

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8068 - L2 Version 2  
Chandra X-Ray Center

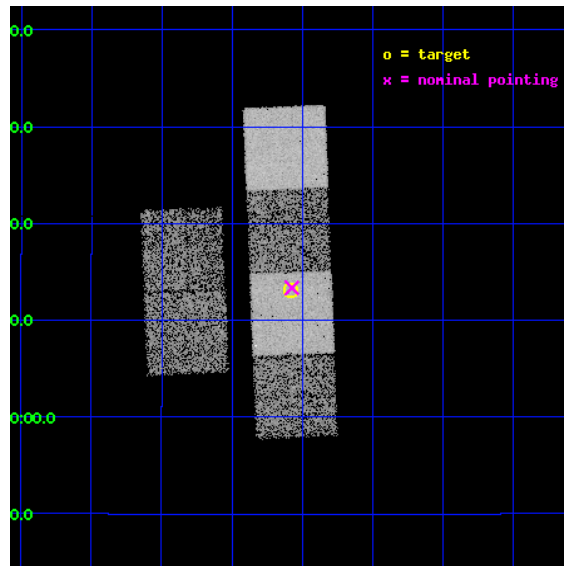
L2 Processing Date : May 10 2012

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# 1 Front

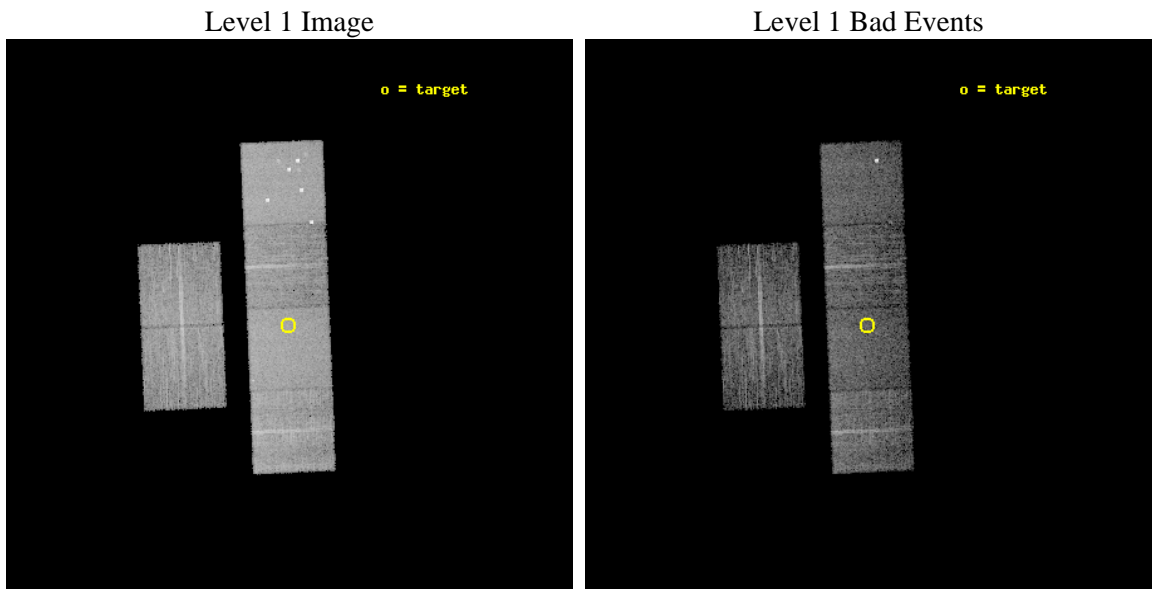
seq_num	900609	Sequence number
obs_id	8068	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	698	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.020833	Observer's specified target RA [deg]
dec_targ	11.218333	Observer's specified target Dec [deg]
ra_nom	186.01837867805	Nominal RA [deg]
dec_nom	11.22267968779	Nominal Dec [deg]
roll_nom	87.712184156308	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.1910241842	Sum of GTIs [s]
livetime	5092.8749035463	Livetime [s]
ontime2	5158.2320641875	Sum of GTIs [s]
ontime3	5158.0679041743	Sum of GTIs [s]
ontime5	5158.1499841809	Sum of GTIs [s]
ontime6	5158.1089441776	Sum of GTIs [s]
ontime7	5158.1910241842	Sum of GTIs [s]
ontime8	5154.7858143449	Sum of GTIs [s]
l2events	81281	Number of level 2 events



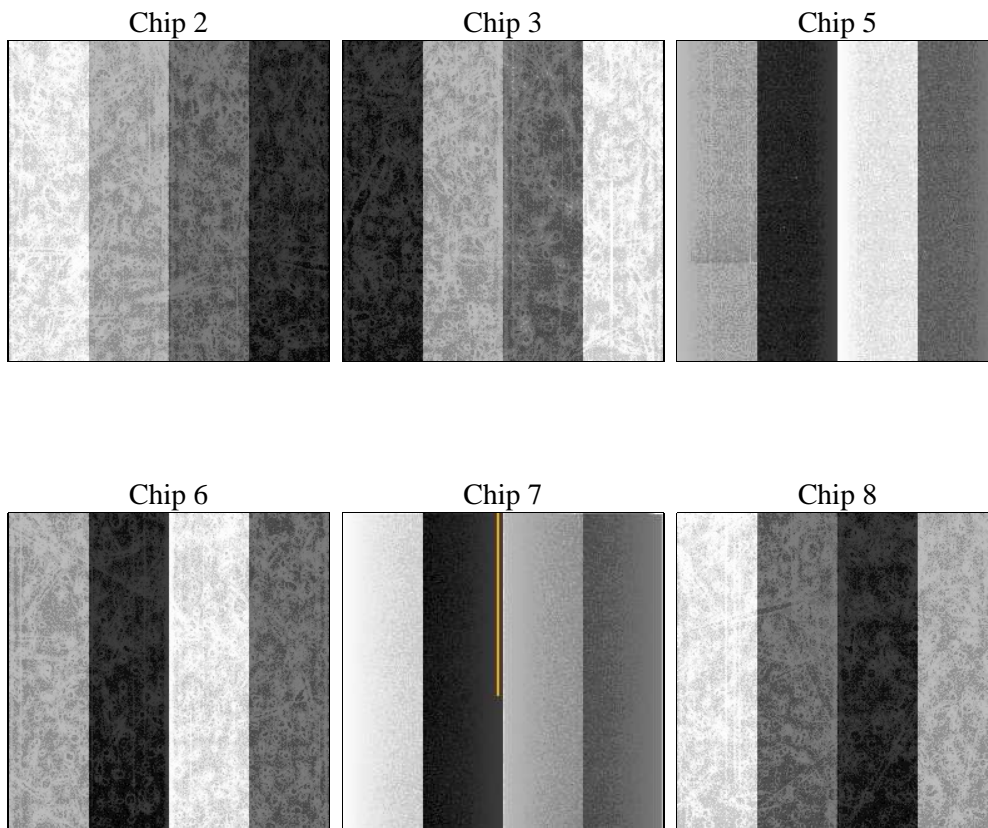
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5158.1910241842	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	5158.2320641875	Sum of GTIs [s]
date	2012-05-10T07:57:48	Date and time of file creation	ontime3	5158.0679041743	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5158.1499841809	Sum of GTIs [s]
			ontime6	5158.1089441776	Sum of GTIs [s]
			ontime7	5158.1910241842	Sum of GTIs [s]
			ontime8	5154.7858143449	Sum of GTIs [s]
			l1events	365729	Number of level 1 events

