

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 7210 - L2 Version 2
Chandra X-Ray Center

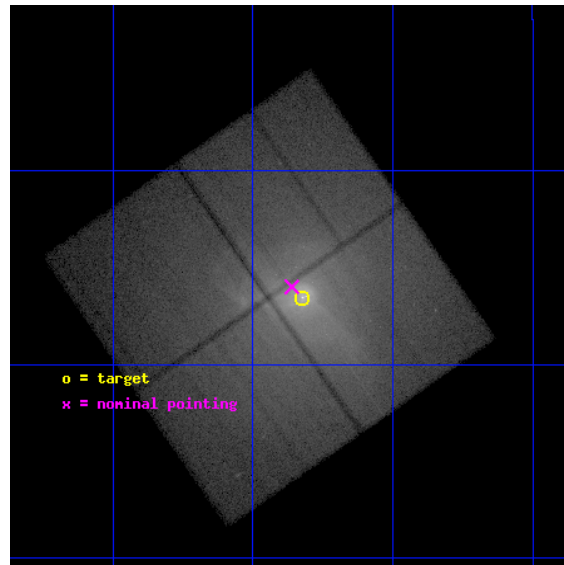
L2 Processing Date : Mar 17 2012

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

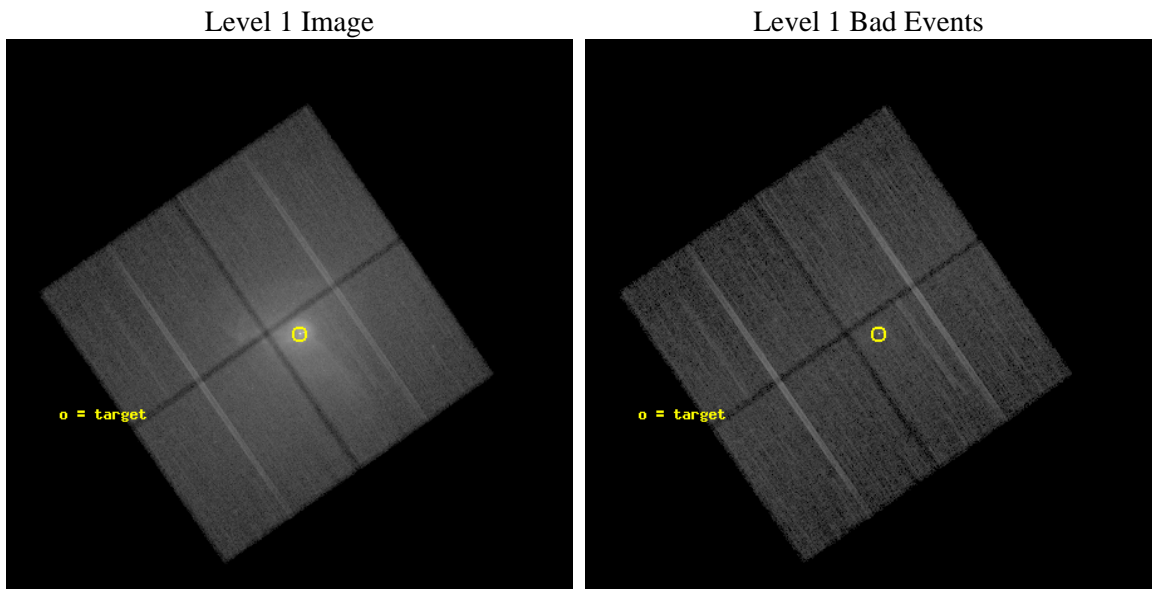
| | | |
|----------|---|---|
| seq_num | 800538 | Sequence number |
| obs_id | 7210 | Observation id |
| title | The History of AGN Activity in M87 and the Interaction of Nuclear Outbursts with the Surrounding Atmosphere | Proposal title |
| observer | Dr William Forman | Principal investigator |
| object | M87 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 187.70625 | Observer's specified target RA [deg] |
| dec_targ | 12.391111 | Observer's specified target Dec [deg] |
| ra_nom | 187.71517629998 | Nominal RA [deg] |
| dec_nom | 12.400429040349 | Nominal Dec [deg] |
| roll_nom | 55.206777896592 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 31117.67699942 | Sum of GTIs [s] |
| livetime | 30711.101640922 | Livetime [s] |
| ontime0 | 31123.958969891 | Sum of GTIs [s] |
| ontime1 | 31117.677039266 | Sum of GTIs [s] |
| ontime2 | 31120.817979634 | Sum of GTIs [s] |
| ontime3 | 31117.67699942 | Sum of GTIs [s] |
| l2events | 1121384 | Number of level 2 events |



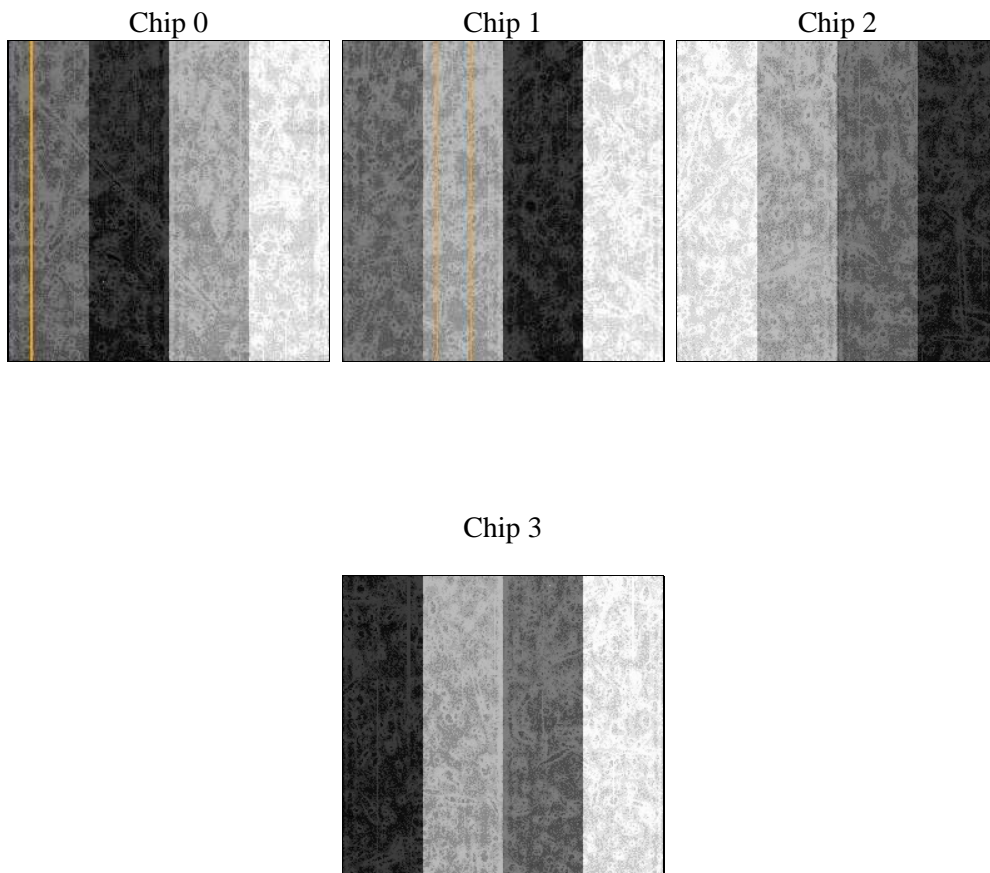
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 31000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.3 | Processing system revision | ontime | 31117.67699942 | Sum of GTIs [s] |
| caldsver | 4.4.8 | | ontime0 | 31123.958969891 | Sum of GTIs [s] |
| date | 2012-03-17T01:39:25 | Date and time of file creation | ontime1 | 31117.677039266 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime2 | 31120.817979634 | Sum of GTIs [s] |
| | | | ontime3 | 31117.67699942 | Sum of GTIs [s] |
| | | | l1events | 1997705 | Number of level 1 events |

