

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11350 - L2 Version 2  
Chandra X-Ray Center

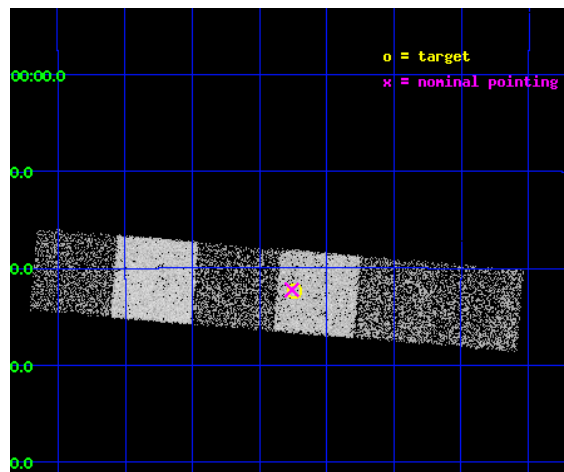
L2 Processing Date : Jun 16 2012

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# 1 Front

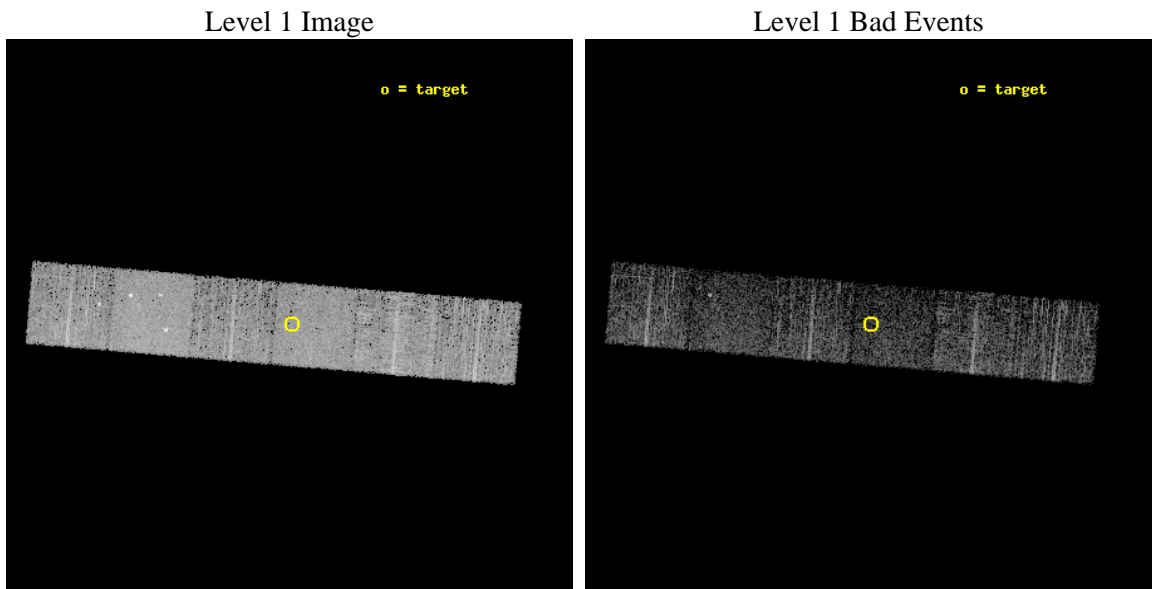
seq_num	600869	Sequence number
obs_id	11350	Observation id
title	Accretion onto nuclear black holes in early type galaxies: comparing field vs. clusters	Proposal title
observer	Elena Gallo	Principal investigator
object	NGC1370	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	53.8109	Observer's specified target RA [deg]
dec_targ	-20.37369	Observer's specified target Dec [deg]
ra_nom	53.814888520319	Nominal RA [deg]
dec_nom	-20.370766669206	Nominal Dec [deg]
roll_nom	4.7827339729249	Nominal Roll [deg]
revision	2	Processing version of data
ontime	2723.1999899149	Sum of GTIs [s]
livetime	2688.7171919284	Livetime [s]
ontime4	2723.1999899149	Sum of GTIs [s]
ontime5	2723.1999899149	Sum of GTIs [s]
ontime6	2723.1999899149	Sum of GTIs [s]
ontime7	2723.1999899149	Sum of GTIs [s]
ontime8	2723.1999899149	Sum of GTIs [s]
ontime9	2723.1696098447	Sum of GTIs [s]
l2events	37651	Number of level 2 events



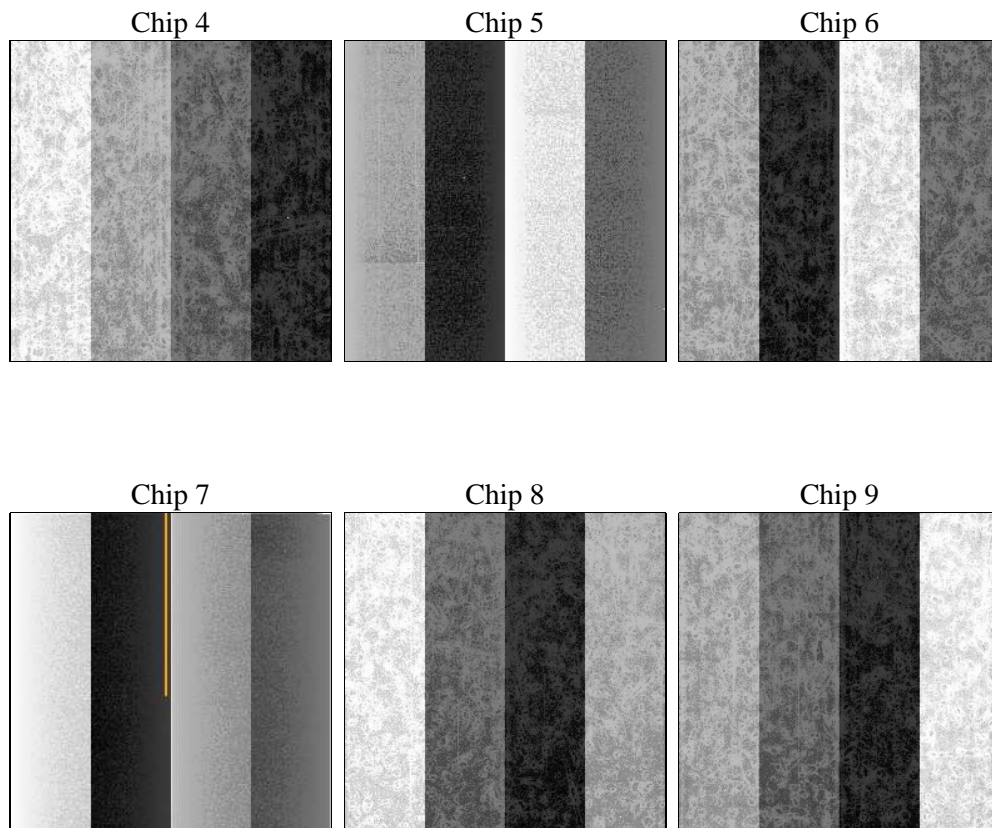
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2617.180000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	2723.1999899149	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime4	2723.1999899149	Sum of GTIs [s]
date	2012-06-16T15:24:01	Date and time of file creation	ontime5	2723.1999899149	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	2723.1999899149	Sum of GTIs [s]
			ontime7	2723.1999899149	Sum of GTIs [s]
			ontime8	2723.1999899149	Sum of GTIs [s]
			ontime9	2723.1696098447	Sum of GTIs [s]
			l1events	168691	Number of level 1 events

