

V&V Reference Report

L2 ASCDS Version : 10.4.3.1

Observation 17211 - L2 Version 1
Chandra X-Ray Center

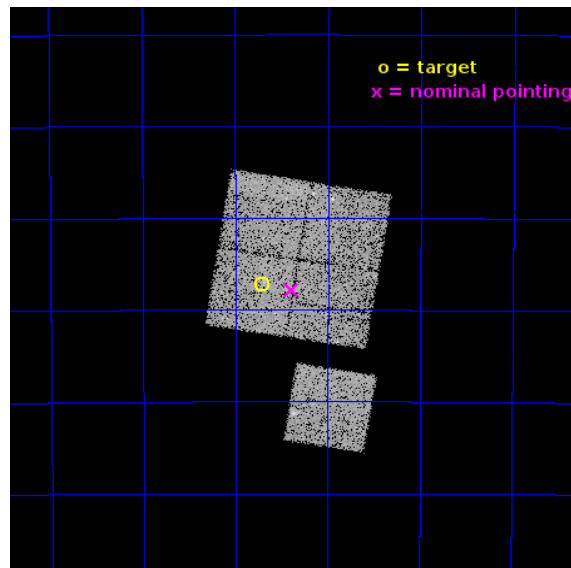
L2 Processing Date : May 21 2016

Contents

| | | |
|----------|-------------------------------|-----------|
| 1 | Front | 2 |
| 2 | OBI | 3 |
| 2.1 | OBI | 3 |
| 2.1.1 | Images | 3 |
| 2.1.2 | Bias | 3 |
| 2.1.3 | Parameters | 4 |
| 2.1.4 | Events | 4 |
| 2.2 | Compared Parameters | 5 |
| 2.3 | Aspect | 6 |
| 2.4 | Star Slots | 9 |
| 2.4.1 | Slot 3 | 9 |
| 2.4.2 | Slot 4 | 10 |
| 2.4.3 | Slot 5 | 11 |
| 2.4.4 | Slot 6 | 12 |
| 2.4.5 | Slot 7 | 13 |
| 2.5 | FID Slots | 14 |
| 2.5.1 | Slot 0 | 14 |
| 2.5.2 | Slot 1 | 15 |
| 2.5.3 | Slot 2 | 16 |
| A | Summary | 17 |
| A.1 | Status | 17 |
| A.2 | Comments | 17 |

1 Front

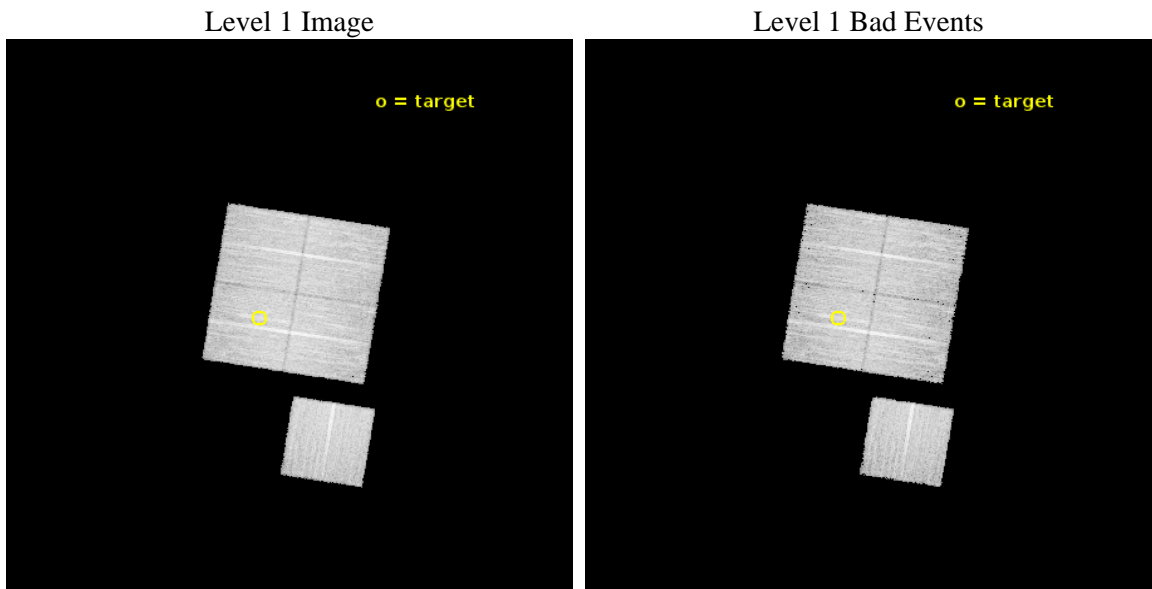
| | | |
|----------|--|---|
| seq_num | 801491 | Sequence number |
| obs_id | 17211 | Observation id |
| title | A MASS-LIMITED SURVEY OF GALAXY CLUSTERS AT $1.2 < z < 1.7$: PROBING THE PHYSICS OF THE ICM DURING ITS ASSEMBLY | Proposal title |
| observer | Michael McDonald | Principal investigator |
| object | SPT-CLJ0459-4947 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 74.927083 | Observer's specified target RA [deg] |
| dec_targ | -49.787194 | Observer's specified target Dec [deg] |
| ra_nom | 74.848388136658 | Nominal RA [deg] |
| dec_nom | -49.796904963971 | Nominal Dec [deg] |
| roll_nom | 189.1485772998 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 14773.591131806 | Sum of GTIs [s] |
| livetime | 14580.56328751 | Livetime [s] |
| ontime0 | 14773.468011856 | Sum of GTIs [s] |
| ontime1 | 14773.5090518 | Sum of GTIs [s] |
| ontime2 | 14767.26817143 | Sum of GTIs [s] |
| ontime3 | 14773.591131806 | Sum of GTIs [s] |
| ontime6 | 14773.426971793 | Sum of GTIs [s] |
| l2events | 42780 | Number of level 2 events |



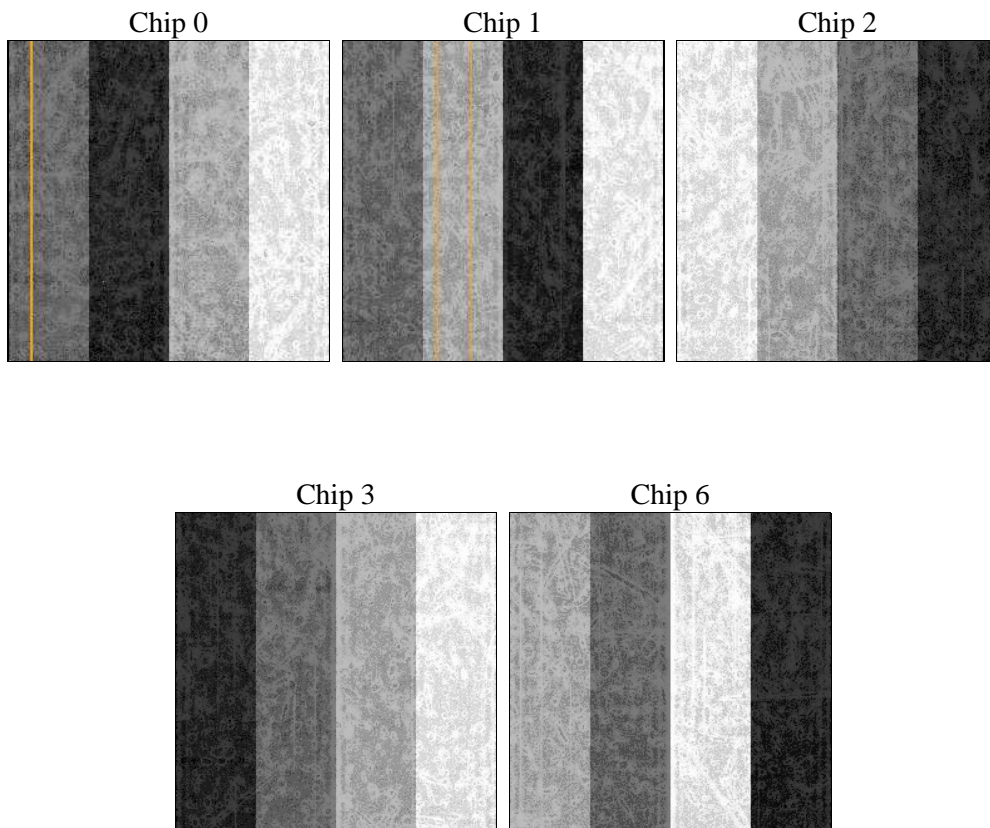
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 15000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.4.3.1 | Processing system revision | ontime | 14773.591131806 | Sum of GTIs [s] |
| caldsver | 4.7.1 | | ontime0 | 14773.468011856 | Sum of GTIs [s] |
| date | 2016-05-21T14:26:35 | Date and time of file creation | ontime1 | 14773.5090518 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime2 | 14767.26817143 | Sum of GTIs [s] |
| | | | ontime3 | 14773.591131806 | Sum of GTIs [s] |
| | | | ontime6 | 14773.426971793 | Sum of GTIs [s] |
| | | | l1events | 424231 | Number of level 1 events |