2.1.4 Events

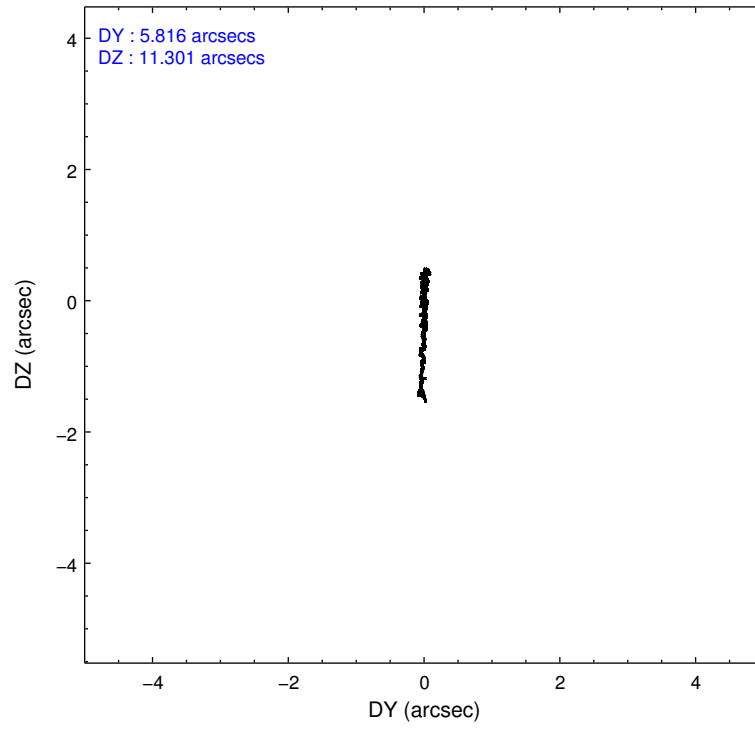
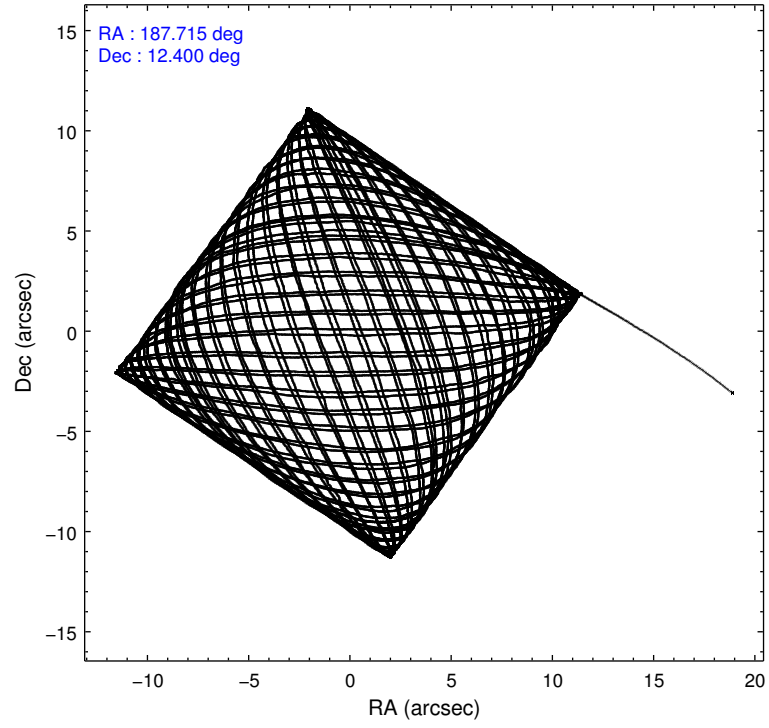
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 |
|-----------------|--------|--------|--------|--------|
| level 1 events | 359299 | 424684 | 468822 | 744900 |
| rejected events | 189424 | 184221 | 215588 | 220952 |
| rejected % | 52% | 43% | 45% | 29% |

