

V&V Reference Report

L2 ASCDS Version : 10.5.1.1

Observation 17606 - L2 Version 1
Chandra X-Ray Center

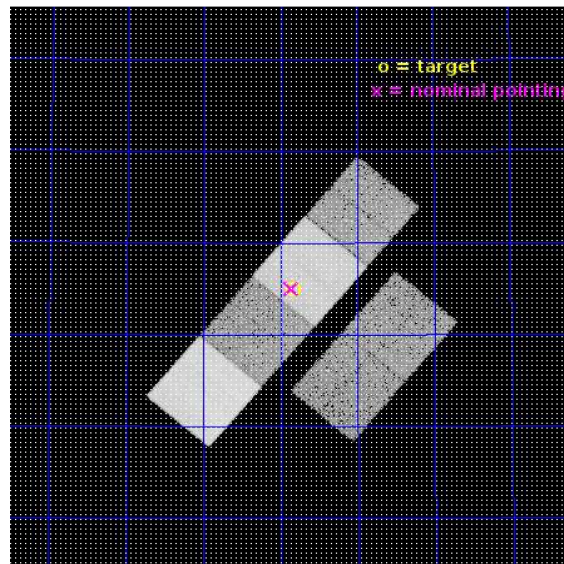
L2 Processing Date : Oct 4 2016

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1 Front

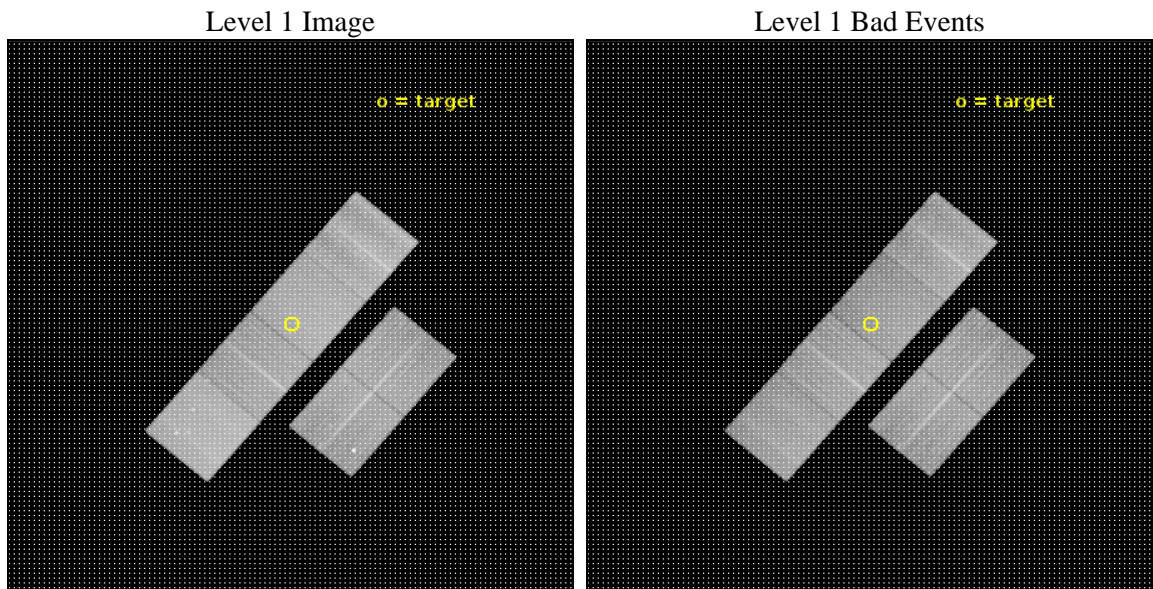
| | | |
|----------|--|---|
| seq_num | 703124 | Sequence number |
| obs_id | 17606 | Observation id |
| title | X-Ray Production in the Unique Relativistic Tidal Disruption Event Sw1644+57 | Proposal title |
| observer | Dr Bevin Zauderer | Principal investigator |
| object | Sw1644+57 | Source name |
| dtycycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 251.207917 | Observer's specified target RA [deg] |
| dec_targ | 57.58325 | Observer's specified target Dec [deg] |
| ra_nom | 251.21434378235 | Nominal RA [deg] |
| dec_nom | 57.583953718617 | Nominal Dec [deg] |
| roll_nom | 310.15121867422 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 24950.09208858 | Sum of GTIs [s] |
| livetime | 24634.158999413 | Livetime [s] |
| ontime2 | 24950.133128524 | Sum of GTIs [s] |
| ontime3 | 24949.968968511 | Sum of GTIs [s] |
| ontime5 | 24950.051048517 | Sum of GTIs [s] |
| ontime6 | 24950.010008574 | Sum of GTIs [s] |
| ontime7 | 24950.09208858 | Sum of GTIs [s] |
| ontime8 | 24946.686898232 | Sum of GTIs [s] |
| l2events | 266143 | Number of level 2 events |



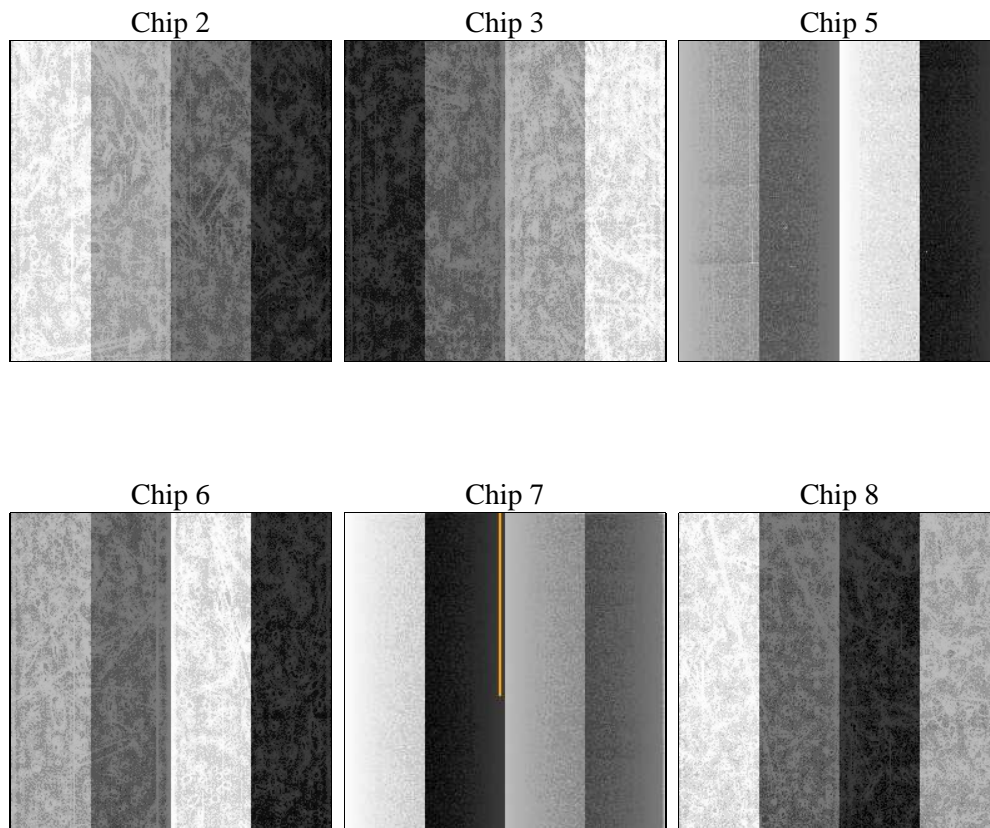
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 25000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.5.1.1 | Processing system revision | ontime | 24950.09208858 | Sum of GTIs [s] |
| caldbver | 4.7.2 | | ontime2 | 24950.133128524 | Sum of GTIs [s] |
| date | 2016-10-04T17:03:06 | Date and time of file creation | ontime3 | 24949.968968511 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime5 | 24950.051048517 | Sum of GTIs [s] |
| | | | ontime6 | 24950.010008574 | Sum of GTIs [s] |
| | | | ontime7 | 24950.09208858 | Sum of GTIs [s] |
| | | | ontime8 | 24946.686898232 | Sum of GTIs [s] |
| | | | l1events | 1174219 | Number of level 1 events |

