

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12719 - L2 Version 2  
Chandra X-Ray Center

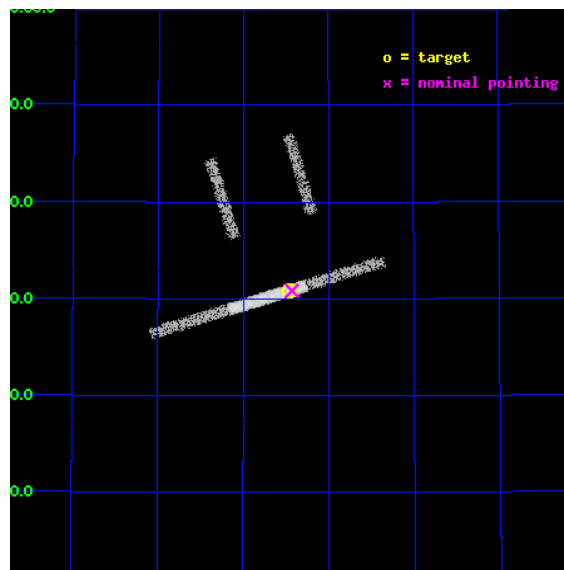
L2 Processing Date : Feb 9 2012

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# 1 Front

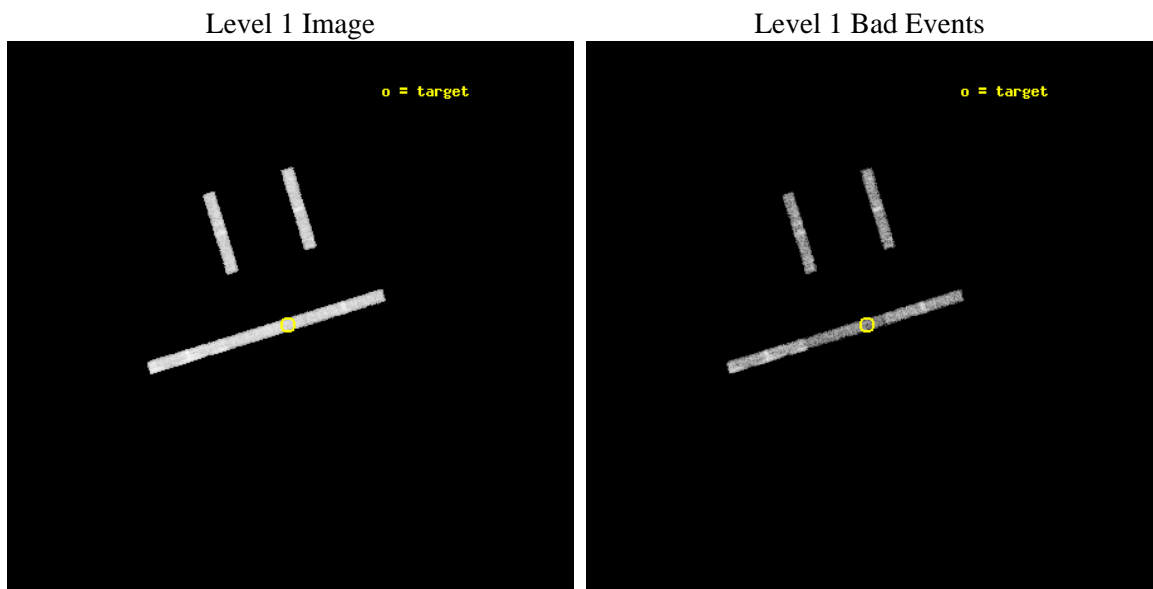
seq_num	702355	Sequence number
obs_id	12719	Observation id
title	First X-ray observations of Low-Power Compact Steep Spectrum Sources	&#160
observer	Dr Magdalena Kunert-Bajraszewska	Principal investigator
object	1558+536	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.865417	Observer's specified target RA [deg]
dec_targ	53.515194	Observer's specified target Dec [deg]
ra_nom	239.85751529636	Nominal RA [deg]
dec_nom	53.513986131482	Nominal Dec [deg]
roll_nom	162.89549813263	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10065.861762226	Sum of GTIs [s]
livetime	9508.3979725223	Livetime [s]
ontime2	10065.697602212	Sum of GTIs [s]
ontime3	10065.779682219	Sum of GTIs [s]
ontime6	10065.820722222	Sum of GTIs [s]
ontime7	10065.861762226	Sum of GTIs [s]
ontime8	10065.738642216	Sum of GTIs [s]
l2events	8853	Number of level 2 events



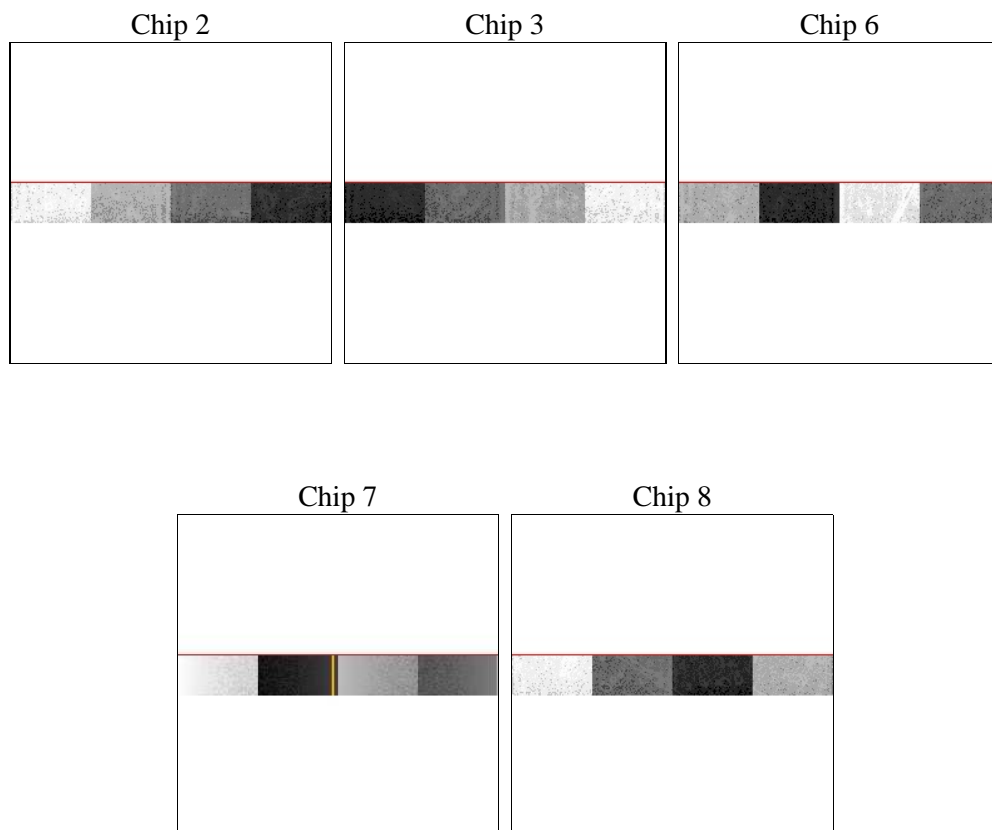
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.840000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10065.861762226	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	10065.697602212	Sum of GTIs [s]
date	2012-02-09T14:40:40	Date and time of file creation	ontime3	10065.779682219	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10065.820722222	Sum of GTIs [s]
			ontime7	10065.861762226	Sum of GTIs [s]
			ontime8	10065.738642216	Sum of GTIs [s]
			l1events	57890	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	9724	9686	10801	11523	16156
rejected events	8679	8625	9638	6021	12632
rejected %	89%	89%	89%	52%	78%

