

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1023 - L2 Version 4
Chandra X-Ray Center

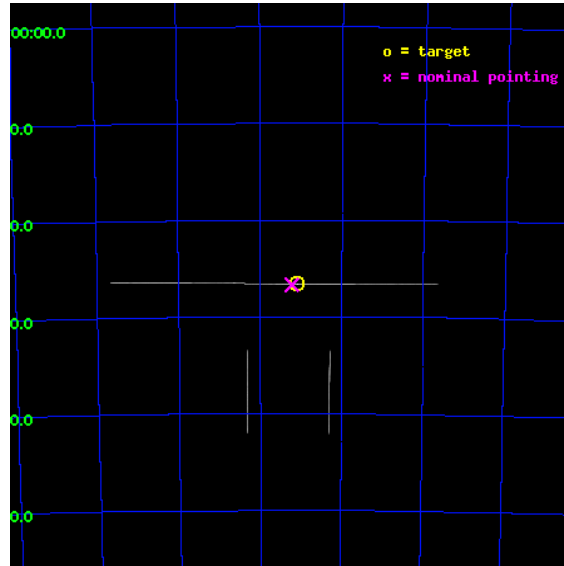
L2 Processing Date : Sep 2 2012

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1 Front

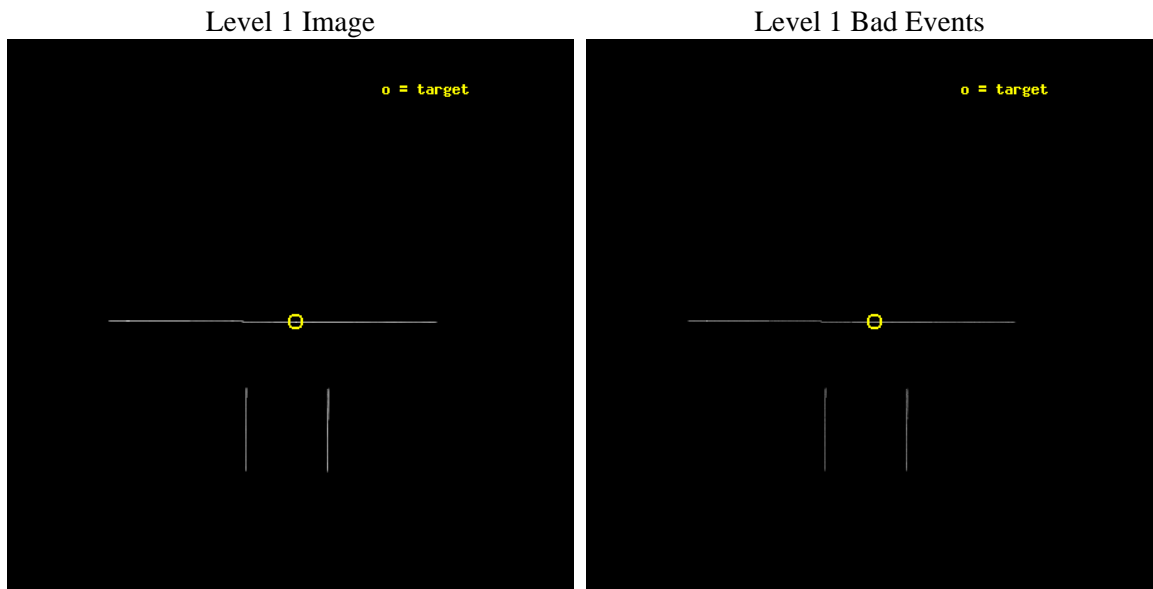
| | | |
|----------|--|---------------------------------------|
| seq_num | 400101 | Sequence number |
| obs_id | 1023 | Observation id |
| title | HIGH RESOLUTION UV/X-RAY SPECTROSCOPY OF SMC X-1 | Proposal title |
| observer | Dr. Saeqa Vrtilek | Principal investigator |
| object | SMC X-1 | Source name |
| ra_targ | 19.271667 | Observer's specified target RA [deg] |
| dec_targ | -73.442944 | Observer's specified target Dec [deg] |
| ra_nom | 19.305904464388 | Nominal RA [deg] |
| dec_nom | -73.444673289092 | Nominal Dec [deg] |
| roll_nom | 0.29053367484253 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 6190.5 | Sum of GTIs [s] |
| livetime | 6166.318359375 | Livetime [s] |
| ontime2 | 6190.5 | Sum of GTIs [s] |
| ontime3 | 6190.5 | Sum of GTIs [s] |
| ontime5 | 6190.5 | Sum of GTIs [s] |
| ontime6 | 6190.5 | Sum of GTIs [s] |
| ontime7 | 6190.5 | Sum of GTIs [s] |
| ontime8 | 6190.5 | Sum of GTIs [s] |
| l2events | 70637 | Number of level 2 events |



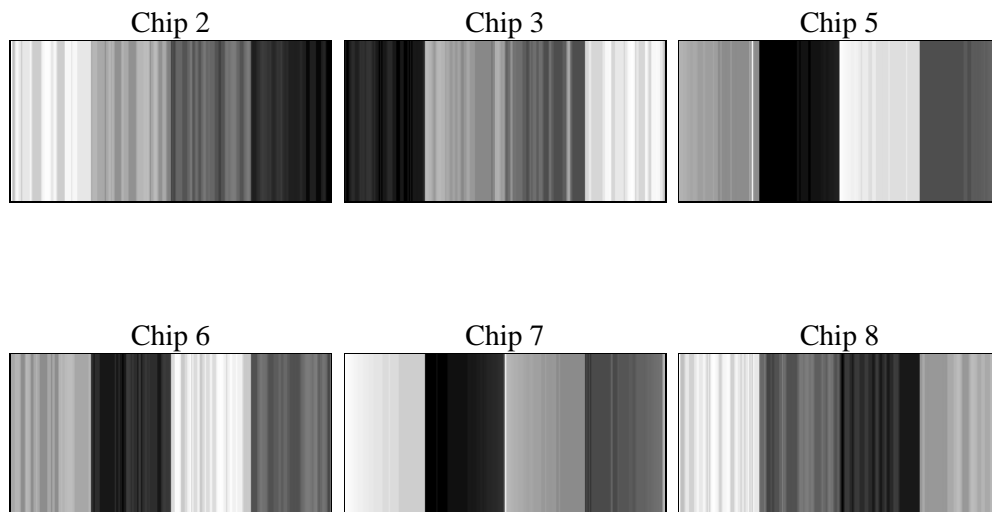
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 6000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 6190.5 | Sum of GTIs [s] |
| caldsver | 4.5.1.1 | | ontime2 | 6190.5 | Sum of GTIs [s] |
| date | 2012-09-02T09:37:22 | Date and time of file creation | ontime3 | 6190.5 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime5 | 6190.5 | Sum of GTIs [s] |
| | | | ontime6 | 6190.5 | Sum of GTIs [s] |
| | | | ontime7 | 6190.5 | Sum of GTIs [s] |
| | | | ontime8 | 6190.5 | Sum of GTIs [s] |
| | | | l1events | 120222 | Number of level 1 events |

2.1.4 Events

| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 8277 | 8899 | 43079 | 9924 | 33792 | 16251 |
| rejected events | 2268 | 2474 | 8776 | 2538 | 7644 | 3777 |
| rejected % | 27% | 27% | 20% | 25% | 22% | 23% |

