

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 2821 - L2 Version 001
Chandra X-Ray Center

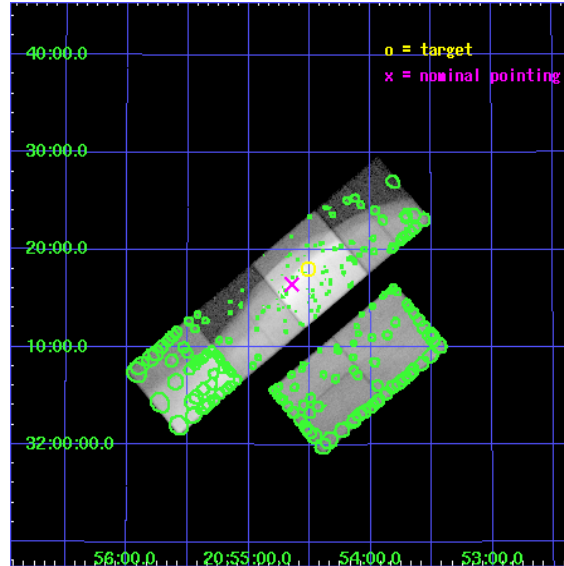
L2 Processing Date : Jan 16 2007

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 |
| 3 | Point Sources | 17 |
| A | Summary | 18 |
| A.1 | Status | 18 |
| A.2 | Comments | 18 |

1 Front

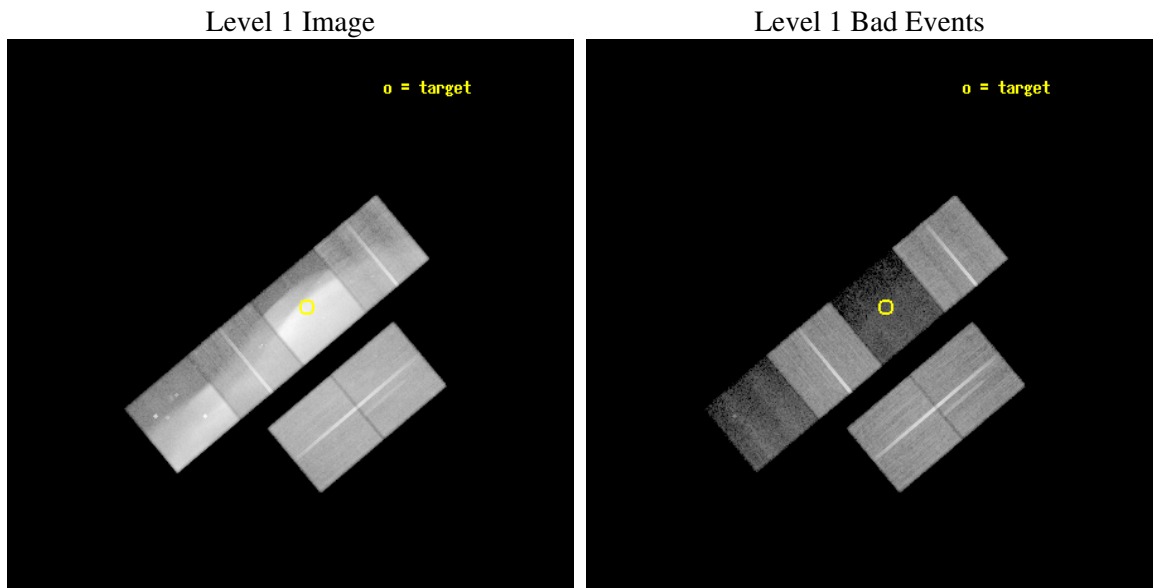
| | |
|----------|---|
| seq_num | 500271 |
| obs_id | 2821 |
| title | BALMER-DOMINATED SHOCKS IN THE CYGNUS LOOP: PROBING COLLISIONLESS SHOCK PHYSICS |
| observer | Dr. Terrance Gaetz |
| object | CYGNUS LOOP NE2 |
| dtcycle | 0 |
| cycle | P |
| ra_targ | 313.629 |
| dec_targ | 32.299839 |
| ra_nom | 313.66154068007 |
| dec_nom | 32.27441582448 |
| roll_nom | 320.00176690555 |
| revision | 2 |
| ontime | 59241.559094936 |
| livetime | 58491.406802691 |
| ontime2 | 59235.077144504 |
| ontime3 | 59228.595124319 |
| ontime5 | 59244.800055176 |
| ontime6 | 59231.836214155 |
| ontime7 | 59241.559094936 |
| ontime8 | 59241.559094921 |
| l2events | 3005070 |



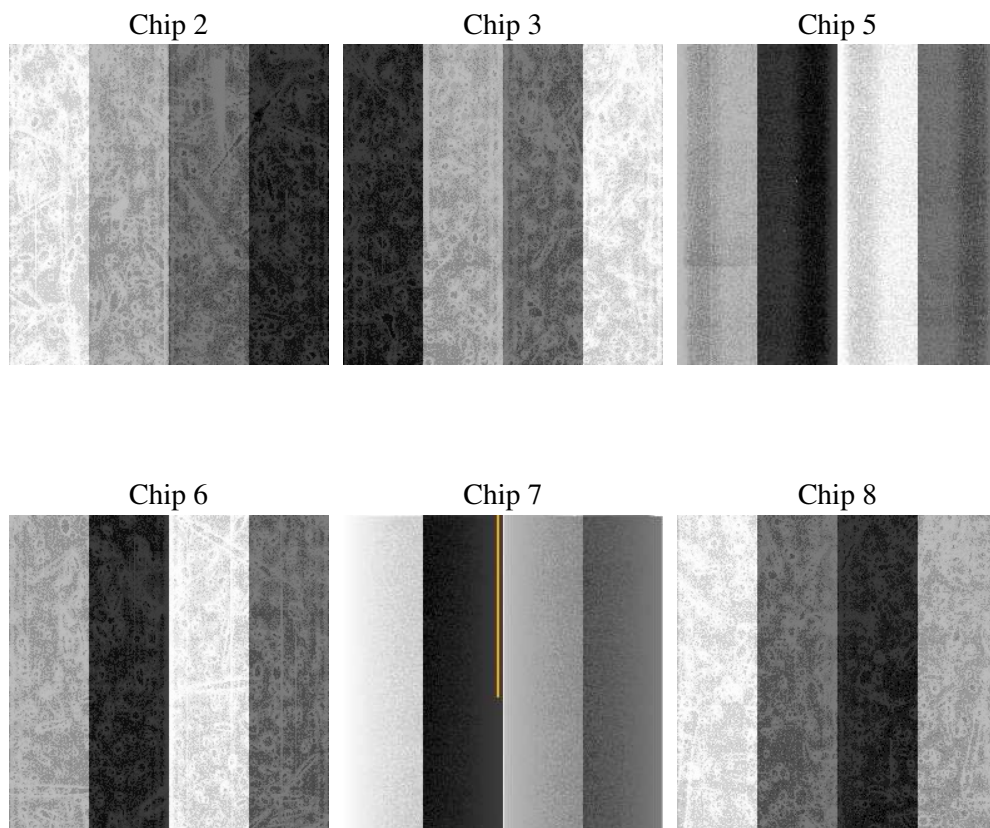
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | |
|----------|---------------------|
| obi_num | 0 |
| ascdsver | 7.6.10 |
| caldsver | 3.3.0 |
| date | 2007-01-17T02:26:49 |
| revision | 2 |

| | |
|----------------|-----------------|
| sched_exp_time | 59284.136000 |
| ontime | 59241.559094936 |
| ontime2 | 59235.077144504 |
| ontime3 | 59228.595124319 |
| ontime5 | 59244.800055176 |
| ontime6 | 59231.836214155 |
| ontime7 | 59241.559094936 |
| ontime8 | 59241.559094921 |
| l1events | 4251593 |

