

V&V Reference Report

L2 ASCDS Version : 7.6.7.1

Observation 6089 - L2 Version 002
Chandra X-Ray Center

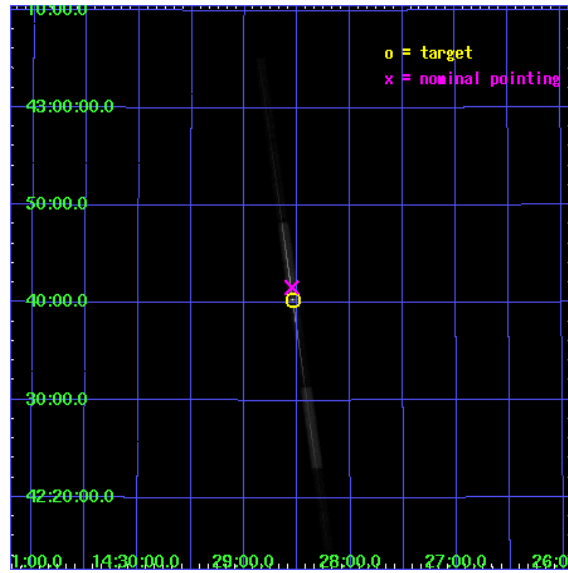
L2 Processing Date : Mar 18 2006

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1 Front

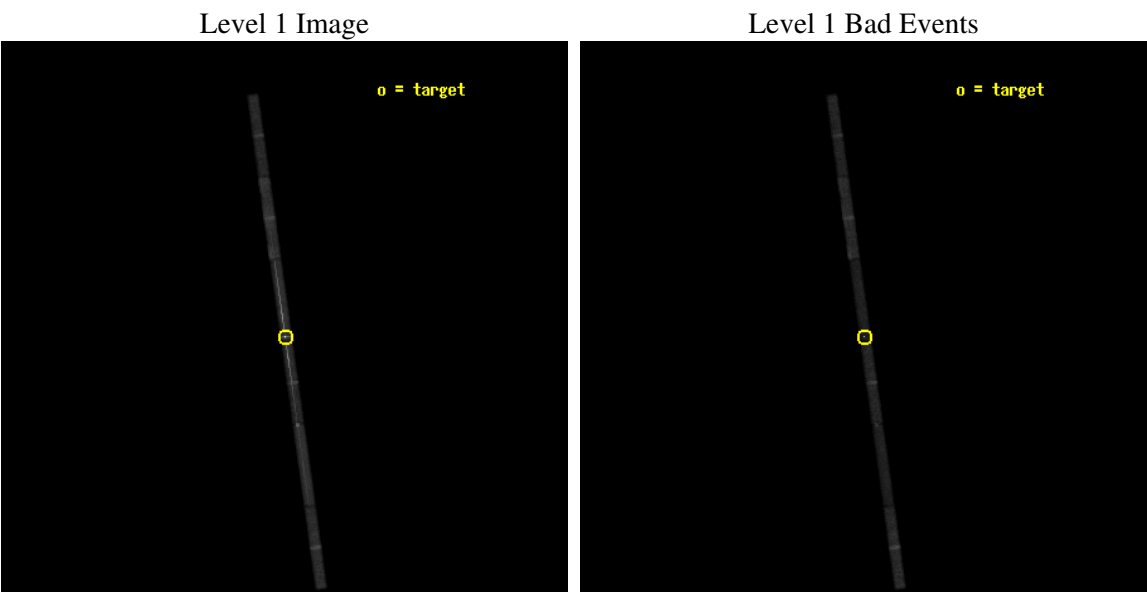
| | |
|----------|---------------------------------------|
| seq_num | 790098 |
| obs_id | 6089 |
| title | AO6 Calibration Observations of 3C273 |
| observer | Dr. CXC Calibration |
| object | 1H1426+428 |
| dtcycle | 0 |
| cycle | P |
| ra_targ | 217.135833 |
| dec_targ | 42.6725 |
| ra_nom | 217.13766035277 |
| dec_nom | 42.693508758716 |
| roll_nom | 261.93333304267 |
| revision | 2 |
| ontime | 42179.899281681 |
| livetime | 39843.907882404 |
| ontime4 | 42179.899281681 |
| ontime5 | 42179.899281681 |
| ontime6 | 42179.899281681 |
| ontime7 | 42179.899281681 |
| ontime8 | 42179.899281681 |
| ontime9 | 42179.899281681 |
| l2events | 183895 |



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



2.1.3 Parameters

| | |
|----------|---------------------|
| obi_num | 1 |
| ascdsver | 7.6.7.1 |
| caldbver | 3.2.1 |
| date | 2006-03-18T21:50:32 |
| revision | 2 |

| | |
|----------------|-----------------|
| sched_exp_time | 42000.000000 |
| ontime | 42399.600842327 |
| ontime4 | 42399.600842327 |
| ontime5 | 42399.600842327 |
| ontime6 | 42399.600842327 |
| ontime7 | 42399.600842327 |
| ontime8 | 42399.600842327 |
| ontime9 | 42400.341882348 |
| l1events | 463979 |

2.1.4 Events

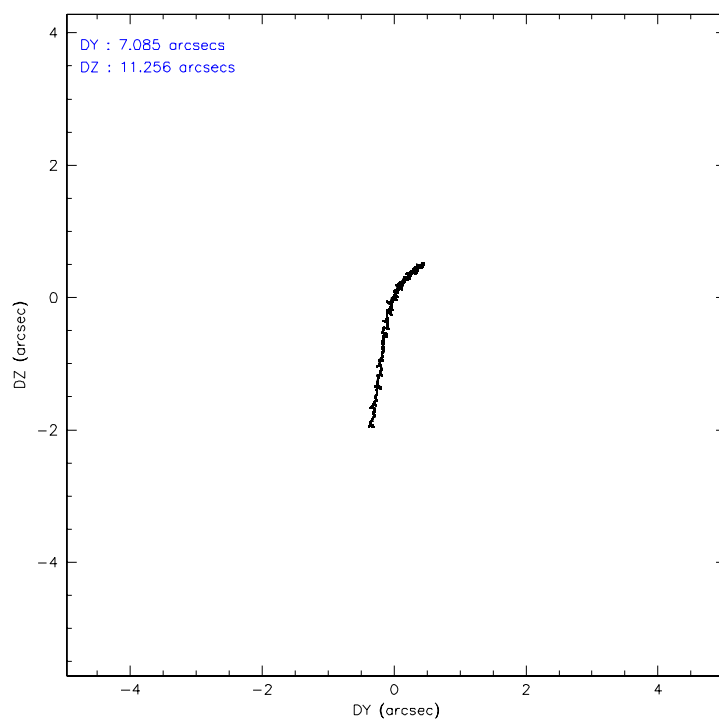
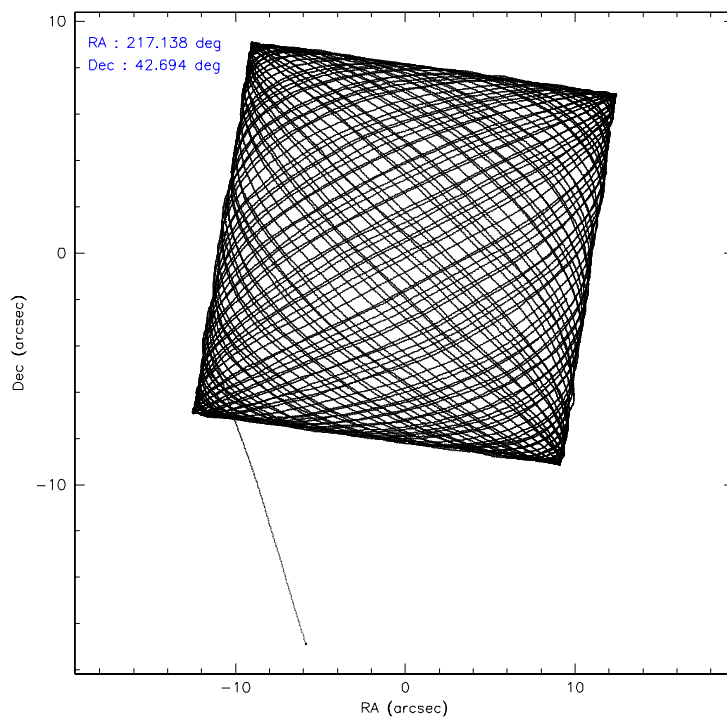
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|--------|-------|-------|
| level 1 events | 57745 | 67494 | 78495 | 141286 | 72336 | 46623 |
| rejected events | 50600 | 33185 | 43800 | 39032 | 54762 | 39924 |
| rejected % | 87% | 49% | 55% | 27% | 75% | 85% |