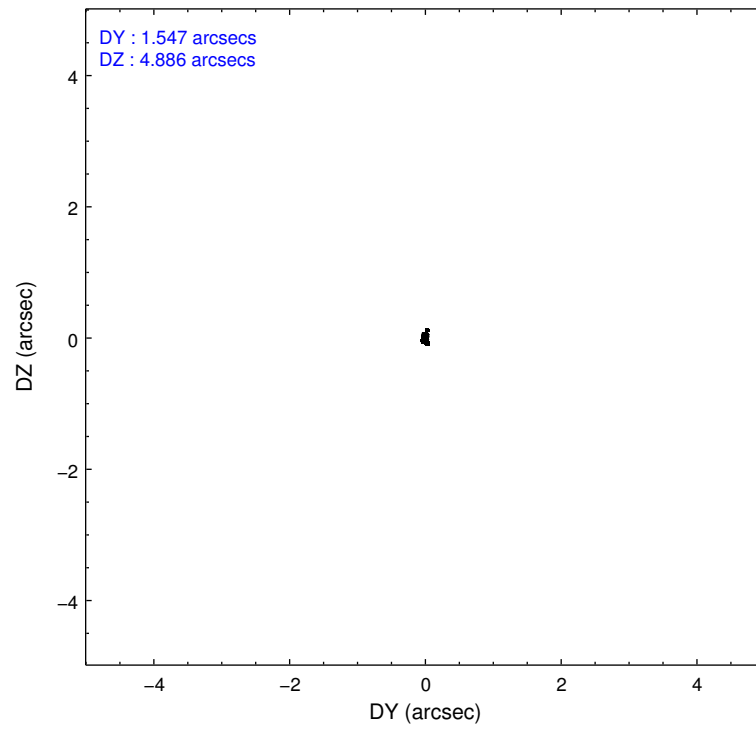
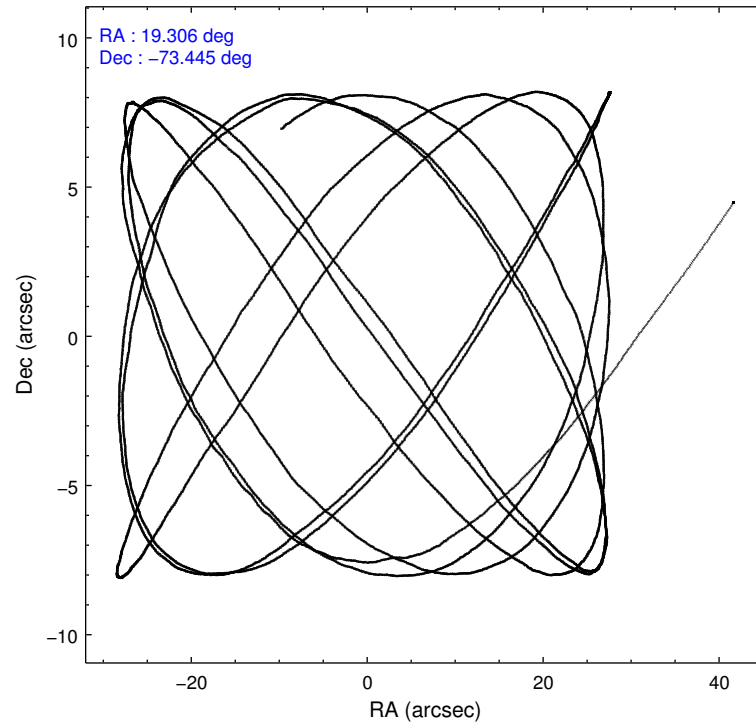
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 915 | 986 | 12566 | 975 | 4559 | 2741 |
| | 11% | 11% | 29% | 9% | 13% | 16% |
| grade 1 events | 25 | 29 | 50 | 28 | 57 | 50 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 2525 | 2645 | 10004 | 3386 | 7055 | 4237 |
| | 30% | 29% | 23% | 34% | 20% | 26% |
| grade 3 events | 1038 | 1227 | 892 | 1171 | 2580 | 1871 |
| | 12% | 13% | 2% | 11% | 7% | 11% |
| grade 4 events | 1084 | 1052 | 862 | 1129 | 2626 | 1719 |
| | 13% | 11% | 2% | 11% | 7% | 10% |
| grade 5 events | 1386 | 1429 | 3734 | 1525 | 4684 | 2143 |
| | 16% | 16% | 8% | 15% | 13% | 13% |
| grade 6 events | 1304 | 1531 | 14971 | 1710 | 12231 | 3490 |
| | 15% | 17% | 34% | 17% | 36% | 21% |
| grade 7 events | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0% | 0% | 0% | 0% | 0% | 0% |