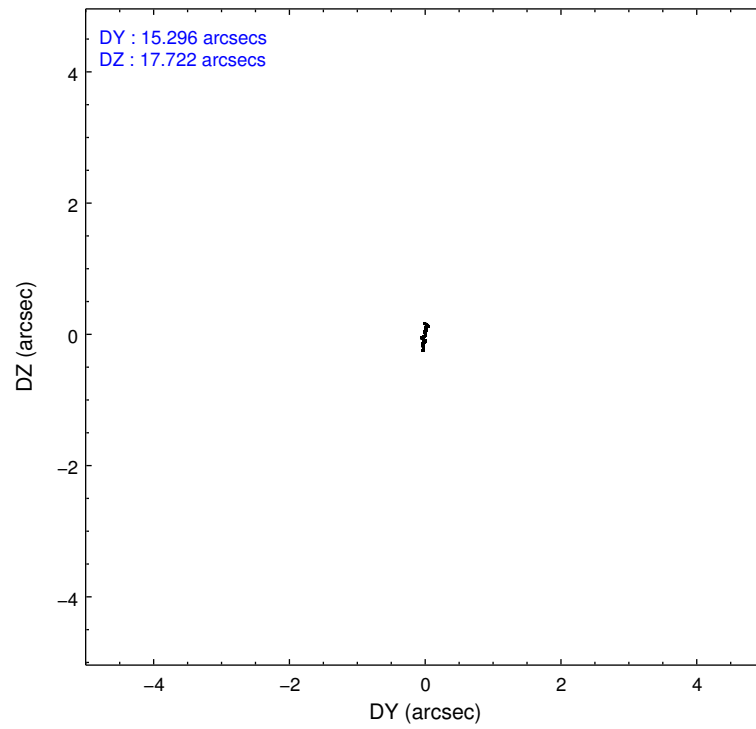
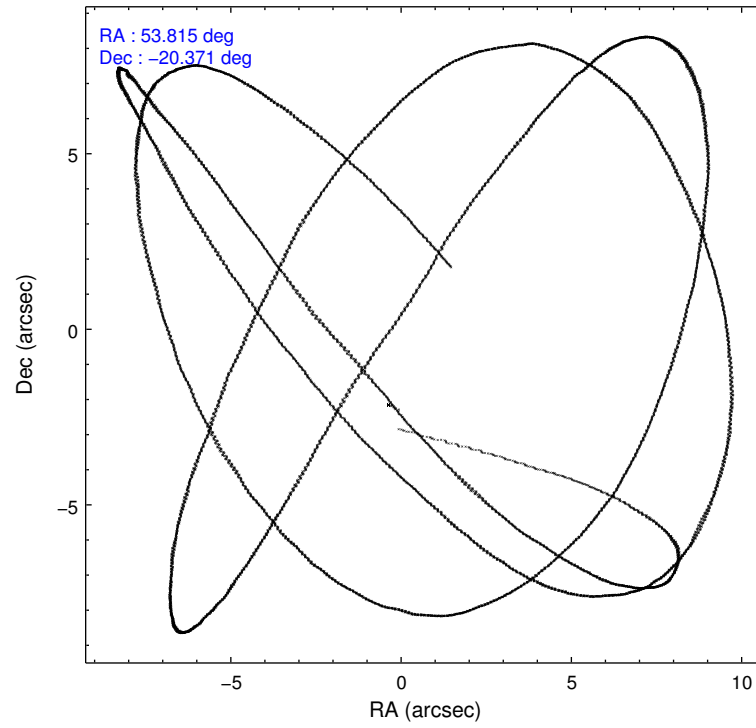
### 2.1.4 Events