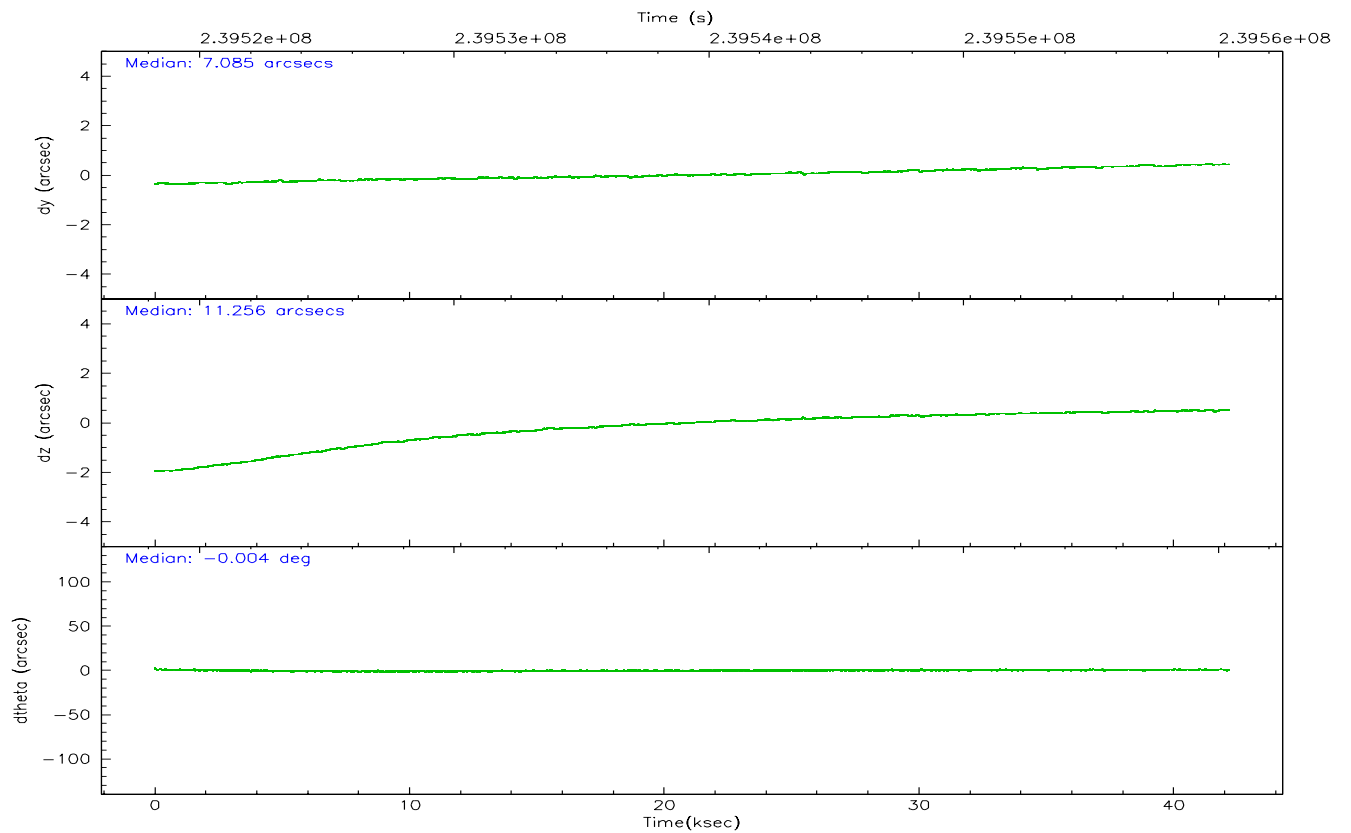
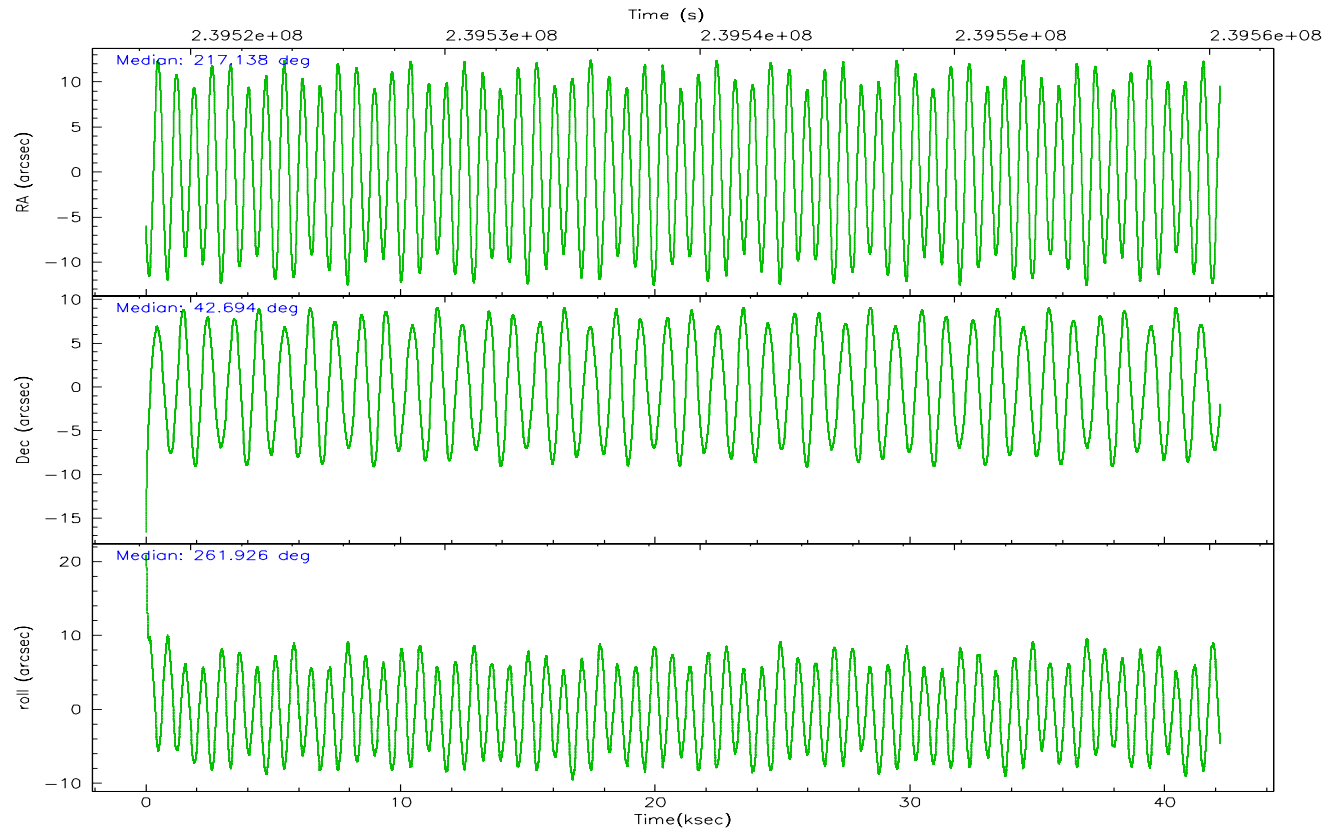
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 2980 | 5666 | 25695 | 21909 | 6280 | 2803 |
| | 5% | 8% | 32% | 15% | 8% | 6% |
| grade 1 events | 31 | 338 | 51 | 695 | 36 | 15 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 1395 | 9045 | 3786 | 25852 | 2863 | 1037 |
| | 2% | 13% | 4% | 18% | 3% | 2% |
| grade 3 events | 902 | 2097 | 1786 | 11104 | 2270 | 978 |
| | 1% | 3% | 2% | 7% | 3% | 2% |
| grade 4 events | 868 | 2191 | 1764 | 10787 | 2107 | 951 |
| | 1% | 3% | 2% | 7% | 2% | 2% |
| grade 5 events | 1638 | 4223 | 1683 | 7084 | 2202 | 1678 |
| | 2% | 6% | 2% | 5% | 3% | 3% |
| grade 6 events | 1034 | 15658 | 1779 | 32928 | 4132 | 962 |
| | 1% | 23% | 2% | 23% | 5% | 2% |
| grade 7 events | 48897 | 28276 | 41951 | 30927 | 52446 | 38199 |
| | 84% | 41% | 53% | 21% | 72% | 81% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | LETG | LETG | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | On-chip summing requested | N | N |
| Observation mode | POINTING | POINTING | Subarray requested | CUSTOM | 1/8 |
| Pointing RA | 217.123353 | 217.1376603527701 | Subarray start row | 113 | 113 |
| Pointing Dec | 42.718612 | 42.69350875871609 | Subarray row count | 128 | 128 |
| Pointing Roll | 261.786407 | 261.933333042672 | Alternating exposures requested | N | N |
| Window start time | 233971264.184000 | 233971264.184000 | Primary exposure time | 0.000000 | 0.7 |
| Window stop time | 241833664.184000 | 241833664.184000 | | | |
| SIM focus pos (mm) | -0.684267 | -0.6828225247311905 | | | |
| SIM defocus (mm) | 0 | 0.001444936568705701 | | | |
| SIM translation stage pos (mm) | -182.132523 | -182.139514760308 | | | |
| SIM translation stage offset (mm) | -8 | -7.993007822699838 | | | |
| Observation start time | 239518439.184000 | 239517390.23216 | | | |
| Observation start date | 2005-08-04T04:52:55 | 2005-08-04T04:36:30 | | | |
| Observation end time | 239560439.184000 | 239561247.42167 | | | |
| Observation end date | 2005-08-04T16:32:55 | 2005-08-04T16:47:27 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



