

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22183 - L2 Version 2
Chandra X-Ray Center

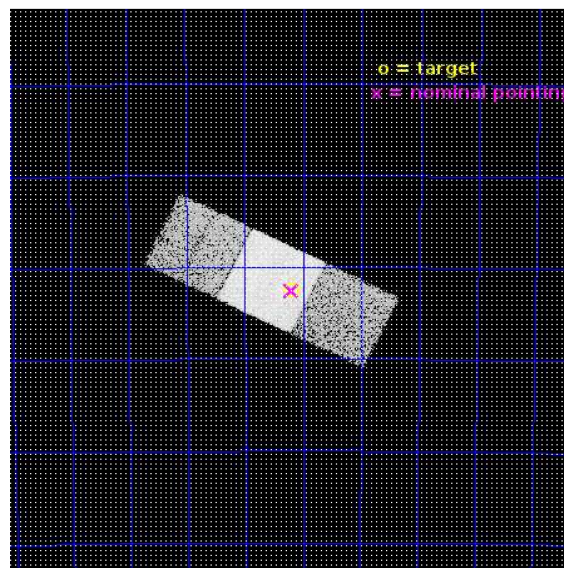
L2 Processing Date : Sep 27 2019

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1 Front

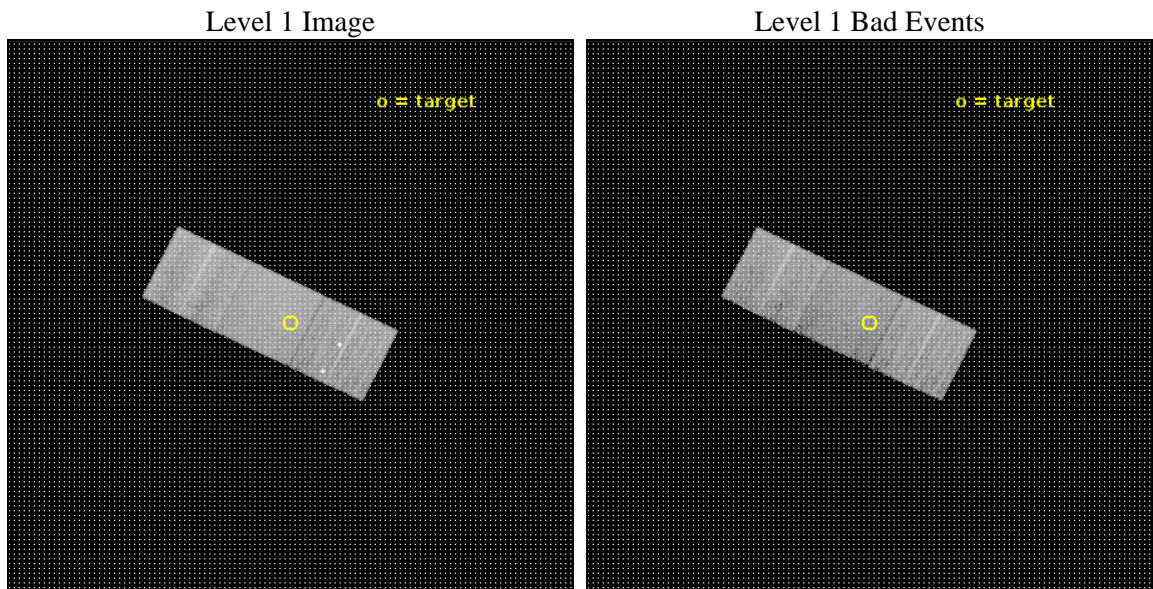
| | | |
|----------|--|---|
| seq_num | 703879 | Sequence number |
| obs_id | 22183 | Observation id |
| title | Exploring the possible link between mass ejection and X-ray emission in a nearby TDE | Proposal title |
| observer | Kate Alexander | Principal investigator |
| object | AT2019ahk | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 105.047083 | Observer's specified target RA [deg] |
| dec_targ | -66.0405 | Observer's specified target Dec [deg] |
| ra_nom | 105.05038080434 | Nominal RA [deg] |
| dec_nom | -66.042683753904 | Nominal Dec [deg] |
| roll_nom | 206.18602469119 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 10108.725782275 | Sum of GTIs [s] |
| livetime | 9976.6478379941 | Livetime [s] |
| ontime6 | 10108.684742332 | Sum of GTIs [s] |
| ontime7 | 10108.725782275 | Sum of GTIs [s] |
| ontime8 | 10108.643702269 | Sum of GTIs [s] |
| l2events | 57121 | Number of level 2 events |



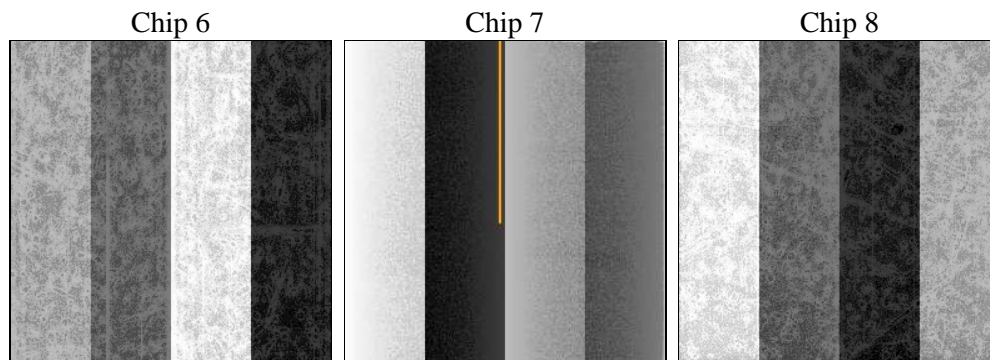
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 10000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.8 | Processing system revision | ontime | 10108.725782275 | Sum of GTIs [s] |
| caldbver | 4.8.4.1 | | ontime6 | 10108.684742332 | Sum of GTIs [s] |
| date | 2019-09-27T17:40:25 | Date and time of file creation | ontime7 | 10108.725782275 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime8 | 10108.643702269 | Sum of GTIs [s] |
| | | | l1events | 289561 | Number of level 1 events |

2.1.4 Events

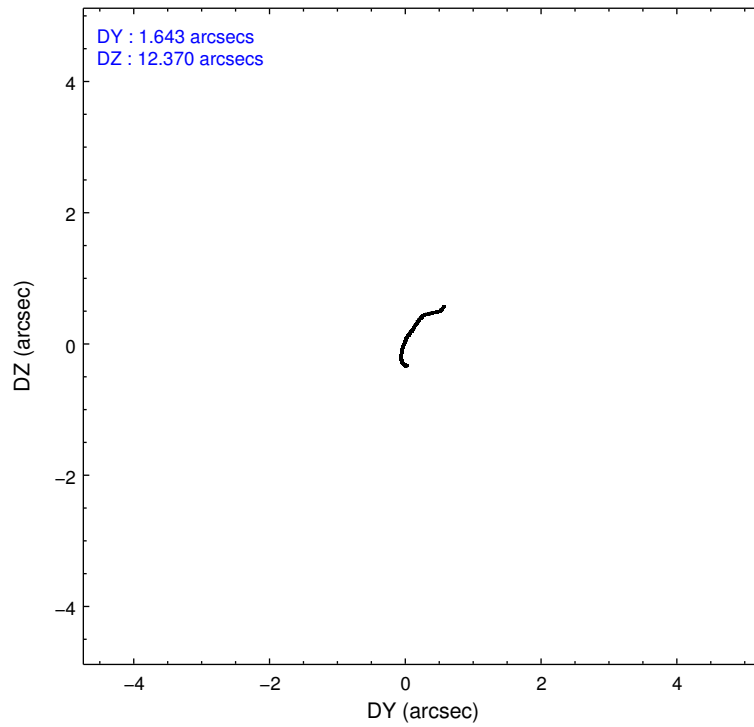
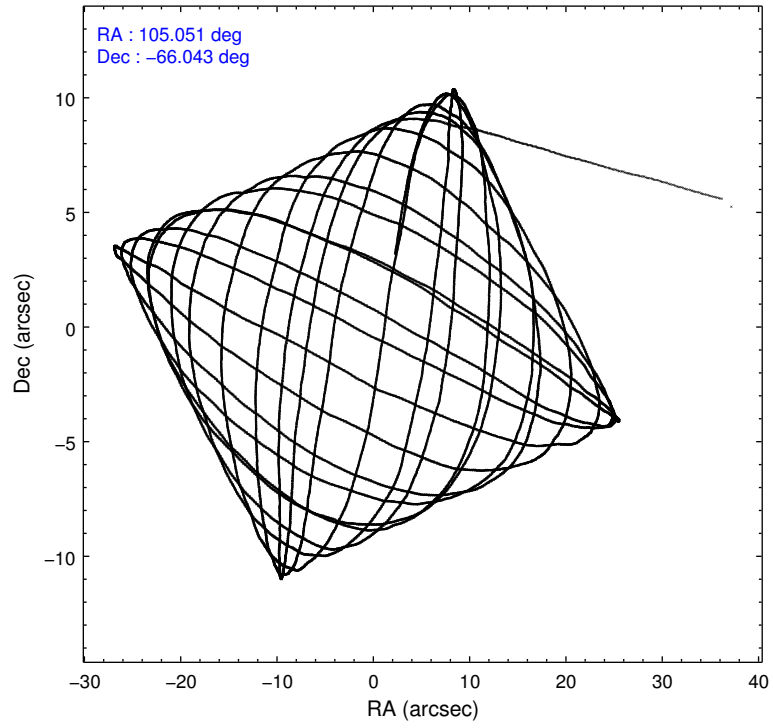
| | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|--------|
| level 1 events | 89292 | 98250 | 102019 |
| rejected events | 74423 | 56141 | 76522 |
| rejected % | 83% | 57% | 75% |