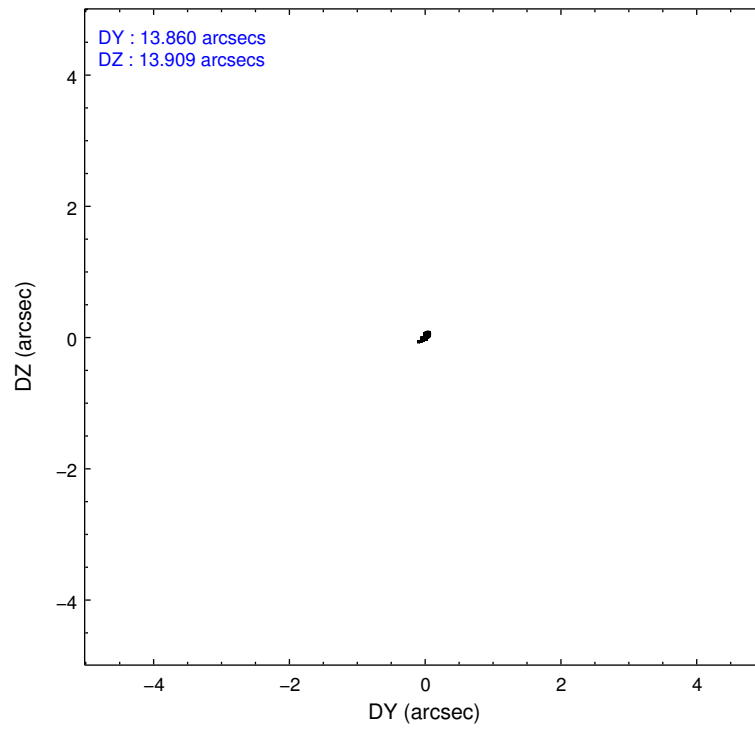
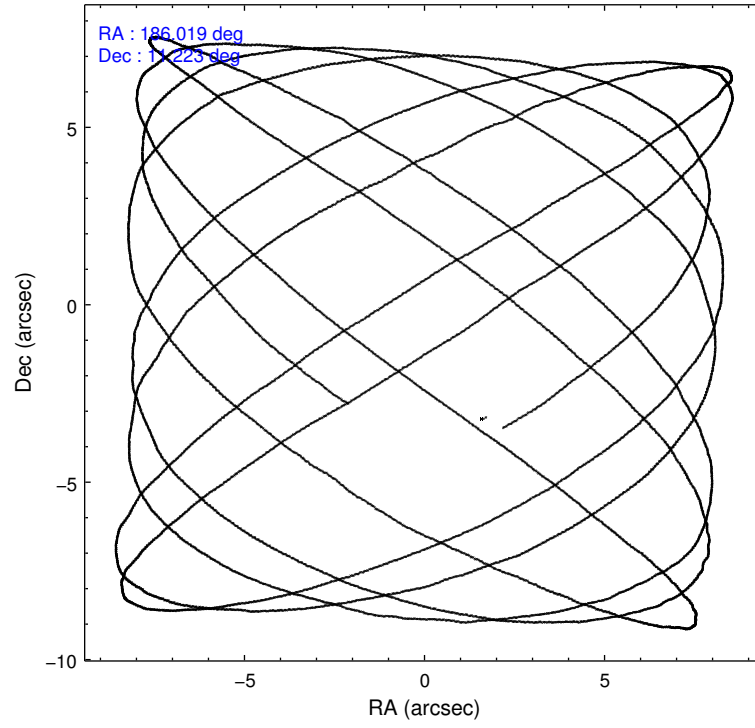
### 2.1.4 Events

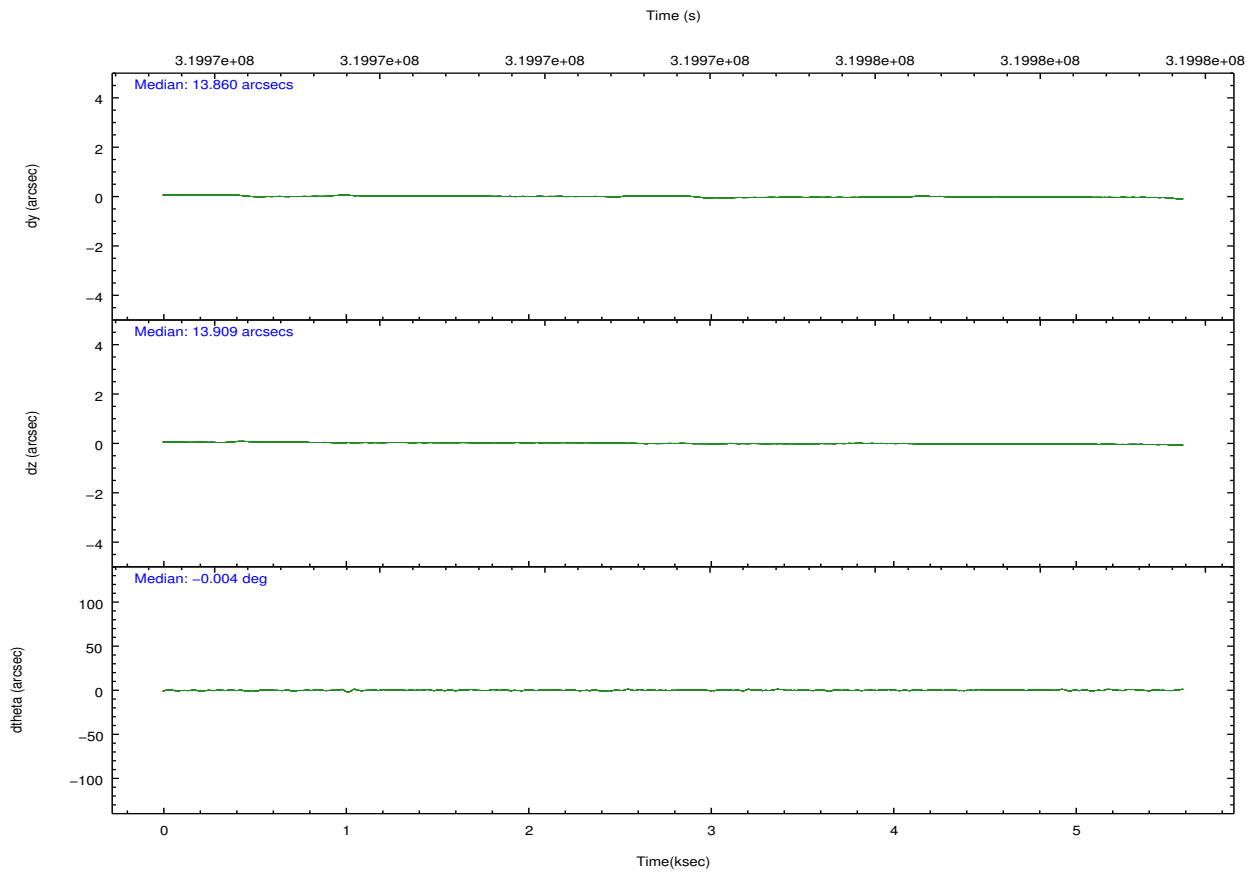
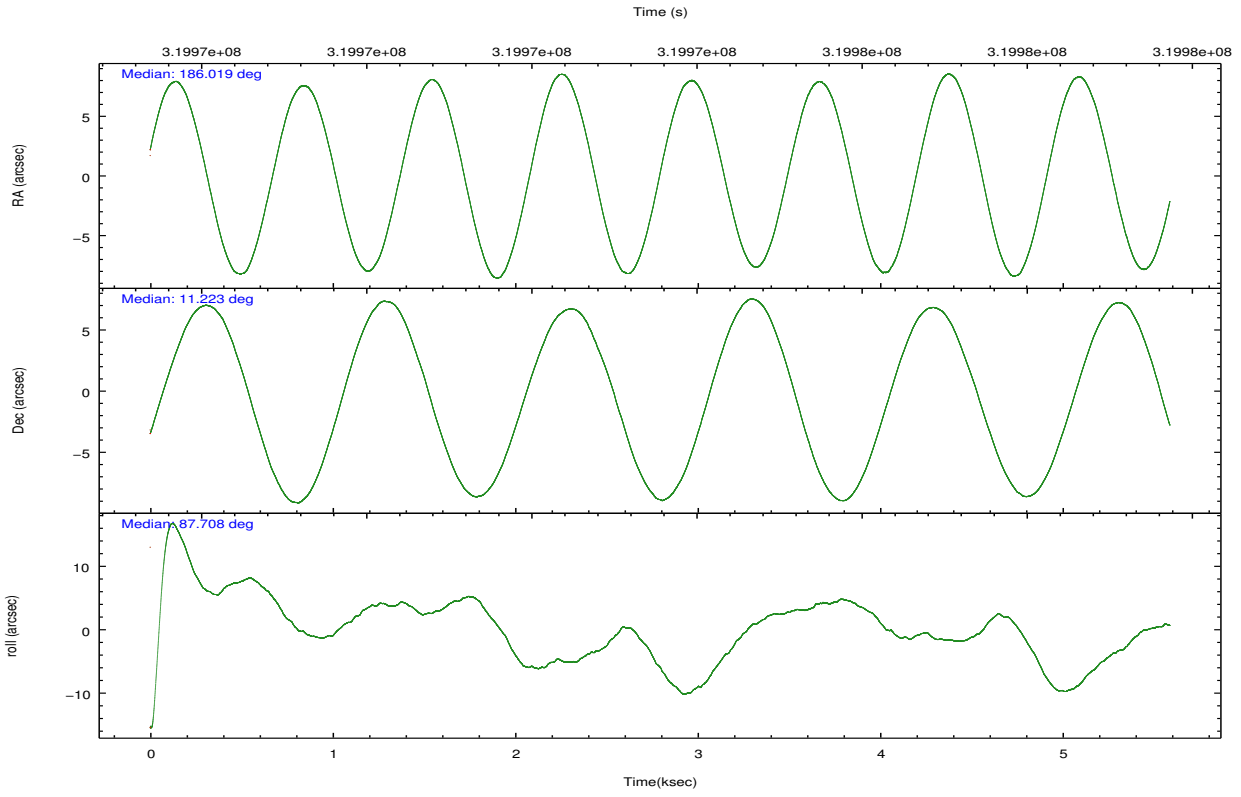
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	50329	48653	83029	49142	68825	65751	grade 0 events	2540	2649	6845	2303	2487	4561
rejected events	44559	42706	42706	43180	40713	51495		5%	5%	8%	4%	3%	6%
rejected %	88%	87%	51%	87%	59%	78%	grade 1 events	26	33	123	22	66	40
								0%	0%	0%	0%	0%	0%
							grade 2 events	1202	1102	10957	1322	5745	3229
								2%	2%	13%	2%	8%	4%
							grade 3 events	541	598	1267	563	2335	1484
								1%	1%	1%	1%	3%	2%
							grade 4 events	533	565	1102	521	2266	1362
								1%	1%	1%	1%	3%	2%
							grade 5 events	2007	2271	5159	2380	6406	3050
								3%	4%	6%	4%	9%	4%
							grade 6 events	959	1042	20184	1255	15296	3630
								1%	2%	24%	2%	22%	5%
							grade 7 events	42521	40393	37392	40776	34224	48395
								84%	83%	45%	82%	49%	73%