2.1.4 Events

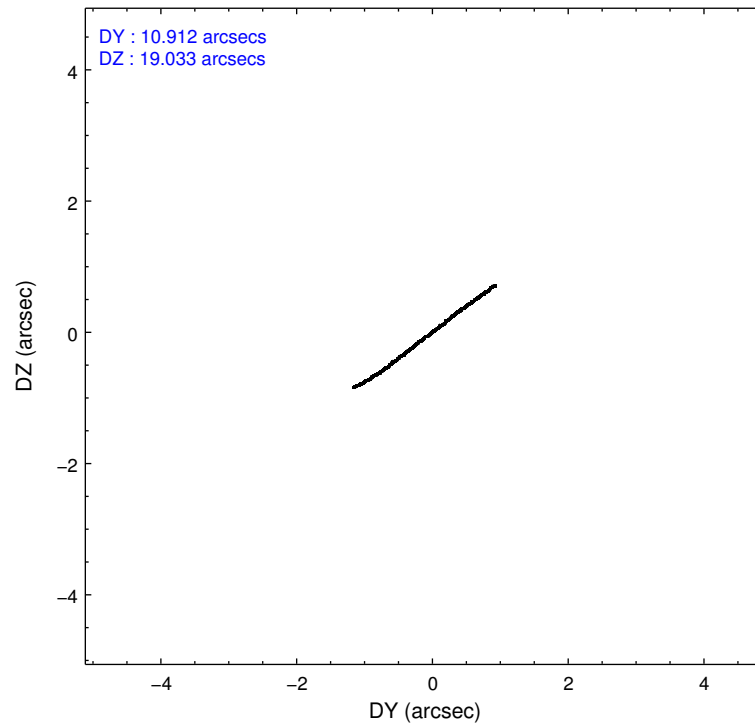
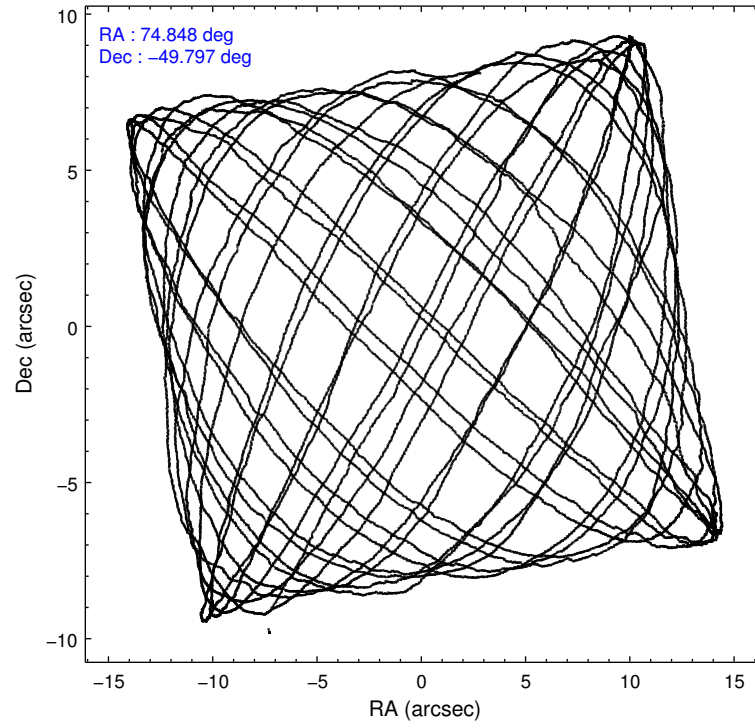
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events | 81101 | 83046 | 86761 | 86298 | 87025 |
| rejected events | 70852 | 71967 | 77063 | 76695 | 76812 |
| rejected % | 87% | 86% | 88% | 88% | 88% |