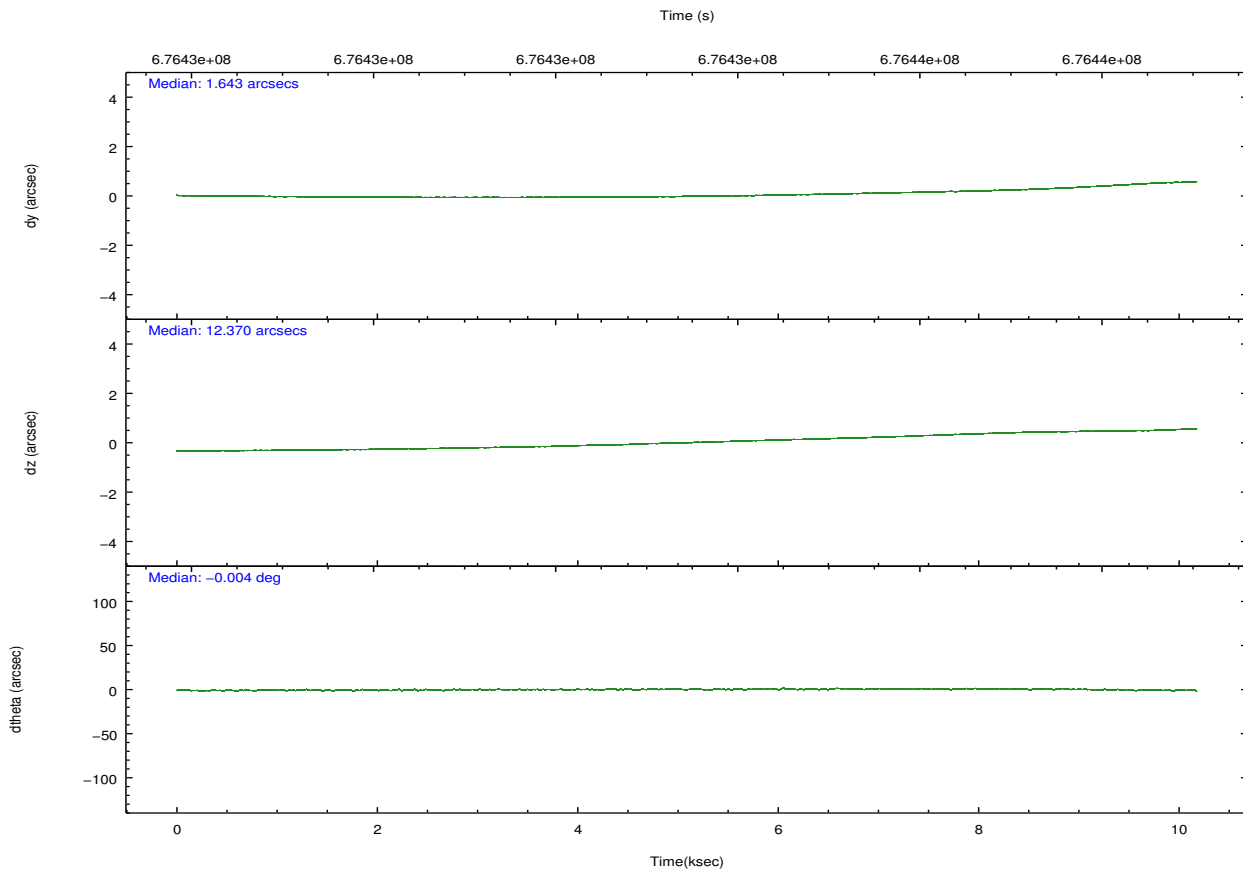
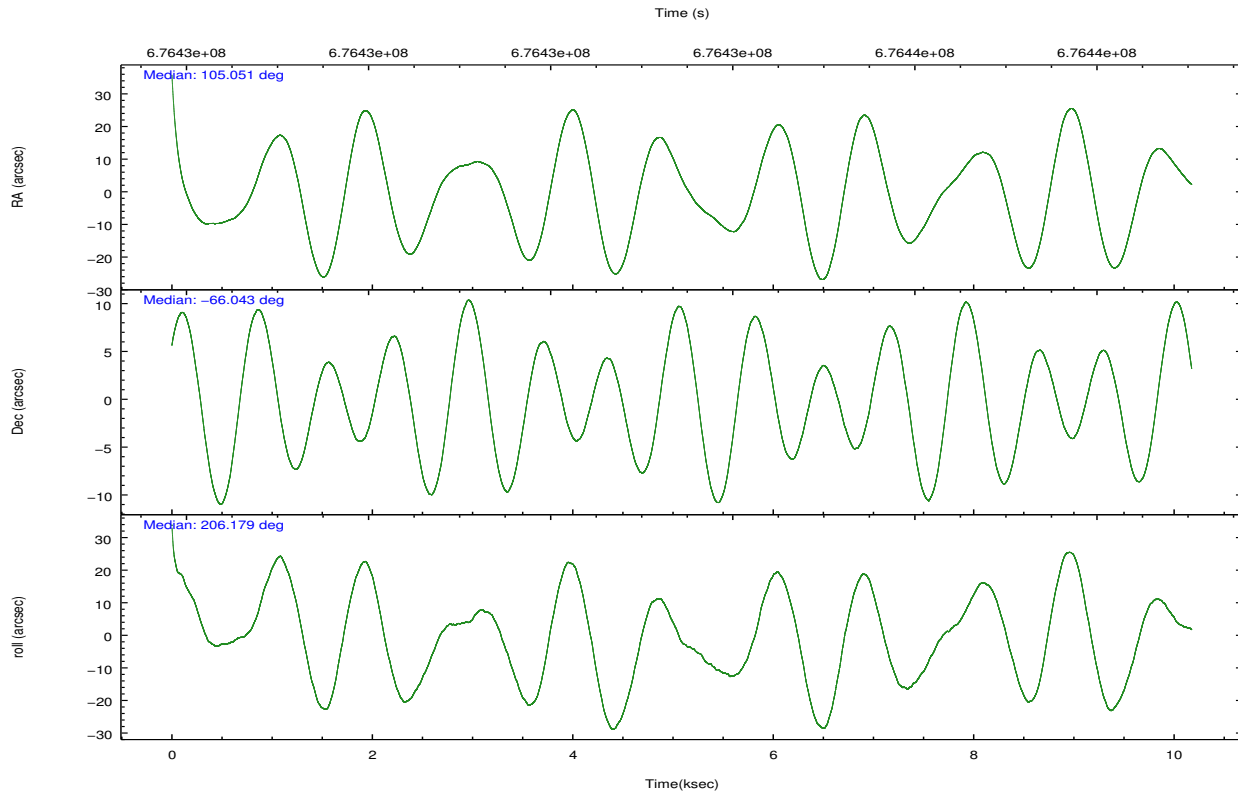
| | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|
| grade 0 events | 5451 | 3406 | 7118 |
| | 6% | 3% | 6% |
| grade 1 events | 50 | 149 | 78 |
| | 0% | 0% | 0% |
| grade 2 events | 5568 | 8805 | 6329 |
| | 6% | 8% | 6% |
| grade 3 events | 711 | 3240 | 2504 |
| | 0% | 3% | 2% |
| grade 4 events | 667 | 3198 | 2373 |
| | 0% | 3% | 2% |
| grade 5 events | 3039 | 9363 | 5014 |
| | 3% | 9% | 4% |
| grade 6 events | 2485 | 23484 | 7191 |
| | 2% | 23% | 7% |
| grade 7 events | 71321 | 46605 | 71412 |
| | 79% | 47% | 69% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-678 | ACIS-678 | 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 | 105.087172 | 105.0503808043353 | CCD I2 on | N | N |
| [deg] Pointing Dec | -66.019729 | -66.04268375390402 | CCD I3 on | N | N |
| [deg] Pointing Roll | 206.063038 | 206.1860246911853 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | N | N |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | O1 | 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 | O2 | Y |
| [s] Observation start time (MET) | 676428537.184000 | 676427558.4465899 | CCD S5 on | N | N |
| Observation start date | 2019-06-09T00:47:48 | 2019-06-09T00:32:38 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 676438537.184000 | 676439961.45983 | On-chip summing requested | N | N |
| Observation end date | 2019-06-09T03:34:28 | 2019-06-09T03:59:21 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.1 |