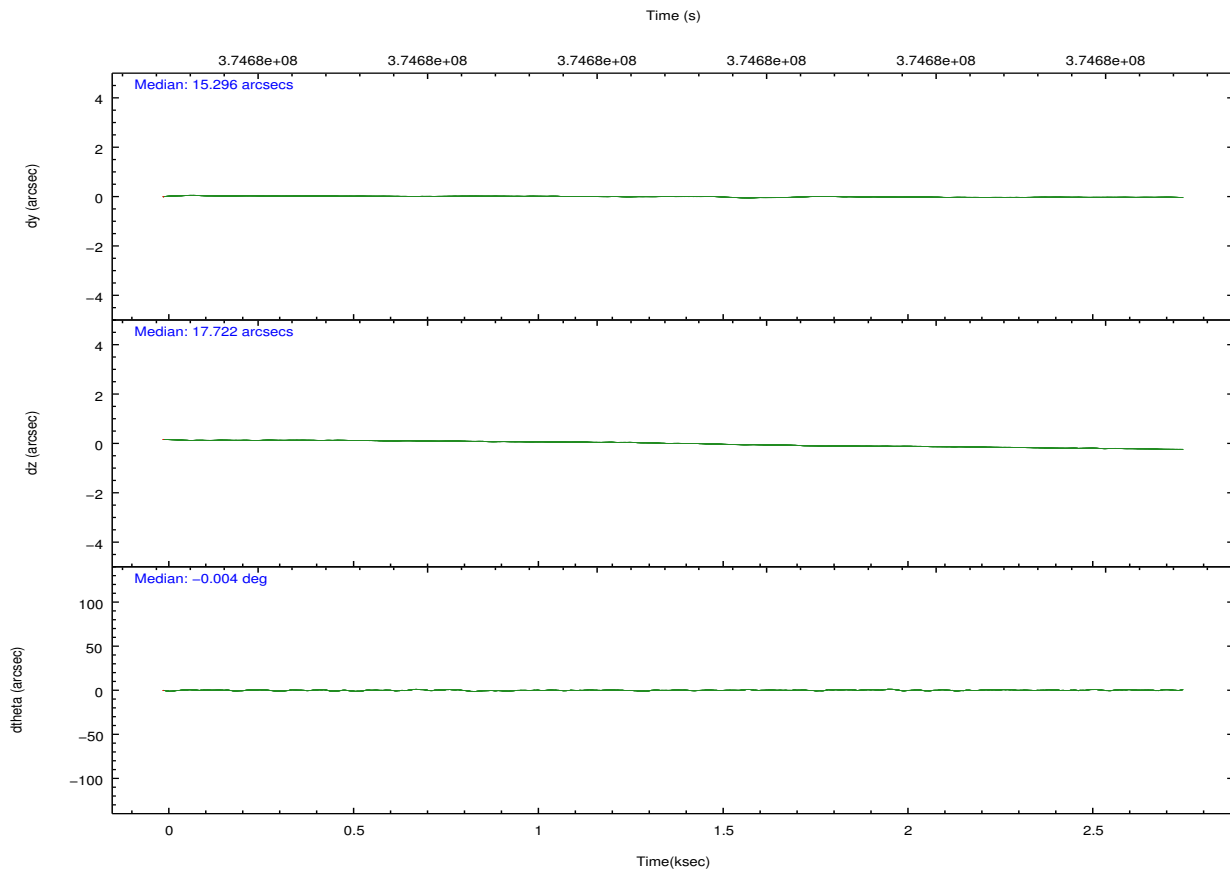
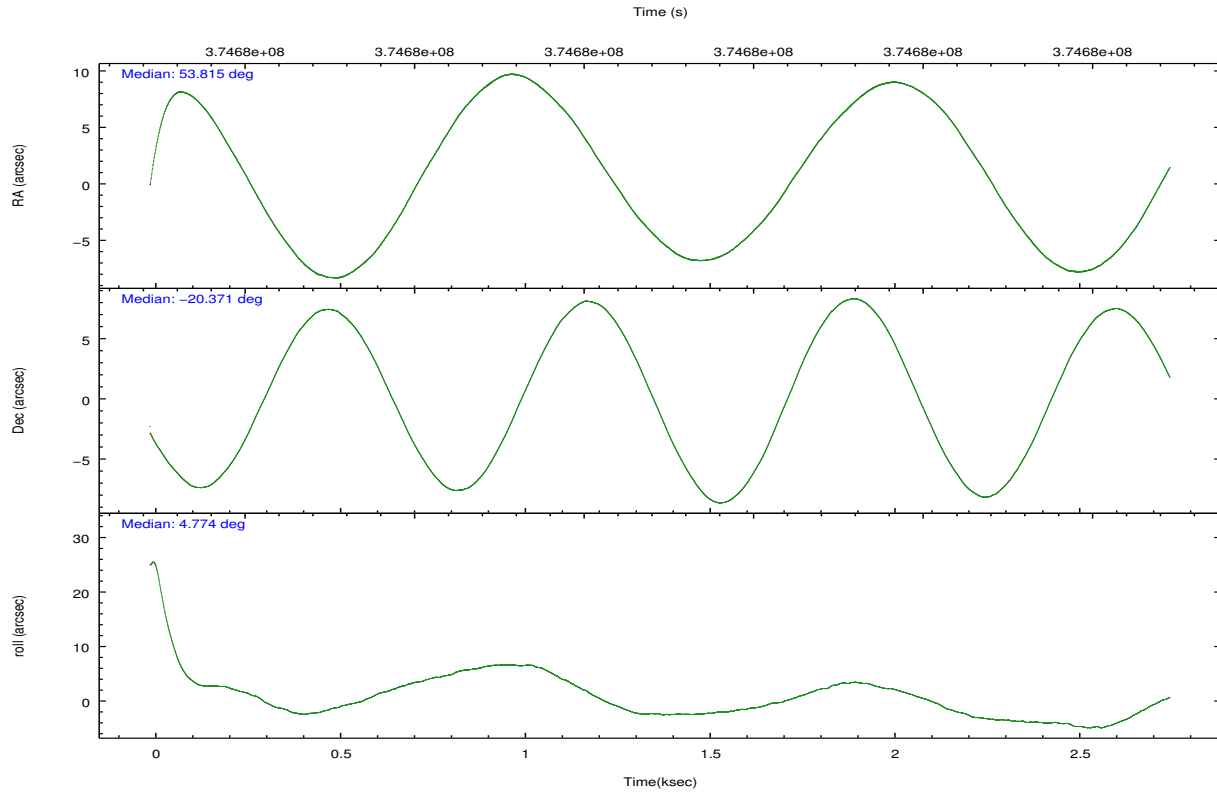
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	27168	35598	23296	27112	30483	25034	grade 0 events	1377	2244	954	1124	2330	1038
rejected events	24140	17428	20678	14758	22732	22367		5%	6%	4%	4%	7%	4%
rejected %	88%	48%	88%	54%	74%	89%	grade 1 events	28	136	19	36	27	17
								0%	0%	0%	0%	0%	0%
							grade 2 events	687	5503	595	2494	1830	545
								2%	15%	2%	9%	6%	2%
							grade 3 events	266	700	257	1171	851	255
								0%	1%	1%	4%	2%	1%
							grade 4 events	269	643	271	1122	801	275
								0%	1%	1%	4%	2%	1%
							grade 5 events	986	2585	984	2938	1480	1113
								3%	7%	4%	10%	4%	4%
							grade 6 events	431	9122	550	6468	1948	560
								1%	25%	2%	23%	6%	2%
							grade 7 events	23124	14665	19666	11759	21216	21231
								85%	41%	84%	43%	69%	84%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	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	53.791334	53.8148885203186	CCD I2 on	N	N
[deg] Pointing Dec	-20.386708	-20.37076666920562	CCD I3 on	N	N
[deg] Pointing Roll	4.617797	4.78273397292487	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	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	Y	Y
[s] Observation start time (MET)	374674976.184000	374673789.9089	CCD S5 on	O2	Y
Observation start date	2009-11-15T12:21:50	2009-11-15T12:03:09	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	374677593.184000	374677857.62161	On-chip summing requested	N	N
Observation end date	2009-11-15T13:05:27	2009-11-15T13:10:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