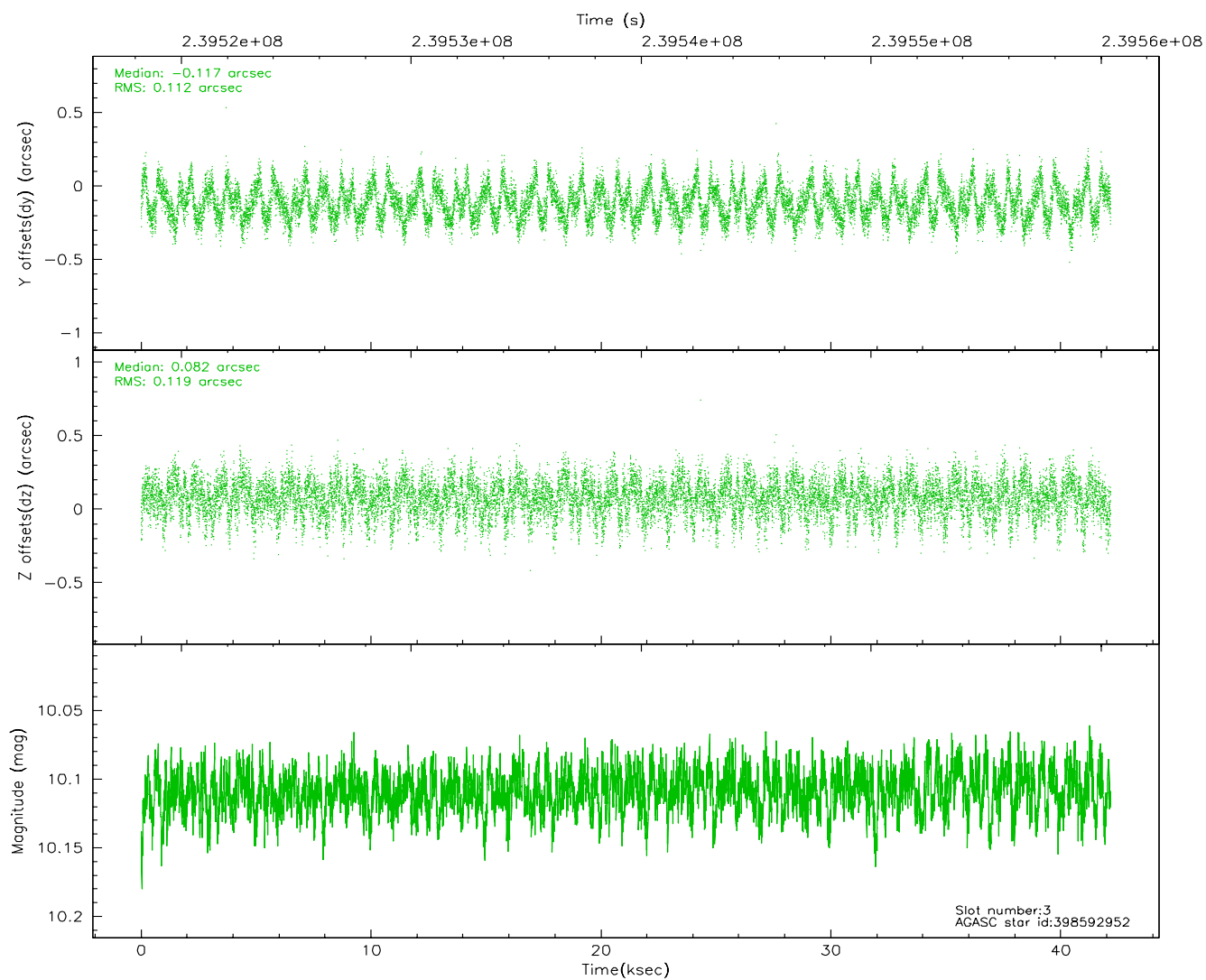
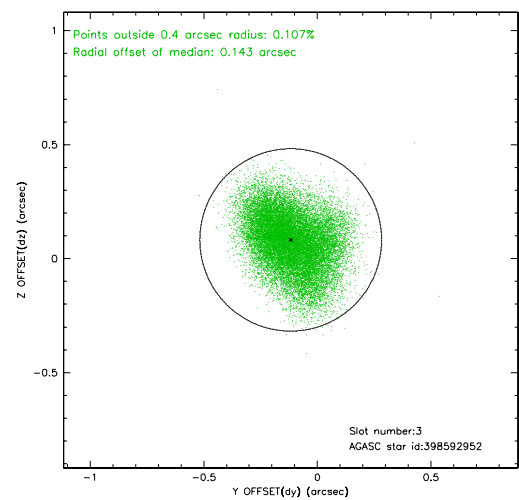
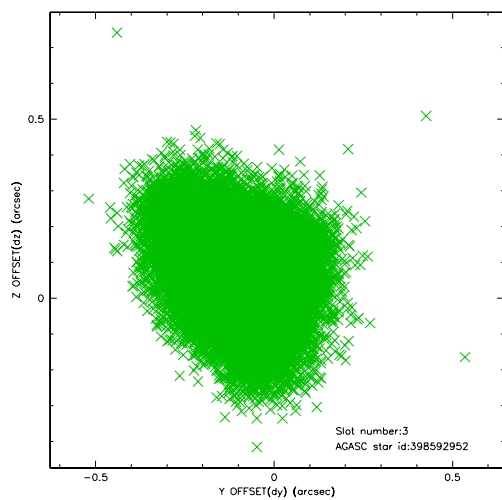