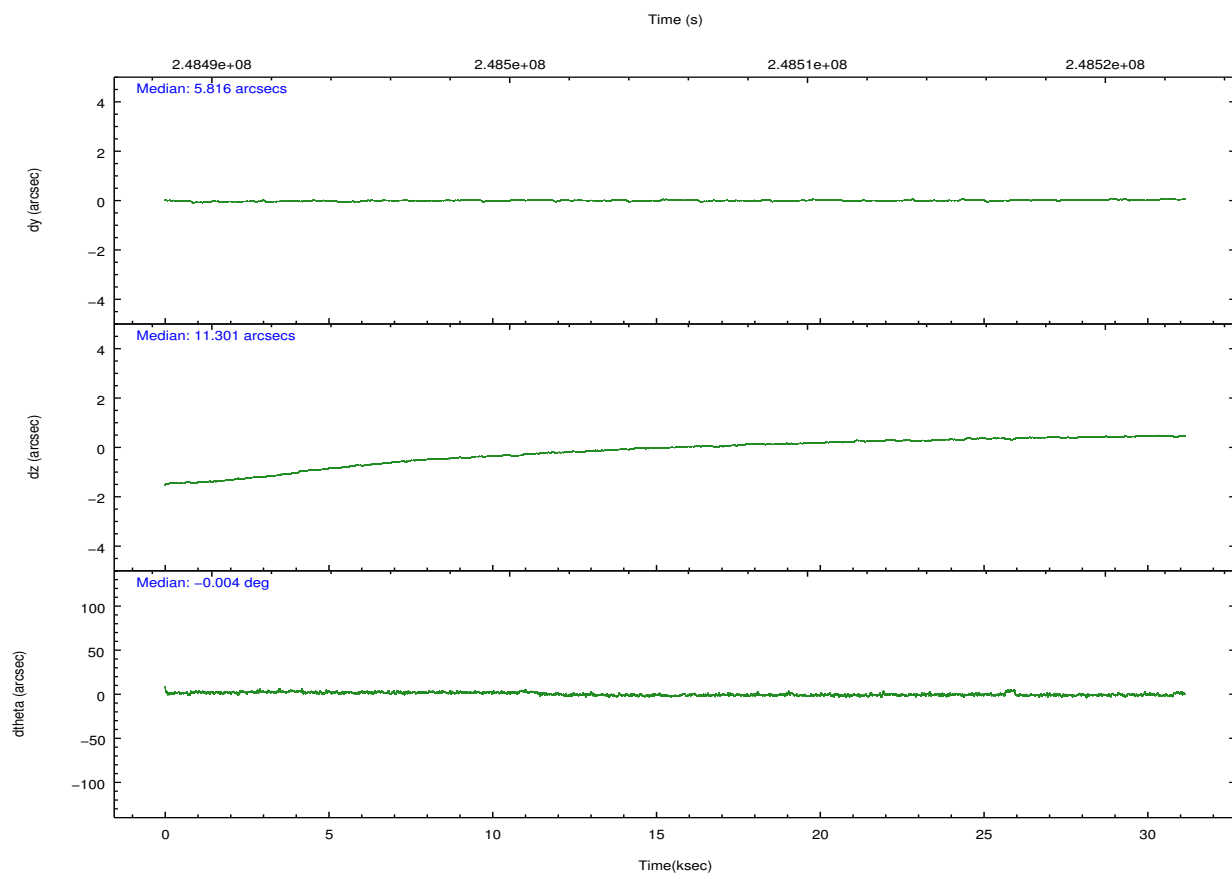
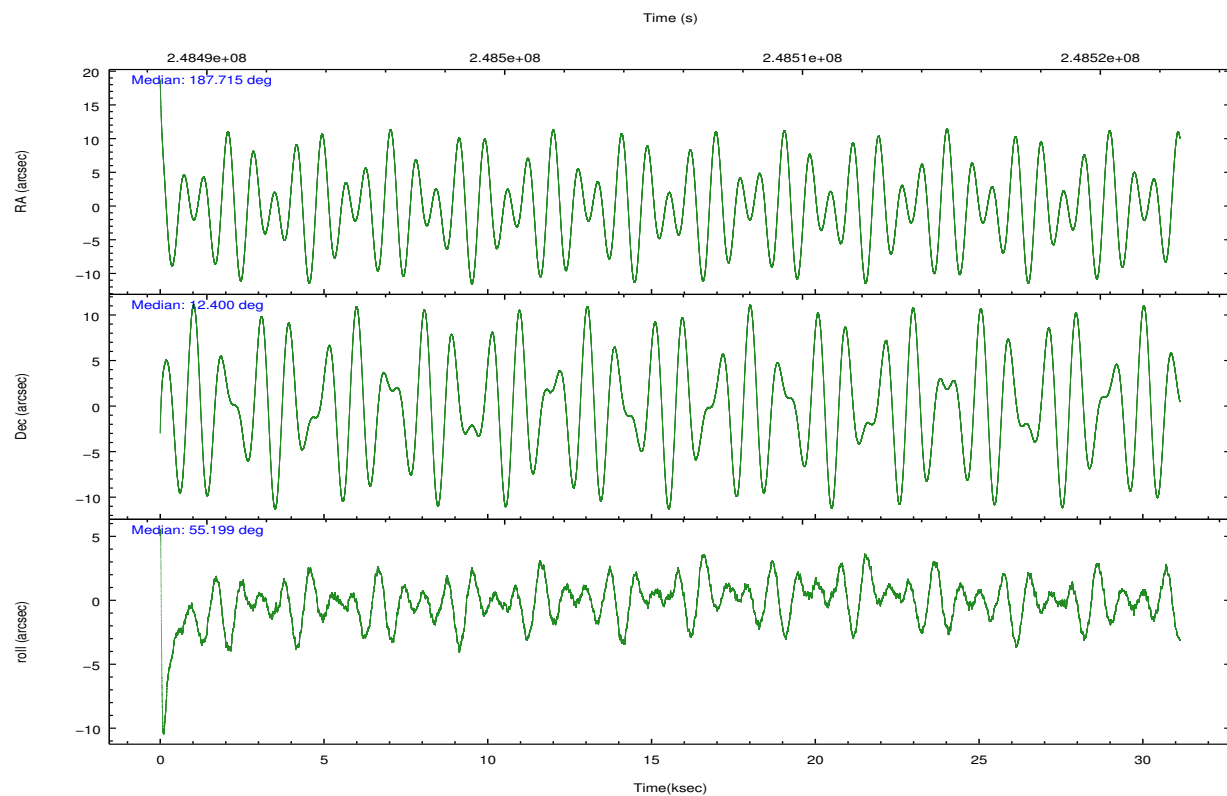
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 |
|----------------|--------|--------|--------|--------|
| grade 0 events | 133403 | 191486 | 205451 | 436569 |
| | 37% | 45% | 43% | 58% |
| grade 1 events | 761 | 870 | 1325 | 4292 |
| | 0% | 0% | 0% | 0% |
| grade 2 events | 19027 | 25640 | 25276 | 48048 |
| | 5% | 6% | 5% | 6% |
| grade 3 events | 6327 | 8497 | 8384 | 15226 |
| | 1% | 2% | 1% | 2% |
| grade 4 events | 6122 | 8269 | 8448 | 14963 |
| | 1% | 1% | 1% | 2% |
| grade 5 events | 7817 | 8954 | 7595 | 12707 |
| | 2% | 2% | 1% | 1% |
| grade 6 events | 6682 | 8769 | 7704 | 12920 |
| | 1% | 2% | 1% | 1% |
| grade 7 events | 179160 | 172199 | 204639 | 200175 |
| | 49% | 40% | 43% | 26% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-0123 | ACIS-0123 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 187.712927 | 187.71517629998 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 12.373119 | 12.40042904034853 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 54.998567 | 55.20677789659214 | [s] Primary exposure time | 0.000000 | 3.1 |
| [mm] SIM focus pos | -0.782348 | -0.7809083437167272 | | | |
| [mm] SIM defocus | 0 | 0.001439871863259334 | | | |
| [mm] SIM translation stage pos | -231.592463 | -231.5986110572947 | | | |
| [mm] SIM translation stage offset | -2 | -1.993841945634955 | | | |
| [s] Observation start time (MET) | 248490117.184000 | 248488883.03227 | | | |
| Observation start date | 2005-11-16T01:00:53 | 2005-11-16T00:41:23 | | | |
| [s] Observation end time (MET) | 248521117.184000 | 248522217.05881 | | | |
| Observation end date | 2005-11-16T09:37:33 | 2005-11-16T09:56:57 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