## 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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	186.031705	186.0183786780549	CCD I2 on	O1	Y
[deg] Pointing Dec	11.198522	11.22267968779046	CCD I3 on	O2	Y
[deg] Pointing Roll	87.553051	87.7121841563084	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	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	O4	Y
[s] Observation start time (MET)	319971161.184000	319970755.64308	CCD S5 on	N	N
Observation start date	2008-02-21T08:51:36	2008-02-21T08:45:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	319976561.184000	319976751.89337	On-chip summing requested	N	N
Observation end date	2008-02-21T10:21:36	2008-02-21T10:25:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



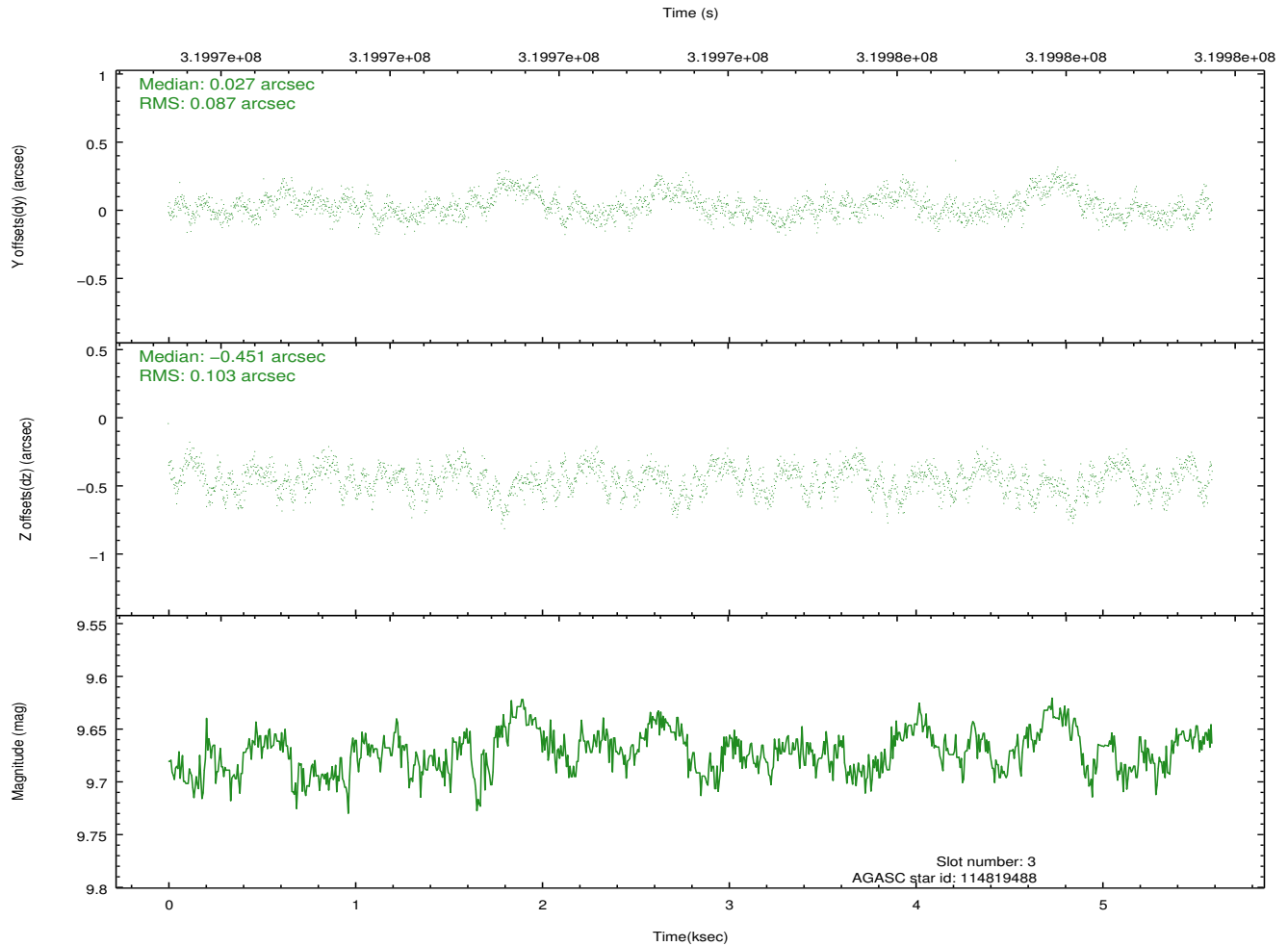
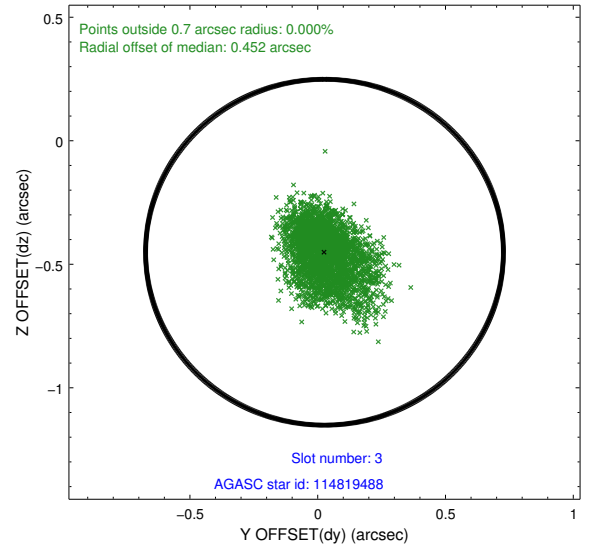
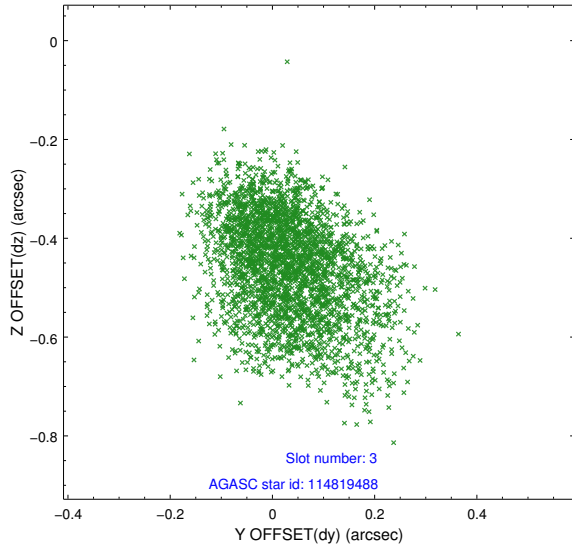


