

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 10491 - L2 Version 2  
Chandra X-Ray Center

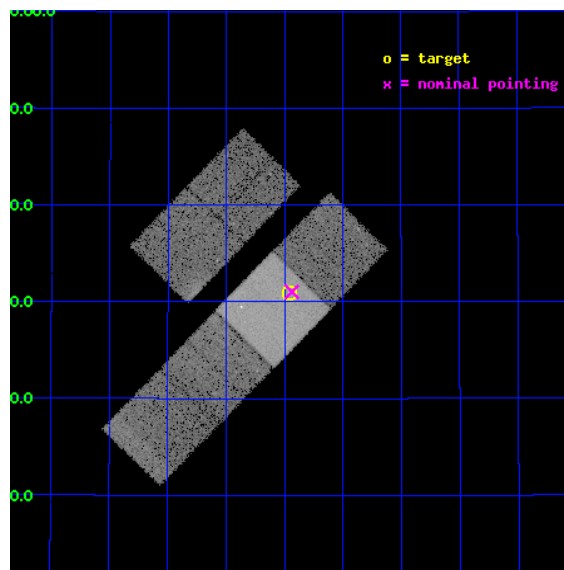
L2 Processing Date : Jun 3 2012

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# 1 Front

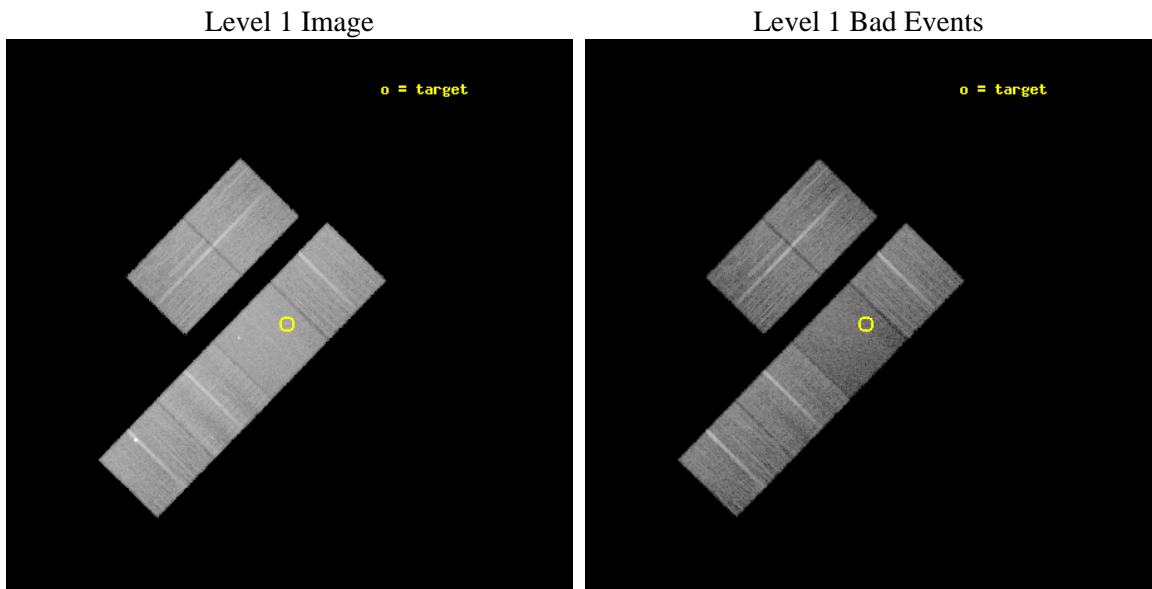
seq_num	900862	Sequence number
obs_id	10491	Observation id
title	Identifying the host galaxies for optically dark gamma-ray bursts	&#160
observer	Dr Andrew Levan	Principal investigator
object	GRB090404	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.24	Observer's specified target RA [deg]
dec_targ	35.516139	Observer's specified target Dec [deg]
ra_nom	239.23422440449	Nominal RA [deg]
dec_nom	35.517304182529	Nominal Dec [deg]
roll_nom	134.21596843839	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15039.5530653	Sum of GTIs [s]
liveltime	14849.113188656	Livetime [s]
ontime2	15036.147885025	Sum of GTIs [s]
ontime3	15039.470985293	Sum of GTIs [s]
ontime6	15039.512025297	Sum of GTIs [s]
ontime7	15039.5530653	Sum of GTIs [s]
ontime8	15039.42994529	Sum of GTIs [s]
ontime9	15036.353094995	Sum of GTIs [s]
l2events	128344	Number of level 2 events



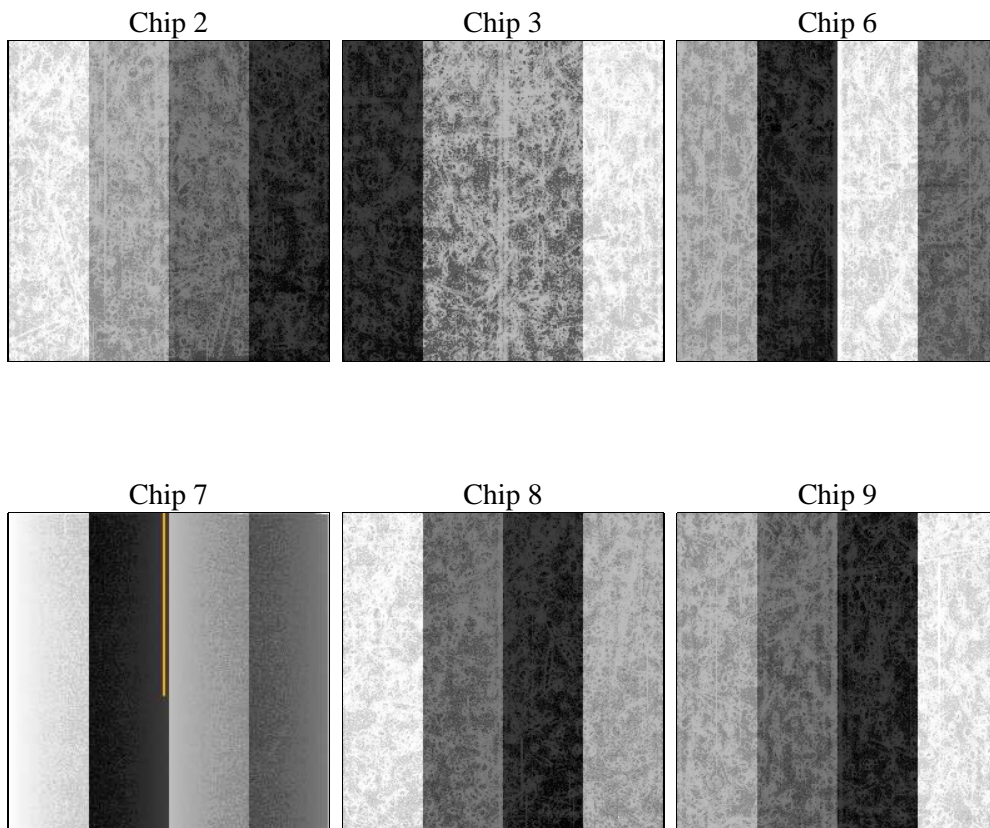
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	15039.5530653	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	15036.147885025	Sum of GTIs [s]
date	2012-06-04T00:13:37	Date and time of file creation	ontime3	15039.470985293	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15039.512025297	Sum of GTIs [s]
			ontime7	15039.5530653	Sum of GTIs [s]
			ontime8	15039.42994529	Sum of GTIs [s]
			ontime9	15036.353094995	Sum of GTIs [s]
			l1events	854157	Number of level 1 events

