

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 22877 - L2 Version 1
Chandra X-Ray Center

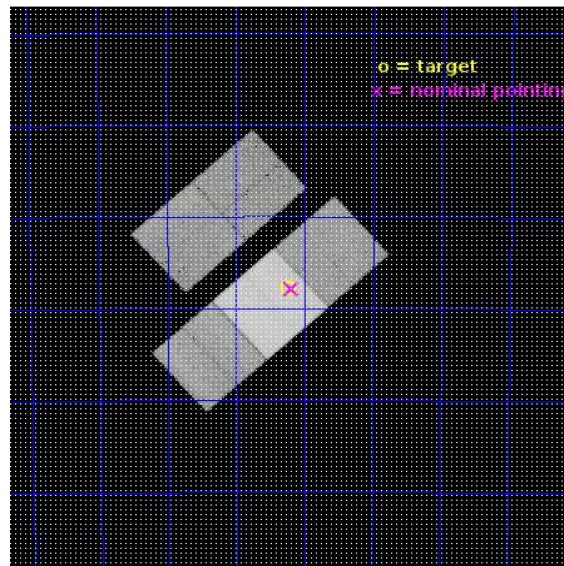
L2 Processing Date : Oct 22 2019

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1 Front

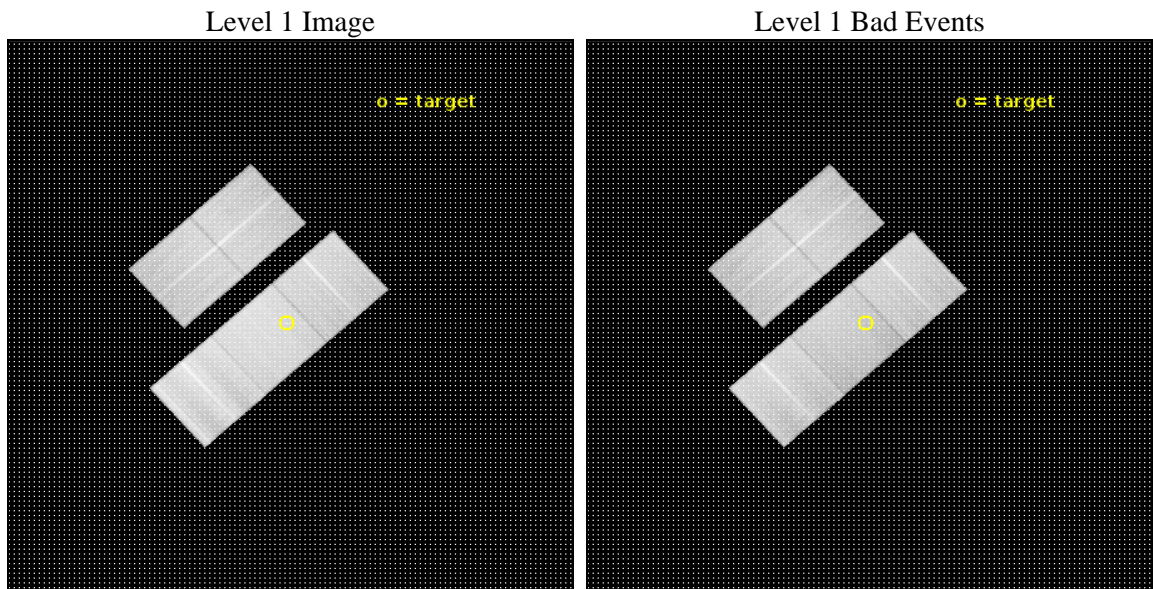
| | | |
|----------|--|---|
| seq_num | 503150 | Sequence number |
| obs_id | 22877 | Observation id |
| title | Evolution of the pulsar wind nebula in PSR J1119-6127 post 2016 outburst | Proposal title |
| observer | Harsha Blumer | Principal investigator |
| object | PSR J1119-6127 | Source name |
| dtycycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 169.809583 | Observer's specified target RA [deg] |
| dec_targ | -61.46375 | Observer's specified target Dec [deg] |
| ra_nom | 169.7975502735 | Nominal RA [deg] |
| dec_nom | -61.464575575244 | Nominal Dec [deg] |
| roll_nom | 138.14606176352 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 45055.400346637 | Sum of GTIs [s] |
| livetime | 44466.718371805 | Livetime [s] |
| ontime2 | 45045.977406025 | Sum of GTIs [s] |
| ontime3 | 45052.25938642 | Sum of GTIs [s] |
| ontime6 | 45049.118406057 | Sum of GTIs [s] |
| ontime7 | 45055.400346637 | Sum of GTIs [s] |
| ontime8 | 45052.259495735 | Sum of GTIs [s] |
| l2events | 347643 | Number of level 2 events |



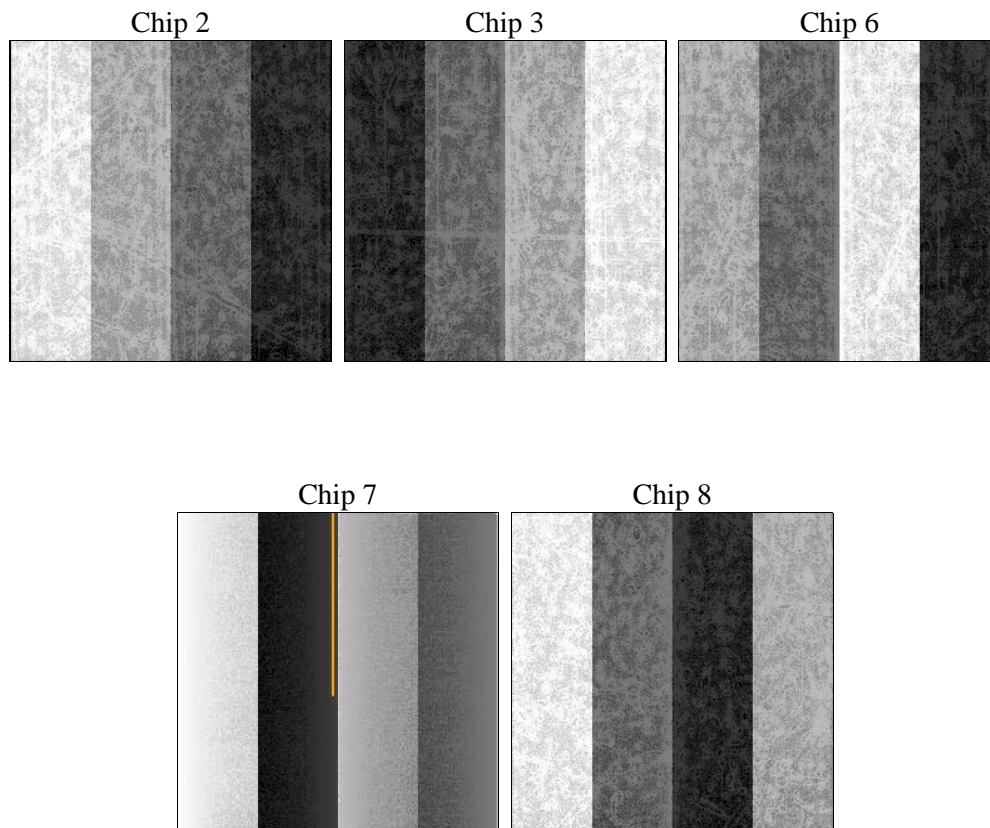
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 45000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.8.1 | Processing system revision | ontime | 45055.400346637 | Sum of GTIs [s] |
| caldbver | 4.8.4.2 | | ontime2 | 45045.977406025 | Sum of GTIs [s] |
| date | 2019-10-22T13:34:15 | Date and time of file creation | ontime3 | 45052.25938642 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime6 | 45049.118406057 | Sum of GTIs [s] |
| | | | ontime7 | 45055.400346637 | Sum of GTIs [s] |
| | | | ontime8 | 45052.259495735 | Sum of GTIs [s] |
| | | | l1events | 1966024 | Number of level 1 events |