2.3 Aspect





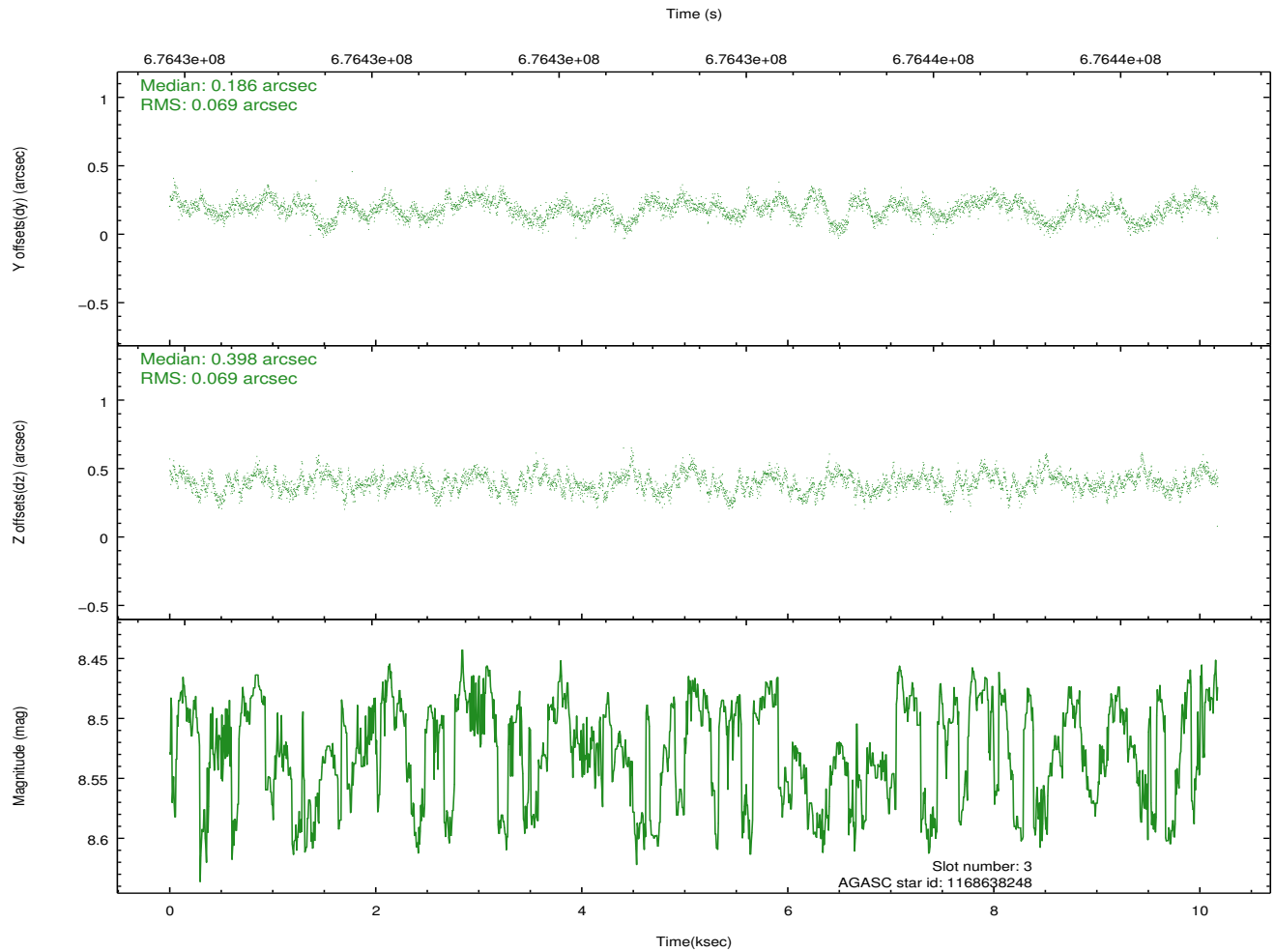
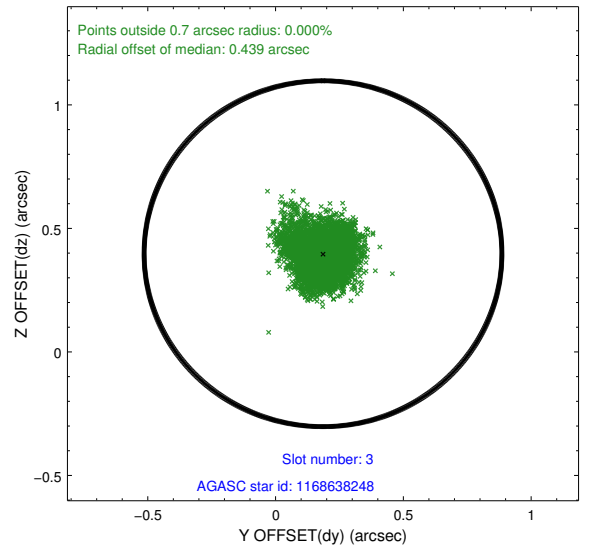
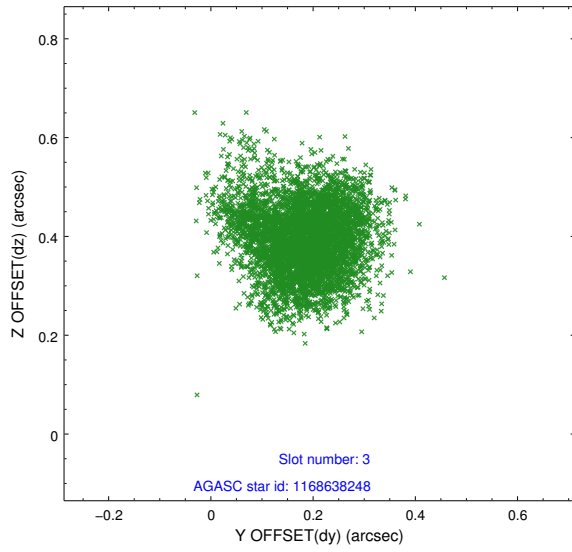
Slot Statistics

| slot | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|------|--------|------|------------|------|-------|----------|--------|--------|-------|-------|------------|------------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.13 | 2482 | 1.000 | -0.218 | -0.092 | 0.014 | 0.023 | 0.000000 | 0.000000 | -754.54 | -1733 |
| 1 | FID | | ACIS-S-4 | 7.27 | 2482 | 1.000 | 0.476 | 0.130 | 0.006 | 0.012 | 0.000000 | 0.000000 | 2159.18 | 174 |
| 2 | FID | | ACIS-S-5 | 7.25 | 2482 | 1.000 | -0.289 | -0.029 | 0.014 | 0.023 | 0.000000 | 0.000000 | -1806.80 | 168 |
| 3 | GUIDE | used | 1168638248 | 8.53 | 4959 | 1.000 | 0.186 | 0.398 | 0.105 | 0.166 | 105.532496 | -65.560848 | -1319.72 | -1189 |
| 4 | GUIDE | used | 1169164816 | 9.30 | 4952 | 1.000 | -0.192 | -0.074 | 0.207 | 0.325 | 104.941418 | -66.419241 | 820.21 | 1199 |
| 5 | GUIDE | used | 1169170408 | 9.10 | 4952 | 1.000 | 0.265 | -0.062 | 0.163 | 0.270 | 103.319895 | -65.858352 | 2098.82 | -1632 |
| 6 | GUIDE | used | 1169172904 | 9.25 | 4959 | 1.000 | -0.031 | -0.093 | 0.169 | 0.277 | 105.337173 | -66.155171 | -111.20 | 598 |
| 7 | GUIDE | used | 1169173568 | 9.43 | 4957 | 1.000 | -0.215 | -0.165 | 0.207 | 0.320 | 104.190697 | -66.243880 | 1526.86 | 162 |