### Slot Statistics

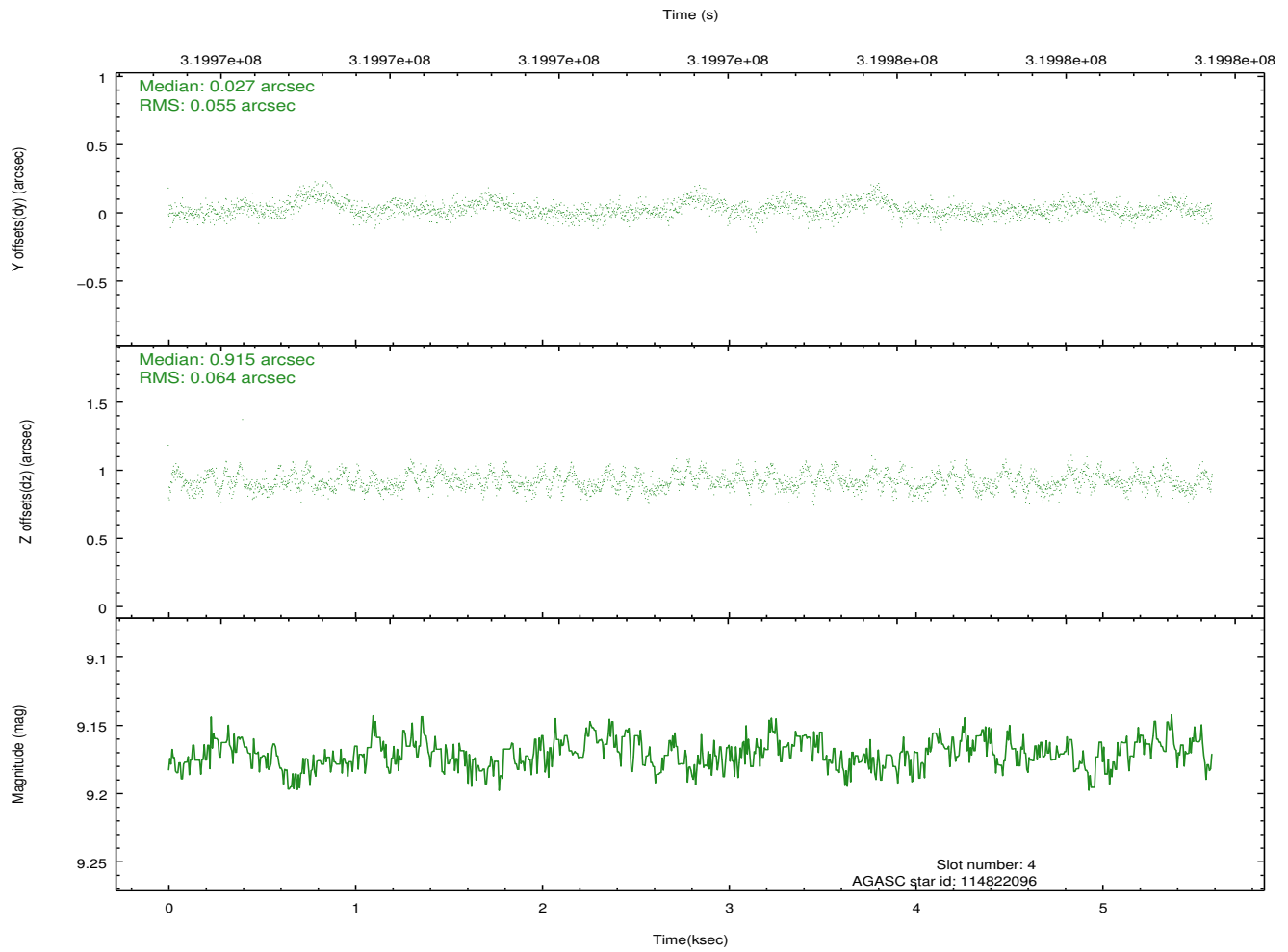
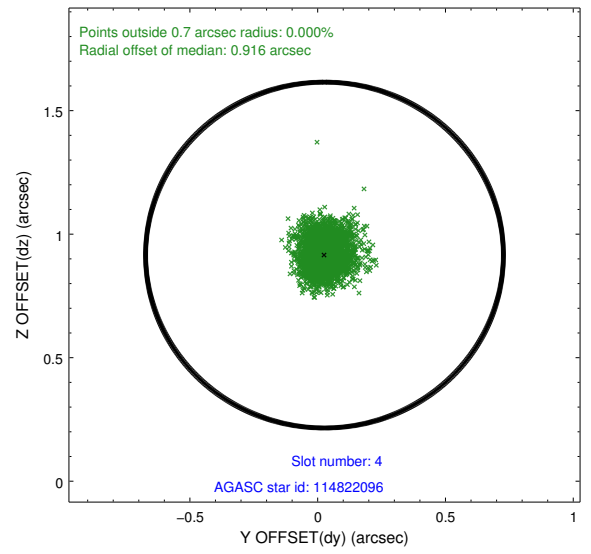
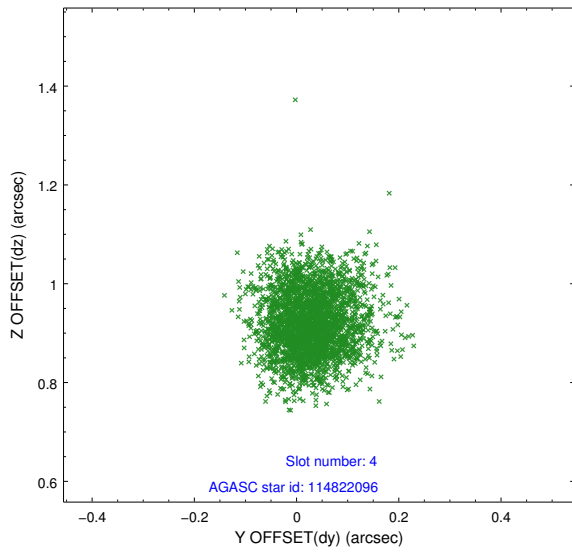
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1363	-0.058	-0.062	0.007	0.012	0.000000	0.000000	-766.86	-1735.27
1	FID	ACIS-S-4	7.19	1364	0.189	0.045	0.006	0.010	0.000000	0.000000	2146.18	172.20
2	FID	ACIS-S-5	7.23	1364	-0.162	0.026	0.007	0.012	0.000000	0.000000	-1818.43	167.08
3	GUIDE	114819488	9.67	2723	0.027	-0.451	0.143	0.231	185.439323	11.182195	-146.41	2087.55
4	GUIDE	114822096	9.17	2724	0.027	0.915	0.089	0.146	186.117793	11.168056	-96.81	-306.45
5	GUIDE	114823144	9.23	2725	-0.167	-0.395	0.105	0.164	185.759442	11.403801	697.20	991.44
6	GUIDE	114823840	9.23	2725	0.083	-0.091	0.084	0.135	186.195871	10.717151	-1706.91	-652.91
7	GUIDE	114957648	9.55	2723	0.024	0.024	0.129	0.209	186.459555	10.641928	-1937.35	-1596.53