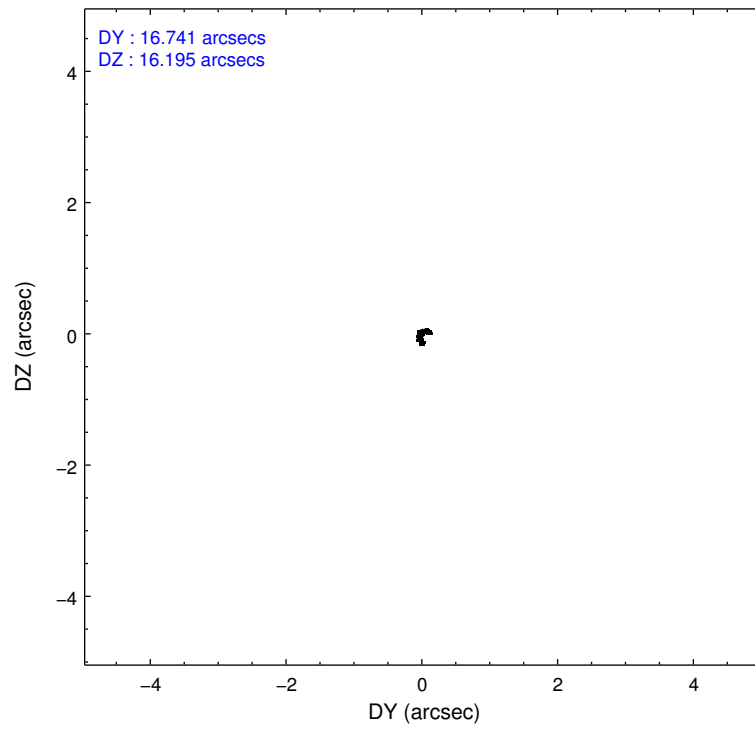
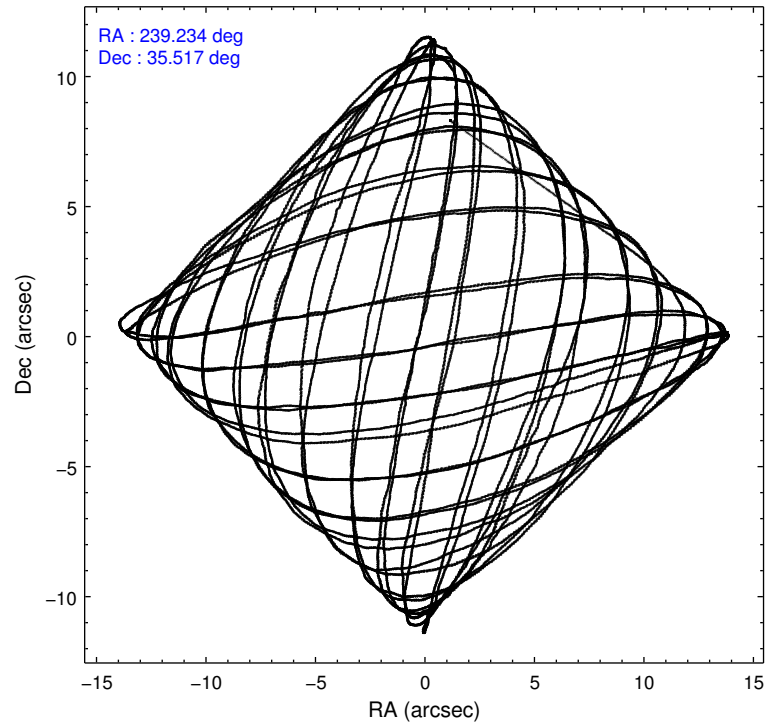
### 2.1.4 Events

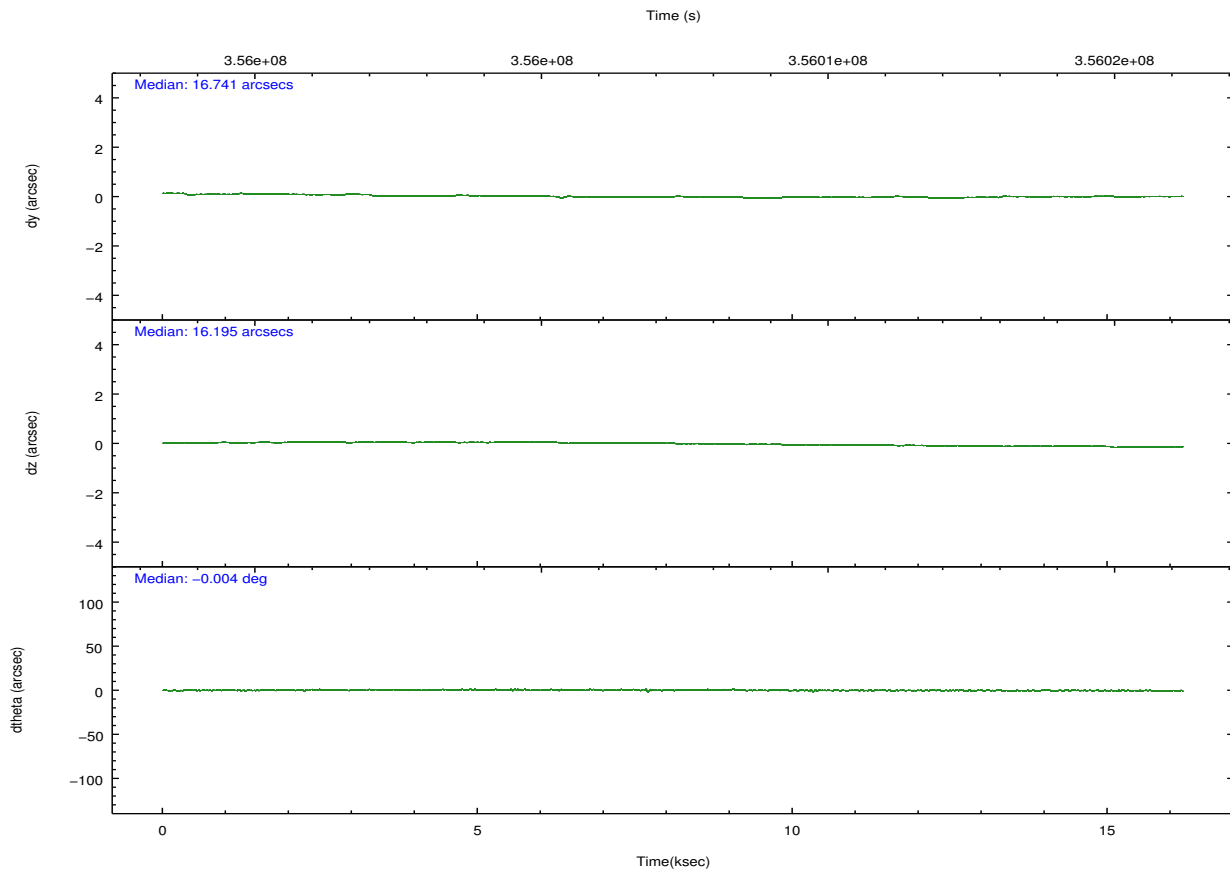
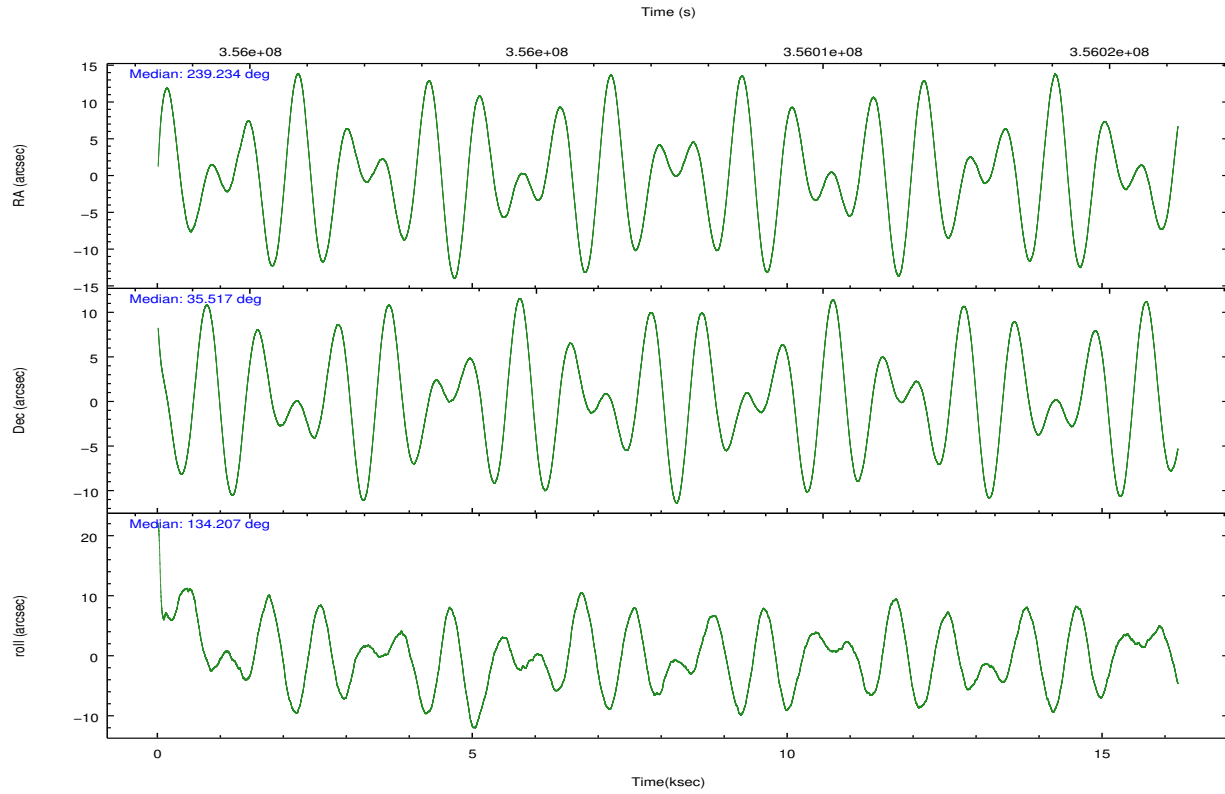
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9		ccd 2	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	134731	129692	133845	150040	167725	138124	grade 0 events	4720	5356	4639	6626	12388	9668
rejected events	121738	116127	120286	81472	125761	119120		3%	4%	3%	4%	7%	6%
rejected %	90%	89%	89%	54%	74%	86%	grade 1 events	68	66	65	192	144	152
								0%	0%	0%	0%	0%	0%
							grade 2 events	3099	2812	3070	14209	9799	3129
								2%	2%	2%	9%	5%	2%
							grade 3 events	1312	1446	1447	6082	4610	1564
								0%	1%	1%	4%	2%	1%
							grade 4 events	1376	1444	1497	6096	4147	1532
								1%	1%	1%	4%	2%	1%
							grade 5 events	4345	5365	5311	15662	7714	6208
								3%	4%	3%	10%	4%	4%
							grade 6 events	2489	2512	2913	35599	11083	3115
								1%	1%	2%	23%	6%	2%
							grade 7 events	117322	110691	114903	65574	117840	112756
								87%	85%	85%	43%	70%	81%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-236789	ACIS-236789	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	239.266667	239.234224404493	CCD I2 on	O3	Y
[deg] Pointing Dec	35.510244	35.51730418252921	CCD I3 on	O2	Y
[deg] Pointing Roll	134.040478	134.2159684383877	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	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)	356000405.184000	355998582.12389	CCD S5 on	O1	Y
Observation start date	2009-04-13T08:58:59	2009-04-13T08:29:42	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	356015405.184000	356016232.11227	On-chip summing requested	N	N
Observation end date	2009-04-13T13:08:59	2009-04-13T13:23:52	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