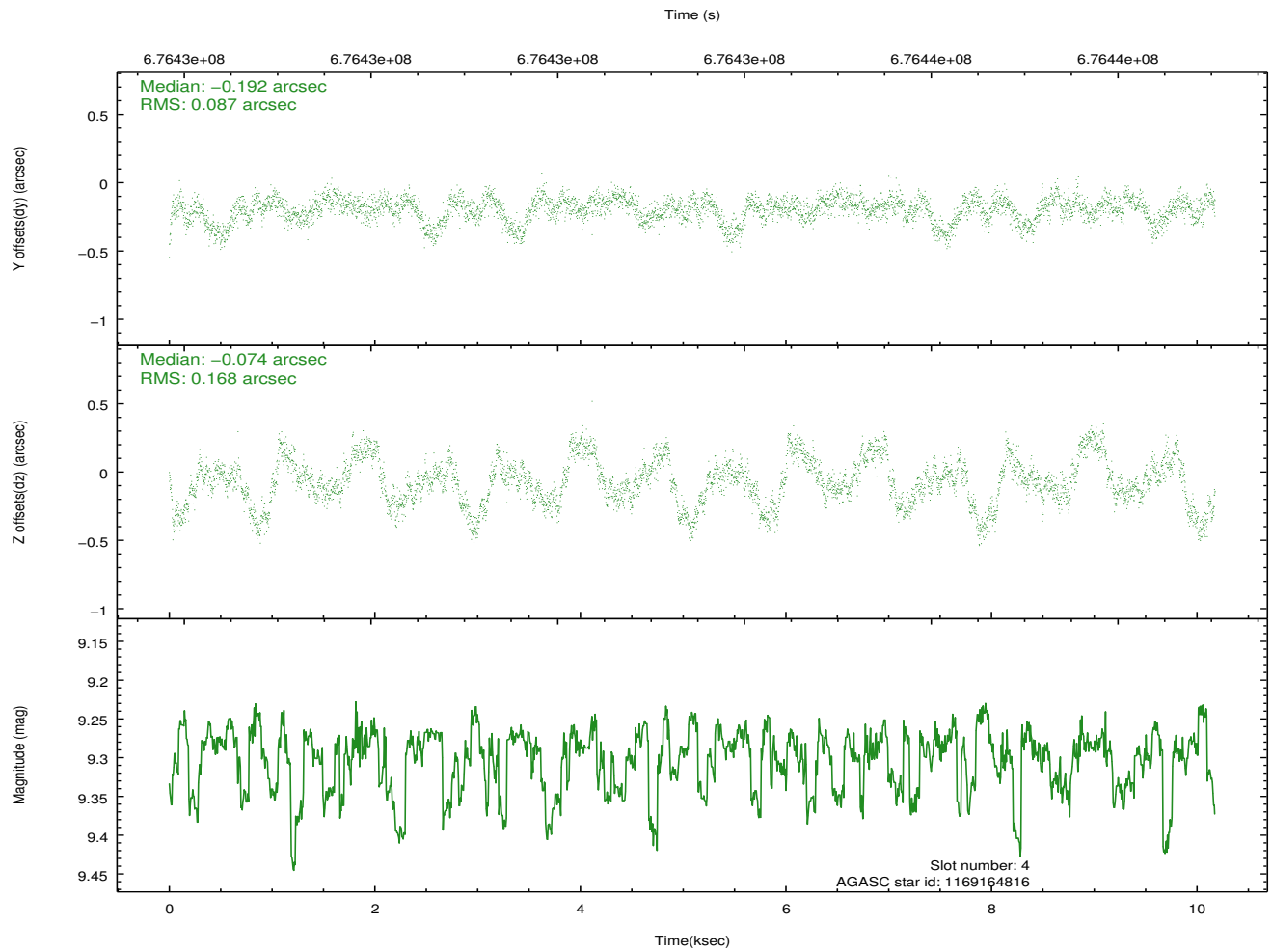
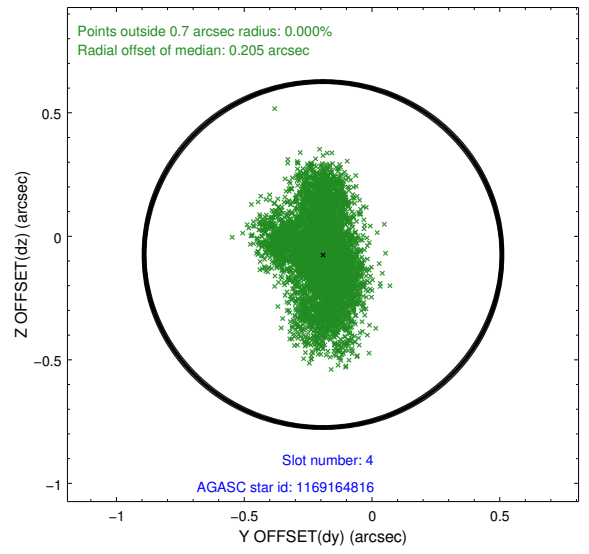
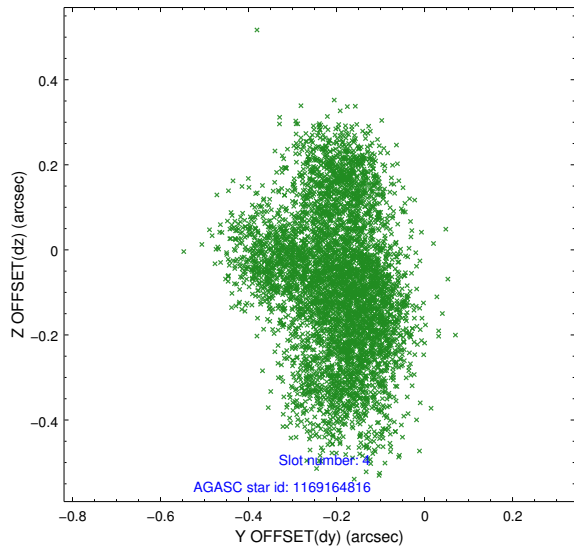
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2.4 Star Slots

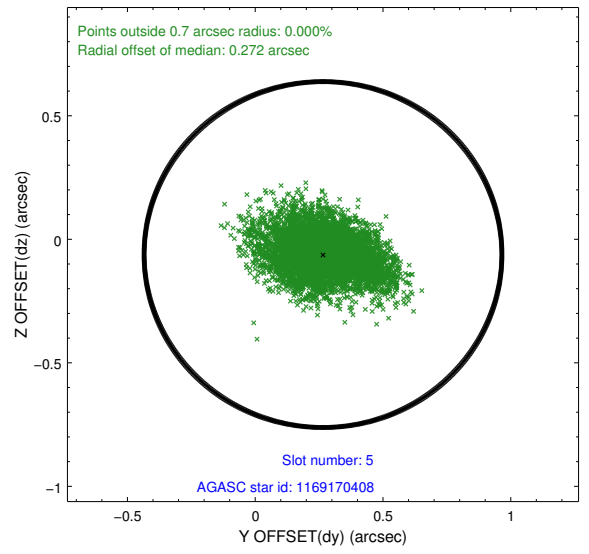
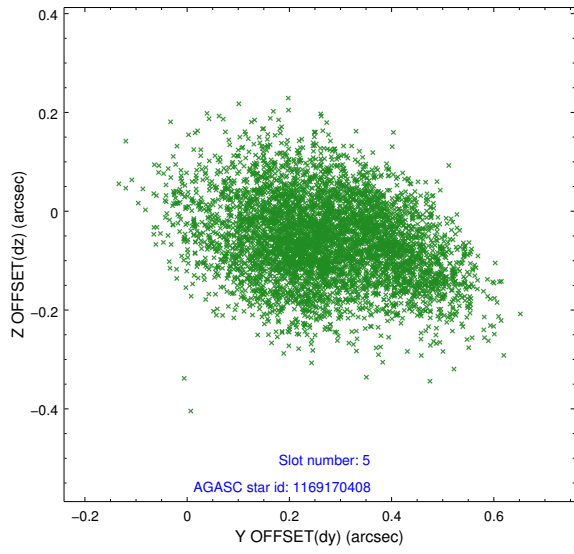
2.4.1 Slot 3



