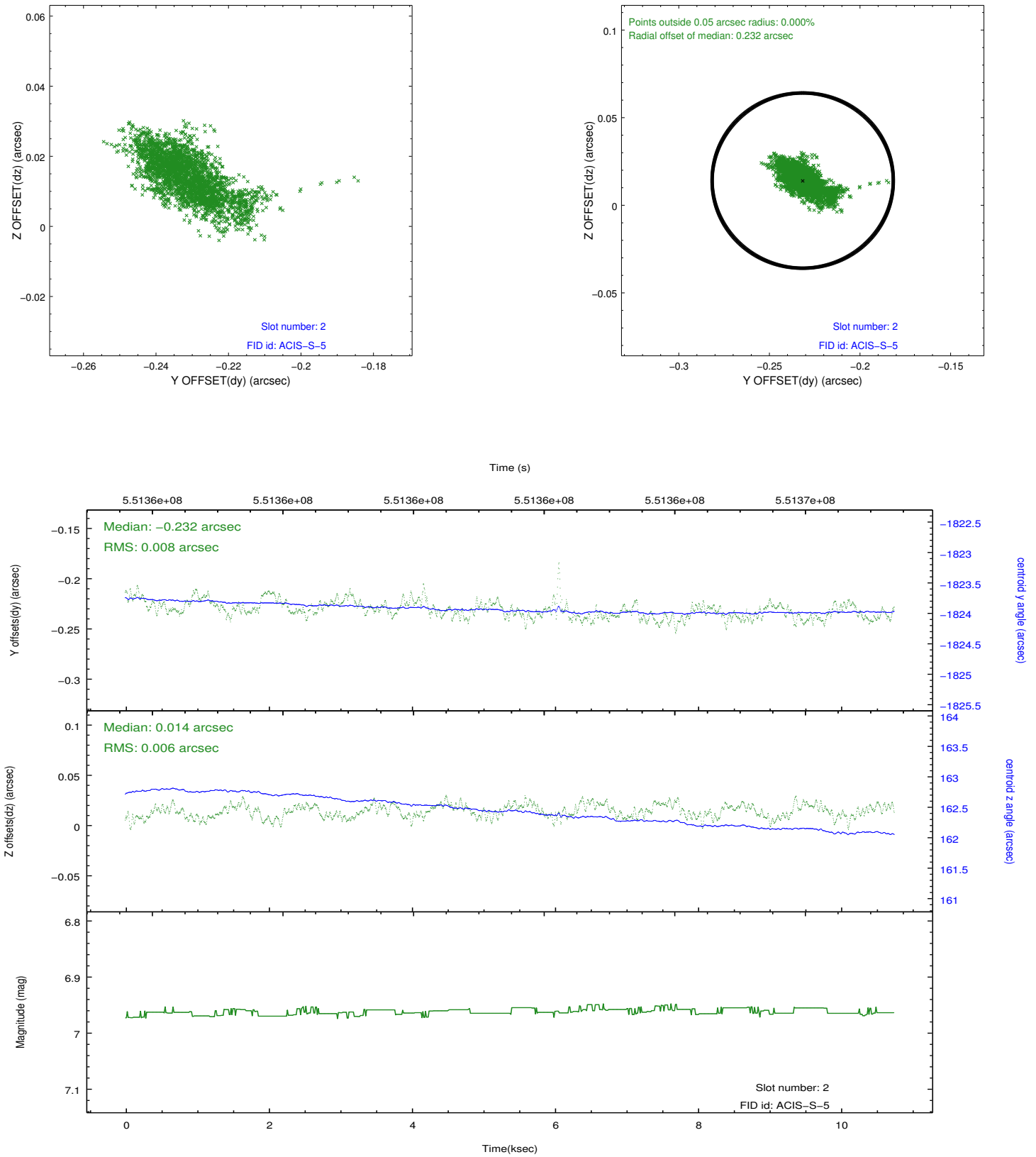
2.5.1 Slot 0



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) | 2015.06.23 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 10.04281405437 |

A.2 Comments

The high background count rate, due to a high radiation environment, resulted in telemetry saturation and a large number of dropped exposures. The ONTIME value for each CCD chip reflects the lost exposure time. The recorded ONTIME value for this observation is based on the ONTIME for chip S7.