

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8196 - L2 Version 2  
Chandra X-Ray Center

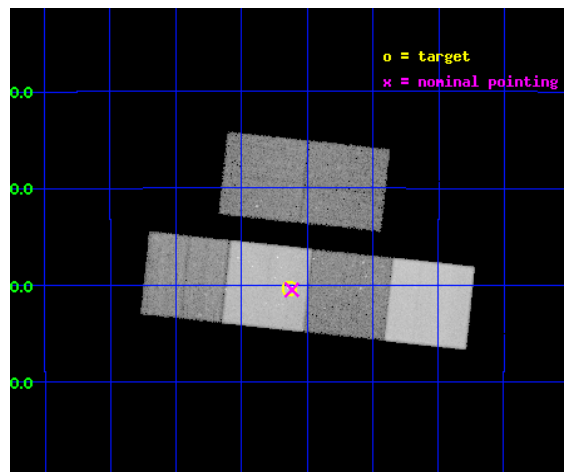
L2 Processing Date : Apr 26 2012

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# 1 Front

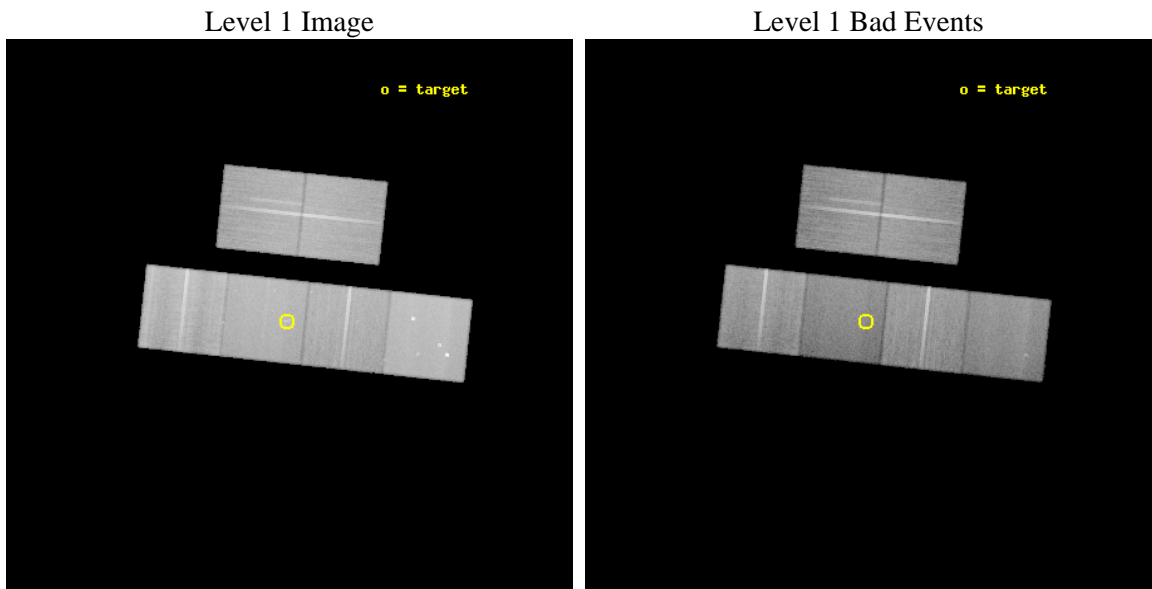
seq_num	600633	Sequence number
obs_id	8196	Observation id
title	Searching for Intermediate-Mass Black Holes in Nuclear Star Clusters	&#160
observer	Dr Joseph Shields	Principal investigator
object	NGC 2139	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	90.283333	Observer's specified target RA [deg]
dec_targ	-23.672222	Observer's specified target Dec [deg]
ra_nom	90.279155198946	Nominal RA [deg]
dec_nom	-23.675197667639	Nominal Dec [deg]
roll_nom	186.1098590069	Nominal Roll [deg]
revision	2	Processing version of data
ontime	39041.988174319	Sum of GTIs [s]
livetime	38547.615011793	Livetime [s]
ontime2	39035.547253847	Sum of GTIs [s]
ontime3	39041.865054309	Sum of GTIs [s]
ontime5	39041.947134316	Sum of GTIs [s]
ontime6	39038.665123999	Sum of GTIs [s]
ontime7	39041.988174319	Sum of GTIs [s]
ontime8	39041.824014306	Sum of GTIs [s]
l2events	467563	Number of level 2 events



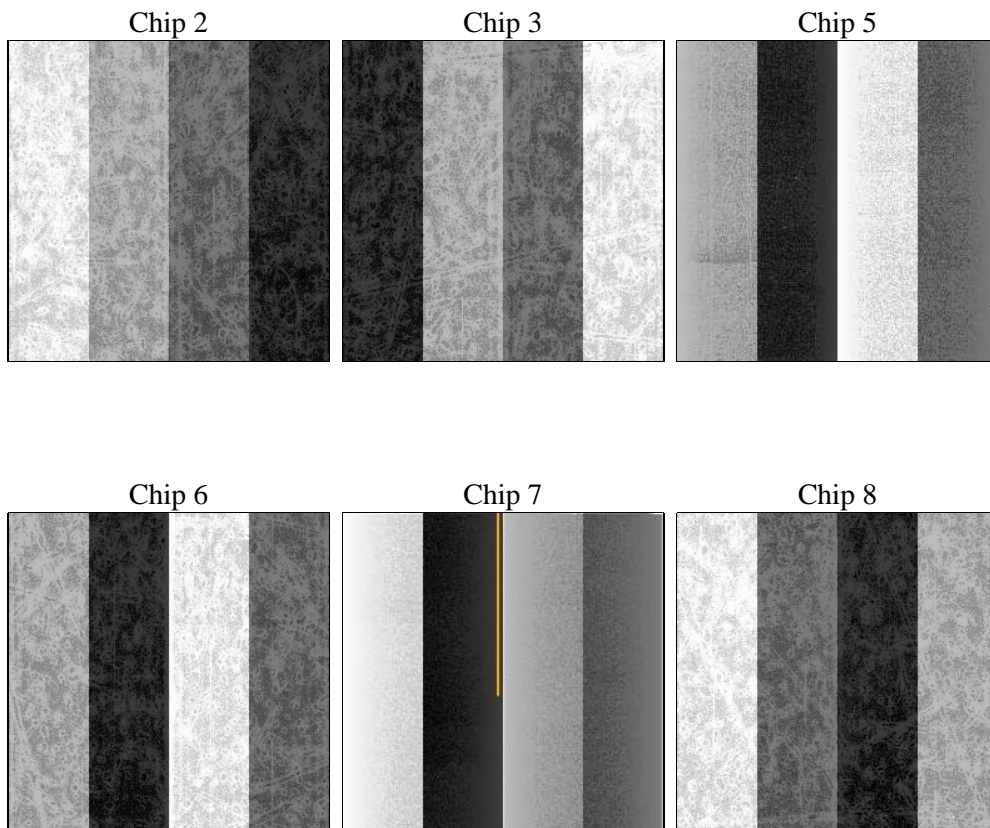
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	39000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	39041.988174319	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	39035.547253847	Sum of GTIs [s]
date	2012-04-26T14:18:20	Date and time of file creation	ontime3	39041.865054309	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	39041.947134316	Sum of GTIs [s]
			ontime6	39038.665123999	Sum of GTIs [s]
			ontime7	39041.988174319	Sum of GTIs [s]
			ontime8	39041.824014306	Sum of GTIs [s]
			l1events	2115268	Number of level 1 events