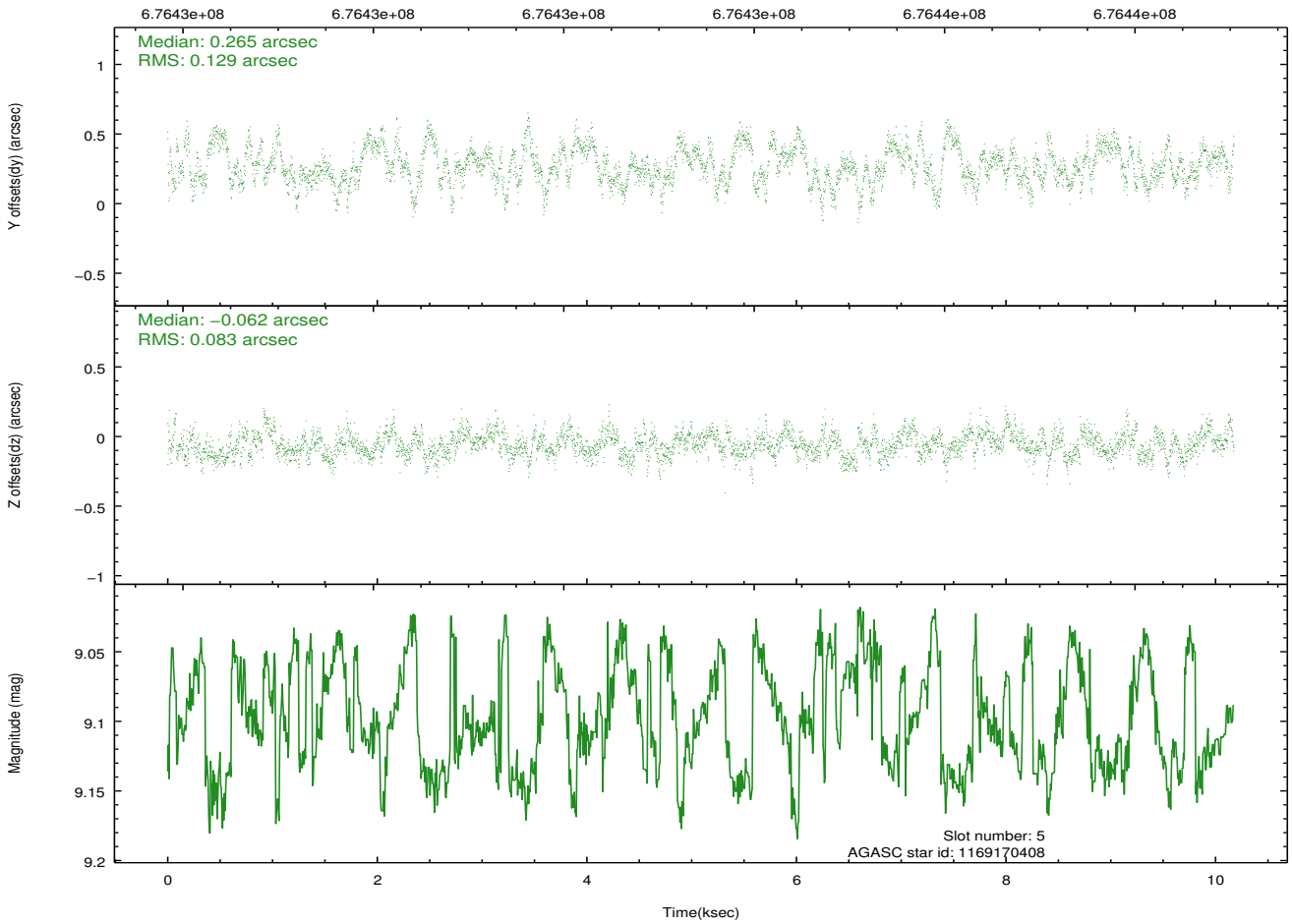
2.4.2 Slot 4



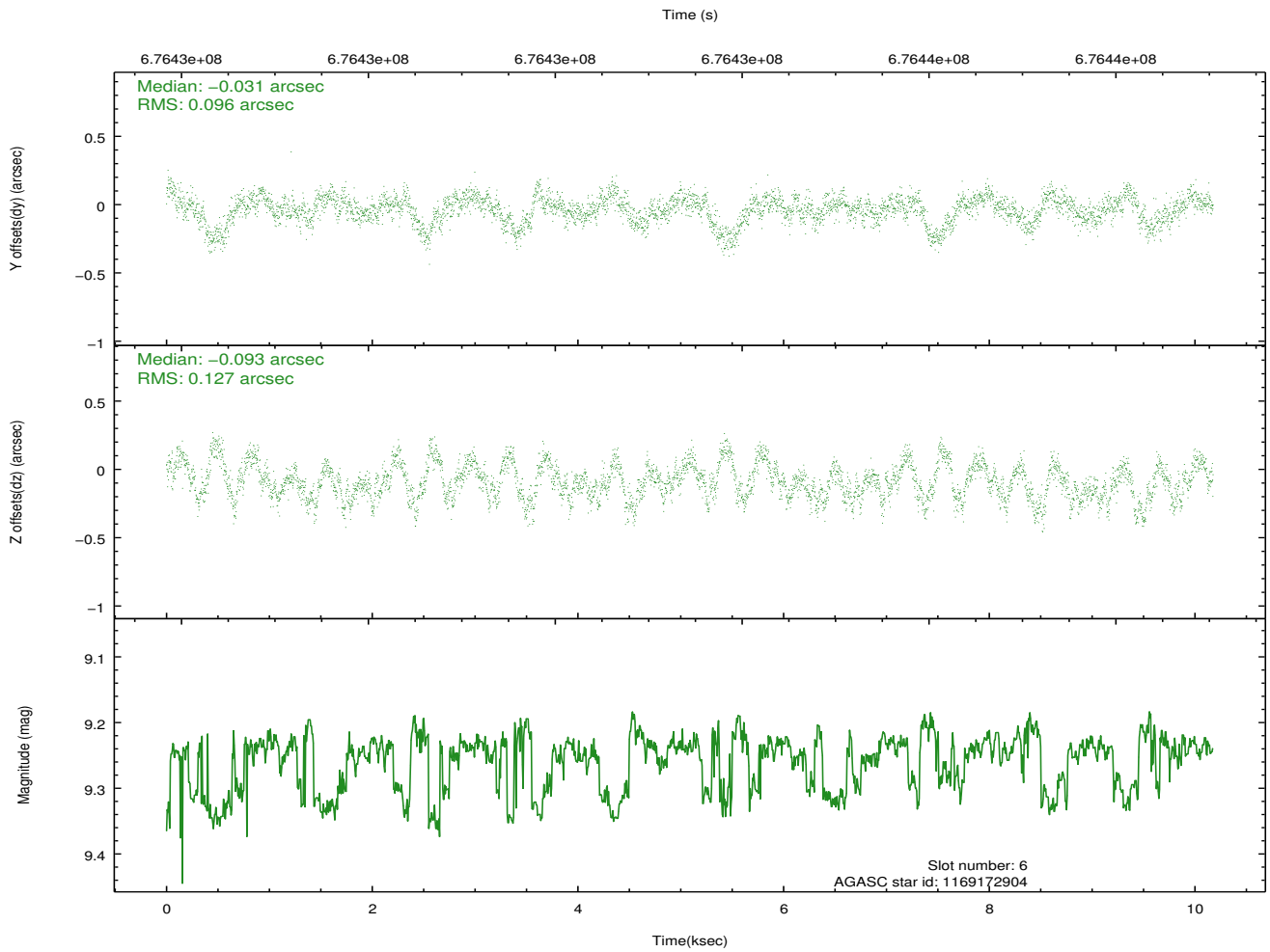
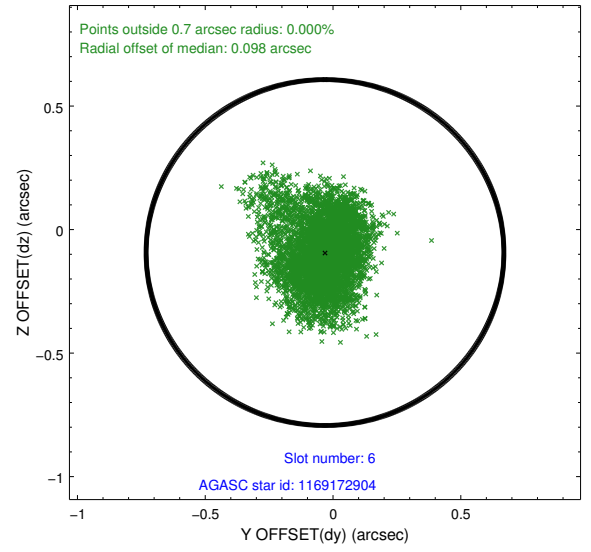
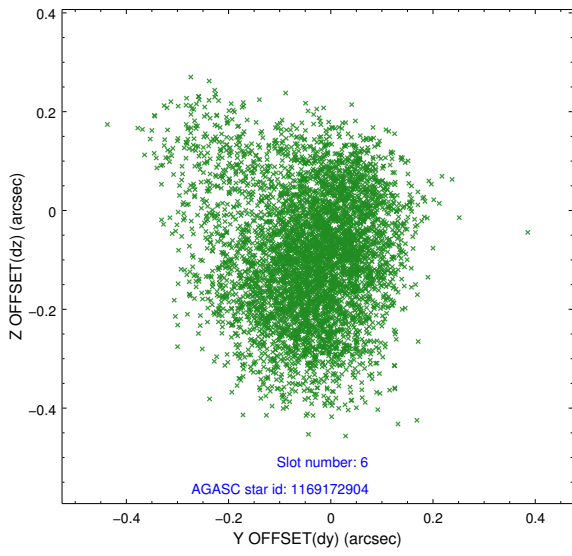
2.4.3 Slot 5