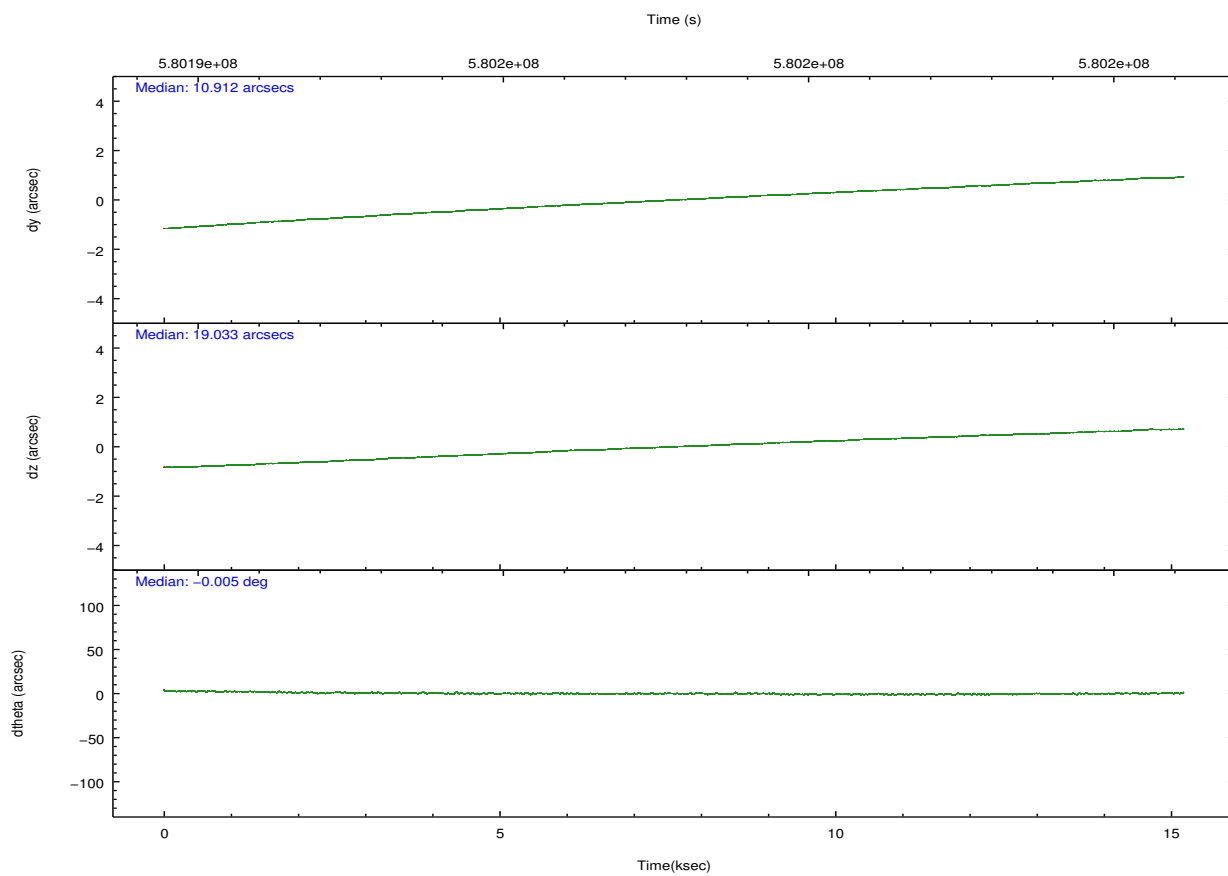
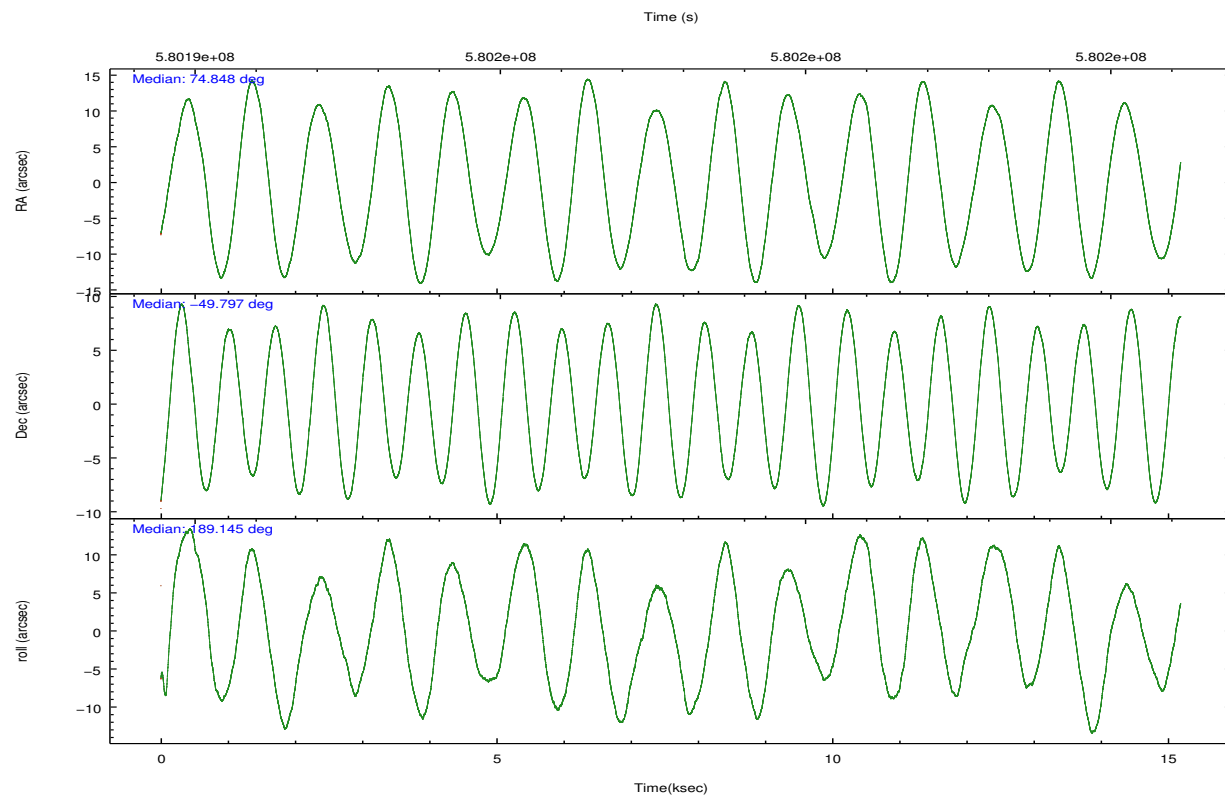
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 3559 | 3749 | 3410 | 3372 | 3447 |
| | 4% | 4% | 3% | 3% | 3% |
| grade 1 events | 53 | 34 | 49 | 46 | 41 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 2585 | 2770 | 2428 | 2127 | 2291 |
| | 3% | 3% | 2% | 2% | 2% |
| grade 3 events | 1041 | 1069 | 962 | 995 | 1109 |
| | 1% | 1% | 1% | 1% | 1% |
| grade 4 events | 941 | 1076 | 978 | 1033 | 989 |
| | 1% | 1% | 1% | 1% | 1% |
| grade 5 events | 3749 | 4091 | 3595 | 4320 | 4205 |
| | 4% | 4% | 4% | 5% | 4% |
| grade 6 events | 2132 | 2421 | 1925 | 2076 | 2378 |
| | 2% | 2% | 2% | 2% | 2% |
| grade 7 events | 67041 | 67836 | 73414 | 72329 | 72565 |
| | 82% | 81% | 84% | 83% | 83% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-01236 | ACIS-01236 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | CCD I0 on | Y | Y |
| Observation mode | POINTING | POINTING | CCD I1 on | Y | Y |
| [deg] Pointing RA | 74.881463 | 74.84838813665837 | CCD I2 on | Y | Y |
| [deg] Pointing Dec | -49.779412 | -49.79690496397072 | CCD I3 on | Y | Y |
| [deg] Pointing Roll | 188.965159 | 189.1485772998009 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.782348 | -0.7809083437167272 | CCD S1 on | N | N |
| [mm] SIM defocus | 0 | 0.001439871863259334 | CCD S2 on | O1 | Y |
| [mm] SIM translation stage pos | -225.842463 | -225.8433433320239 | CCD S3 on | N | N |
| [mm] SIM translation stage offset | -7.75 | -7.749109670905796 | CCD S4 on | N | N |
| [s] Observation start time (MET) | 580190389.184000 | 580189706.68312 | CCD S5 on | N | N |
| Observation start date | 2016-05-21T03:58:41 | 2016-05-21T03:48:26 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 580205389.184000 | 580206466.45908 | On-chip summing requested | N | N |
| Observation end date | 2016-05-21T08:08:41 | 2016-05-21T08:27:46 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.1 |