## 2.4 Star Slots

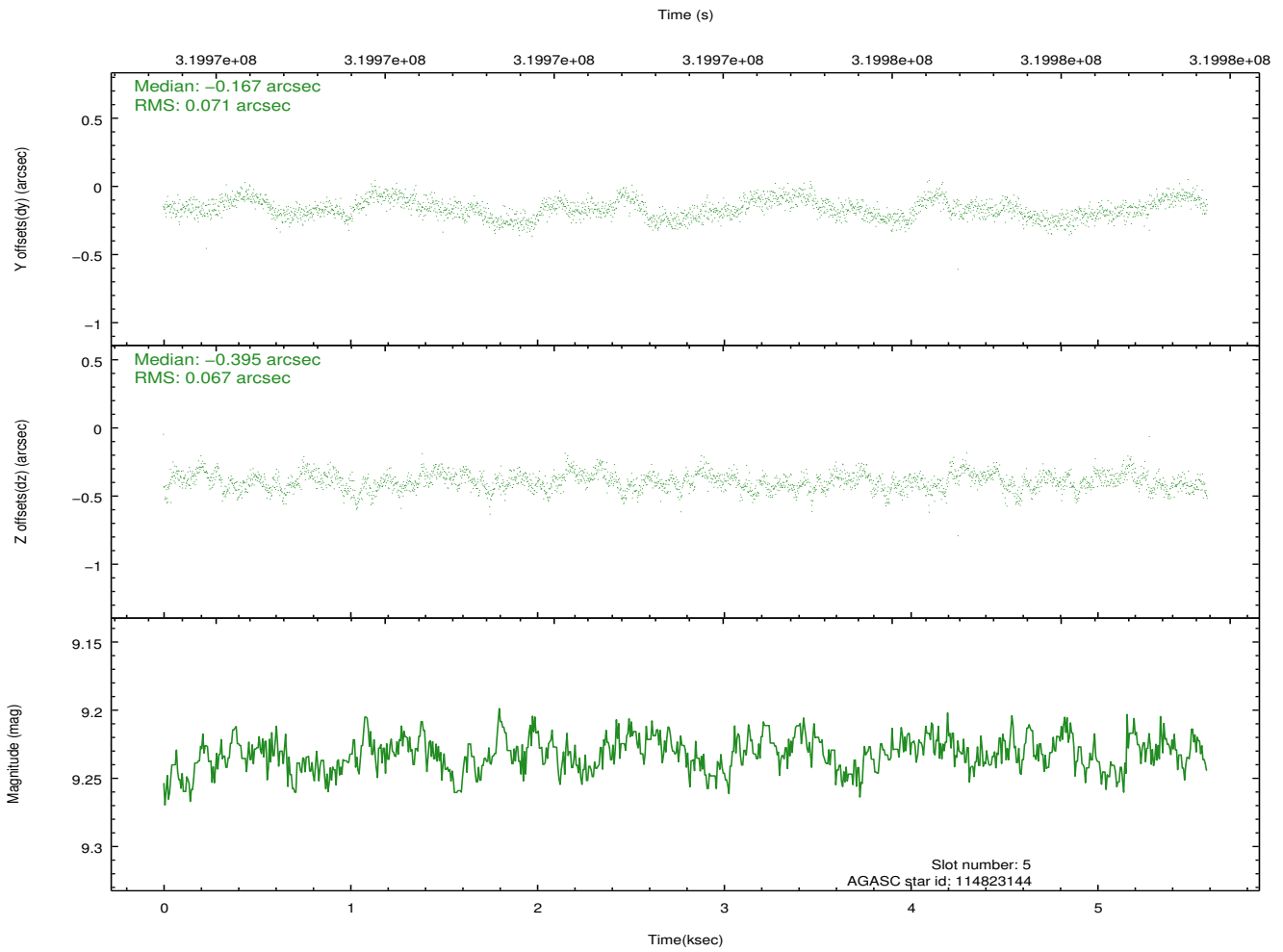
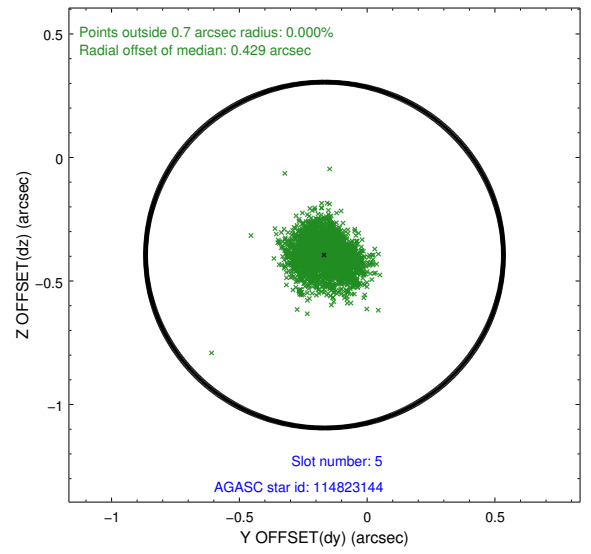
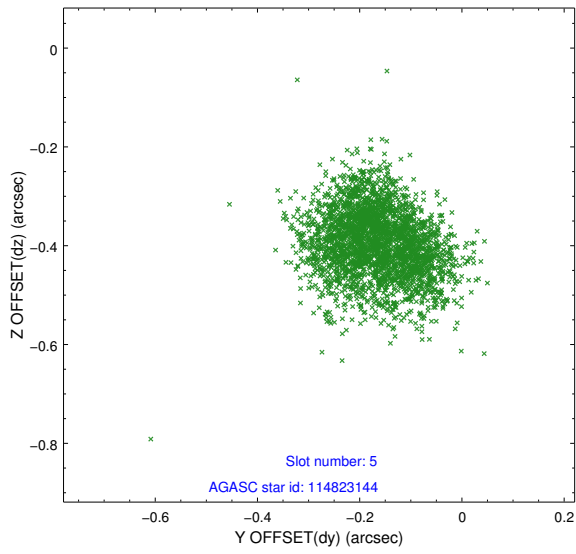
### 2.4.1 Slot 3



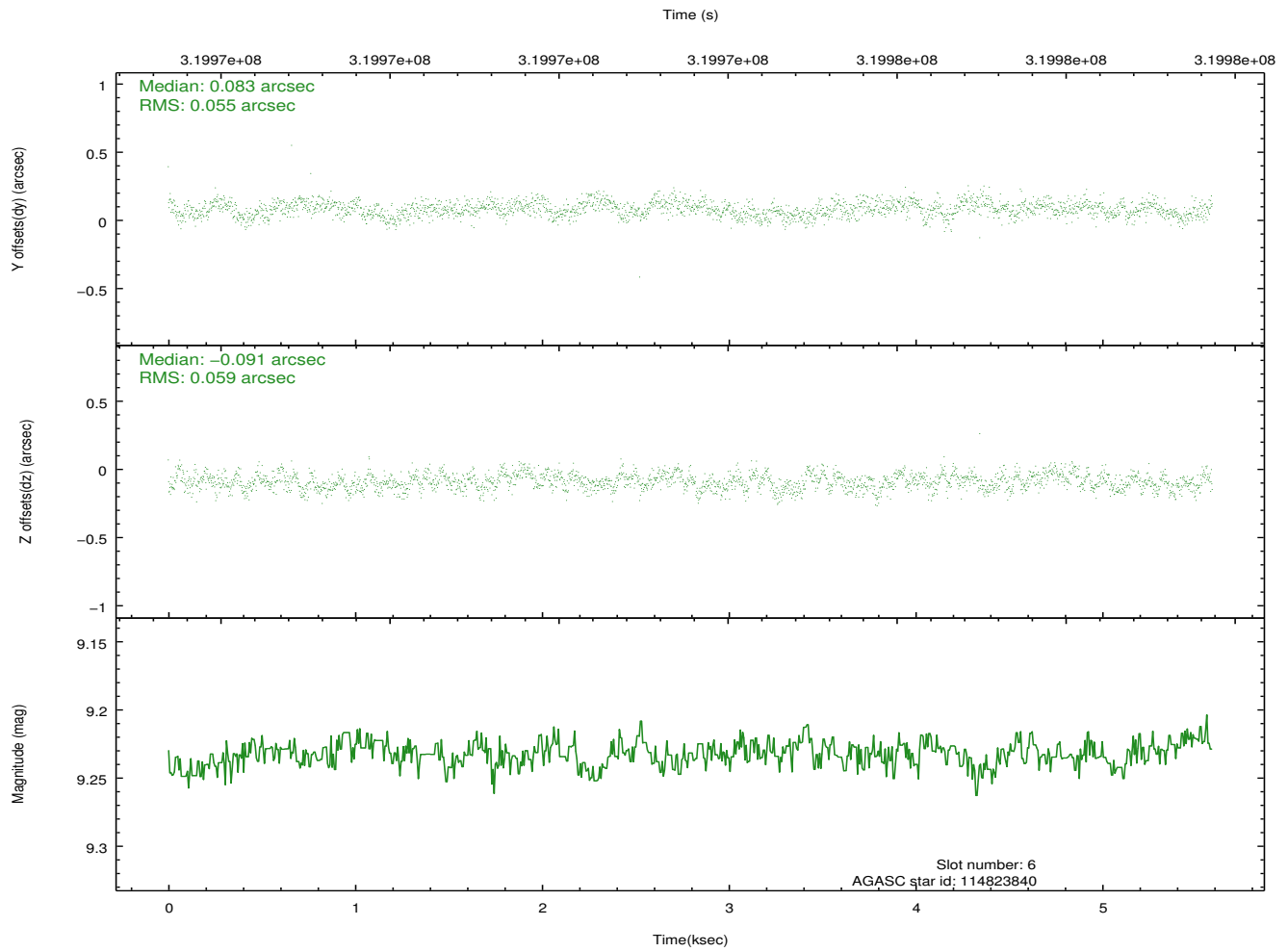
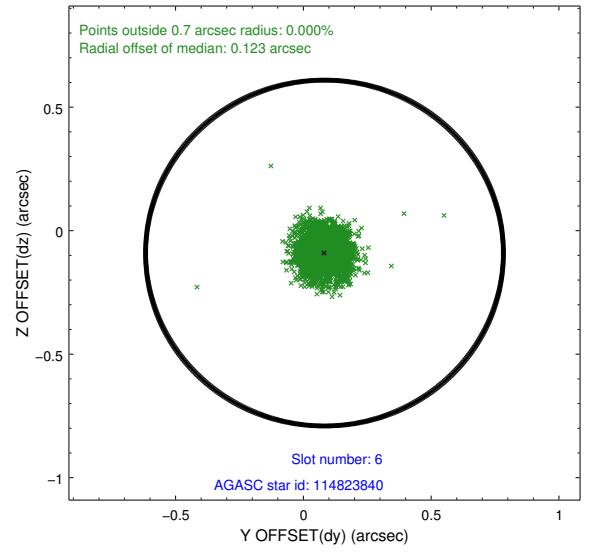
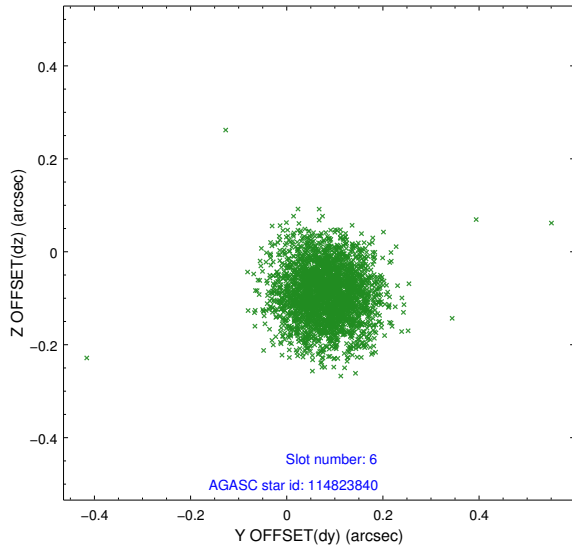
## 2.4.2 Slot 4



