

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12007 - L2 Version 2  
Chandra X-Ray Center

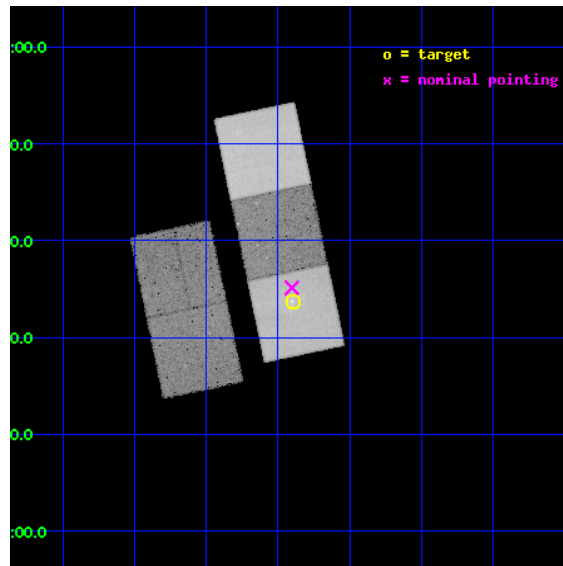
L2 Processing Date : Jun 15 2012

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# 1 Front

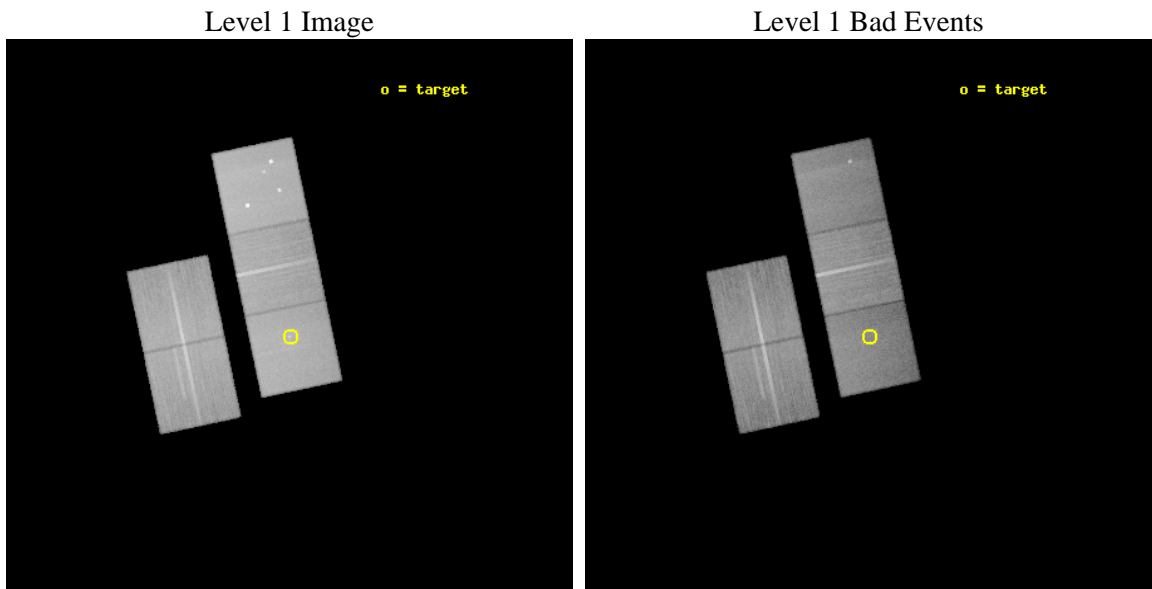
seq_num	800891	Sequence number
obs_id	12007	Observation id
title	Strong shocks, cavities and AGN heating in galaxy groups	Proposal
observer	Dr. Ming Sun	Principal investigator
object	3C88	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	51.973333	Observer's specified target RA [deg]
dec_targ	2.561389	Observer's specified target Dec [deg]
ra_nom	51.975837119289	Nominal RA [deg]
dec_nom	2.5855167397689	Nominal Dec [deg]
roll_nom	78.15651540942	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35081.287737608	Sum of GTIs [s]
livetime	34622.924886848	Livetime [s]
ontime2	35074.84156698	Sum of GTIs [s]
ontime3	35078.023607194	Sum of GTIs [s]
ontime5	35081.246697605	Sum of GTIs [s]
ontime6	35081.205657601	Sum of GTIs [s]
ontime7	35081.287737608	Sum of GTIs [s]
l2events	442162	Number of level 2 events



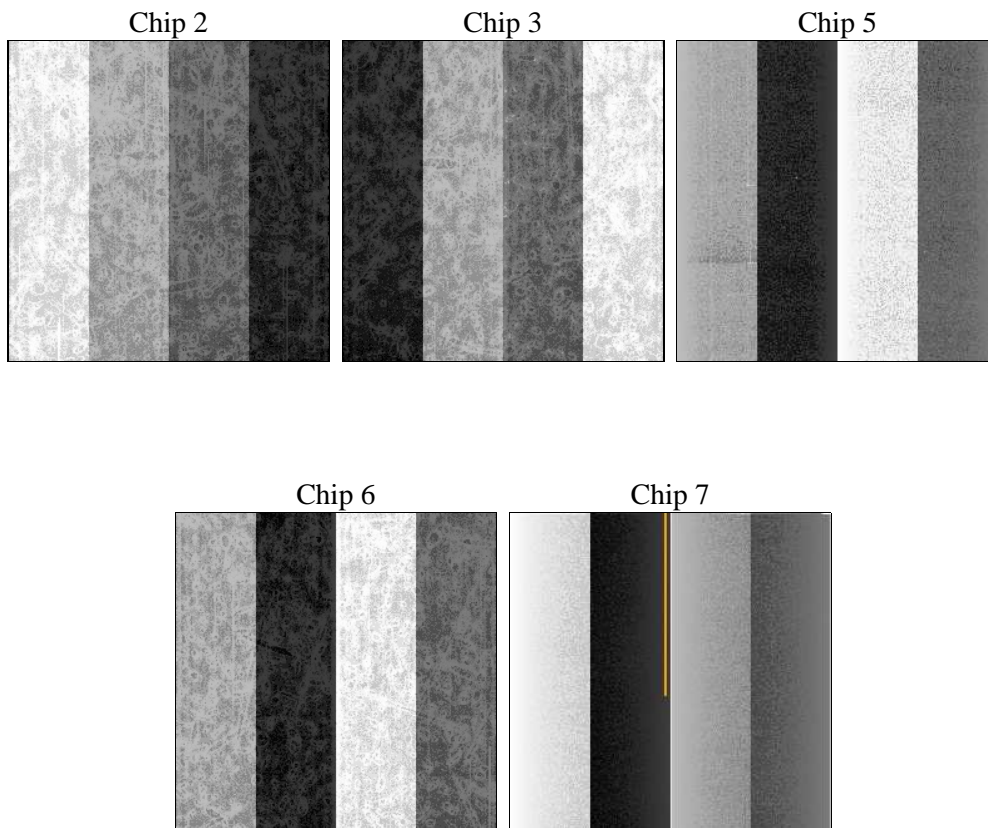
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	35081.287737608	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime2	35074.84156698	Sum of GTIs [s]
date	2012-06-15T14:08:07	Date and time of file creation	ontime3	35078.023607194	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	35081.246697605	Sum of GTIs [s]
			ontime6	35081.205657601	Sum of GTIs [s]
			ontime7	35081.287737608	Sum of GTIs [s]
			l1events	1714757	Number of level 1 events