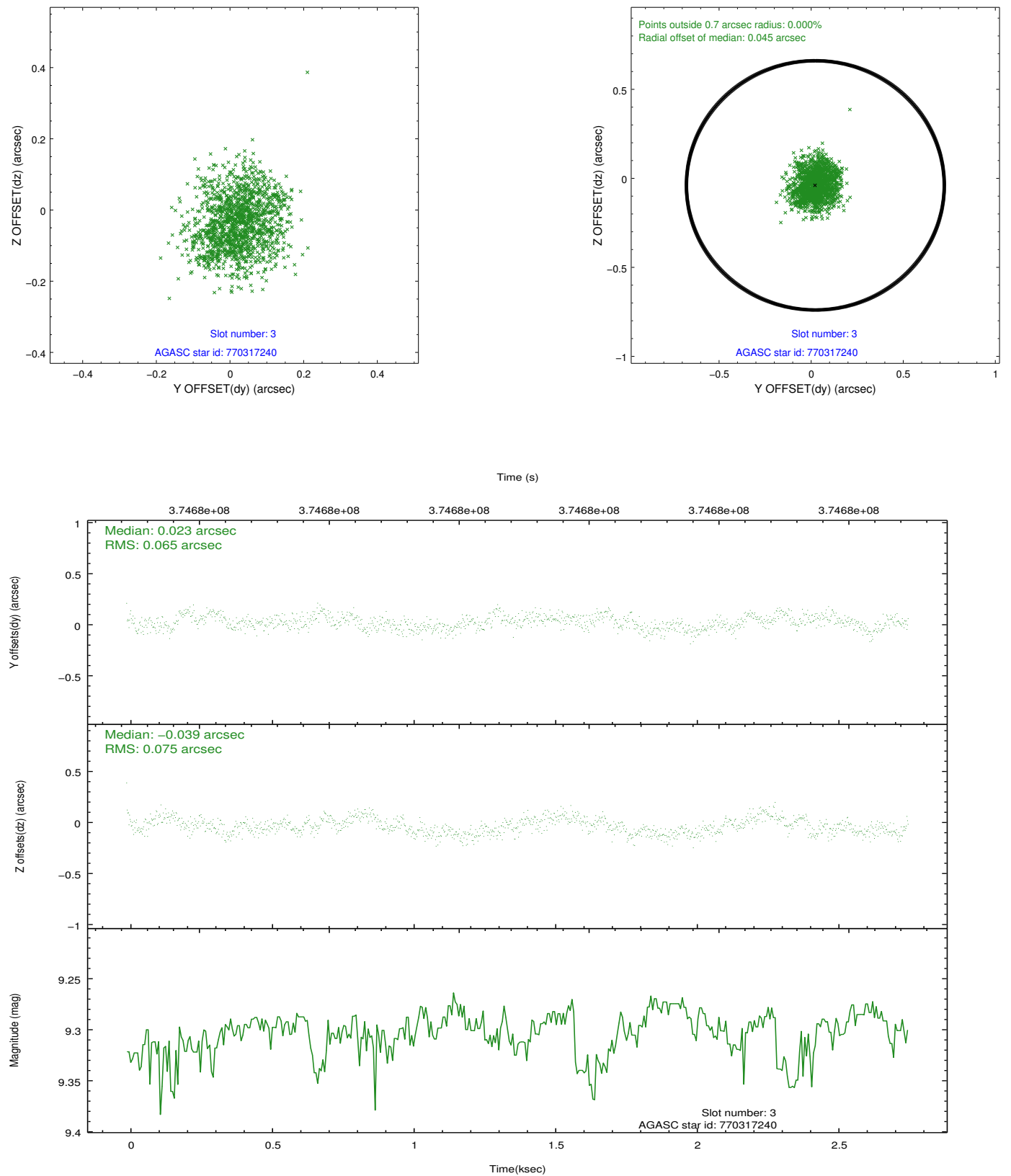
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.96	674	0.088	-0.041	0.009	0.015	0.000000	0.000000	927.81	-1734.85
1	FID	ACIS-S-5	7.00	674	-0.135	0.065	0.006	0.011	0.000000	0.000000	-1820.07	160.47
2	FID	ACIS-S-6	7.10	674	0.026	-0.012	0.011	0.016	0.000000	0.000000	390.84	806.93
3	GUIDE	770317240	9.30	1344	0.023	-0.039	0.108	0.164	53.738105	-19.838103	-20.09	1982.97
4	GUIDE	770575752	9.66	1342	-0.006	0.103	0.153	0.230	53.244440	-20.781547	-1948.44	-1270.49
5	GUIDE	770708744	9.57	1347	-0.003	0.104	0.112	0.189	54.361194	-20.896620	1762.64	-1987.75
6	GUIDE	770709496	8.95	1347	-0.085	-0.085	0.079	0.130	53.978606	-20.152211	700.93	788.56
7	GUIDE	770713200	9.22	1344	0.069	-0.075	0.104	0.159	53.492126	-20.369976	-1000.31	140.74

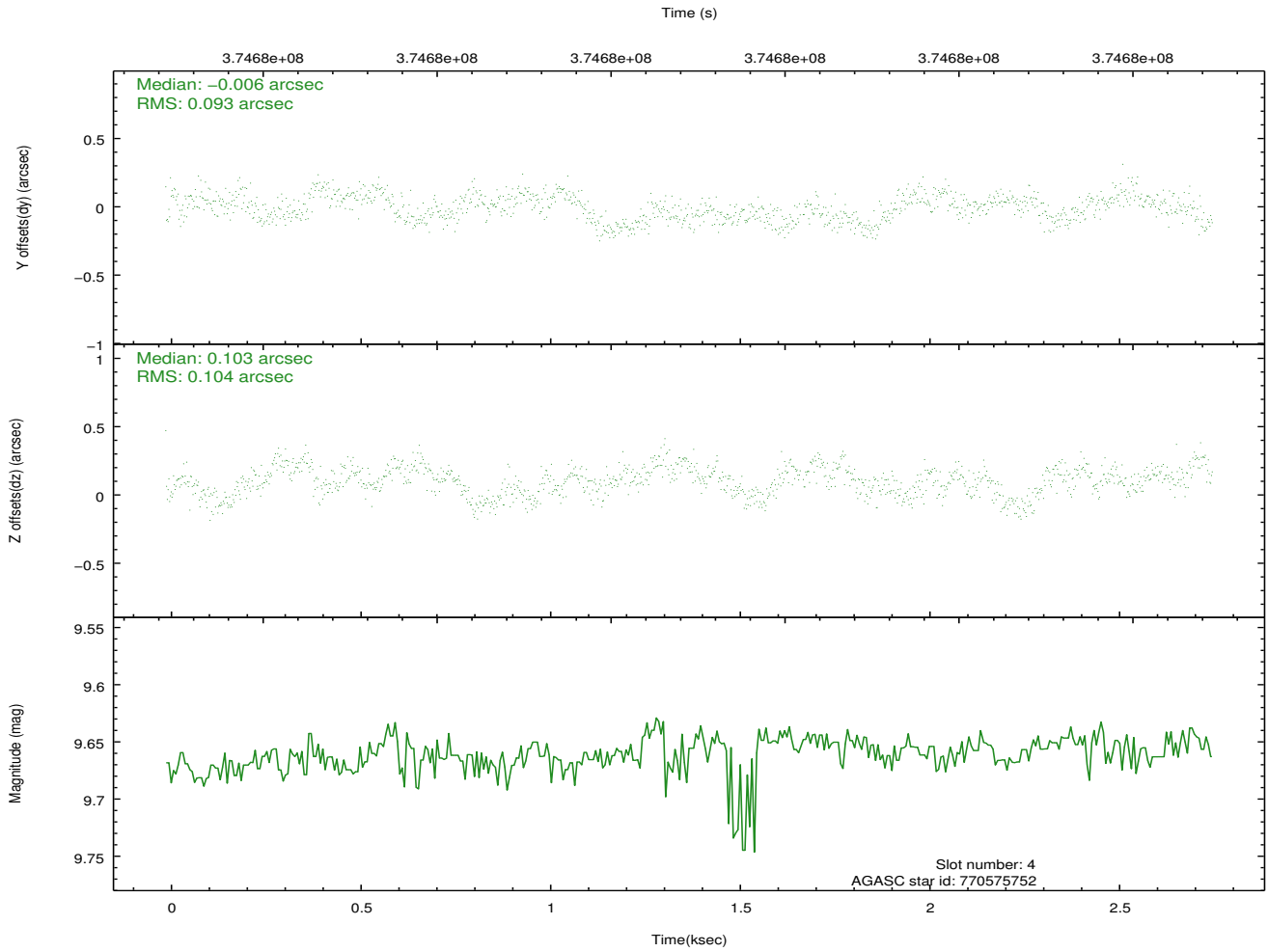
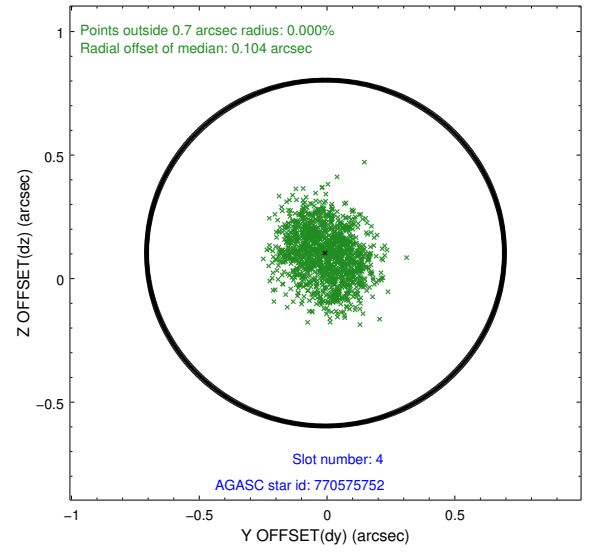
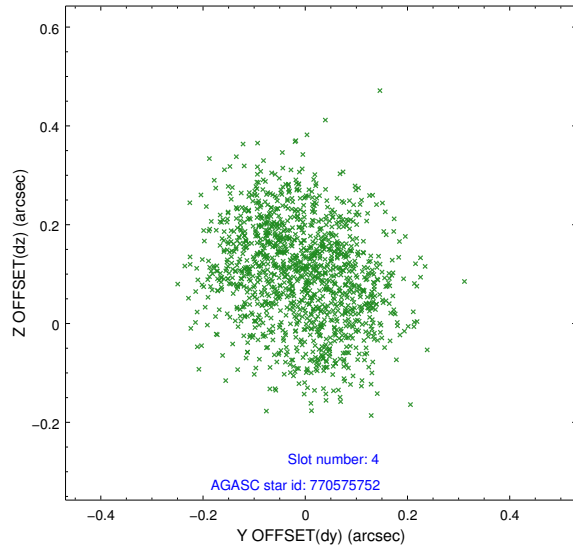