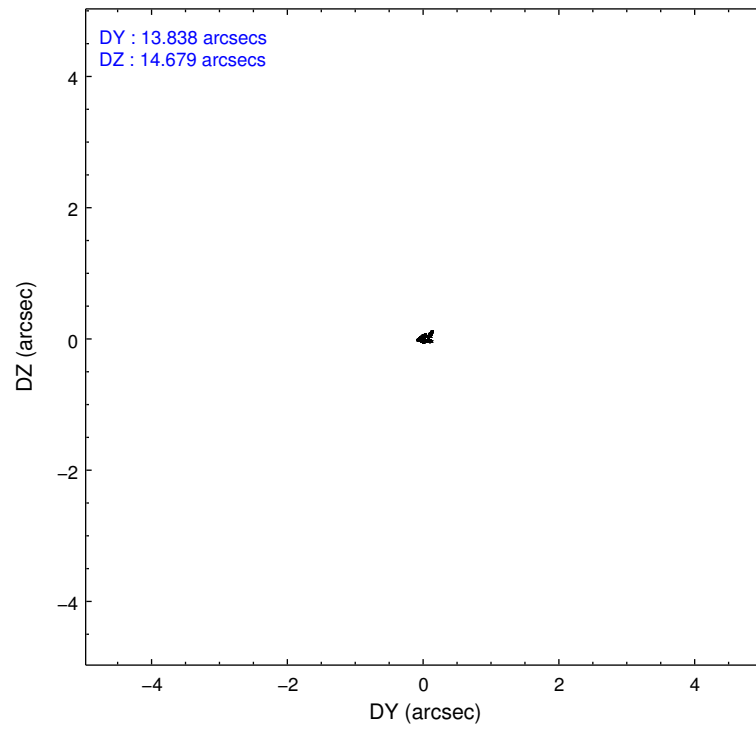
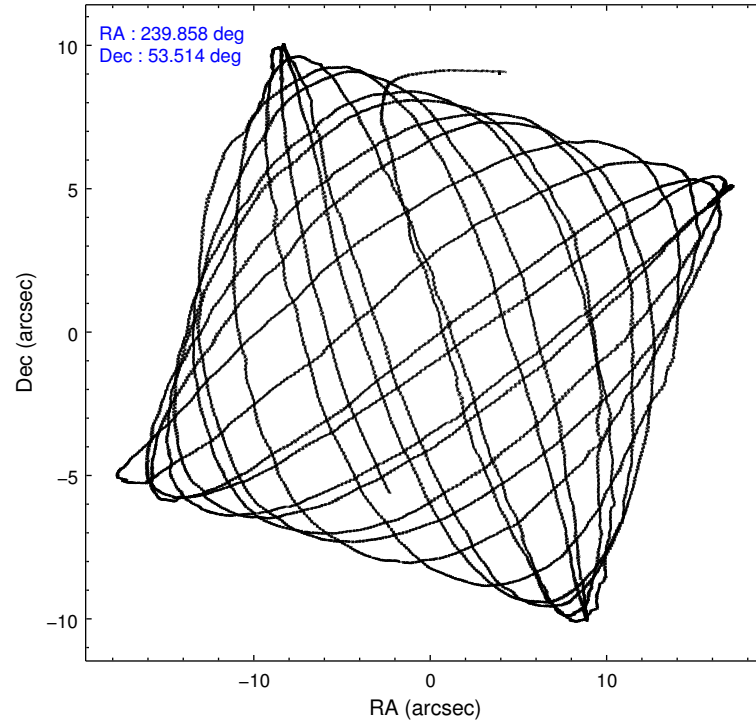
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	297	327	337	596	889
	3%	3%	3%	5%	5%
grade 1 events	3	4	3	9	5
	0%	0%	0%	0%	0%
grade 2 events	175	198	216	1131	746
	1%	2%	1%	9%	4%
grade 3 events	203	179	202	669	388
	2%	1%	1%	5%	2%
grade 4 events	190	171	190	629	376
	1%	1%	1%	5%	2%
grade 5 events	296	393	427	1187	593
	3%	4%	3%	10%	3%
grade 6 events	180	186	218	2478	1125
	1%	1%	2%	21%	6%
grade 7 events	8380	8228	9208	4824	12034
	86%	84%	85%	41%	74%