### 2.1.4 Events

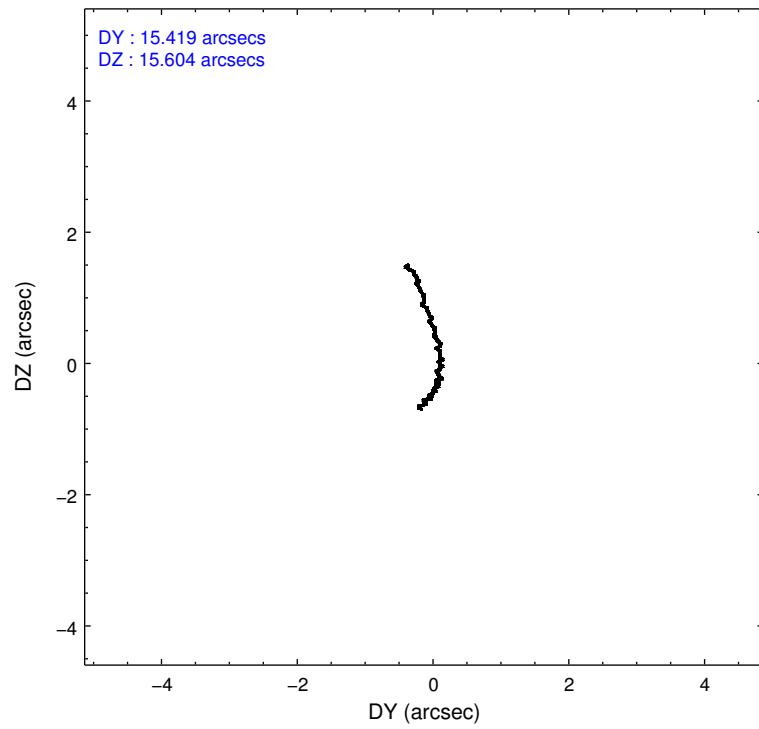
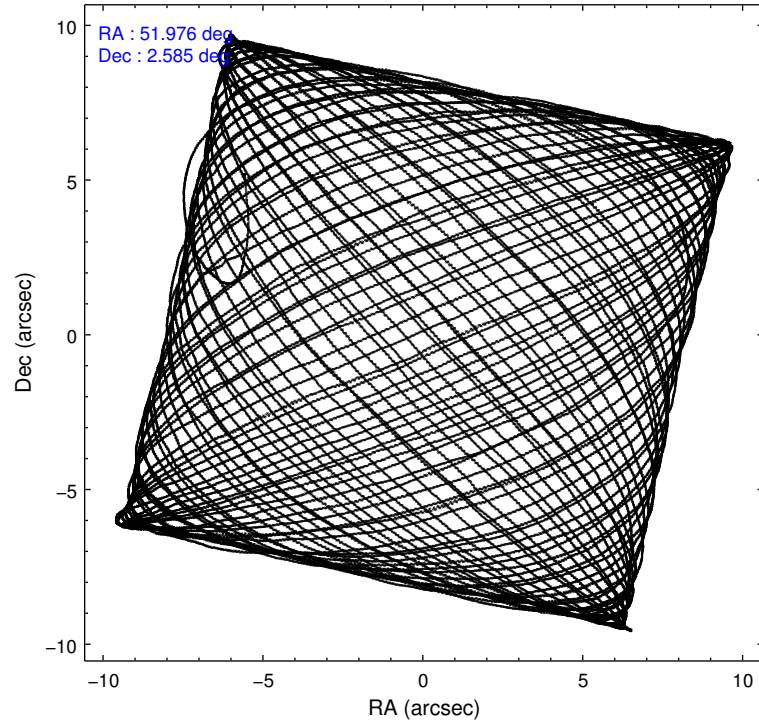
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	306283	292235	446894	312133	357212
rejected events	276849	263536	220299	279326	192144
rejected %	90%	90%	49%	89%	53%

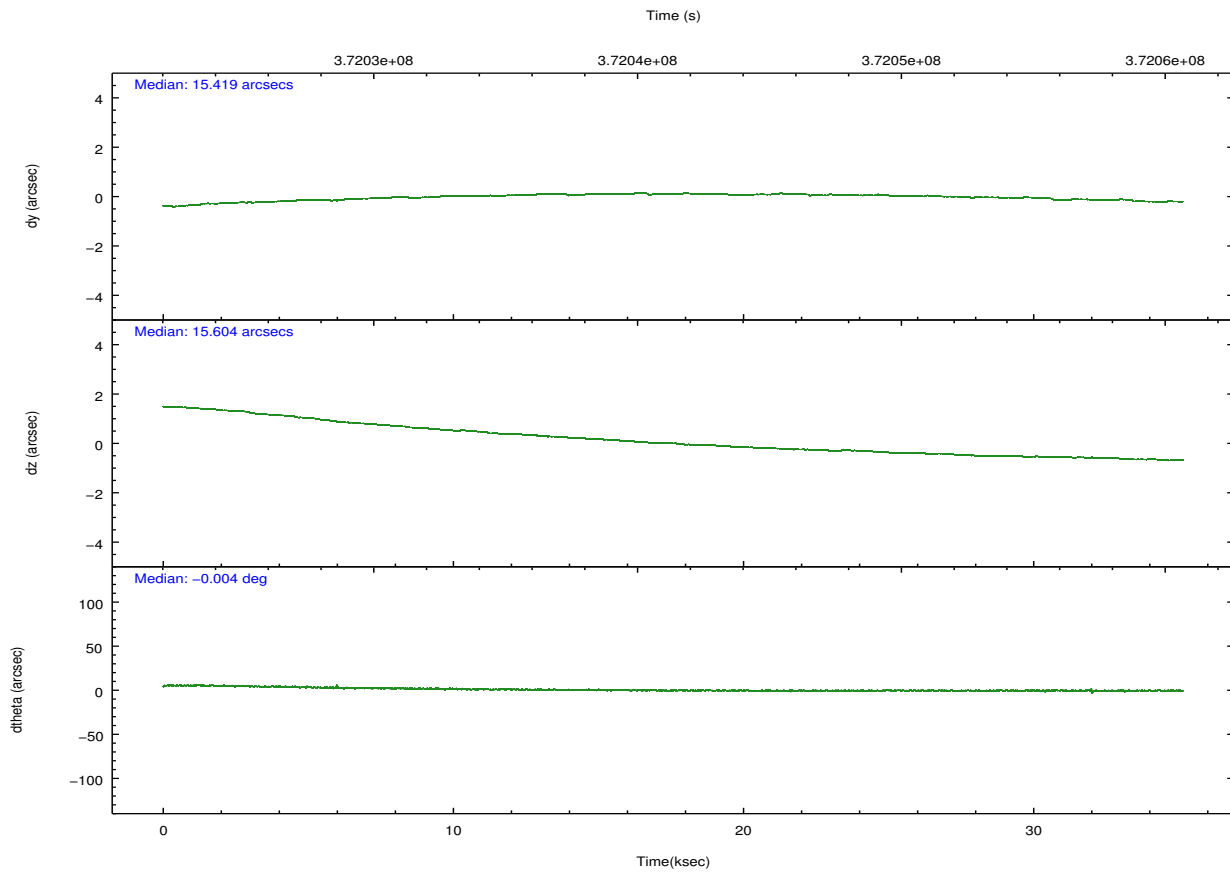
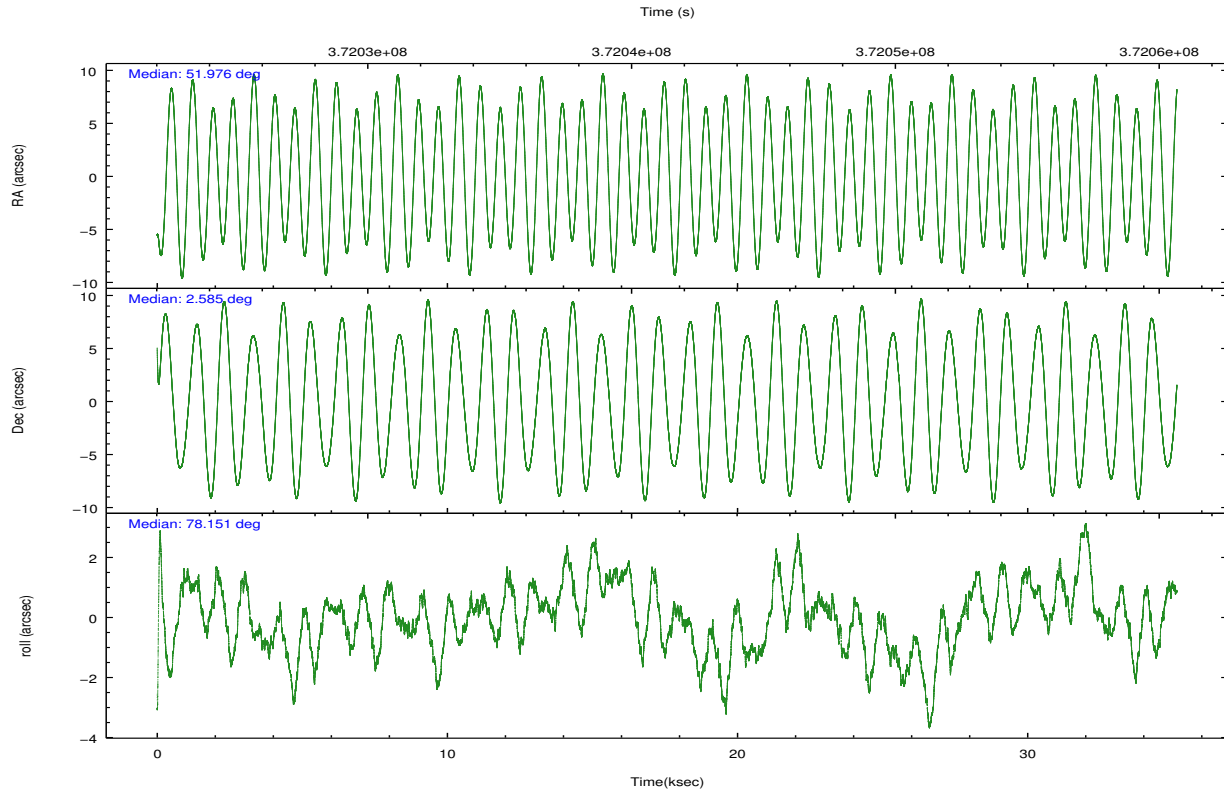
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	10400	10029	28710	11454	16579
	3%	3%	6%	3%	4%
grade 1 events	168	166	758	195	469
	0%	0%	0%	0%	0%
grade 2 events	7125	6390	67318	7346	34057
	2%	2%	15%	2%	9%
grade 3 events	3164	3234	8990	3509	15252
	1%	1%	2%	1%	4%
grade 4 events	3117	3200	8674	3453	14785
	1%	1%	1%	1%	4%
grade 5 events	10127	12618	34257	13076	36855
	3%	4%	7%	4%	10%
grade 6 events	5631	5848	112921	7051	84410
	1%	2%	25%	2%	23%
grade 7 events	266551	250750	185266	266049	154805
	87%	85%	41%	85%	43%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	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	51.984733	51.97583711928851	CCD I2 on	O1	Y
[deg] Pointing Dec	2.559650	2.585516739768894	CCD I3 on	Y	Y
[deg] Pointing Roll	77.999499	78.15651540941981	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	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	N	N
[s] Observation start time (MET)	372023920.184000	372022823.05036	CCD S5 on	N	N
Observation start date	2009-10-15T19:57:34	2009-10-15T19:40:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	372058920.184000	372059869.11472	On-chip summing requested	N	N
Observation end date	2009-10-16T05:40:54	2009-10-16T05:57:49	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