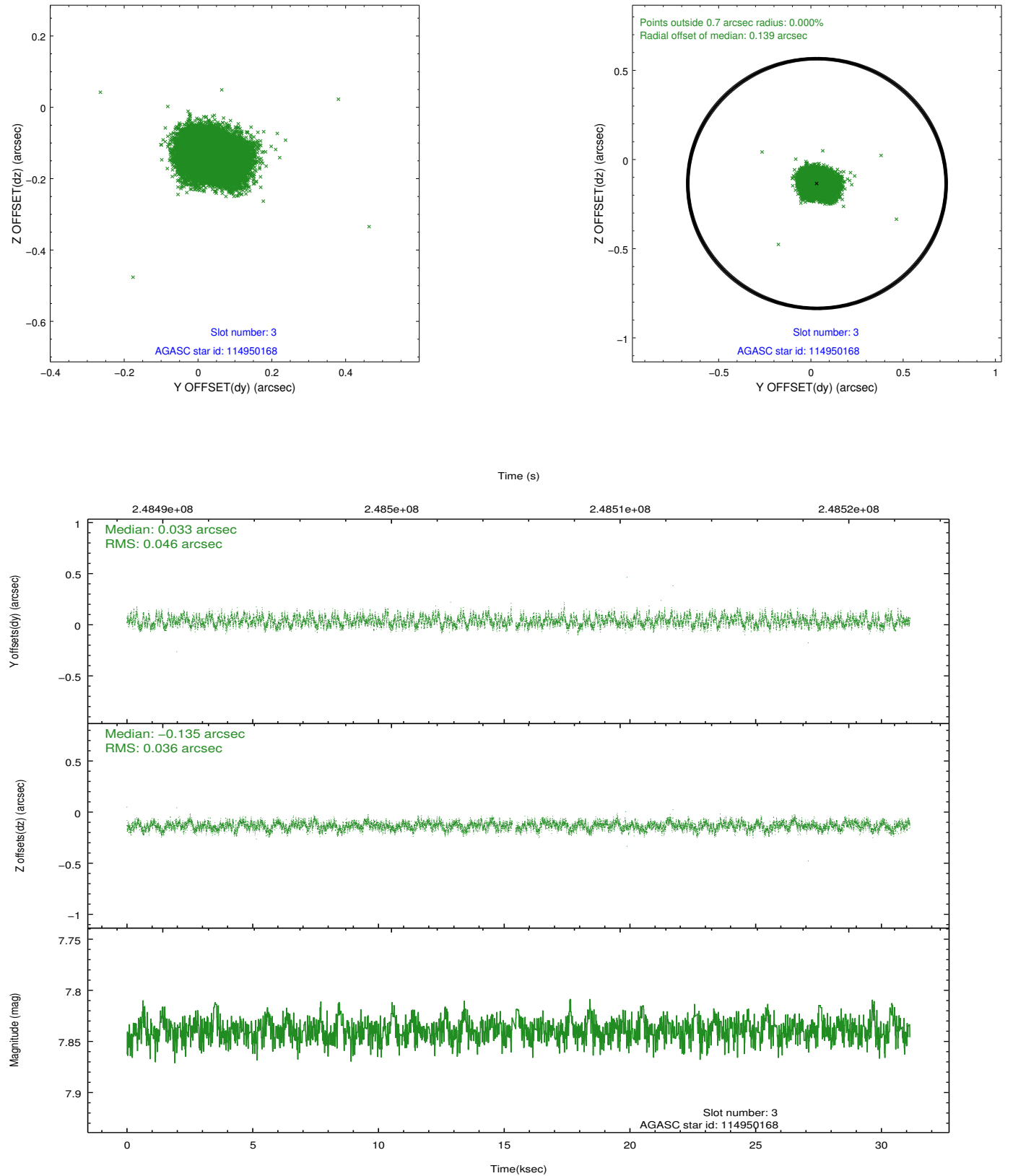


Slot Statistics

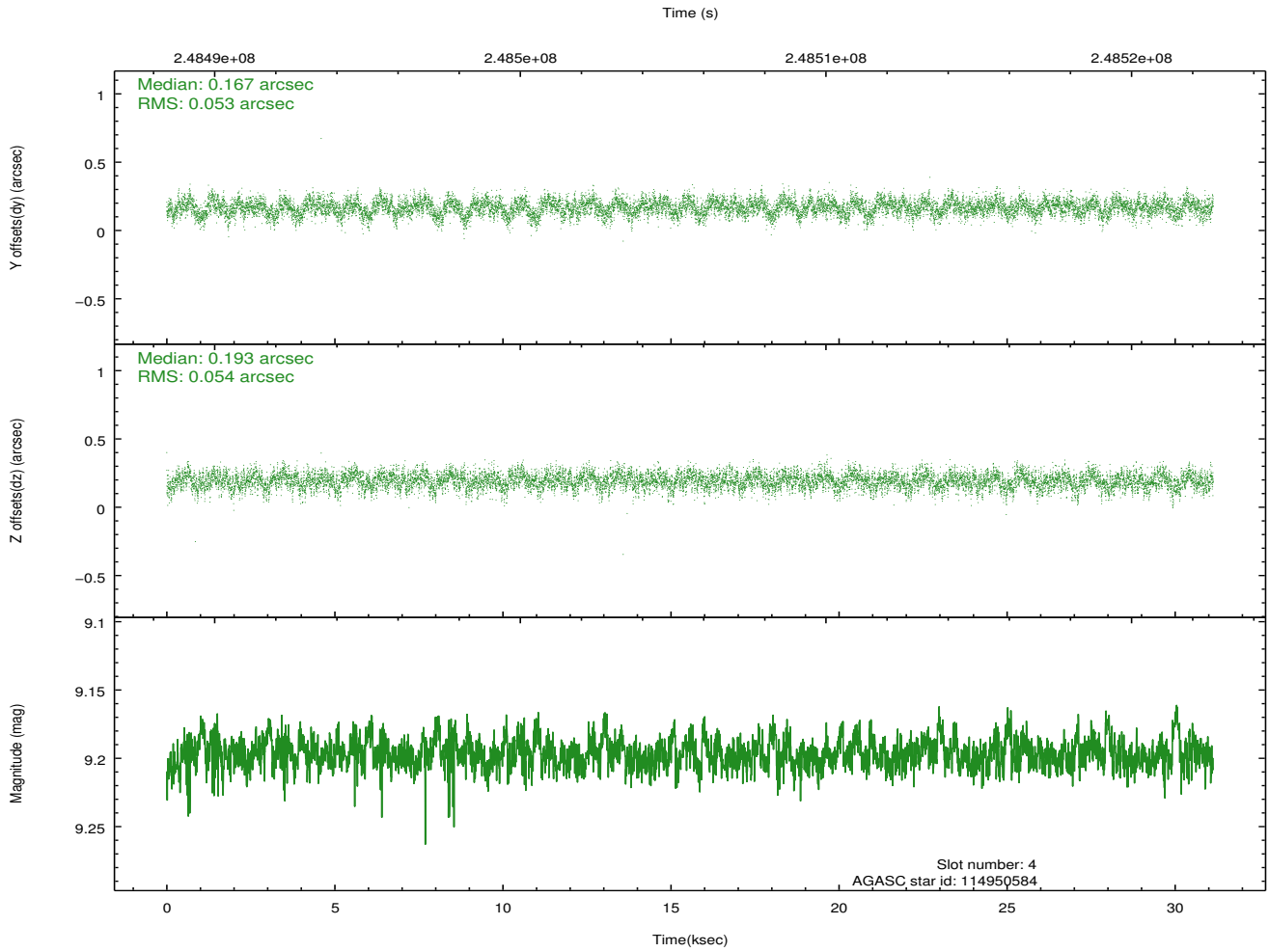
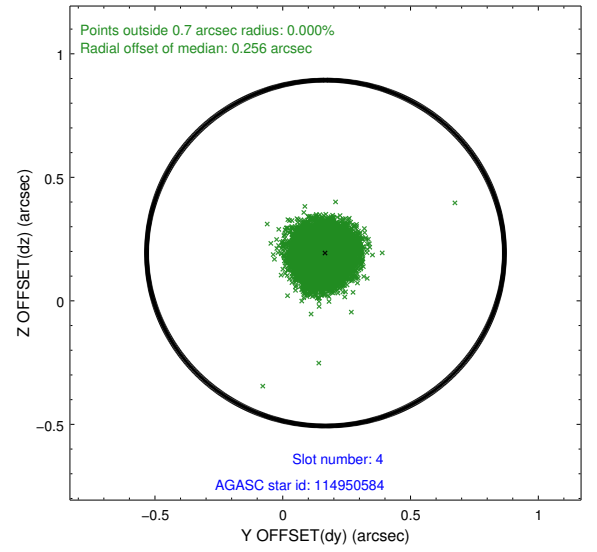
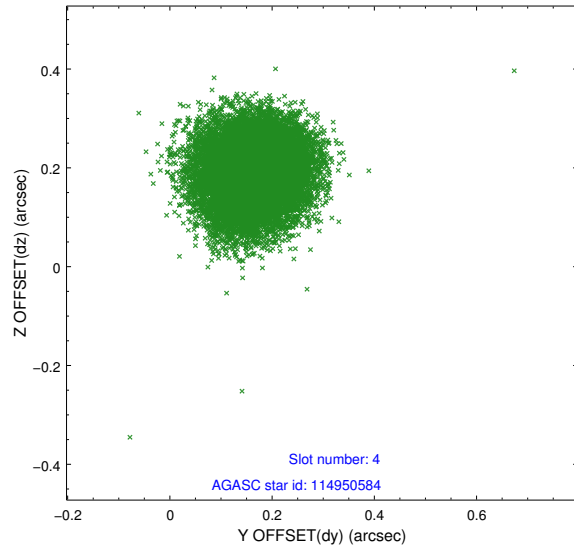
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-I-1 | 7.24 | 7594 | -0.024 | -0.043 | 0.018 | 0.029 | 0.000000 | 0.000000 | 933.88 | -875.49 |
| 1 | FID | ACIS-I-2 | 7.15 | 7593 | -0.136 | -0.016 | 0.011 | 0.018 | 0.000000 | 0.000000 | -760.39 | -881.74 |
| 2 | FID | ACIS-I-4 | 7.16 | 7593 | 0.062 | 0.126 | 0.012 | 0.018 | 0.000000 | 0.000000 | 2153.63 | 1024.75 |
| 3 | GUIDE | 114950168 | 7.84 | 15121 | 0.033 | -0.135 | 0.062 | 0.099 | 187.143398 | 12.117441 | -1902.17 | 1115.28 |
| 4 | GUIDE | 114950584 | 9.20 | 15177 | 0.167 | 0.193 | 0.080 | 0.130 | 187.487323 | 11.827248 | -2065.32 | -475.31 |
| 5 | GUIDE | 114952824 | 8.57 | 15186 | -0.189 | -0.115 | 0.066 | 0.107 | 187.703904 | 12.486727 | 316.45 | 261.05 |
| 6 | GUIDE | 114954440 | 9.19 | 15173 | 0.117 | -0.267 | 0.099 | 0.162 | 186.915066 | 12.219118 | -2060.78 | 1983.32 |
| 7 | GUIDE | 114955056 | 8.34 | 15186 | -0.125 | 0.322 | 0.066 | 0.102 | 187.914001 | 12.127854 | -317.11 | -1085.13 |