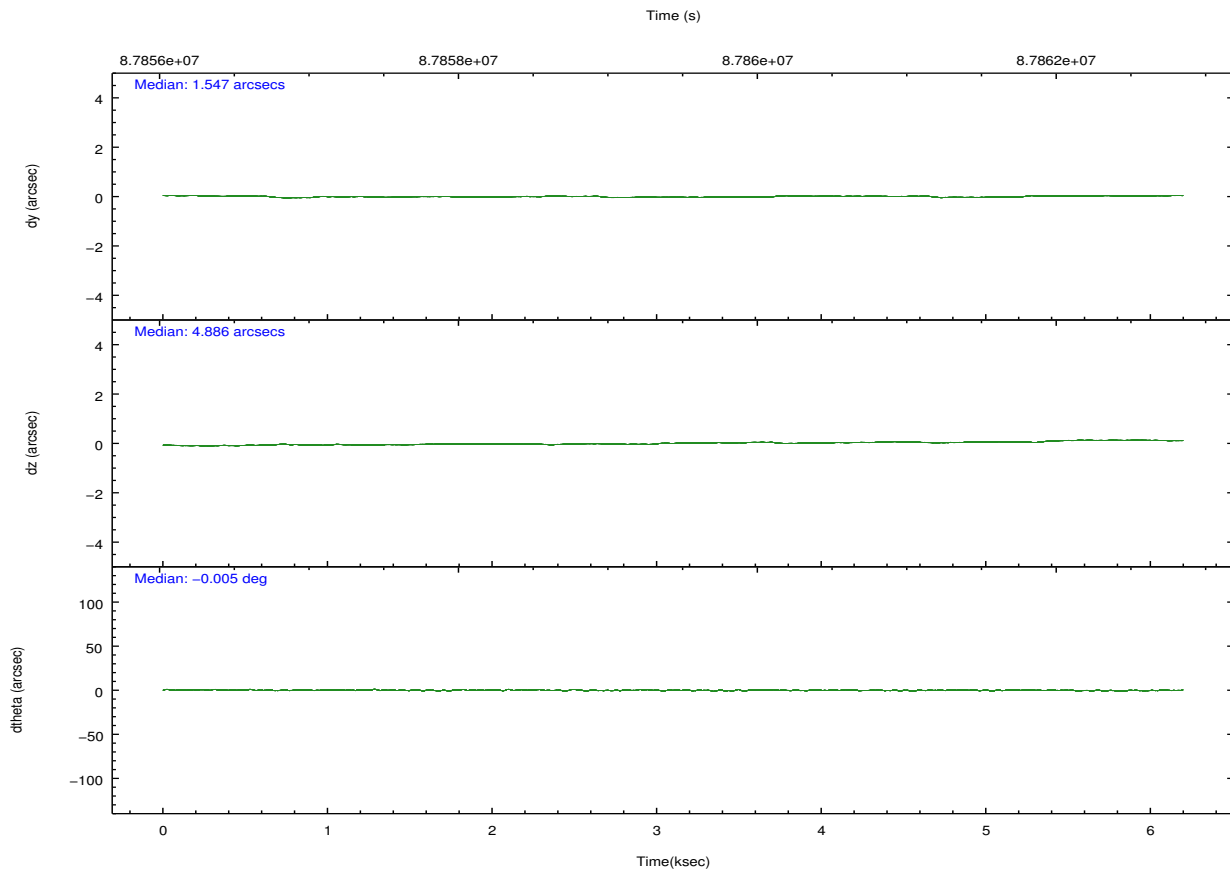
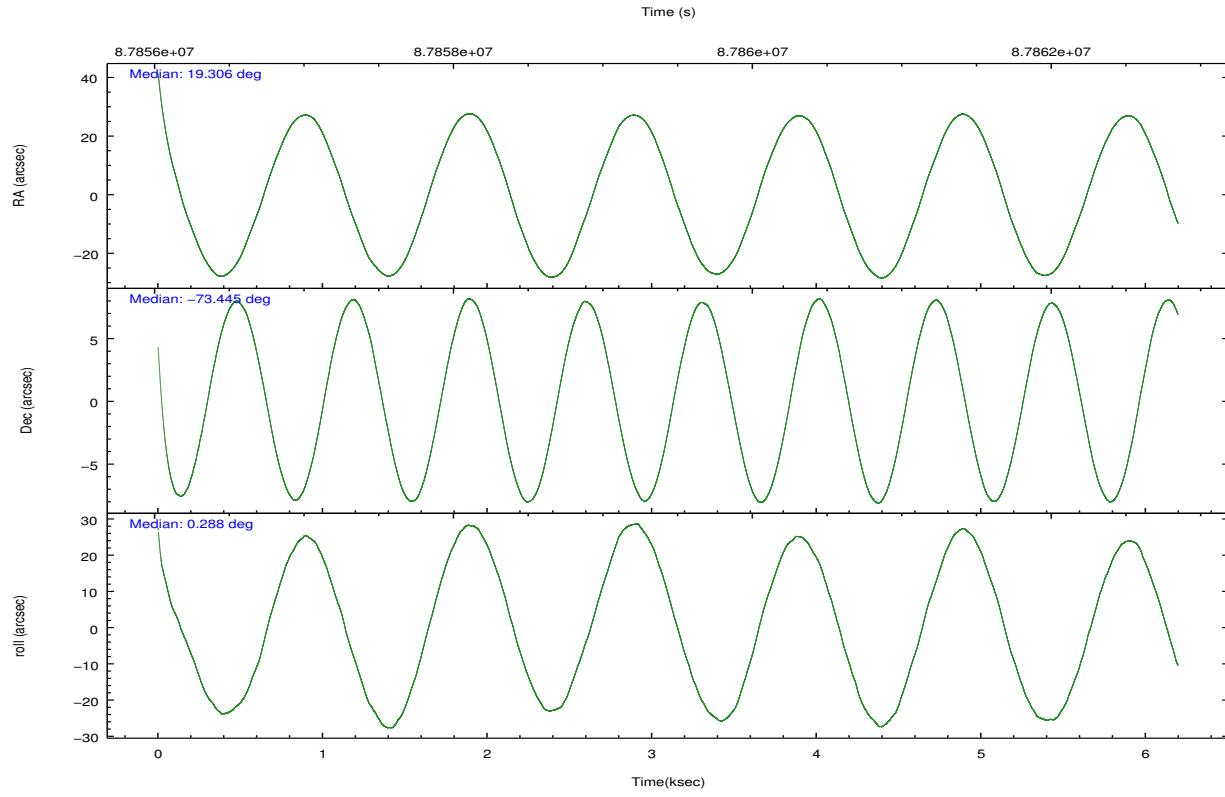
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-235678 | ACIS-235678 |
| Grating | NONE | NONE |
| Data mode | CC33_FAINT | CC33_FAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 19.223183 | 19.30590446438769 |
| [deg] Pointing Dec | -73.458651 | -73.44467328909164 |
| [deg] Pointing Roll | 0.054624 | 0.2905336748425343 |
| [s] Window start time (MET) | 87856264.184000 | 87856264.184000 |
| [s] Window stop time (MET) | 87863464.184000 | 87863464.184000 |
| [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 |
| Phase constraints | Y | Y |
| [d] Phase period | 3.892000 | 3.892000 |
| [d] Phase epoch (MJD) | 50141.466800 | 50141.466800 |
| Phase start | 0.000000 | 0.000000 |
| Phase end | 0.800000 | 0.800000 |
| Phase start error | 0.050000 | 0.050000 |
| Phase end error | 0.050000 | 0.050000 |
| [s] Observation start time (MET) | 87856534.184000 | 87855442.61596701 |
| Observation start date | 2000-10-13T20:34:30 | 2000-10-13T20:17:22 |
| [s] Observation end time (MET) | 87862534.184000 | 87863222.87876 |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 0 |