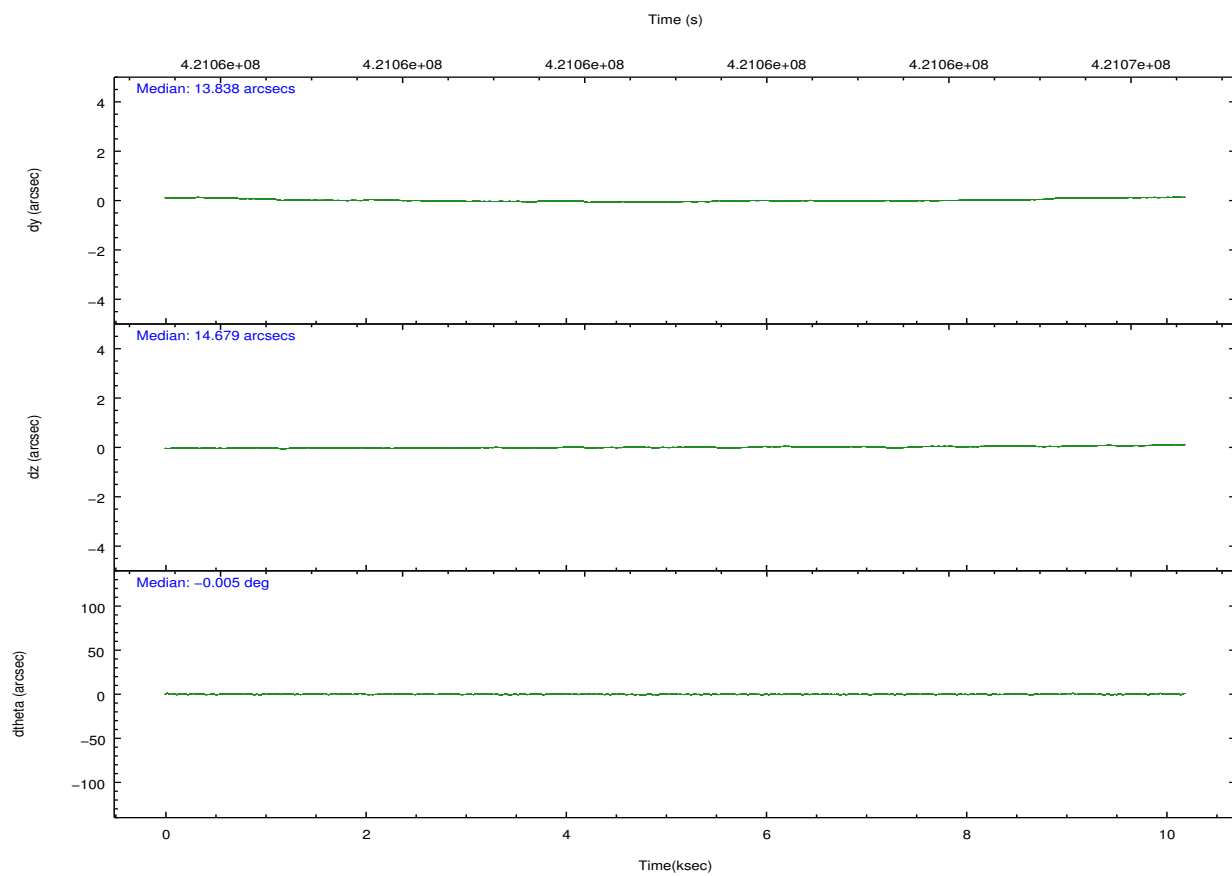
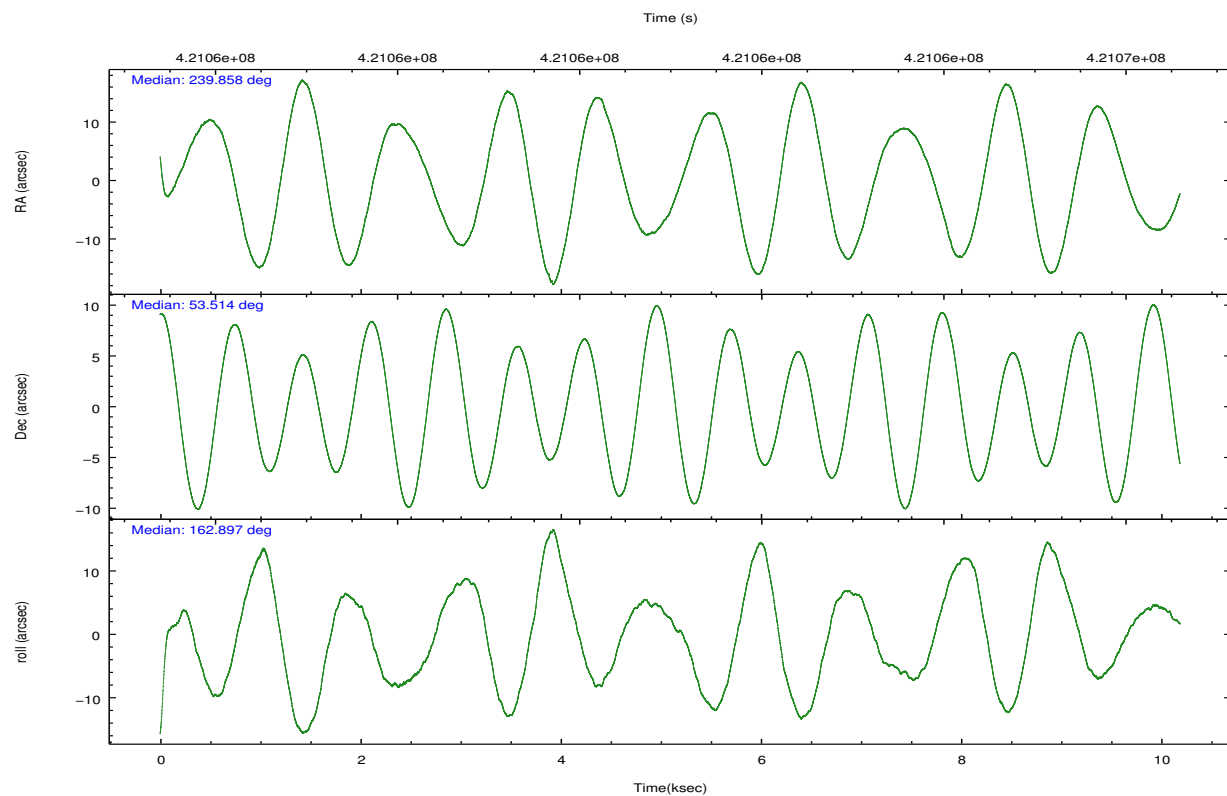


## 2.2 Compared Parameters

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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	239.902212	239.8575152963604	CCD I2 on	O4	Y
[deg] Pointing Dec	53.520430	53.51398613148155	CCD I3 on	O2	Y
[deg] Pointing Roll	162.702945	162.8954981326323	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O3	Y
[s] Observation start time (MET)	421056082.184000	421055197.57087	CCD S5 on	N	N
Observation start date	2011-05-06T08:00:16	2011-05-06T07:46:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	421066083.184000	421066309.59645	On-chip summing requested	N	N
Observation end date	2011-05-06T10:46:57	2011-05-06T10:51:49	Subarray requested	CUSTOM	1/8
Read mode	TIMED	TIMED	Subarray start row	449	449
			Subarray row count	128	128
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0.7