Slot Statistics

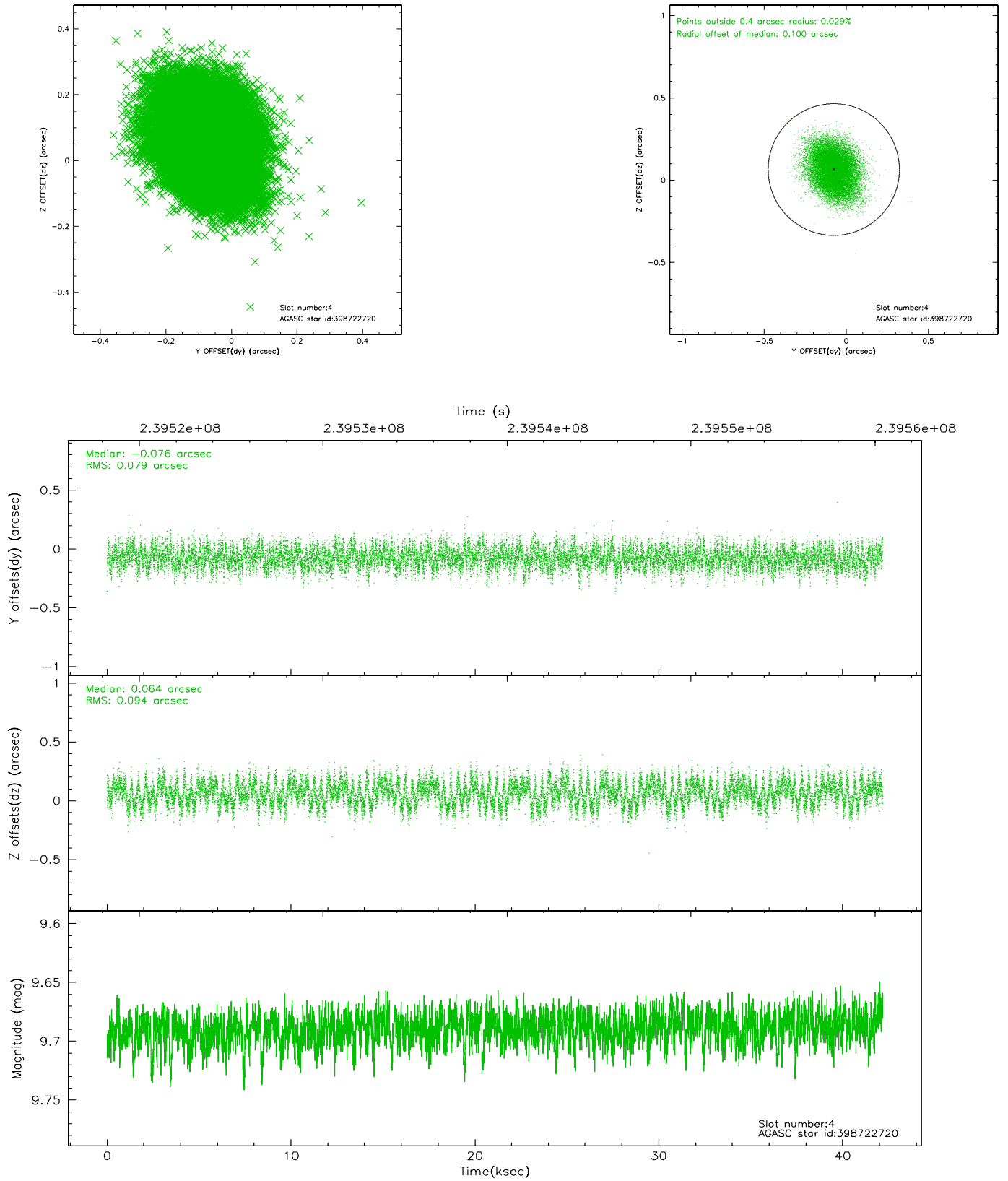
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|-------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.09 | 10287 | -0.060 | -0.121 | 0.026 | 0.047 | 0.000000 | 0.000000 | -759.35 | -1897.06 |
| 1 | FID | ACIS-S-4 | 7.18 | 10288 | 0.079 | 0.060 | 0.015 | 0.032 | 0.000000 | 0.000000 | 2154.07 | 11.56 |
| 2 | FID | ACIS-S-5 | 7.23 | 10288 | -0.053 | 0.068 | 0.023 | 0.042 | 0.000000 | 0.000000 | -1812.18 | 5.24 |
| 3 | GUIDE | 398592952 | 10.11 | 20555 | -0.117 | 0.082 | 0.176 | 0.278 | 216.343106 | 43.029643 | -823.97 | -2193.40 |
| 4 | GUIDE | 398722720 | 9.69 | 20555 | -0.076 | 0.064 | 0.131 | 0.208 | 218.042263 | 43.202045 | -2080.38 | 2135.92 |
| 5 | GUIDE | 398723464 | 9.05 | 20536 | 0.079 | -0.171 | 0.084 | 0.136 | 217.255519 | 42.514001 | 679.28 | 452.46 |
| 6 | GUIDE | 398725424 | 8.78 | 20568 | -0.067 | 0.109 | 0.104 | 0.162 | 217.673023 | 42.542871 | 413.28 | 1533.26 |
| 7 | GUIDE | 398197864 | 9.37 | 20554 | 0.182 | -0.086 | 0.107 | 0.175 | 216.112574 | 42.237784 | 2083.09 | -2420.87 |