2.1.4 Events

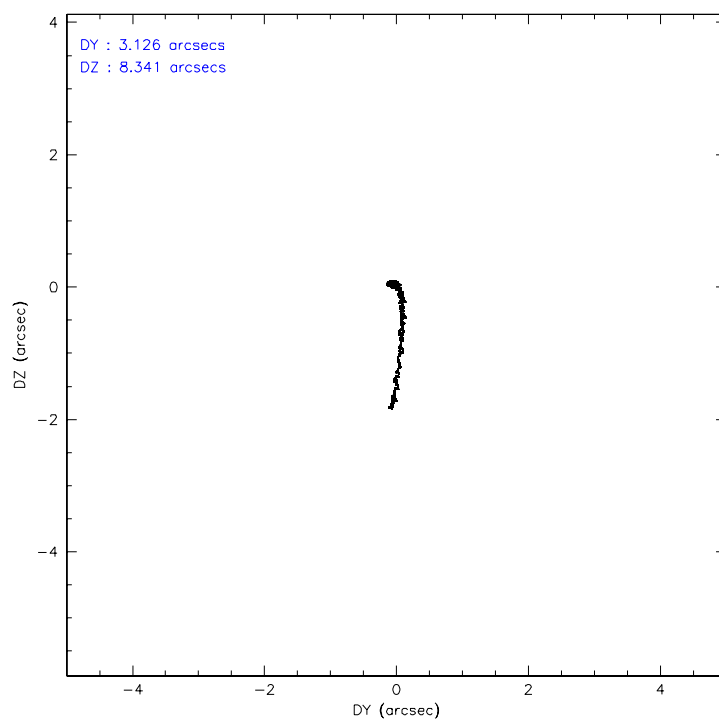
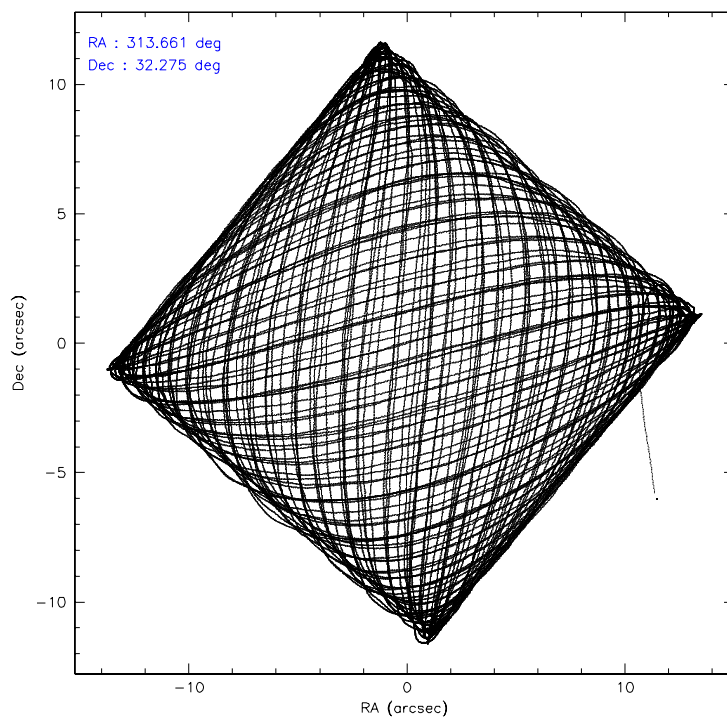
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|---------|--------|
| level 1 events | 547135 | 545454 | 711229 | 612650 | 1348761 | 486364 |
| rejected events | 280661 | 245835 | 44189 | 247185 | 33440 | 241022 |
| rejected % | 51% | 45% | 6% | 40% | 2% | 49% |