2.1.4 Events

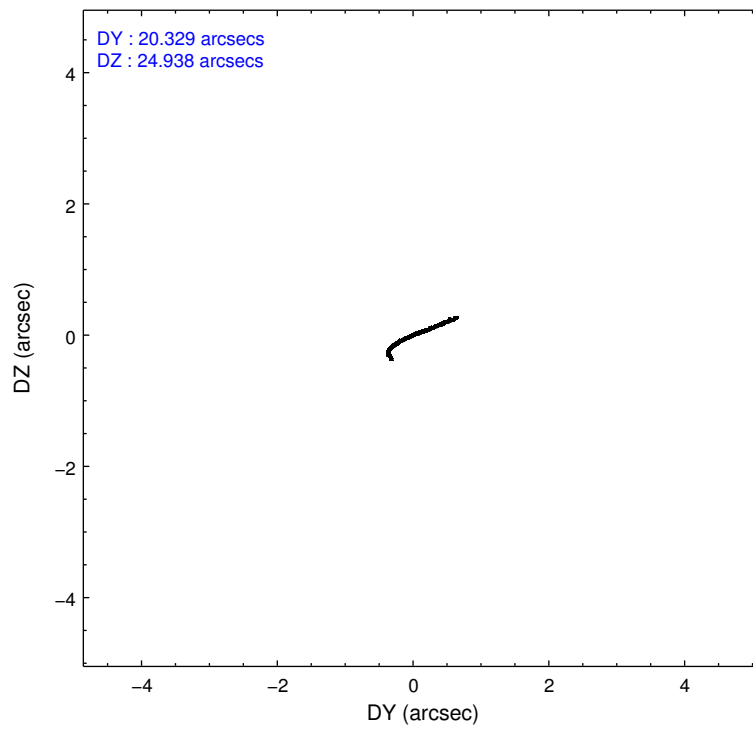
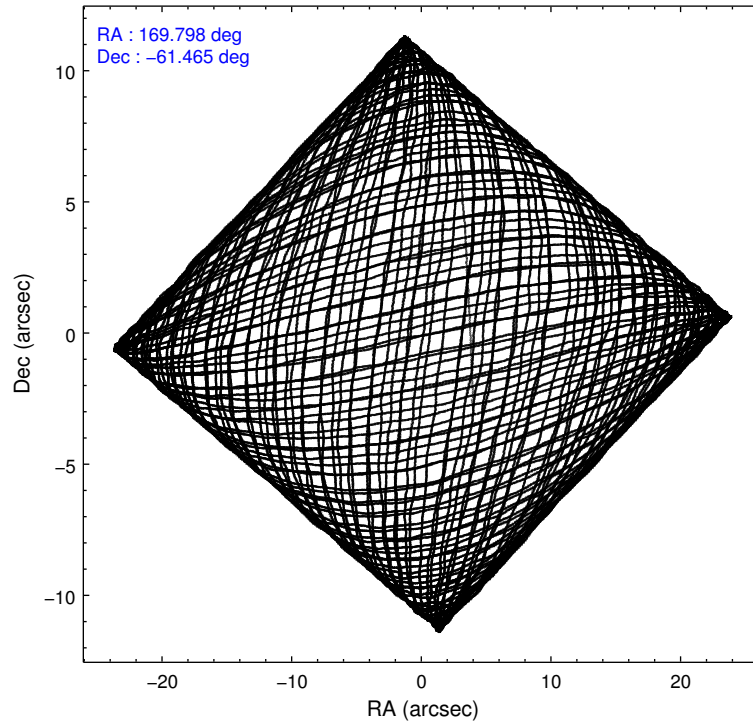
| | ccd 2 | ccd 3 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|--------|
| level 1 events | 341571 | 331959 | 363892 | 456743 | 471859 |
| rejected events | 302616 | 292904 | 318774 | 255067 | 337546 |
| rejected % | 88% | 88% | 87% | 55% | 71% |

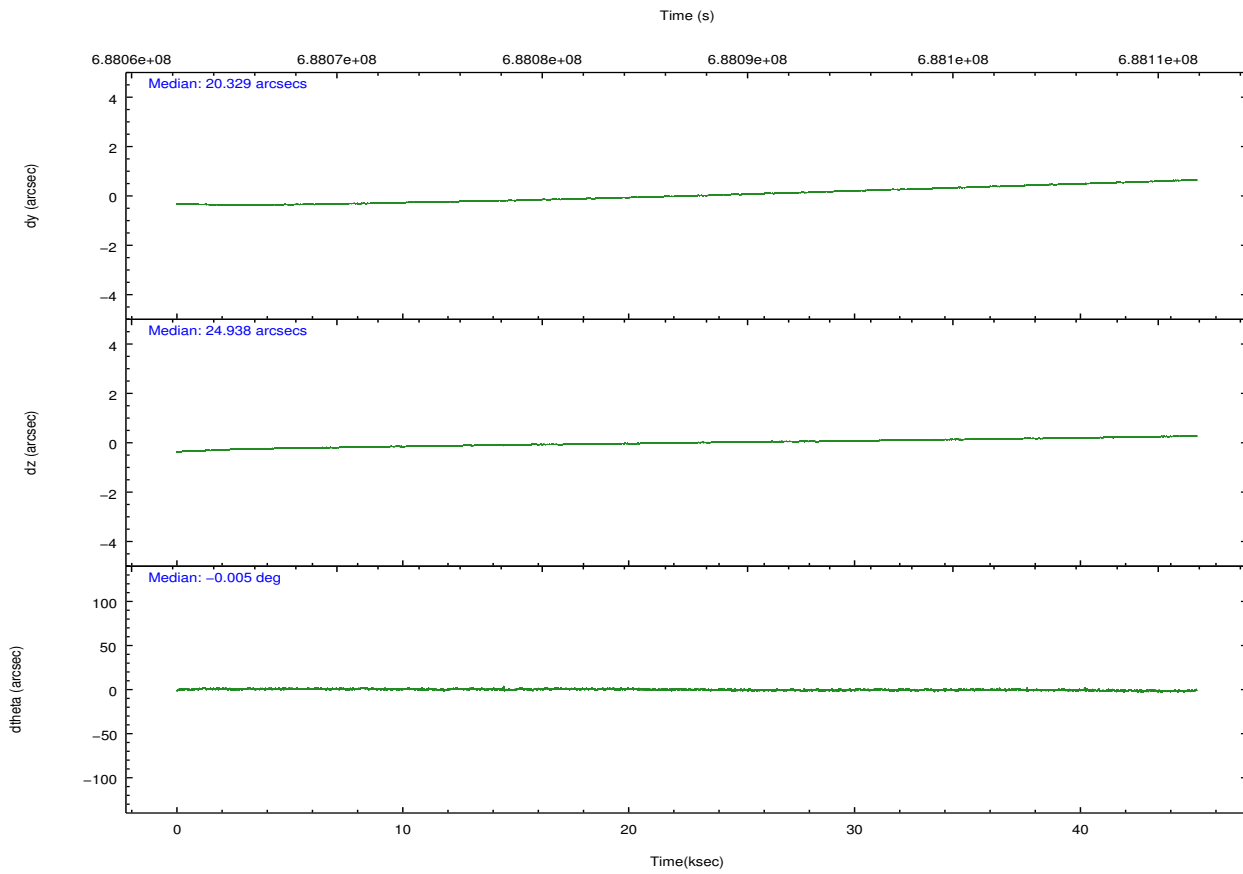
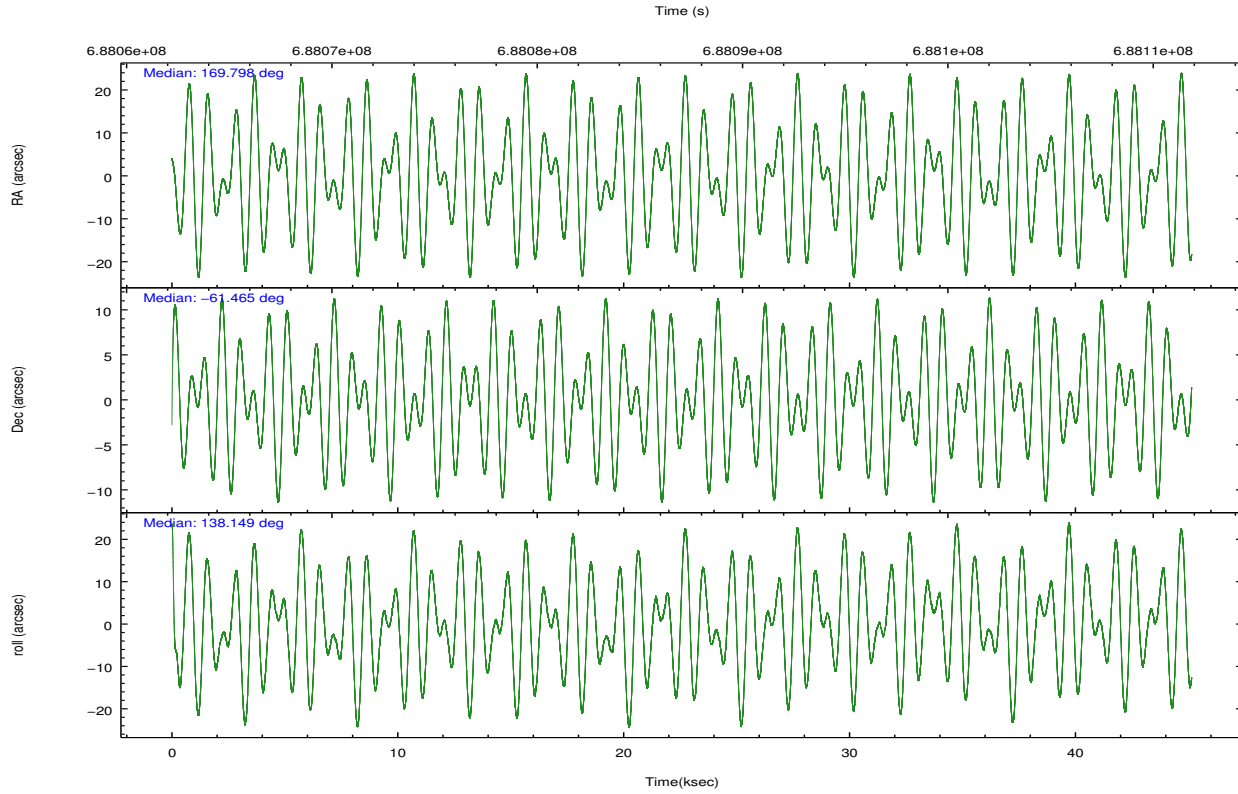
| | ccd 2 | ccd 3 | ccd 6 | ccd 7 | ccd 8 |
|----------------|--------|--------|--------|--------|--------|
| grade 0 events | 14169 | 15310 | 17256 | 17703 | 40025 |
| | 4% | 4% | 4% | 3% | 8% |
| grade 1 events | 201 | 200 | 210 | 696 | 426 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 9853 | 8398 | 10125 | 44413 | 32083 |
| | 2% | 2% | 2% | 9% | 6% |
| grade 3 events | 3609 | 3839 | 4139 | 16025 | 13819 |
| | 1% | 1% | 1% | 3% | 2% |
| grade 4 events | 3753 | 3738 | 4049 | 15830 | 13219 |
| | 1% | 1% | 1% | 3% | 2% |
| grade 5 events | 13927 | 16478 | 17054 | 44651 | 25423 |
| | 4% | 4% | 4% | 9% | 5% |
| grade 6 events | 7574 | 7774 | 9556 | 107726 | 35171 |
| | 2% | 2% | 2% | 23% | 7% |
| grade 7 events | 288485 | 276222 | 301503 | 209699 | 311693 |
| | 84% | 83% | 82% | 45% | 66% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-23678 | ACIS-23678 | 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 | 169.853938 | 169.7975502735009 | CCD I2 on | O1 | Y |
| [deg] Pointing Dec | -61.469839 | -61.4645755752444 | CCD I3 on | O2 | Y |
| [deg] Pointing Roll | 138.038972 | 138.1460617635177 | CCD S0 on | N | N |
| [s] Window start time (MET) | 686275269.184000 | 686275269.184000 | CCD S1 on | N | N |
| [s] Window stop time (MET) | 688867269.184000 | 688867269.184000 | CCD S2 on | Y | Y |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S3 on | Y | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S4 on | Y | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | CCD S5 on | N | N |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation start time (MET) | 688064607.184000 | 688063475.4837101 | On-chip summing requested | N | N |
| Observation start date | 2019-10-21T17:02:18 | 2019-10-21T16:44:35 | Subarray requested | NONE | NONE |
| [s] Observation end time (MET) | 688109607.184000 | 688110651.11155 | Alternating exposures requested | N | N |
| Observation end date | 2019-10-22T05:32:18 | 2019-10-22T05:50:51 | [s] Primary exposure time | 0.000000 | 3.1 |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