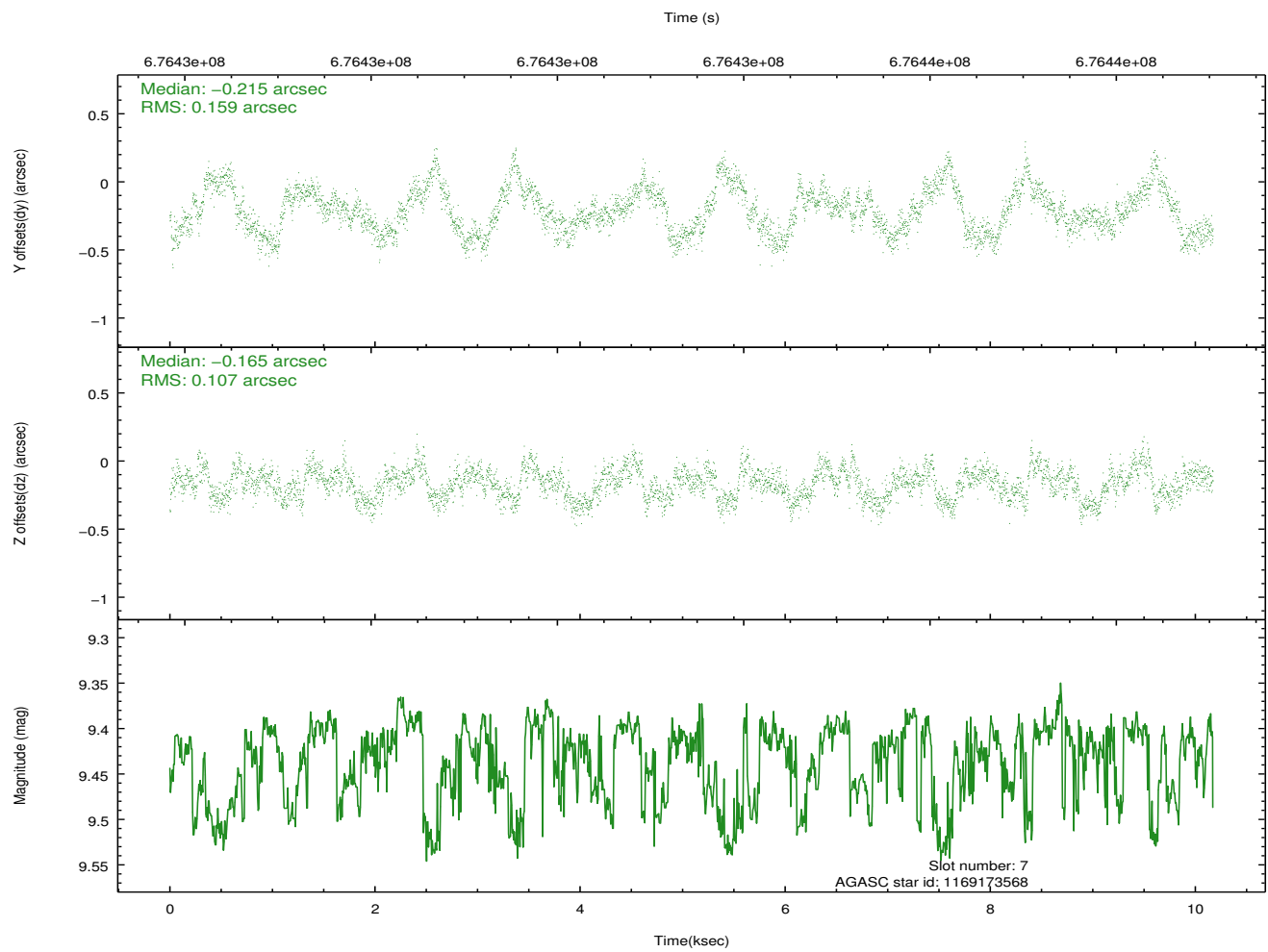
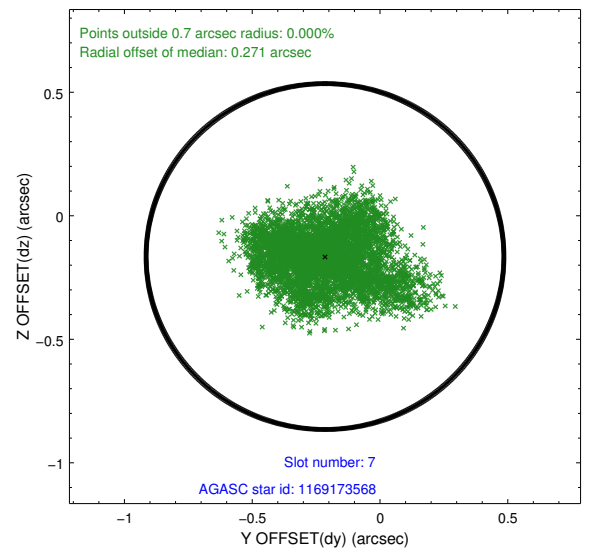
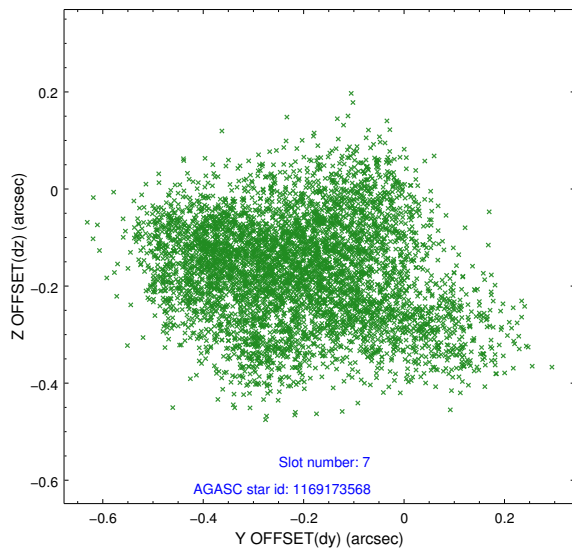
Time (s)