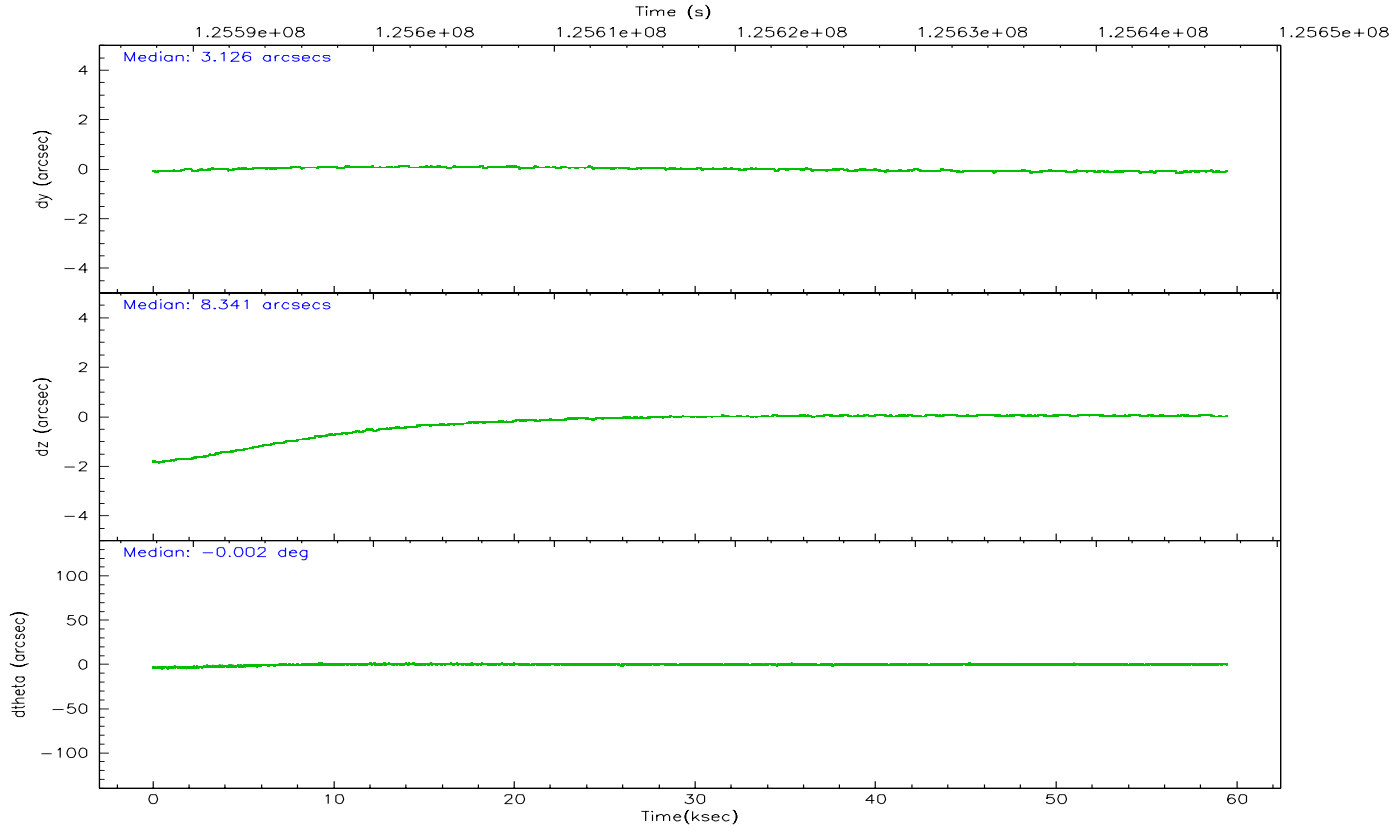
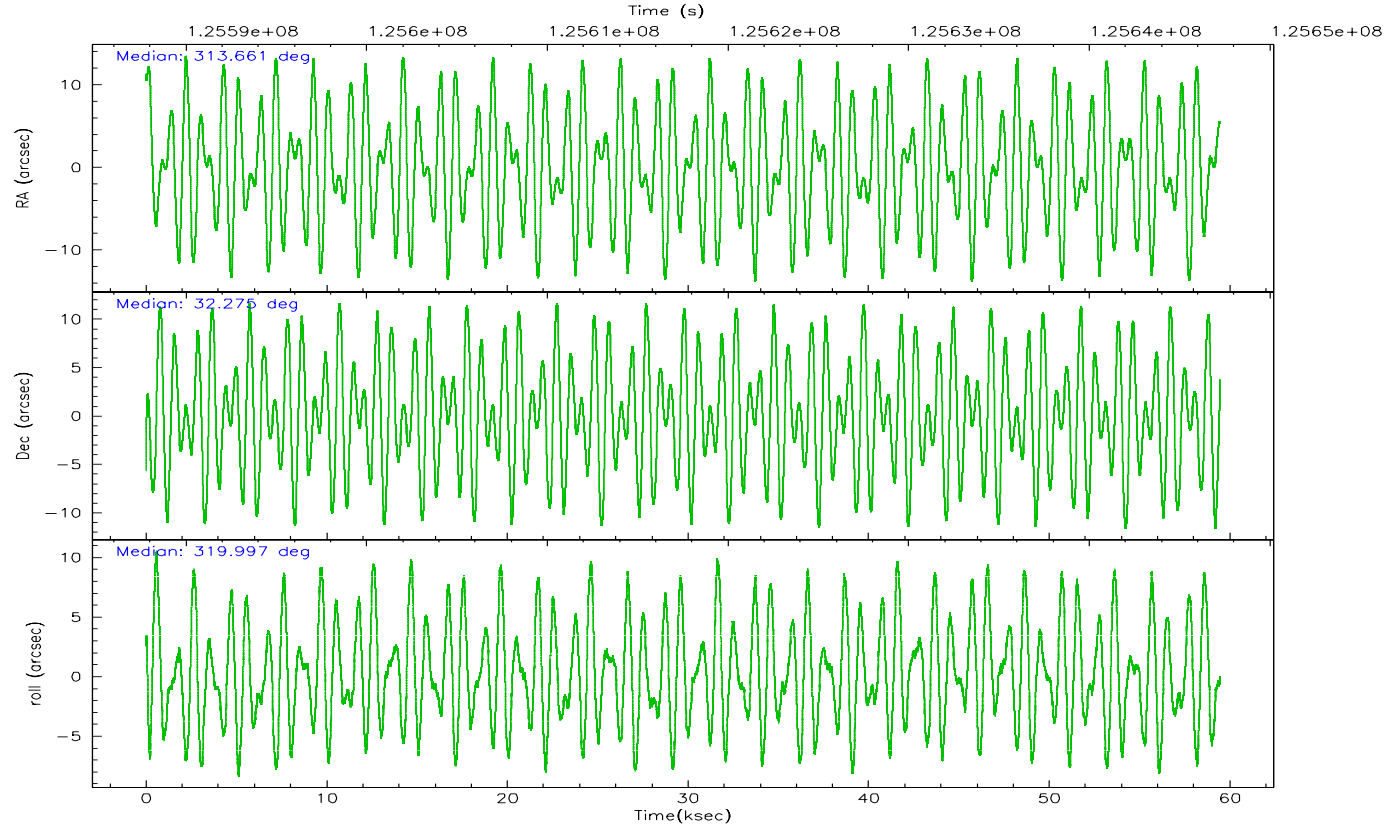
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|--------|--------|--------|--------|--------|--------|
| grade 0 events | 235714 | 267996 | 358667 | 334826 | 578120 | 185094 |
| | 43% | 49% | 50% | 54% | 42% | 38% |
| grade 1 events | 916 | 995 | 771 | 1332 | 626 | 783 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 18430 | 19007 | 154339 | 19313 | 326697 | 23941 |
| | 3% | 3% | 21% | 3% | 24% | 4% |
| grade 3 events | 4653 | 5068 | 45545 | 4259 | 140135 | 9059 |
| | 0% | 0% | 6% | 0% | 10% | 1% |
| grade 4 events | 4664 | 4636 | 44710 | 4224 | 136197 | 8427 |
| | 0% | 0% | 6% | 0% | 10% | 1% |
| grade 5 events | 2480 | 2675 | 12816 | 2990 | 14949 | 4739 |
| | 0% | 0% | 1% | 0% | 1% | 0% |
| grade 6 events | 3056 | 2971 | 63808 | 2866 | 134244 | 18827 |
| | 0% | 0% | 8% | 0% | 9% | 3% |
| grade 7 events | 277222 | 242106 | 30573 | 242840 | 17793 | 235494 |
| | 50% | 44% | 4% | 39% | 1% | 48% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| Detector | ACIS-235678 | ACIS-235678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| Pointing RA | 313.629718 | 313.6615406800673 | Subarray requested | NONE | NONE |
| Pointing Dec | 32.278838 | 32.27441582447993 | Alternating exposures requested | N | N |
| Pointing Roll | 319.862136 | 320.0017669055546 | Primary exposure time | 0.000000 | 3.2 |
| SIM focus pos (mm) | -0.684267 | -0.6828225247311905 | | | |
| SIM defocus (mm) | 0 | 0.001444936568705701 | | | |
| SIM translation stage pos (mm) | -190.132523 | -190.1425803651734 | | | |
| SIM translation stage offset (mm) | 0 | 0.01005778216563158 | | | |
| Observation start time | 125587968.184000 | 125587000.44851 | | | |
| Observation start date | 2001-12-24T13:31:44 | 2001-12-24T13:16:40 | | | |
| Observation end time | 125647252.184000 | 125647566.16344 | | | |
| Observation end date | 2001-12-25T05:59:48 | 2001-12-25T06:06:06 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