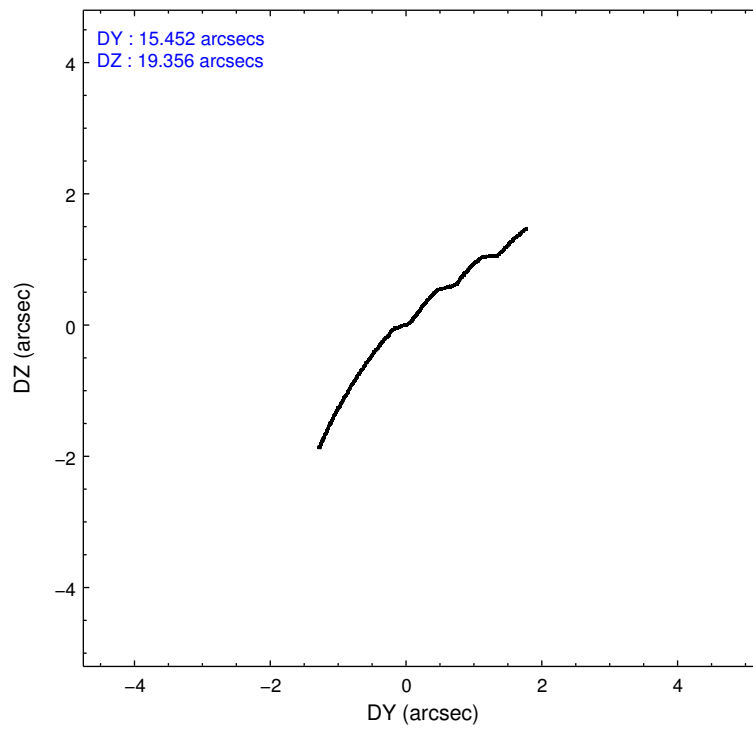
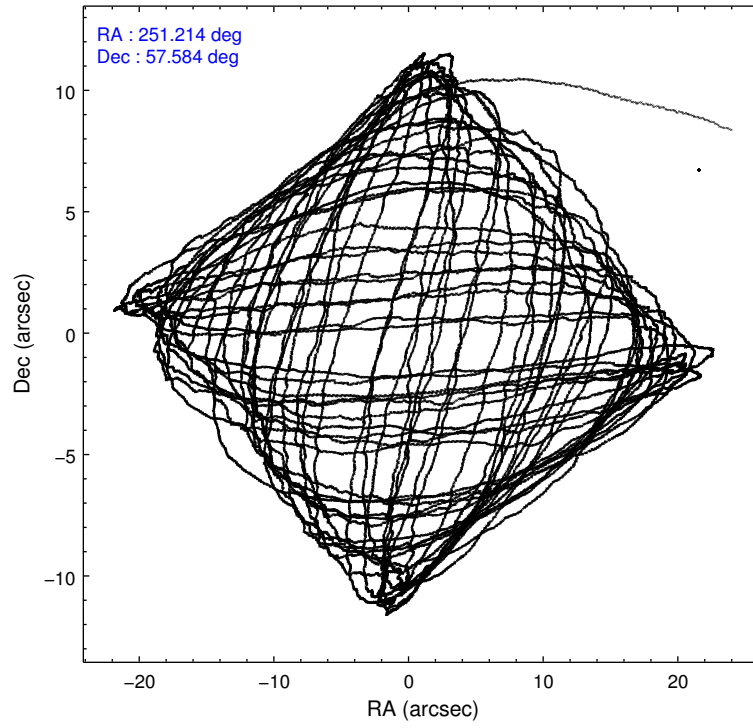
2.1.4 Events

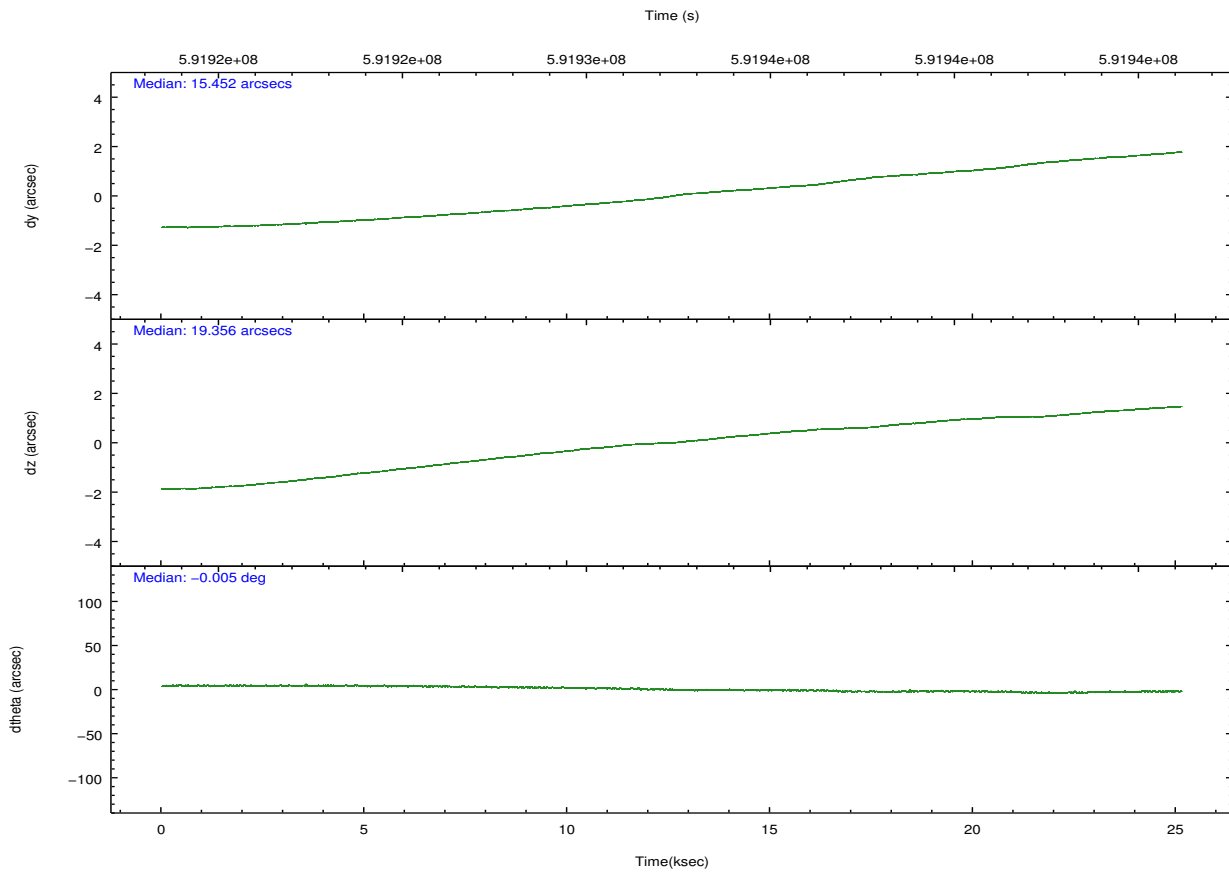
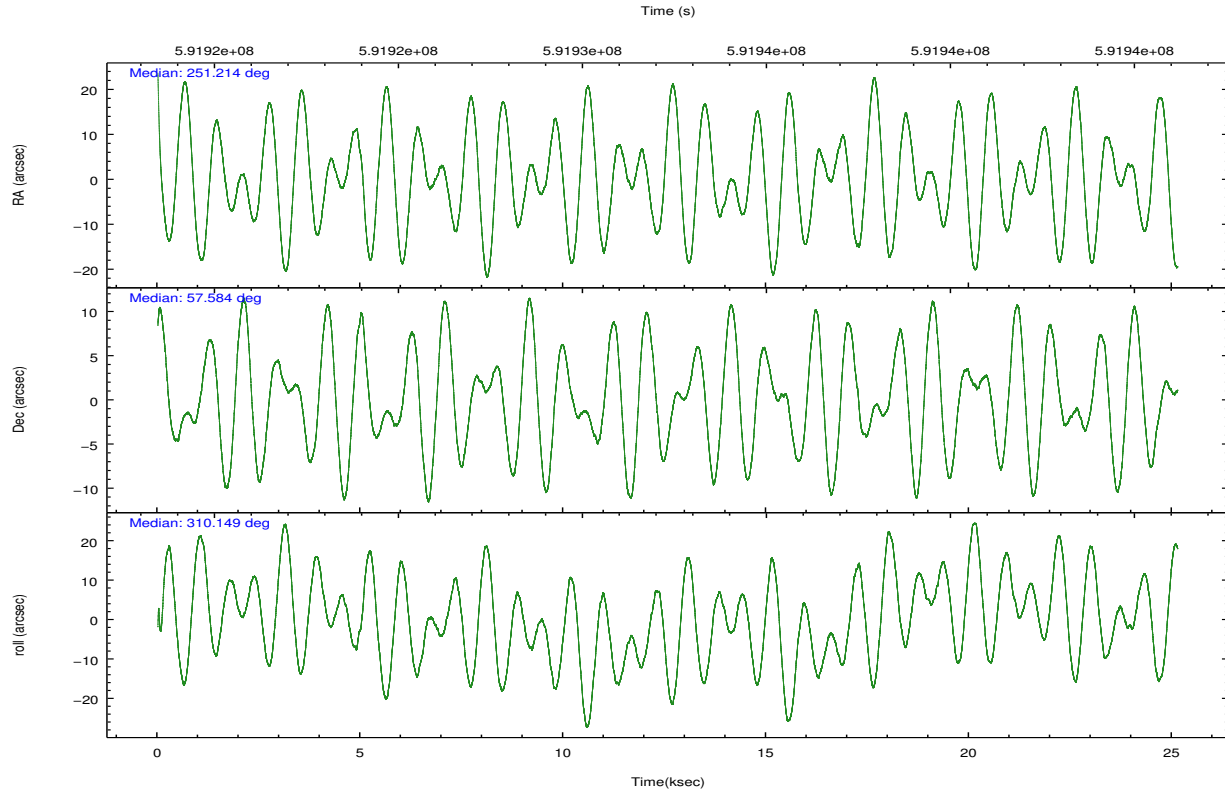
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|-------|--------|
| level 1 events | 168137 | 158919 | 255165 | 170101 | 207781 | 214116 | grade 0 events | 6265 | 5698 | 9040 | 5732 | 7429 | 15997 |
| rejected events | 145688 | 142550 | 133007 | 151935 | 118449 | 158501 | | 3% | 3% | 3% | 3% | 3% | 7% |
| rejected % | 86% | 89% | 52% | 89% | 57% | 74% | grade 1 events | 110 | 77 | 664 | 86 | 266 | 165 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 9300 | 3569 | 37580 | 4390 | 19028 | 13653 |
| | | | | | | | | 5% | 2% | 14% | 2% | 9% | 6% |
| | | | | | | | grade 3 events | 1692 | 1798 | 3806 | 1738 | 6824 | 5597 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 4 events | 1765 | 1758 | 3632 | 1803 | 6754 | 5278 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 5 events | 6393 | 7594 | 17438 | 7382 | 20158 | 11347 |
| | | | | | | | | 3% | 4% | 6% | 4% | 9% | 5% |
| | | | | | | | grade 6 events | 3434 | 3555 | 68129 | 4507 | 49322 | 15093 |
| | | | | | | | | 2% | 2% | 26% | 2% | 23% | 7% |
| | | | | | | | grade 7 events | 139178 | 134870 | 114876 | 144463 | 98000 | 146986 |
| | | | | | | | | 82% | 84% | 45% | 84% | 47% | 68% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-235678 | ACIS-235678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | CCD I0 on | N | N |
| Observation mode | POINTING | POINTING | CCD I1 on | N | N |
| [deg] Pointing RA | 251.165969 | 251.2143437823466 | CCD I2 on | O1 | Y |
| [deg] Pointing Dec | 57.592912 | 57.58395371861733 | CCD I3 on | O2 | Y |
| [deg] Pointing Roll | 310.035418 | 310.1512186742243 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | Y | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | Y | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 | CCD S4 on | Y | Y |
| [s] Observation start time (MET) | 591919903.184000 | 591918687.03155 | CCD S5 on | N | N |
| Observation start date | 2016-10-03T22:10:35 | 2016-10-03T21:51:27 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 591944903.184000 | 591946387.14563 | On-chip summing requested | N | N |
| Observation end date | 2016-10-04T05:07:15 | 2016-10-04T05:33:07 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect