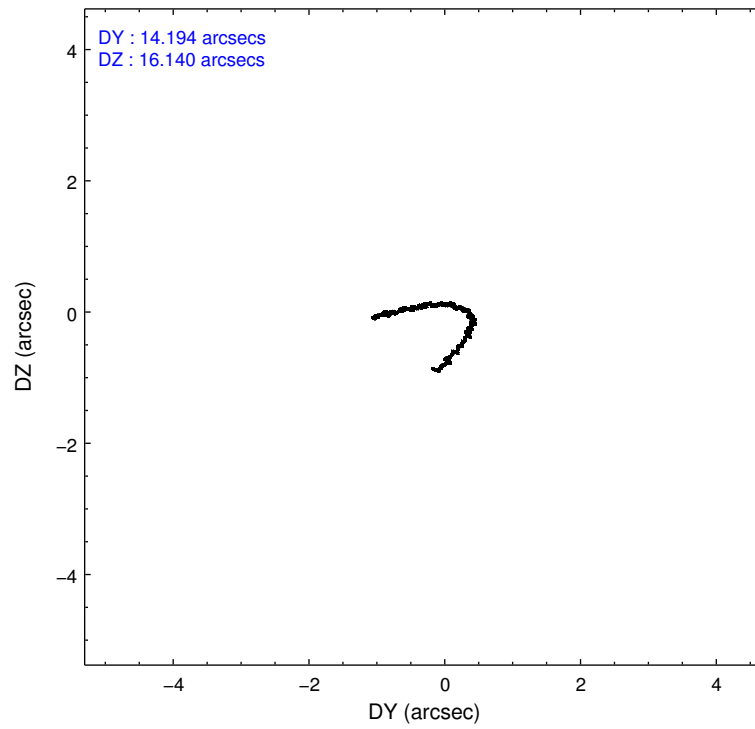
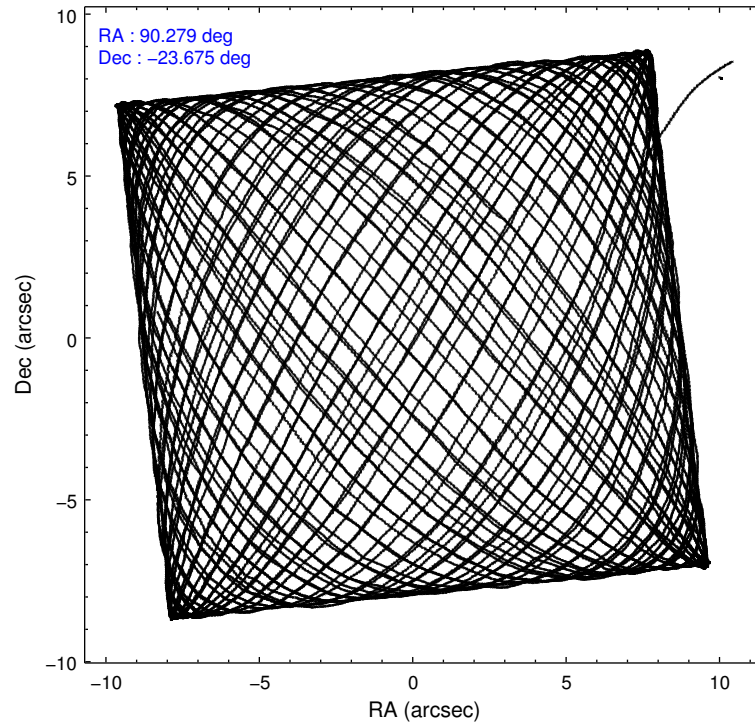
### 2.1.4 Events

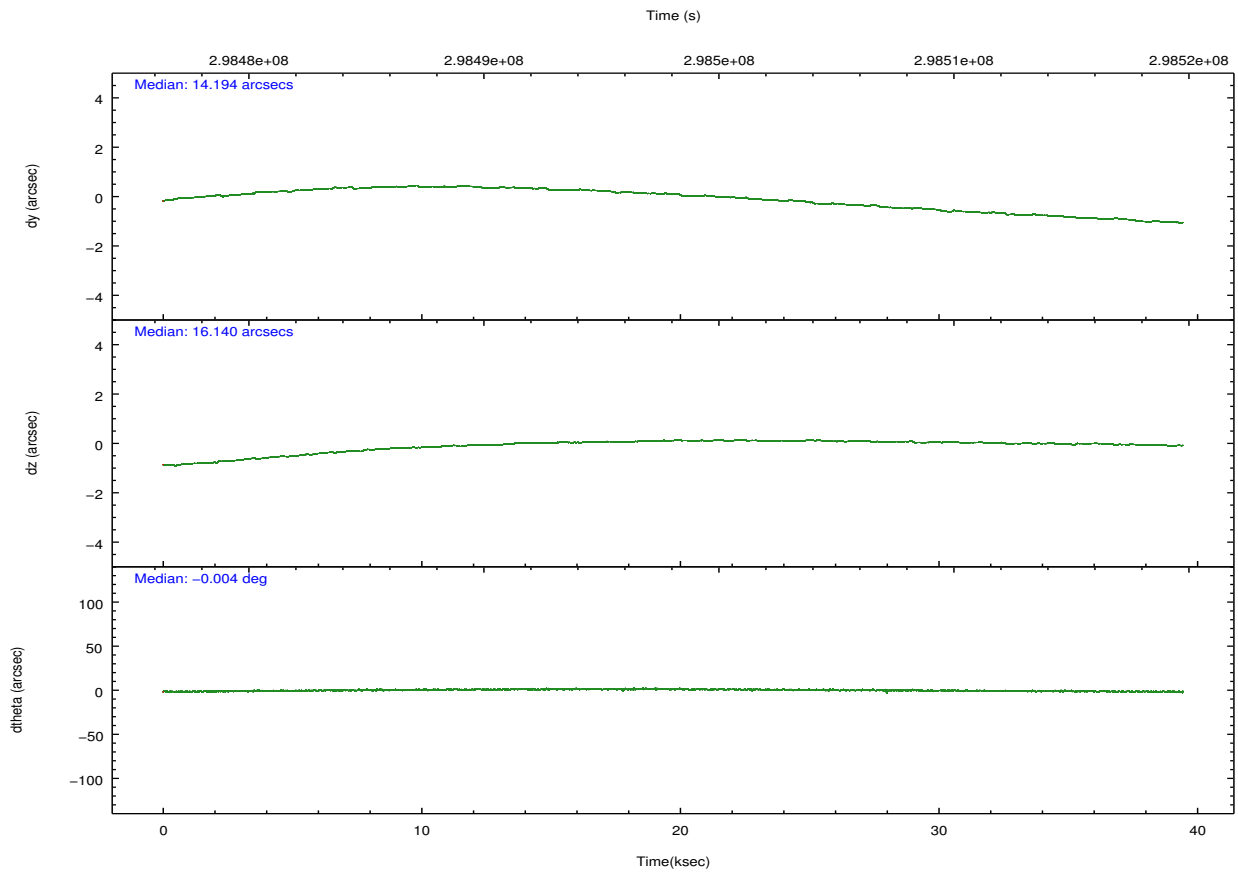
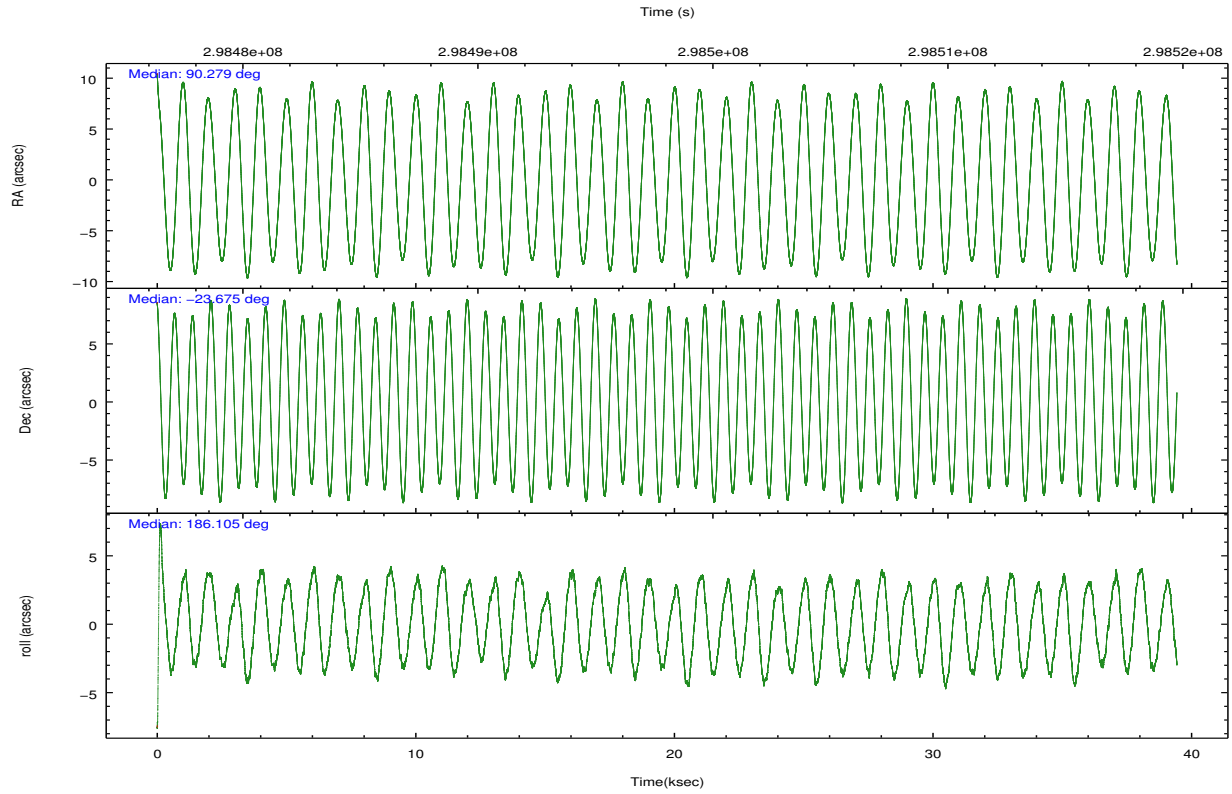
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	329007	304801	429518	311175	348641	392126	grade 0 events	10481	10022	23929	11525	15869	29035
rejected events	298814	276390	214047	278900	187468	295854		3%	3%	5%	3%	4%	7%
rejected %	90%	90%	49%	89%	53%	75%	grade 1 events	194	178	1120	153	416	305
								0%	0%	0%	0%	0%	0%
							grade 2 events	7445	6202	63252	7072	32818	21984
								2%	2%	14%	2%	9%	5%
							grade 3 events	3302	3264	8917	3433	14807	10435
								1%	1%	2%	1%	4%	2%
							grade 4 events	3344	3219	8669	3493	14858	9679
								1%	1%	2%	1%	4%	2%
							grade 5 events	10180	12077	33949	12431	36547	17811
								3%	3%	7%	3%	10%	4%
							grade 6 events	5625	5706	110740	6758	82846	25143
								1%	1%	25%	2%	23%	6%
							grade 7 events	288436	264133	178942	266310	150480	277734
								87%	86%	41%	85%	43%	70%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	90.303019	90.27915519894606	CCD I2 on	Y	Y
[deg] Pointing Dec	-23.658771	-23.67519766763904	CCD I3 on	Y	Y
[deg] Pointing Roll	185.962820	186.1098590069021	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	O1	Y
[s] Observation start time (MET)	298478768.184000	298477636.20692	CCD S5 on	N	N
Observation start date	2007-06-17T14:45:03	2007-06-17T14:27:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	298517768.184000	298518568.55888	On-chip summing requested	N	N
Observation end date	2007-06-18T01:35:03	2007-06-18T01:49:28	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