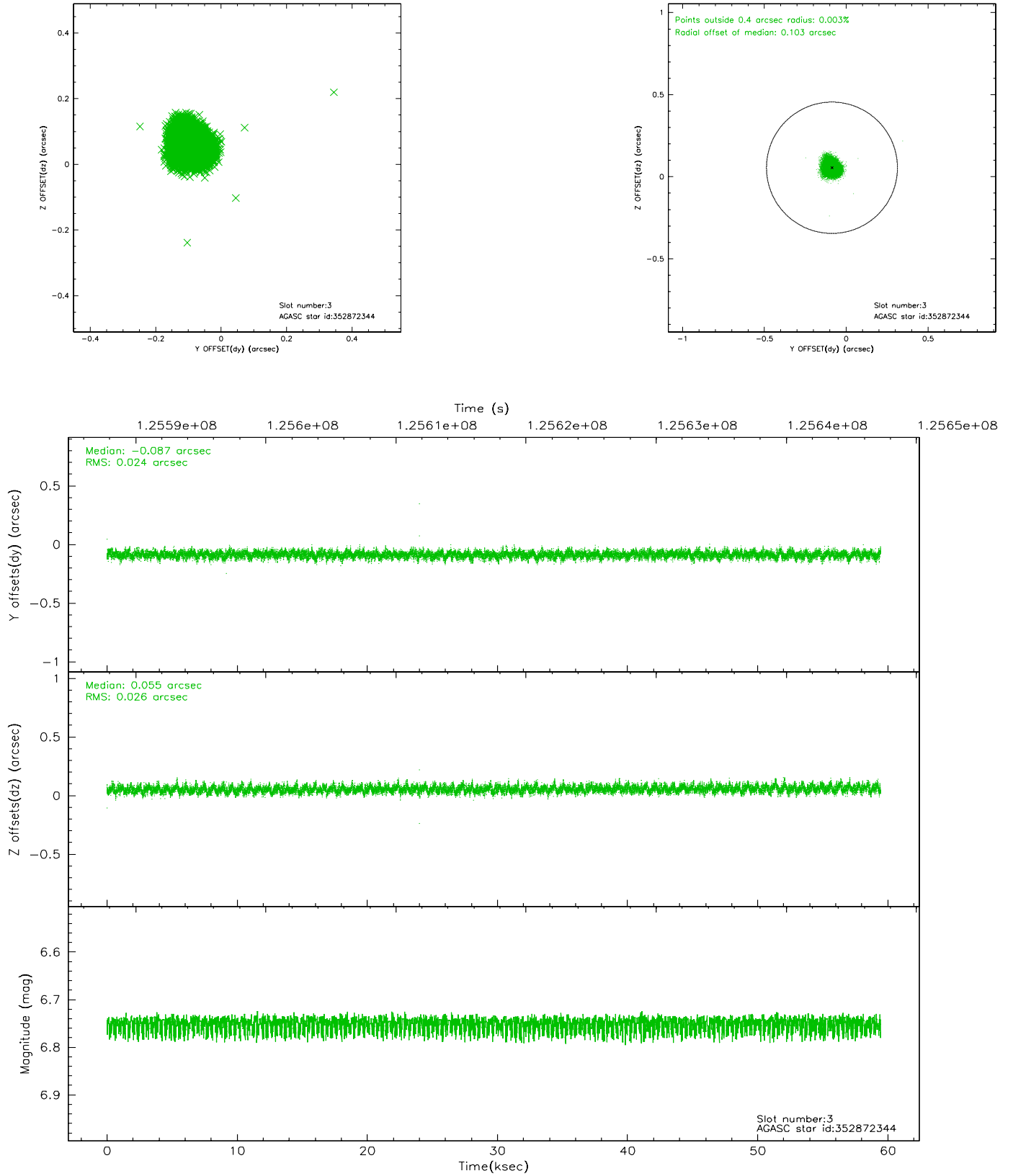


Slot Statistics

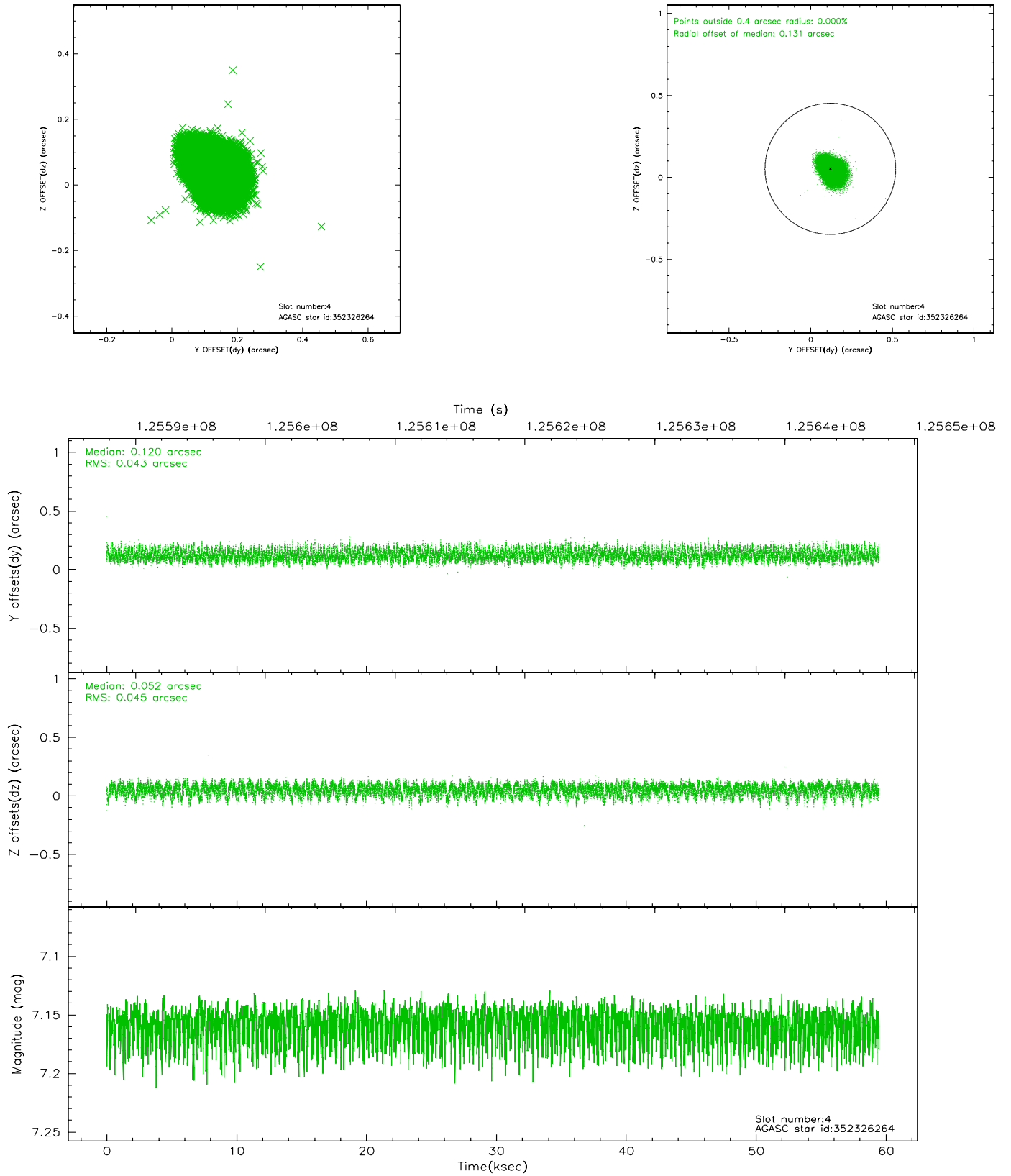
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-3 | 7.36 | 14496 | -0.050 | 0.019 | 0.016 | 0.064 | 0.000000 | 0.000000 | 57.30 | -1858.27 |
| 1 | FID | ACIS-S-5 | 7.24 | 14488 | 0.069 | -0.027 | 0.008 | 0.014 | 0.000000 | 0.000000 | -1808.73 | 172.85 |
| 2 | FID | ACIS-S-6 | 7.35 | 14491 | -0.041 | 0.018 | 0.013 | 0.066 | 0.000000 | 0.000000 | 405.88 | 816.68 |
| 3 | GUIDE | 352872344 | 6.75 | 28981 | -0.087 | 0.055 | 0.037 | 0.061 | 313.849074 | 32.689120 | -443.75 | 1558.34 |
| 4 | GUIDE | 352326264 | 7.16 | 28996 | 0.120 | 0.052 | 0.067 | 0.104 | 313.388931 | 31.626197 | 951.03 | -2270.94 |
| 5 | GUIDE | 352869944 | 7.47 | 28992 | 0.155 | -0.086 | 0.049 | 0.078 | 313.966924 | 32.094645 | 1213.74 | 157.37 |
| 6 | GUIDE | 352866152 | 8.83 | 28993 | -0.039 | 0.061 | 0.067 | 0.107 | 313.017994 | 32.458256 | -1839.37 | -699.89 |
| 7 | GUIDE | 352725184 | 9.20 | 28986 | -0.151 | -0.075 | 0.088 | 0.142 | 312.544282 | 32.201031 | -2357.18 | -2333.00 |