## 2.4 Star Slots

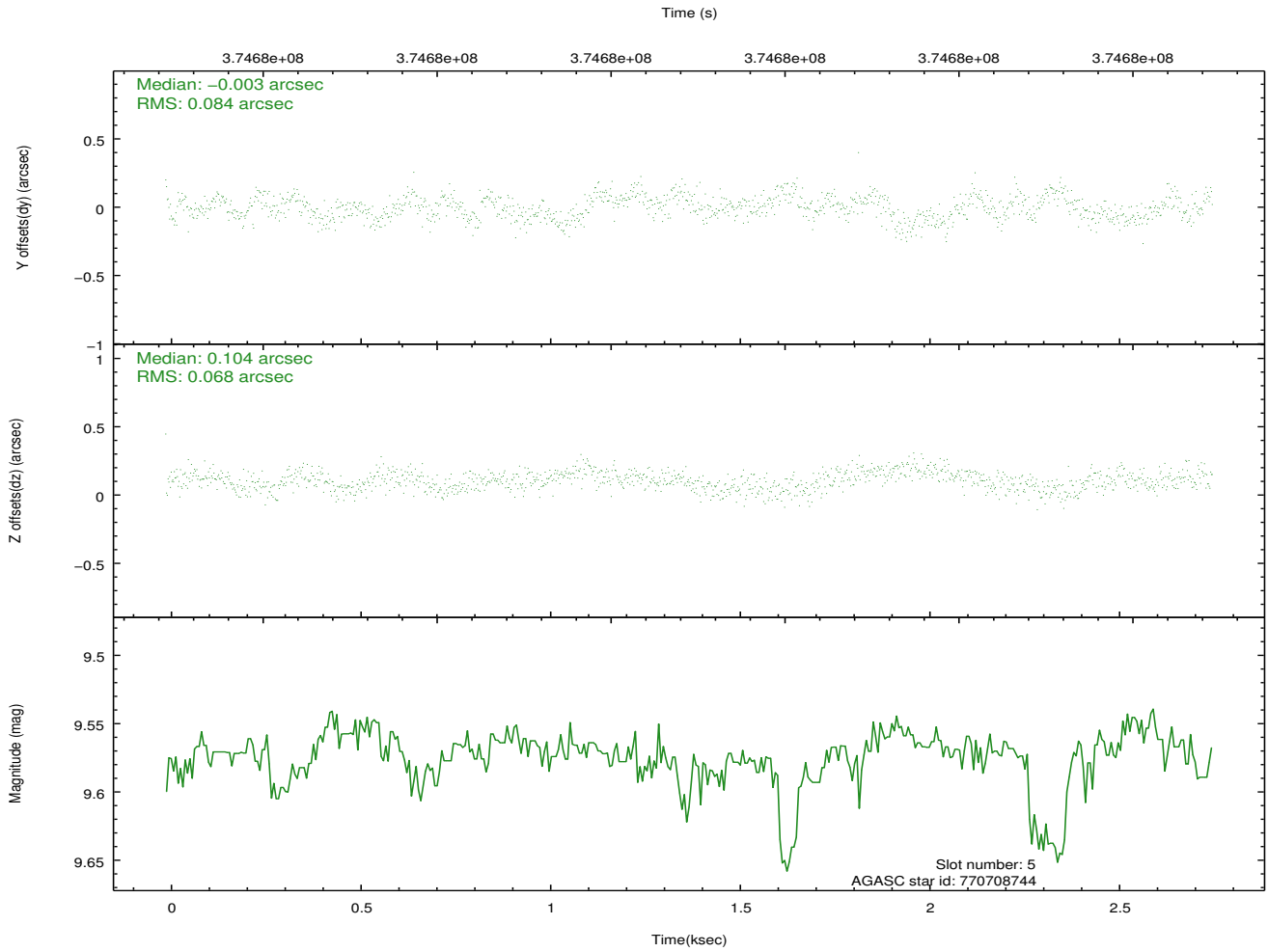
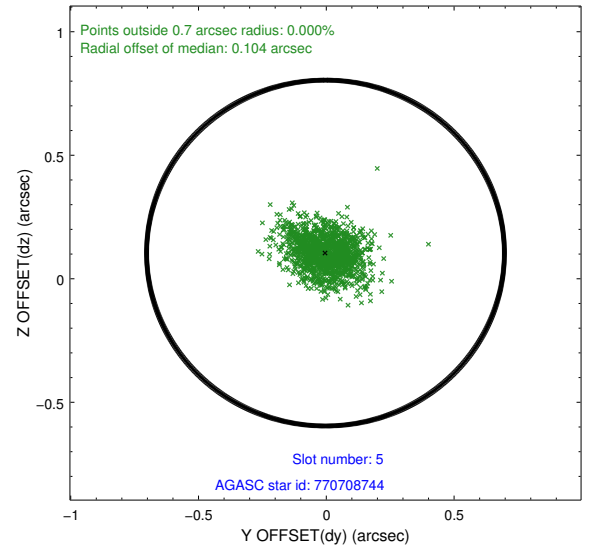
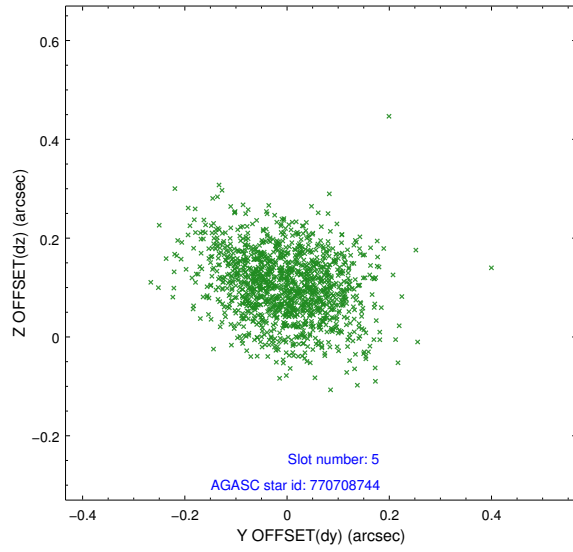
### 2.4.1 Slot 3