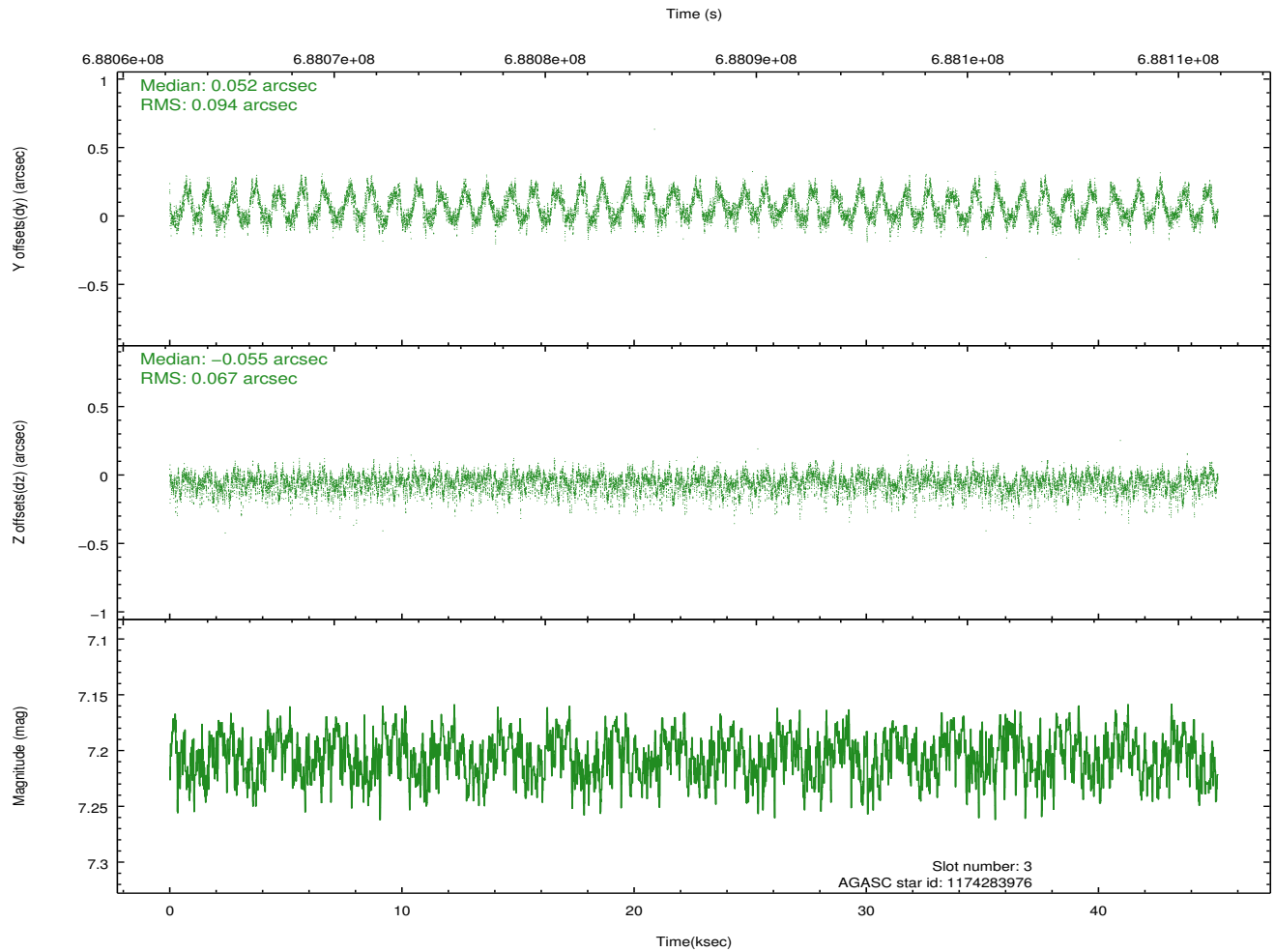
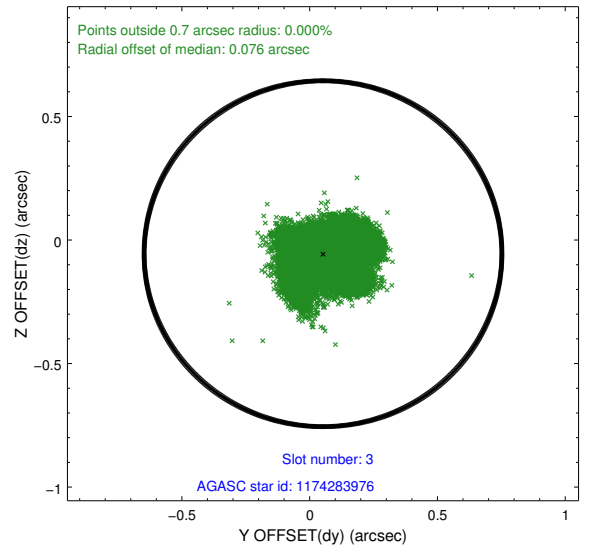
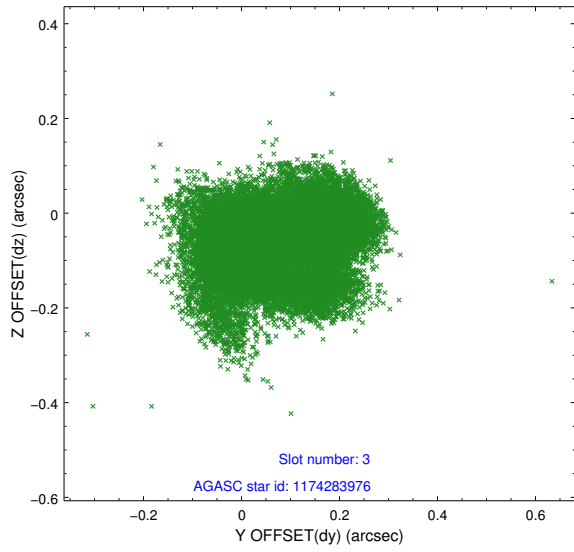
Slot Statistics

| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|------------|------|-------|----------|--------|--------|-------|-------|------------|------------|----------|-------|
| 0 | FID | | ACIS-S-1 | 7.04 | 11011 | 1.000 | -0.173 | -0.158 | 0.011 | 0.019 | 0.000000 | 0.000000 | 922.36 | -1742 |
| 1 | FID | | ACIS-S-4 | 7.08 | 11012 | 1.000 | 0.314 | 0.180 | 0.011 | 0.017 | 0.000000 | 0.000000 | 2140.25 | 162 |
| 2 | FID | | ACIS-S-6 | 7.25 | 11010 | 1.000 | -0.164 | -0.012 | 0.011 | 0.017 | 0.000000 | 0.000000 | 388.31 | 799 |
| 3 | GUIDE | used | 1174283976 | 7.21 | 22020 | 1.000 | 0.052 | -0.055 | 0.123 | 0.196 | 170.390254 | -61.226219 | -104.24 | -1268 |
| 4 | GUIDE | used | 1174285640 | 8.17 | 22007 | 1.000 | 0.312 | 0.322 | 0.184 | 0.258 | 171.226538 | -61.280786 | -1325.78 | -2073 |
| 5 | GUIDE | used | 1174289064 | 7.60 | 22017 | 1.000 | -0.519 | -0.496 | 0.105 | 0.179 | 169.403245 | -61.635432 | 173.06 | 961 |
| 6 | GUIDE | used | 1174290744 | 8.16 | 22013 | 1.000 | 0.204 | 0.421 | 0.152 | 0.241 | 171.197974 | -61.558775 | -1942.30 | -1283 |
| 7 | GUIDE | used | 1174293864 | 7.51 | 22014 | 1.000 | -0.070 | -0.178 | 0.091 | 0.164 | 170.089015 | -61.097044 | 594.20 | -1269 |

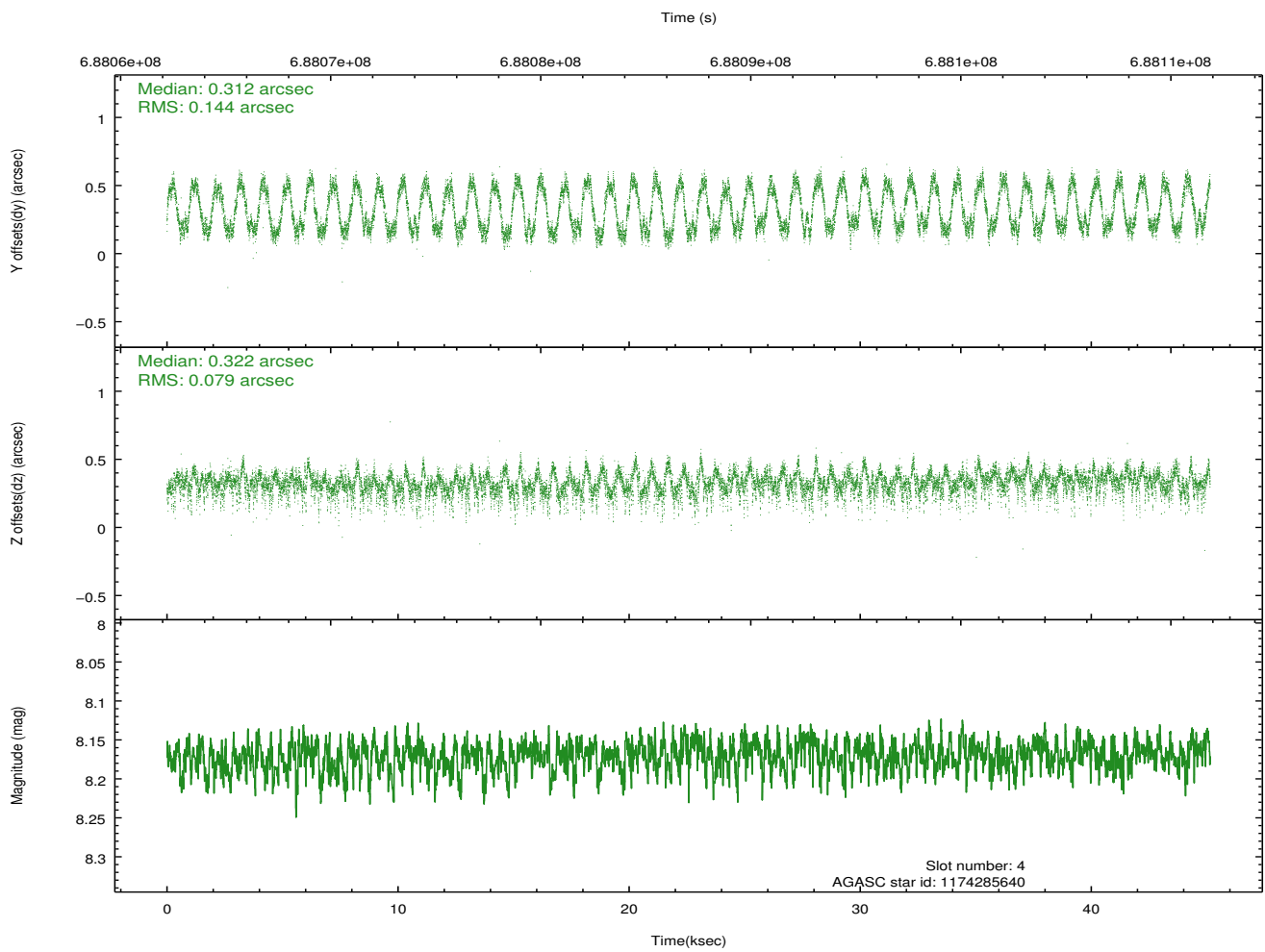
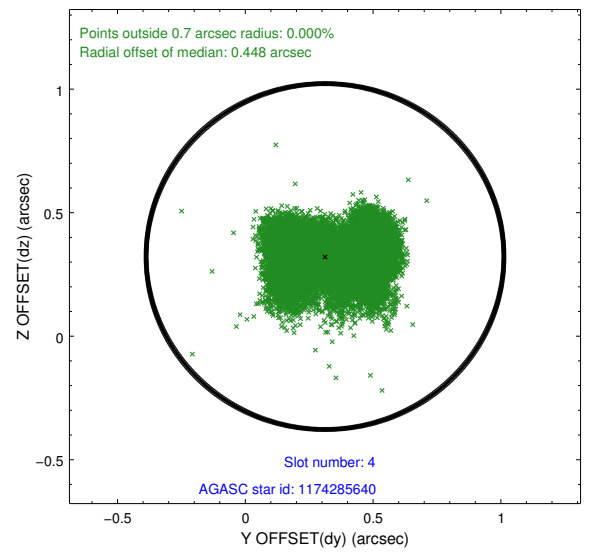
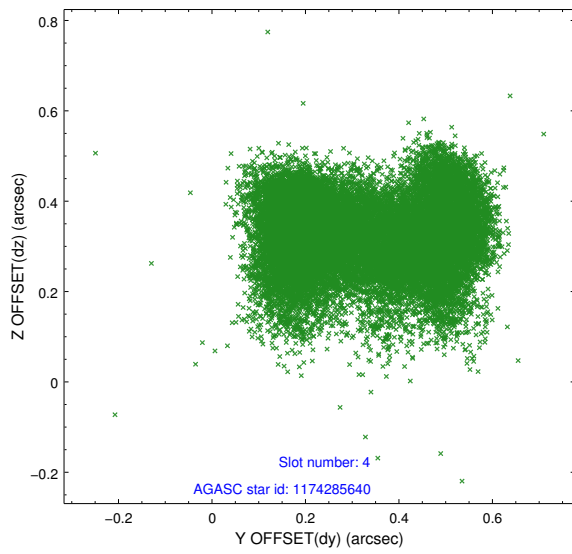
∞