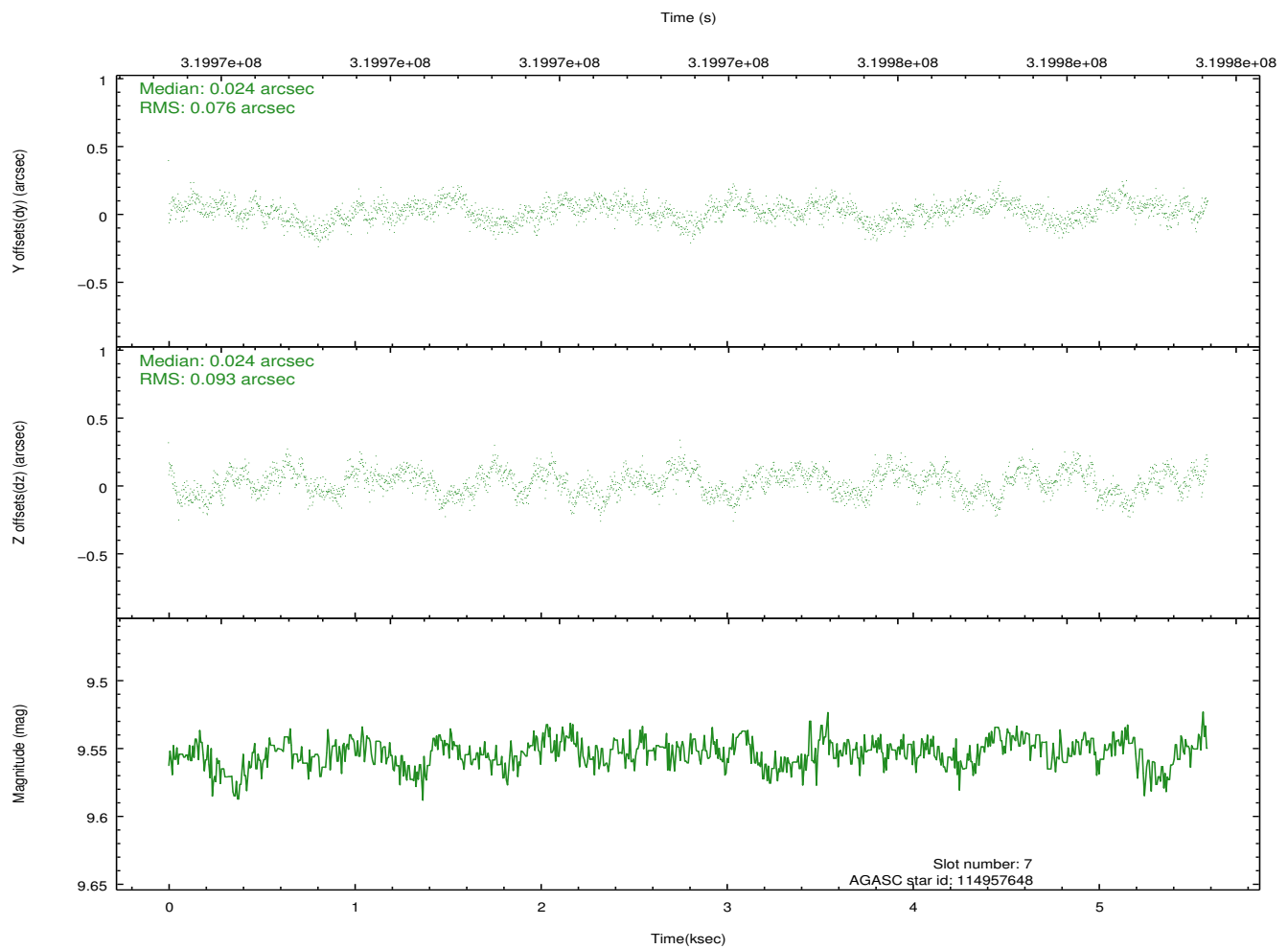
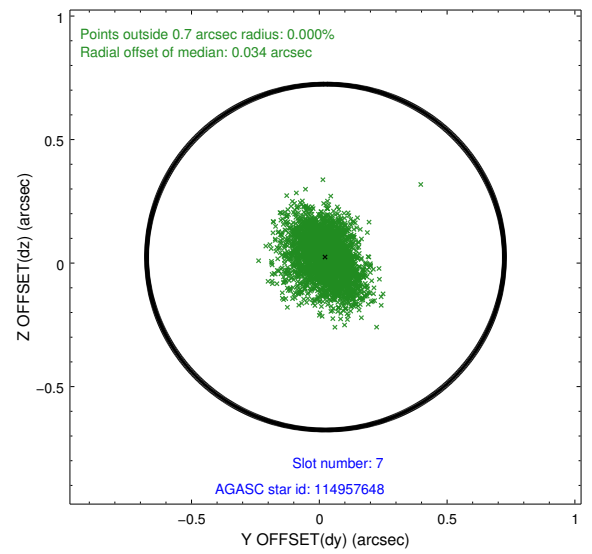
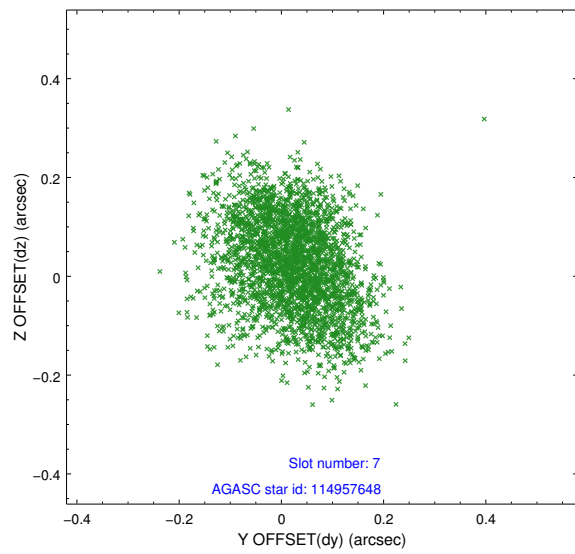
### 2.4.3 Slot 5