2.4 Star Slots

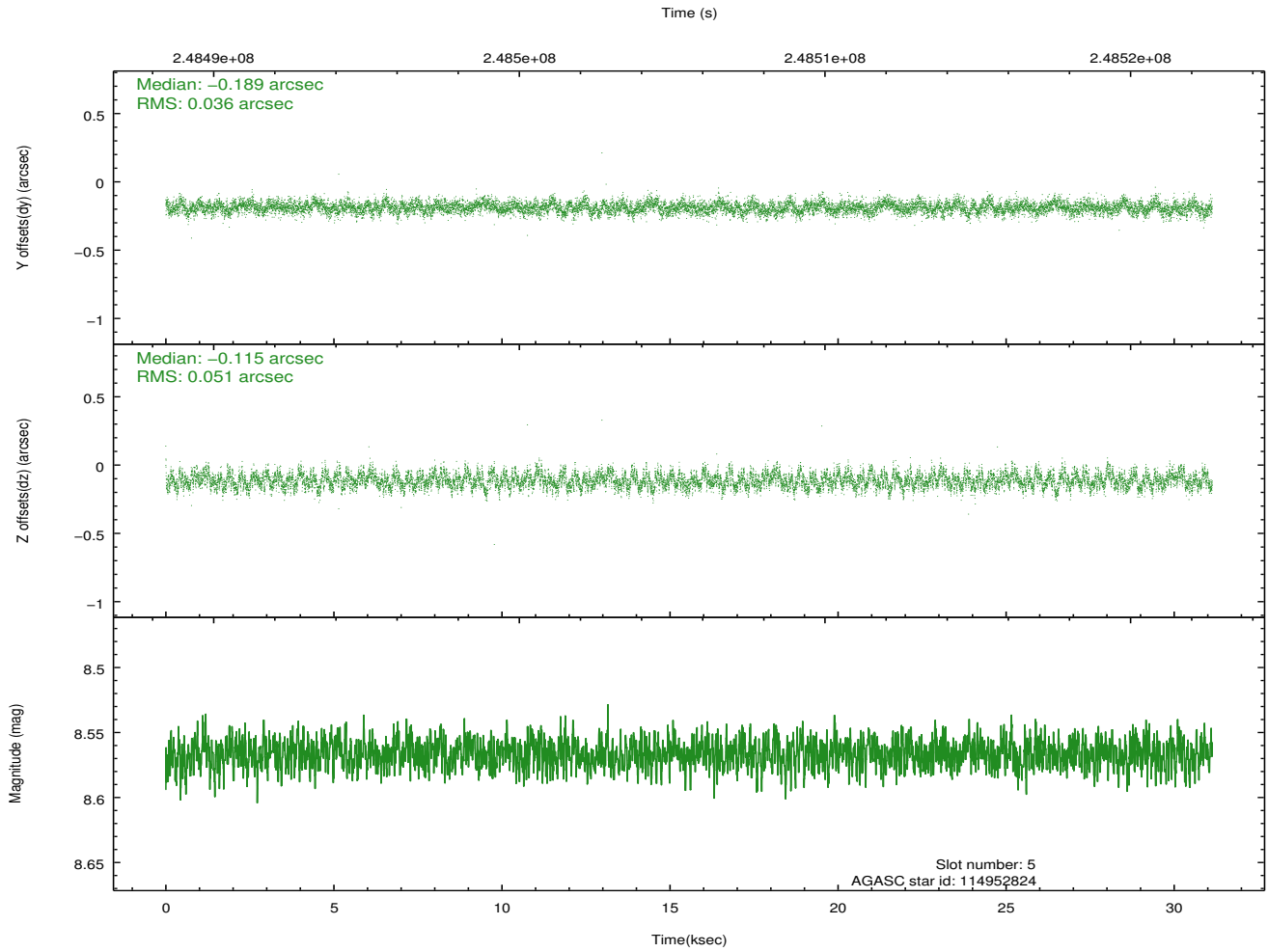
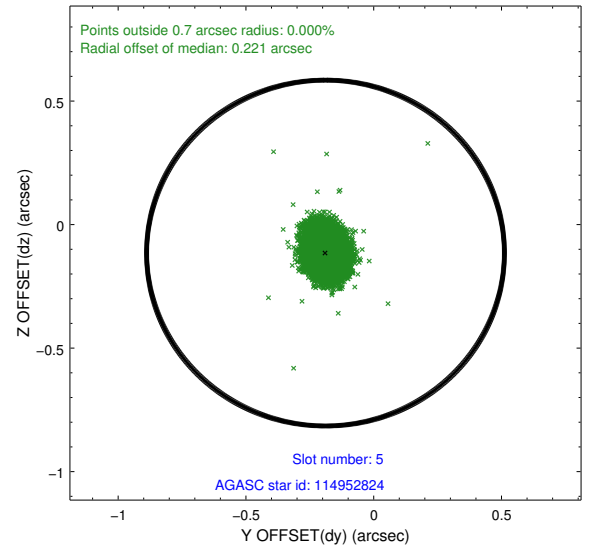
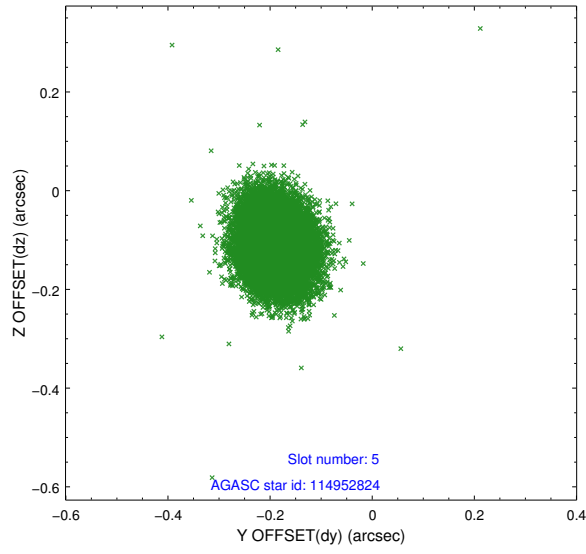
2.4.1 Slot 3