2.3 Aspect



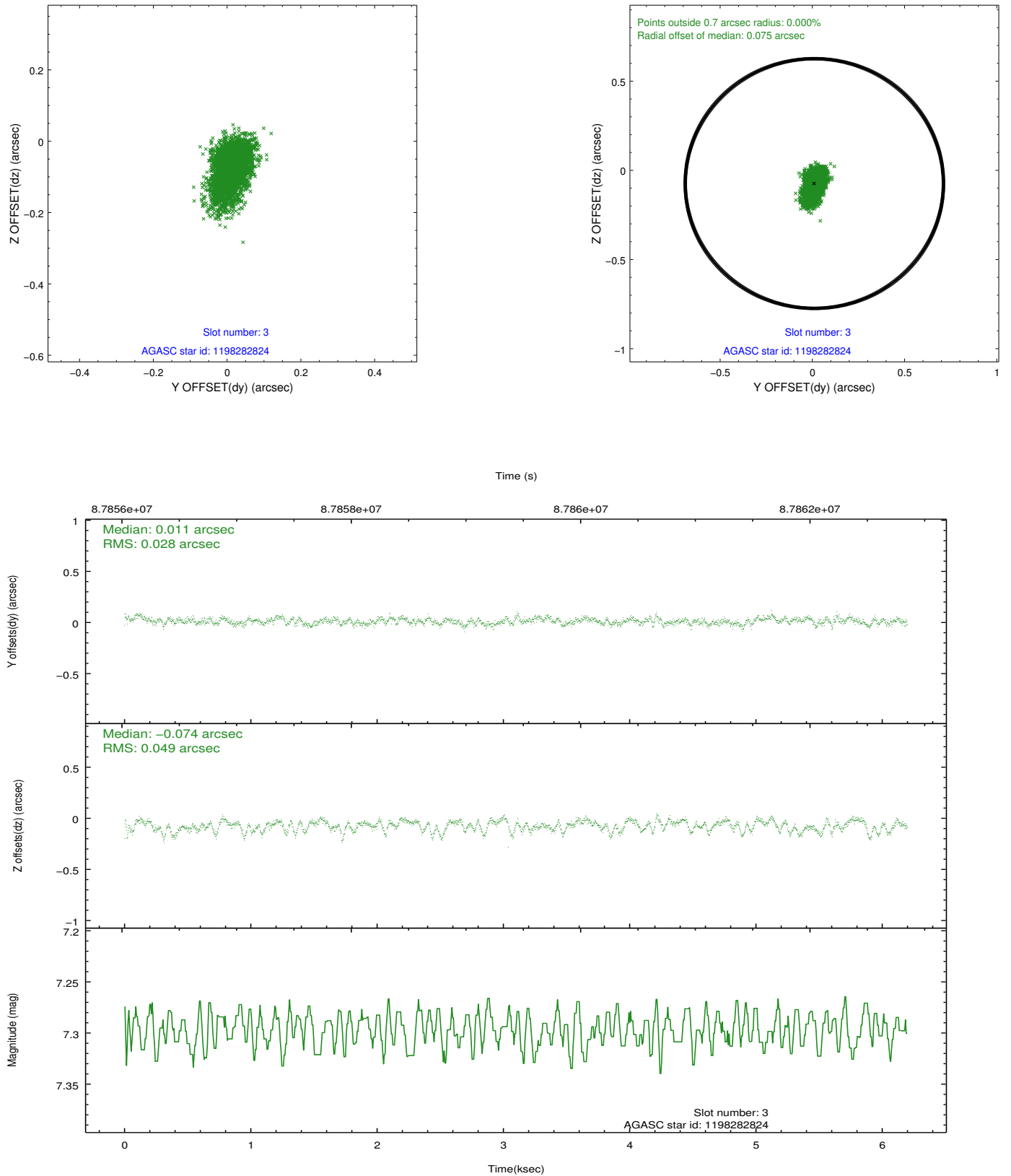


Slot Statistics

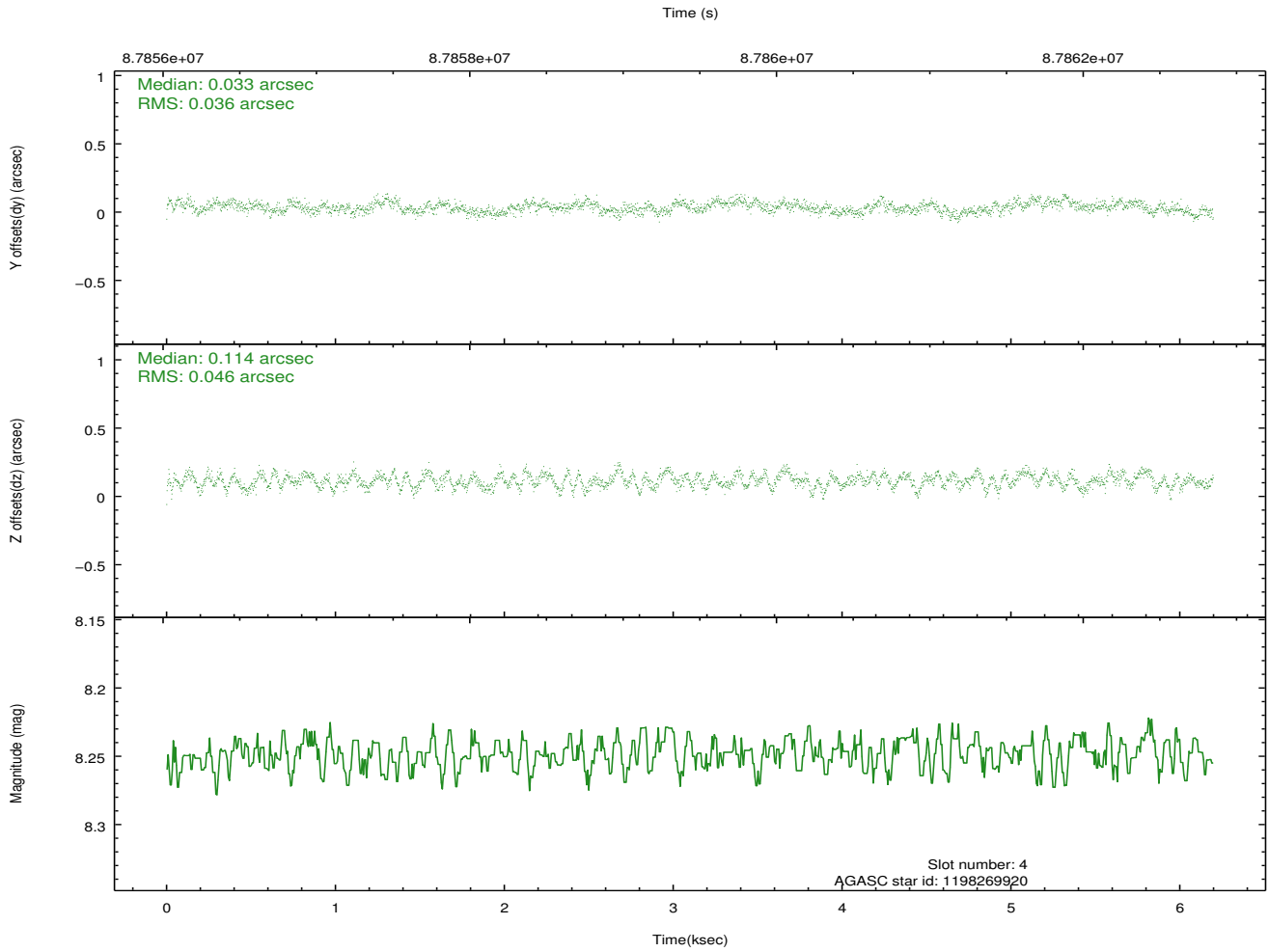
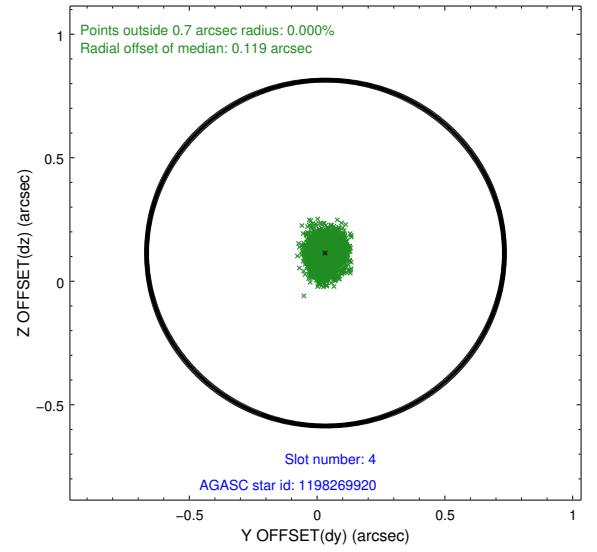
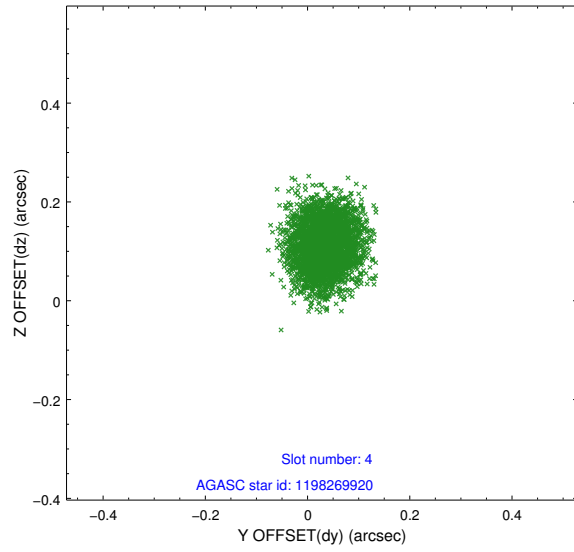
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------------|-------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.12 | 1512 | -0.042 | -0.008 | 0.006 | 0.010 | 0.000000 | 0.000000 | -754.17 | -1726.02 |
| 1 | FID | ACIS-S-4 | 7.21 | 1512 | -0.007 | 0.023 | 0.005 | 0.009 | 0.000000 | 0.000000 | 2158.69 | 181.55 |
| 2 | FID | ACIS-S-5 | 7.24 | 1512 | 0.018 | -0.006 | 0.006 | 0.011 | 0.000000 | 0.000000 | -1805.75 | 176.23 |
| 3 | GUIDE | 1198282824 | 7.30 | 3024 | 0.011 | -0.074 | 0.059 | 0.101 | 18.044095 | -73.907062 | -1178.06 | -1624.71 |
| 4 | GUIDE | 1198269920 | 8.25 | 3024 | 0.033 | 0.114 | 0.063 | 0.099 | 20.316466 | -73.033728 | 1149.42 | 1517.97 |
| 5 | GUIDE | 1198264832 | 9.52 | 3021 | 0.075 | 0.150 | 0.103 | 0.170 | 20.353668 | -72.974637 | 1193.54 | 1730.99 |
| 6 | BAD | 1198270632 | 10.27 | 2890 | -0.235 | -0.285 | 0.119 | 0.204 | 18.734673 | -73.773529 | -492.25 | -1134.20 |
| 7 | GUIDE | 1198283072 | 10.43 | 3017 | 0.116 | 0.093 | 0.185 | 0.283 | 18.377128 | -73.336207 | -873.10 | 435.32 |