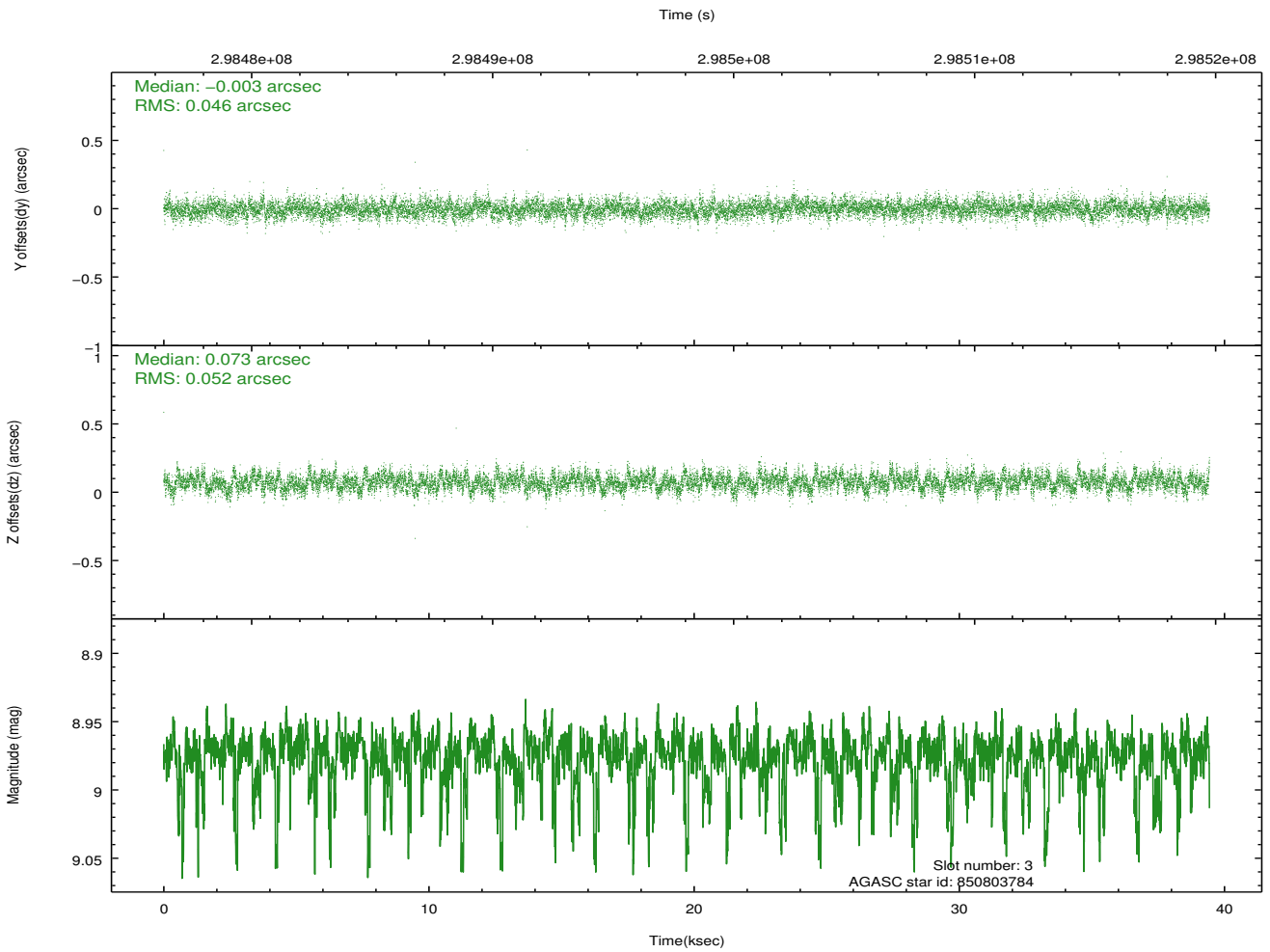
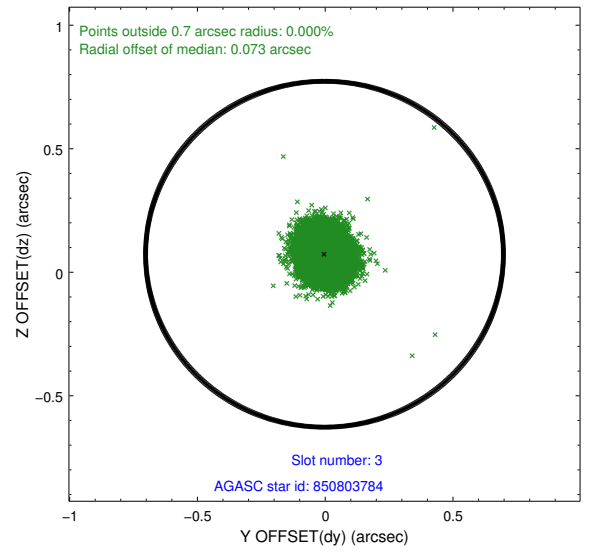
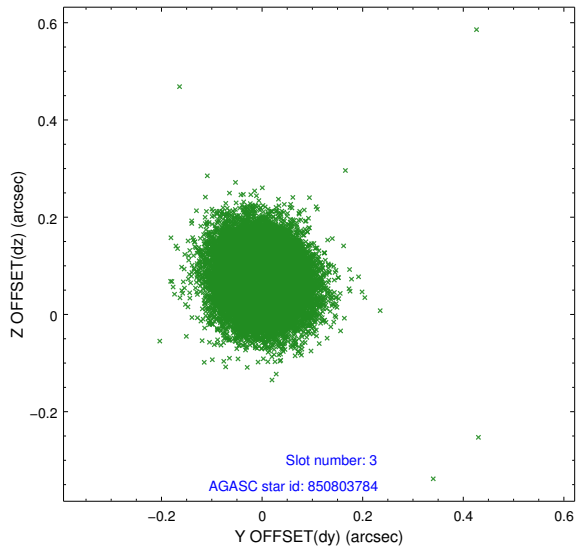