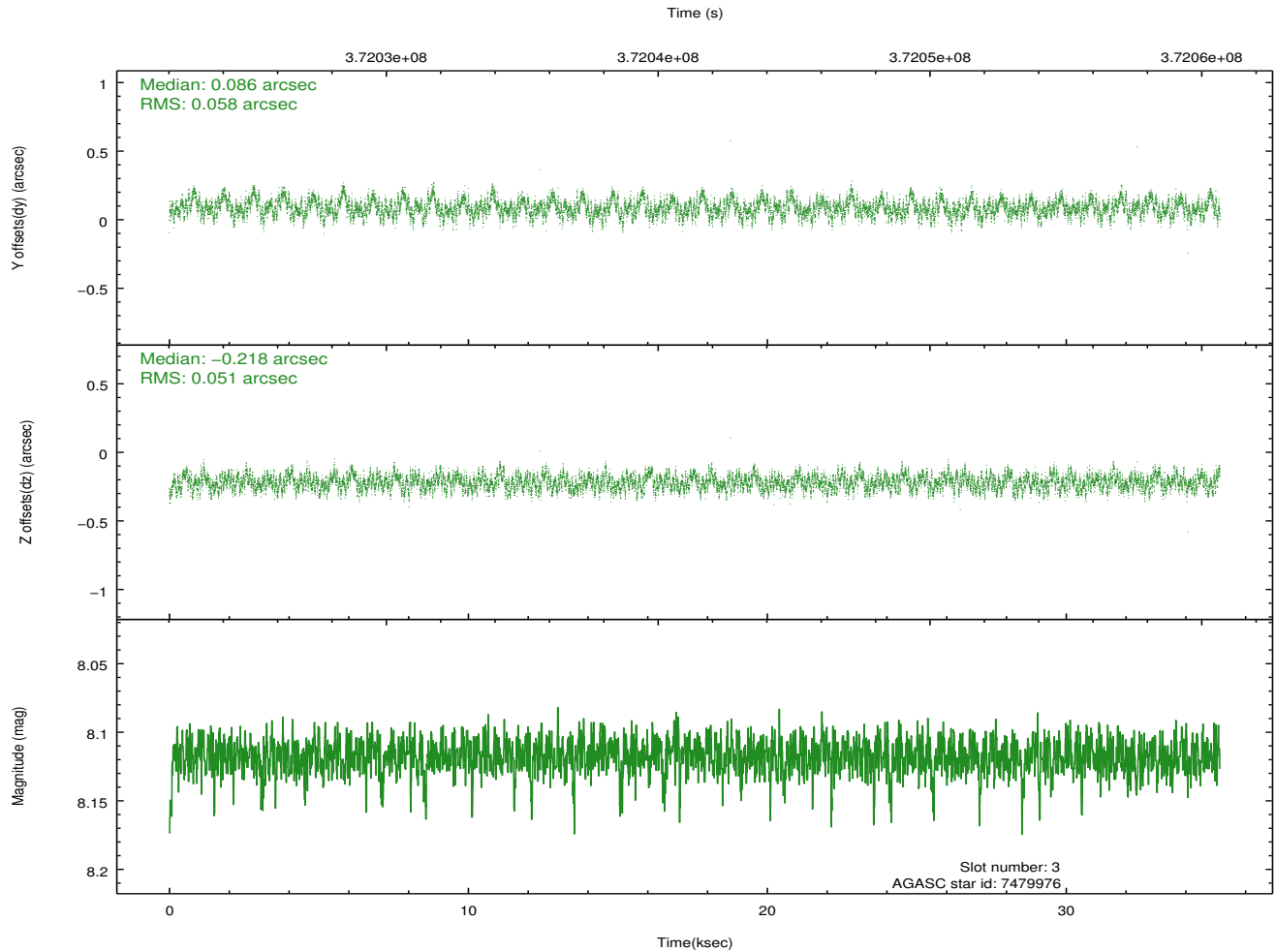
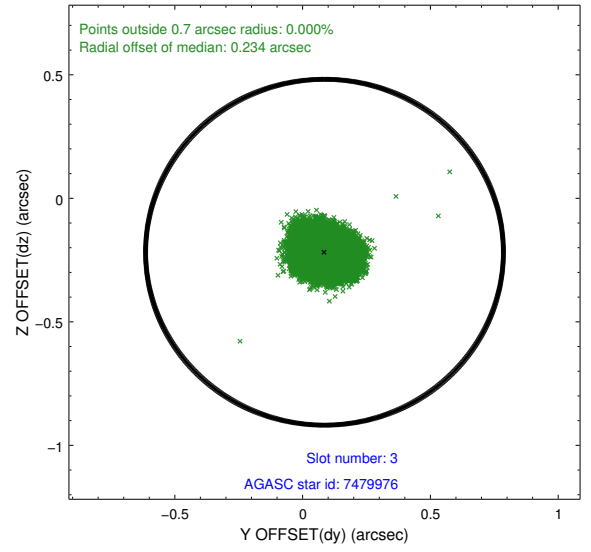
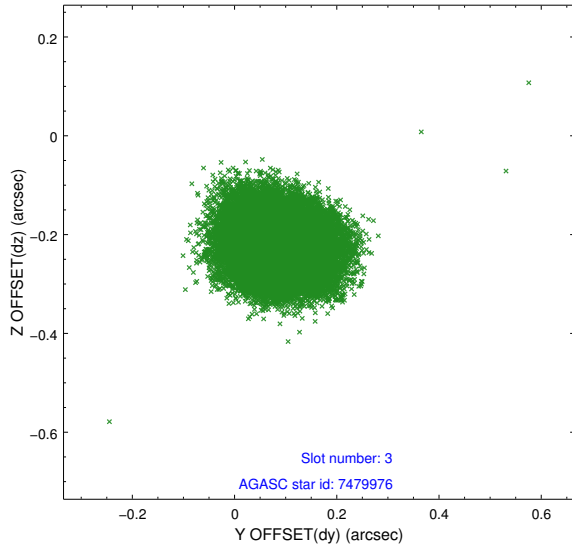