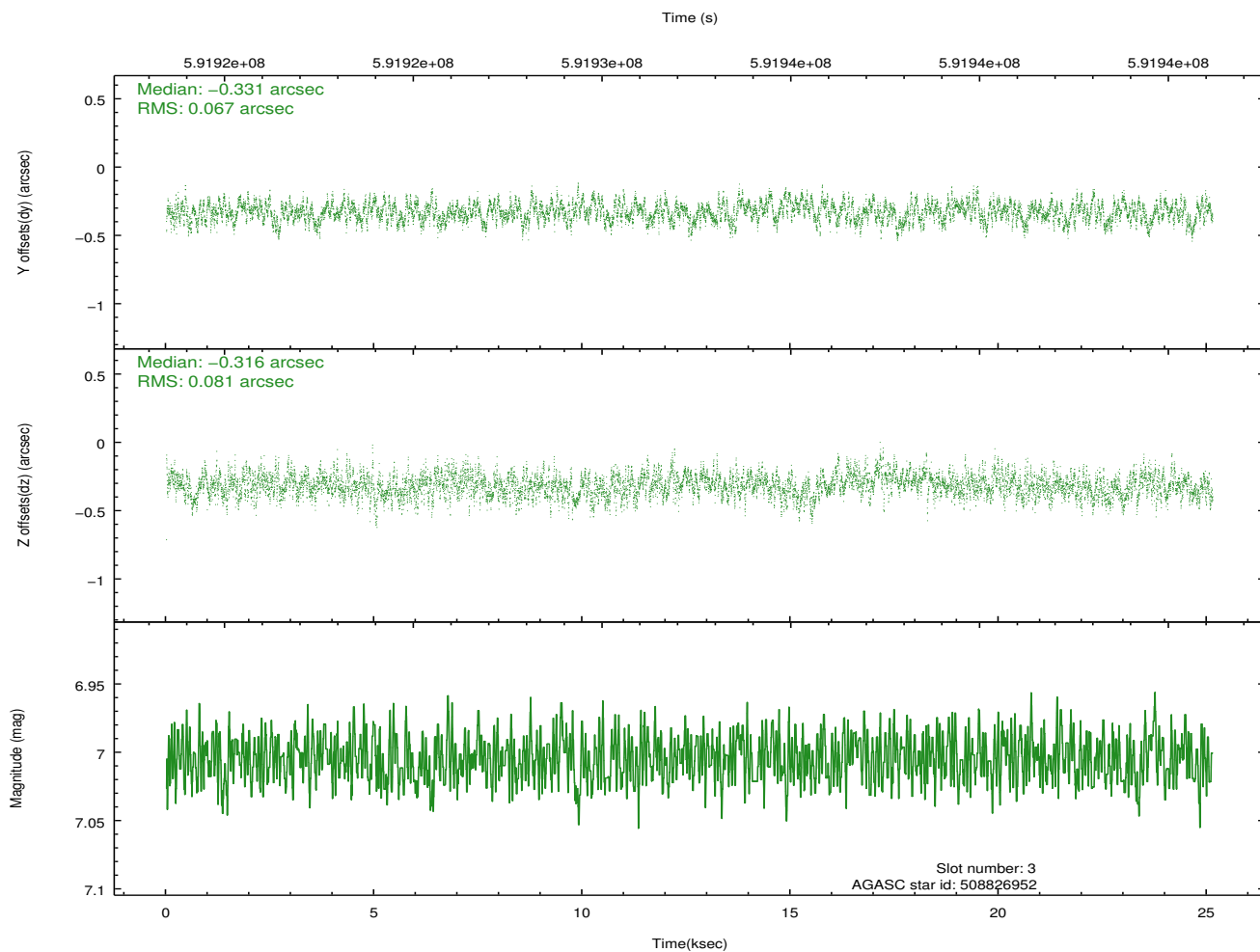
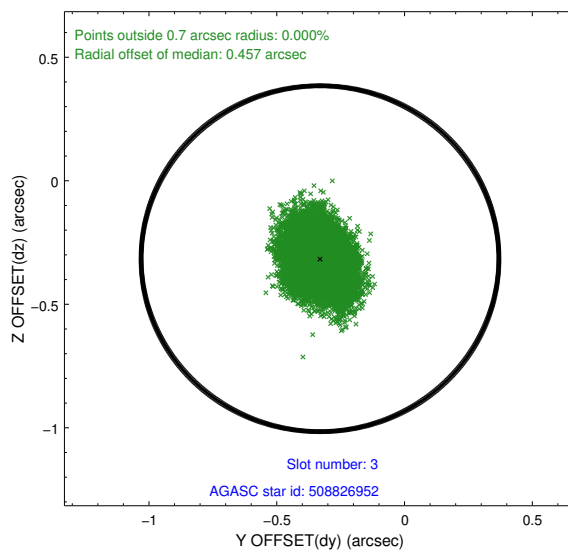
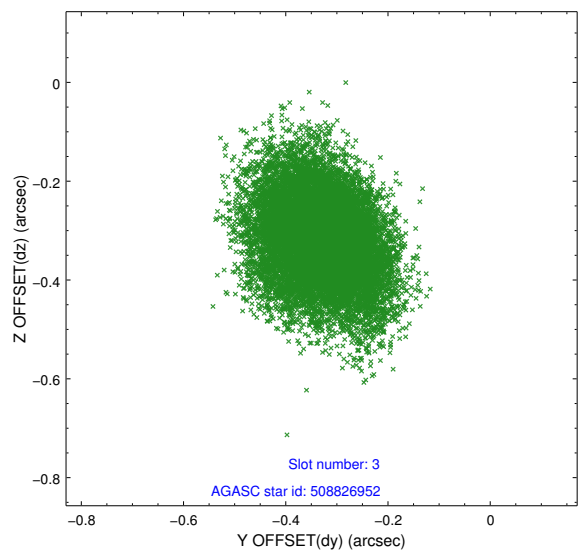
Slot Statistics

| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | | ACIS-S-2 | 7.11 | 6130 | -0.204 | -0.119 | 0.030 | 0.045 | 0.000000 | 0.000000 | -768.67 | -1740.83 |
| 1 | FID | | ACIS-S-4 | 7.21 | 6130 | 0.470 | 0.129 | 0.018 | 0.032 | 0.000000 | 0.000000 | 2145.20 | 167.81 |
| 2 | FID | | ACIS-S-5 | 7.21 | 6130 | -0.290 | -0.007 | 0.039 | 0.064 | 0.000000 | 0.000000 | -1821.48 | 161.45 |
| 3 | GUIDE | used | 508826952 | 7.00 | 12261 | -0.331 | -0.316 | 0.112 | 0.182 | 252.003832 | 57.489272 | 1321.16 | 1007.62 |
| 4 | GUIDE | used | 509214760 | 8.33 | 12256 | 0.109 | 0.048 | 0.119 | 0.192 | 250.589992 | 57.556199 | -617.22 | -933.29 |
| 5 | GUIDE | used | 509223192 | 7.69 | 12257 | -0.155 | -0.066 | 0.099 | 0.169 | 251.320493 | 58.085113 | -1167.55 | 1365.29 |
| 6 | GUIDE | used | 509227784 | 9.21 | 12249 | 0.220 | 0.065 | 0.134 | 0.223 | 250.982124 | 57.635413 | -345.00 | -172.07 |
| 7 | GUIDE | used | 509228136 | 9.22 | 12243 | 0.156 | 0.274 | 0.140 | 0.228 | 249.958671 | 57.735608 | -1900.27 | -1432.54 |

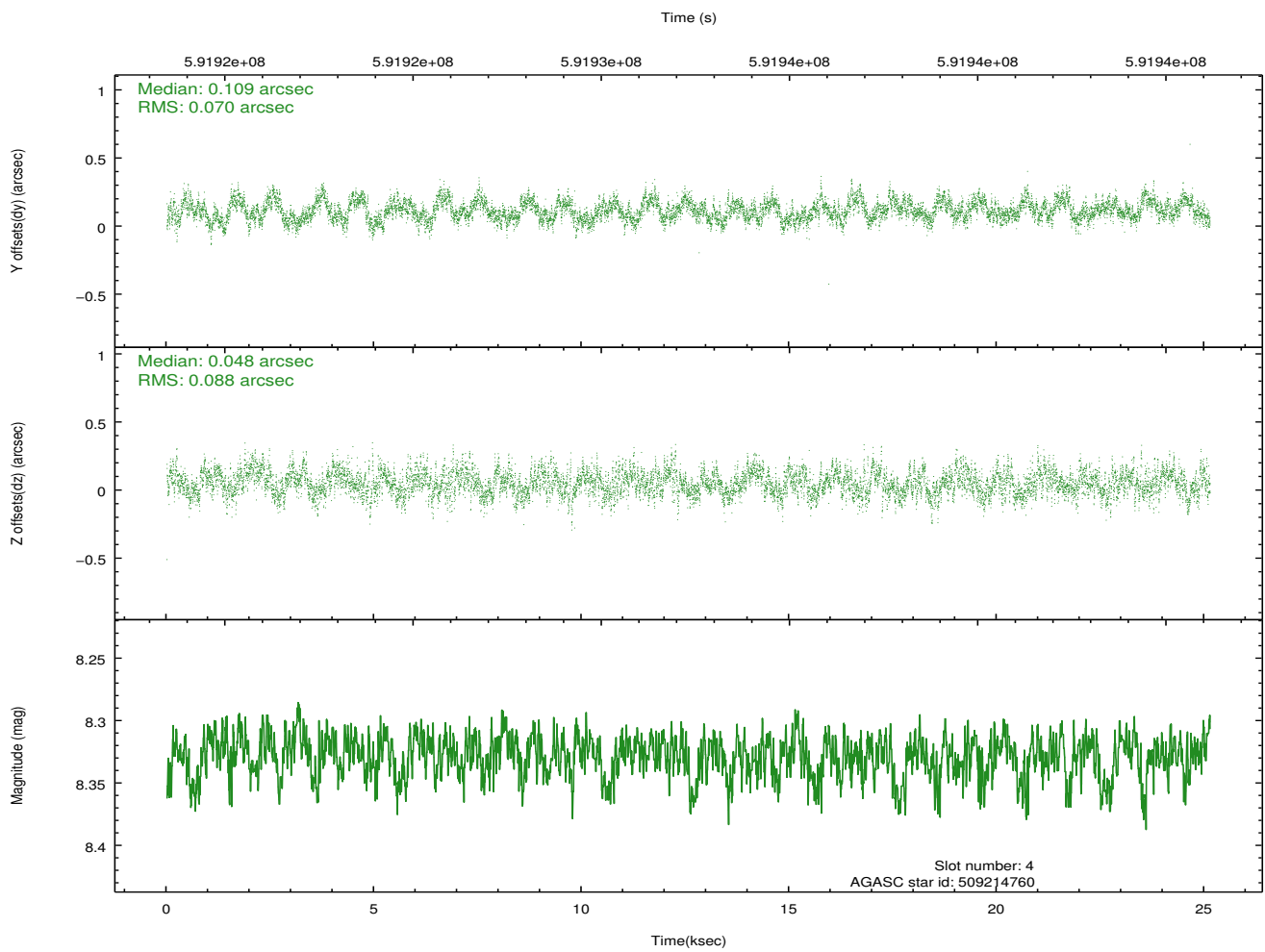
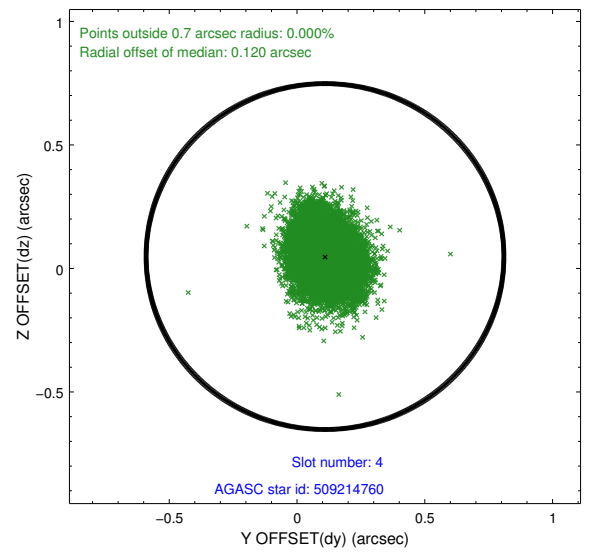
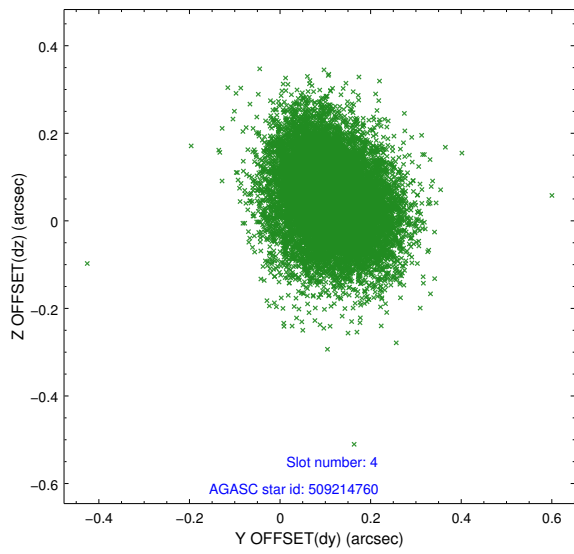
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2.4 Star Slots