2.4 Star Slots

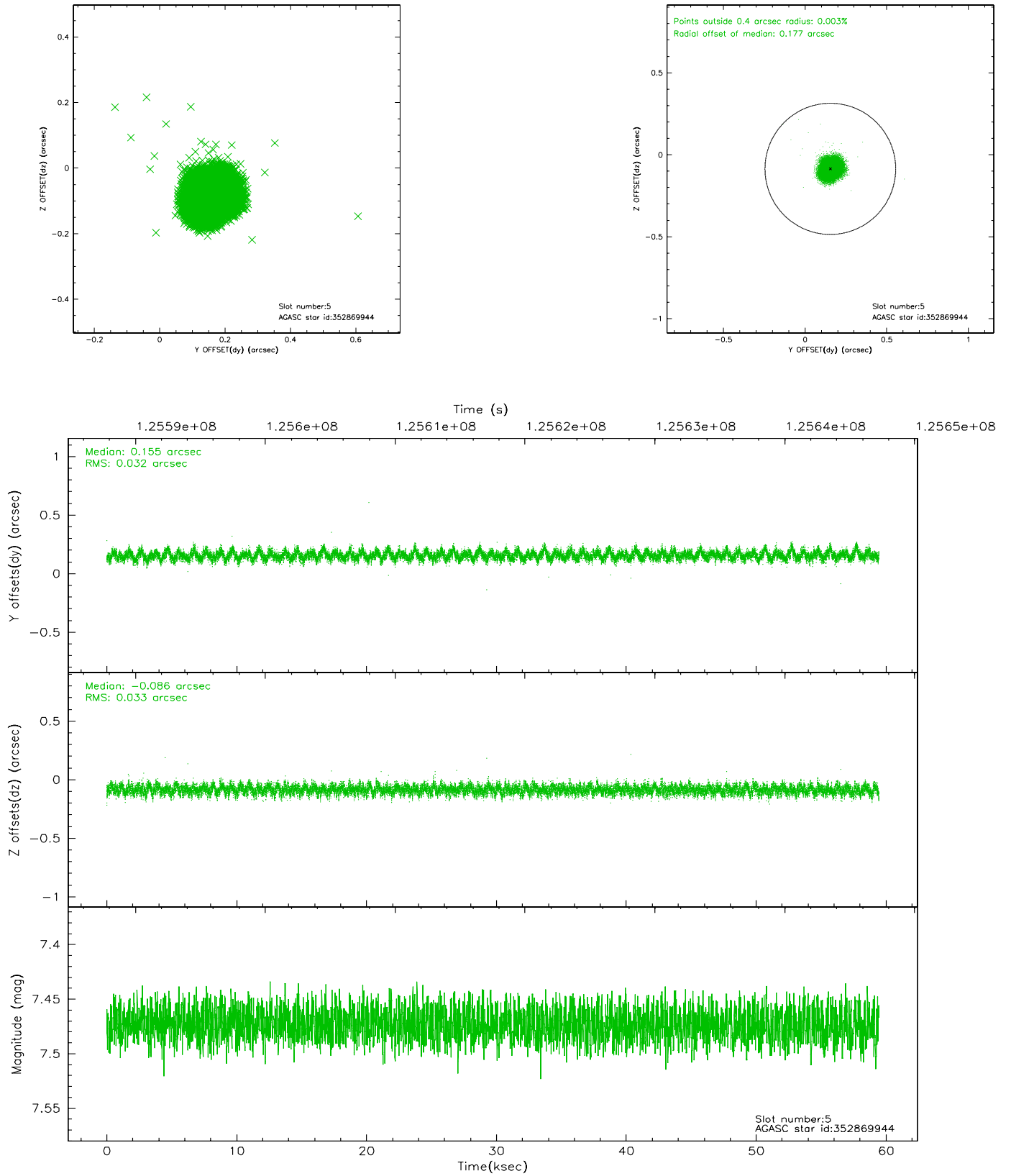
2.4.1 Slot 3



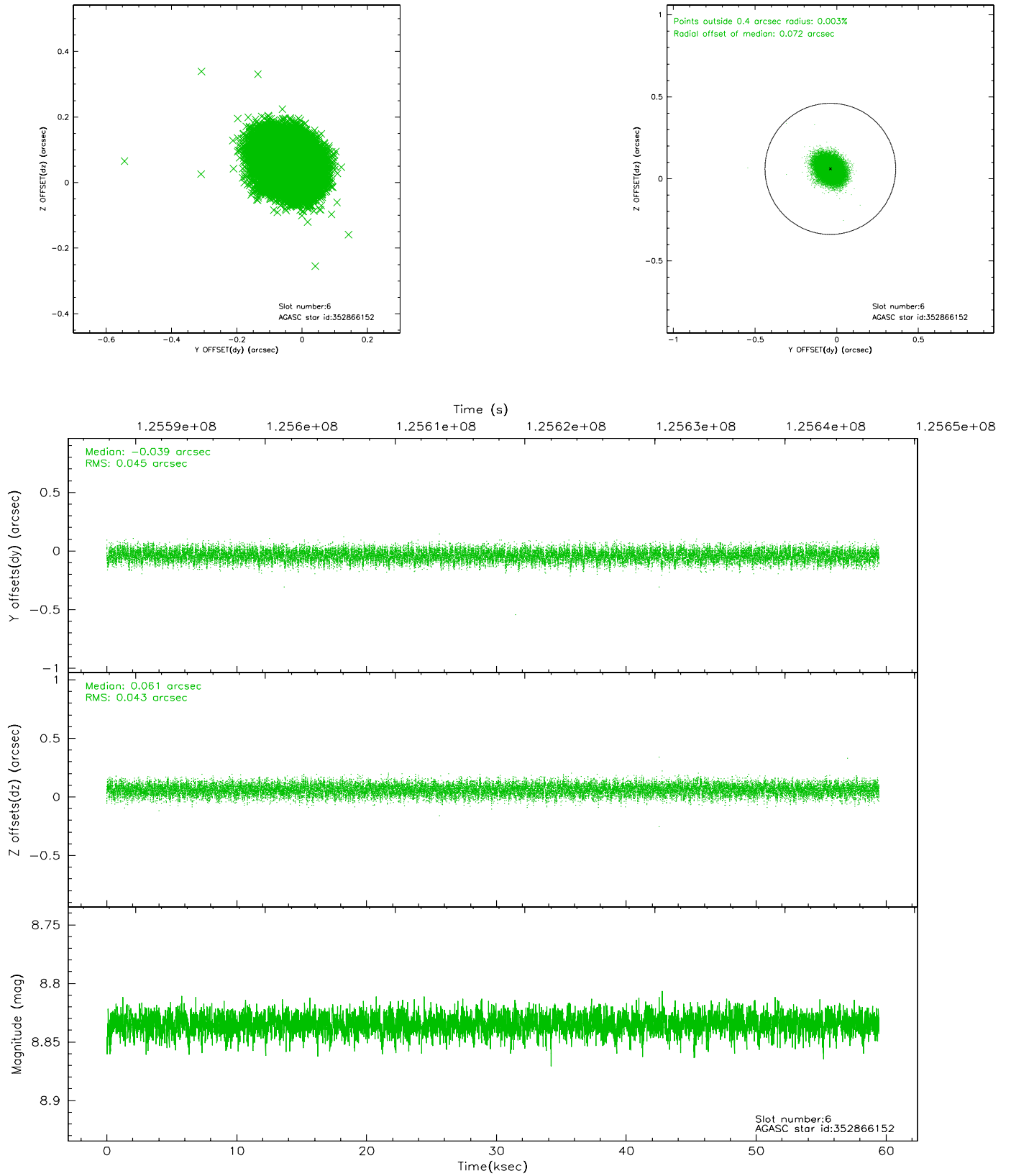
2.4.2 Slot 4



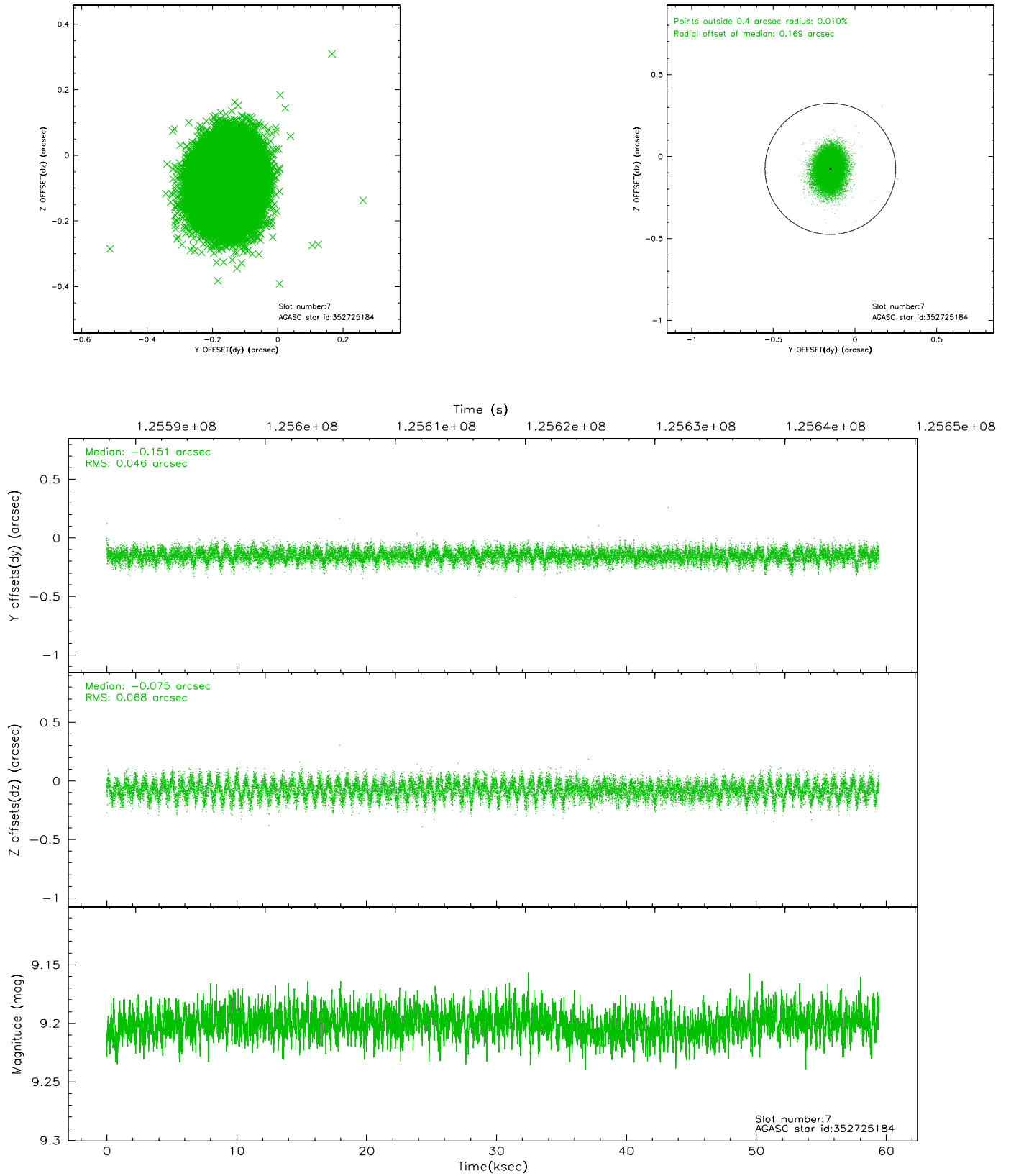