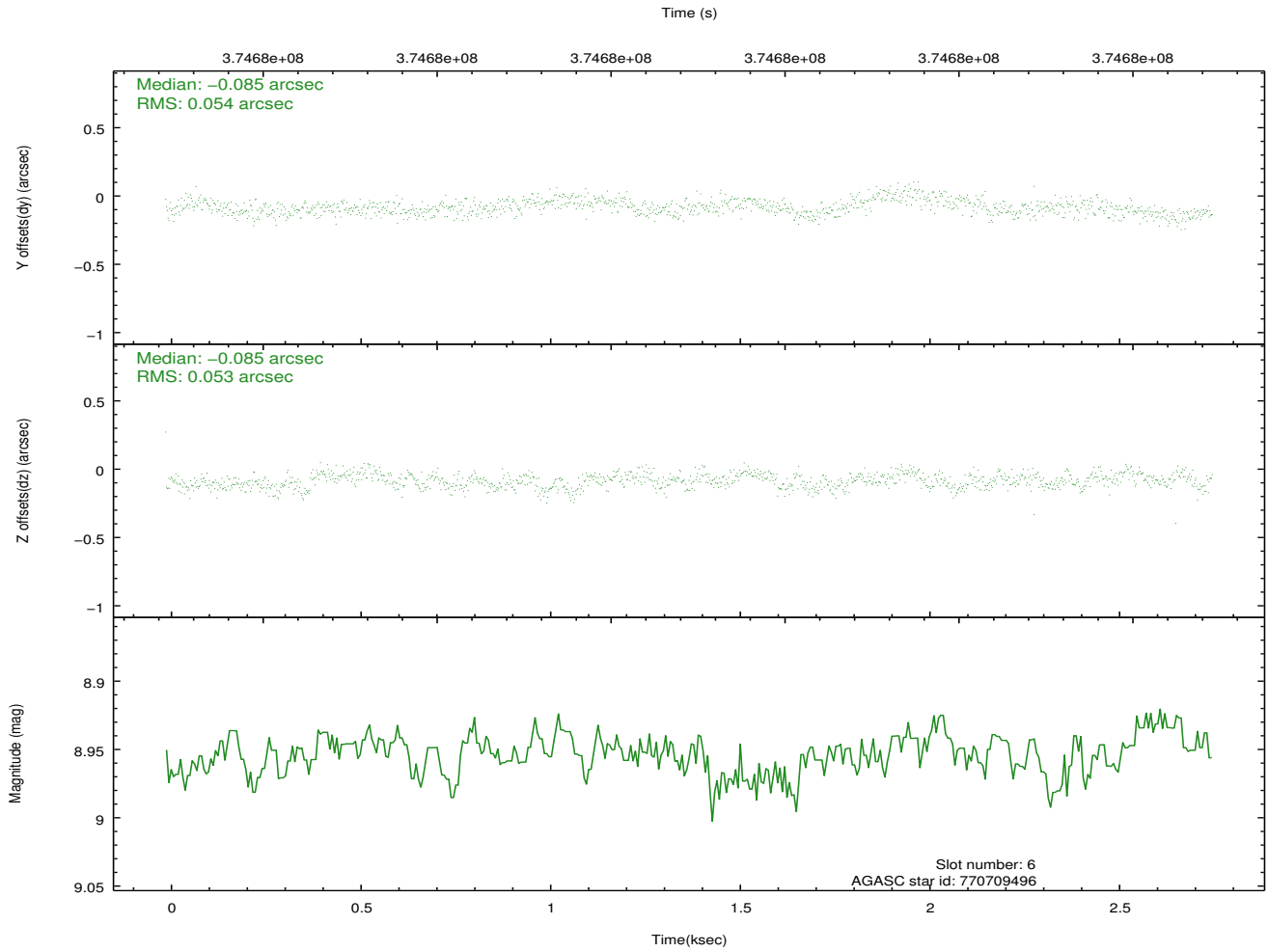
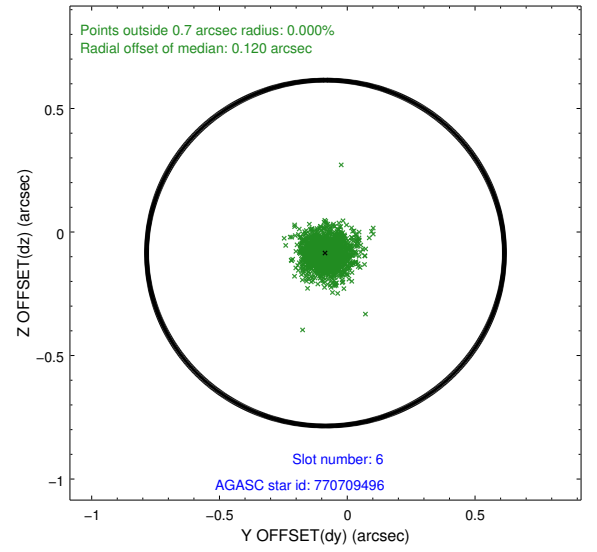
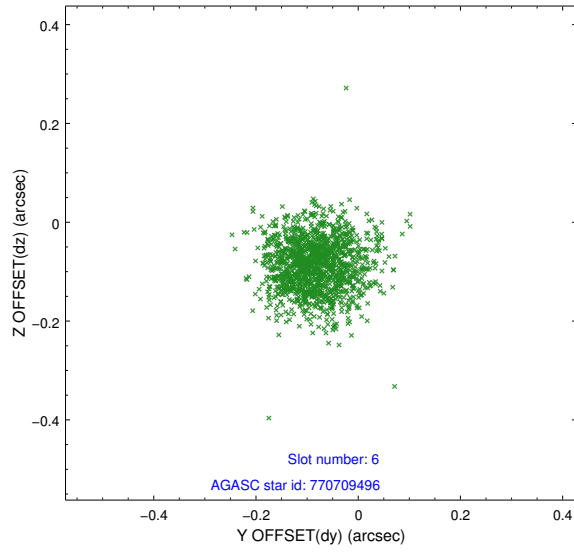
## 2.4.2 Slot 4