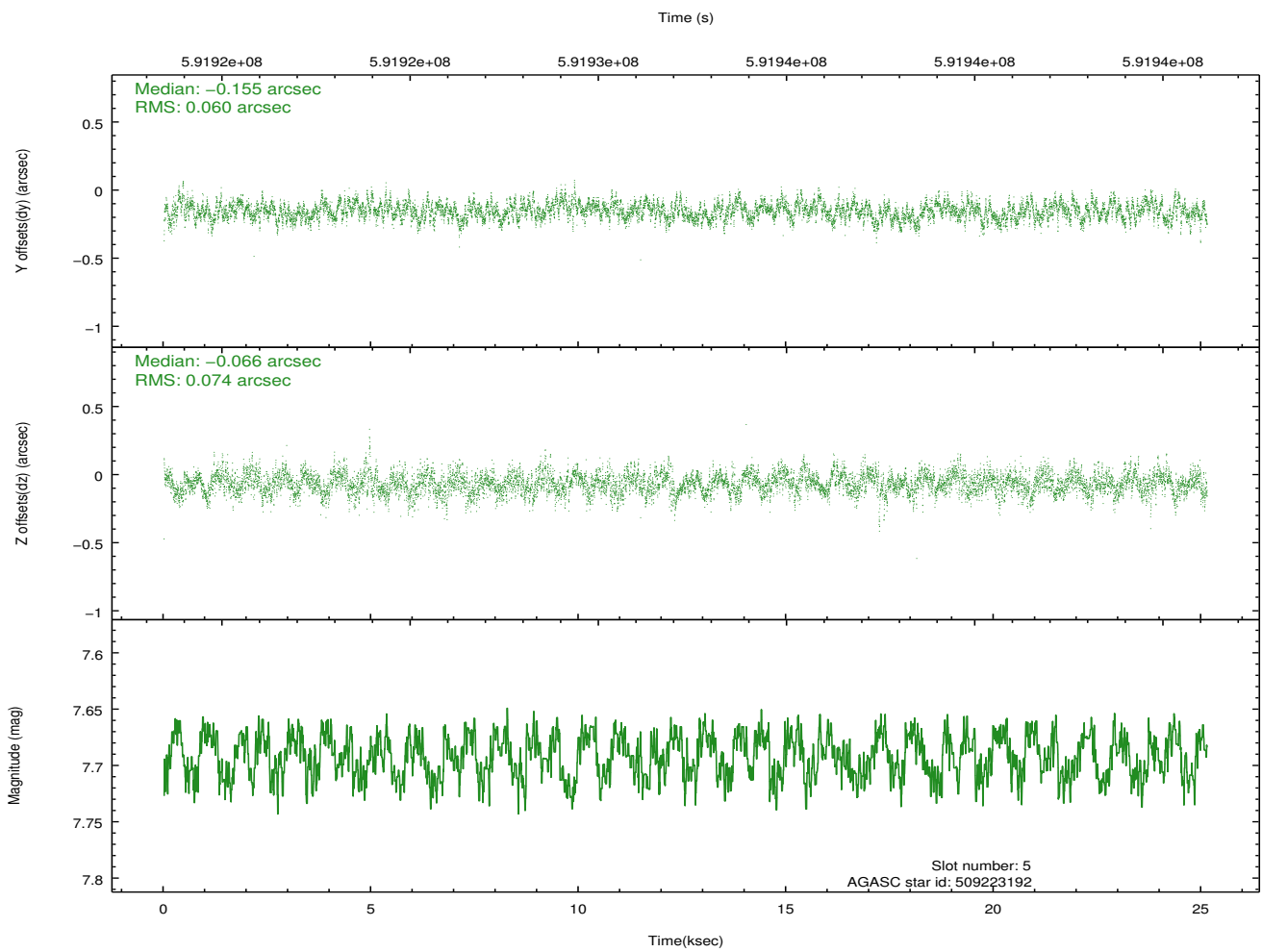
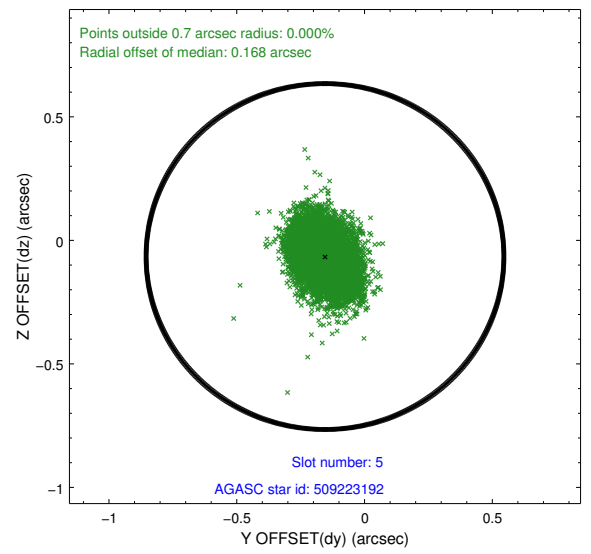
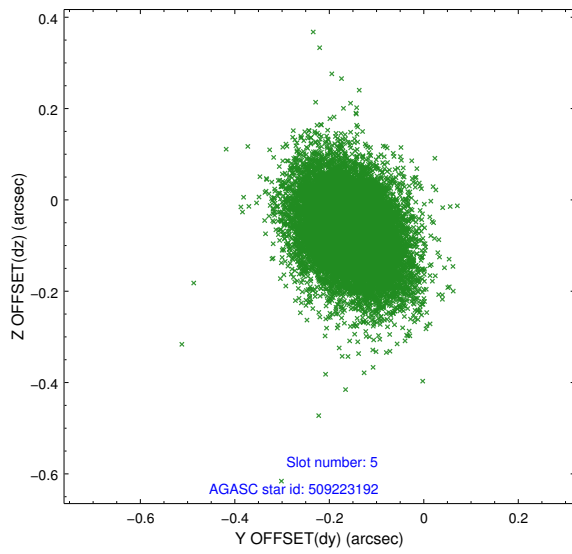
2.4.1 Slot 3



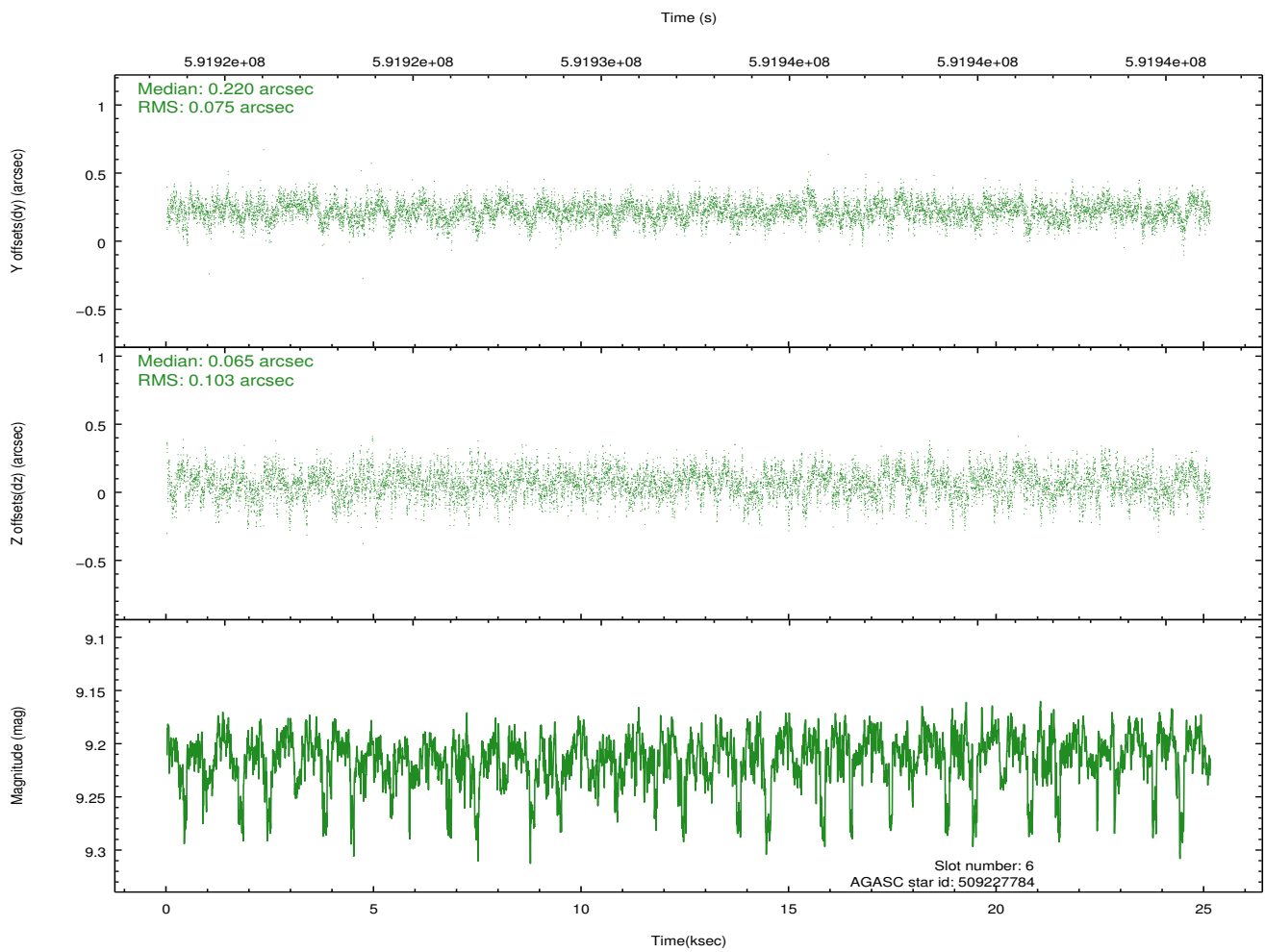
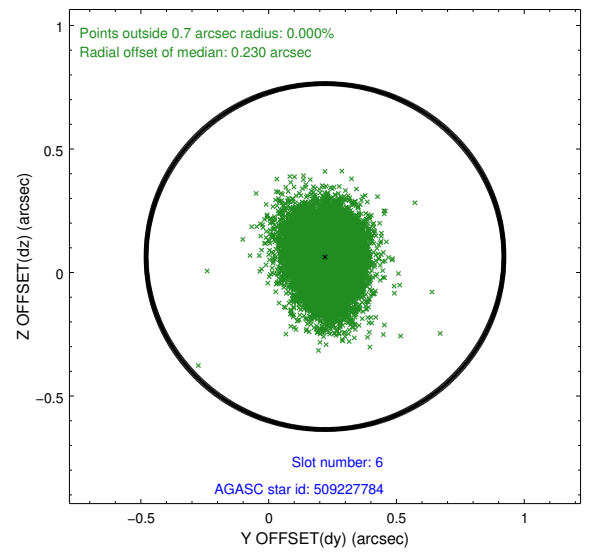
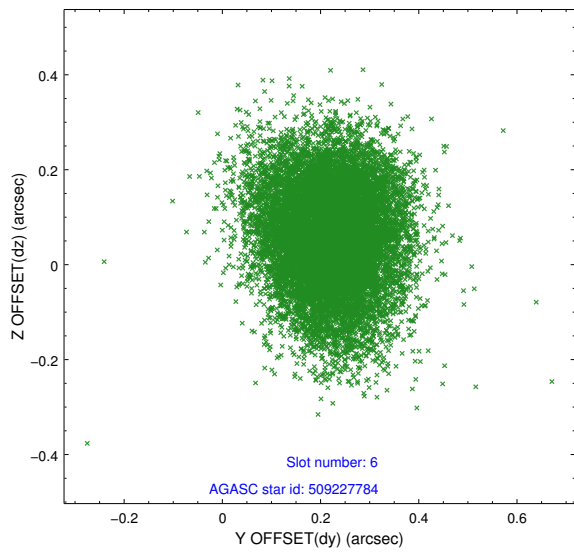
2.4.2 Slot 4