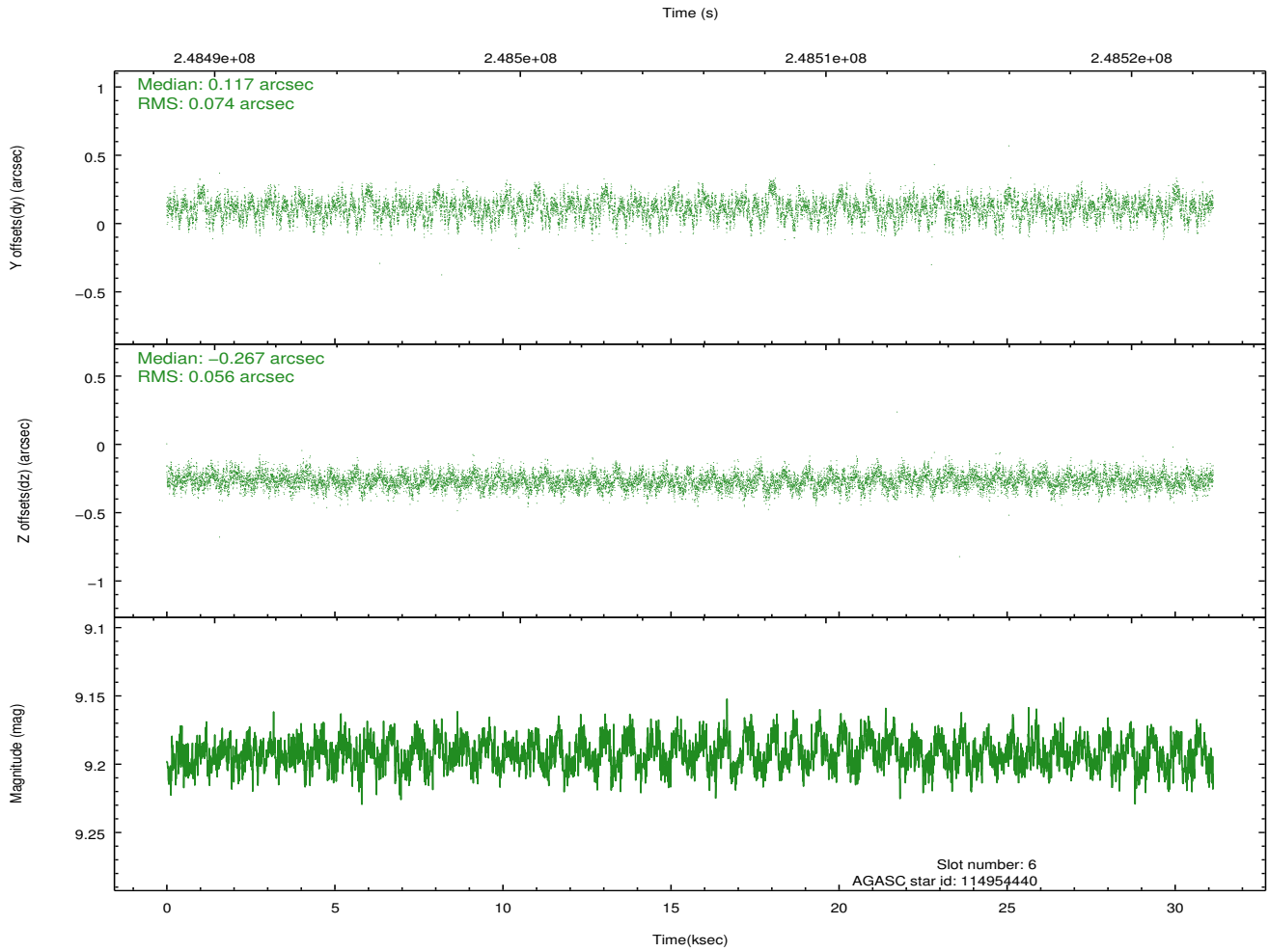
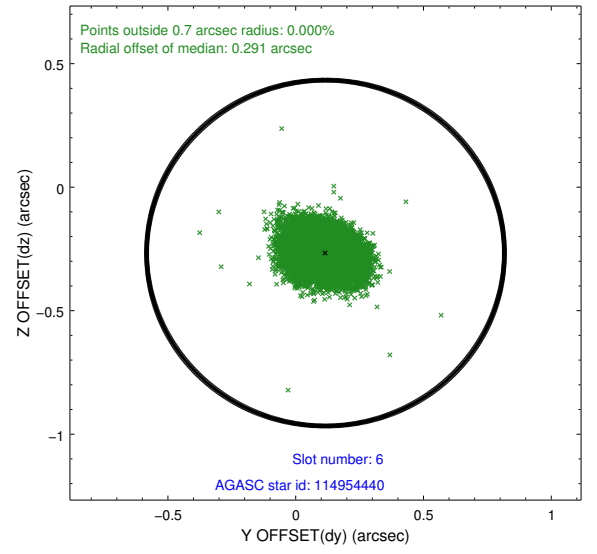
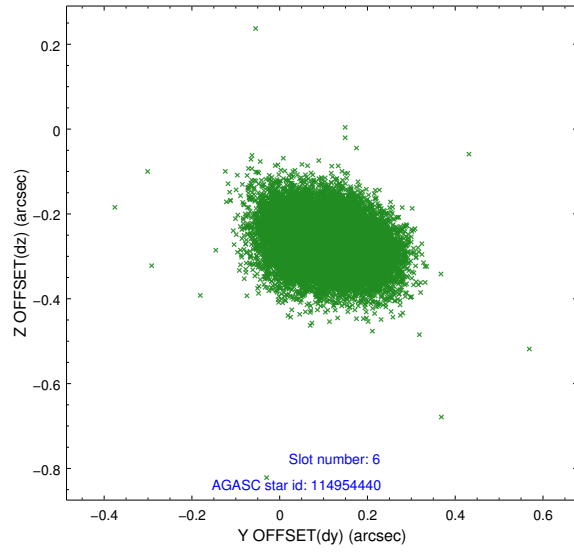
2.4.2 Slot 4