### Slot Statistics

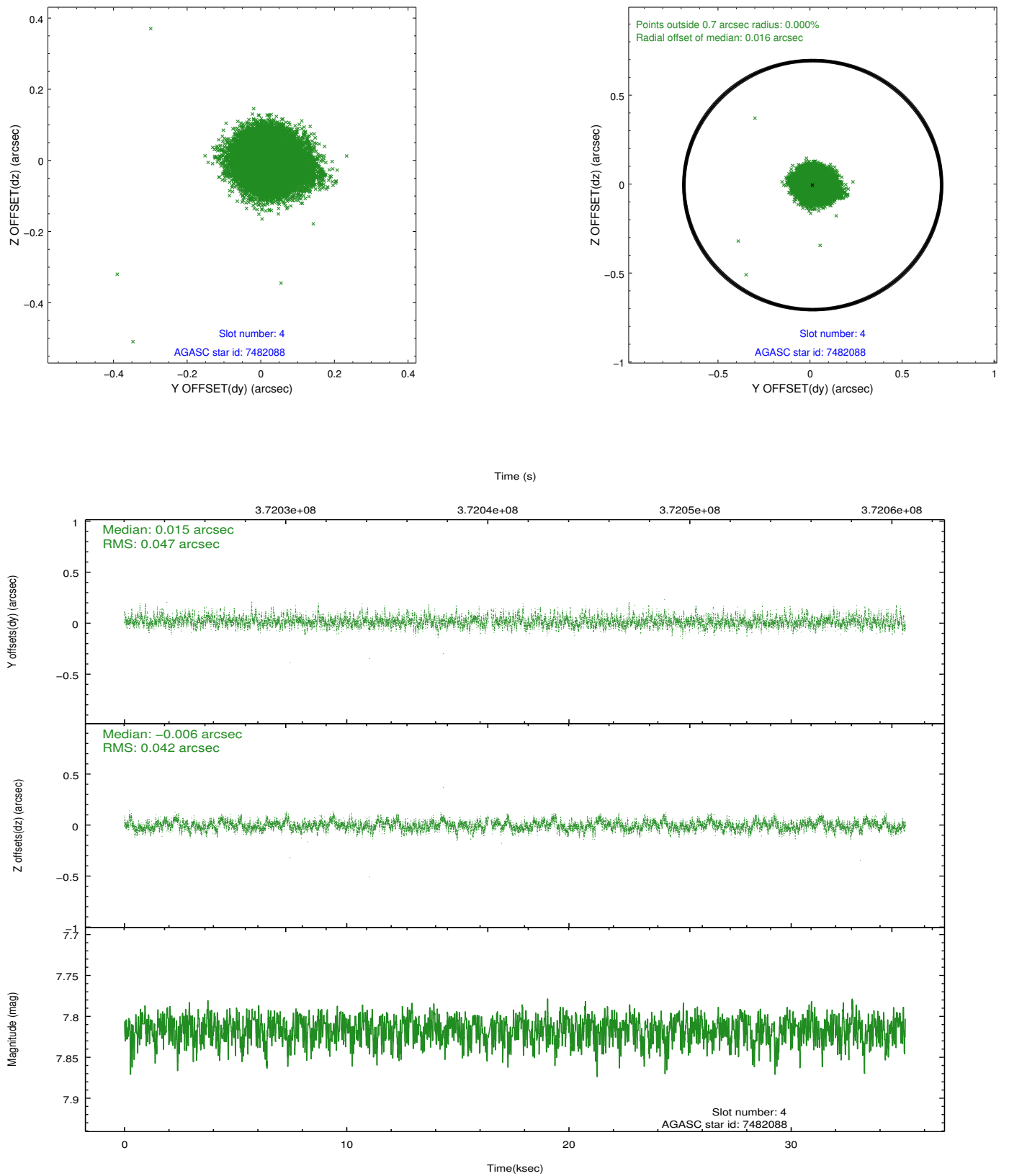
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.89	8573	-0.097	-0.024	0.011	0.030	0.000000	0.000000	-768.45	-1737.18
1	FID	ACIS-S-4	6.97	8573	0.193	0.053	0.012	0.019	0.000000	0.000000	2145.09	171.35
2	FID	ACIS-S-5	7.00	8573	-0.130	-0.020	0.009	0.025	0.000000	0.000000	-1821.29	164.98
3	GUIDE	7479976	8.12	17144	0.086	-0.218	0.084	0.130	51.609520	2.169750	-1653.22	1028.23
4	GUIDE	7482088	7.82	17078	0.015	-0.006	0.067	0.109	51.807690	2.280173	-1116.51	413.48
5	GUIDE	7864464	9.08	17129	0.012	-0.046	0.080	0.132	51.892106	3.187870	2142.80	795.94
6	GUIDE	7867360	9.14	17123	-0.126	-0.003	0.073	0.119	51.860417	2.901354	1110.52	693.20
7	GUIDE	8390776	9.63	17117	0.015	0.272	0.123	0.201	52.520913	2.154889	-1023.45	-2189.46