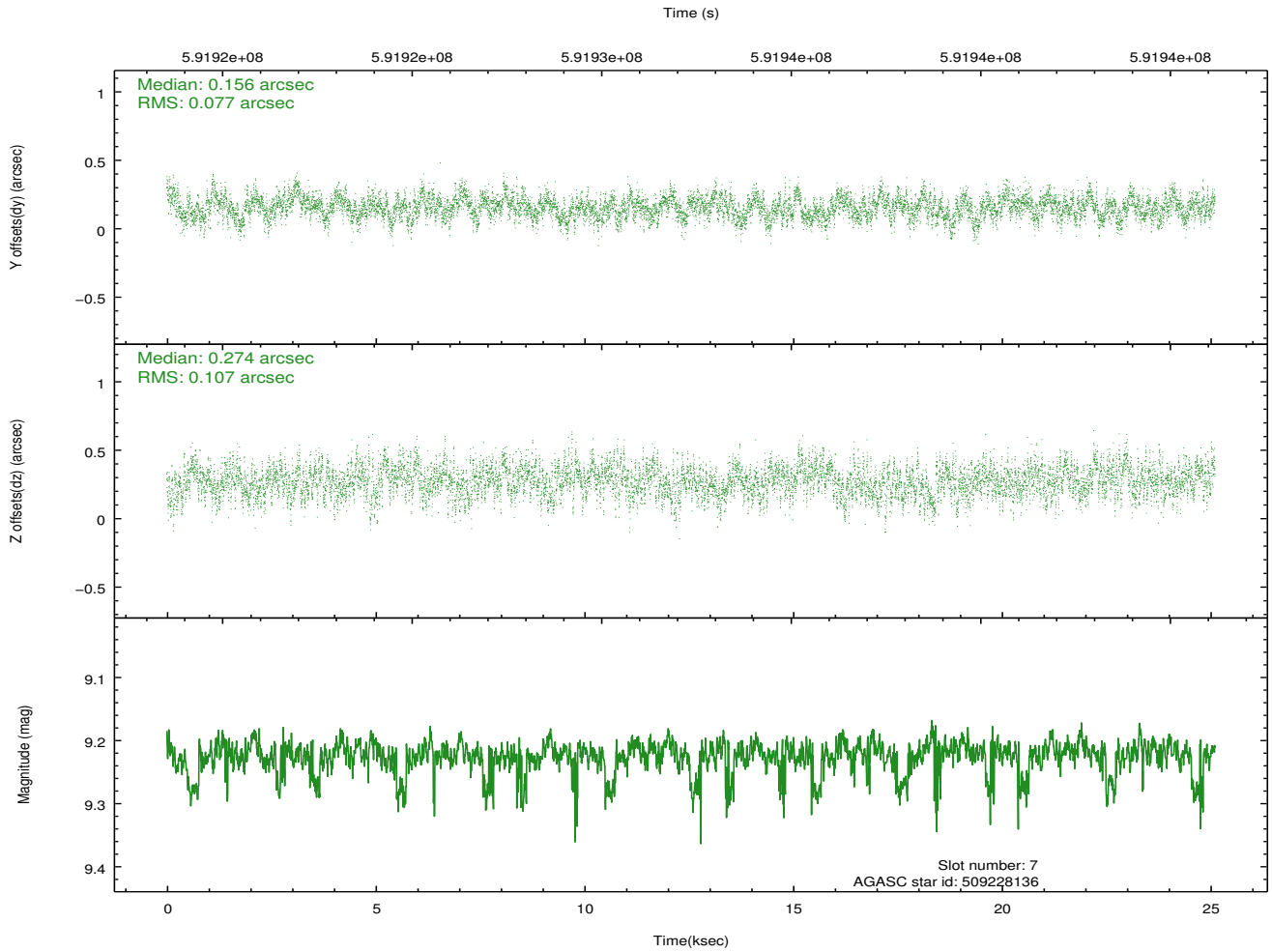
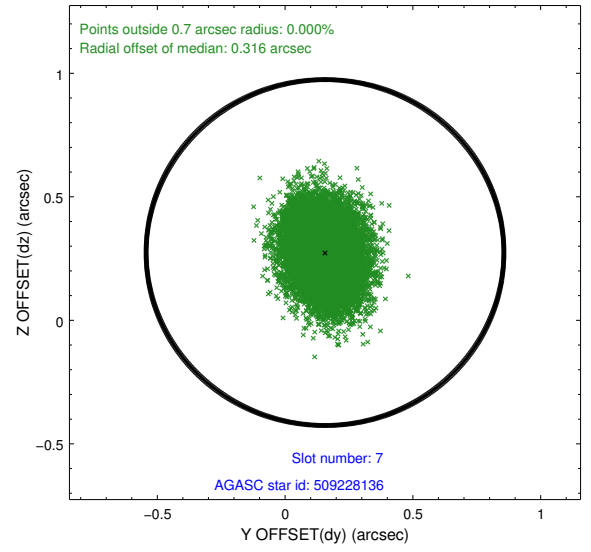
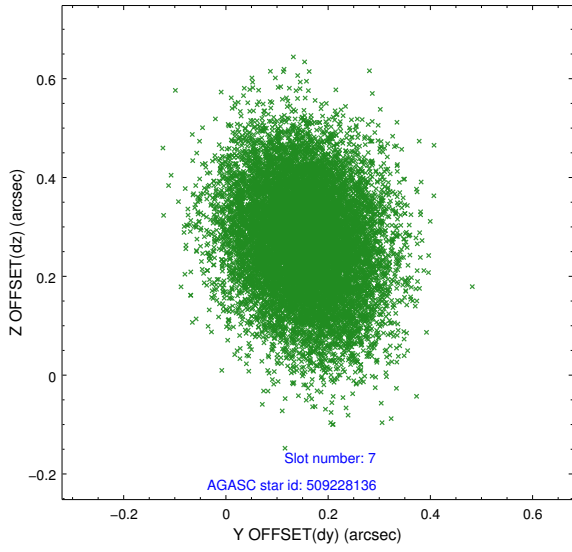
2.4.3 Slot 5