### Slot Statistics

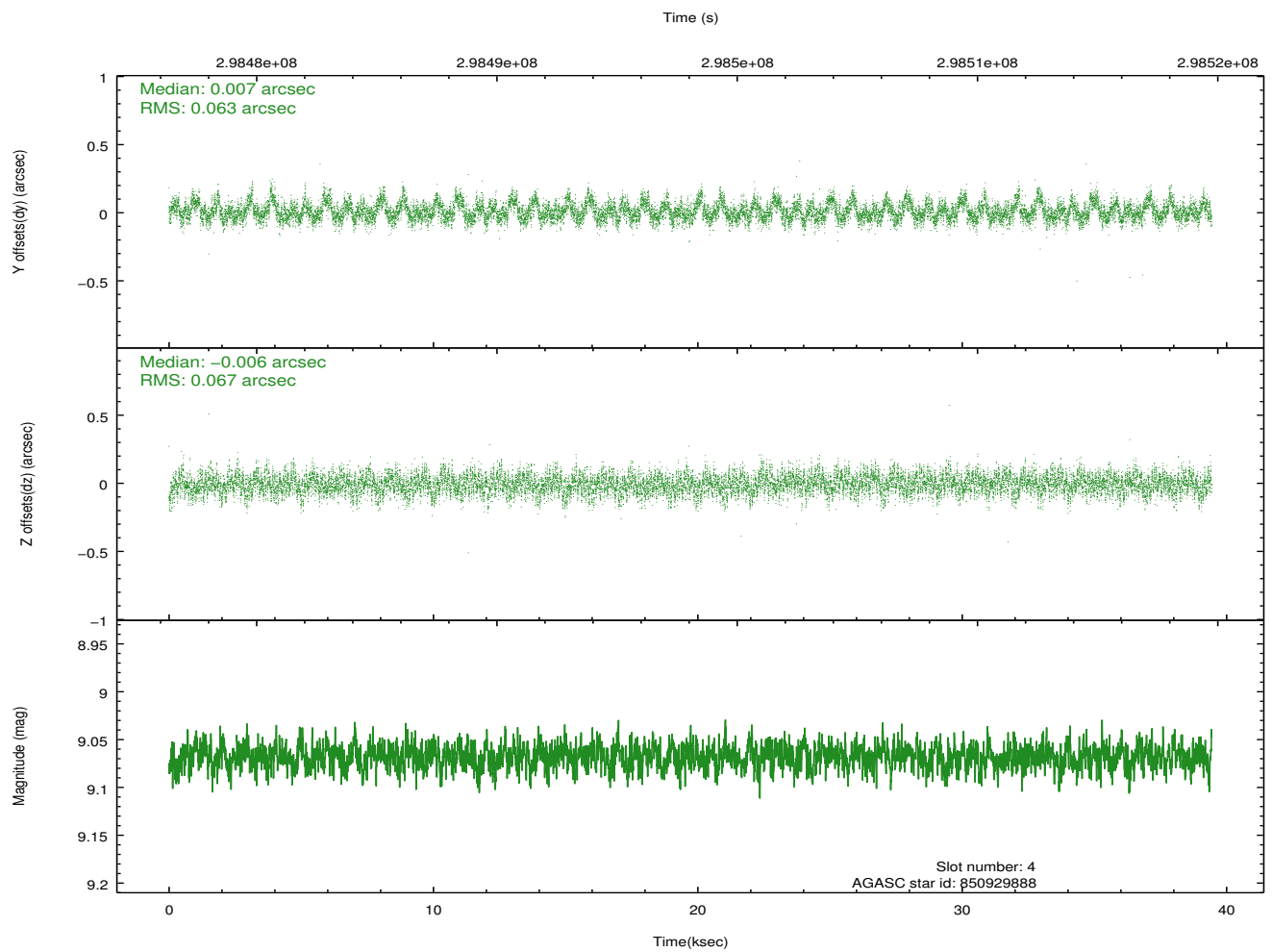
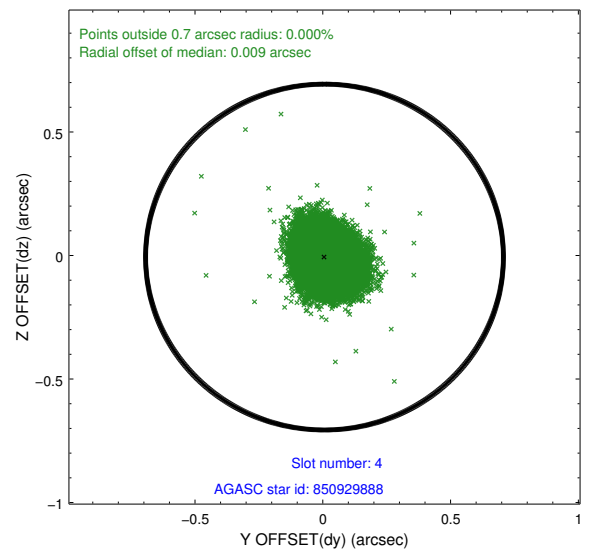
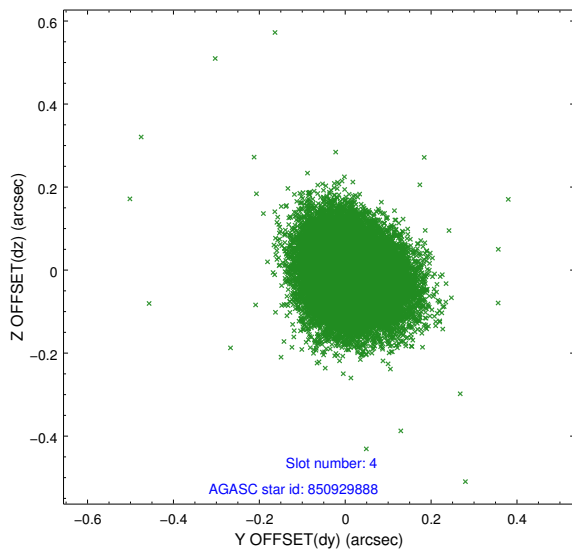
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	9616	-0.071	-0.031	0.019	0.030	0.000000	0.000000	-767.07	-1737.42
1	FID	ACIS-S-4	7.19	9617	0.204	0.043	0.012	0.037	0.000000	0.000000	2146.46	171.12
2	FID	ACIS-S-5	7.22	9618	-0.161	-0.002	0.015	0.024	0.000000	0.000000	-1819.99	164.76
3	GUIDE	850803784	8.97	19215	-0.003	0.073	0.074	0.120	89.698346	-23.619143	1969.61	-344.48
4	GUIDE	850929888	9.07	19215	0.007	-0.006	0.098	0.157	90.270408	-24.095243	270.10	1551.84
5	GUIDE	850931592	7.36	19235	-0.062	-0.001	0.058	0.091	90.752935	-23.218588	-1644.63	-1419.49
6	GUIDE	850937984	9.37	19212	0.047	-0.051	0.091	0.149	90.507862	-23.935378	-566.77	1061.09
7	GUIDE	850796312	9.12	19158	0.006	-0.013	0.090	0.151	89.585460	-23.215098	2196.41	-1829.01