2.4.3 Slot 5



2.4.4 Slot 6

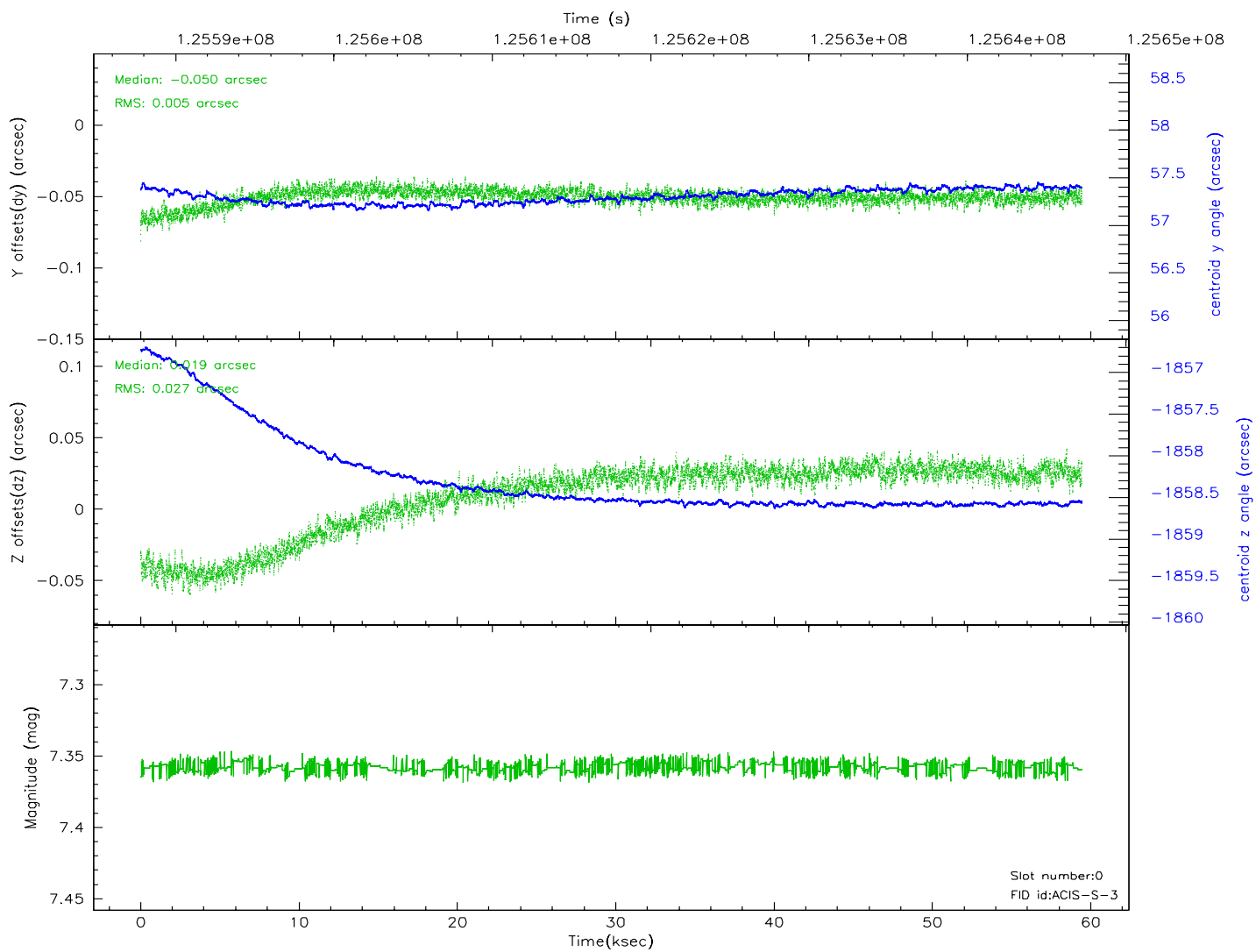
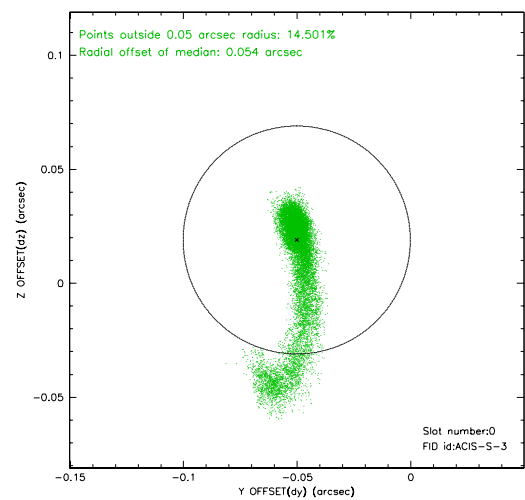
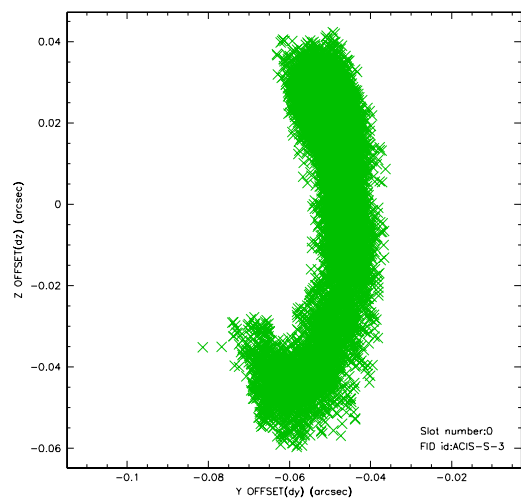