2.4.4 Slot 6

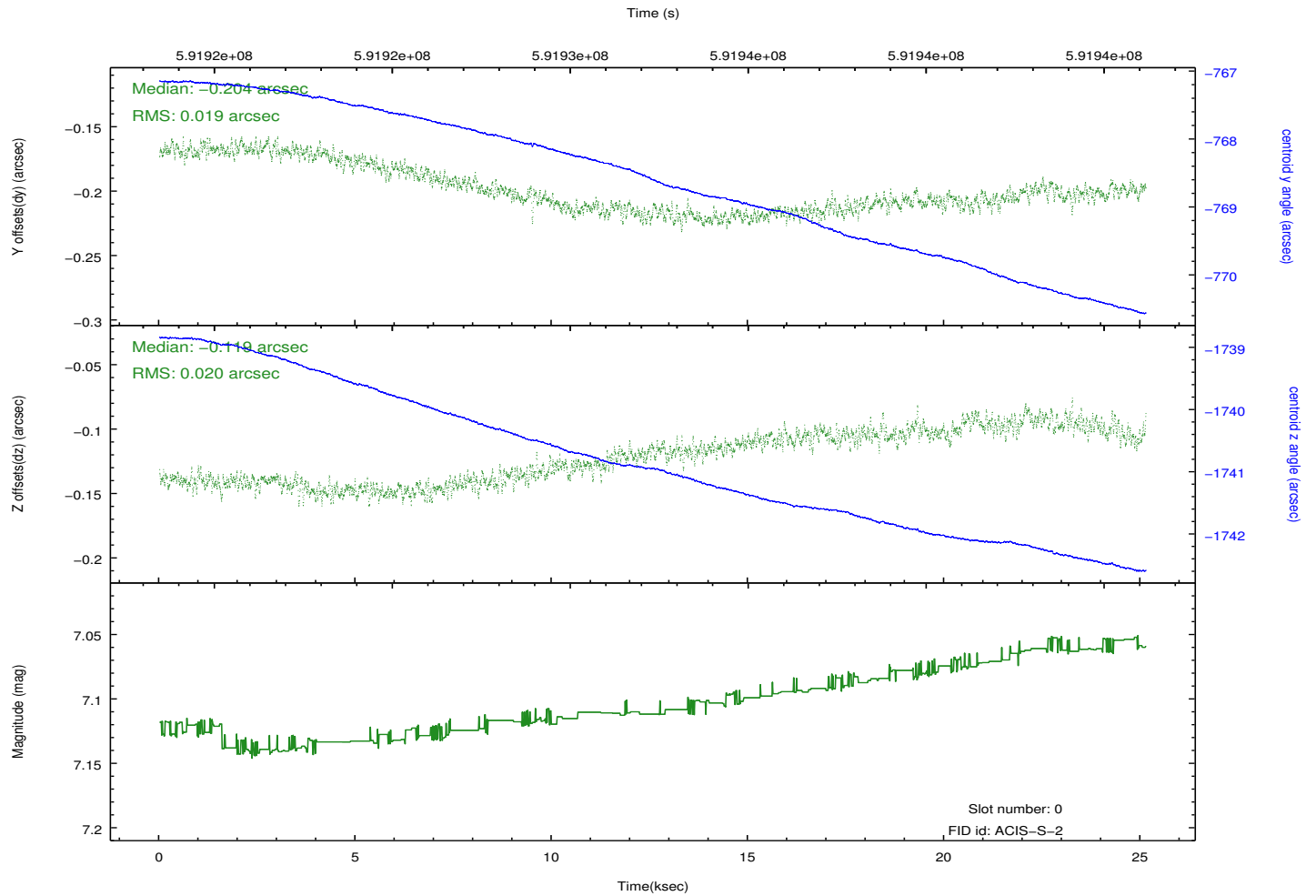
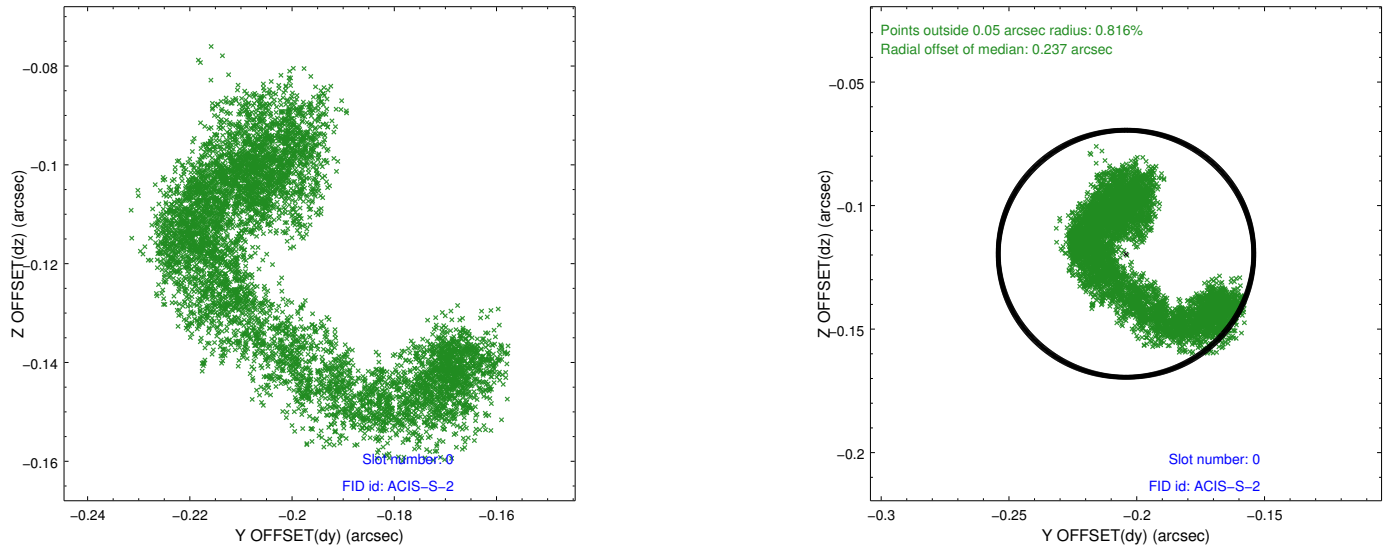


2.4.5 Slot 7

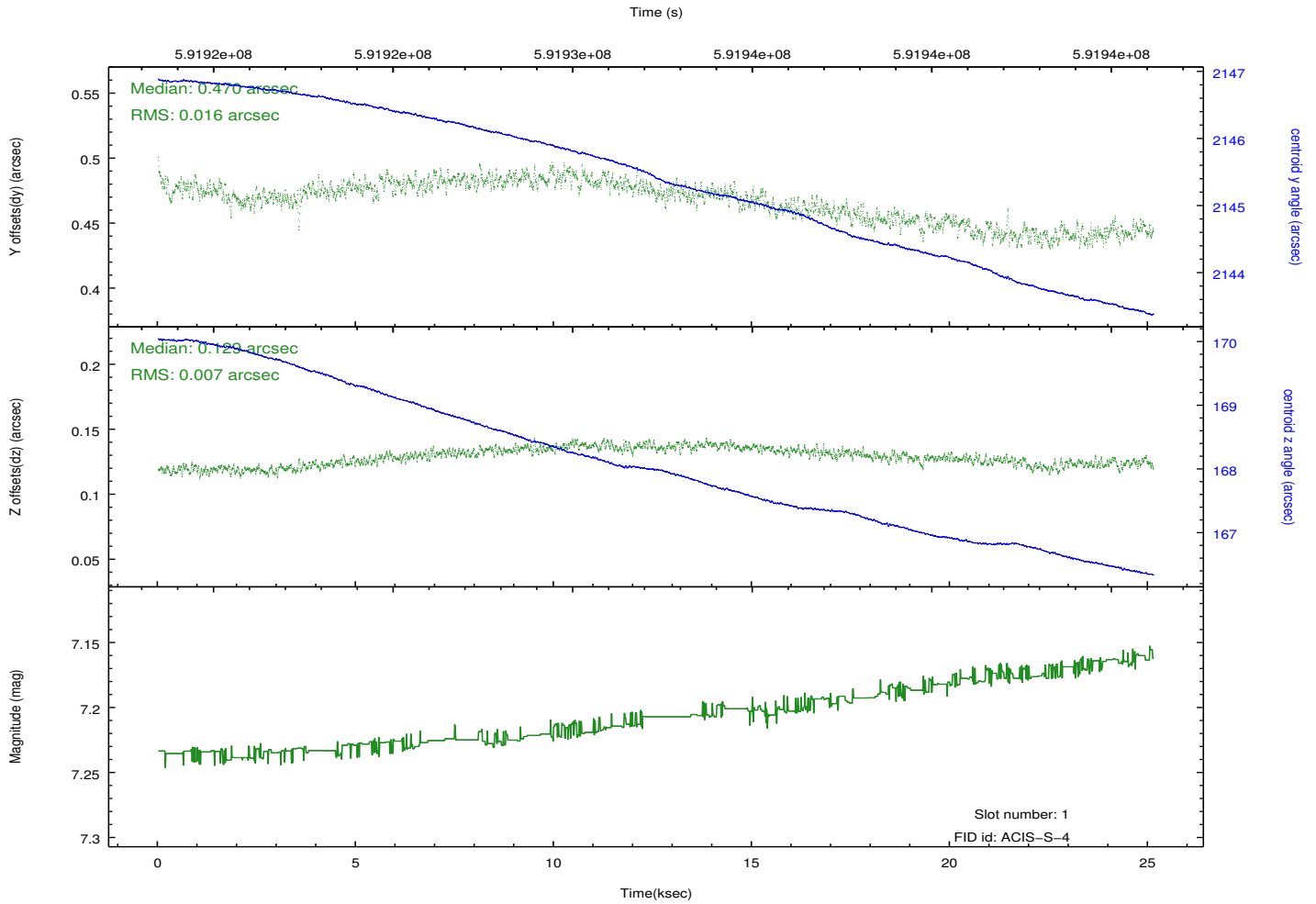
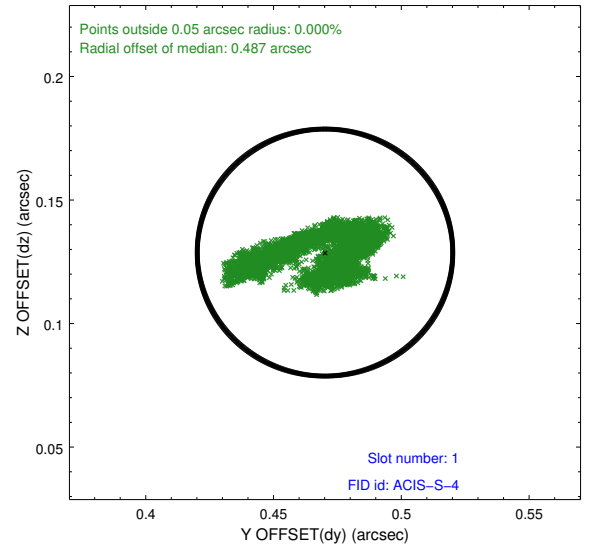
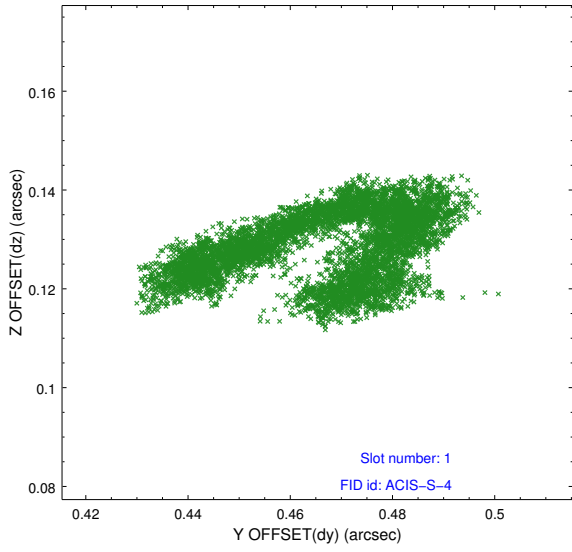