2.4 Star Slots

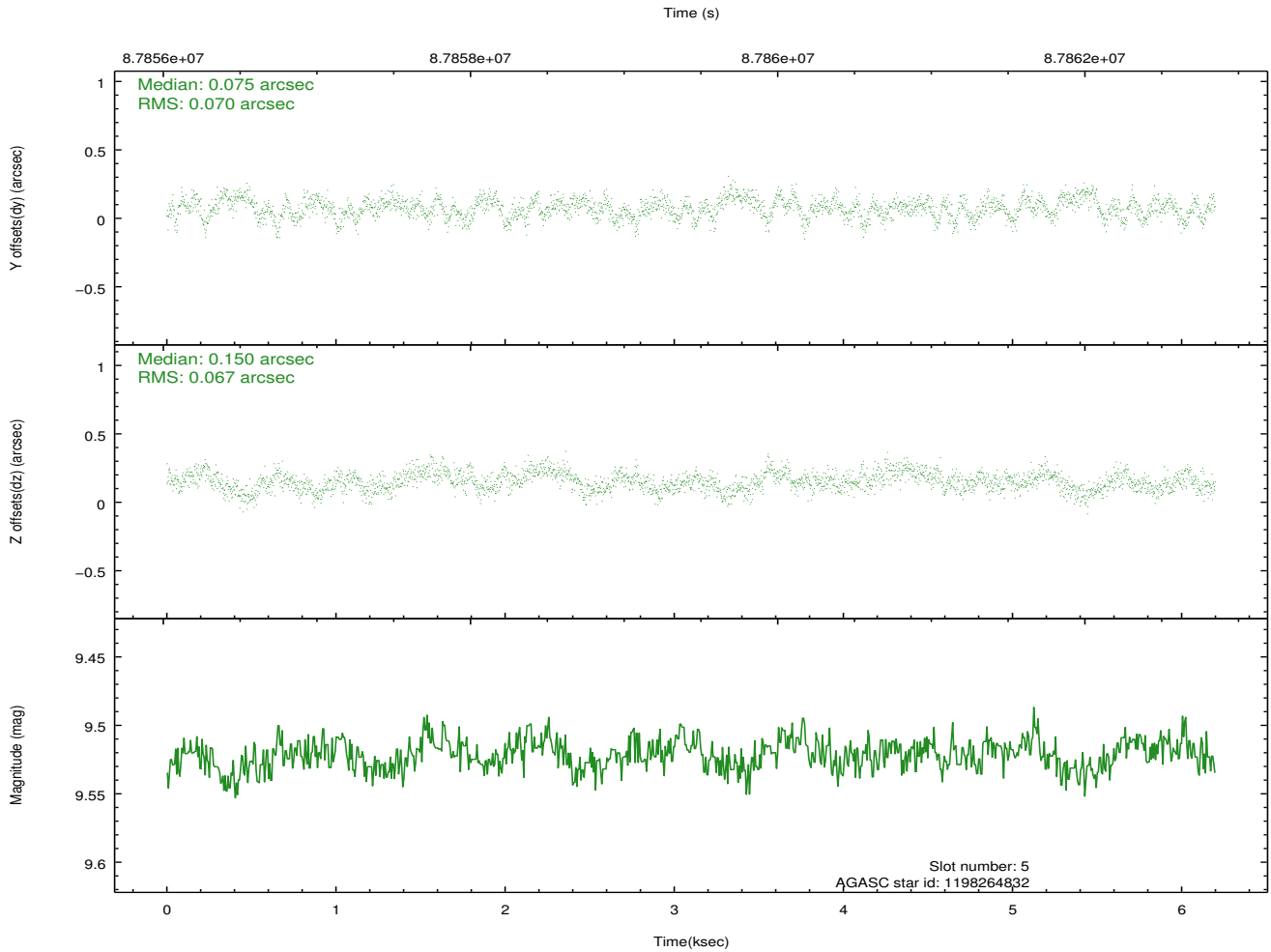
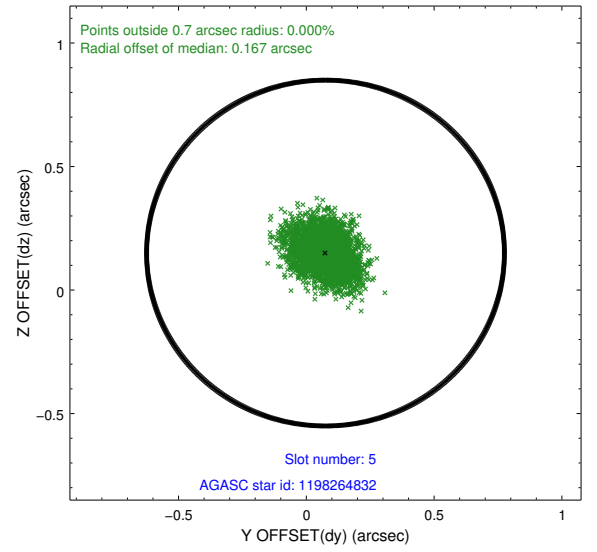
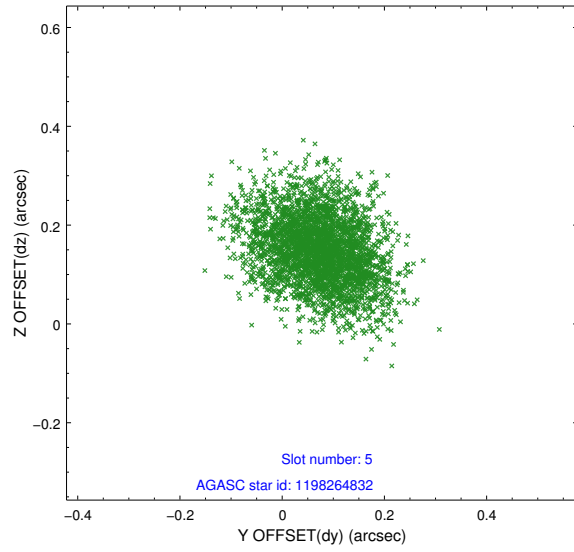
2.4.1 Slot 3