## 2.3 Aspect



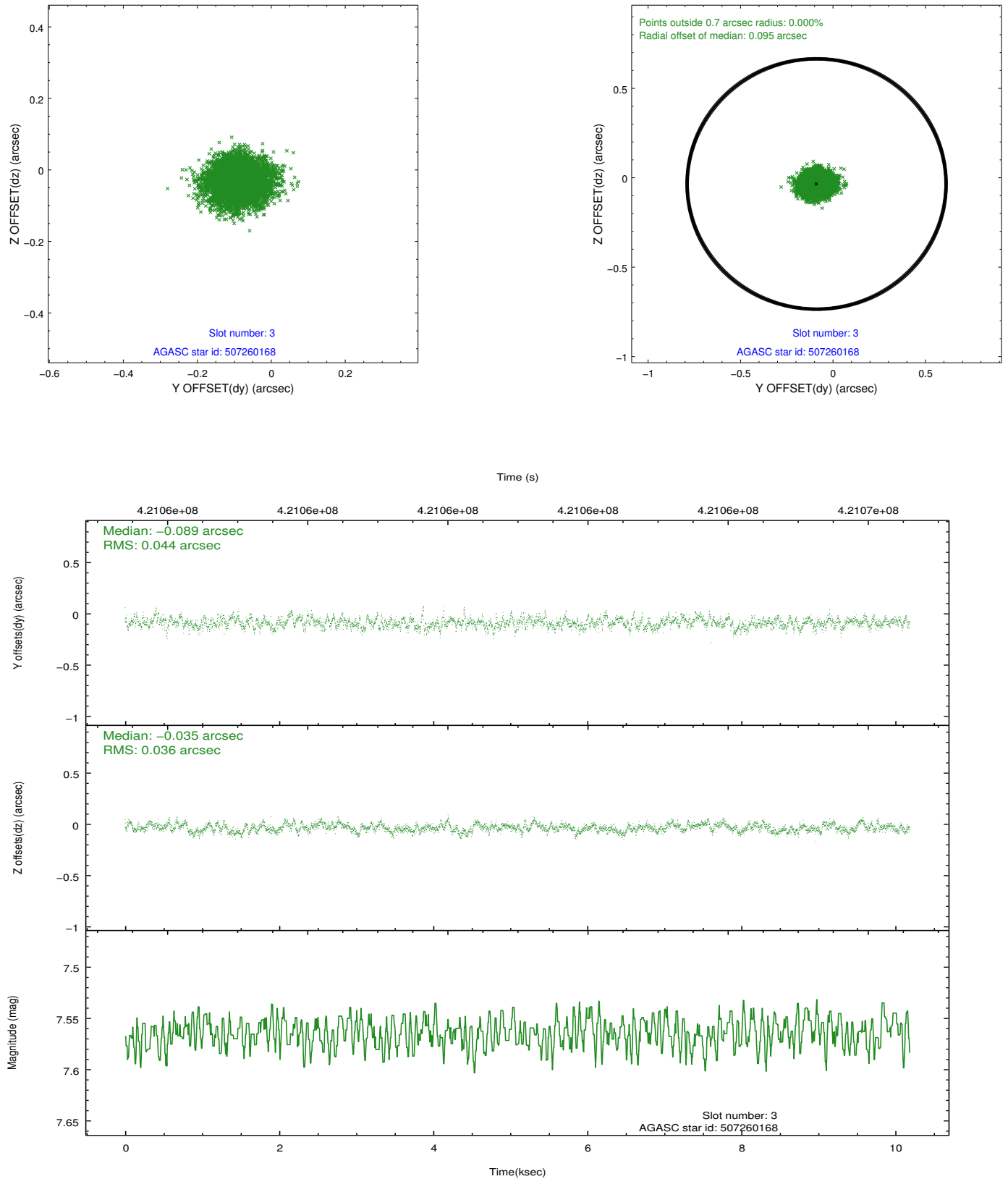


### Slot Statistics

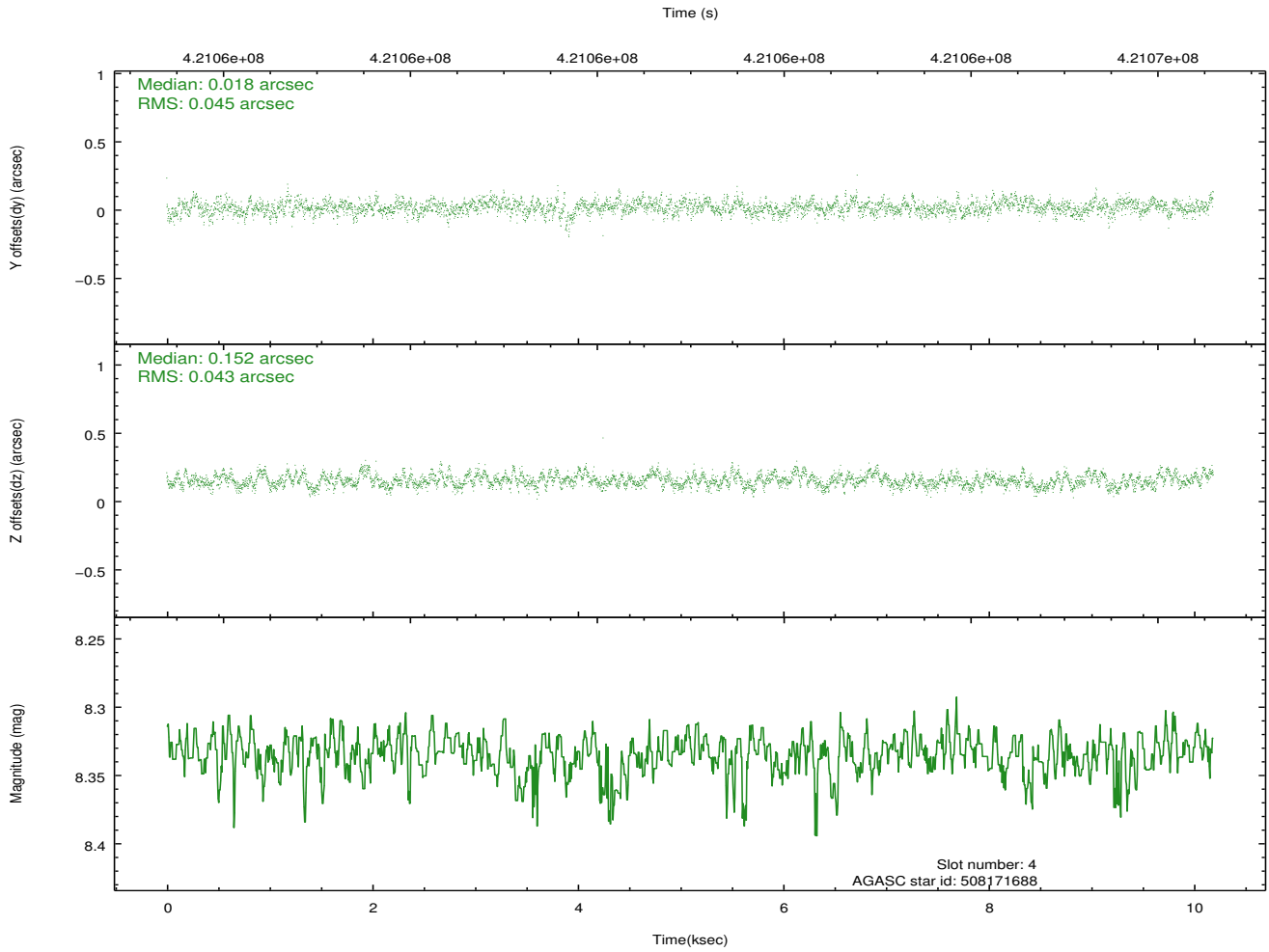
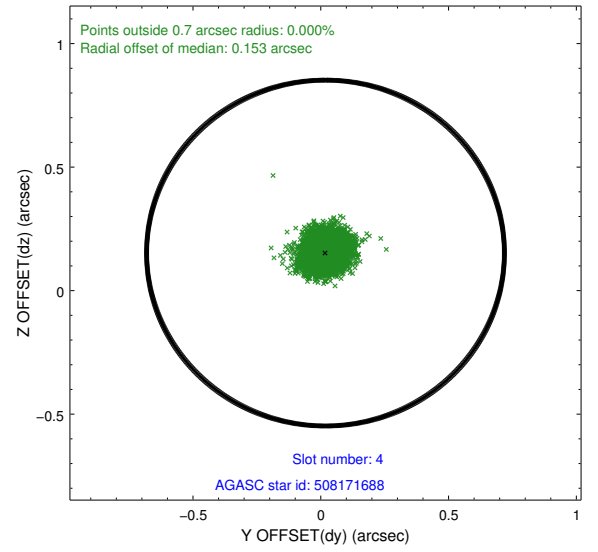
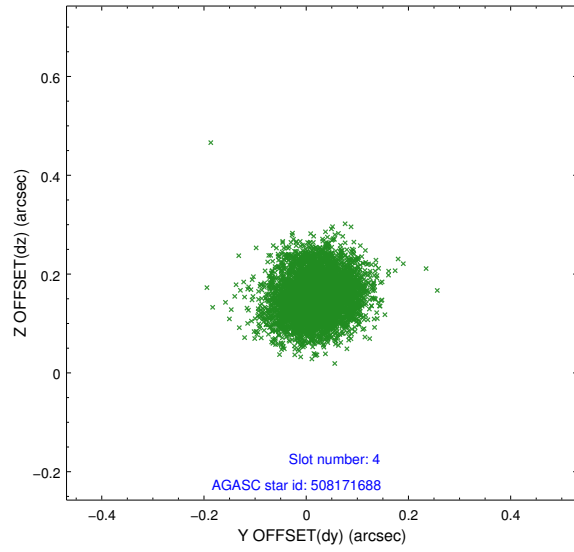
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.92	2485	-0.067	-0.028	0.006	0.011	0.000000	0.000000	-766.84	-1736.09
1	FID	ACIS-S-4	7.00	2485	0.192	0.040	0.005	0.011	0.000000	0.000000	2146.44	171.95
2	FID	ACIS-S-5	7.02	2485	-0.156	-0.003	0.006	0.011	0.000000	0.000000	-1819.13	166.12
3	GUIDE	507260168	7.56	4971	-0.089	-0.035	0.062	0.097	239.904975	53.152942	-399.20	1261.13
4	GUIDE	508171688	8.33	4971	0.018	0.152	0.067	0.106	240.869884	53.409278	-2097.32	-247.89
5	GUIDE	508174152	7.73	4969	-0.053	-0.167	0.069	0.112	240.816113	53.216948	-2202.31	445.40
6	GUIDE	508179744	7.46	4969	-0.012	-0.010	0.073	0.118	240.103369	53.966638	70.75	-1660.40
7	GUIDE	507262448	9.32	4956	0.133	0.055	0.094	0.154	238.508534	53.092328	2427.55	2339.16