2.4 Star Slots

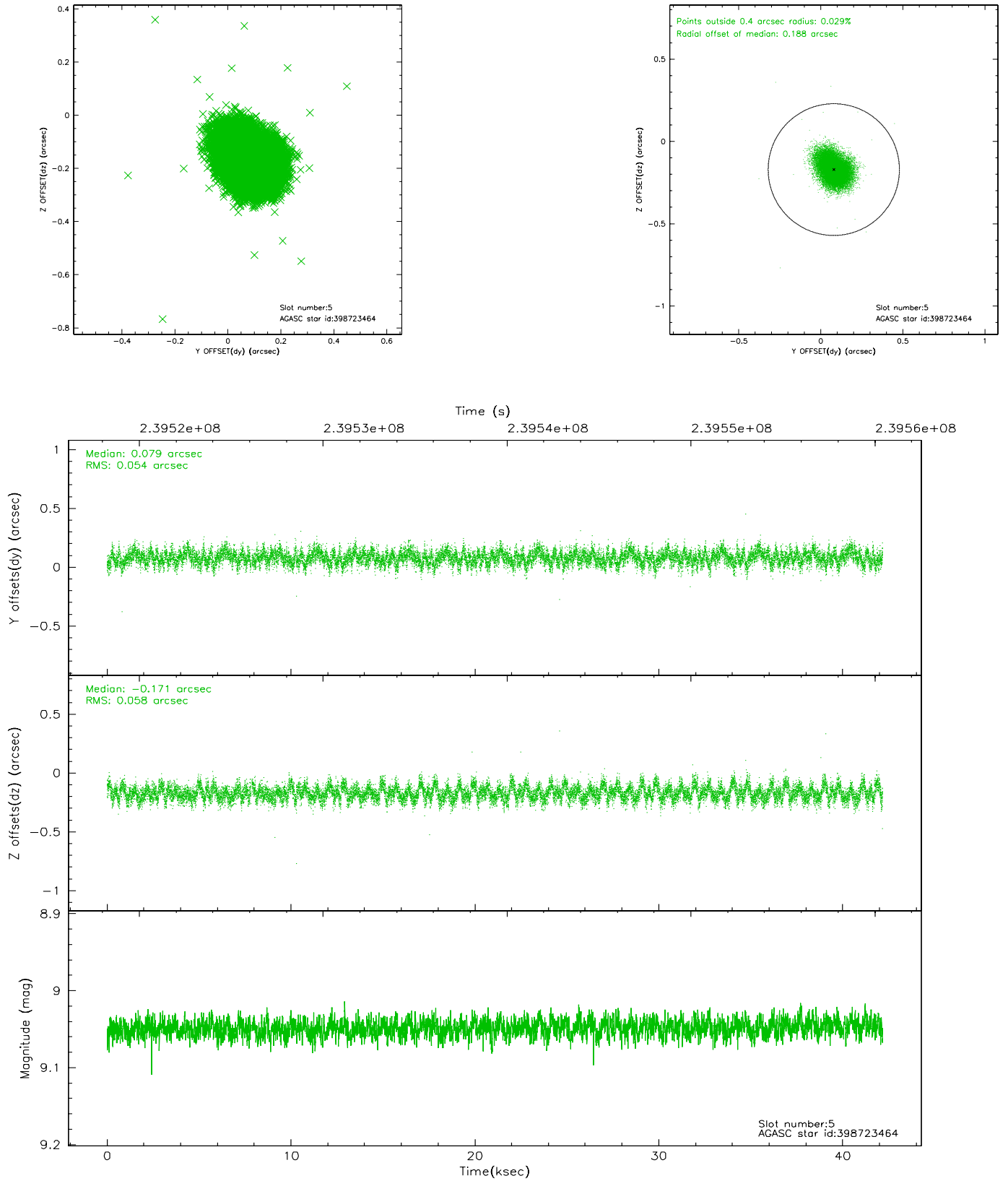
2.4.1 Slot 3



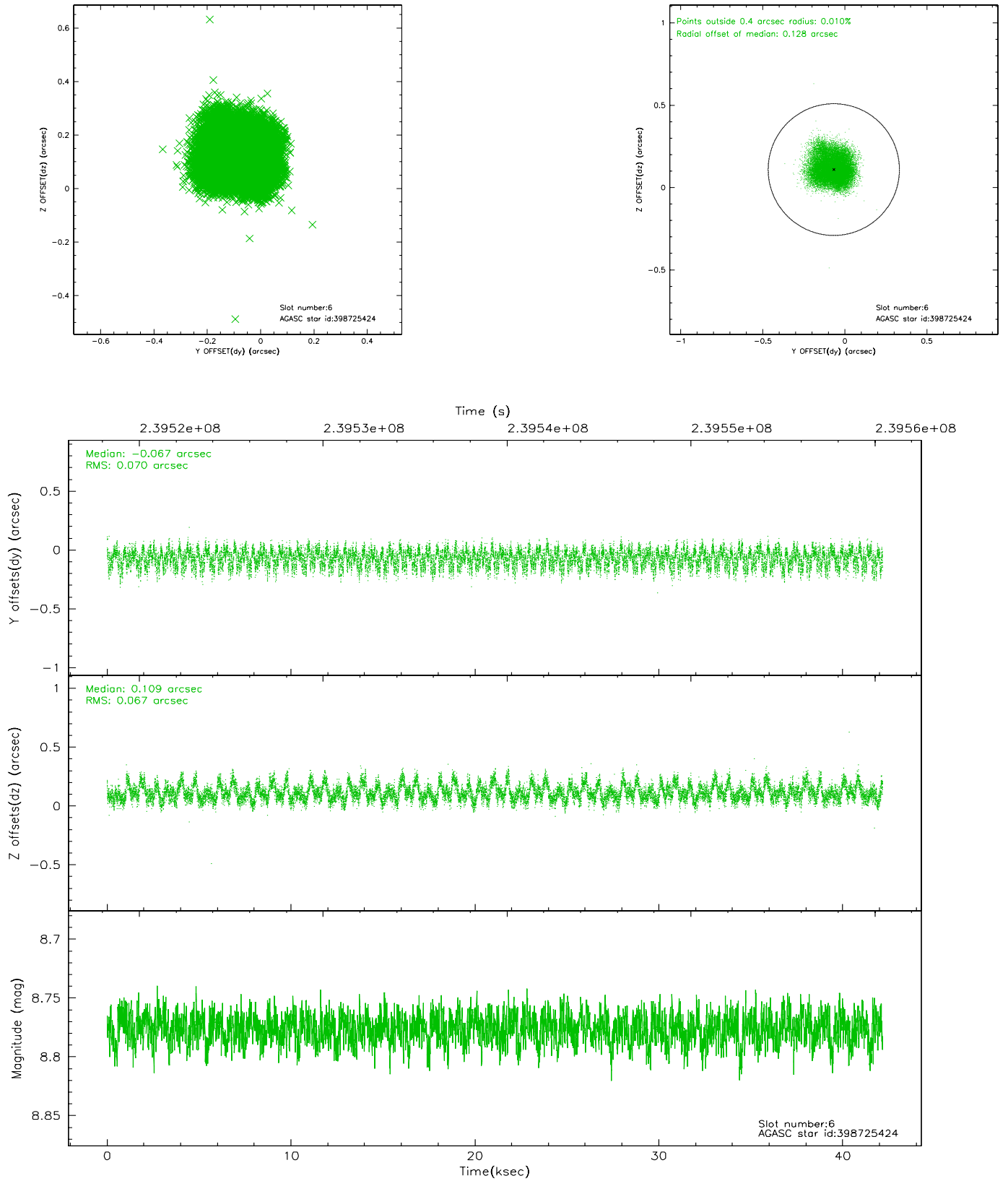
2.4.2 Slot 4



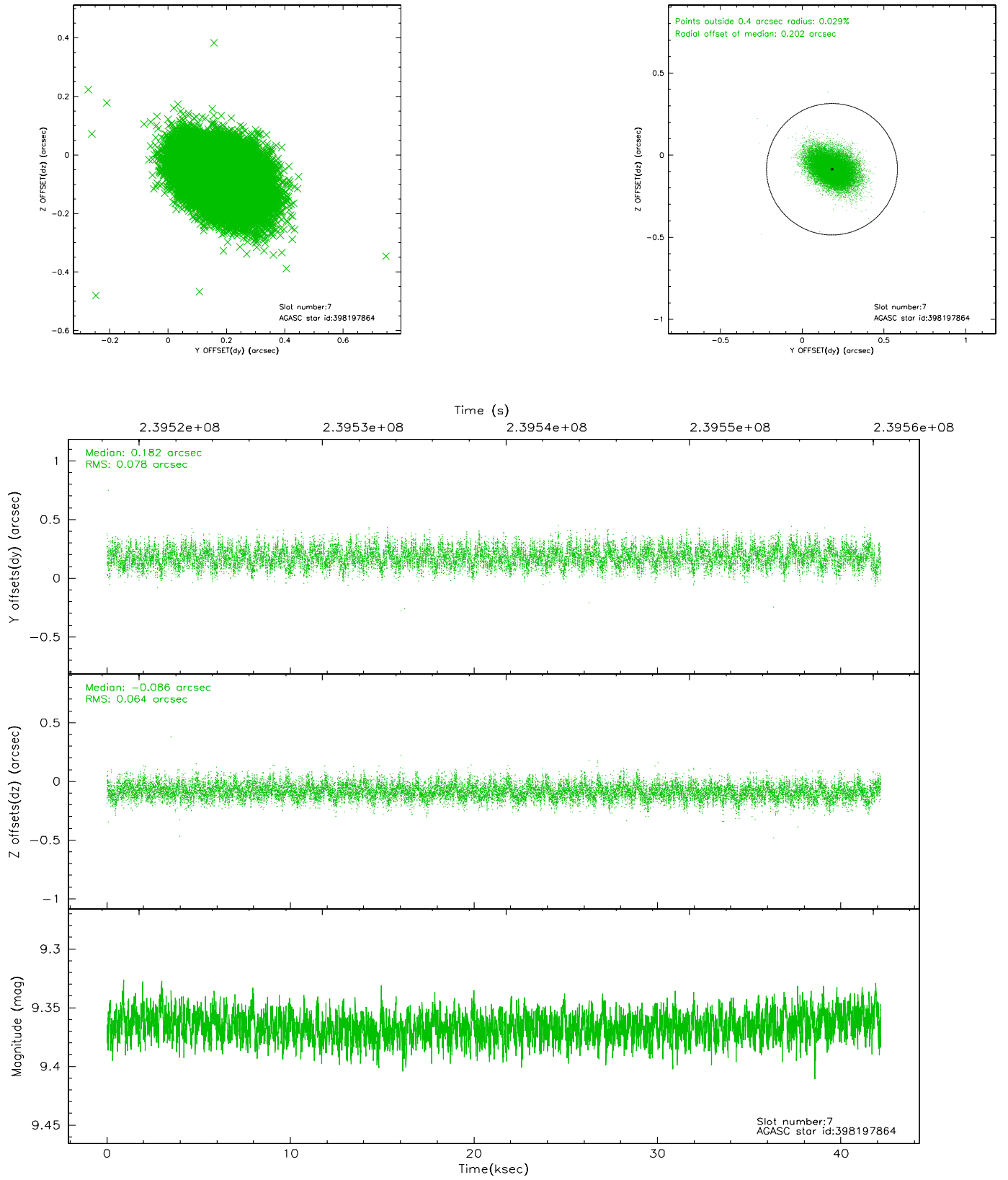
2.4.3 Slot 5



2.4.4 Slot 6

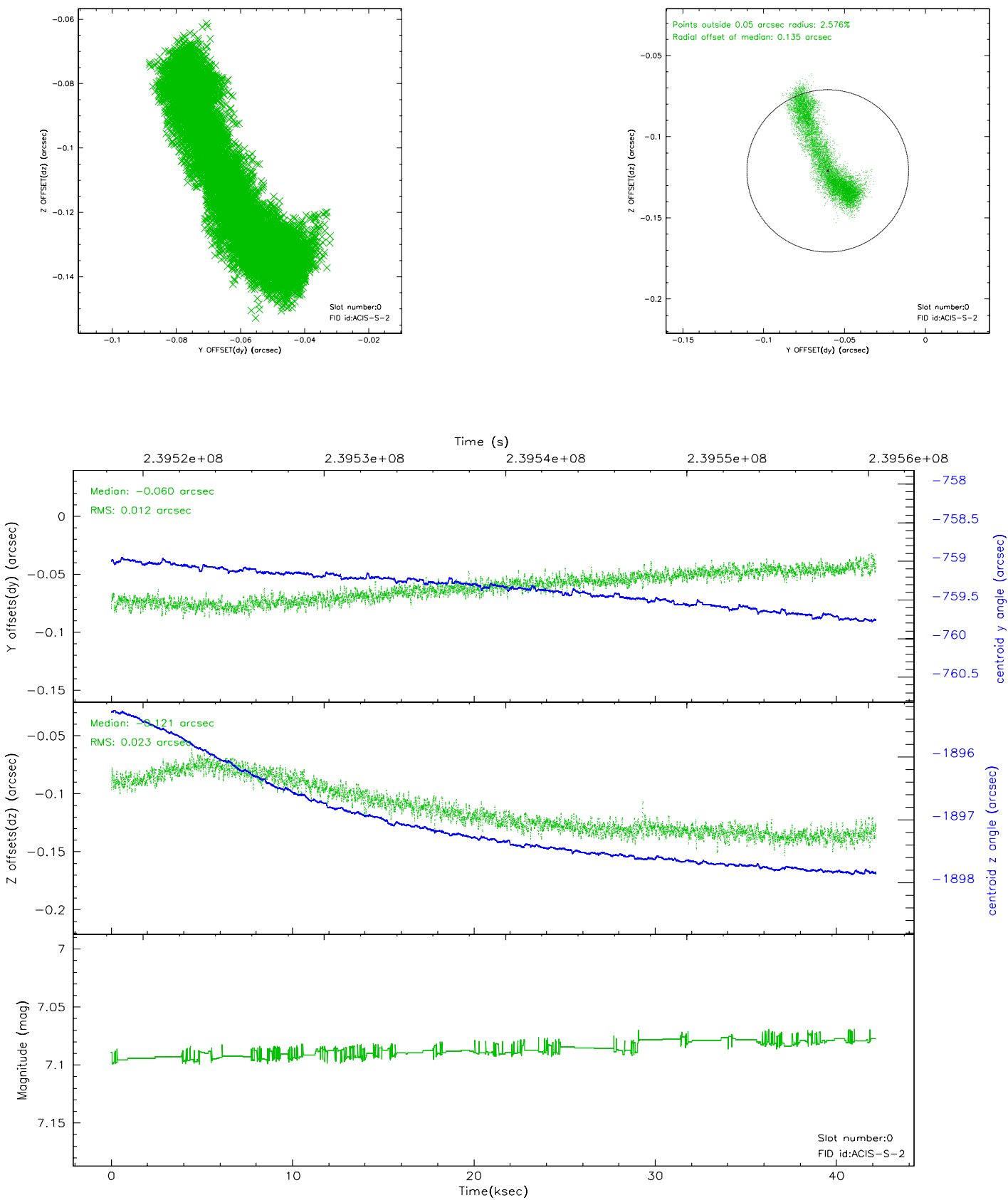


2.4.5 Slot 7

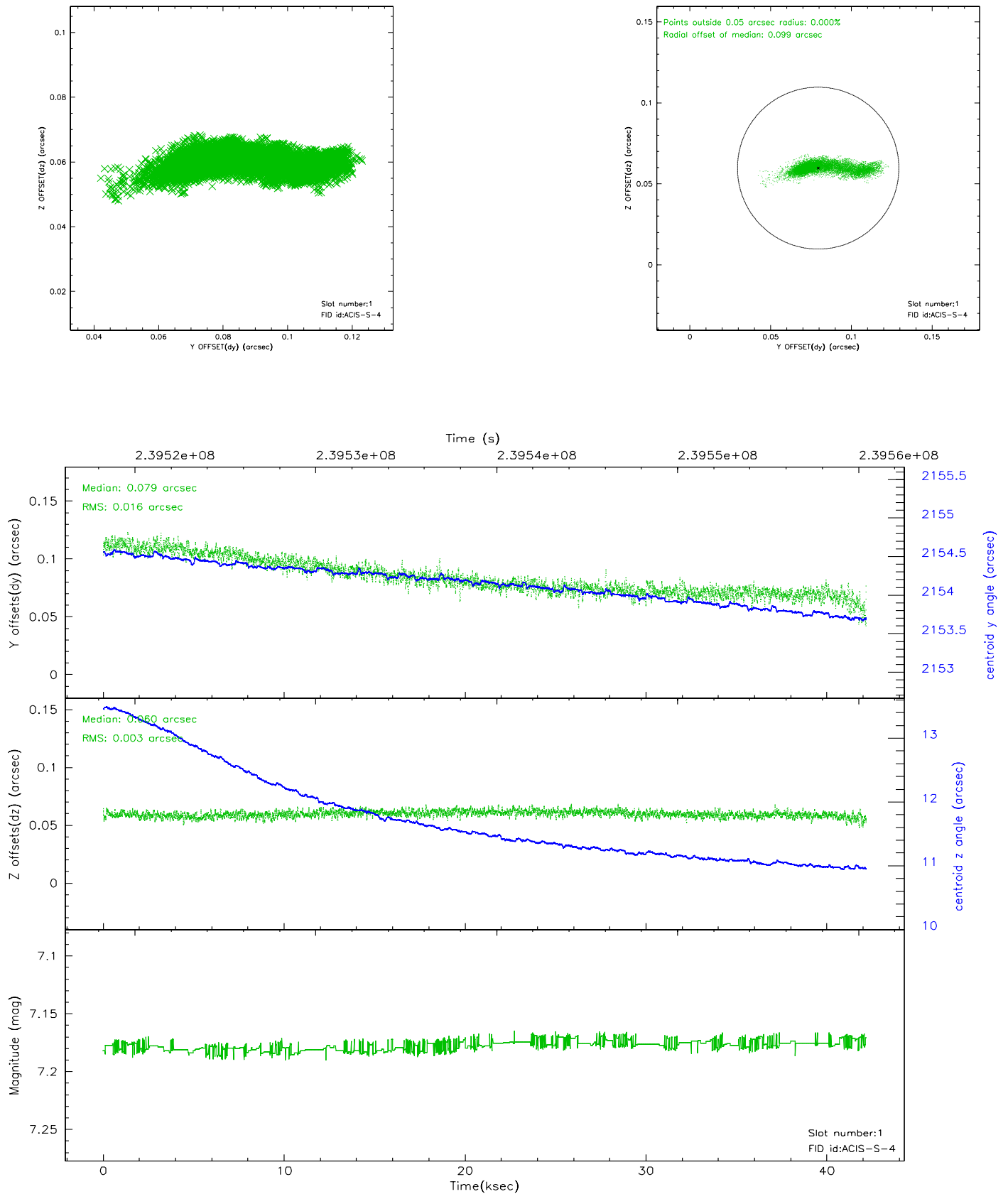


2.5 FID Slots