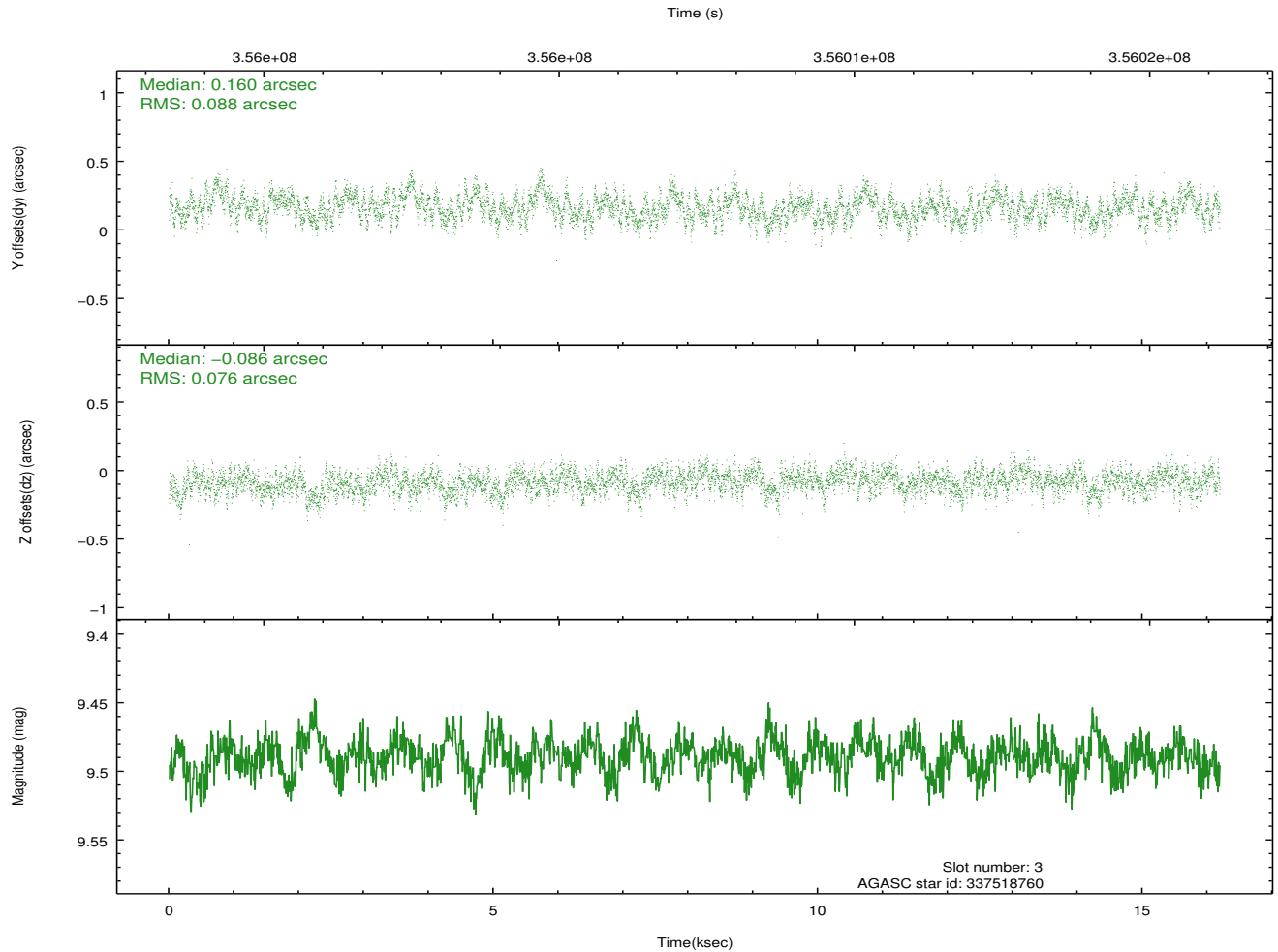
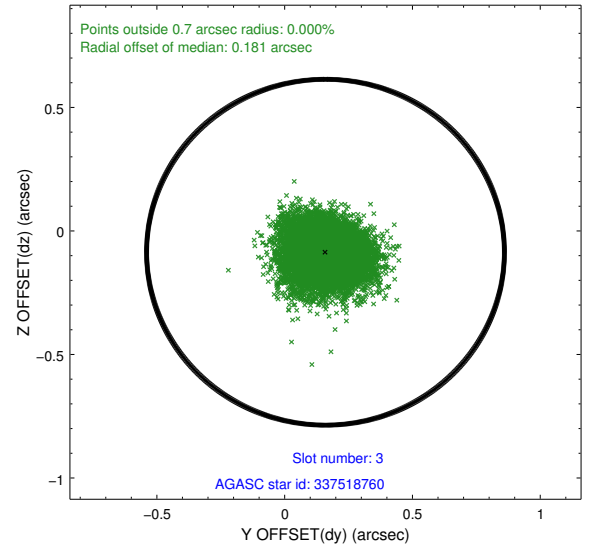
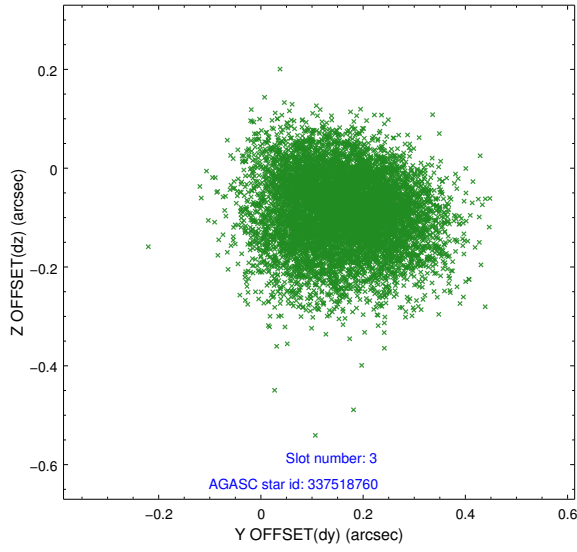