2.4.4 Slot 6

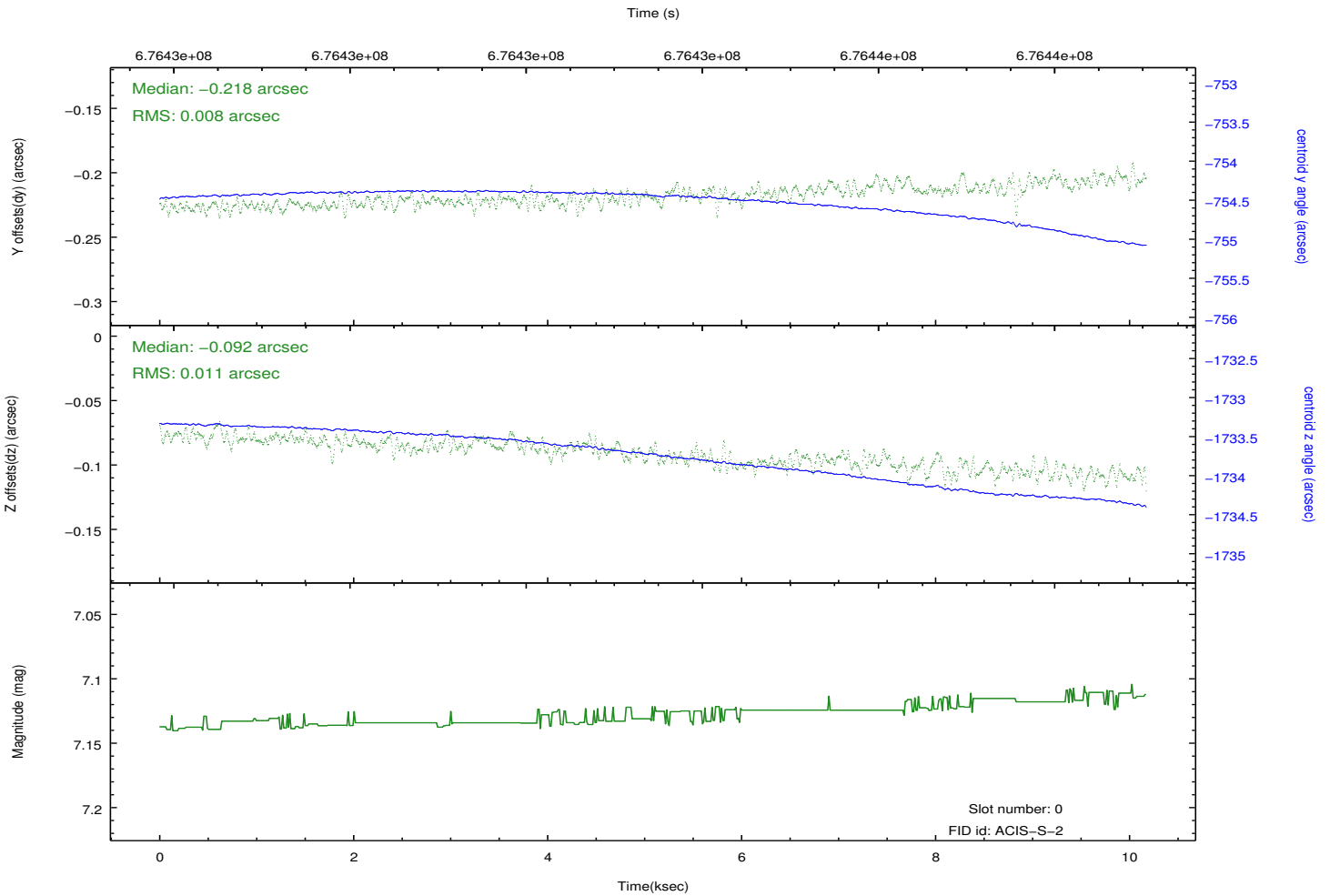
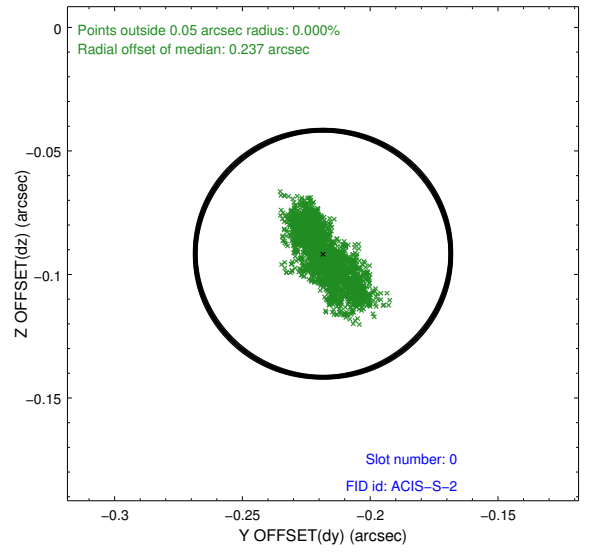
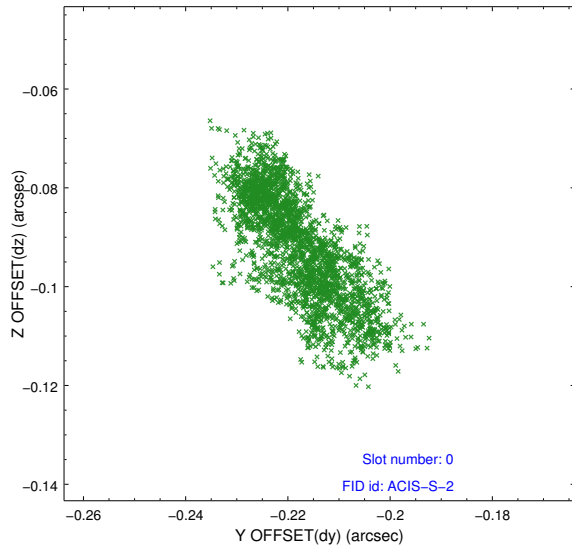


2.4.5 Slot 7

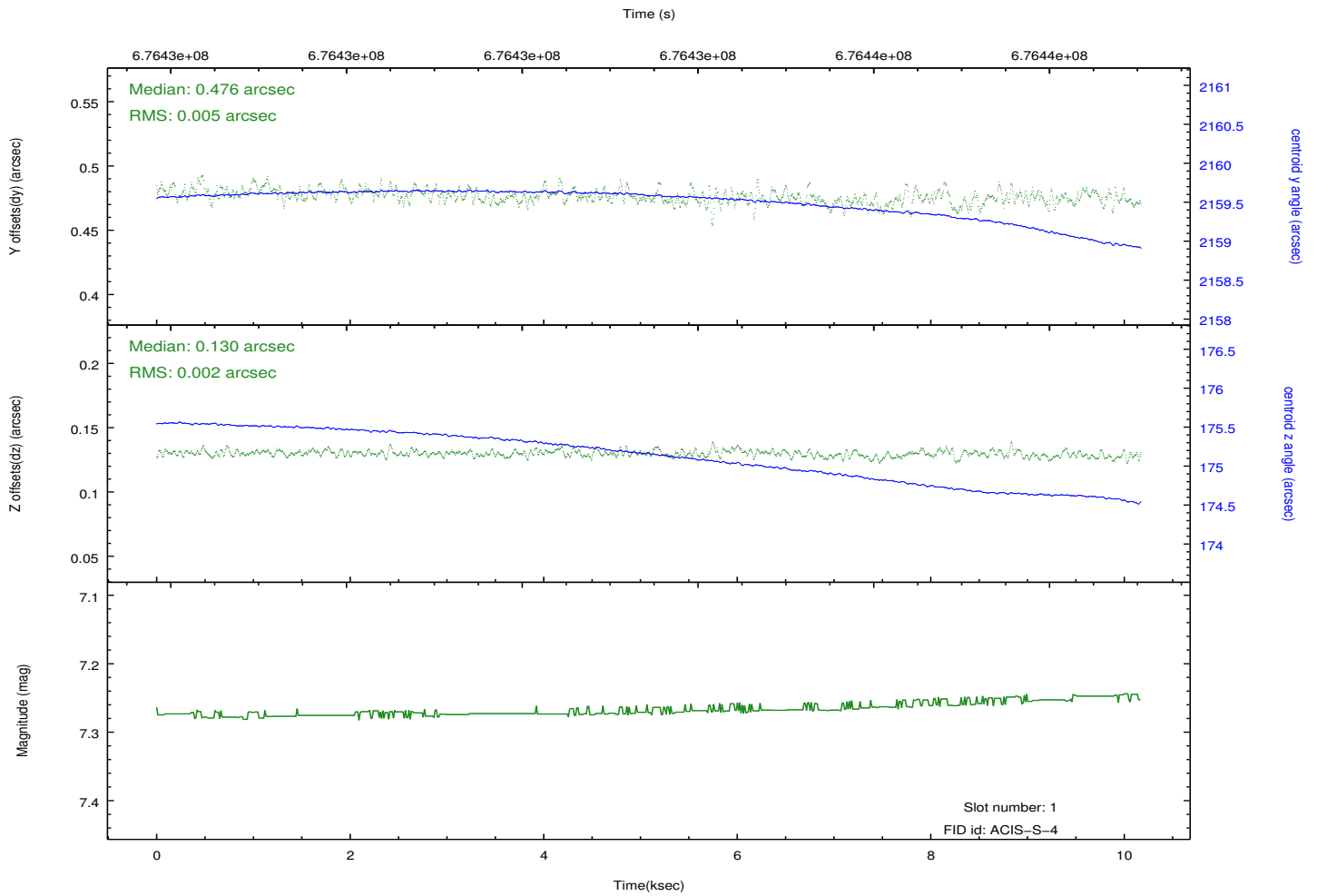
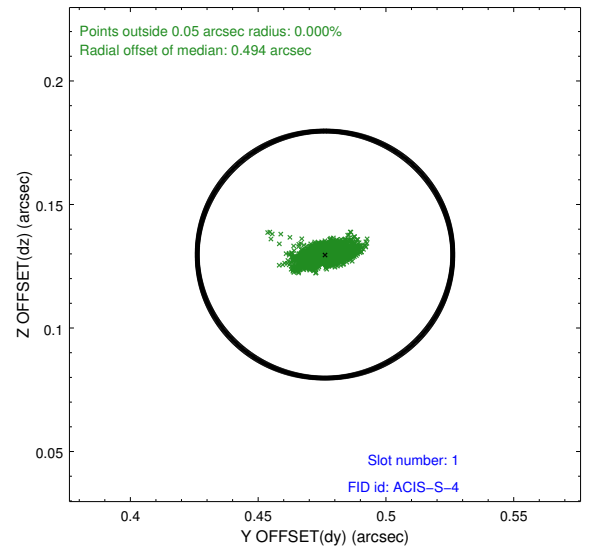
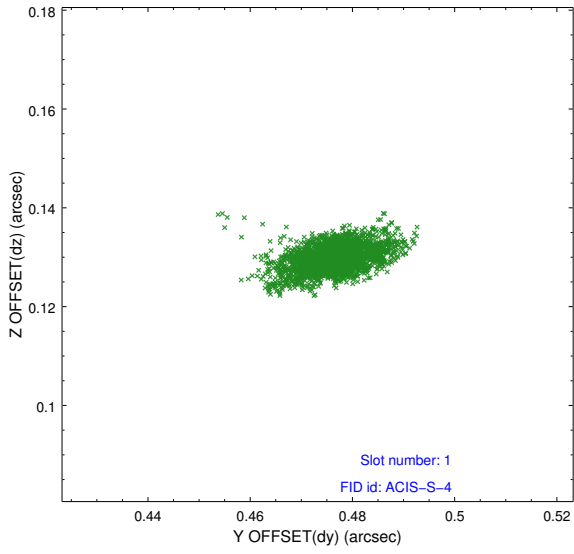