2.4 Star Slots

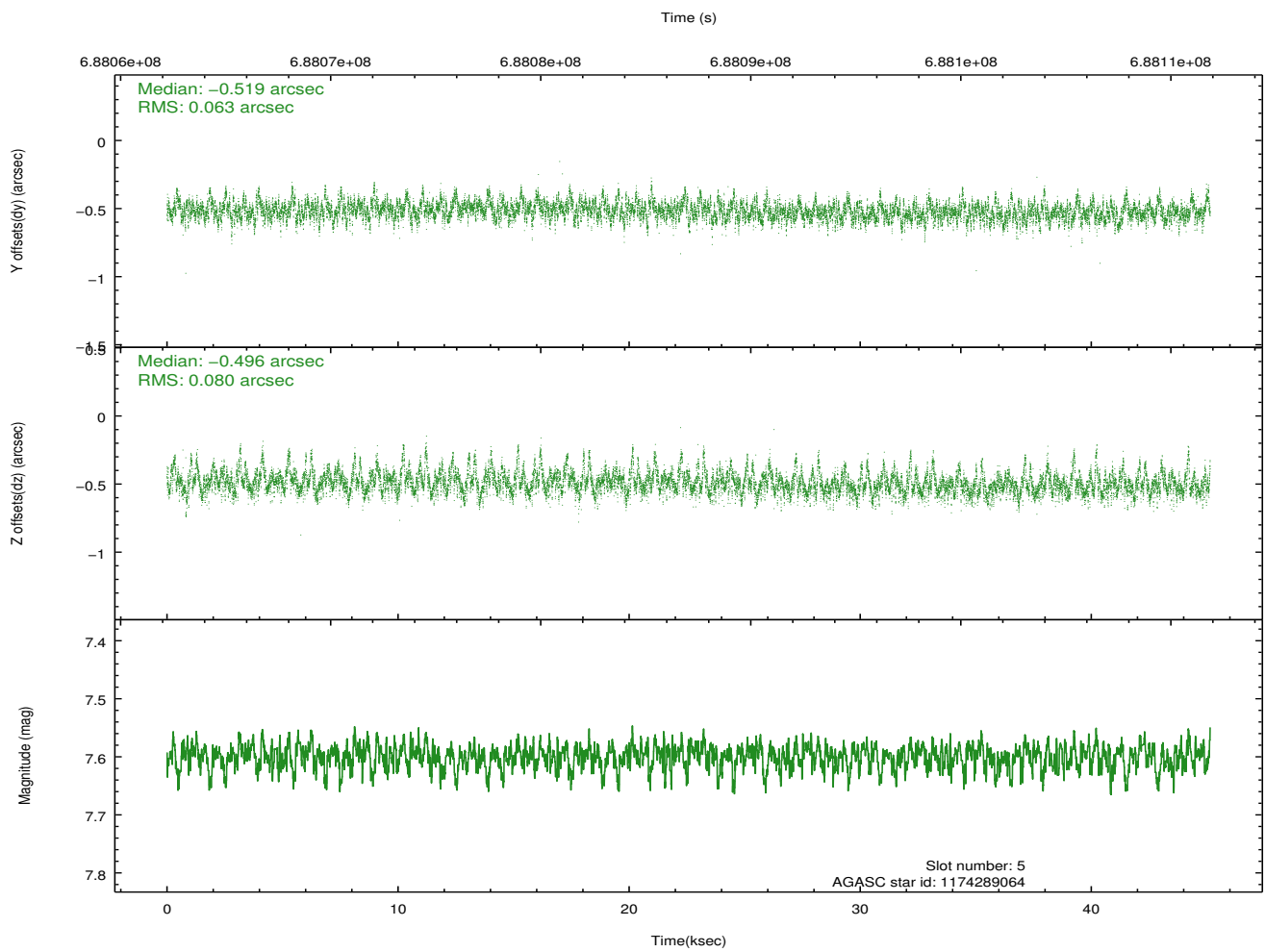
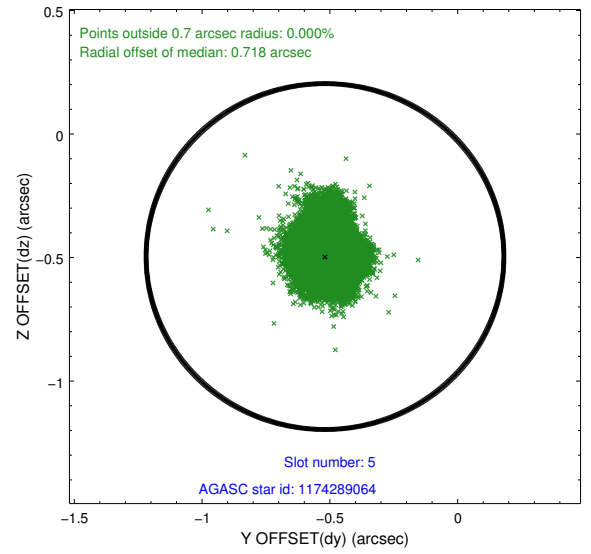
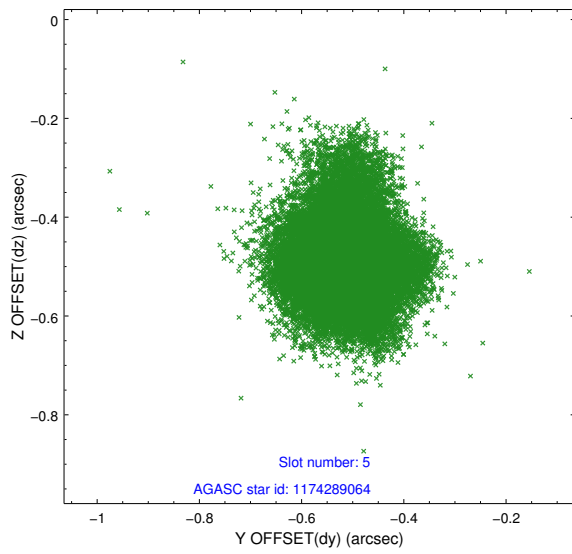
2.4.1 Slot 3



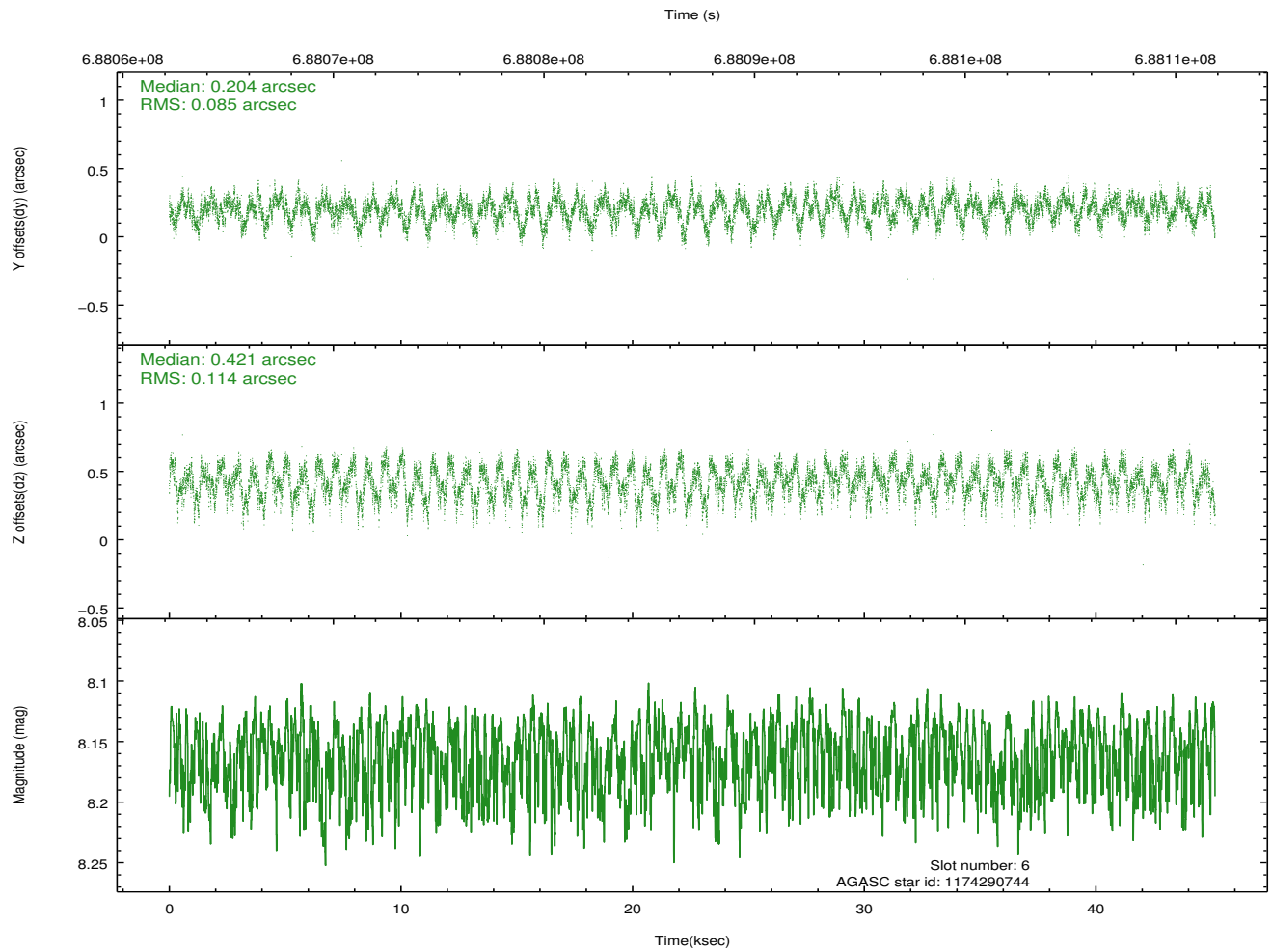
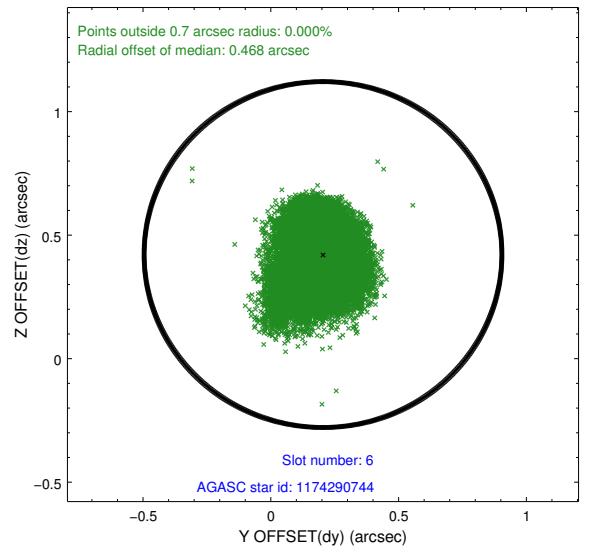
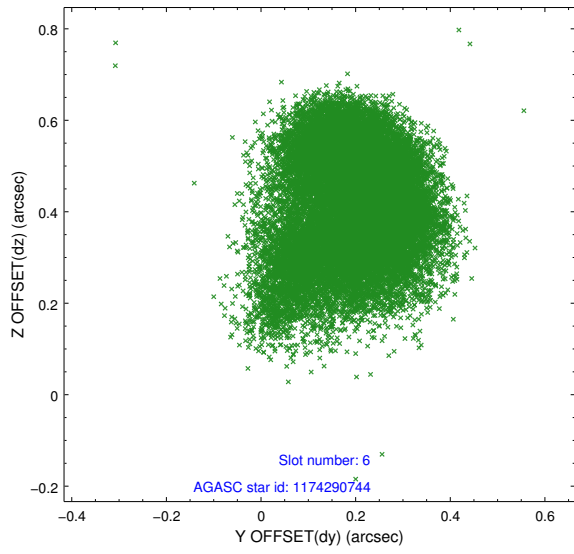
2.4.2 Slot 4