### Slot Statistics

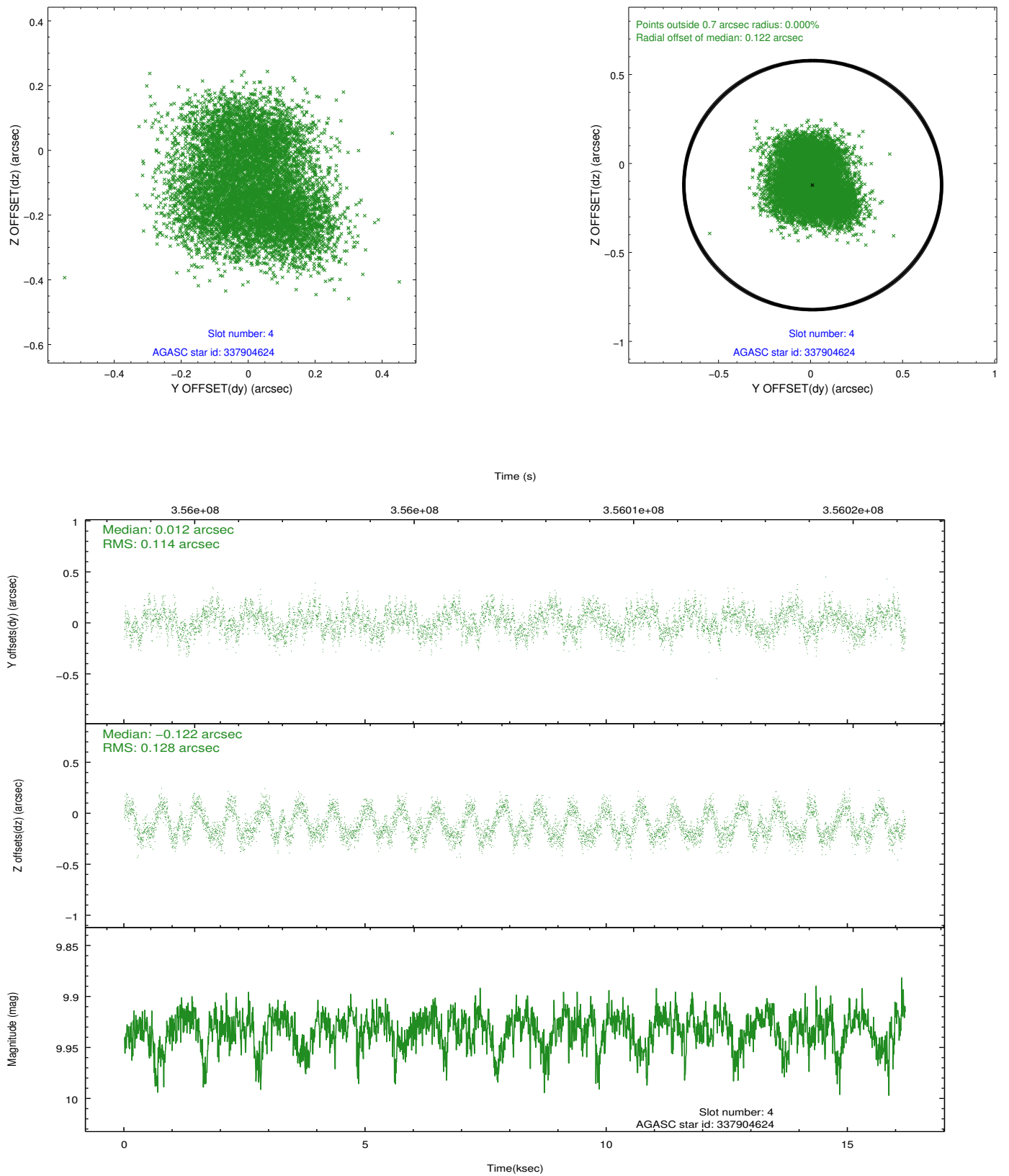
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.89	3950	-0.090	-0.012	0.009	0.016	0.000000	0.000000	-769.85	-1737.59
1	FID	ACIS-S-4	6.97	3950	0.182	0.047	0.009	0.015	0.000000	0.000000	2143.56	170.68
2	FID	ACIS-S-5	7.00	3950	-0.123	-0.026	0.008	0.013	0.000000	0.000000	-1822.39	164.57
3	GUIDE	337518760	9.49	7883	0.160	-0.086	0.125	0.199	239.097692	34.771349	-1564.33	2207.82
4	GUIDE	337904624	9.93	7881	0.012	-0.122	0.187	0.277	239.233188	36.212599	1885.84	-1687.40
5	GUIDE	337910008	10.25	7827	0.105	0.116	0.208	0.339	239.747171	35.972227	225.87	-2164.89
6	GUIDE	337913264	8.47	7892	-0.166	0.020	0.084	0.133	238.953585	36.127348	2231.29	-890.75
7	GUIDE	337915800	9.75	7851	-0.078	0.068	0.168	0.331	238.456559	35.774976	2337.36	1031.97