## 2.4 Star Slots

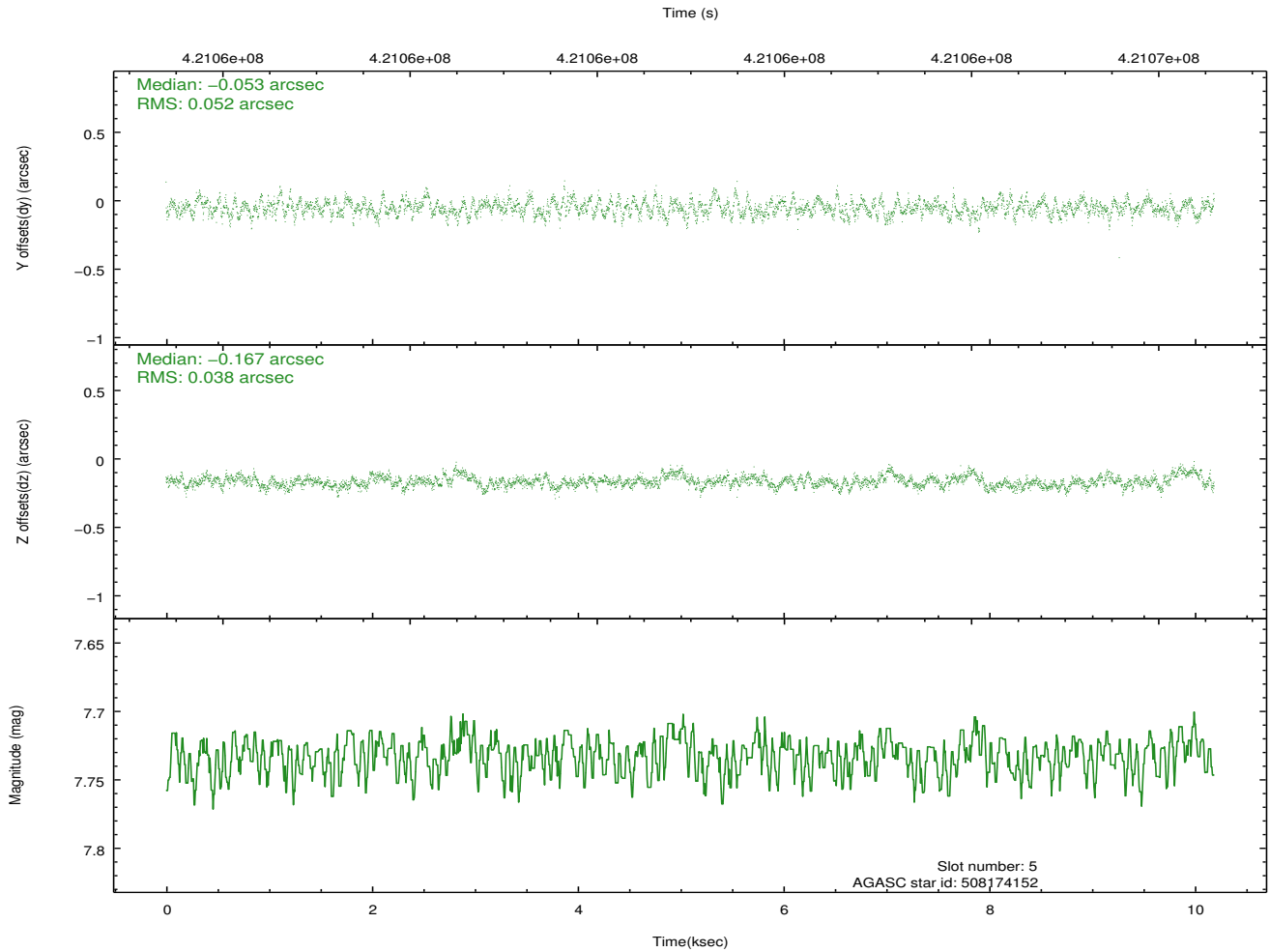
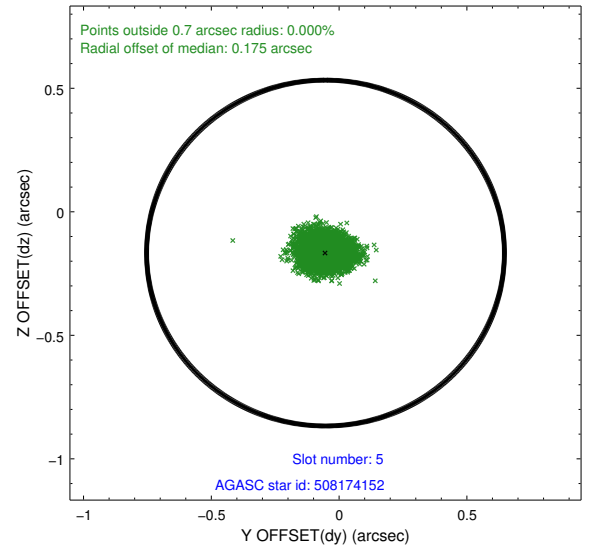
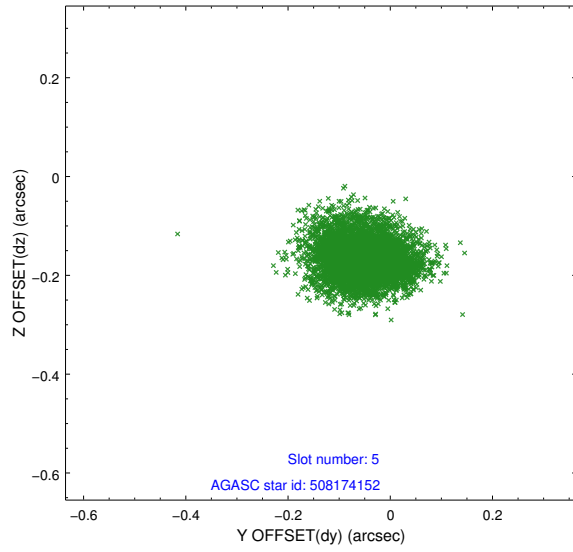
### 2.4.1 Slot 3