## 2.4.4 Slot 6

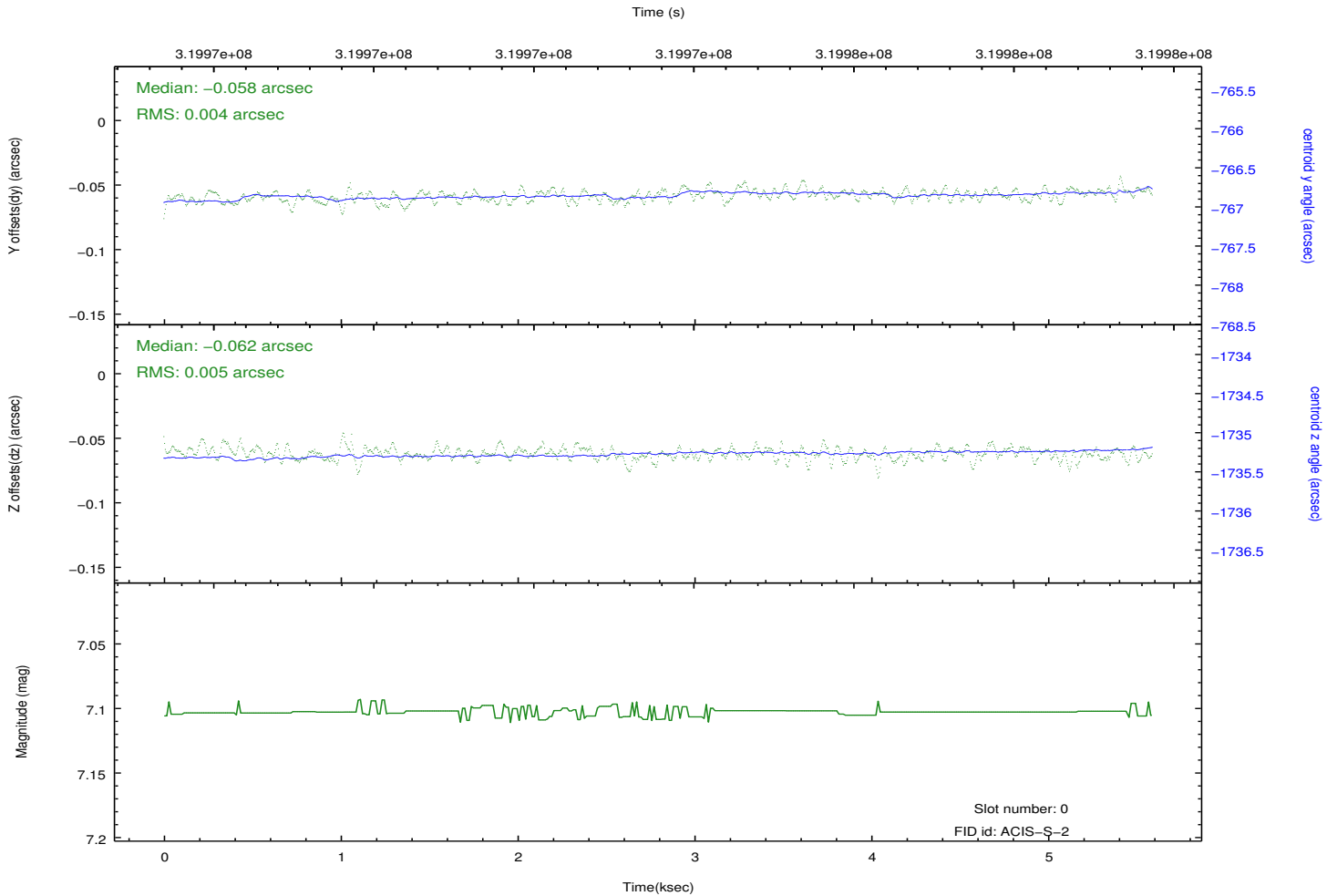
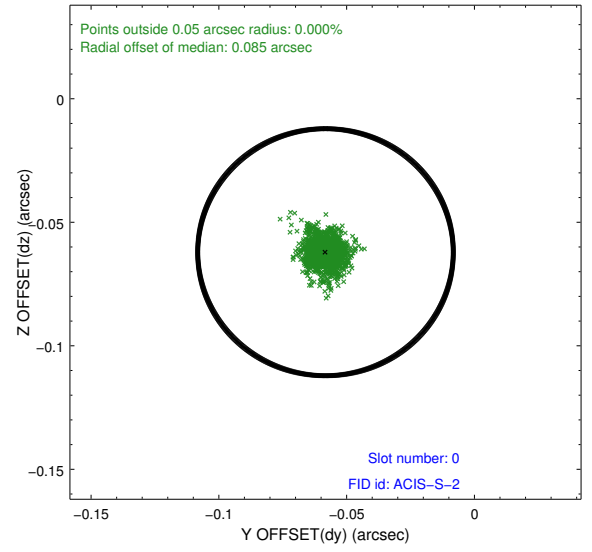
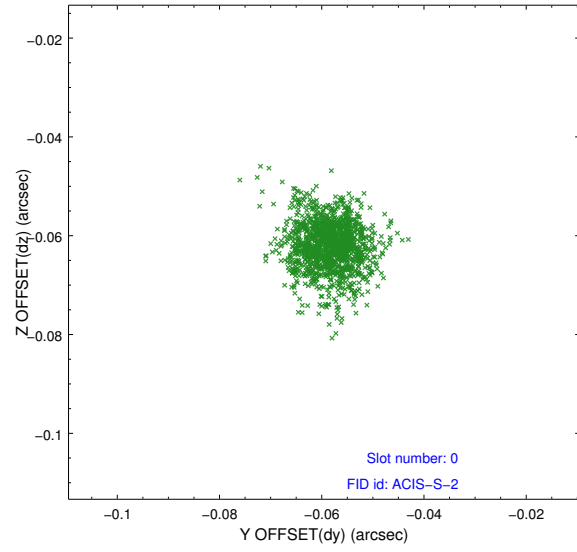


## 2.4.5 Slot 7

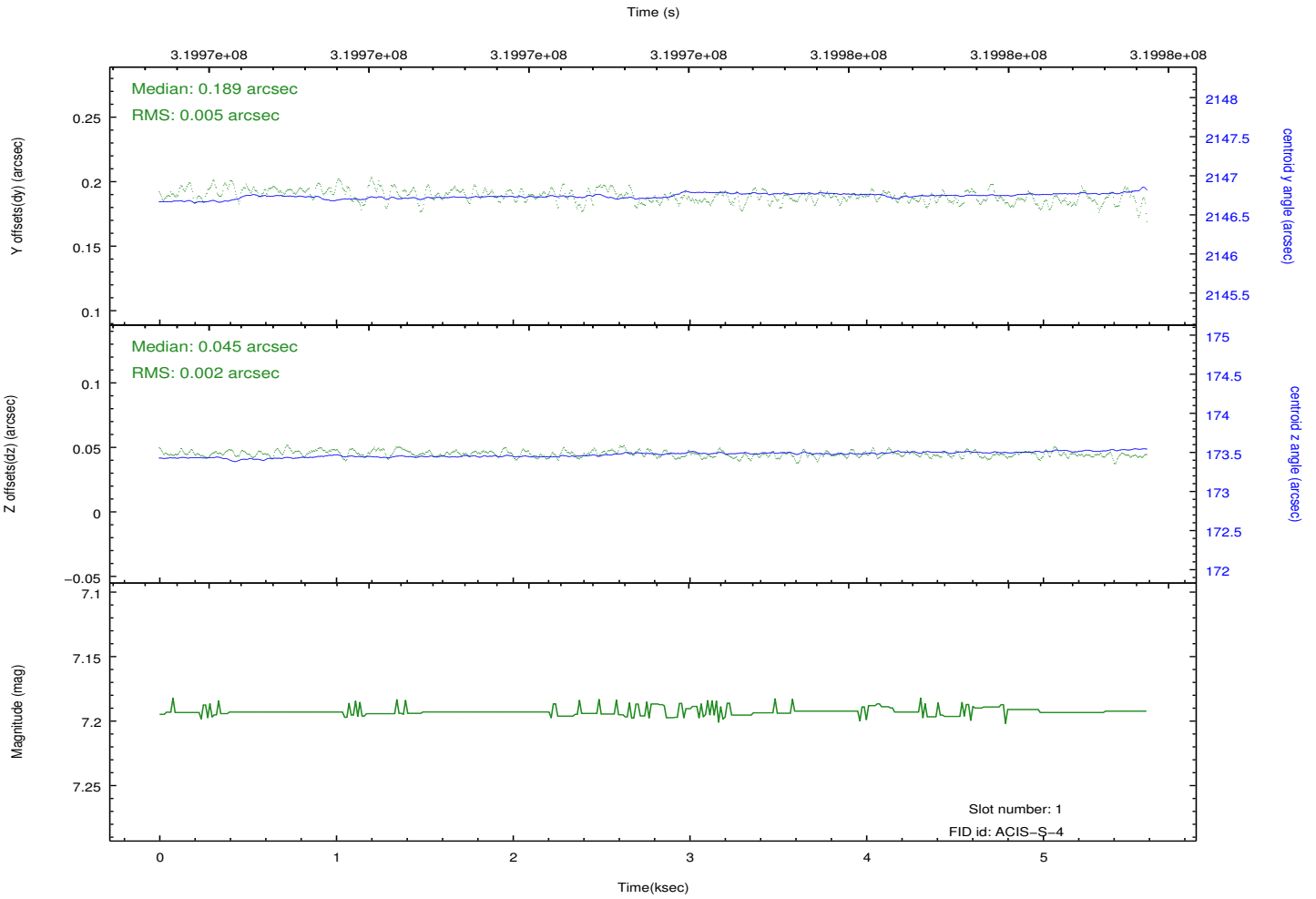
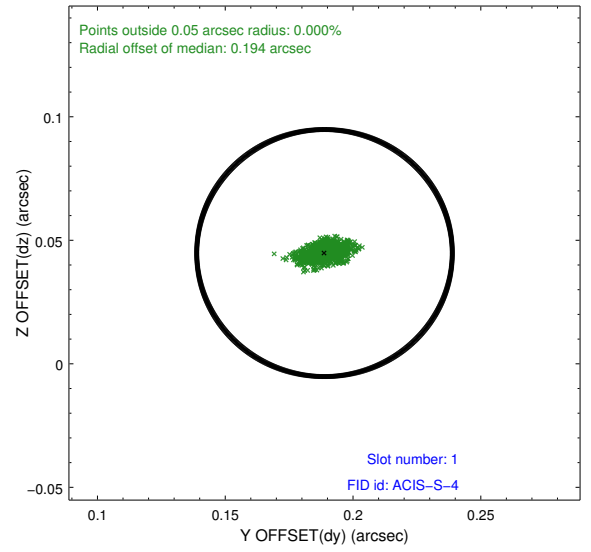
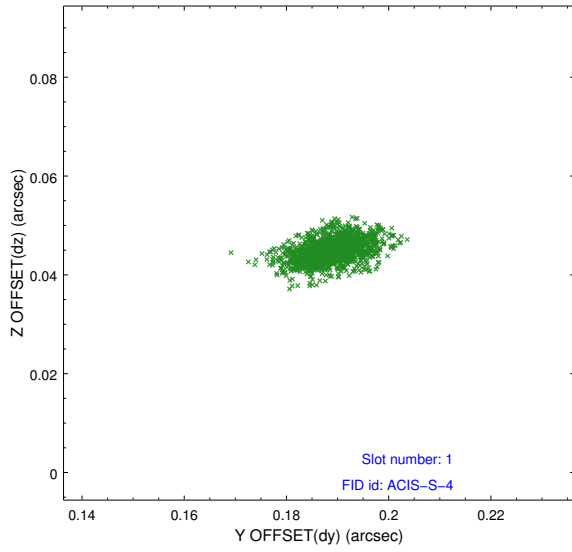