## 2.4 Star Slots

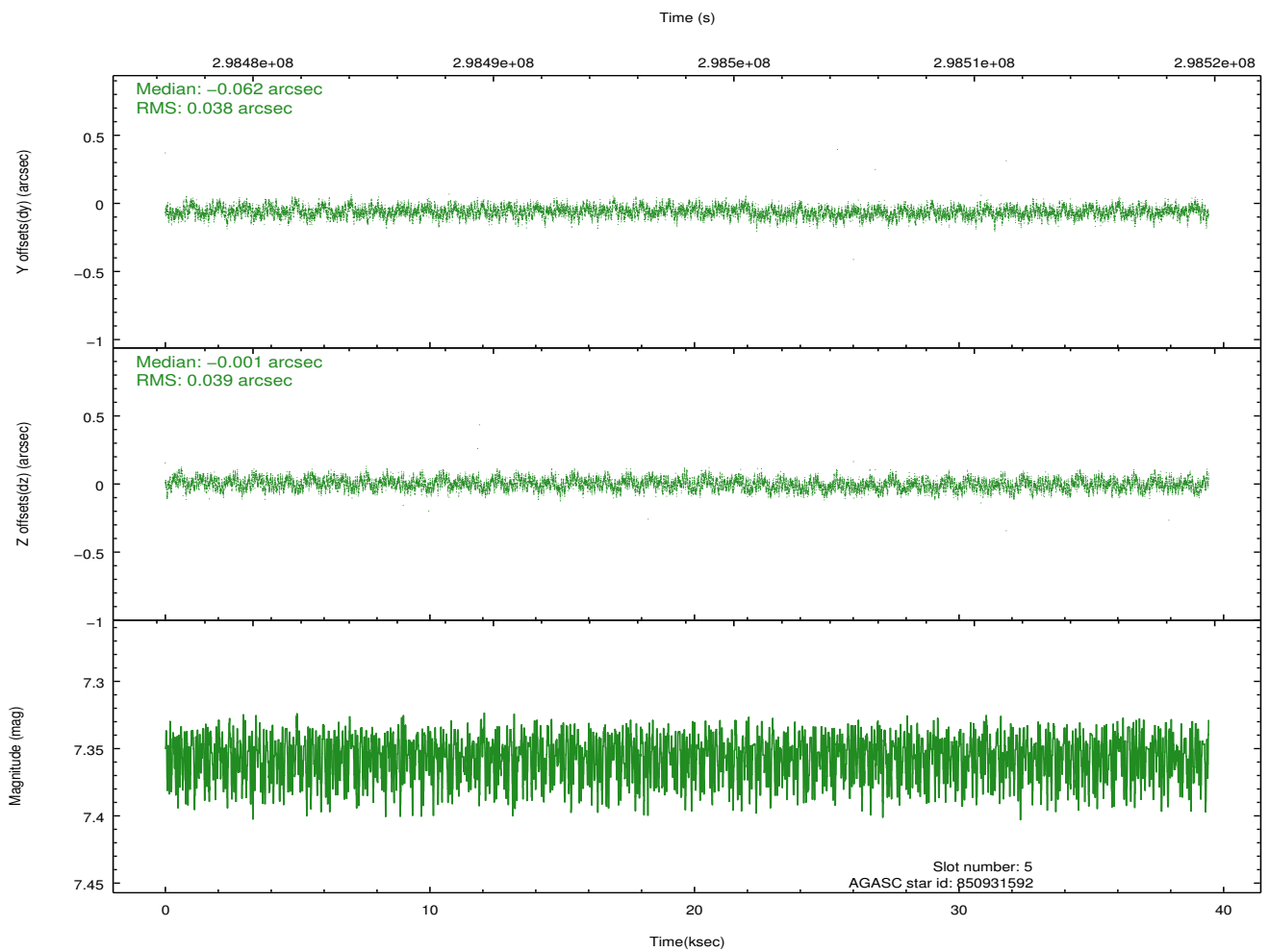
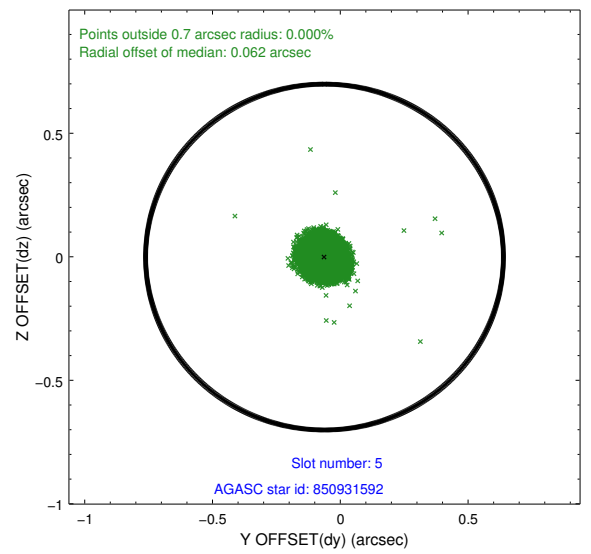
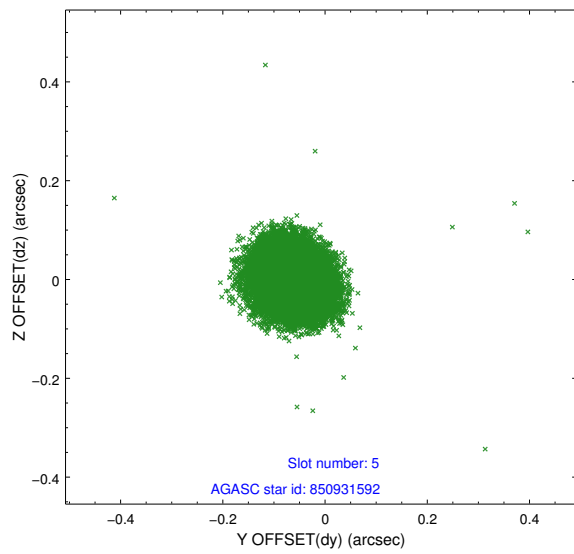
### 2.4.1 Slot 3