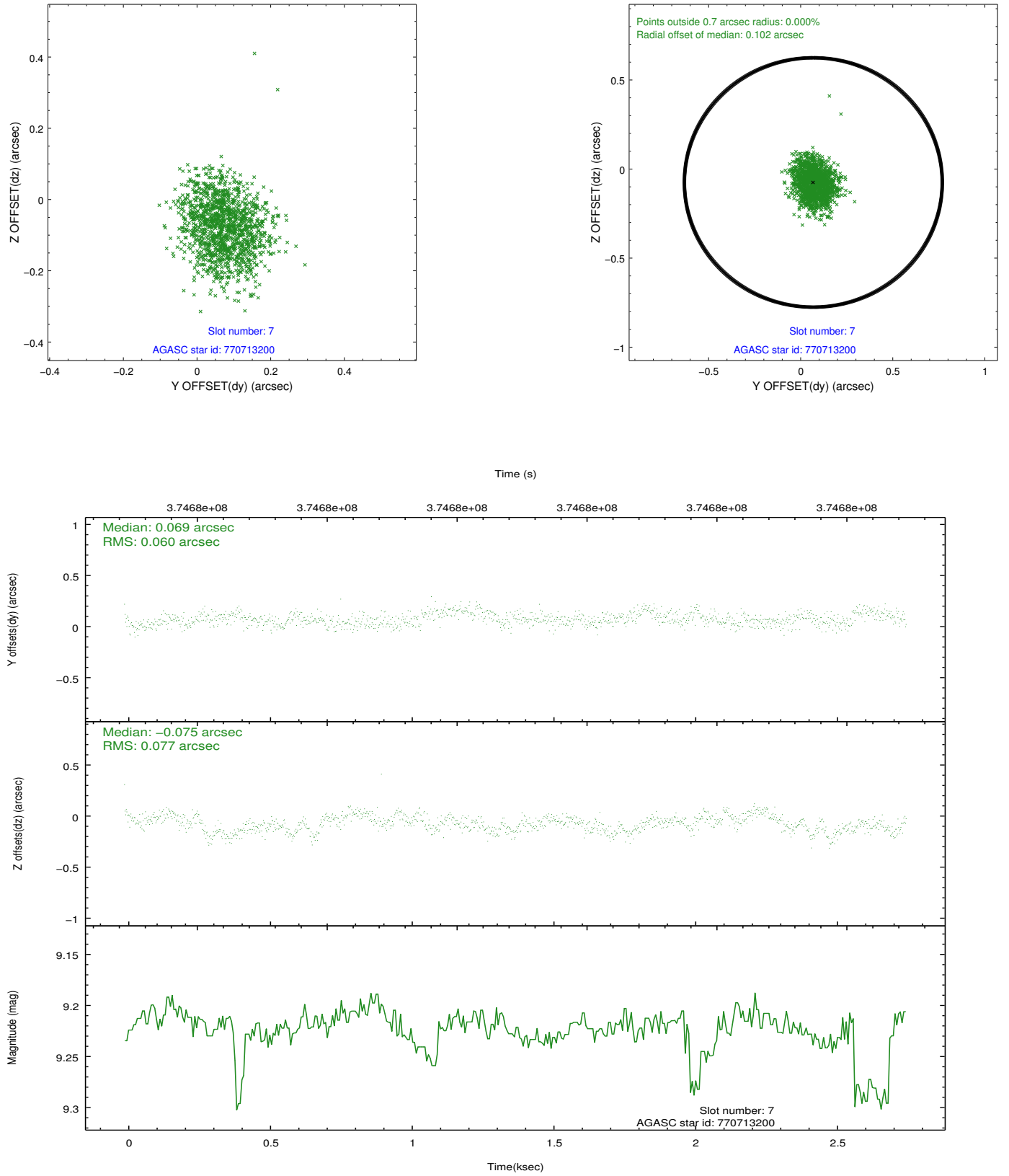
### 2.4.3 Slot 5



## 2.4.4 Slot 6

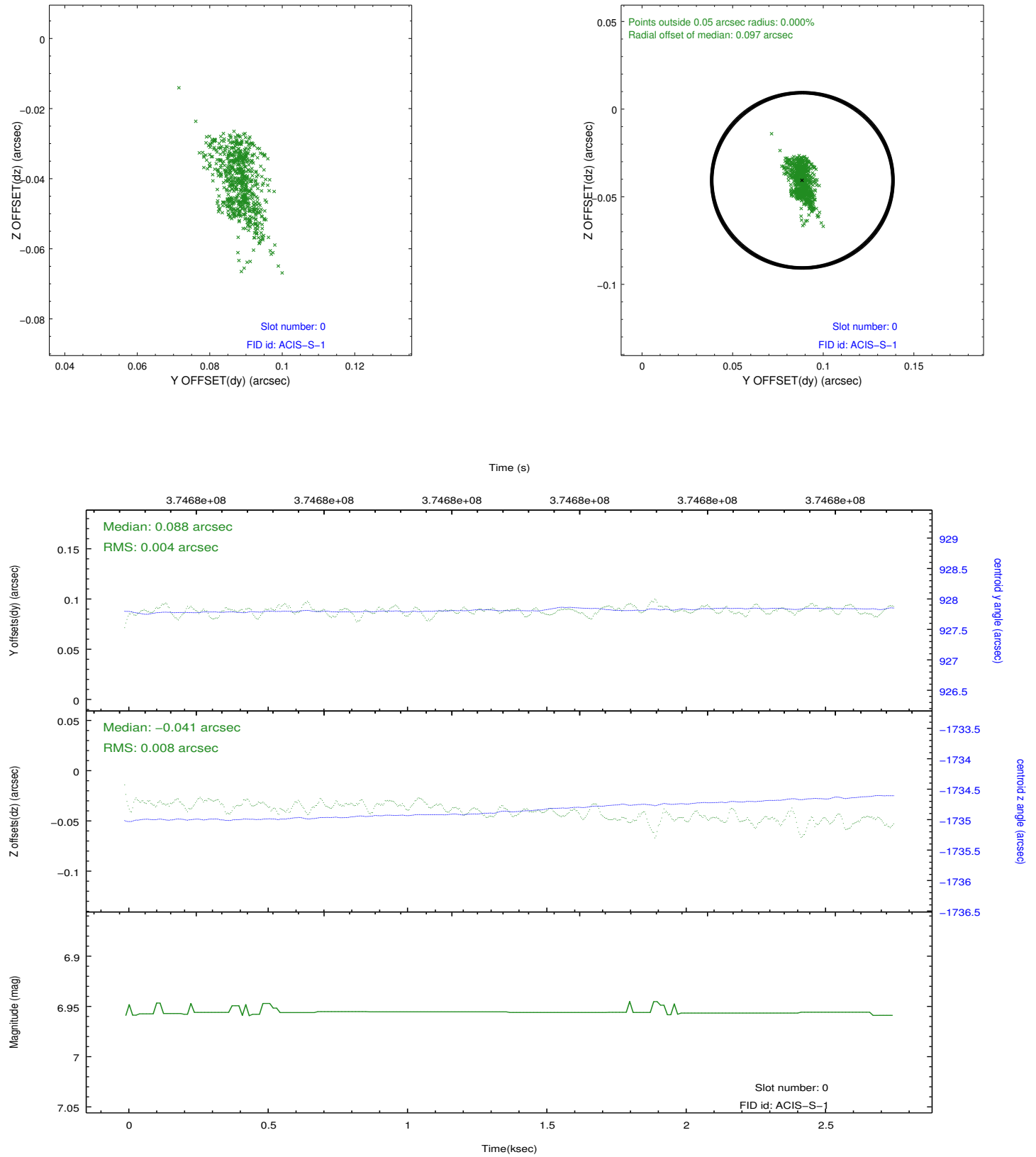


## 2.4.5 Slot 7

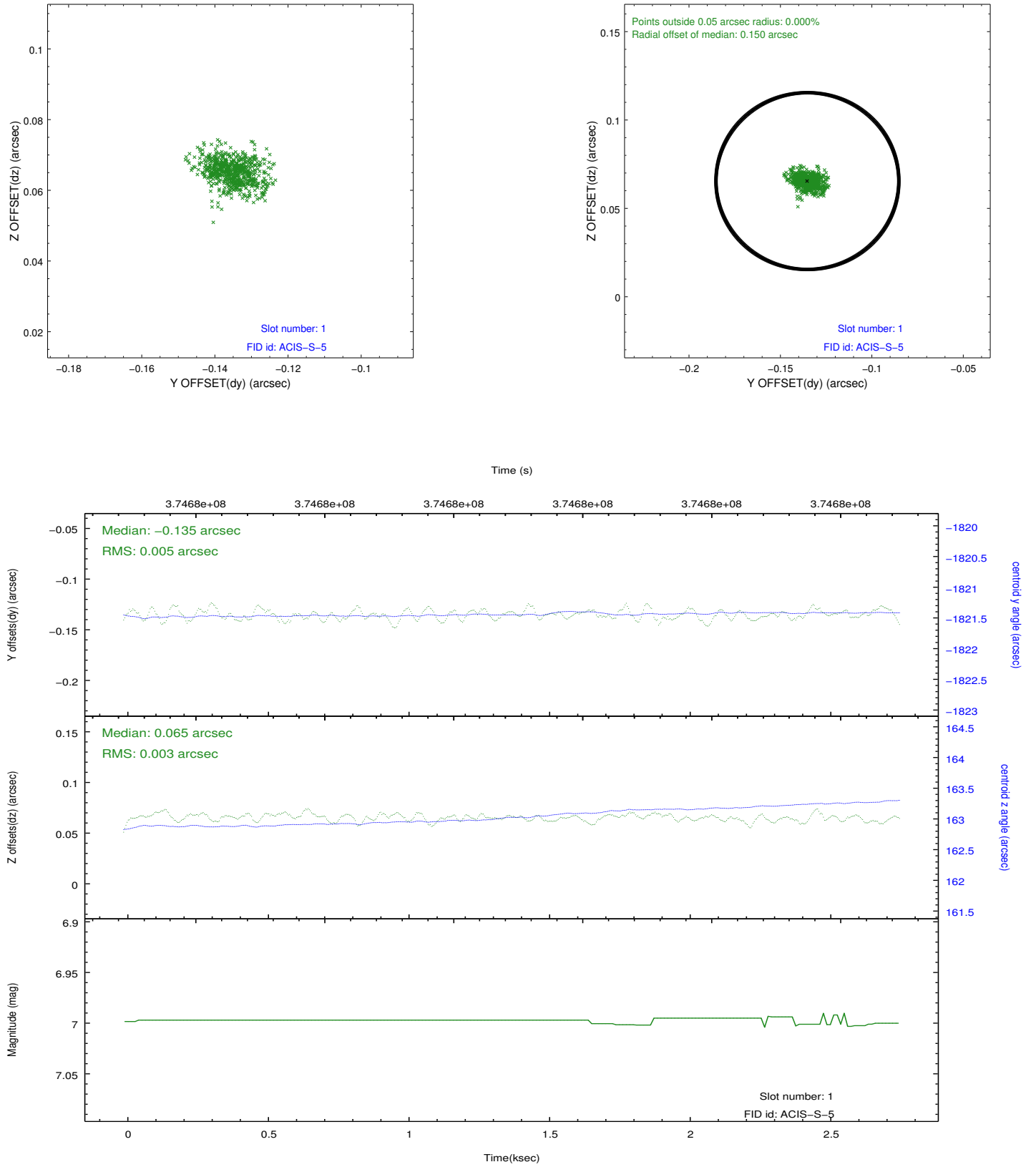