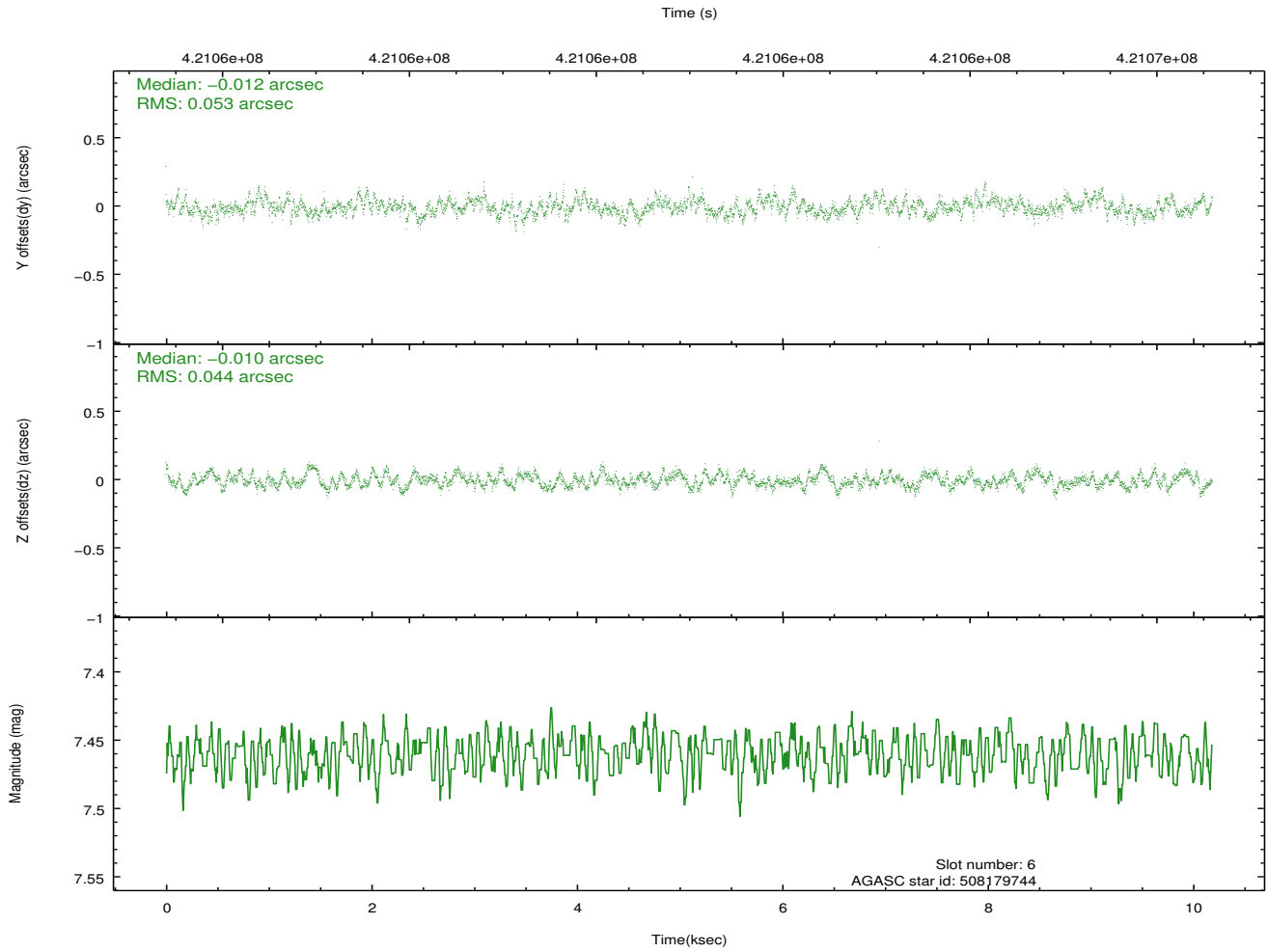
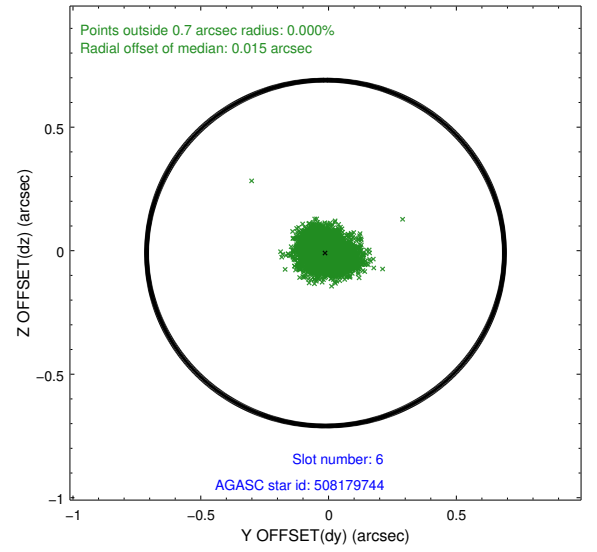
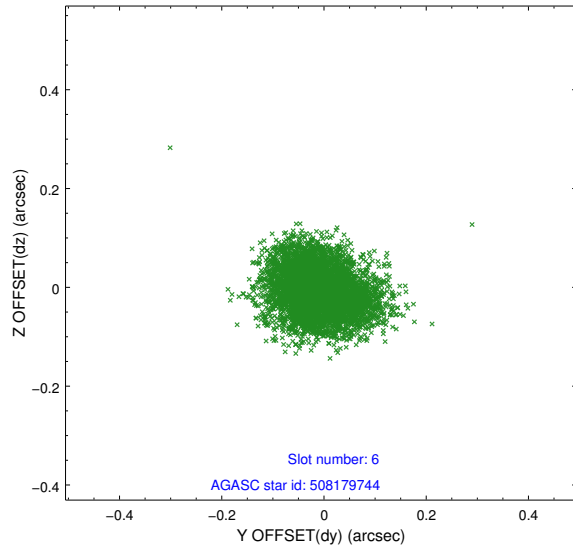
## 2.4.2 Slot 4