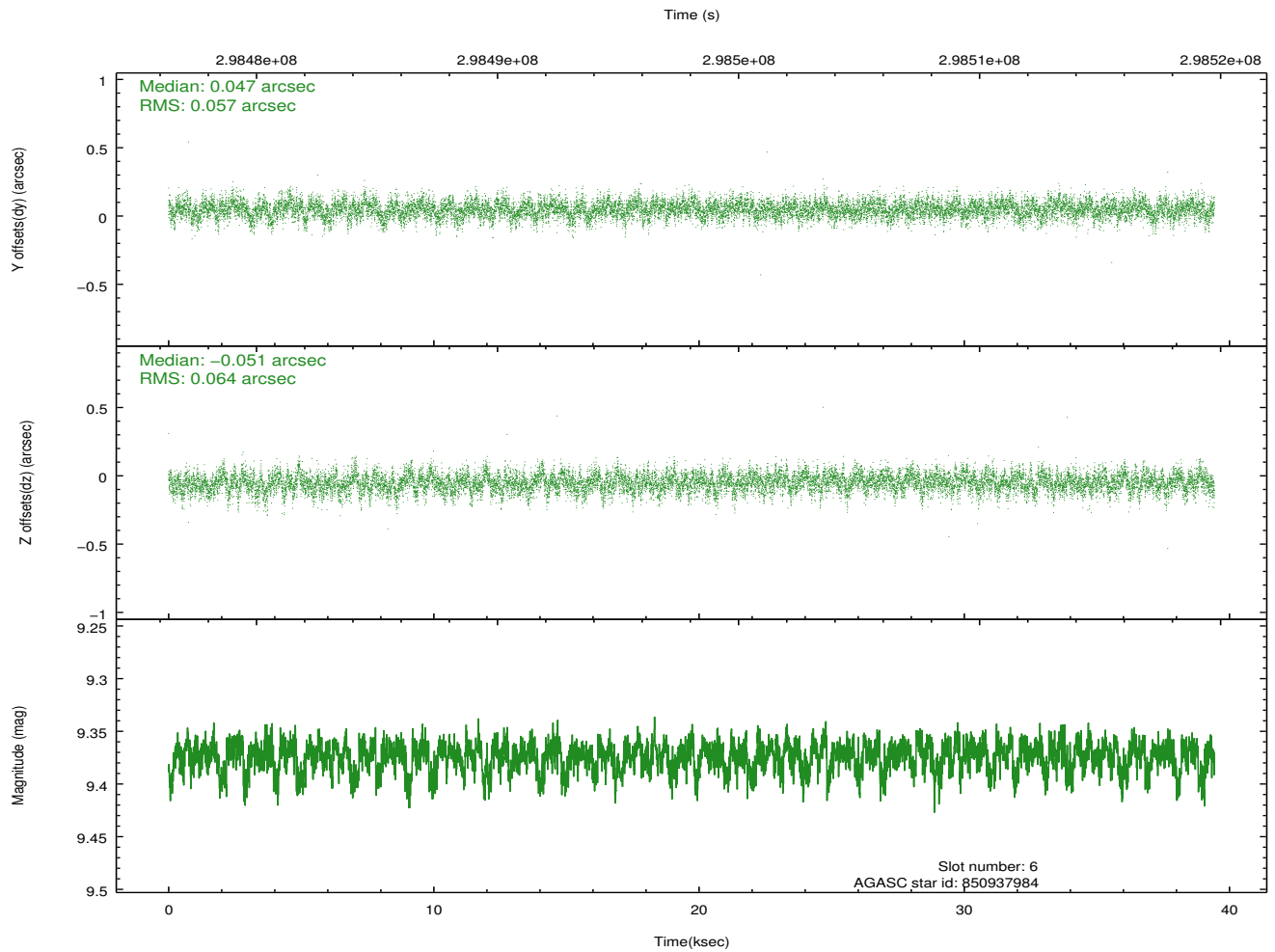
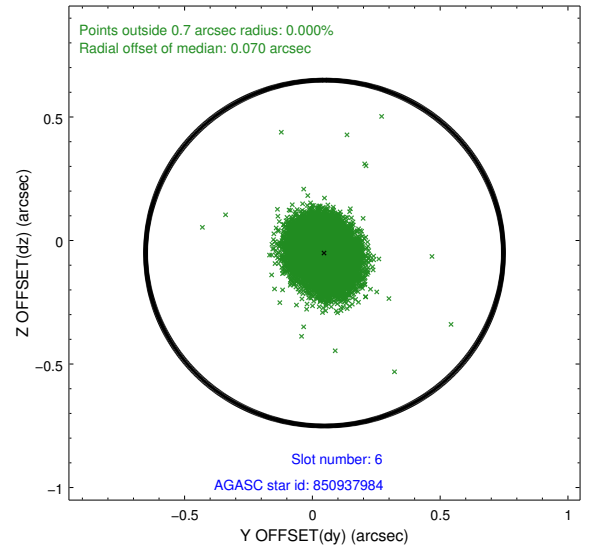
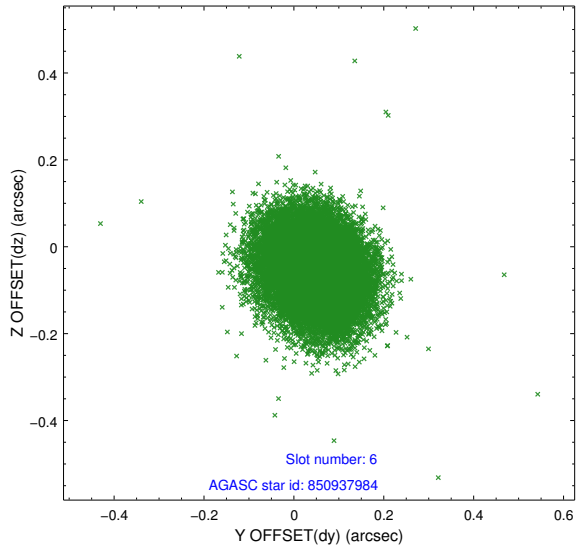
## 2.4.2 Slot 4



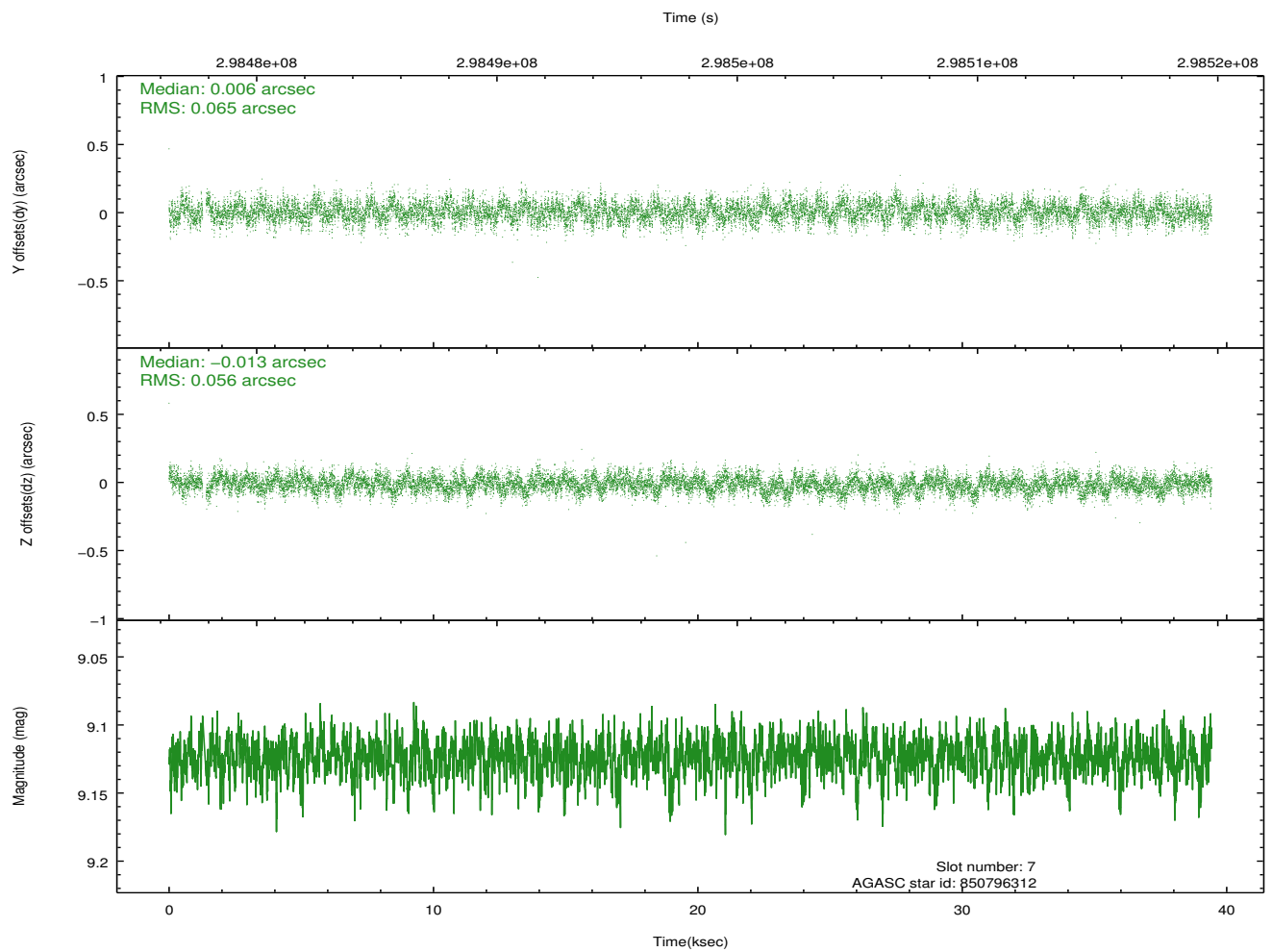
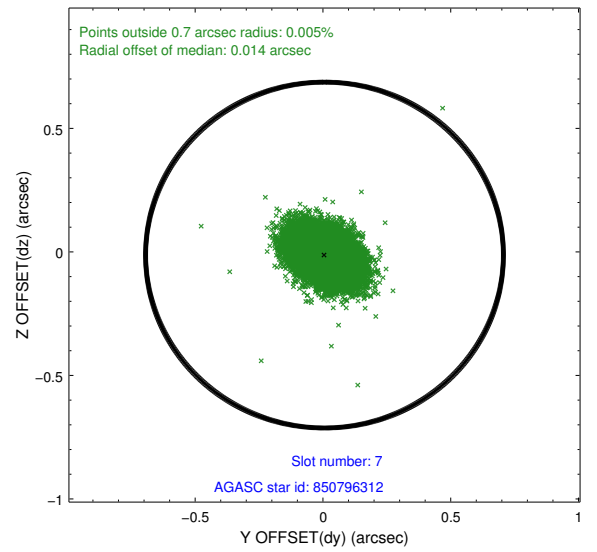
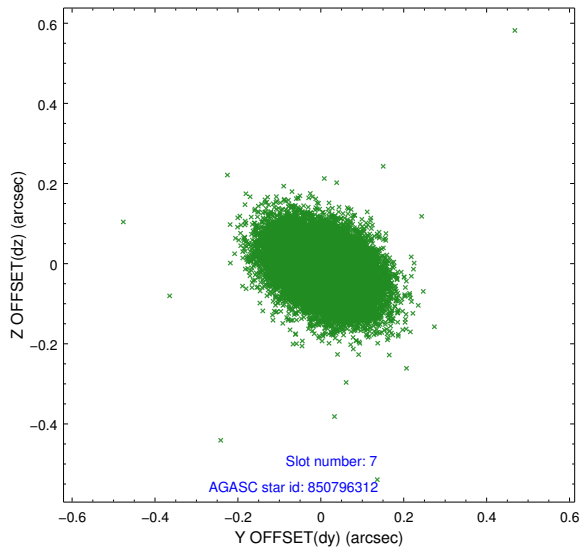
### 2.4.3 Slot 5