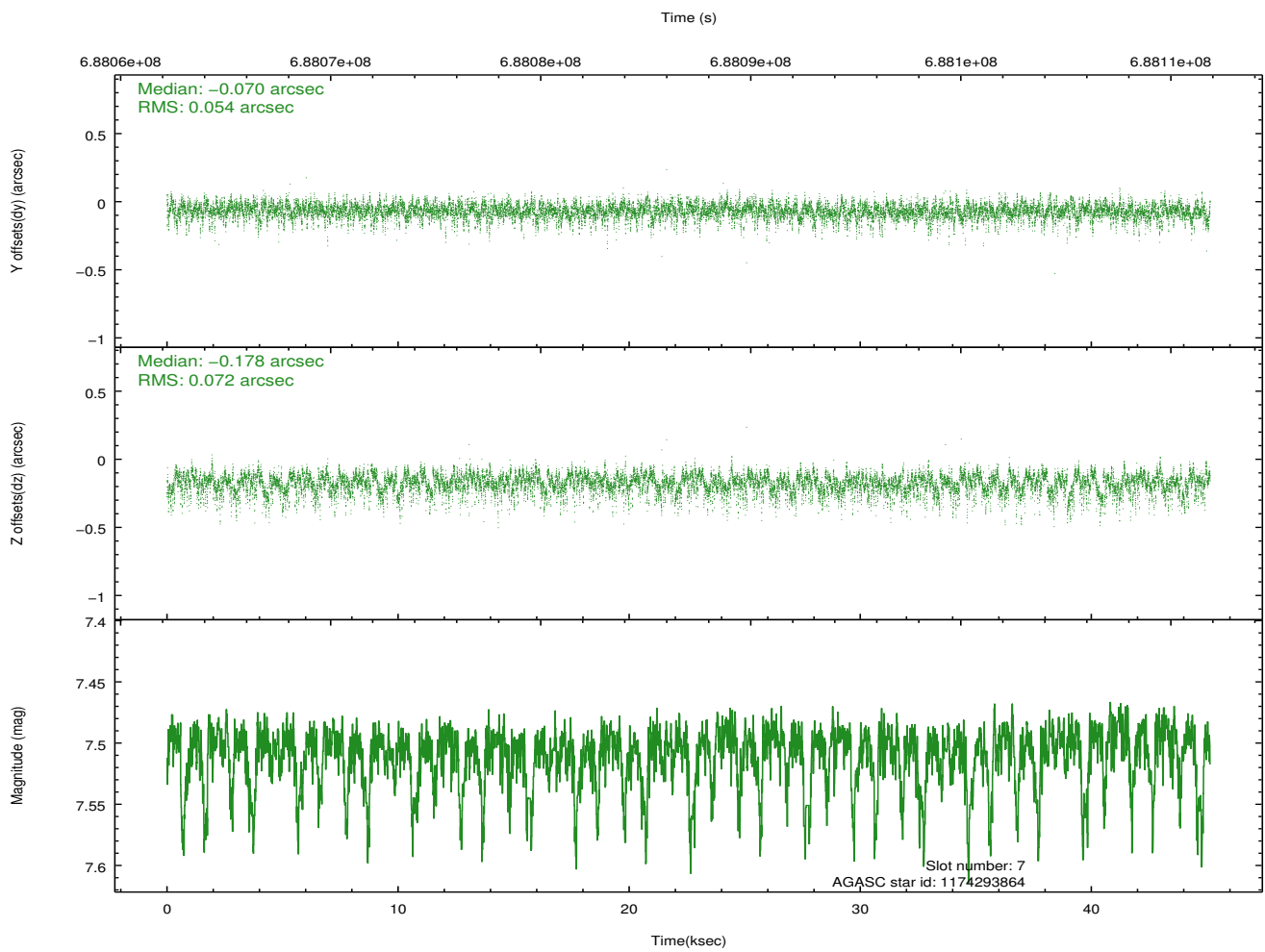
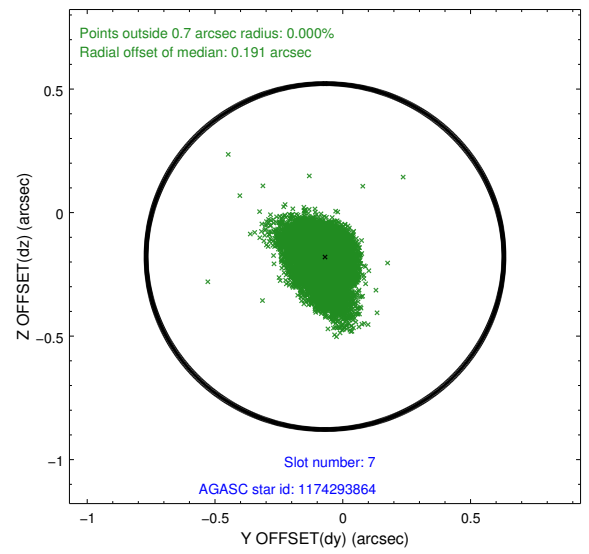
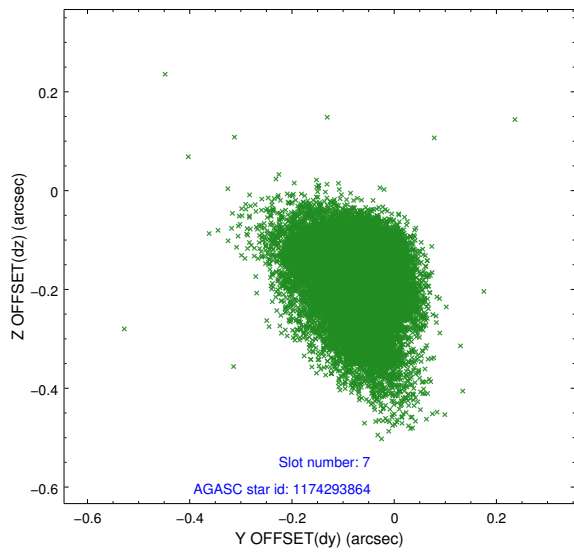
2.4.3 Slot 5