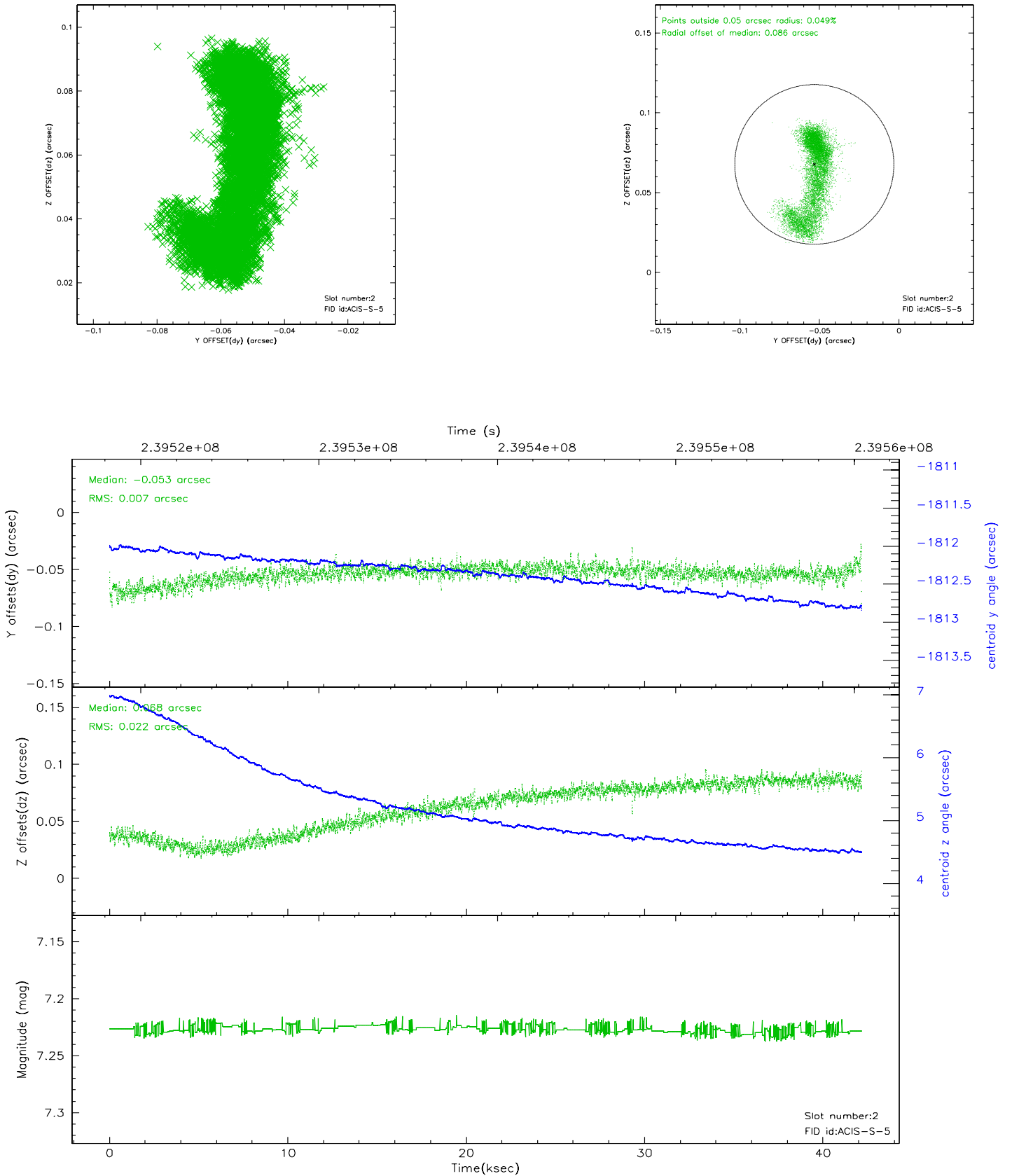
2.5.1 Slot 0



2.5.2 Slot 1

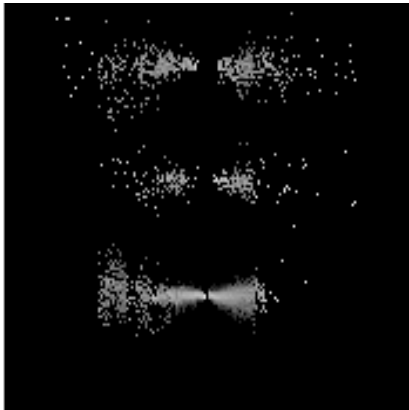


2.5.3 Slot 2

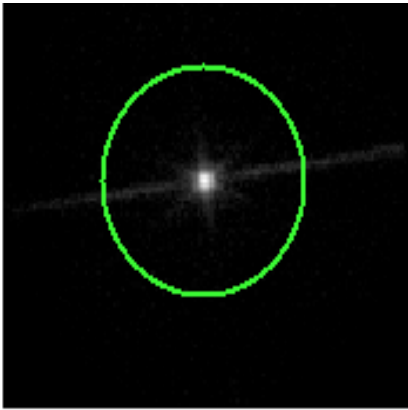


3 Gratings

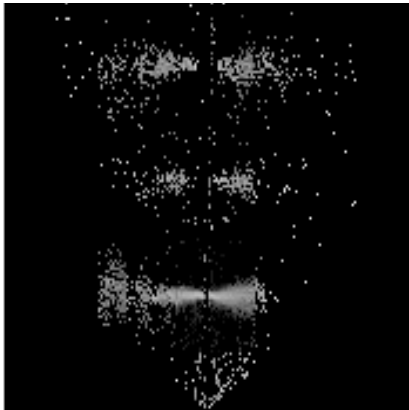
3.1 LETG Arm



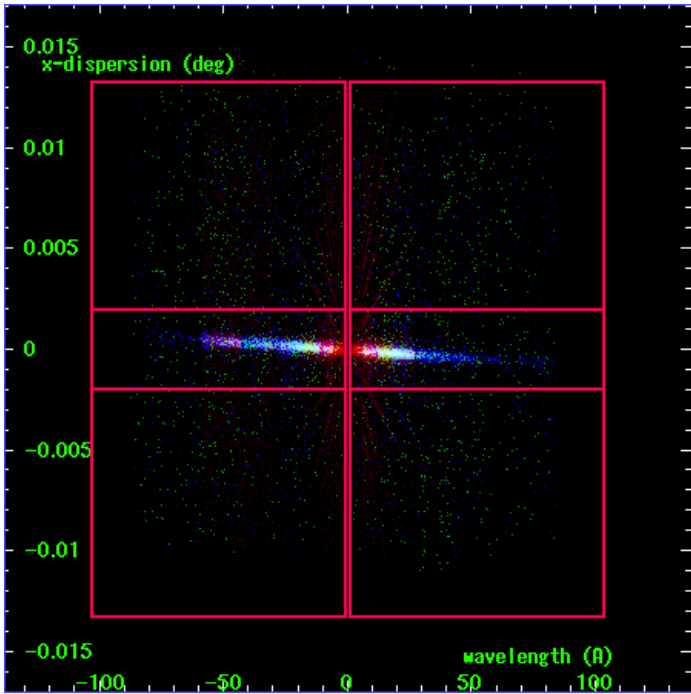
LETG Order Sort 123