### 2.4.3 Slot 5

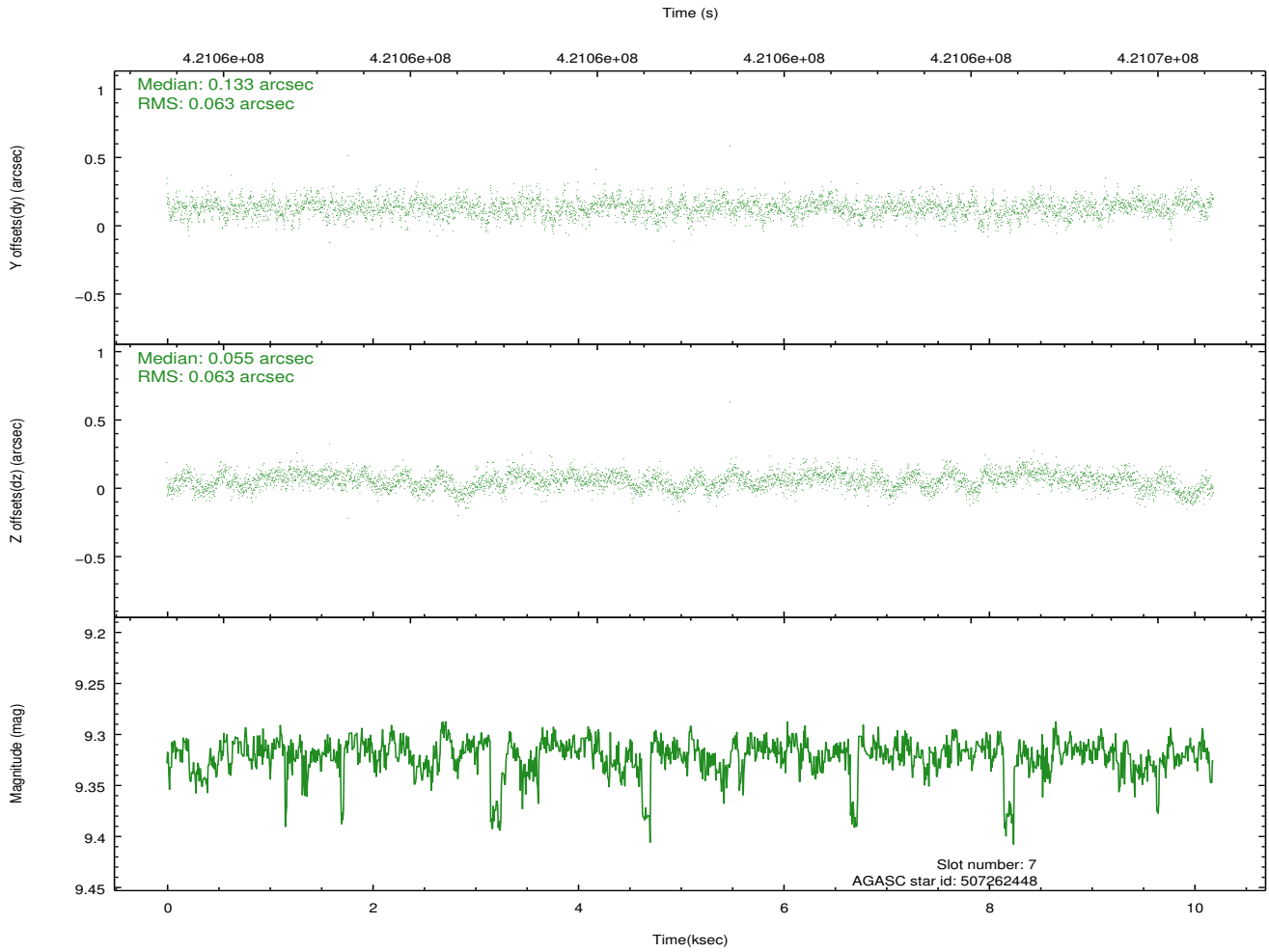
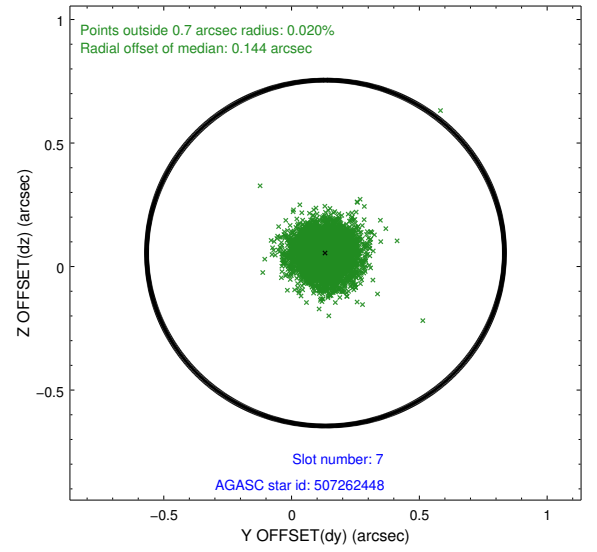
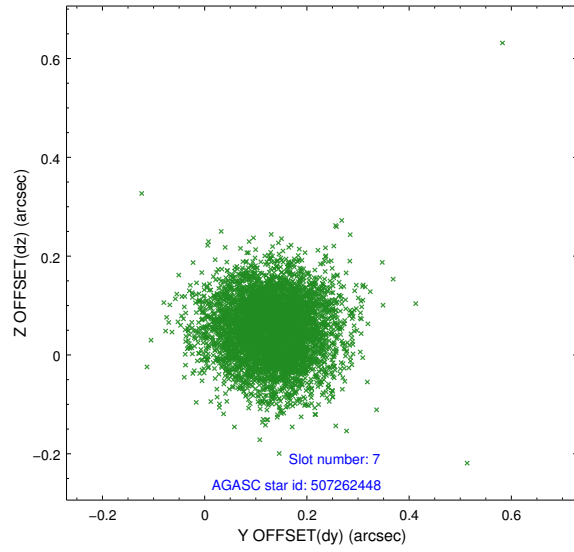