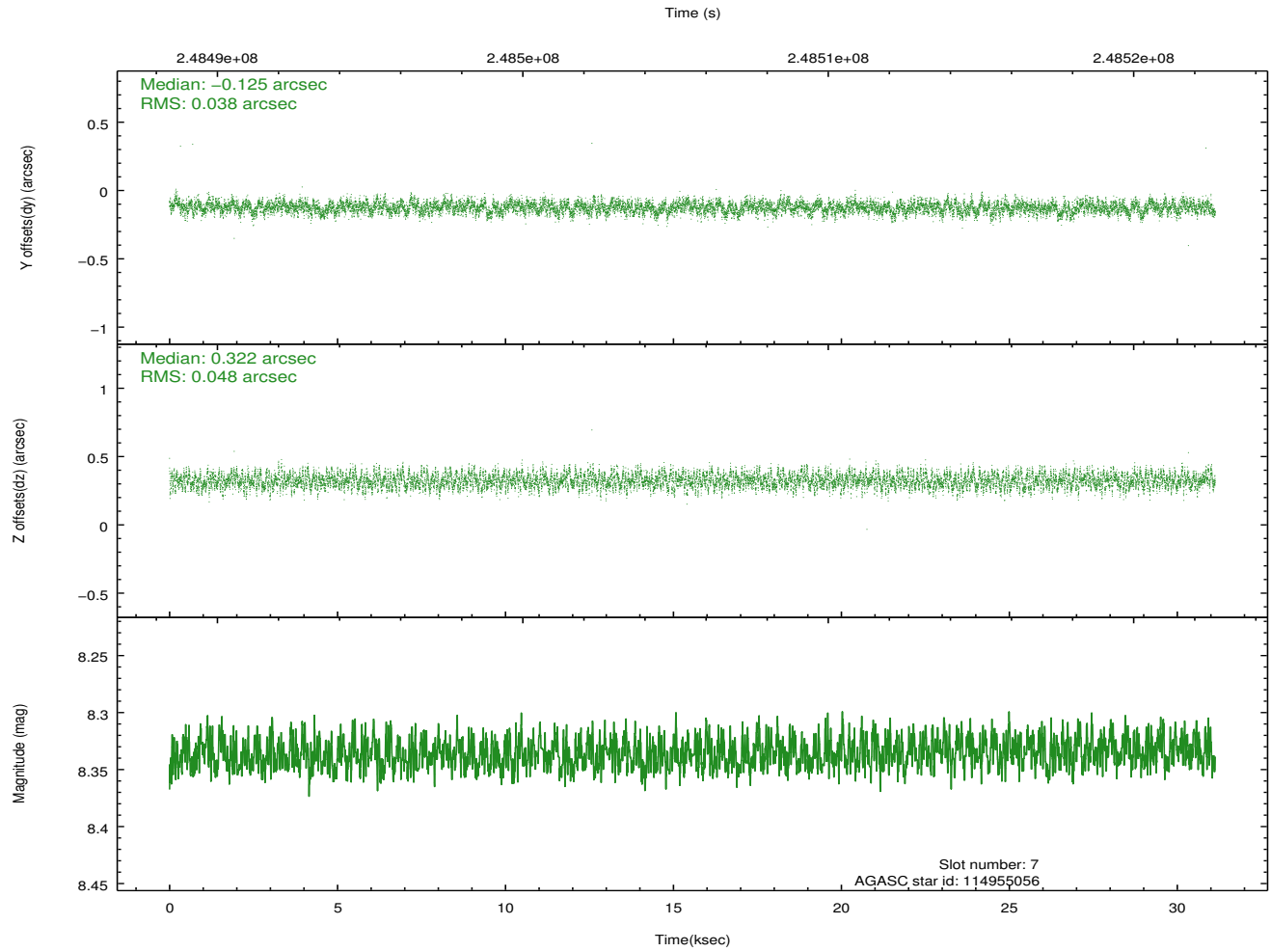
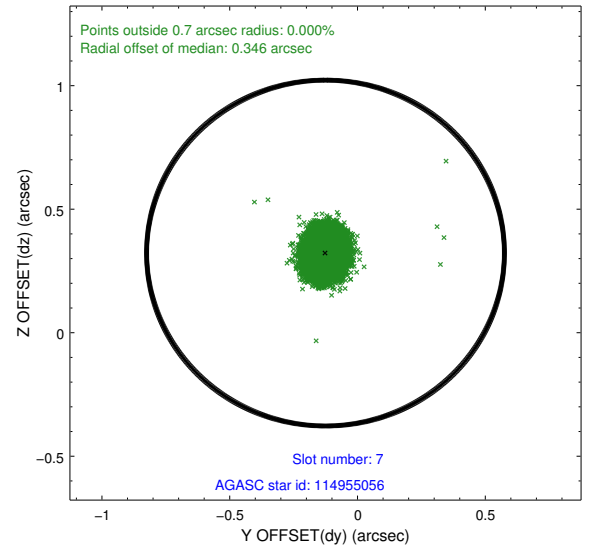
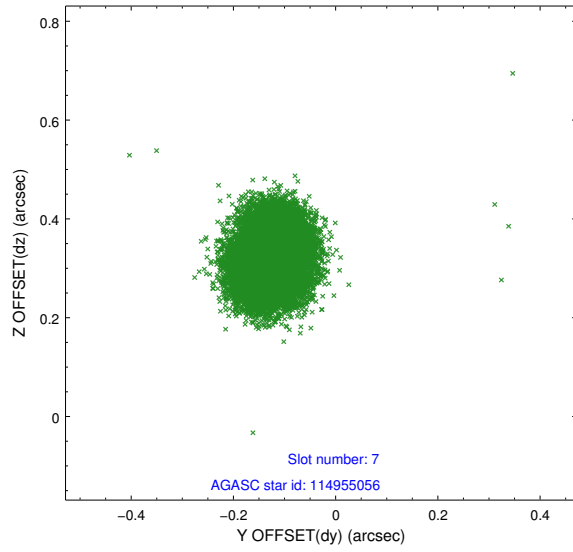
2.4.3 Slot 5