2.4.4 Slot 6

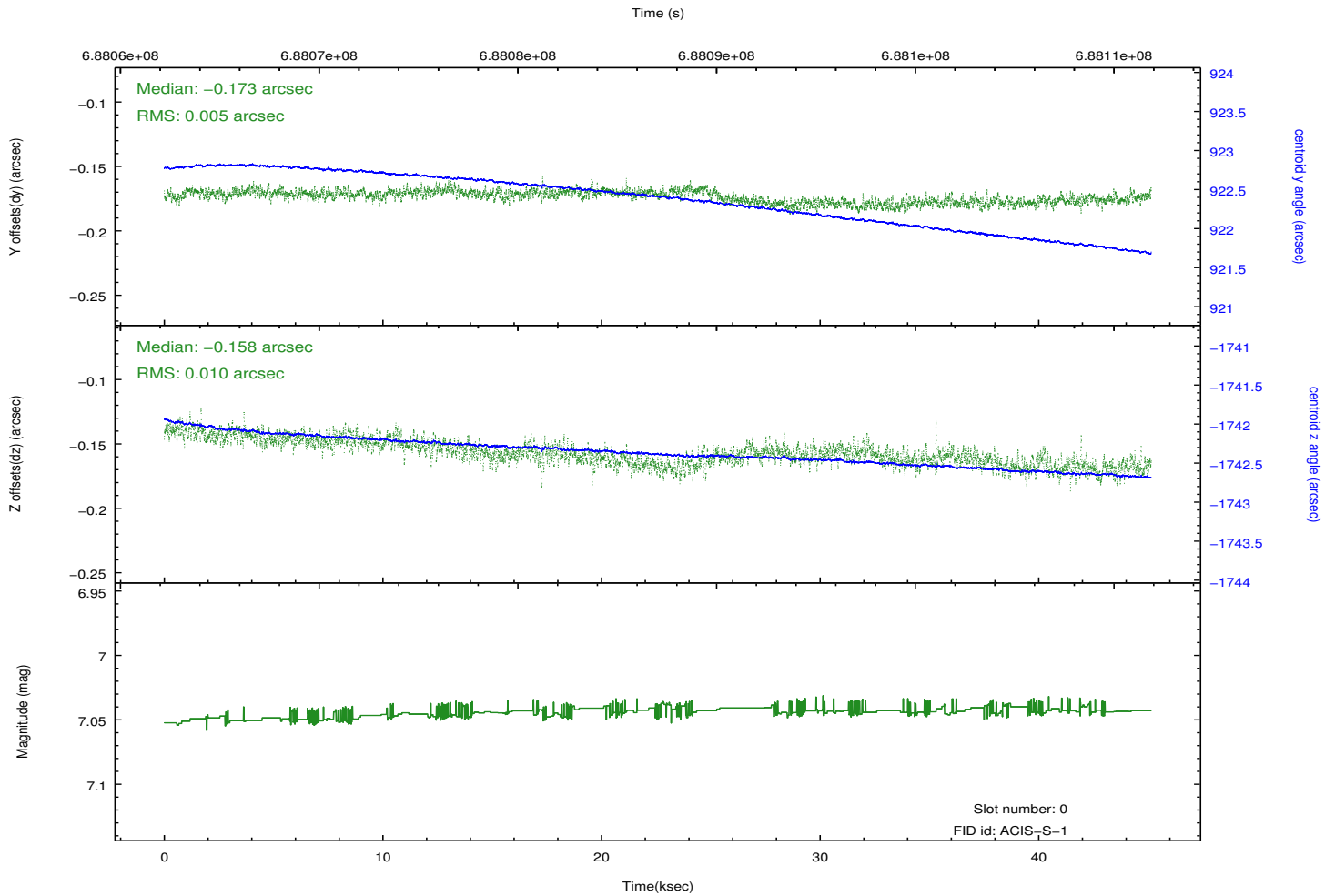
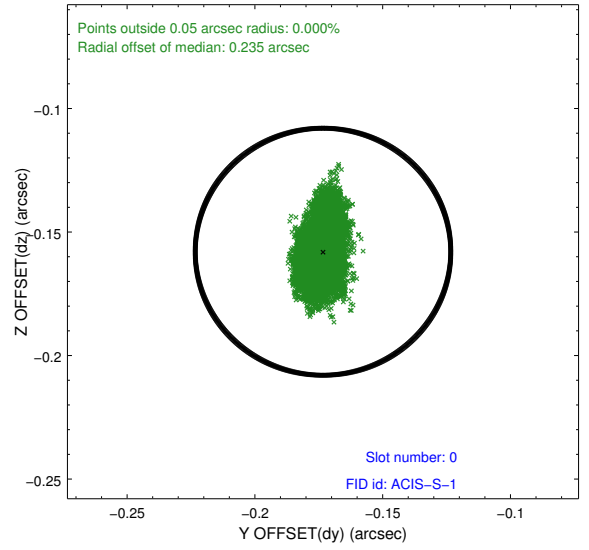
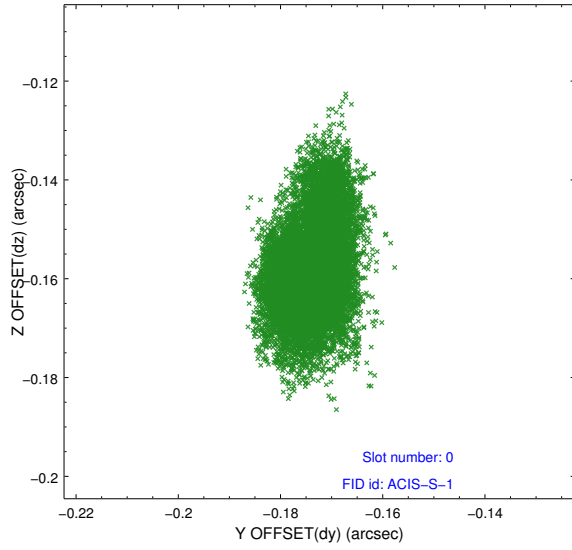


2.4.5 Slot 7

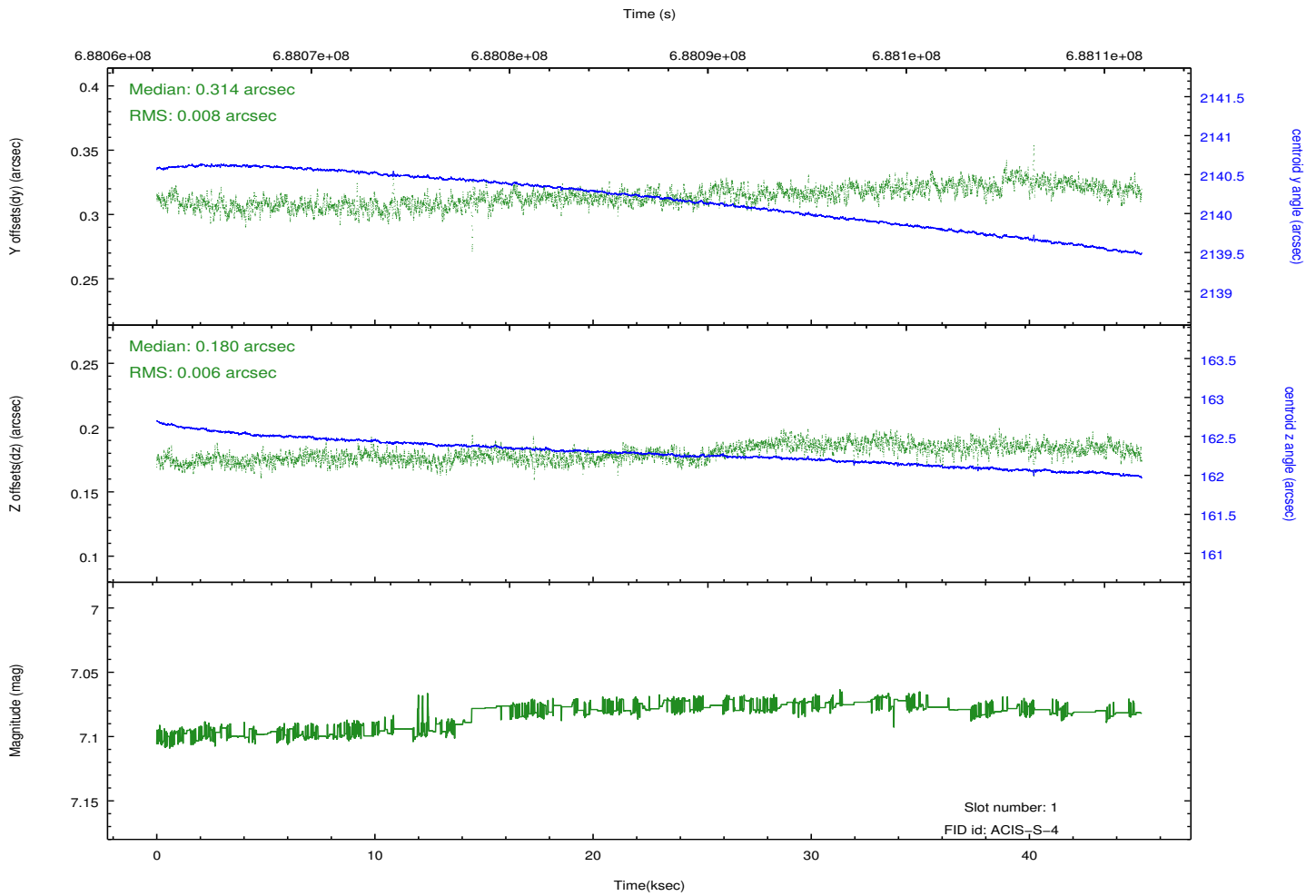
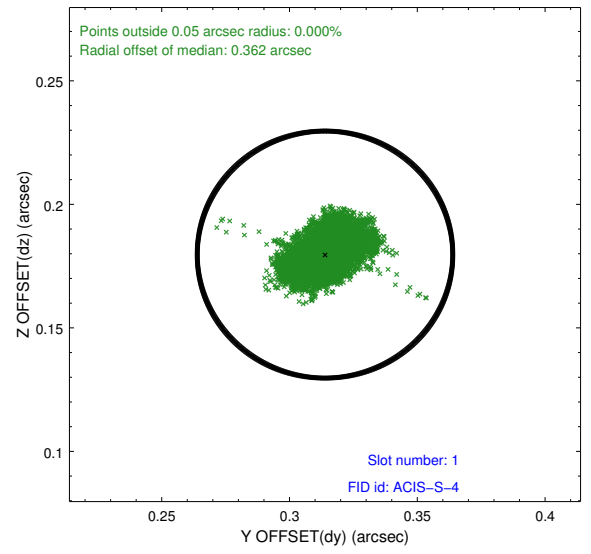
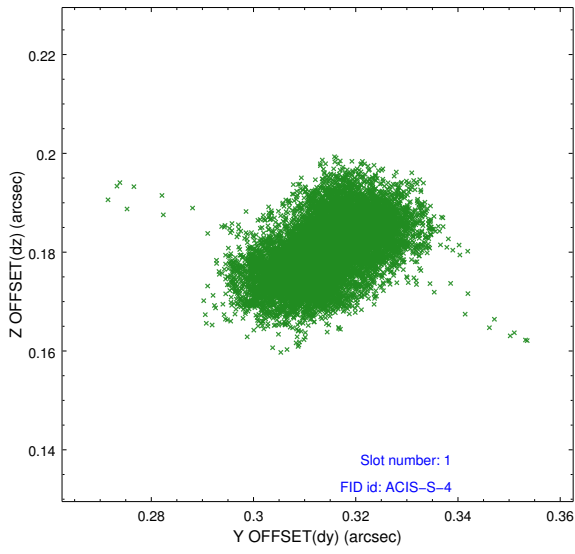