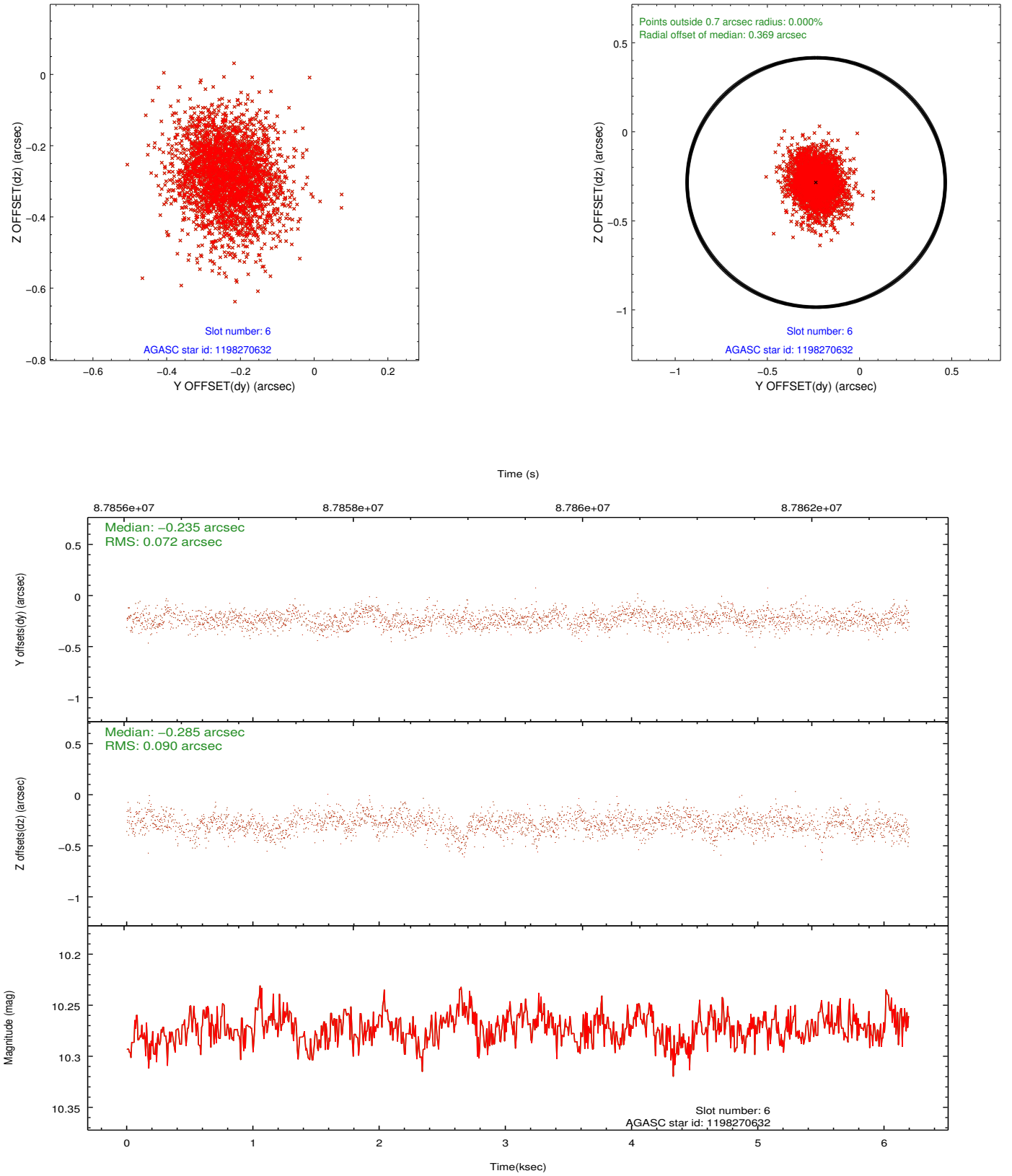
2.4.2 Slot 4



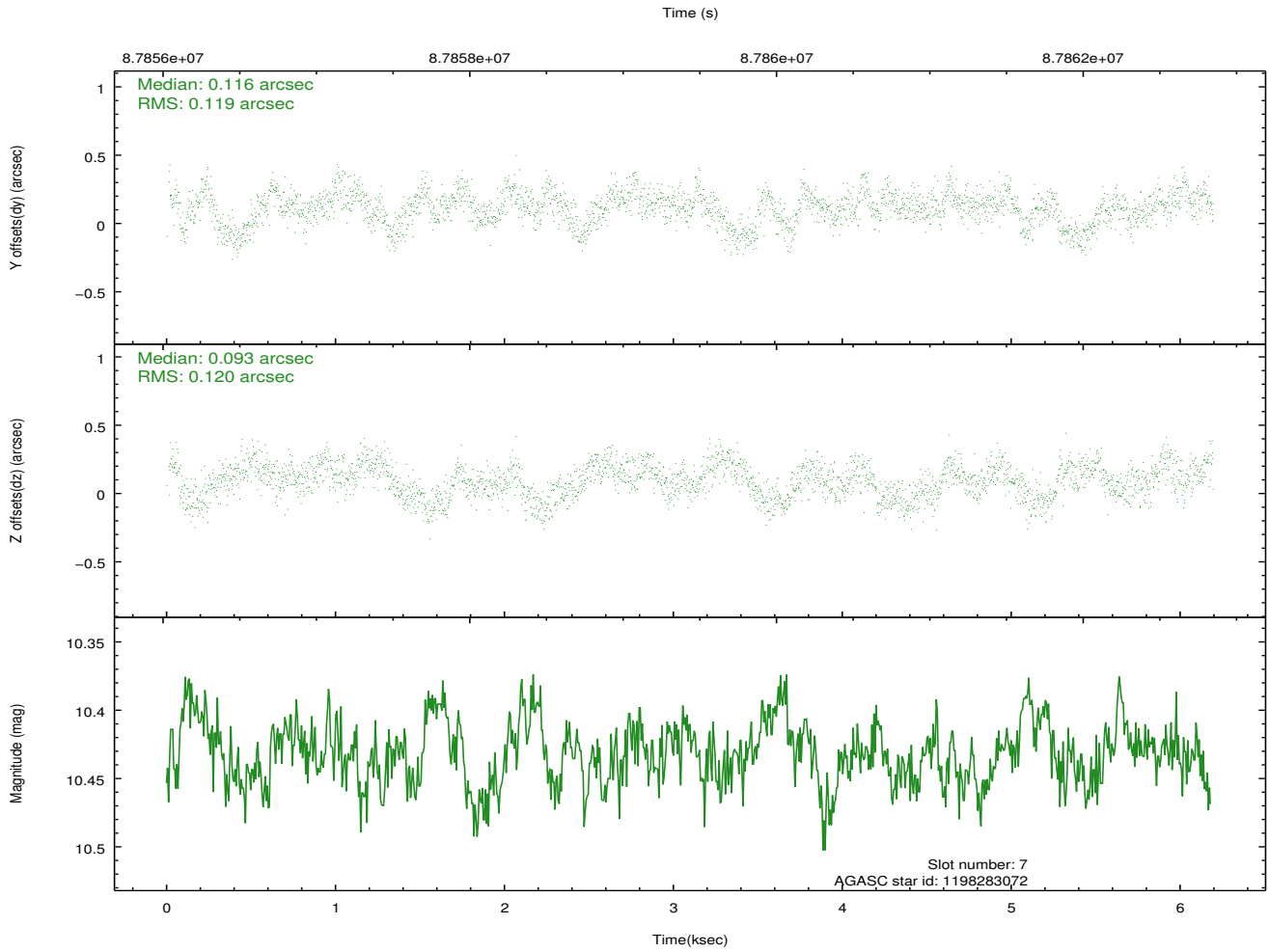
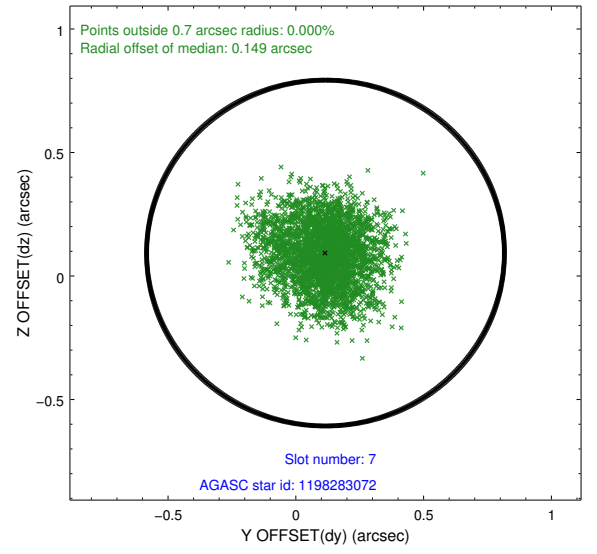
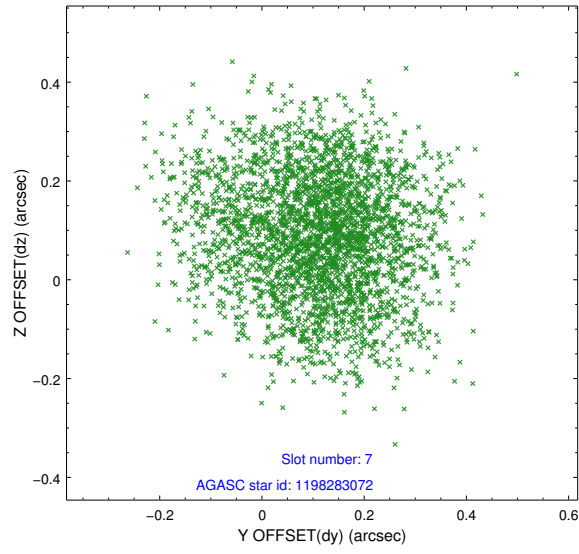
2.4.3 Slot 5