## 2.4 Star Slots

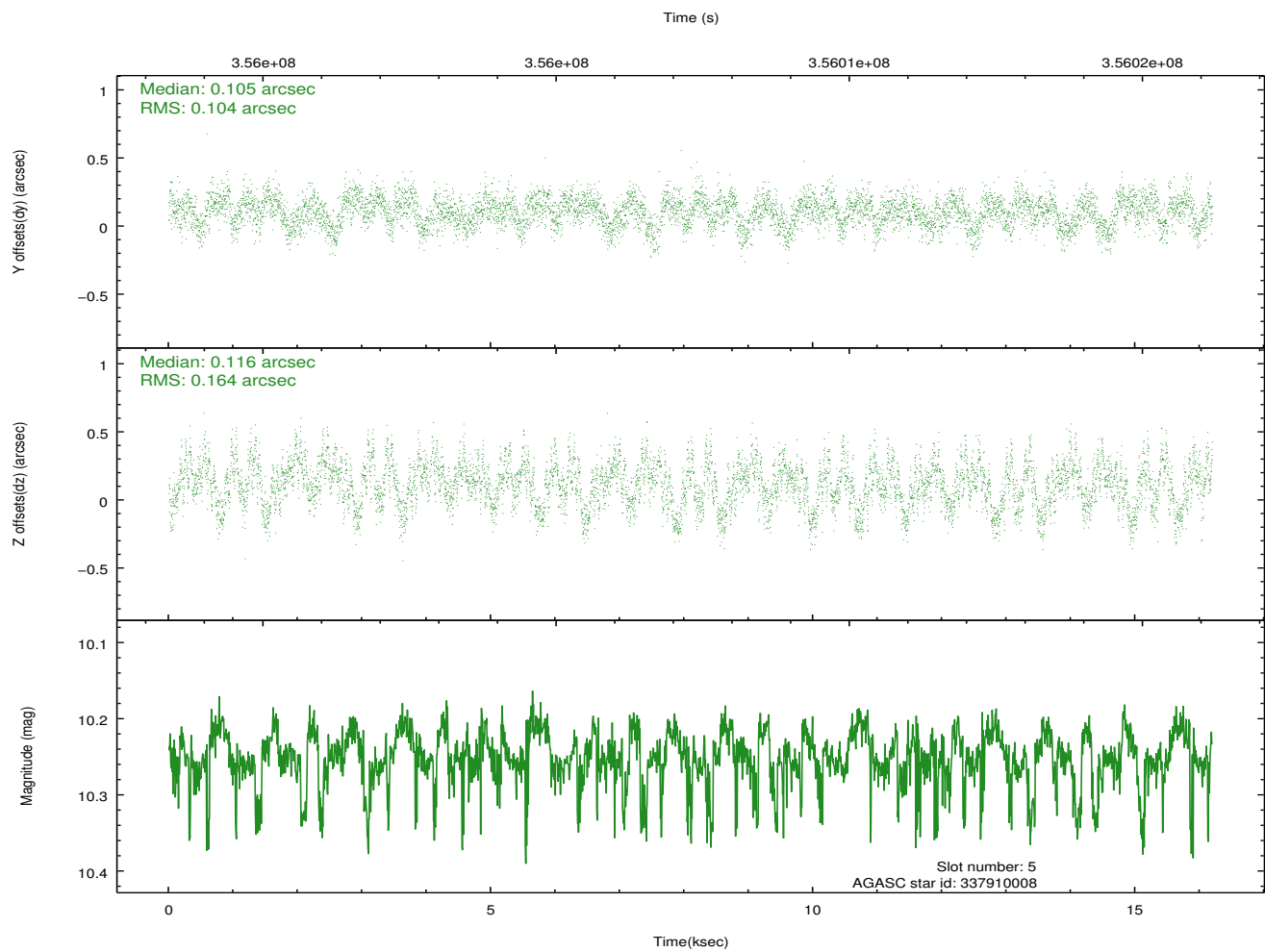
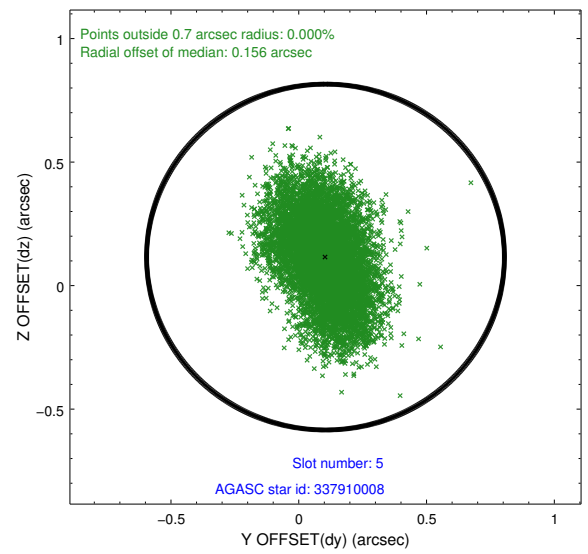
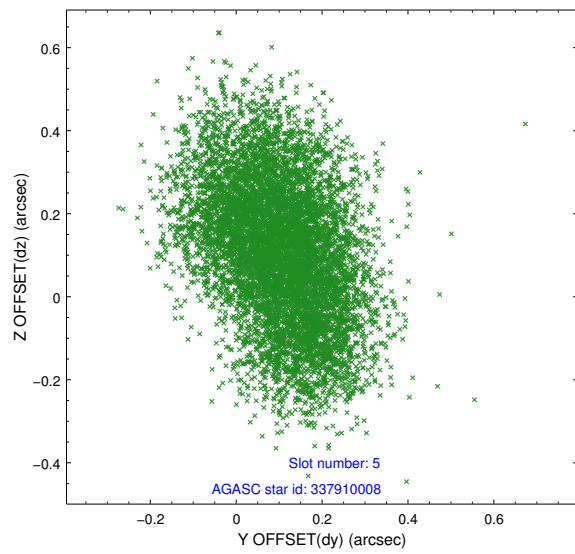
### 2.4.1 Slot 3