2.3 Aspect



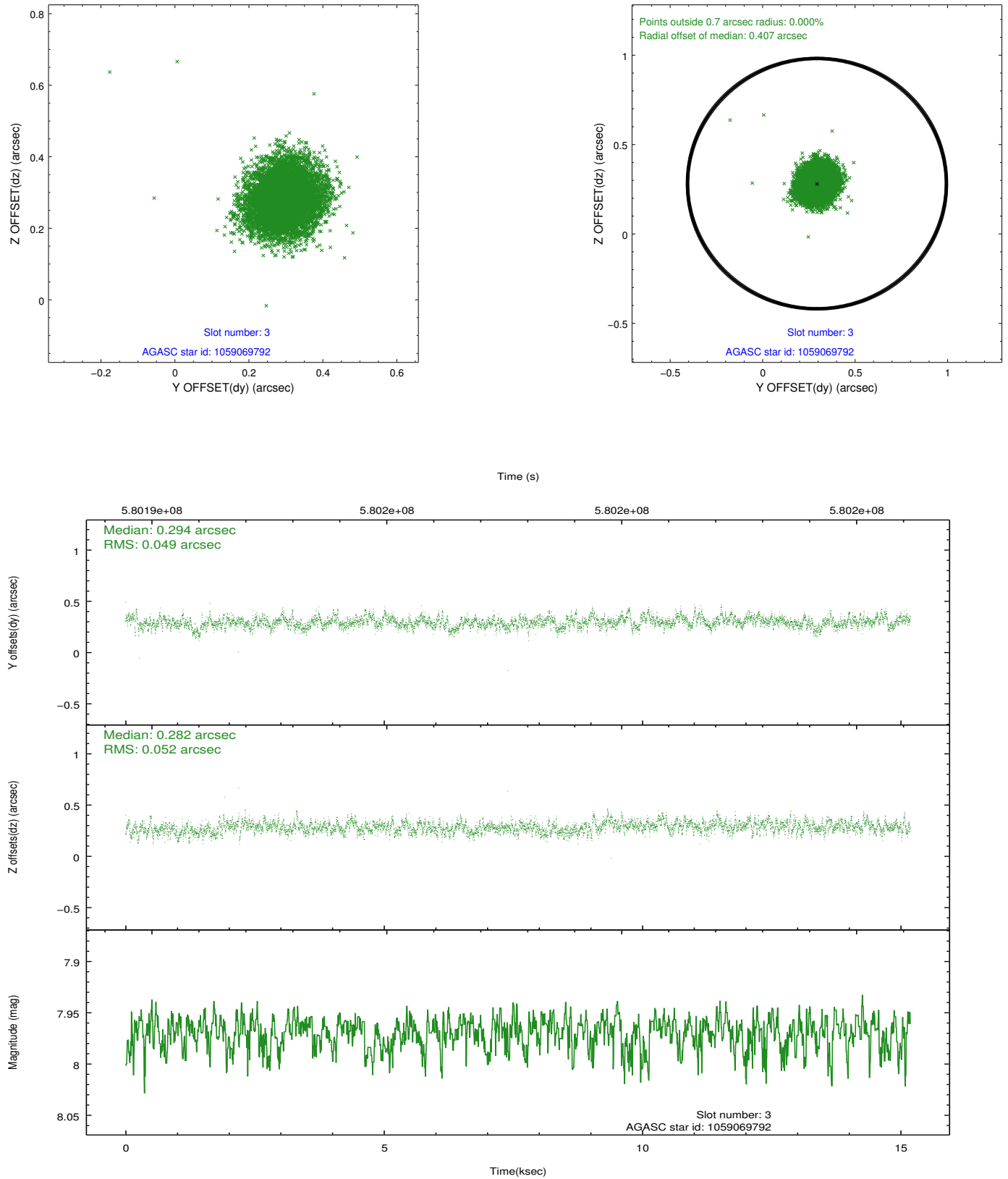


Slot Statistics

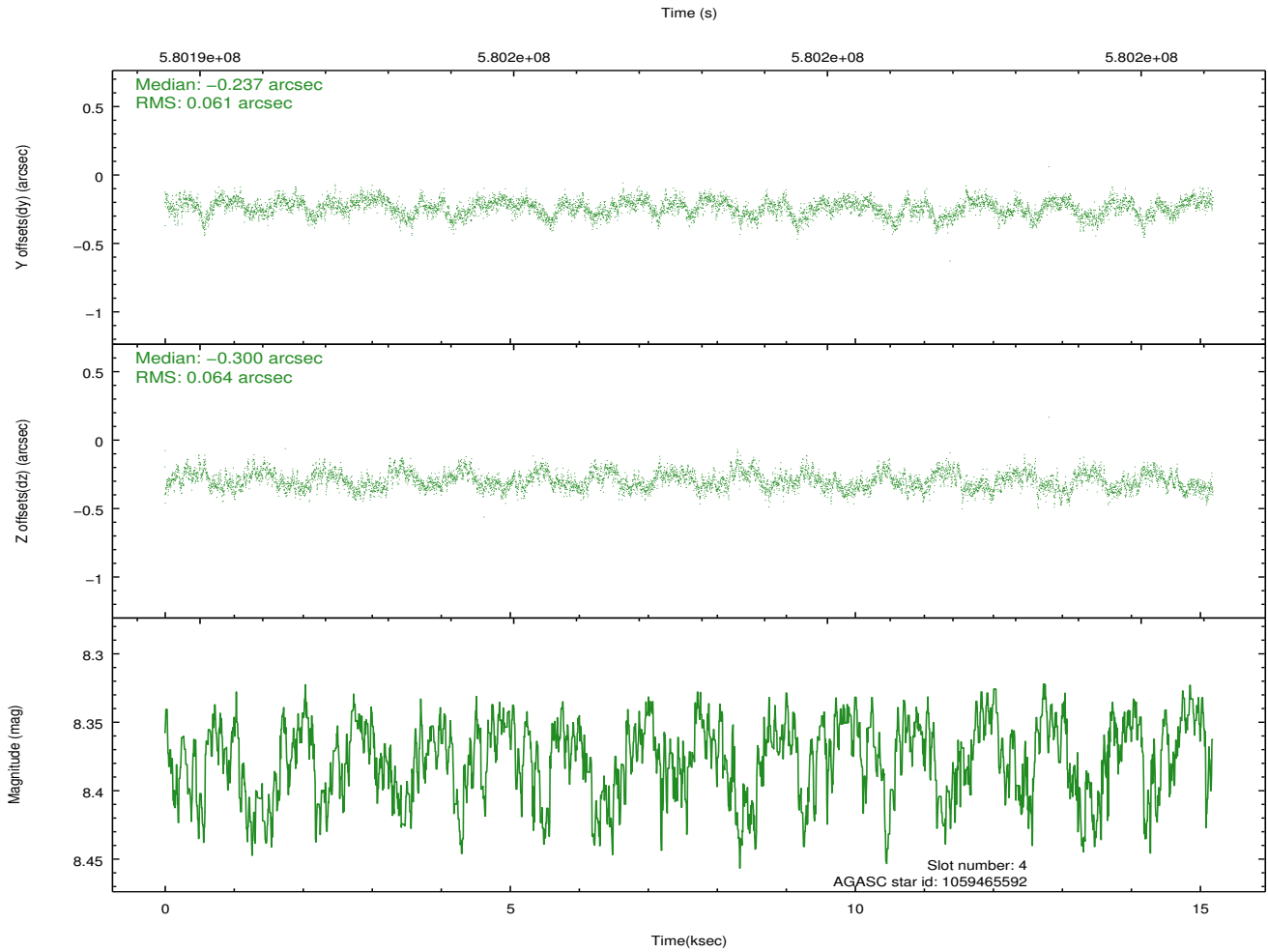
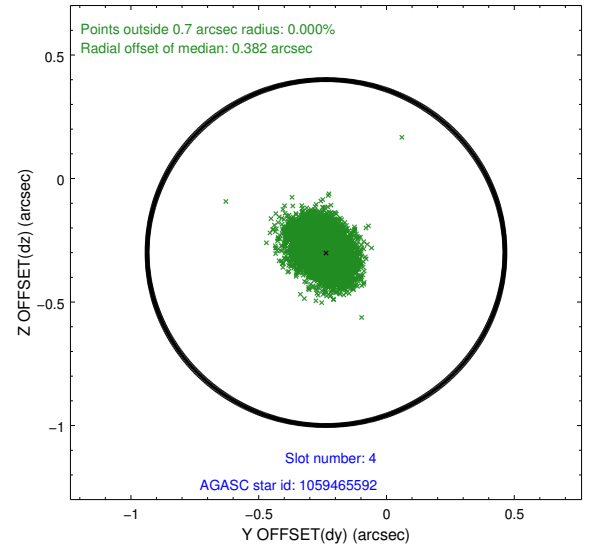
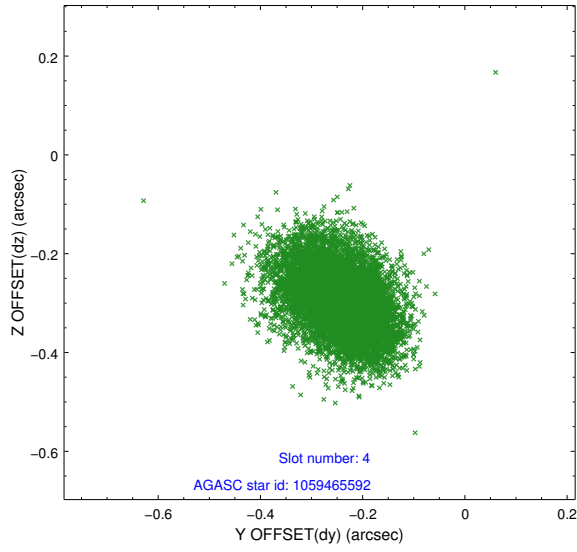
| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|------------|------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0 | FID | | ACIS-I-1 | 7.22 | 3705 | 0.131 | -0.124 | 0.015 | 0.025 | 0.000000 | 0.000000 | 928.73 | -1001.88 |
| 1 | FID | | ACIS-I-5 | 7.22 | 3704 | -0.336 | 0.085 | 0.009 | 0.017 | 0.000000 | 0.000000 | -1819.77 | 895.50 |
| 2 | FID | | ACIS-I-6 | 7.26 | 3703 | 0.113 | 0.108 | 0.017 | 0.029 | 0.000000 | 0.000000 | 393.81 | 1540.47 |
| 3 | GUIDE | used | 1059069792 | 7.97 | 7409 | 0.294 | 0.282 | 0.075 | 0.124 | 74.923482 | -49.123698 | -465.03 | -2315.92 |
| 4 | GUIDE | used | 1059465592 | 8.37 | 7404 | -0.237 | -0.300 | 0.094 | 0.153 | 74.779199 | -50.142014 | 436.21 | 1252.44 |
| 5 | GUIDE | used | 1059592008 | 8.09 | 7407 | -0.074 | -0.237 | 0.072 | 0.122 | 75.466024 | -50.276117 | -1049.23 | 1980.97 |
| 6 | GUIDE | used | 1059206568 | 7.02 | 7409 | 0.095 | 0.435 | 0.086 | 0.138 | 75.815619 | -49.492286 | -2316.96 | -666.88 |
| 7 | GUIDE | used | 1059466240 | 8.90 | 7400 | -0.076 | -0.179 | 0.101 | 0.163 | 74.209270 | -50.505530 | 1928.19 | 2349.86 |