2.4.5 Slot 7

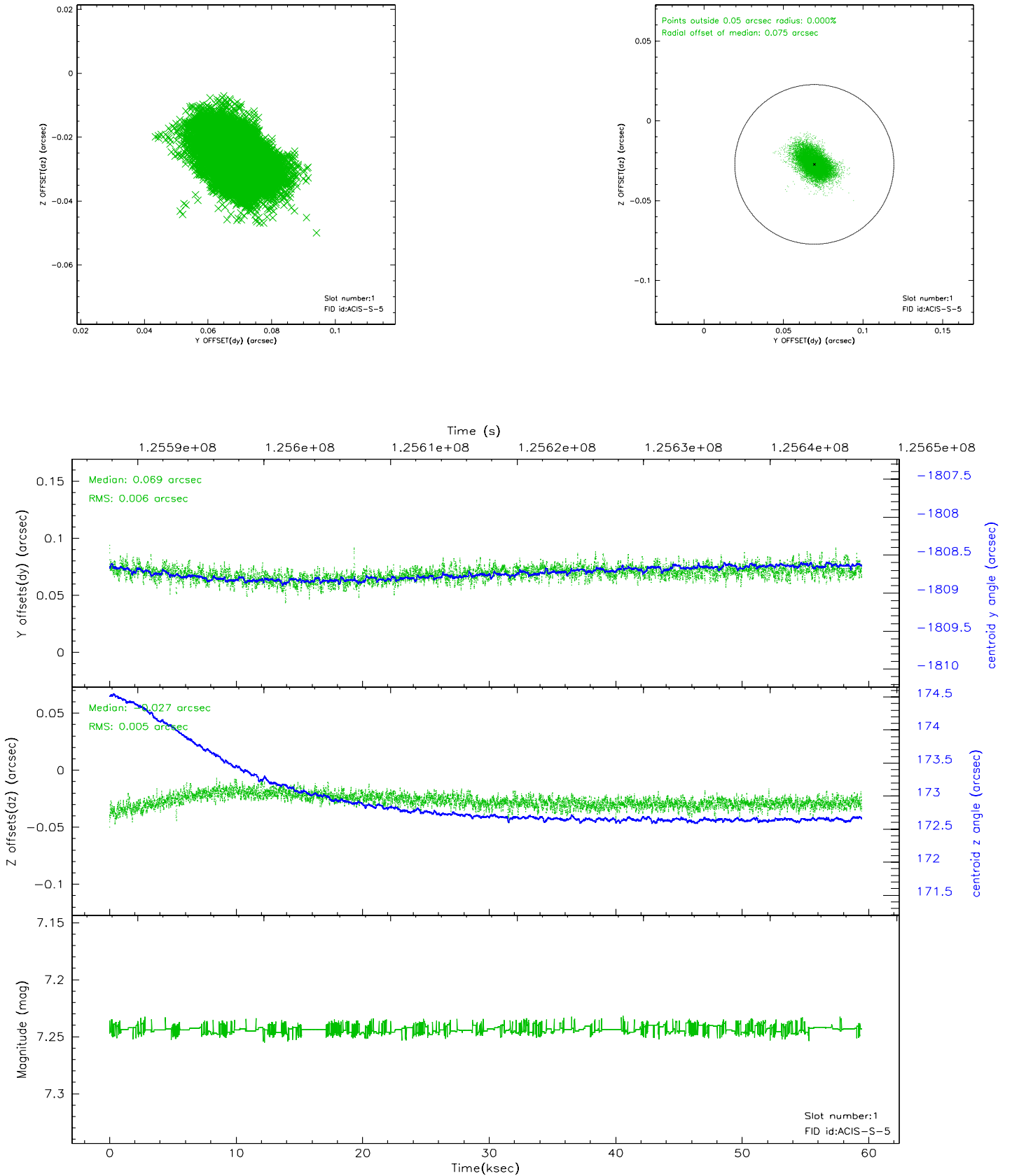


2.5 FID Slots

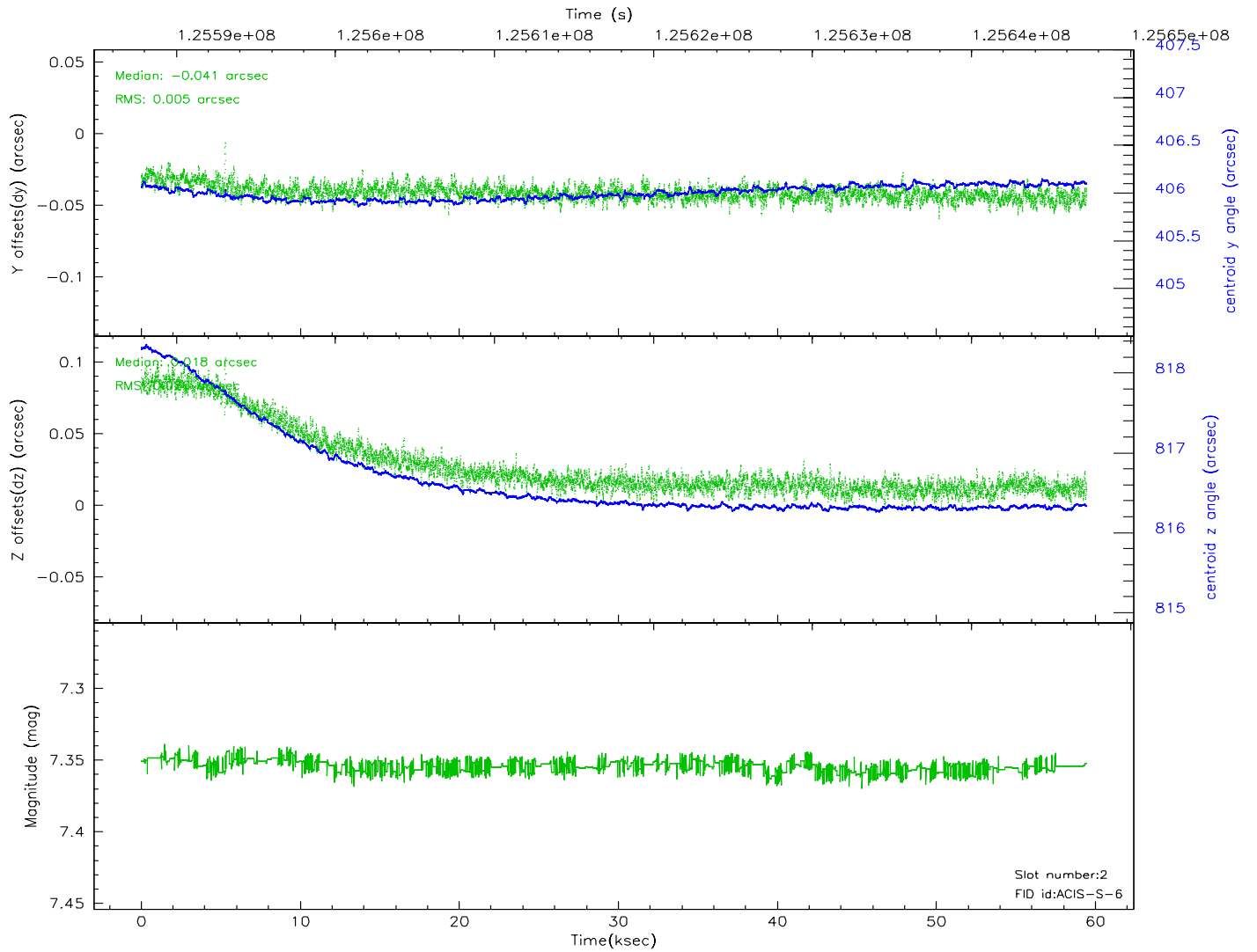
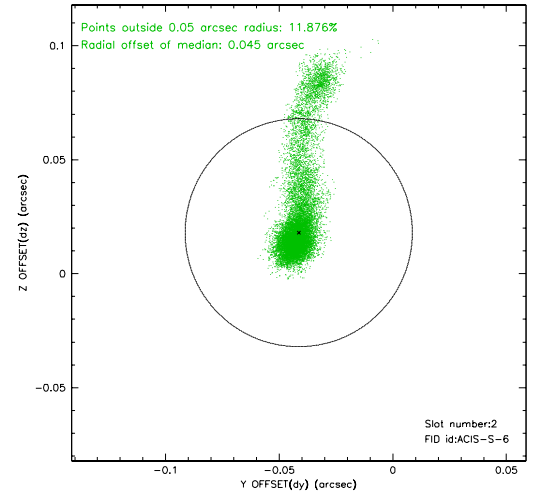
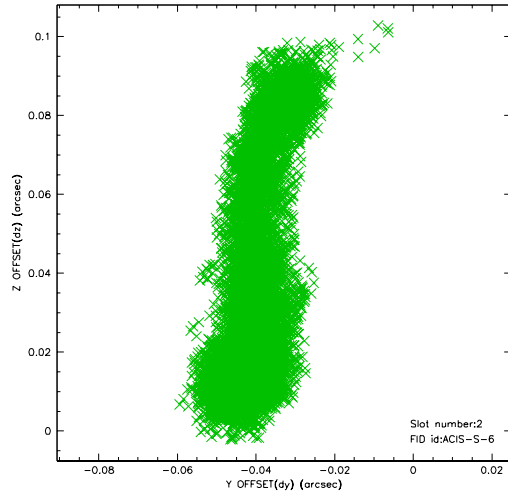
2.5.1 Slot 0



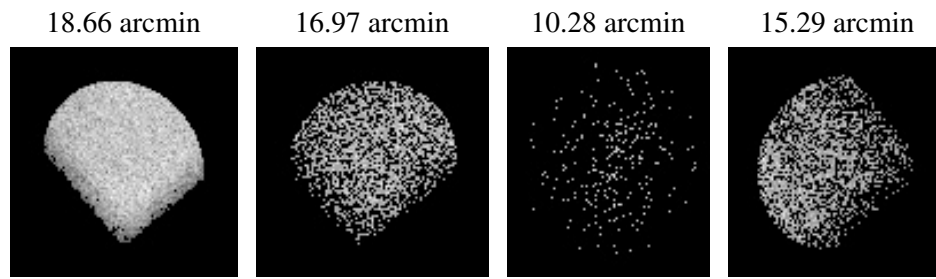
2.5.2 Slot 1



2.5.3 Slot 2



3 Point Sources



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2007.01.17 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 59.241 |

A.2 Comments