## 2.4.4 Slot 6

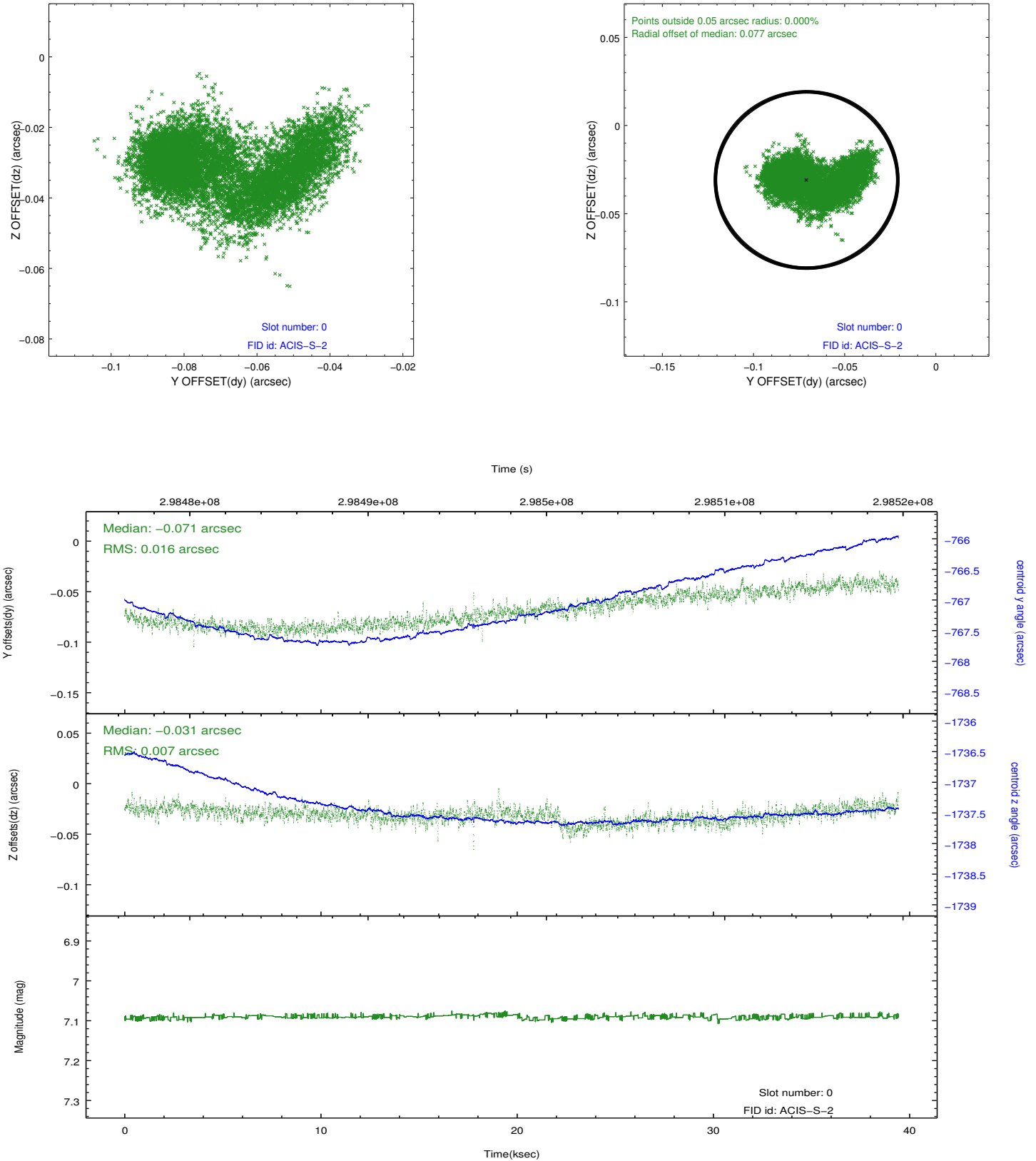


## 2.4.5 Slot 7

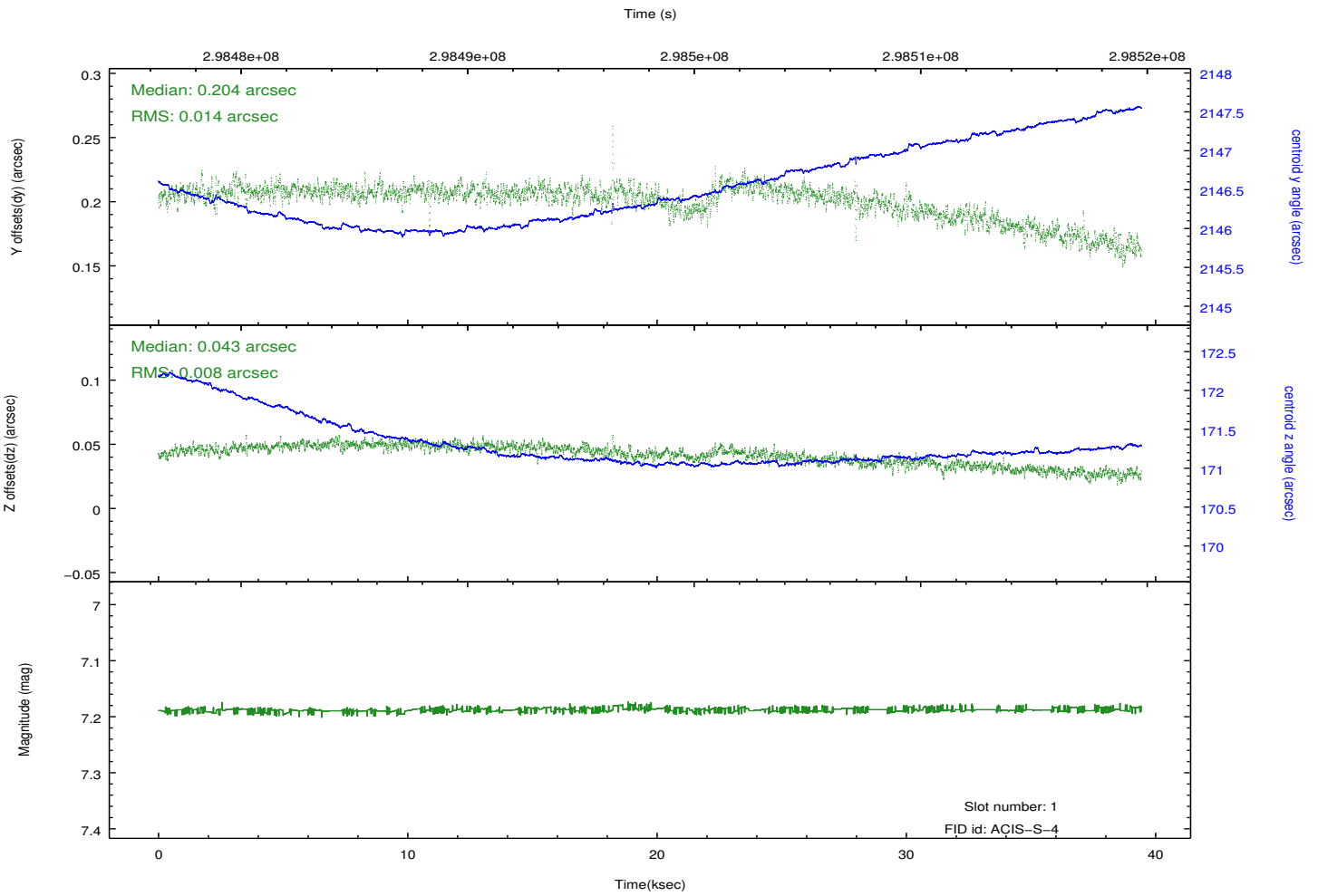
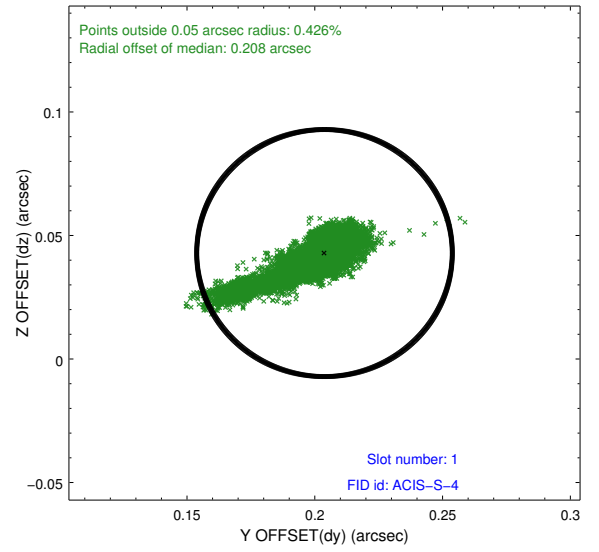
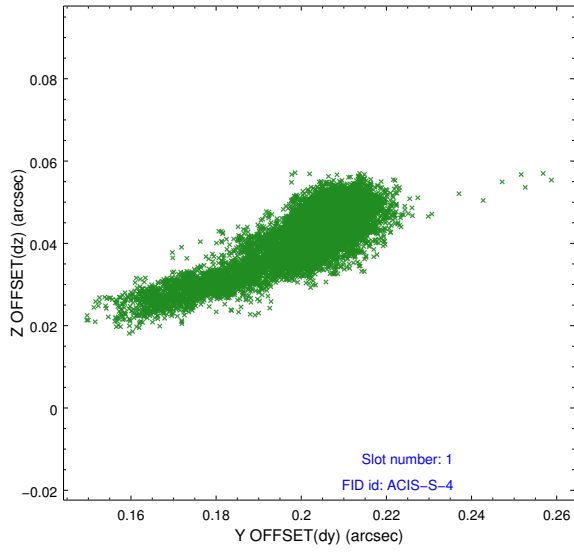