2.4 Star Slots

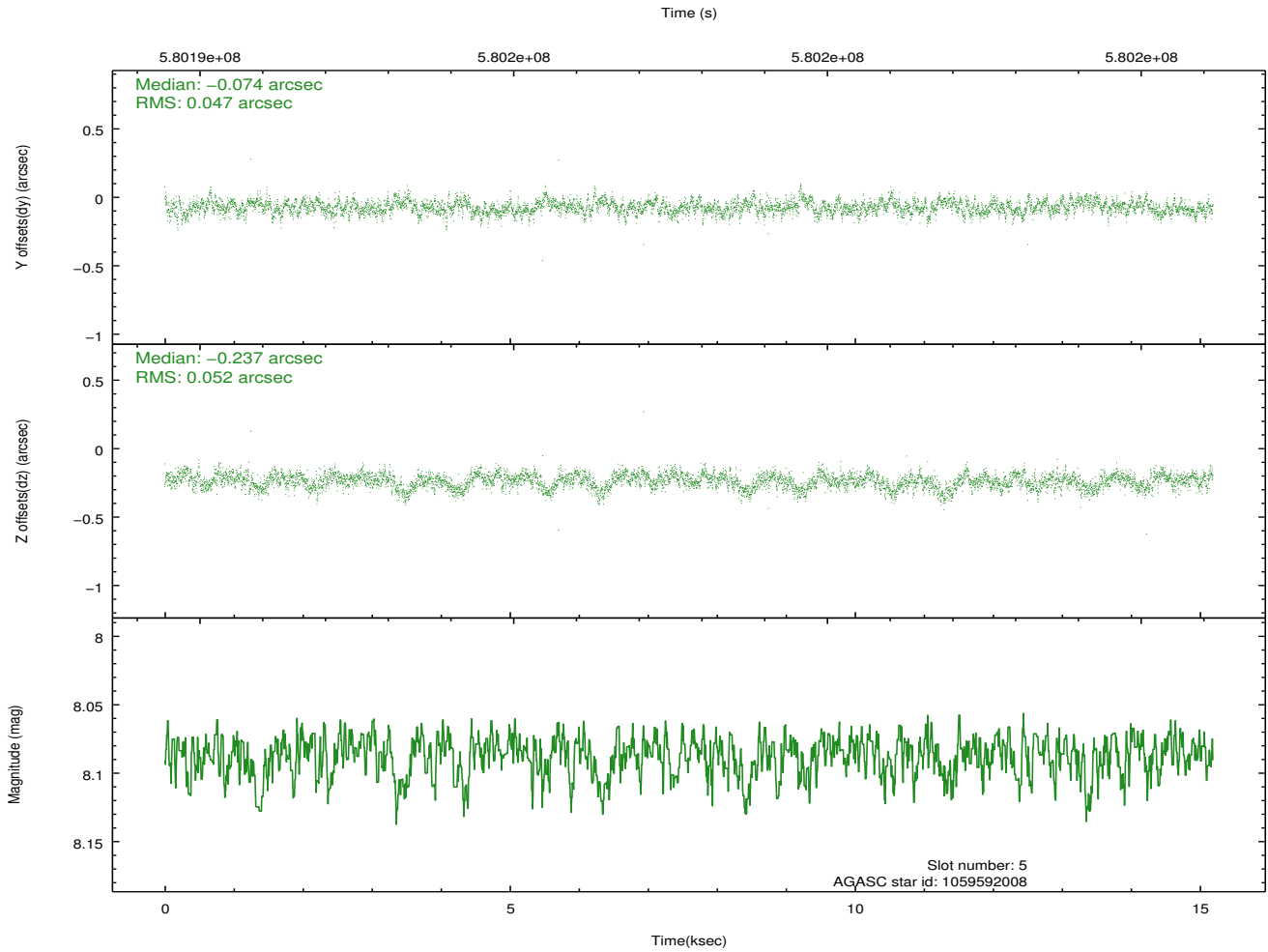
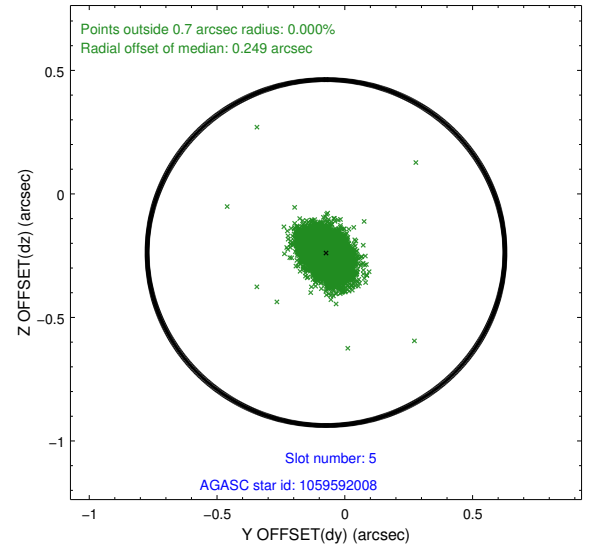
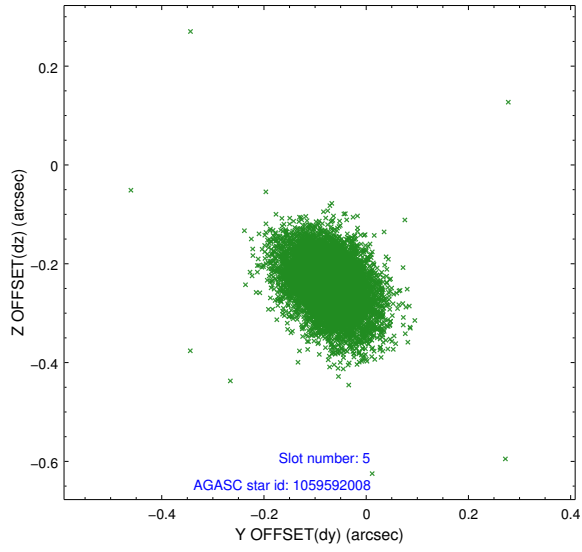
2.4.1 Slot 3