## 2.4 Star Slots

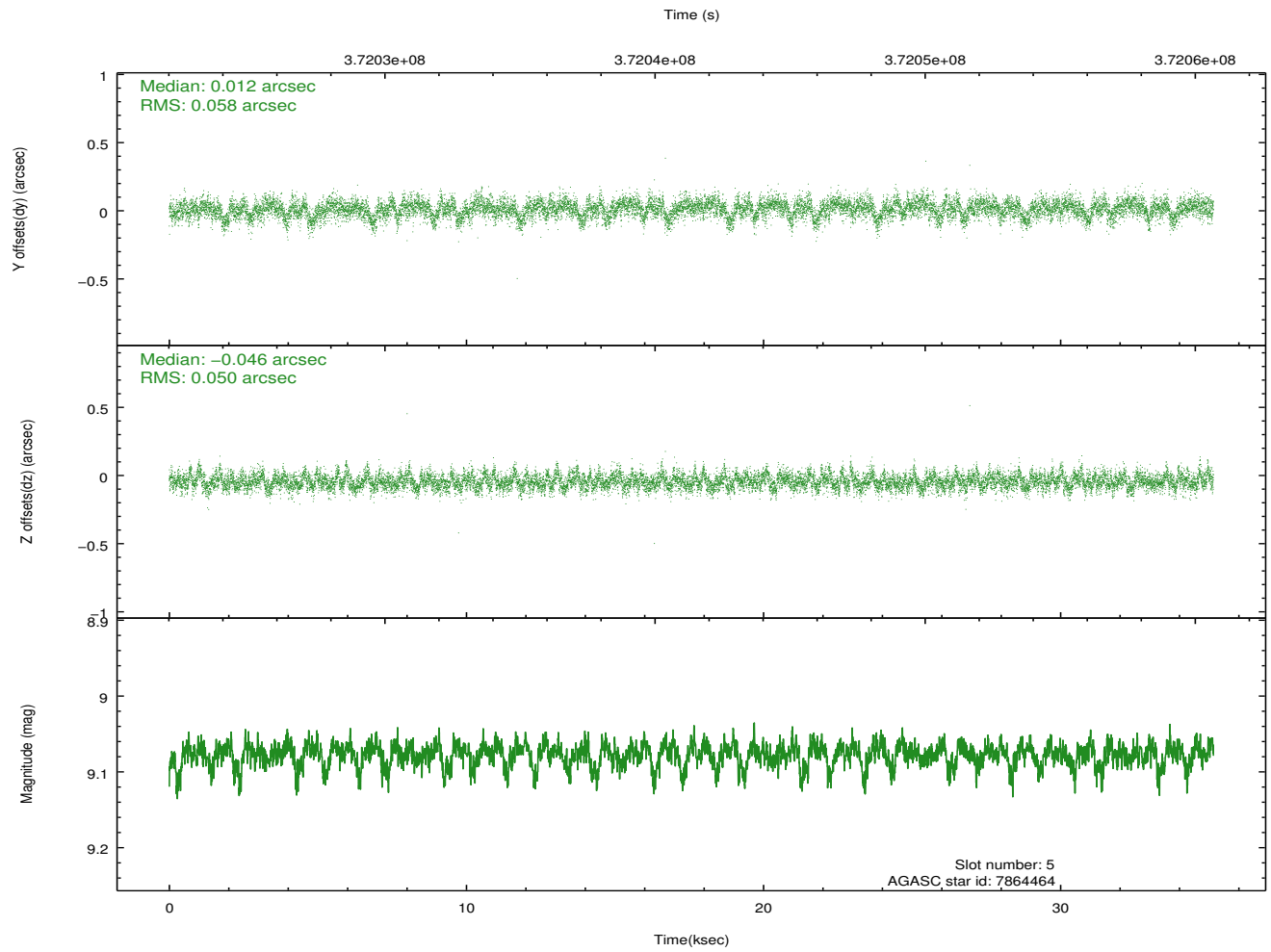
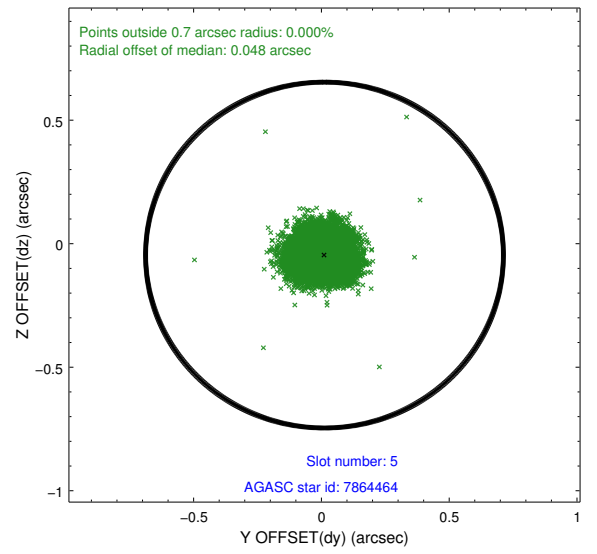
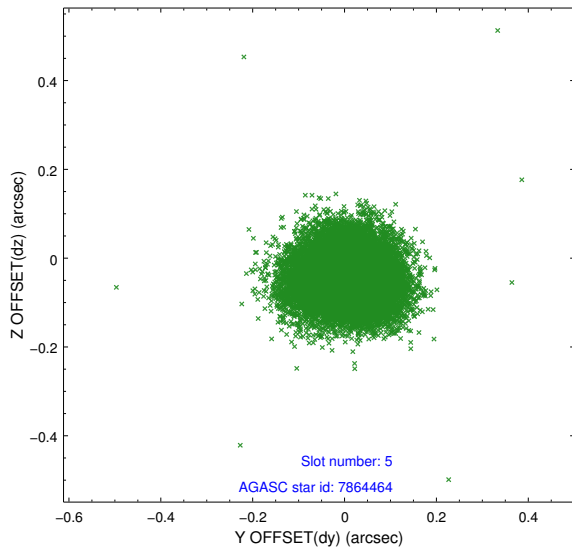
### 2.4.1 Slot 3



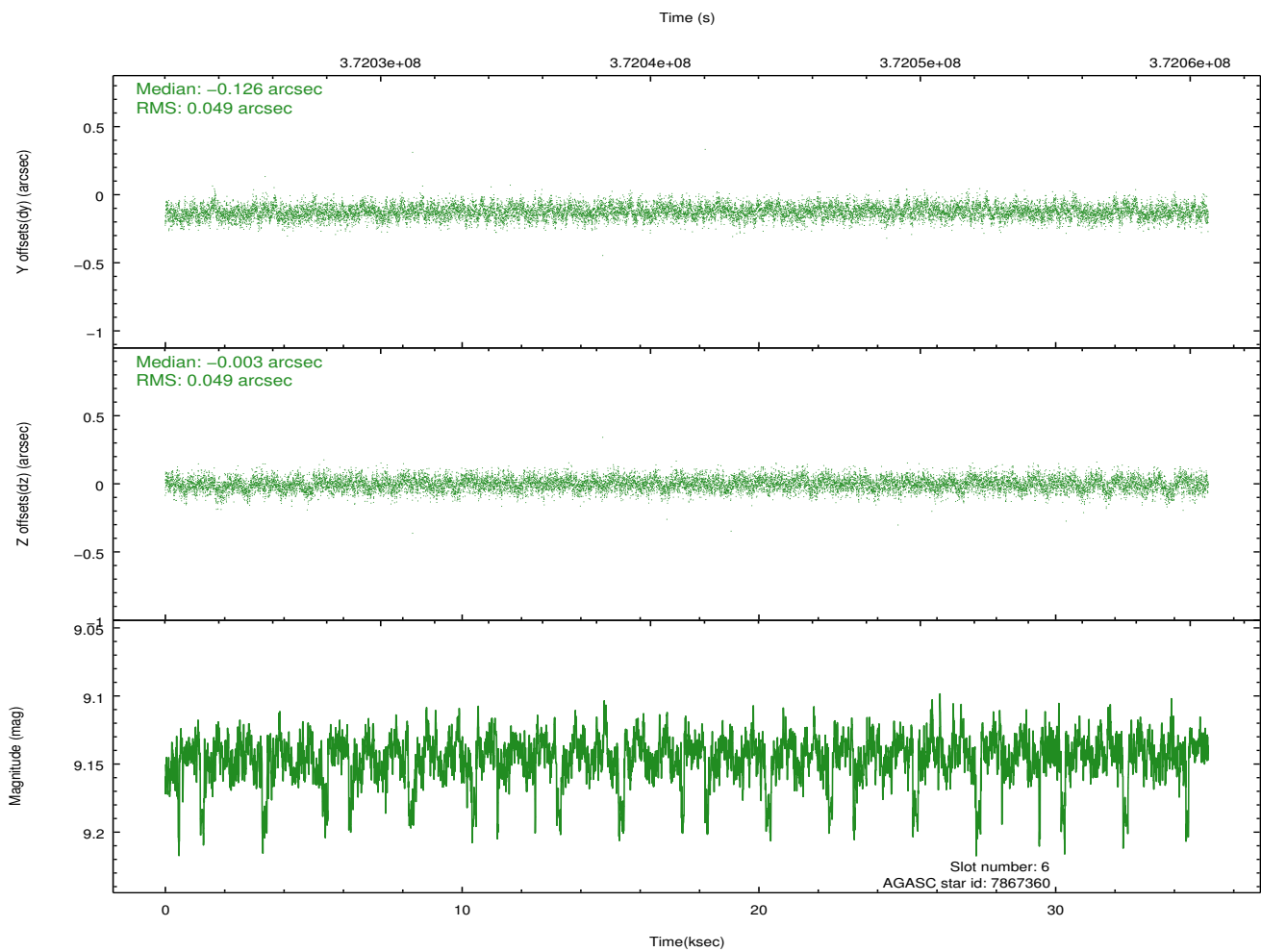
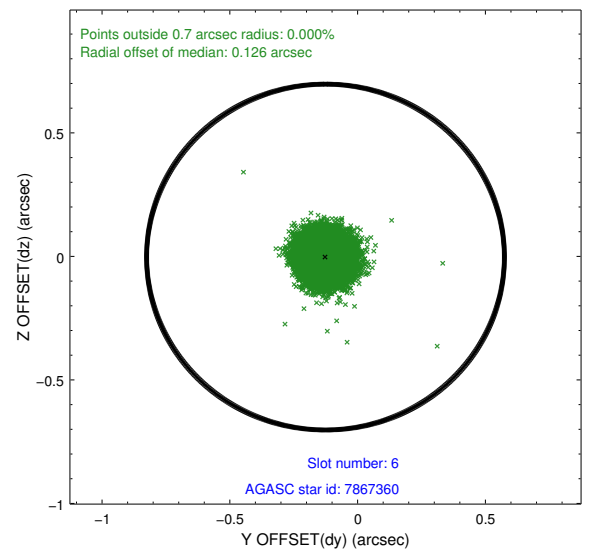
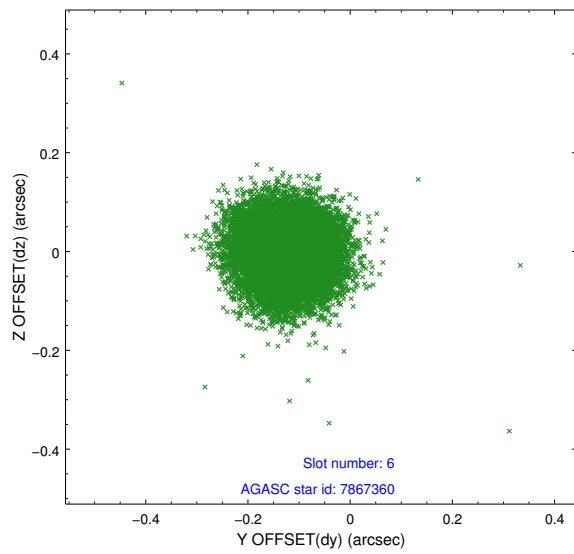
## 2.4.2 Slot 4



