

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11340 - L2 Version 2  
Chandra X-Ray Center

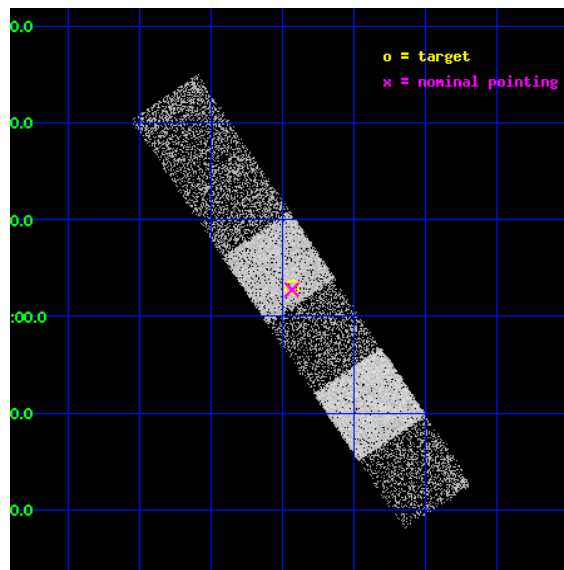
L2 Processing Date : Jun 25 2012

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# 1 Front

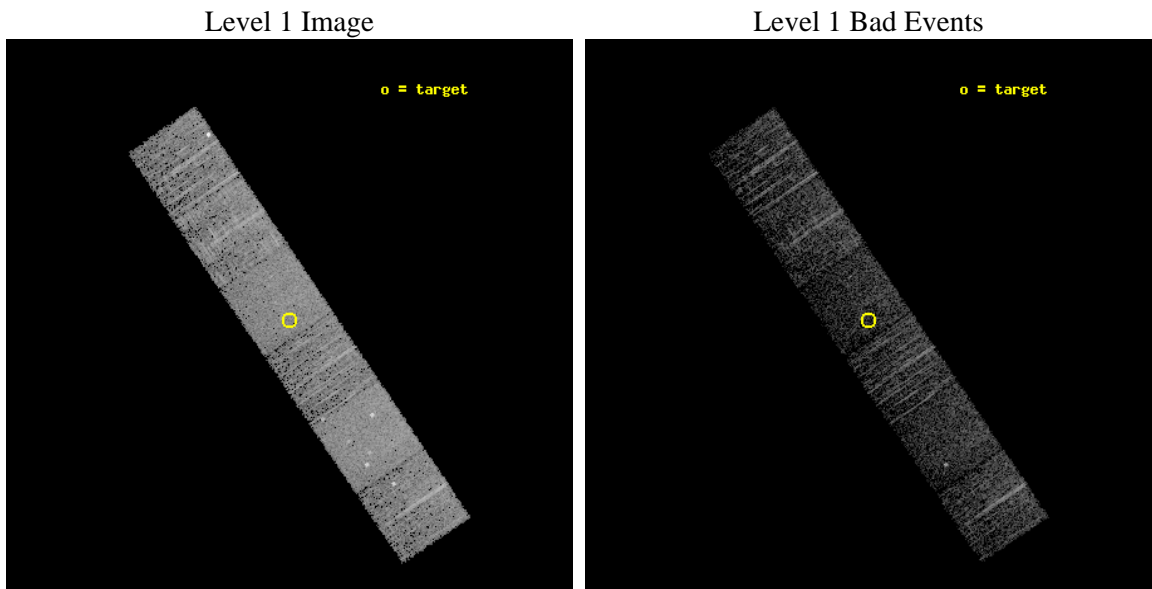
seq_num	600859	Sequence number
obs_id	11340	Observation id
title	Accretion onto nuclear black holes in early type galaxies: comparing field vs. clusters	Proposal title
observer	Elena Gallo	Principal investigator
object	PGC042454	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	190.108	Observer's specified target RA [deg]
dec_targ	4.05028	Observer's specified target Dec [deg]
ra_nom	190.10799517928	Nominal RA [deg]
dec_nom	4.0455913058065	Nominal Dec [deg]
roll_nom	235.86736975212	Nominal Roll [deg]
revision	2	Processing version of data
ontime	2582.3999904394	Sum of GTIs [s]
livetime	2549.7000868259	Livetime [s]
ontime4	2582.3999904394	Sum of GTIs [s]
ontime5	2582.3999904394	Sum of GTIs [s]
ontime6	2582.3999904394	Sum of GTIs [s]
ontime7	2582.3999904394	Sum of GTIs [s]
ontime8	2582.3999904394	Sum of GTIs [s]
ontime9	2582.3999904394	Sum of GTIs [s]
l2events	31878	Number of level 2 events