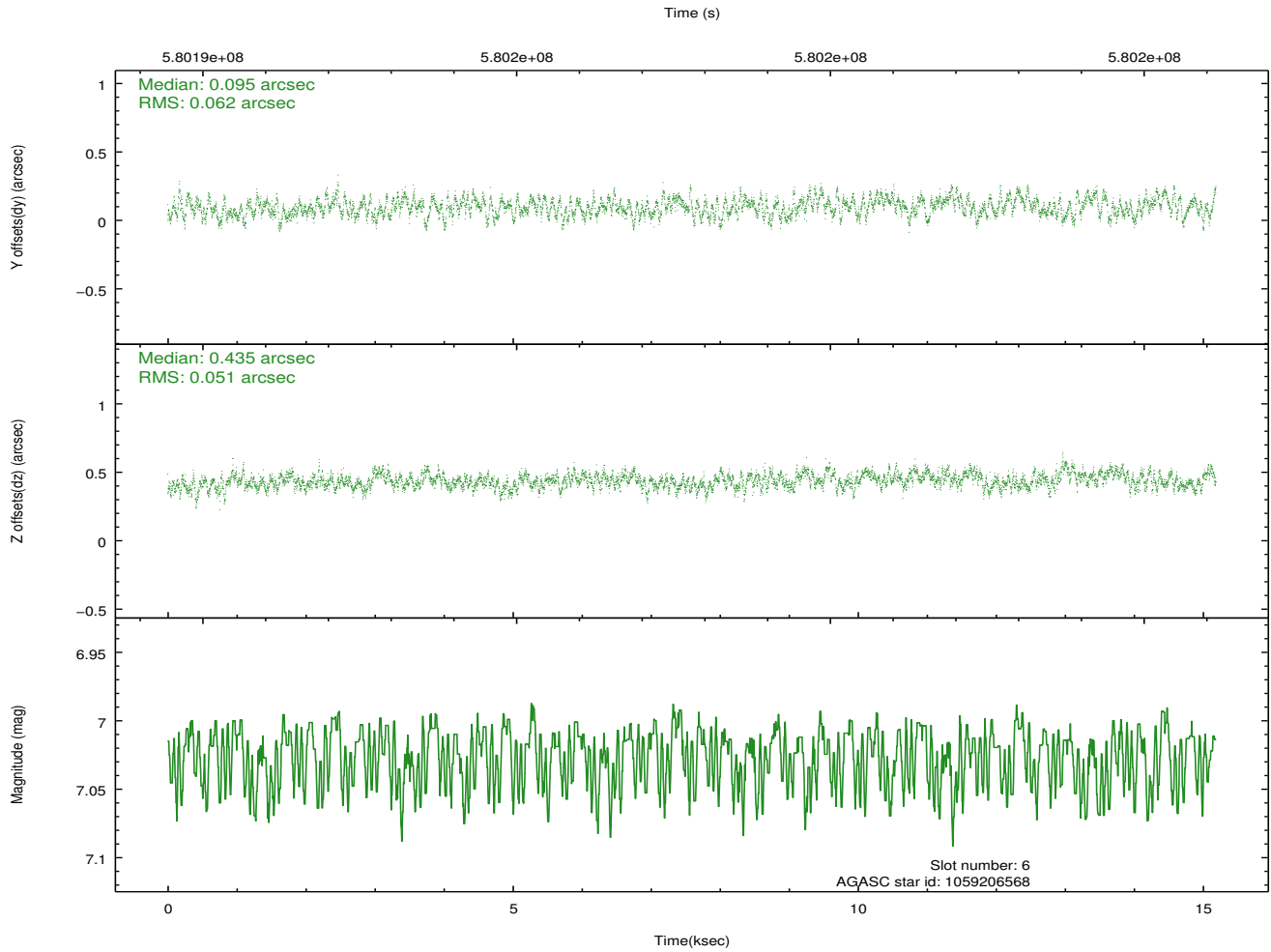
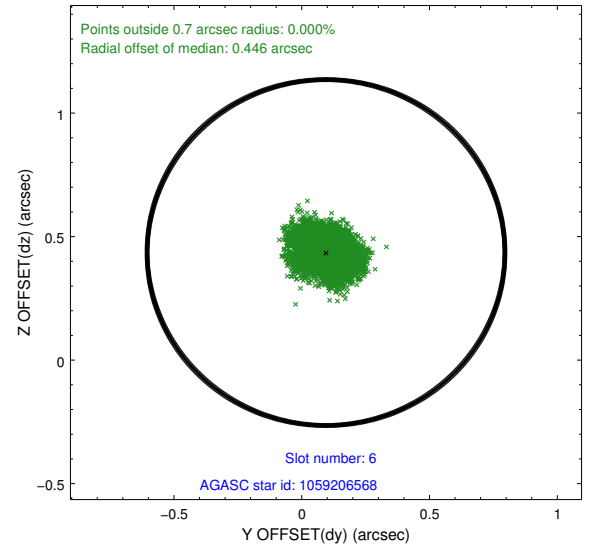
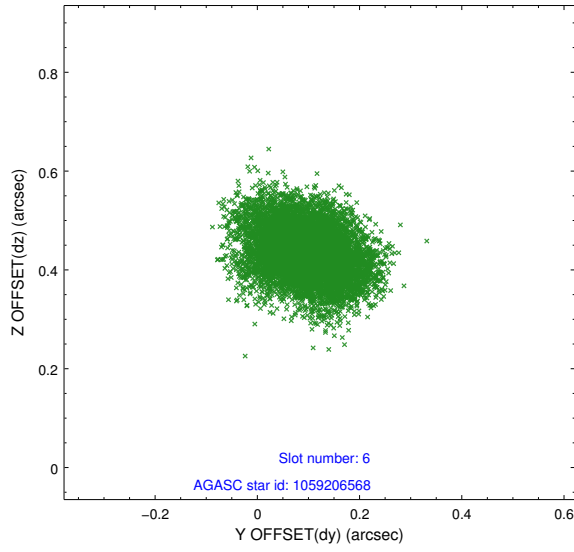
2.4.2 Slot 4



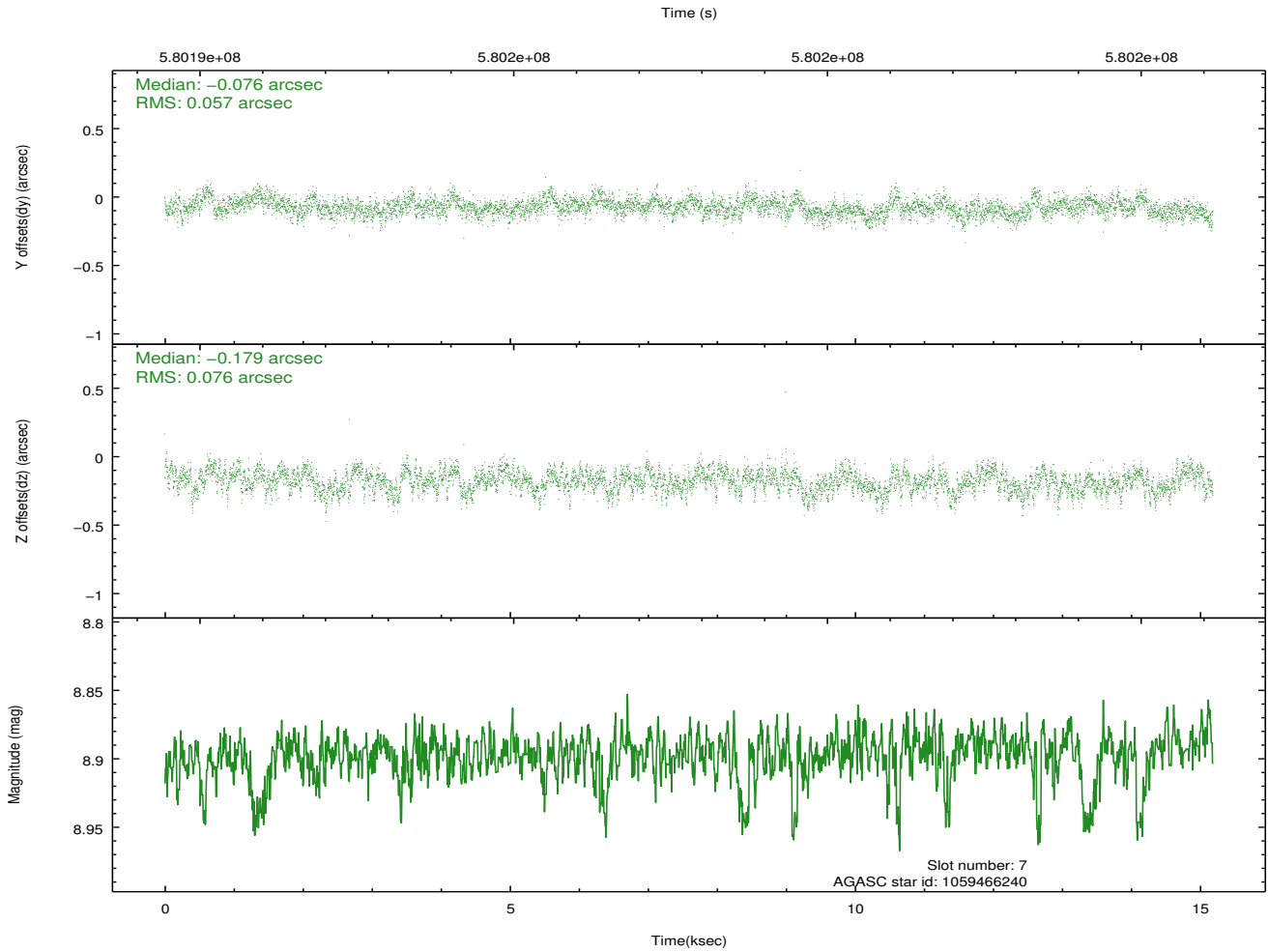
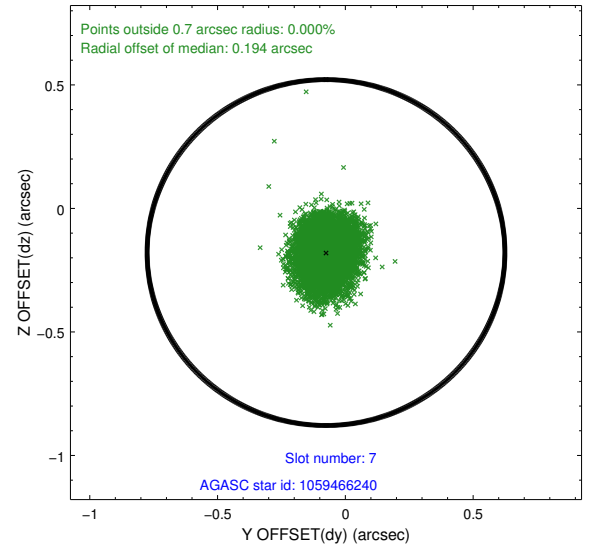
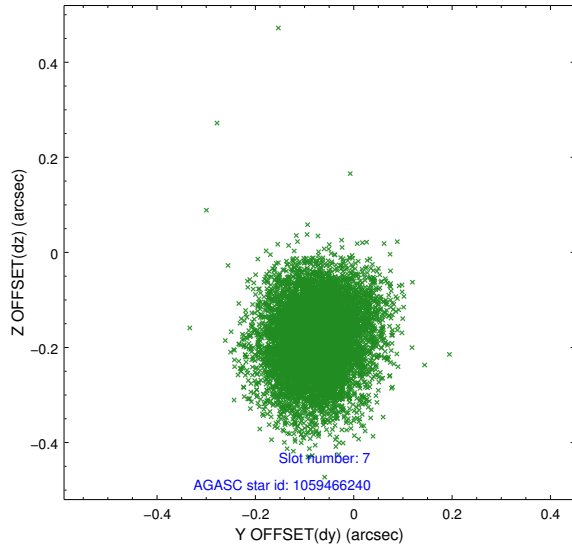
2.4.3 Slot 5