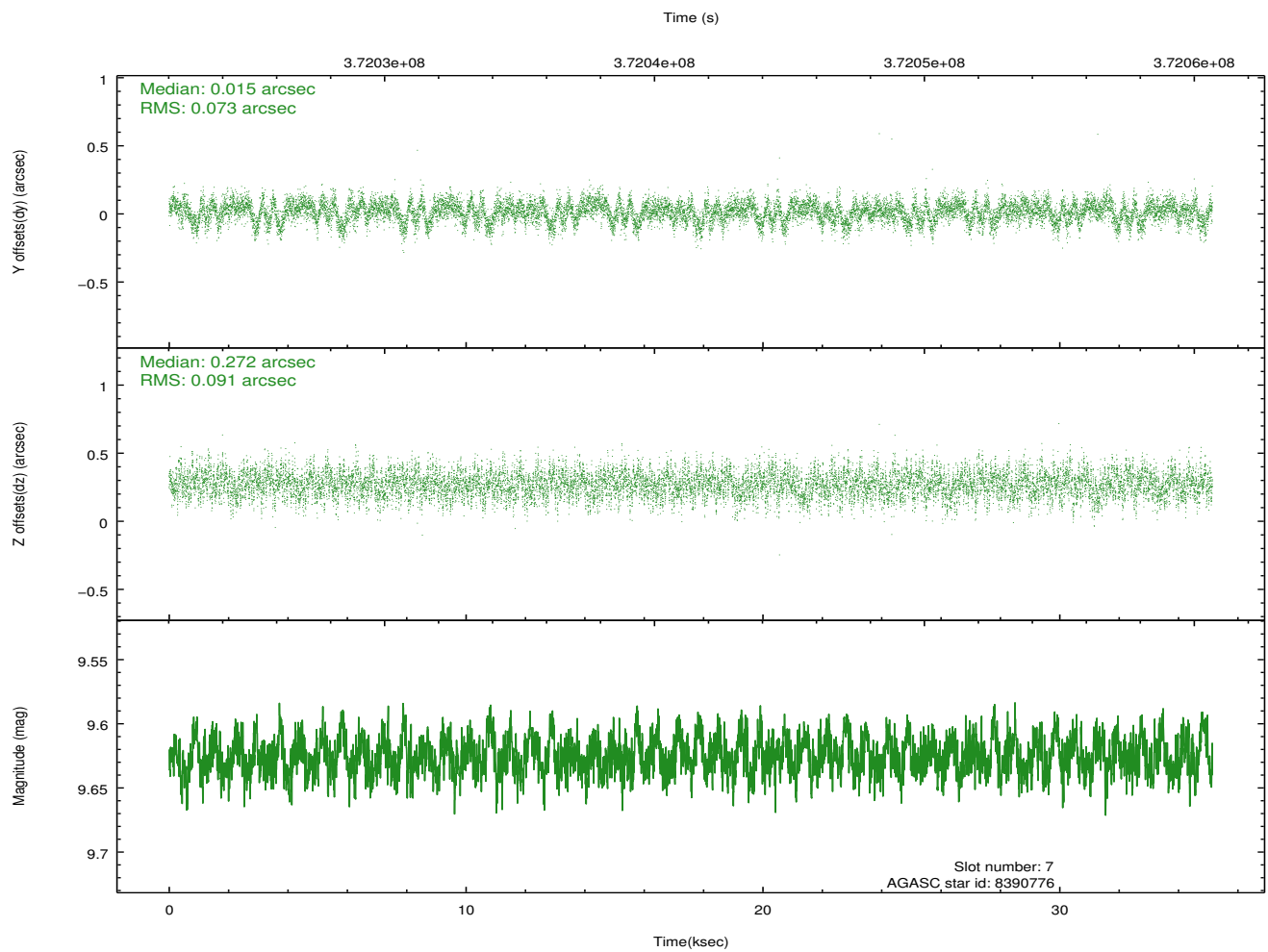
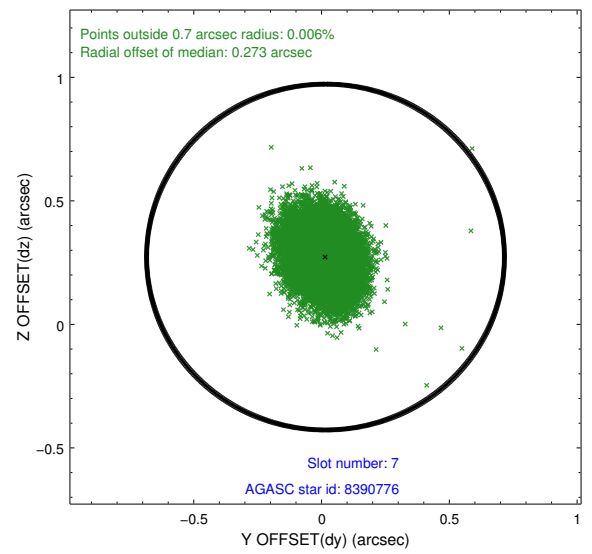
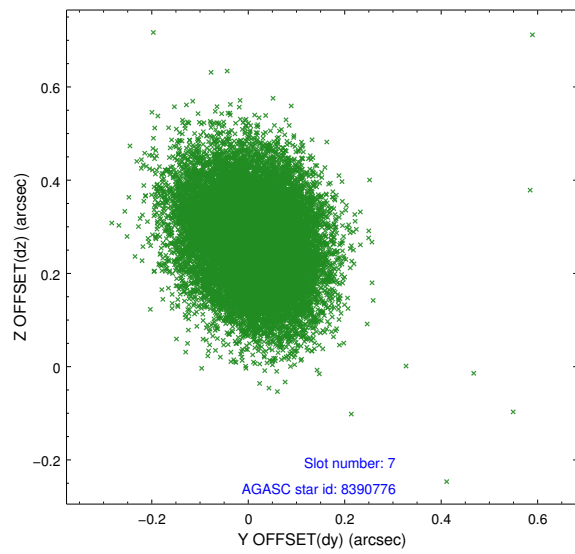
### 2.4.3 Slot 5