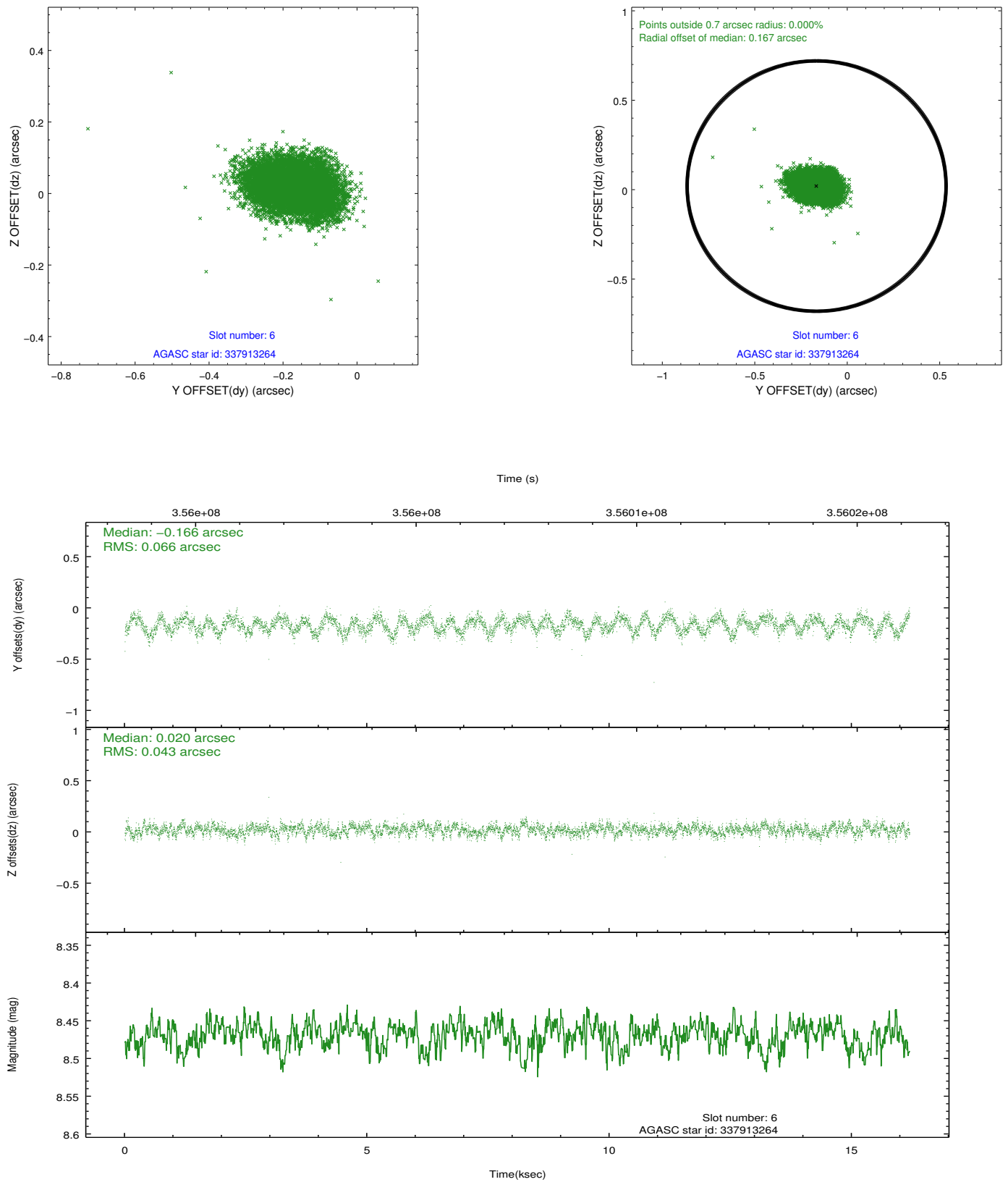
## 2.4.2 Slot 4



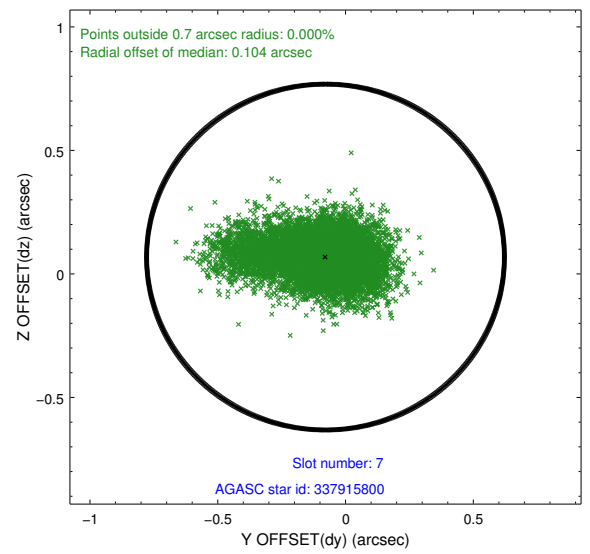
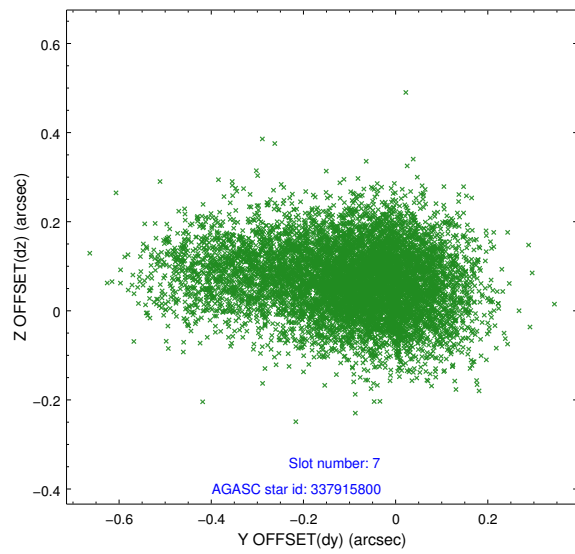
### 2.4.3 Slot 5