2.4.4 Slot 6

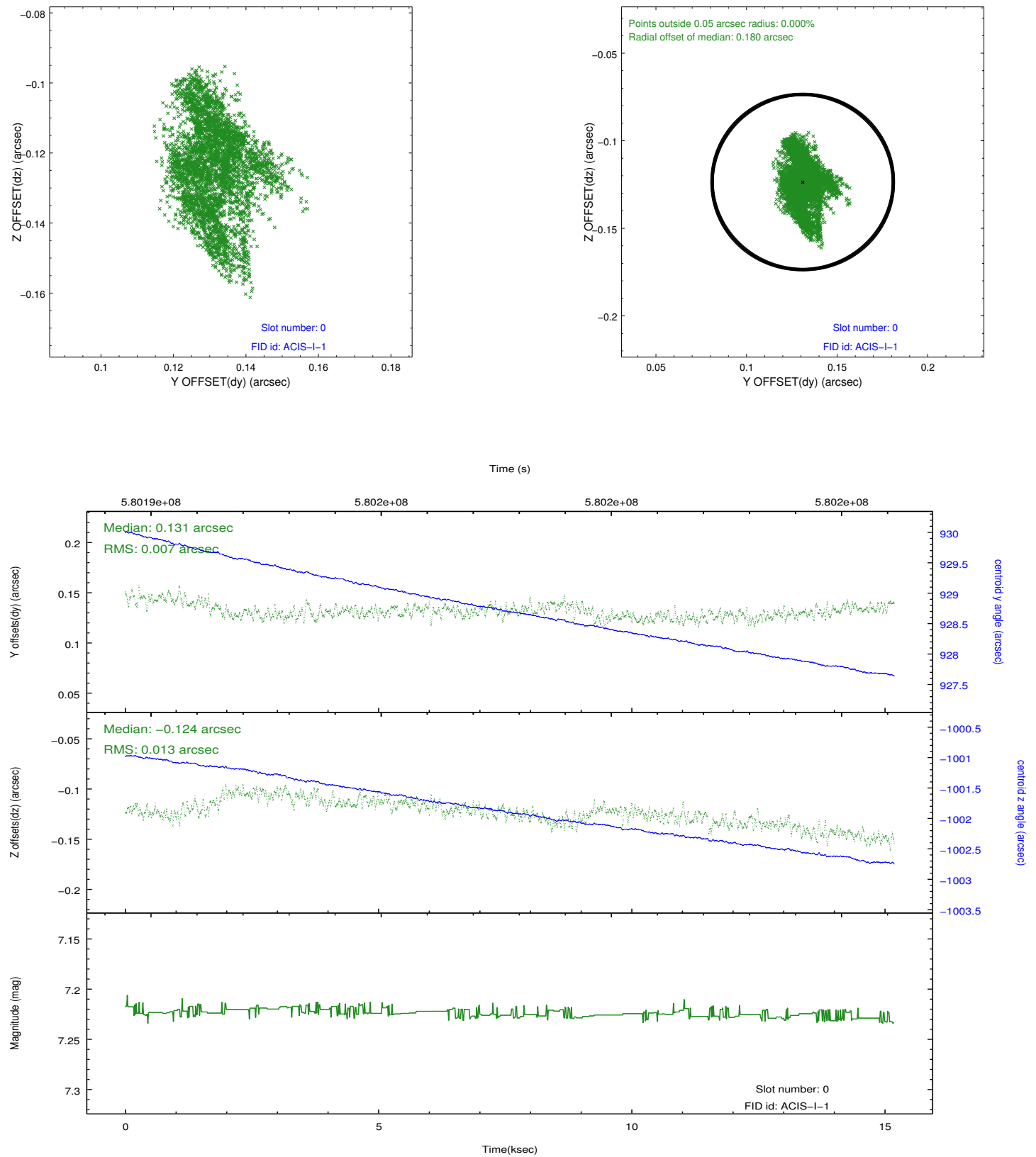


2.4.5 Slot 7

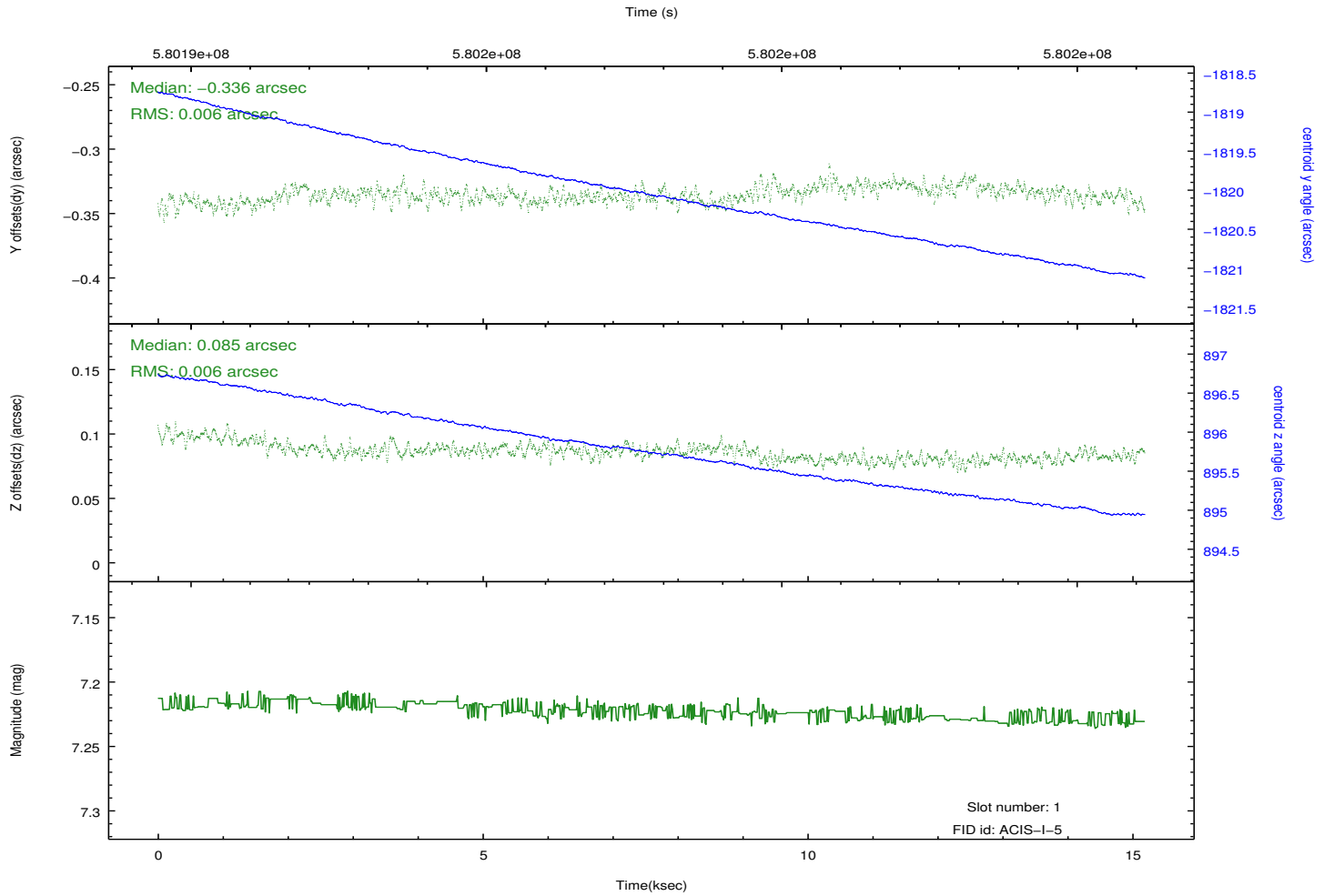
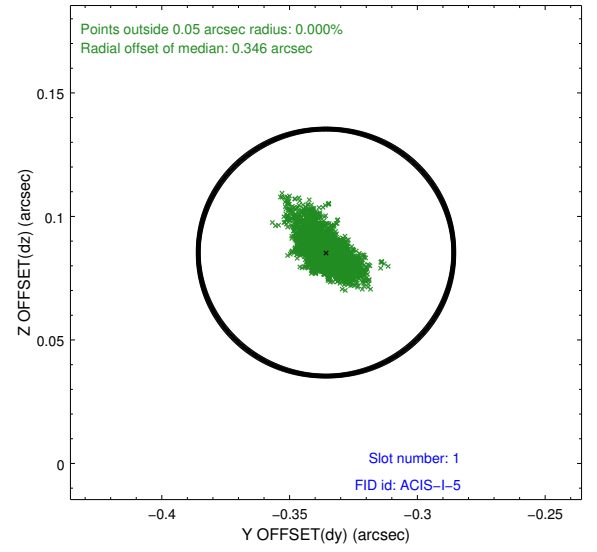
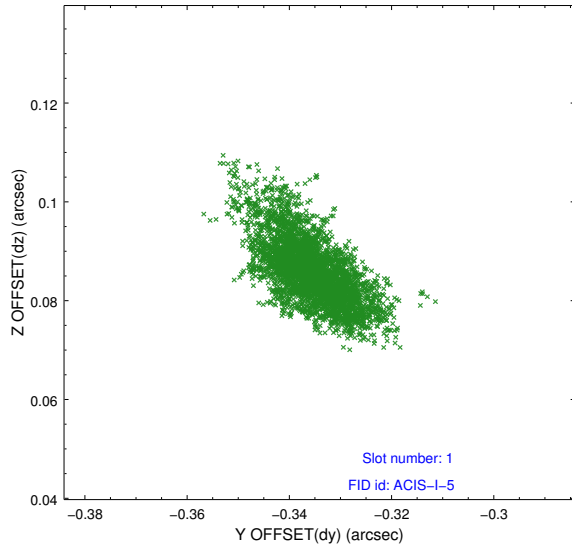