## 2.5 FID Slots

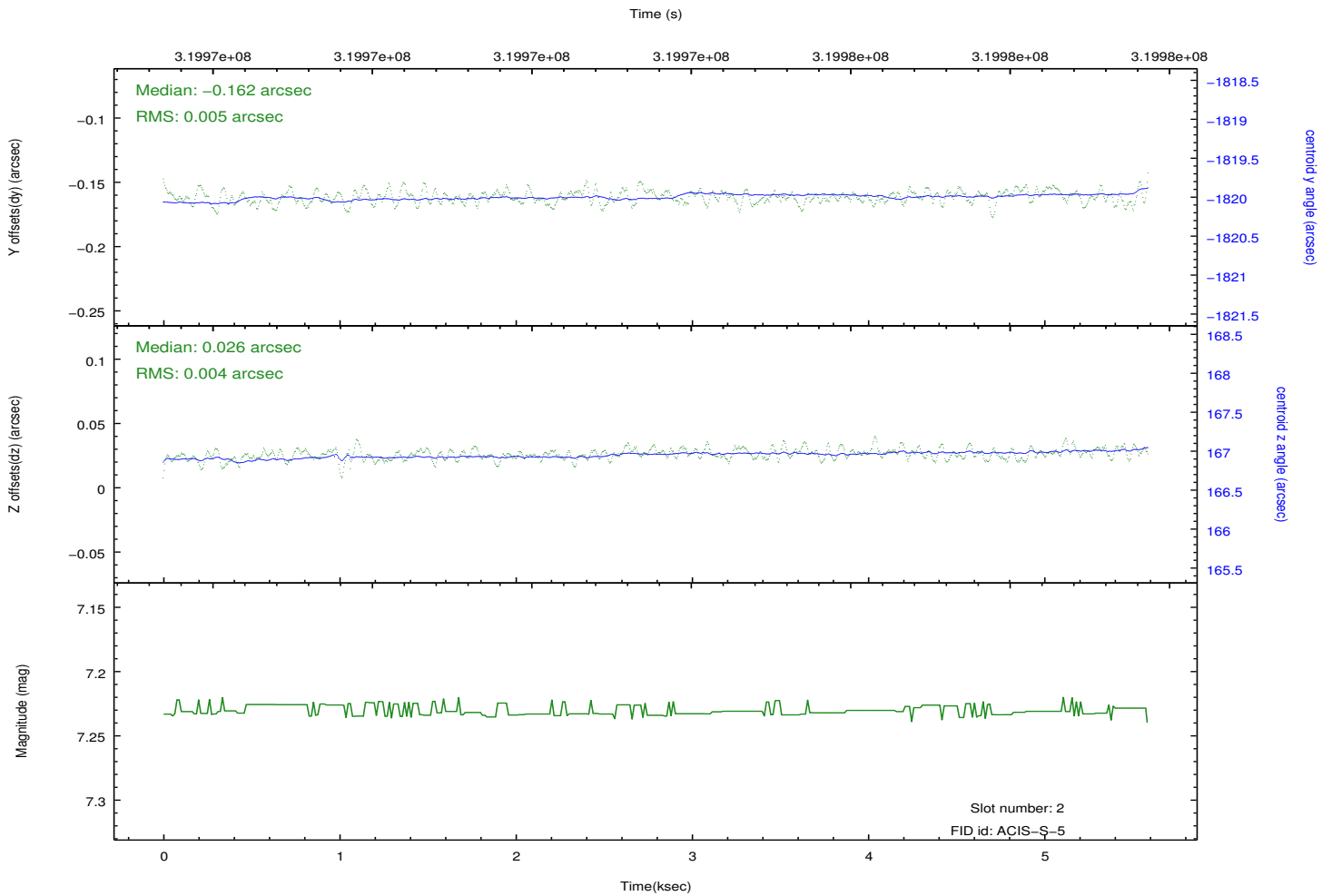
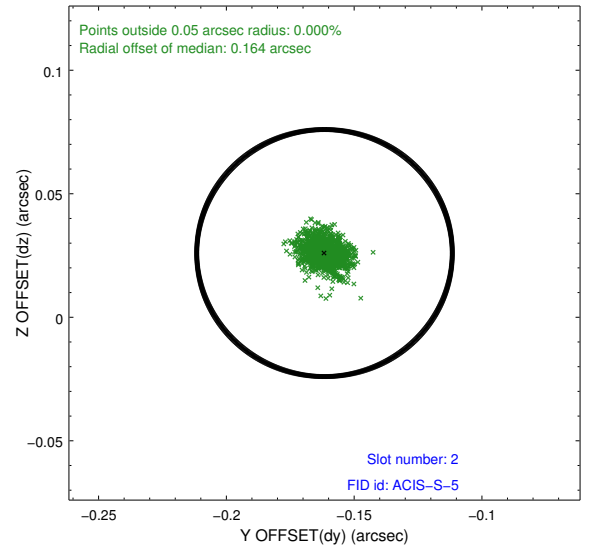
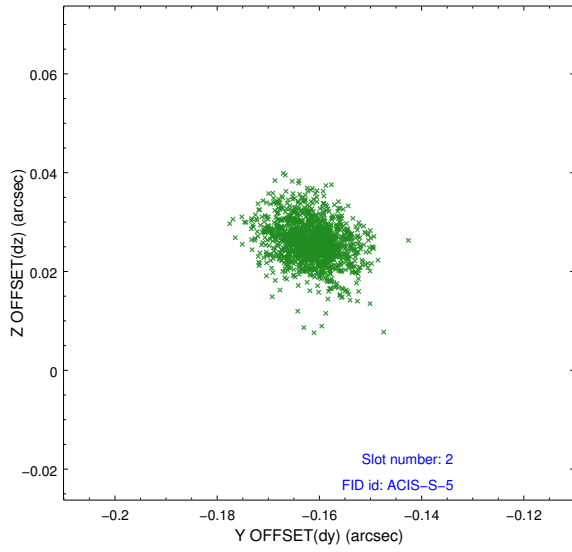
### 2.5.1 Slot 0



## 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)	2012.05.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

## A.2 Comments

Joint Proposal: Spitzer