## 2.5 FID Slots

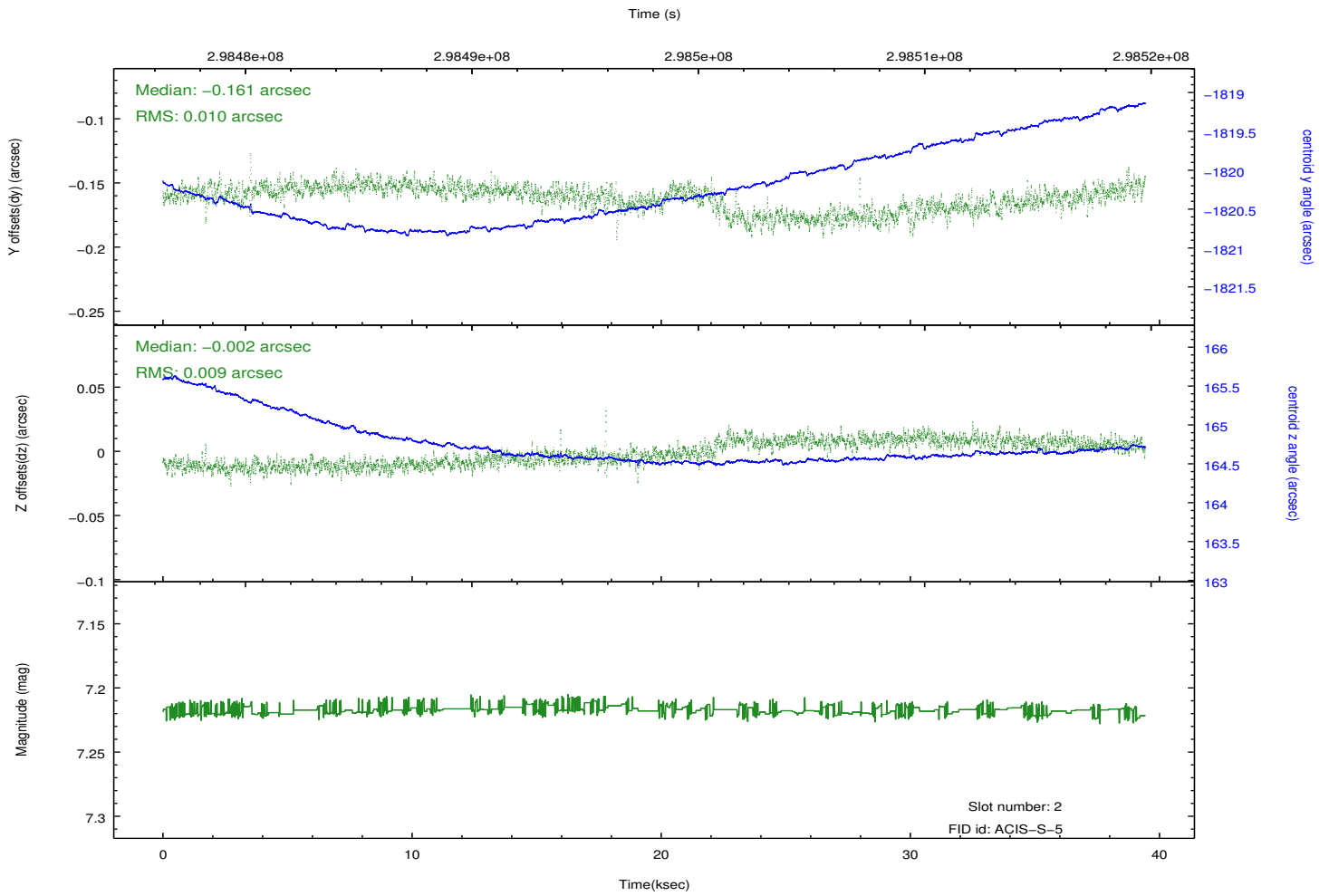
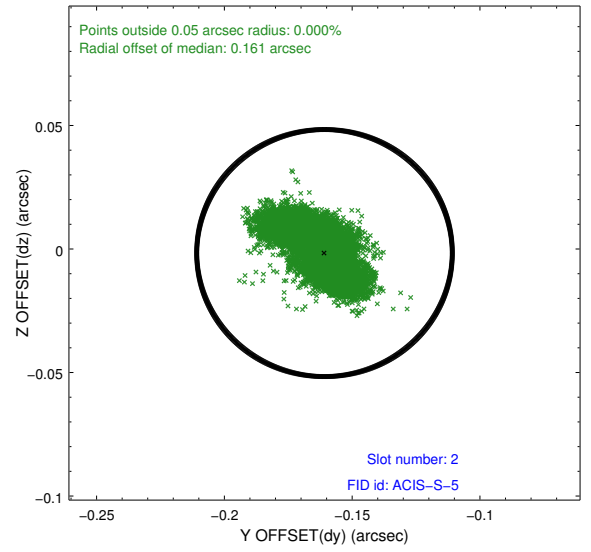
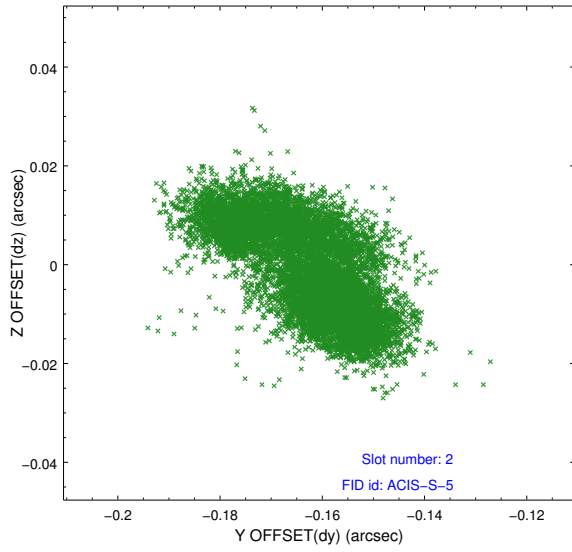
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## **A Summary**

### **A.1 Status**

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.04.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.0431998

### **A.2 Comments**