2.5 FID Slots

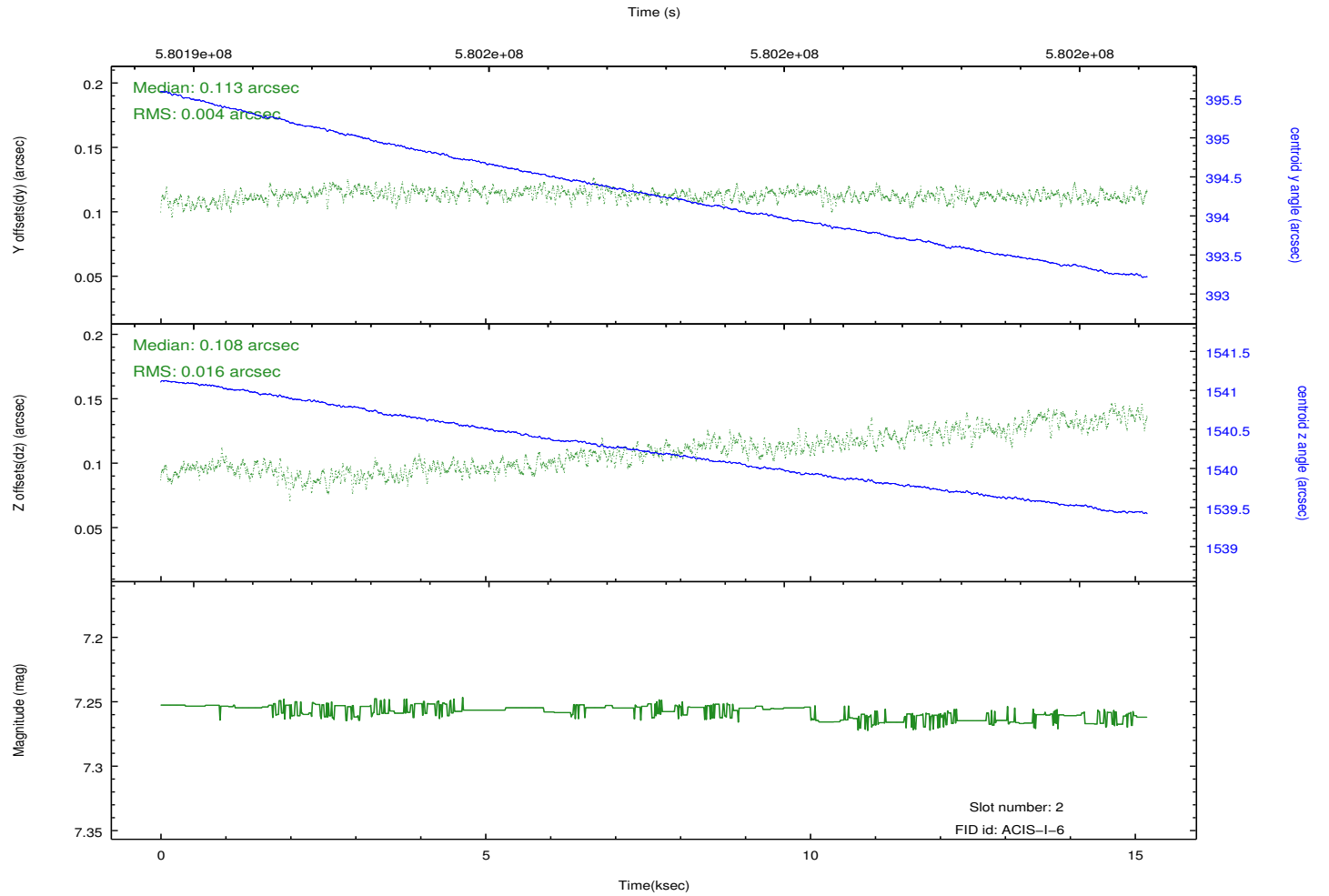
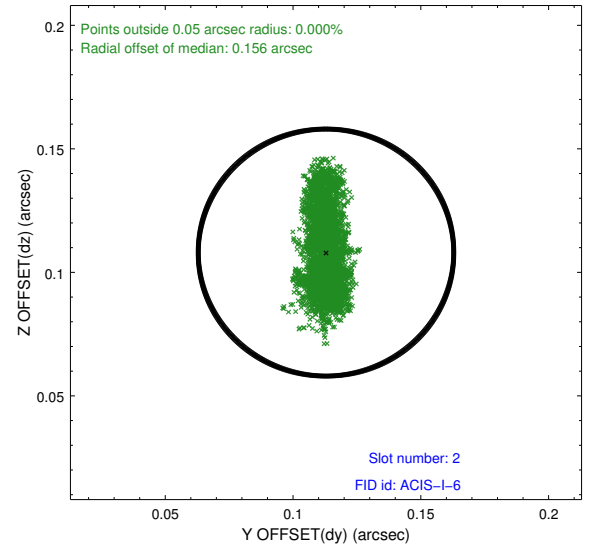
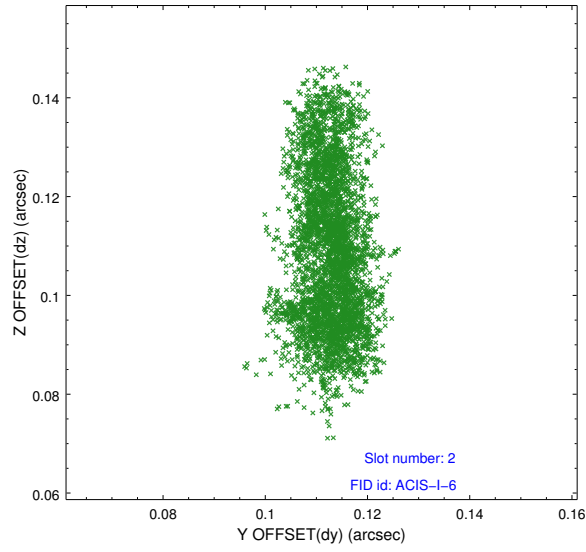
2.5.1 Slot 0



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) | 2016.05.23 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 14.773591131806 |

A.2 Comments