## 2.4.4 Slot 6

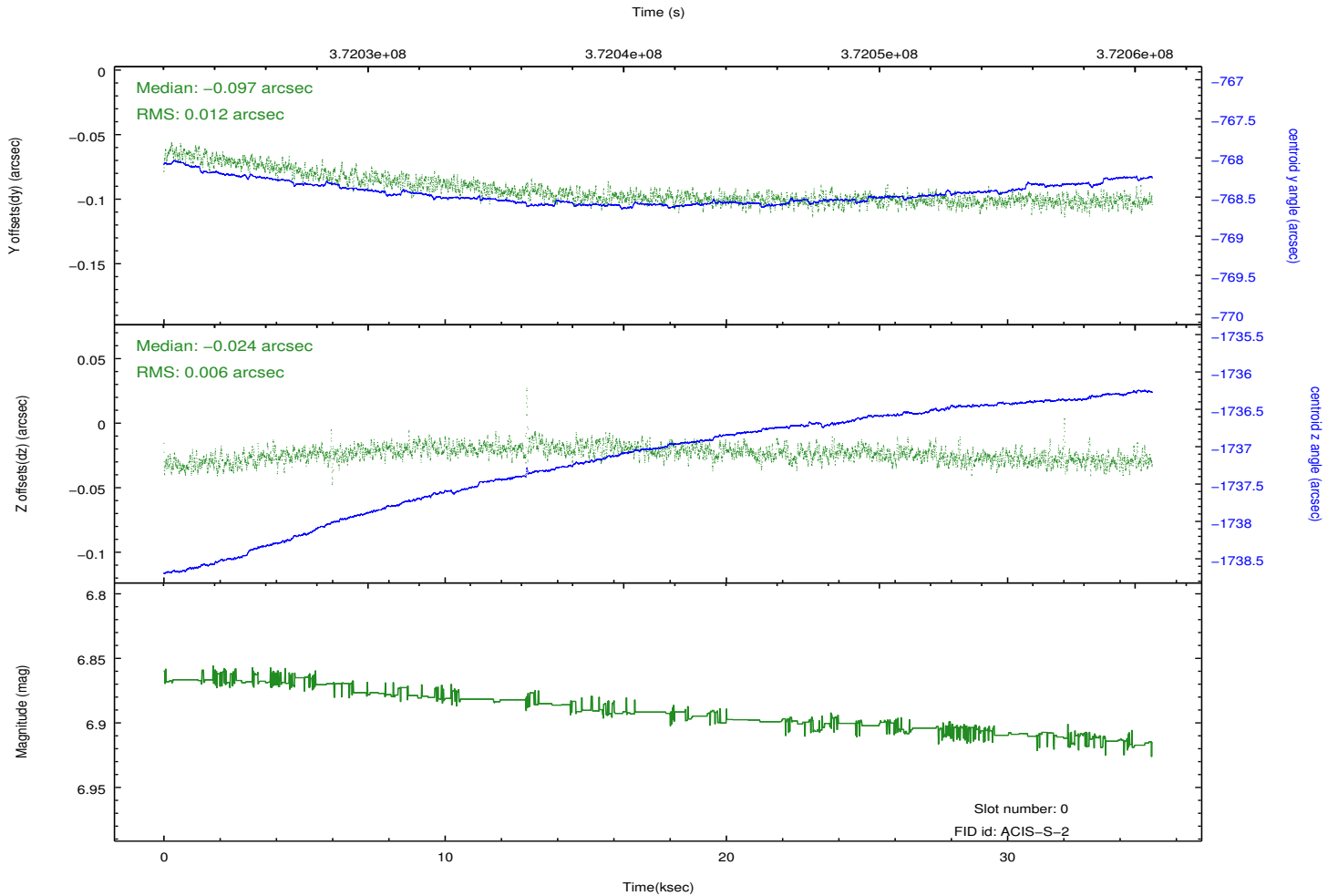
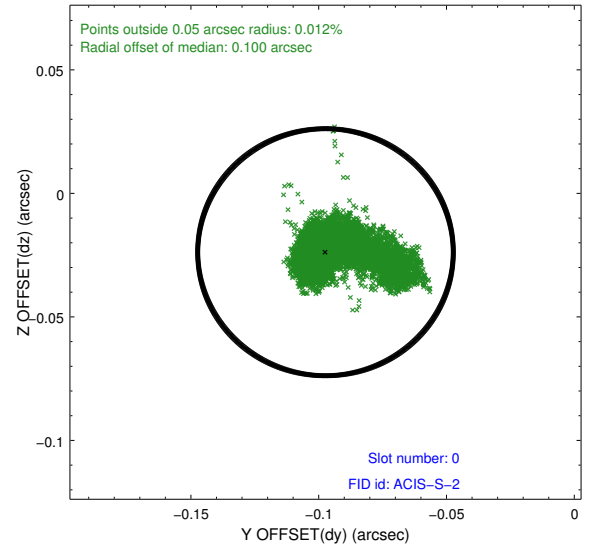
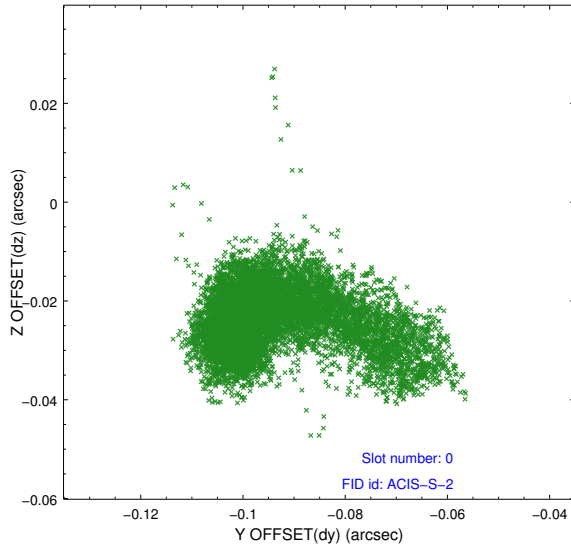


## 2.4.5 Slot 7

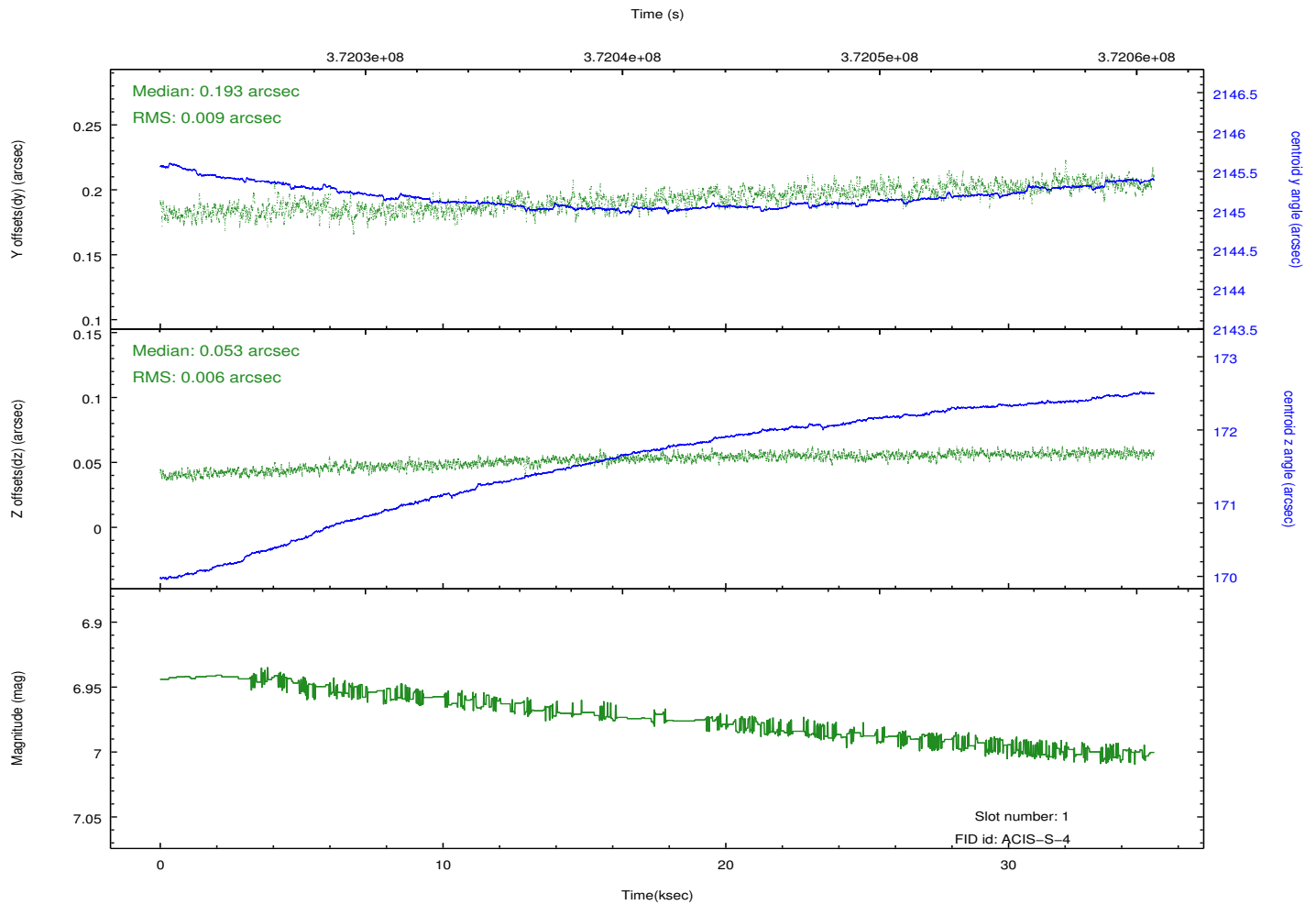
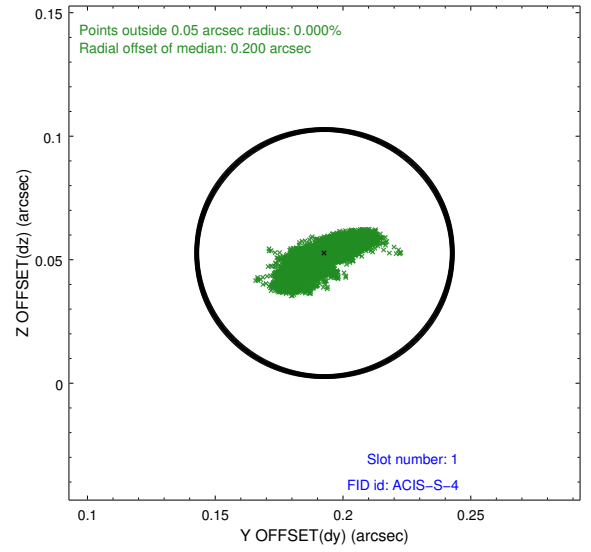
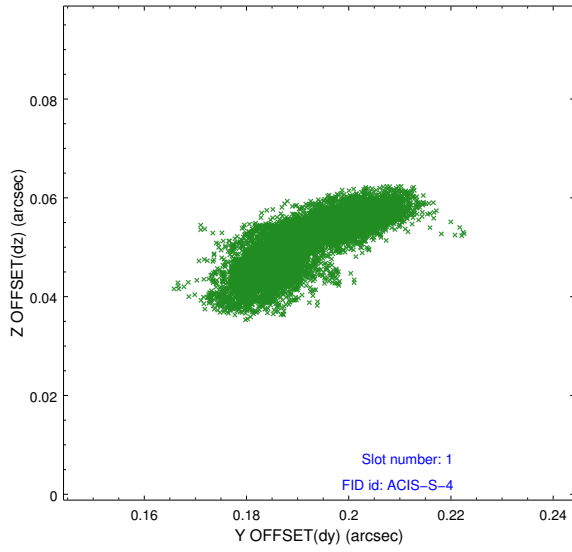