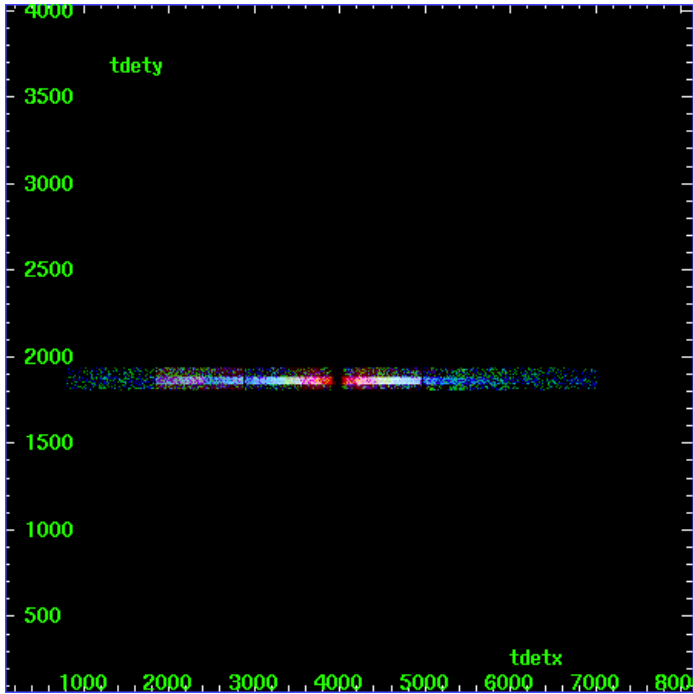
LETG Zero Order



LETG Order Sort ALL

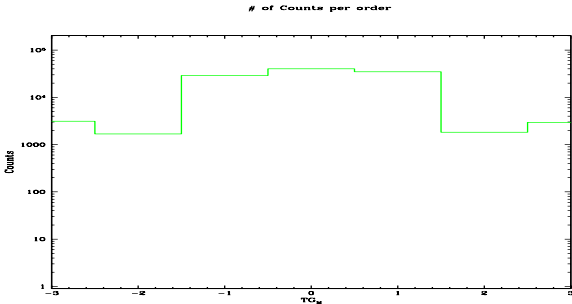


Spot Image LETG

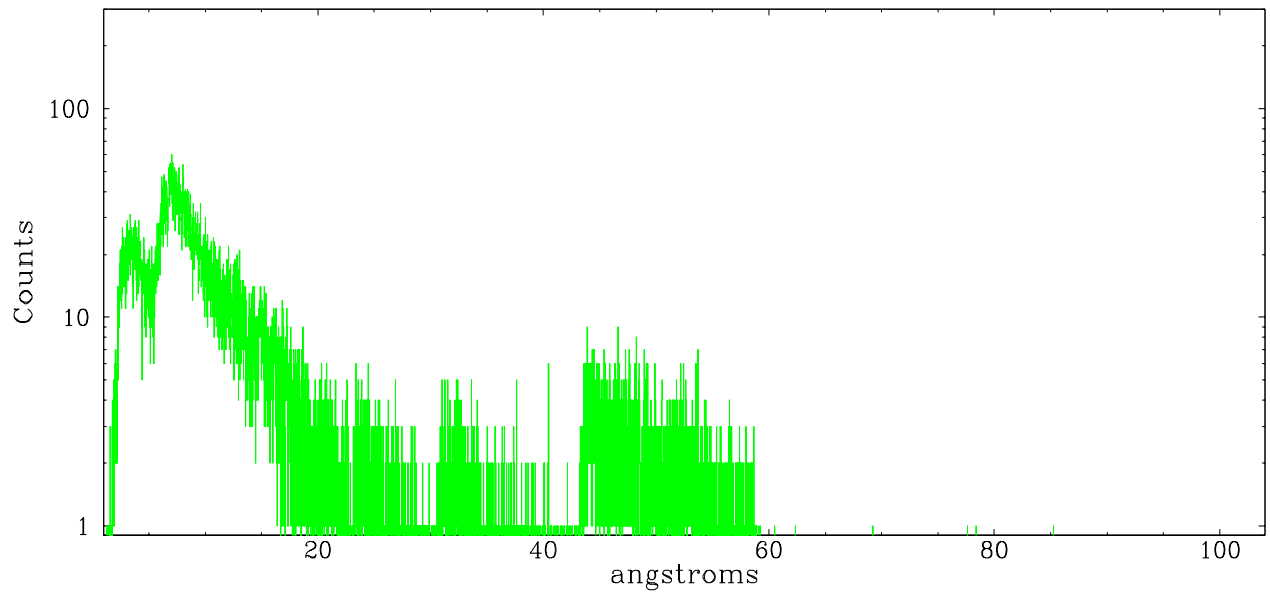


Full Detector LETG

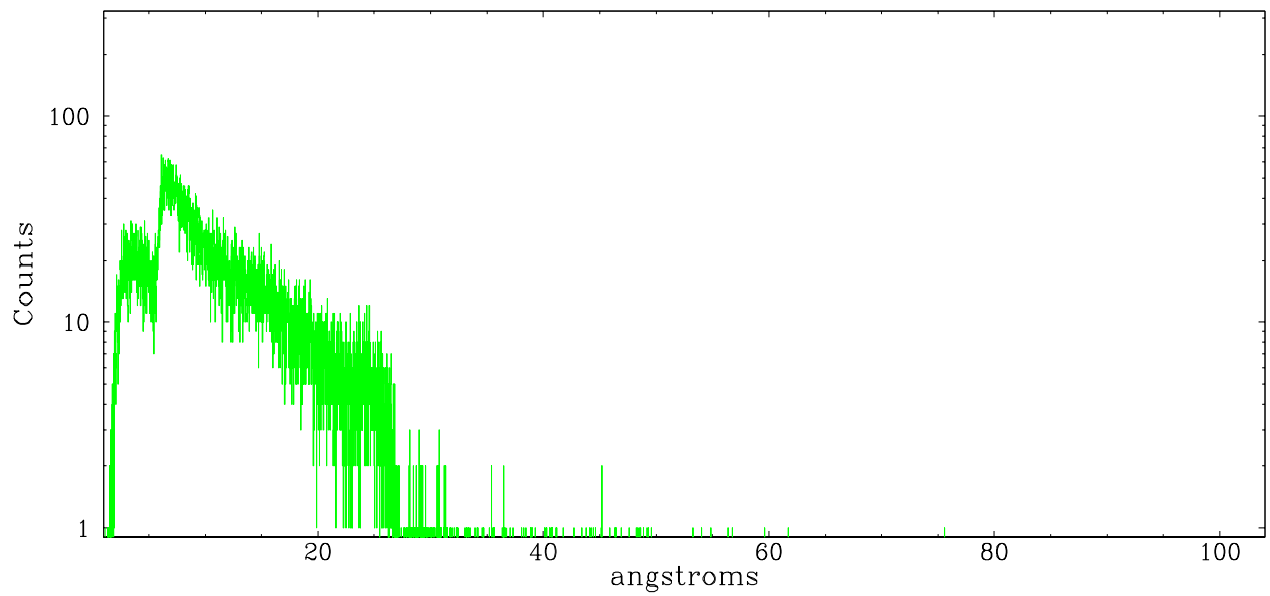
| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 3117 | 1690 | 28875 | 40344 | 34707 | 1833 | 2950 |



leg order -1



leg order +1



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2006.03.20 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 42.1799 |

A.2 Comments

Window constraint met.

The ACIS focal plane temperature was above calibration limits for the first four ksec of the observation.