2.5 FID Slots

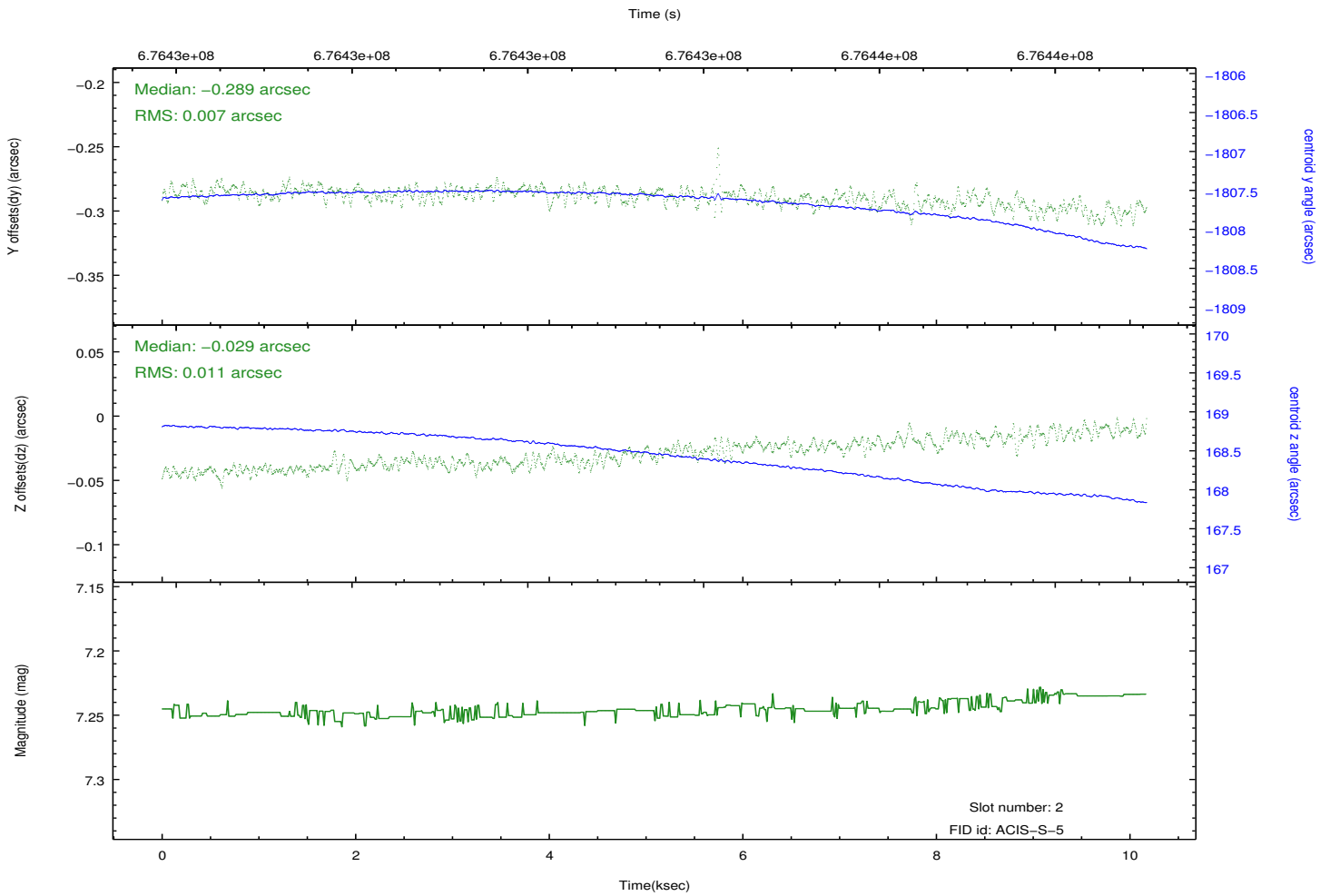
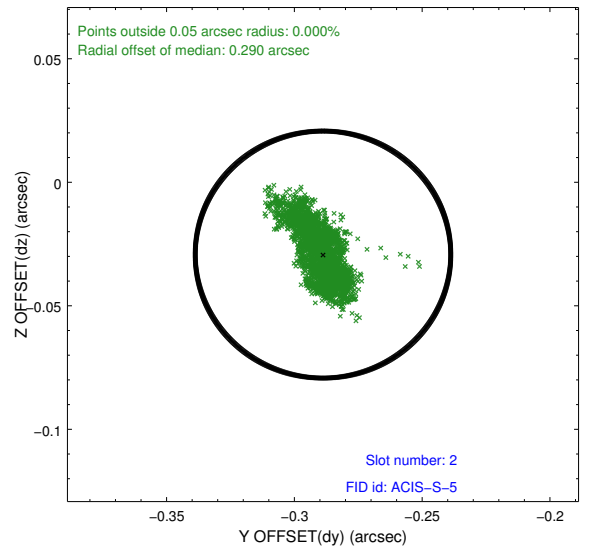
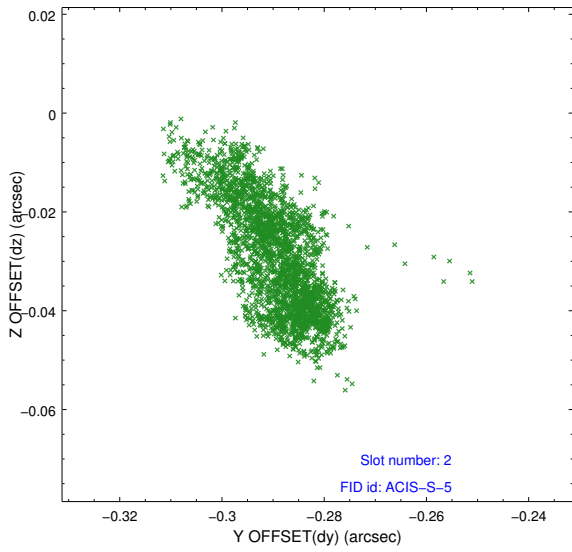
2.5.1 Slot 0



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) | 2019.09.28 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 10.108725782275 |

A.2 Comments

Observation coordinated with ALMA, ATCA.

==

ACIS T_GAIN files released in CalDB 4.8.3 (23 May 2019) and CalDB 4.8.4 (03 September 2019) have errors in the T_GAIN corrections for ACIS-I chips 0, 1, 2, and 3, and ACIS-S chip 6 (S2). All ACIS OBS_IDs including those chips, which were processed (or reprocessed) in SDP between 2019-05-24T01:06:00 and 2019-09-06T17:31:43 with CalDB 4.8.3, 4.8.3.1, or 4.8.4, were affected. The errors in the T_GAINs, which produce a 1%-2% reduction in the PHA and hence the ENERGY column values for dithered observations, result from alternating real value and zero value columns in CHIPX space across FI chips ACIS-0, 1, 2, 3, and 6. The error has been corrected in this version of the data products.