## 2.5 FID Slots

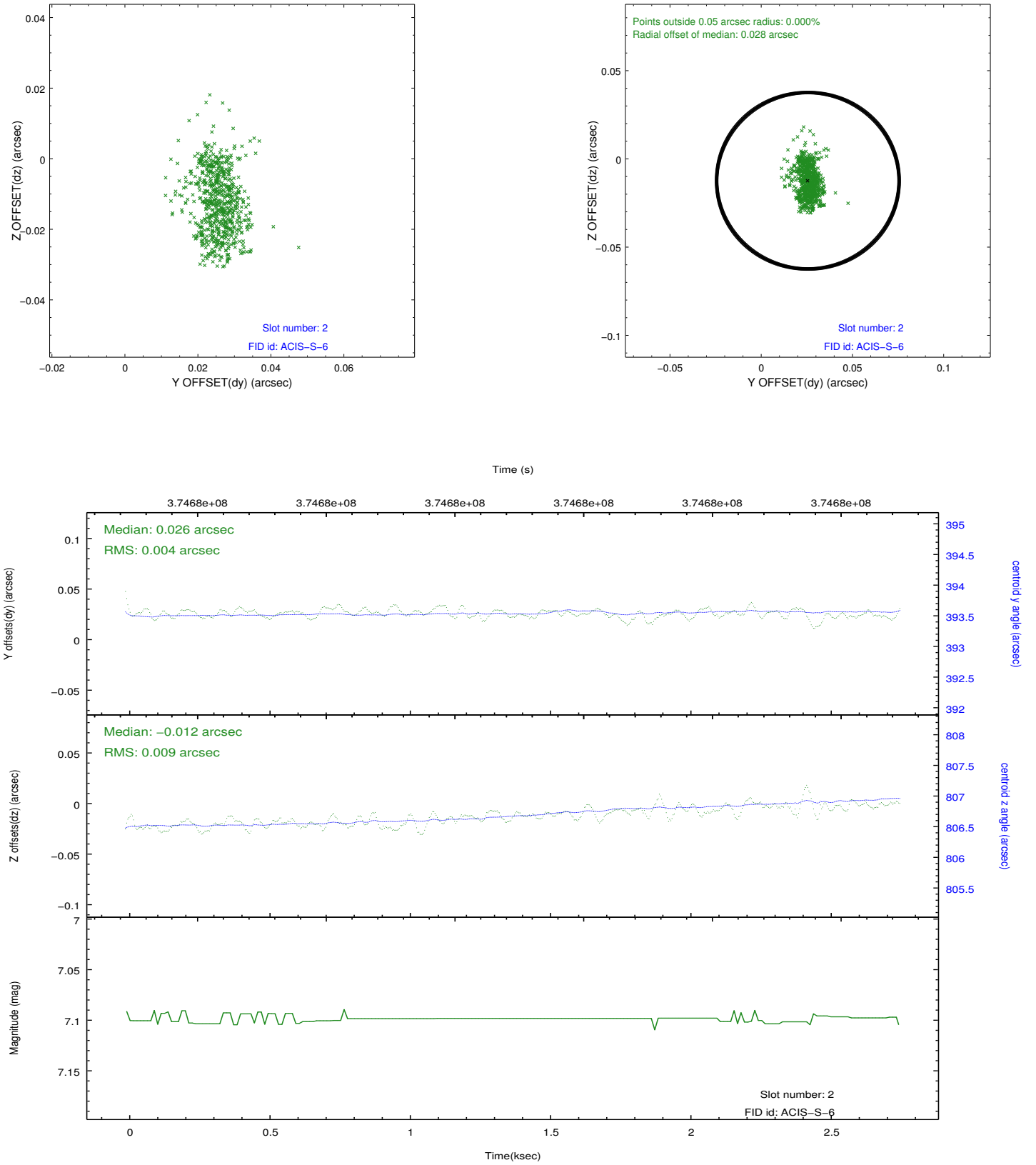
### 2.5.1 Slot 0



## 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)	2012.06.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.7231999899149

### **A.2 Comments**