## 2.4.4 Slot 6



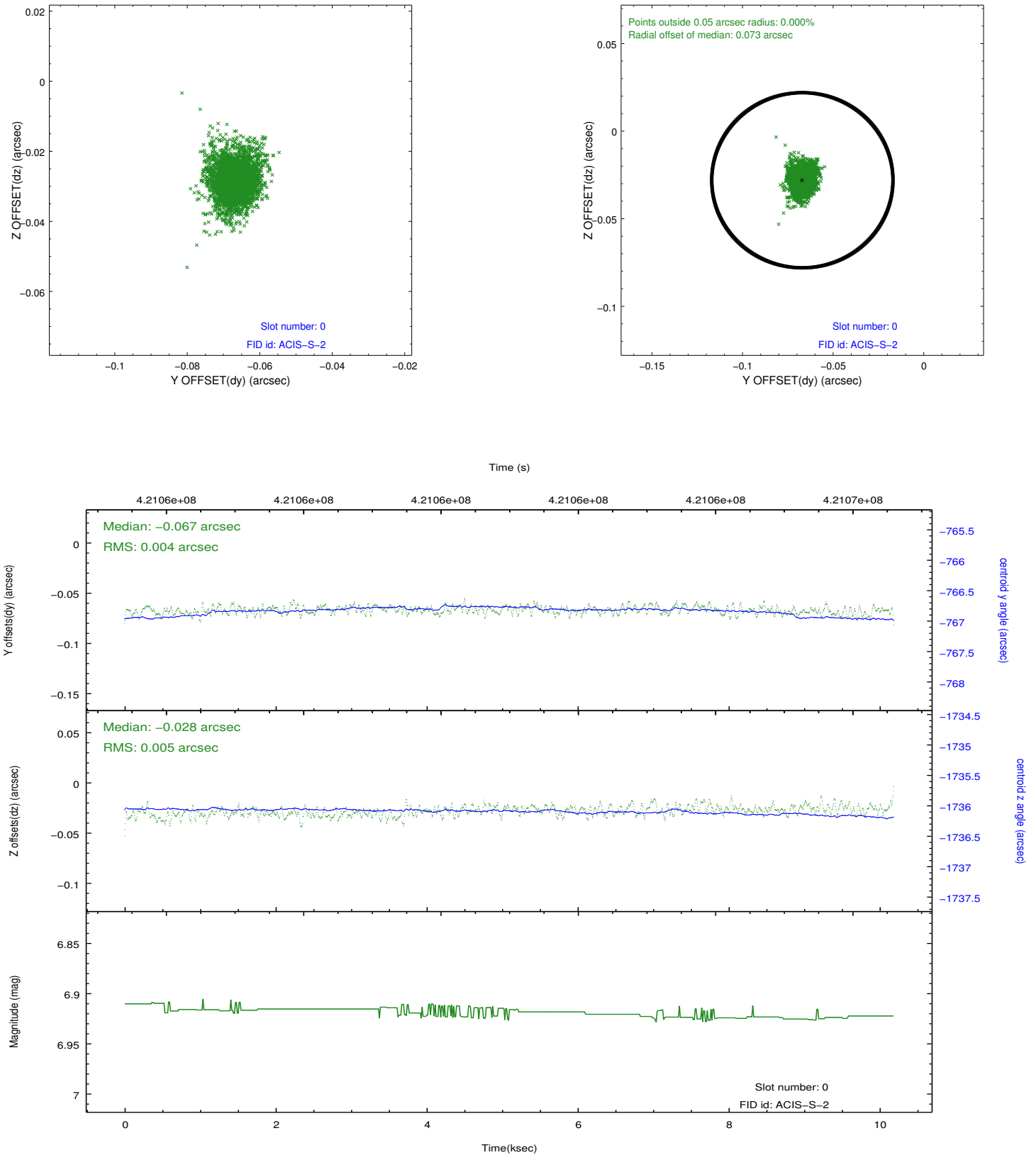


## 2.4.5 Slot 7

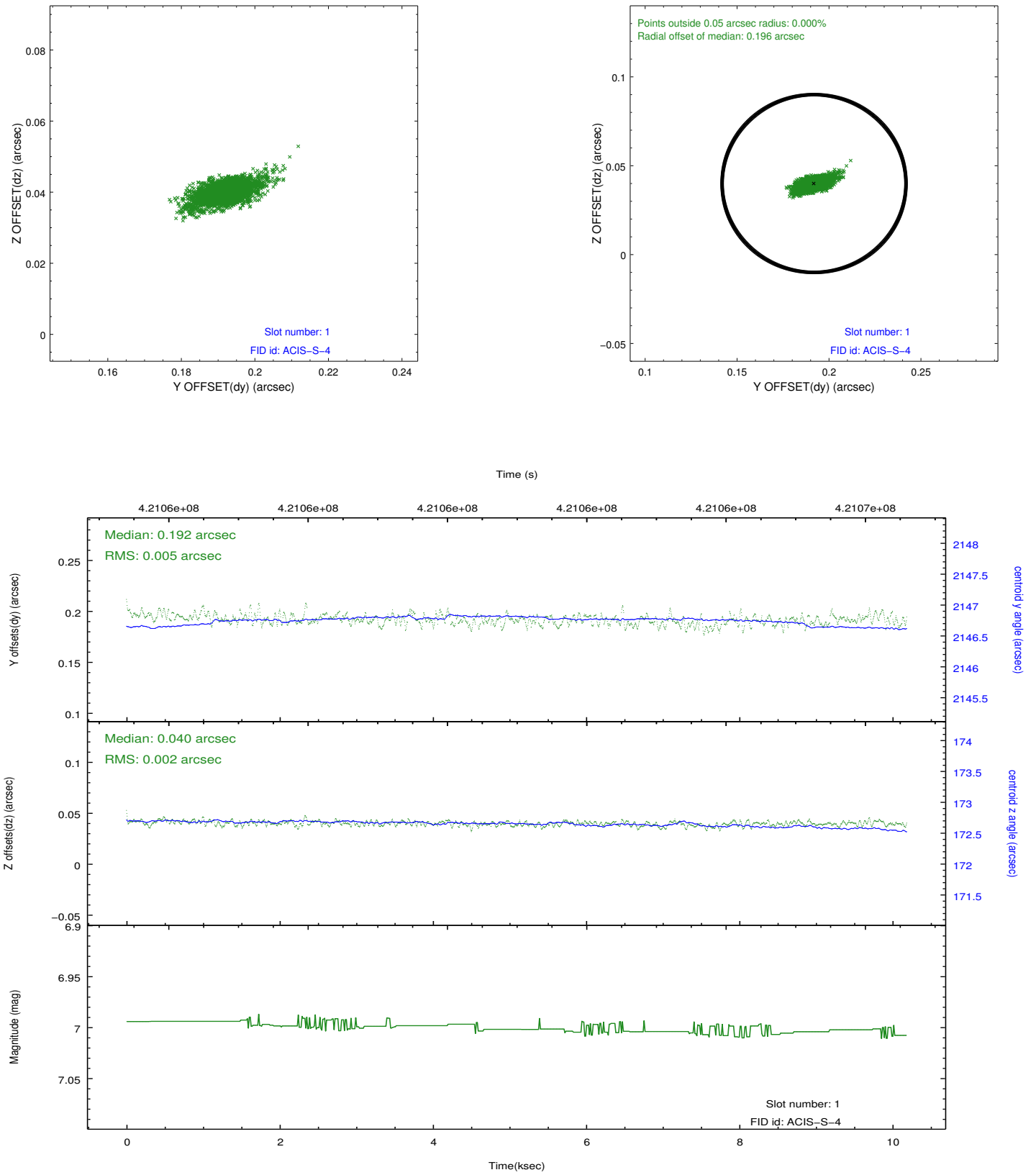


## 2.5 FID Slots

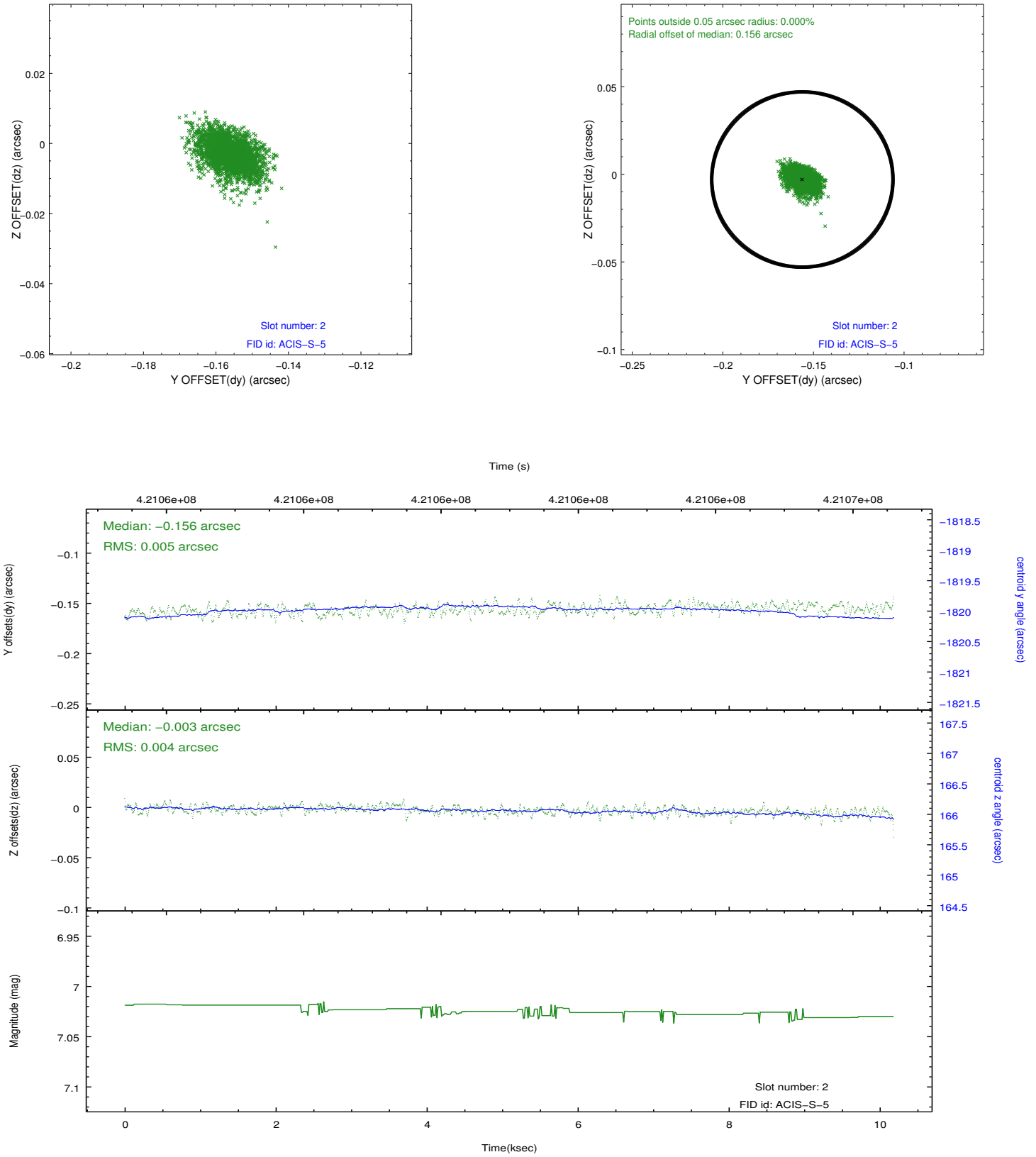
### 2.5.1 Slot 0



## 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)	2012.02.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.065861766815

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.