2.5 FID Slots

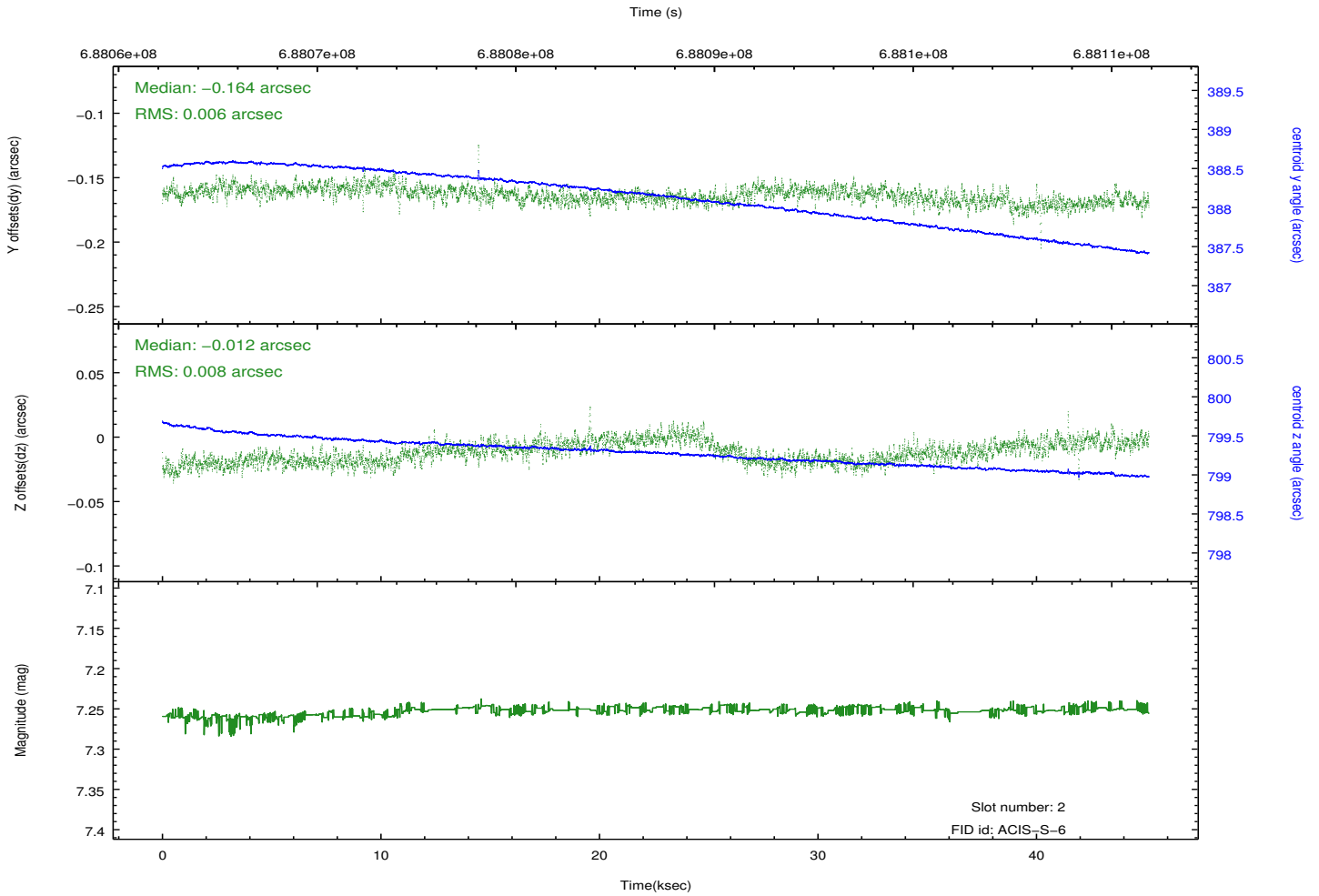
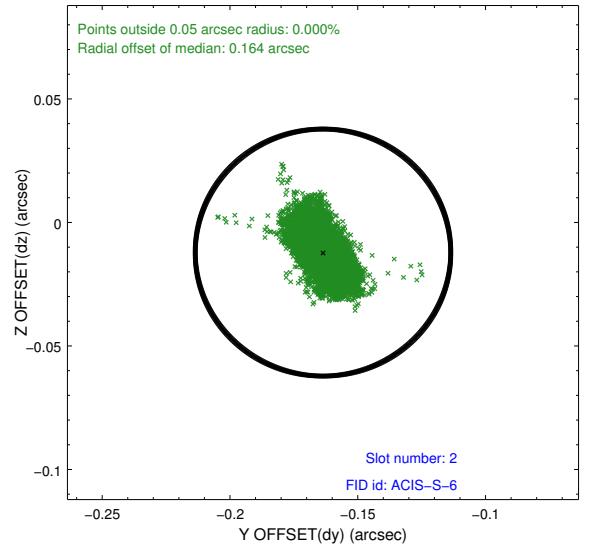
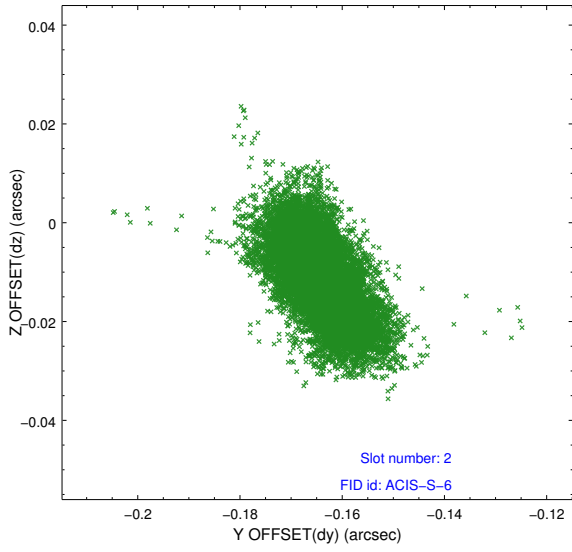
2.5.1 Slot 0



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) | 2019.10.22 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 45.055400346637 |

A.2 Comments

Window constraint met. Roll preference met.