2.5 FID Slots

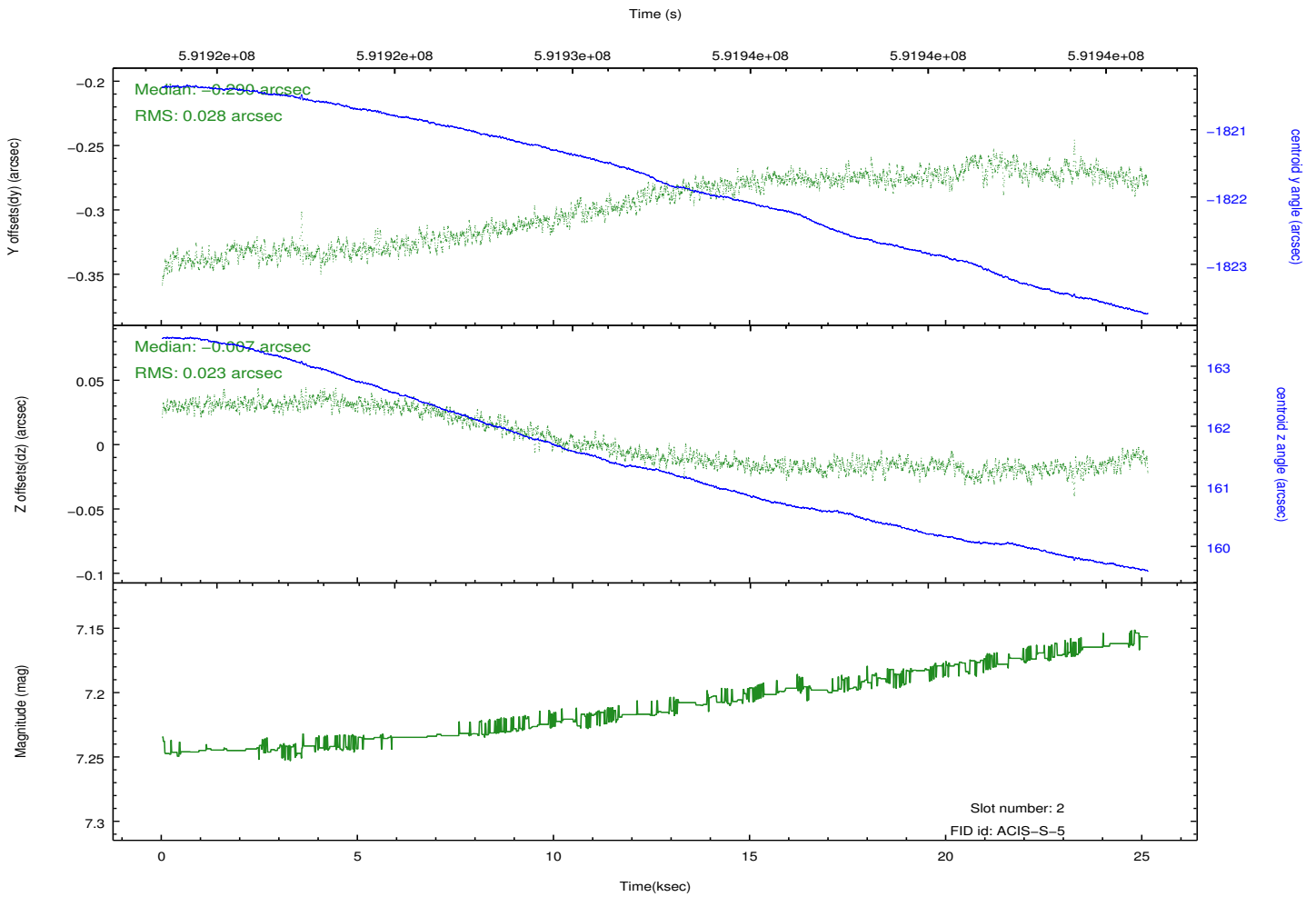
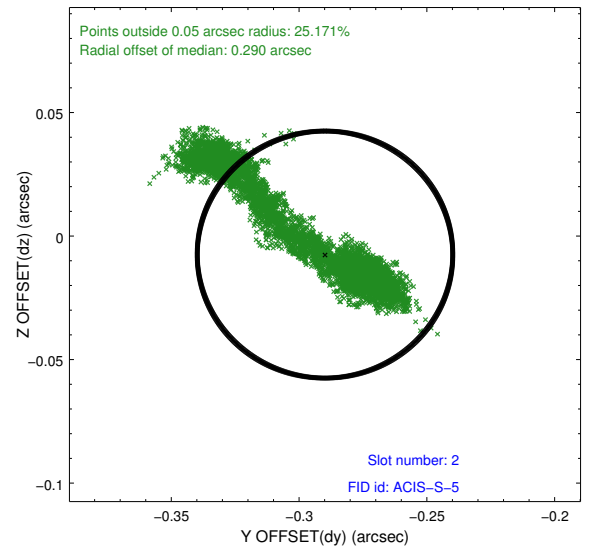
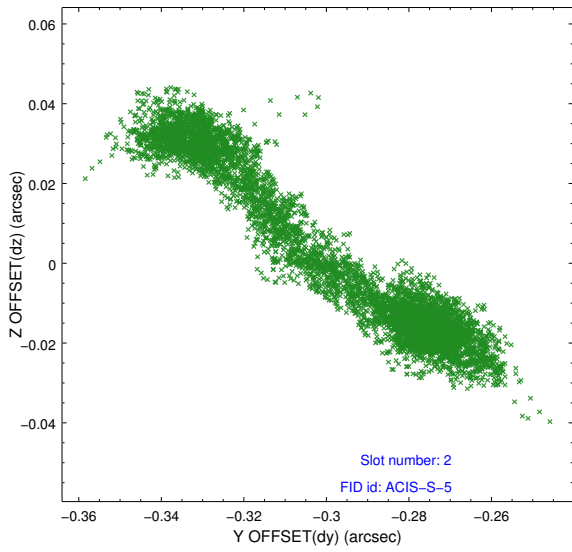
2.5.1 Slot 0



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) | 2016.10.04 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 24.95009208858 |

A.2 Comments