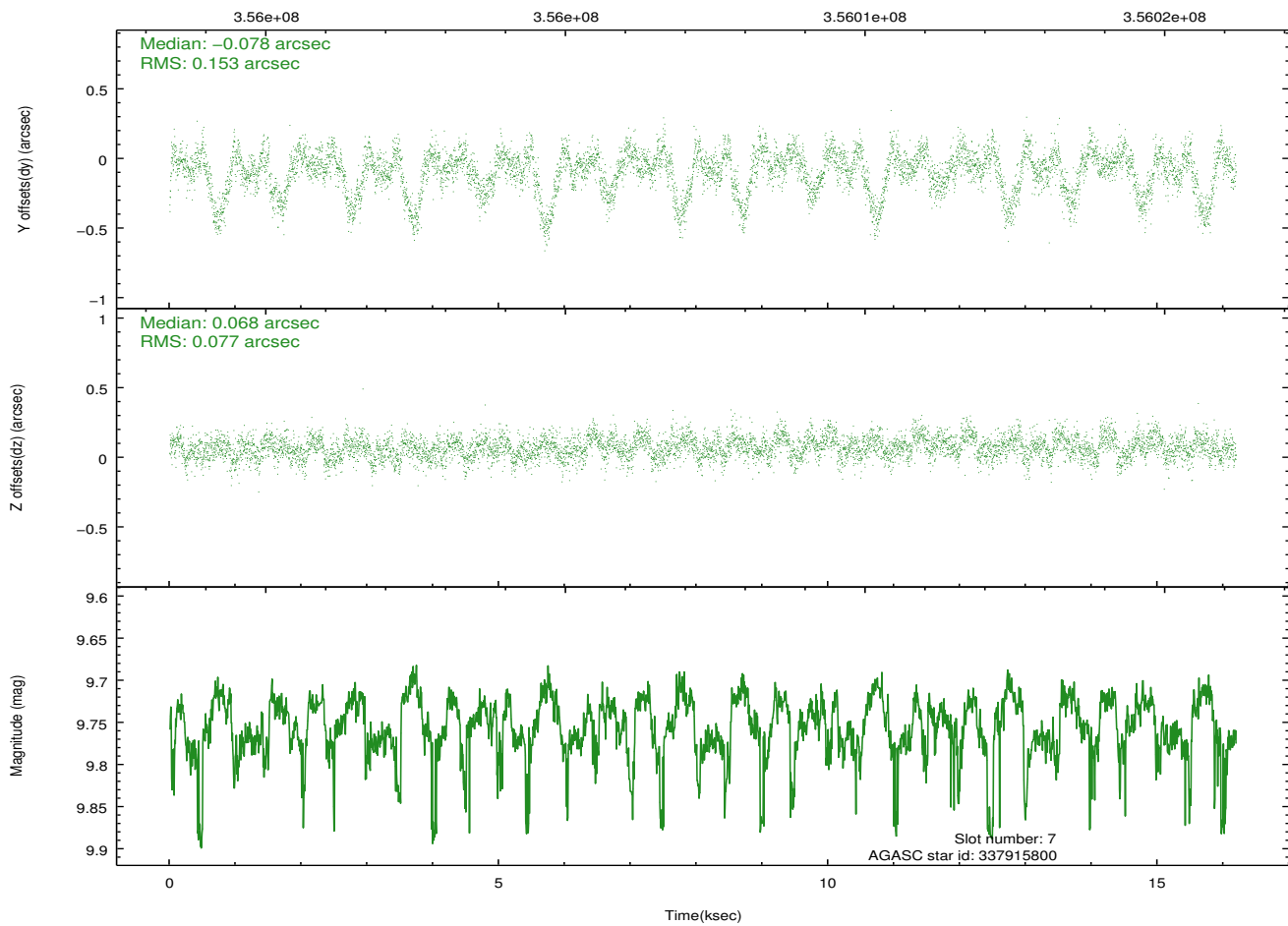
## 2.4.4 Slot 6



## 2.4.5 Slot 7

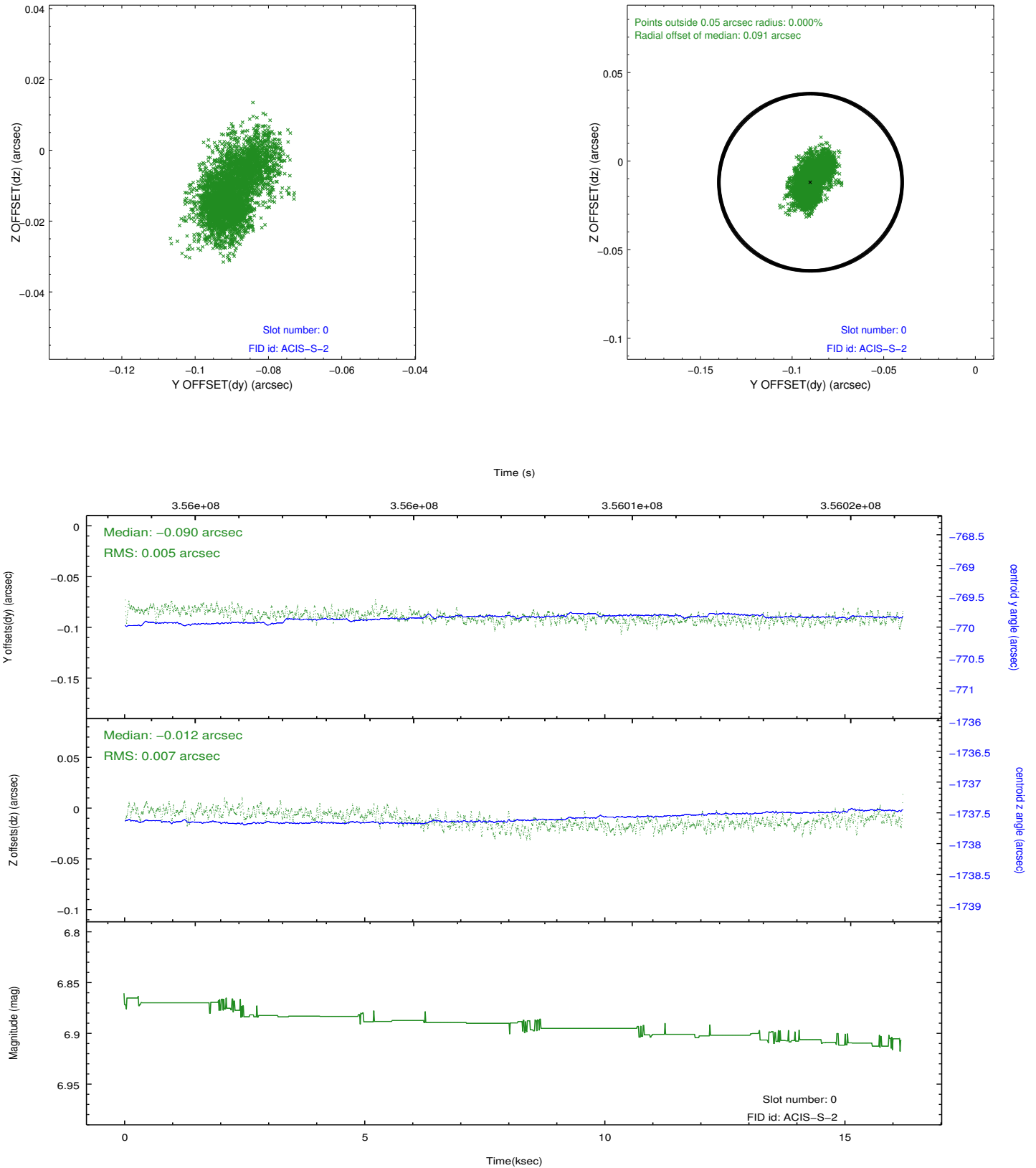


Time (s)

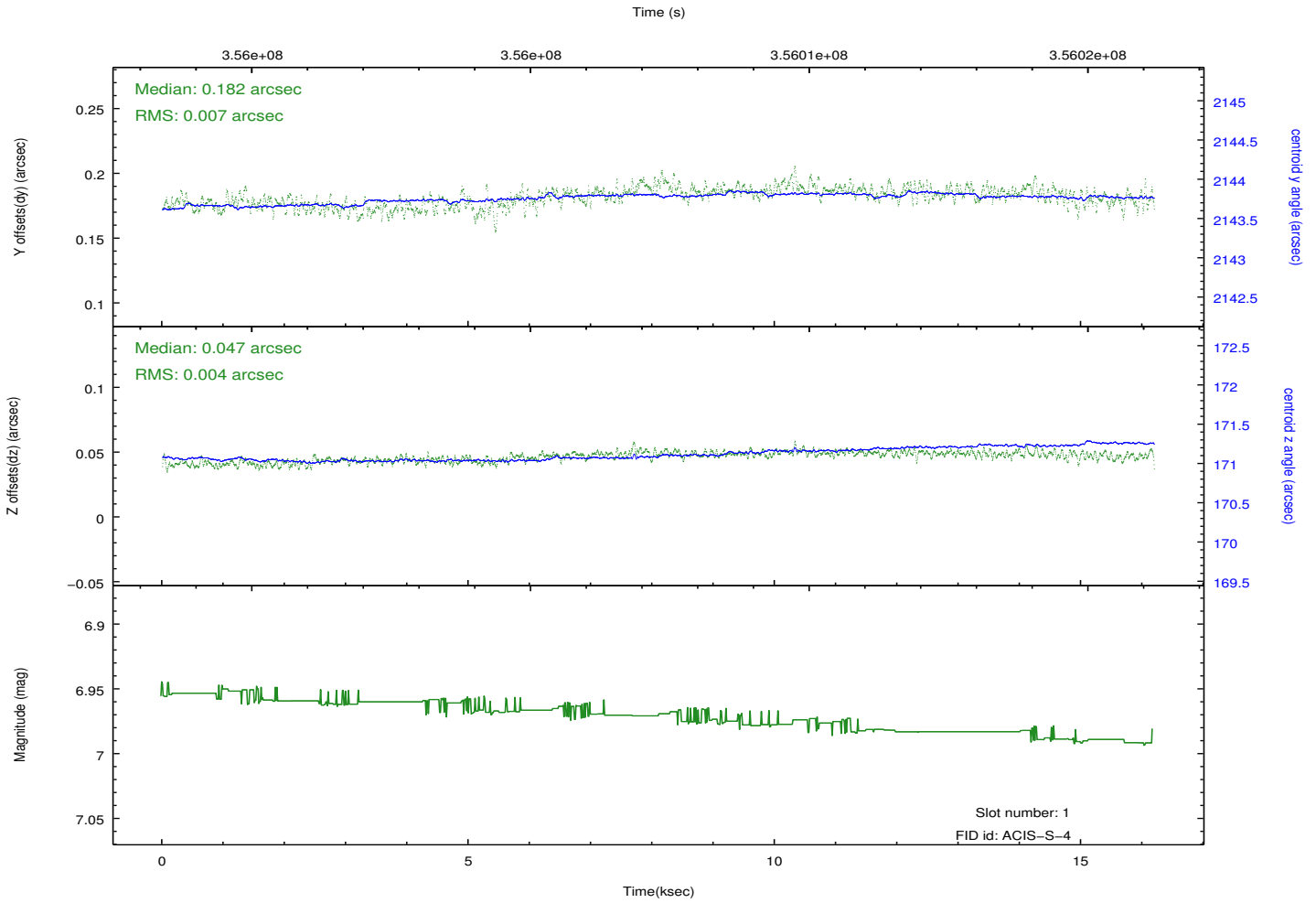
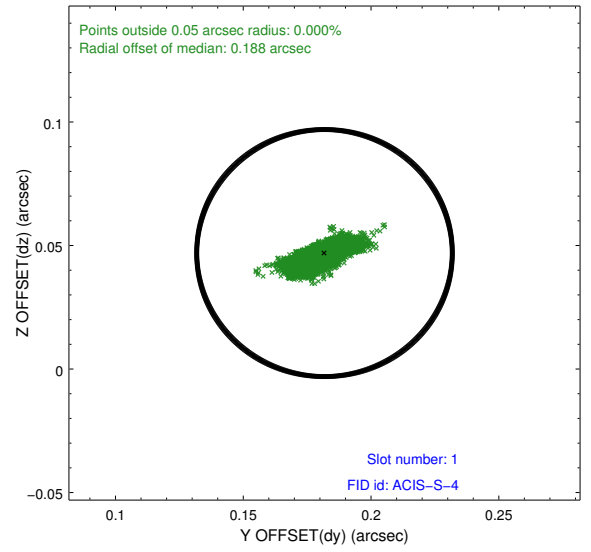
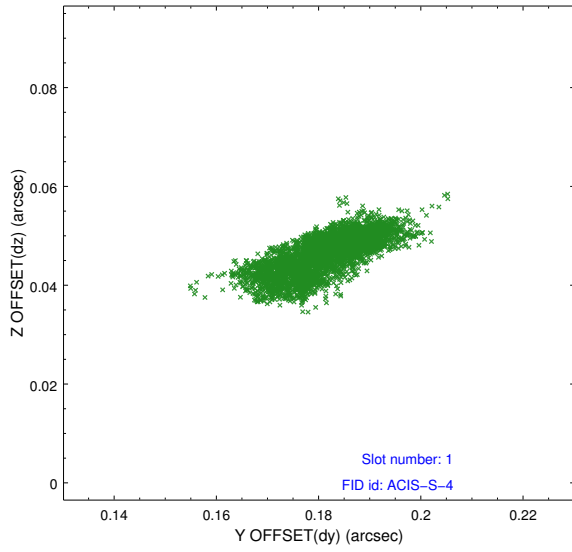