## 2.5 FID Slots

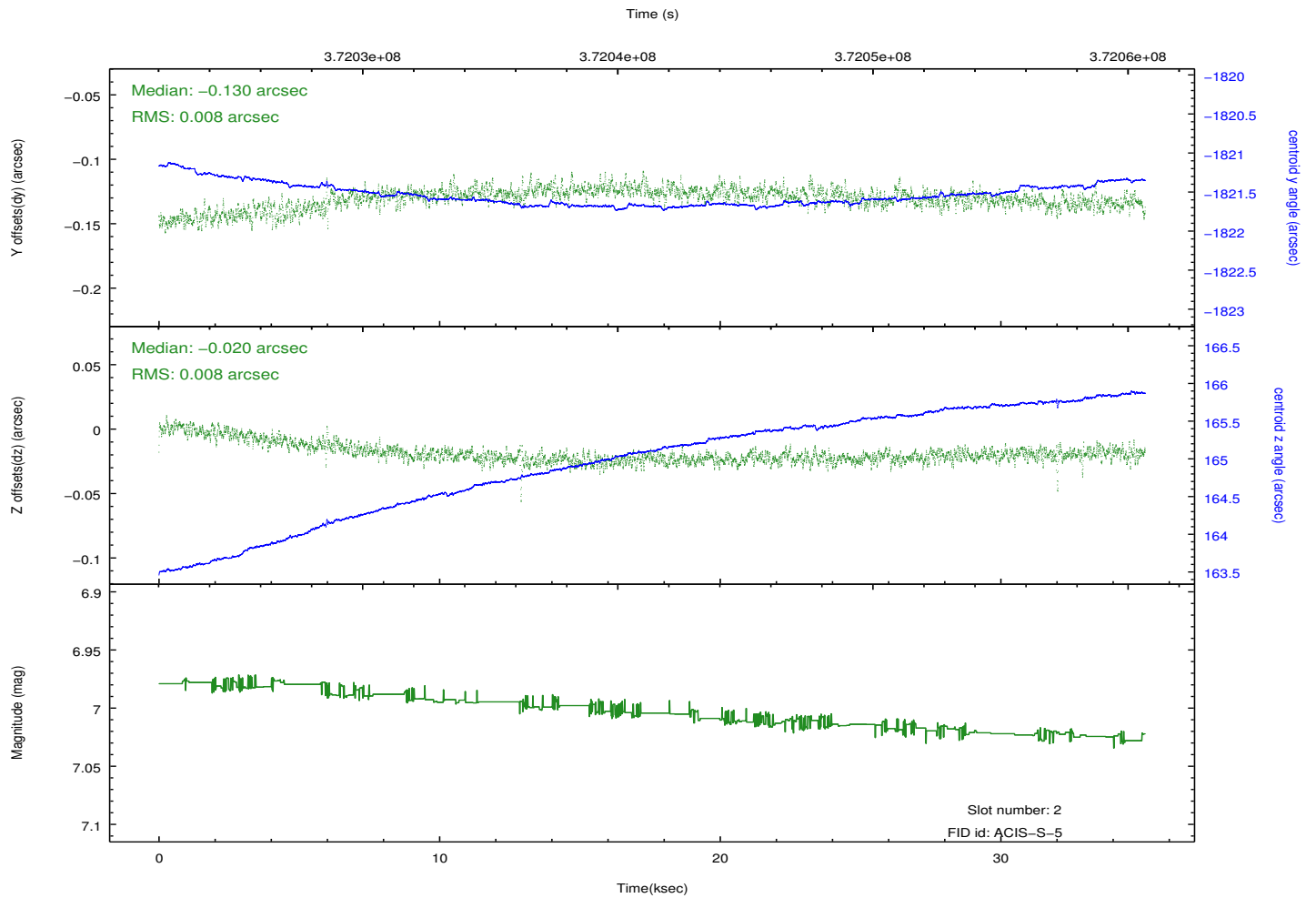
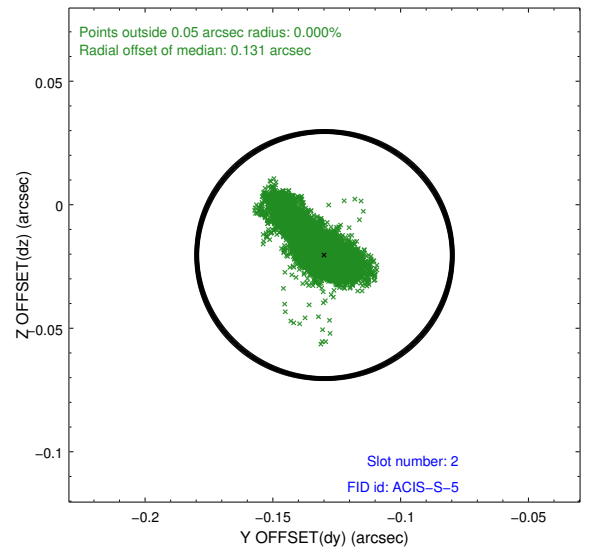
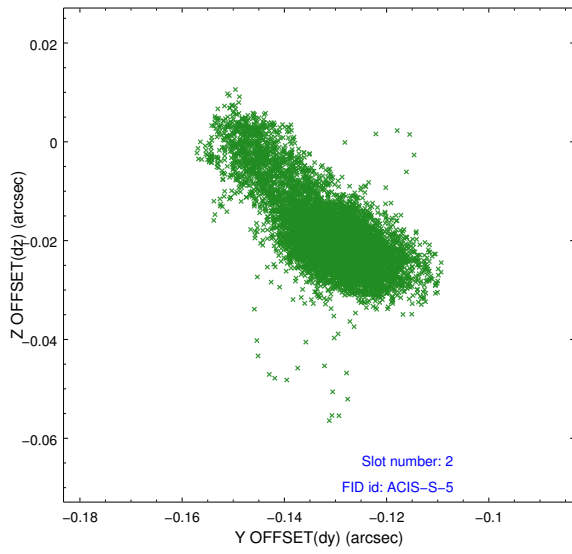
### 2.5.1 Slot 0



## 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)	2012.06.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.081287744045

## A.2 Comments

Joint Proposal: NRAO