2.4.4 Slot 6

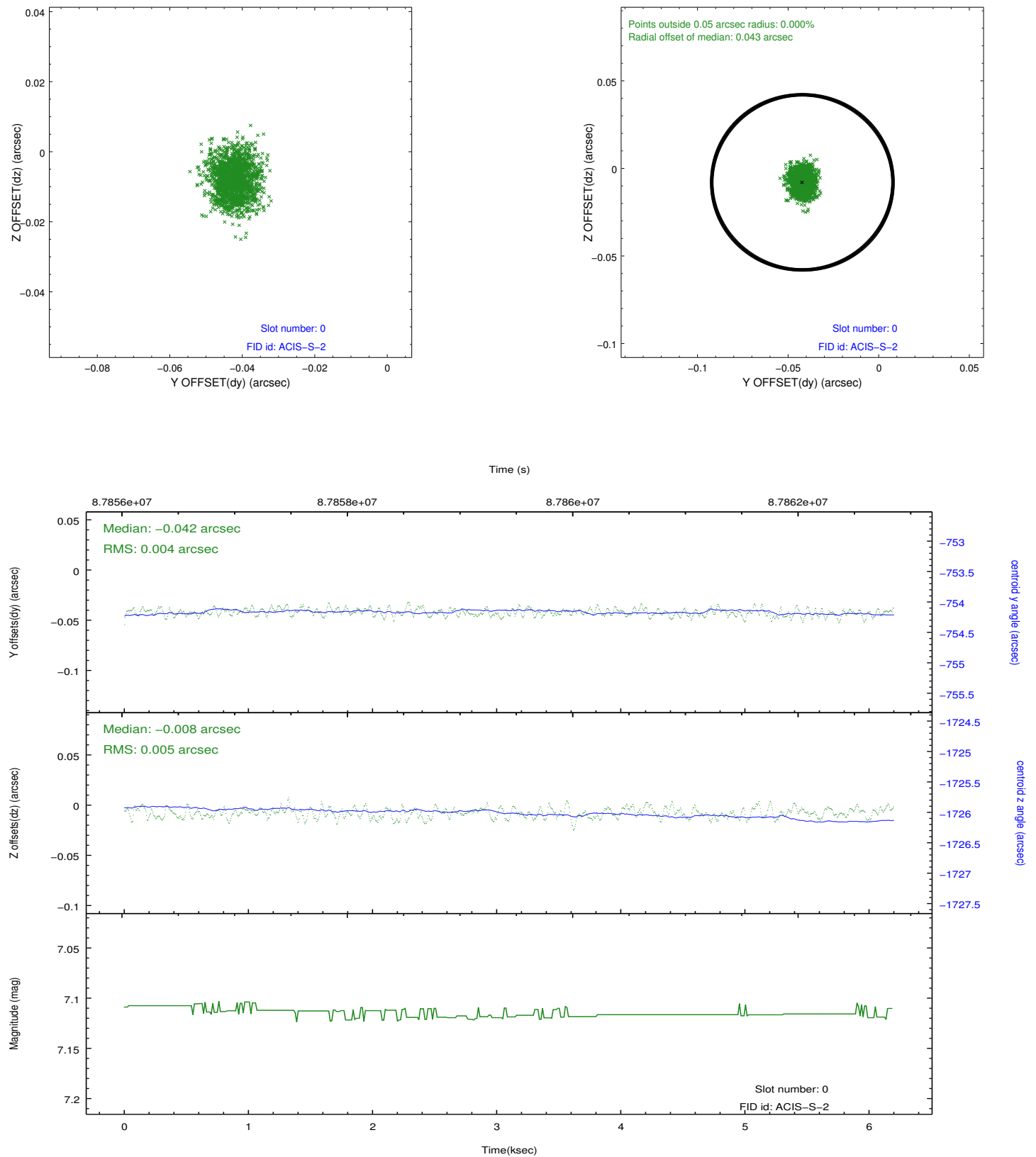


2.4.5 Slot 7

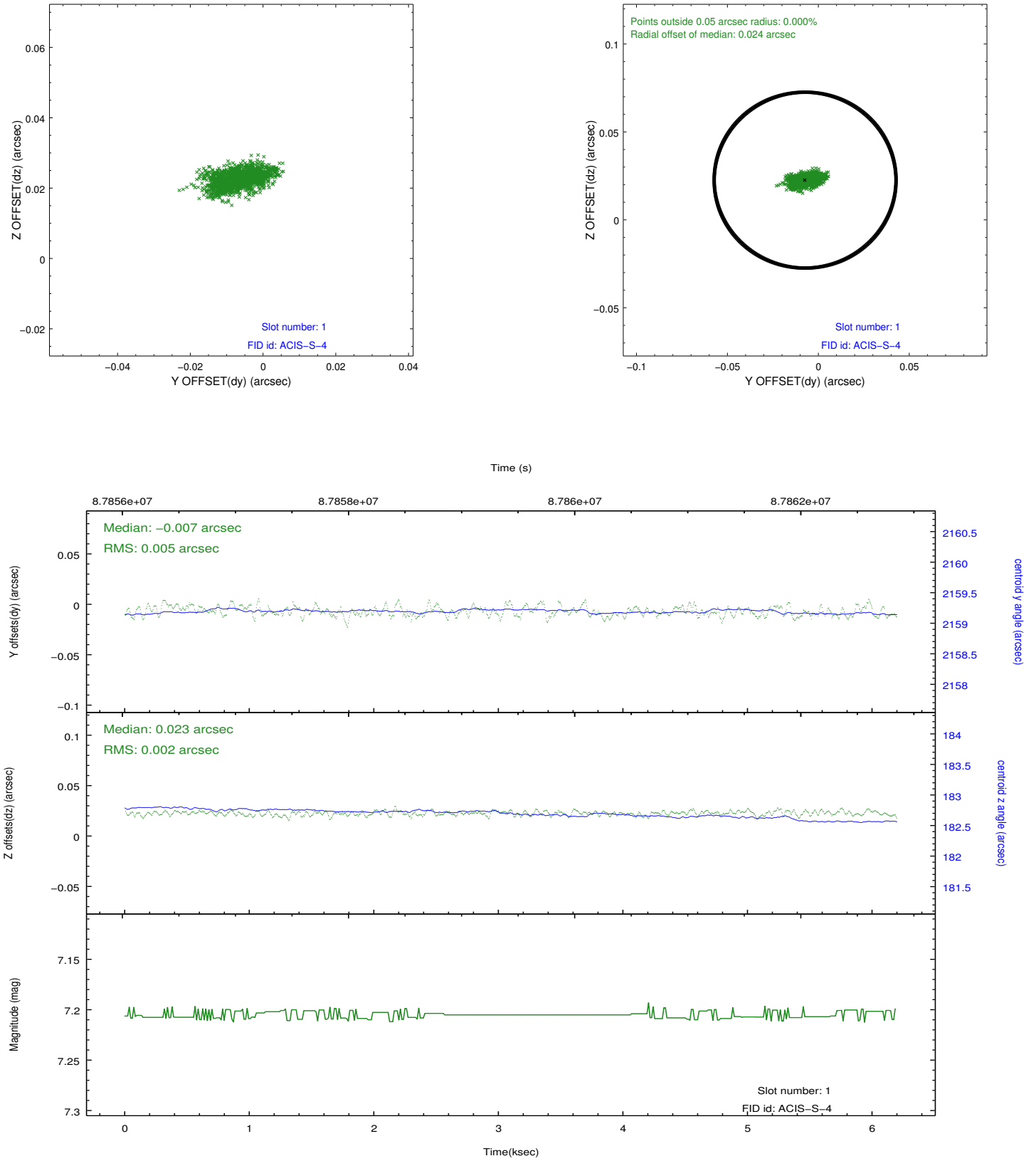


2.5 FID Slots

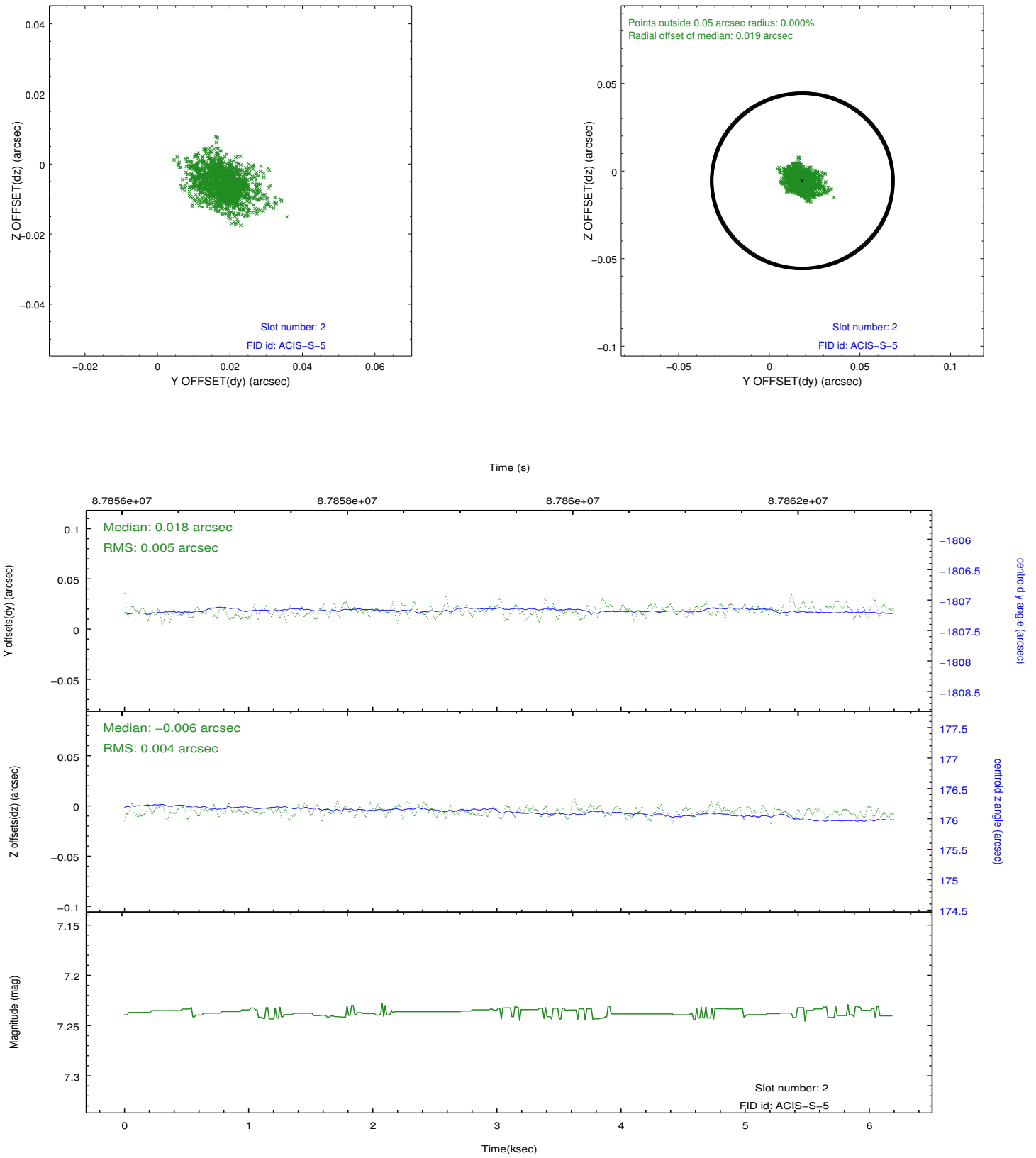
2.5.1 Slot 0



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) | 2012.09.04 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 6.194 |

A.2 Comments