2.4.4 Slot 6

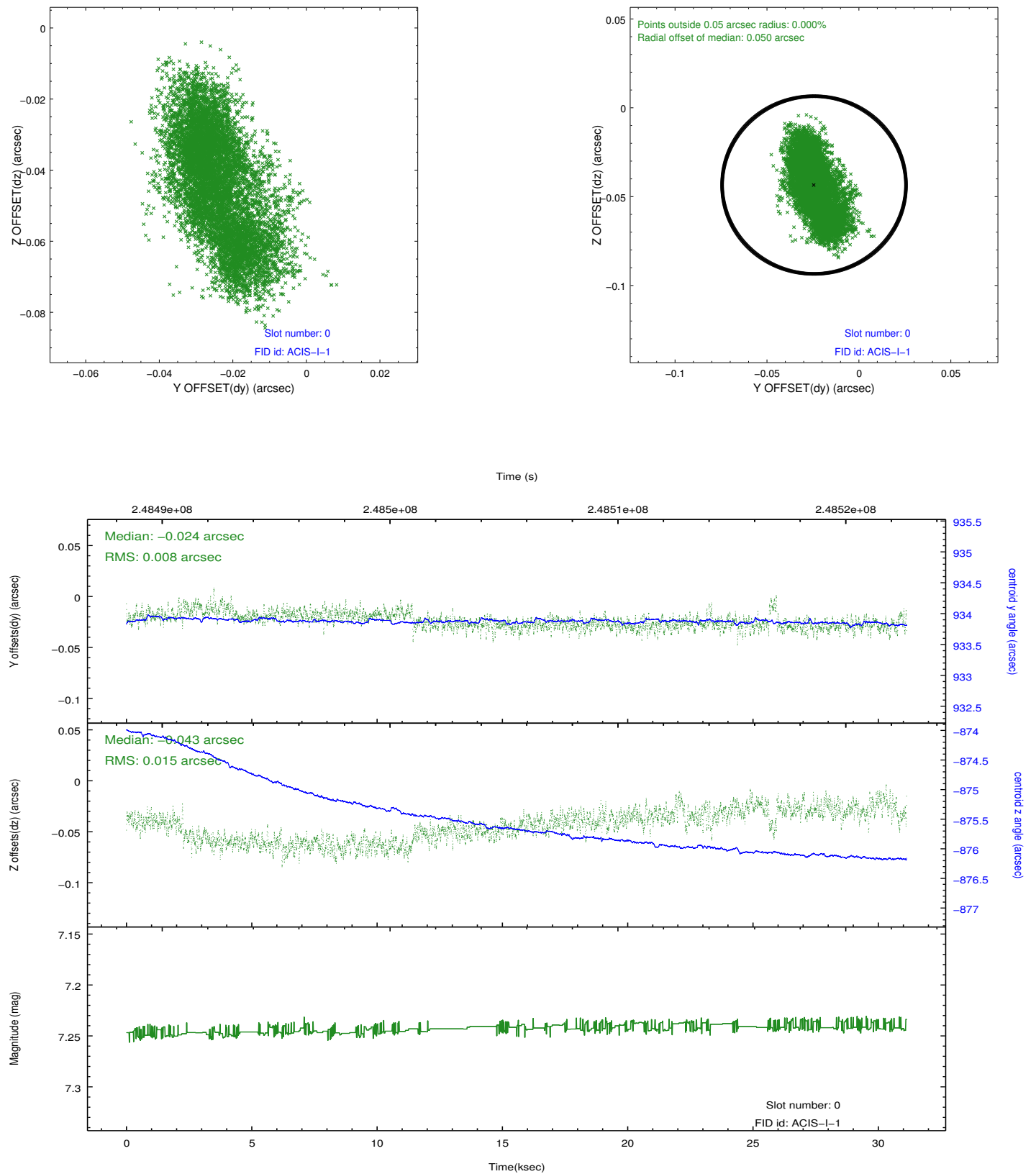


2.4.5 Slot 7

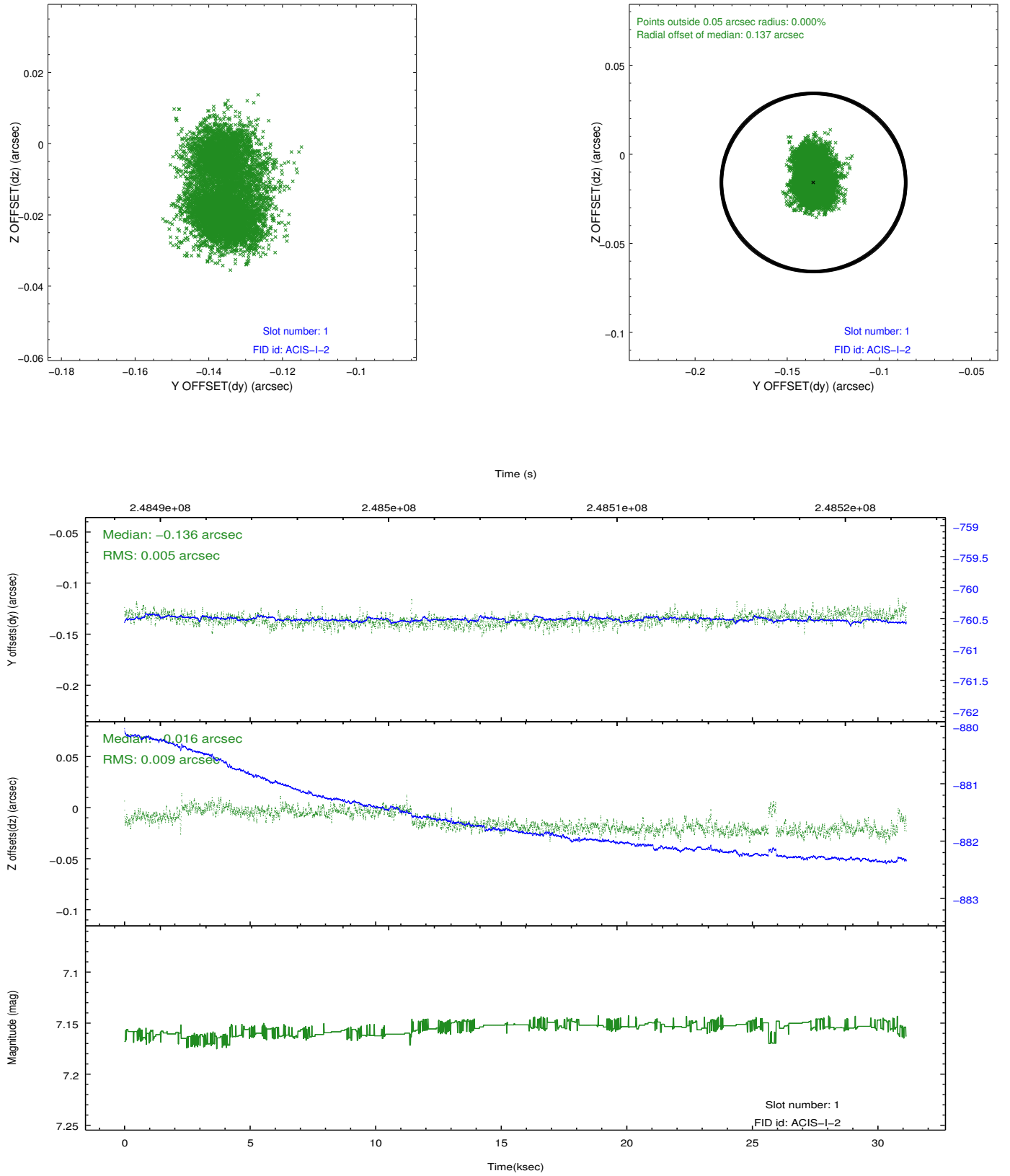


2.5 FID Slots

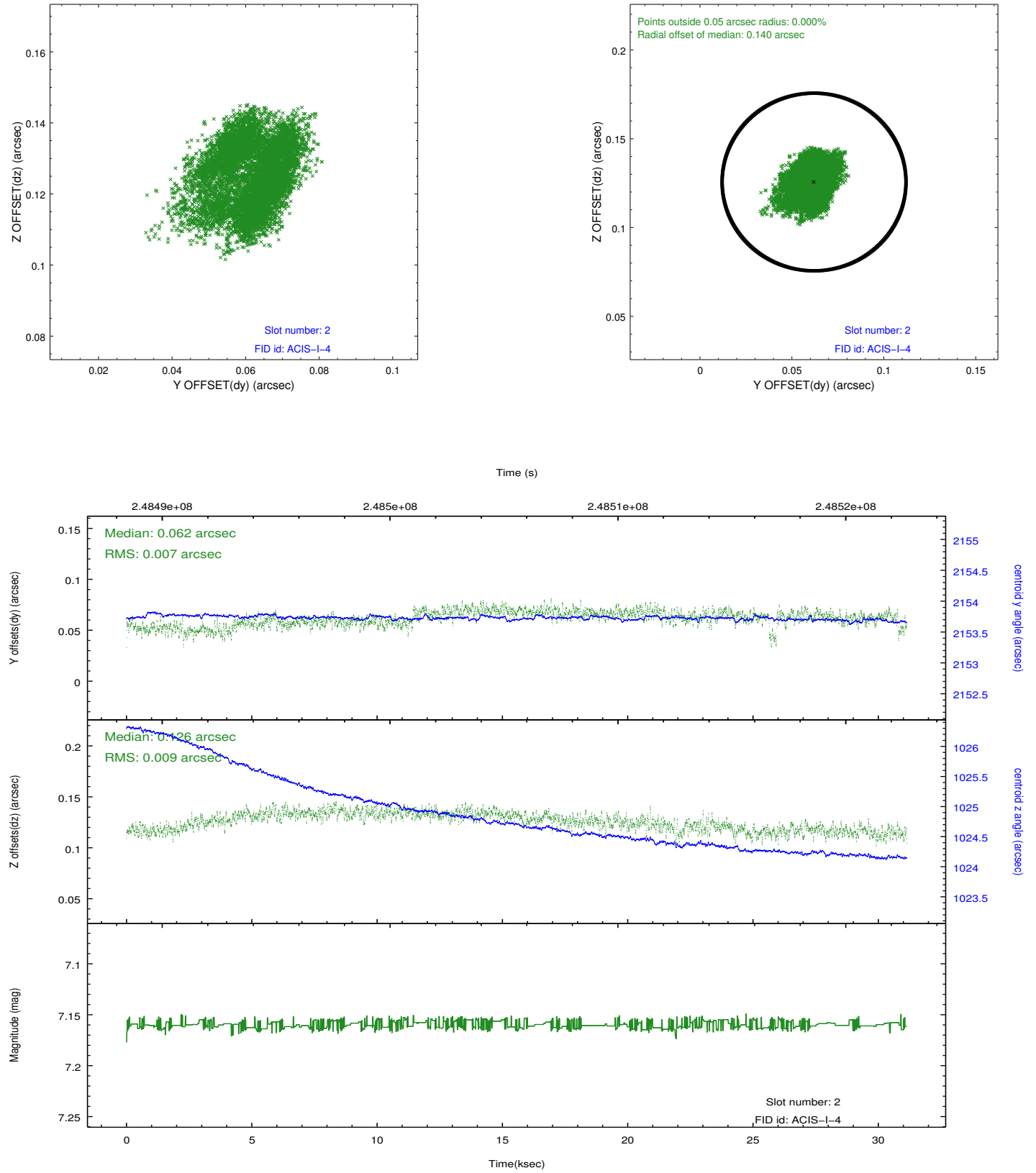
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2012.03.18 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 31.11767 |

A.2 Comments