## 2.5 FID Slots

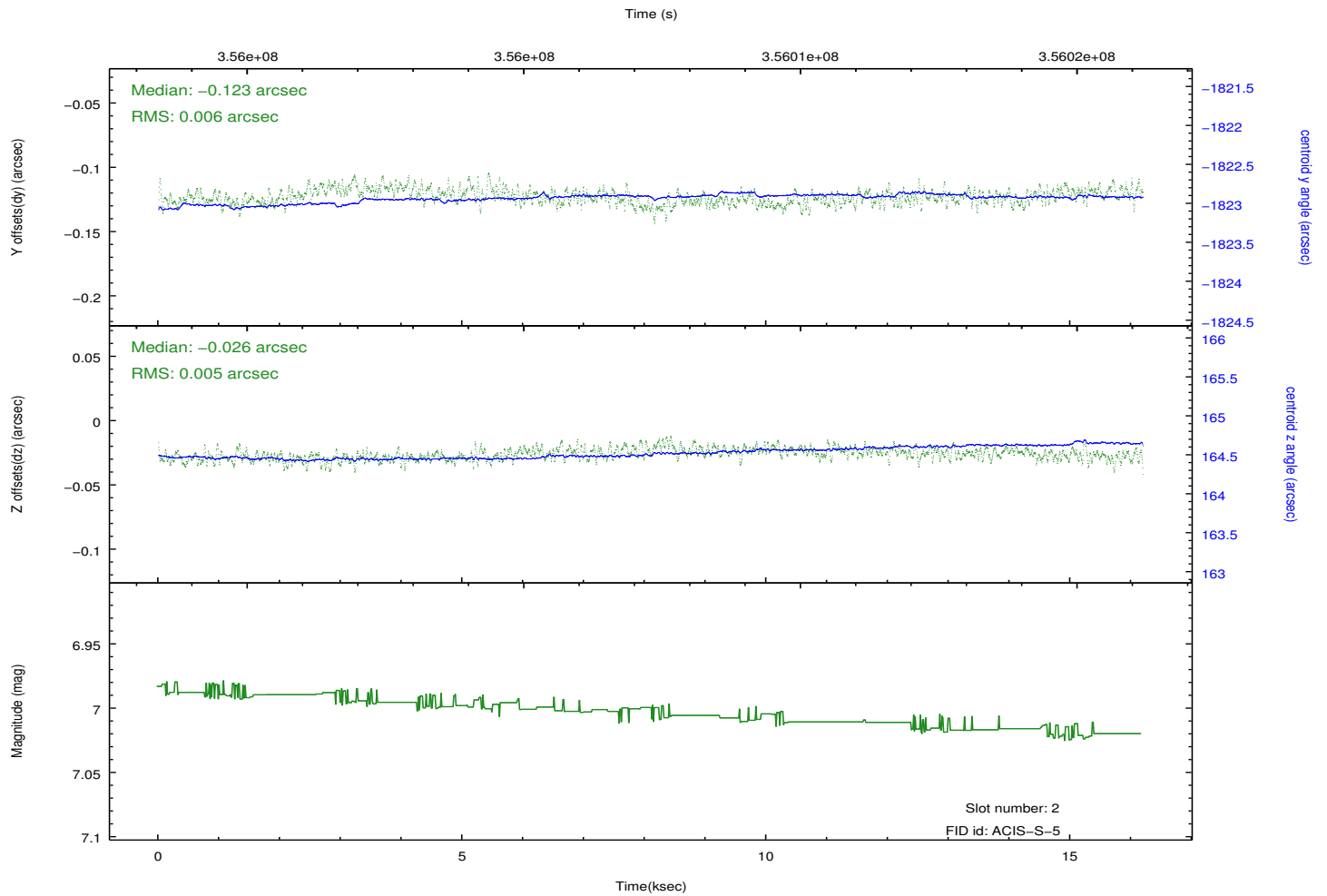
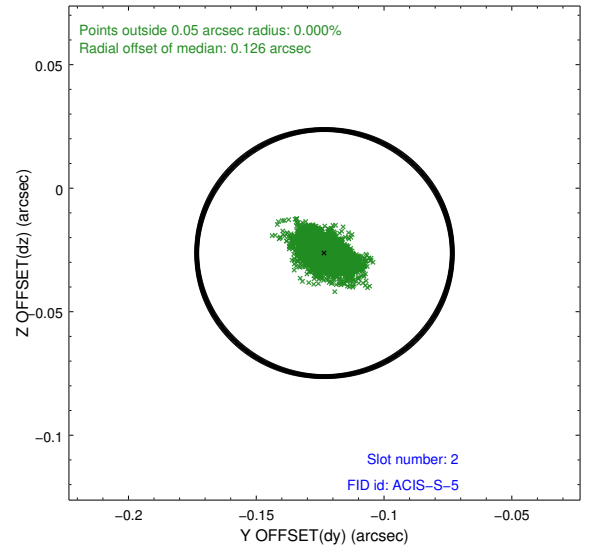
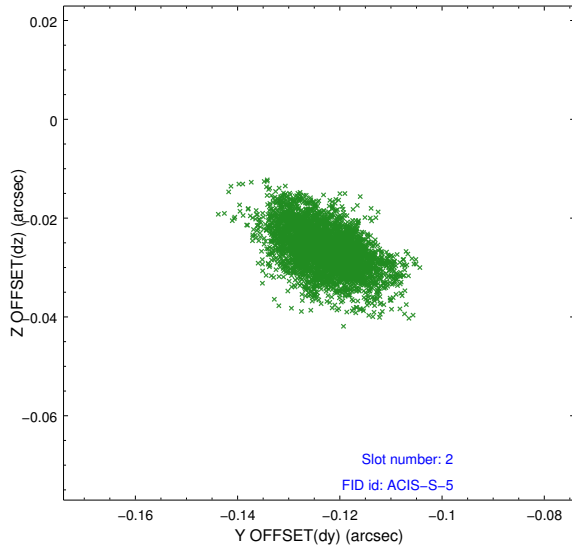
### 2.5.1 Slot 0



## 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)	2012.06.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.0399999

## A.2 Comments

Joint proposal with HST.