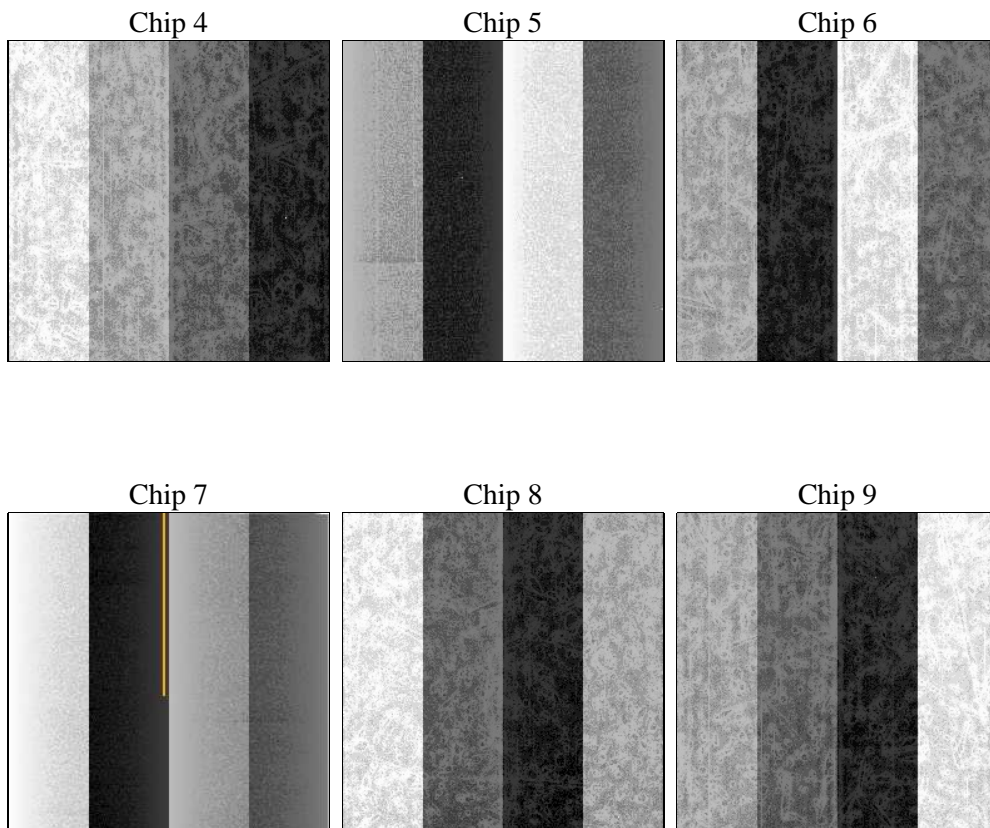
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	2582.3999904394	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime4	2582.3999904394	Sum of GTIs [s]
date	2012-06-25T09:22:53	Date and time of file creation	ontime5	2582.3999904394	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	2582.3999904394	Sum of GTIs [s]
			ontime7	2582.3999904394	Sum of GTIs [s]
			ontime8	2582.3999904394	Sum of GTIs [s]
			ontime9	2582.3999904394	Sum of GTIs [s]
			l1events	178837	Number of level 1 events

### 2.1.4 Events

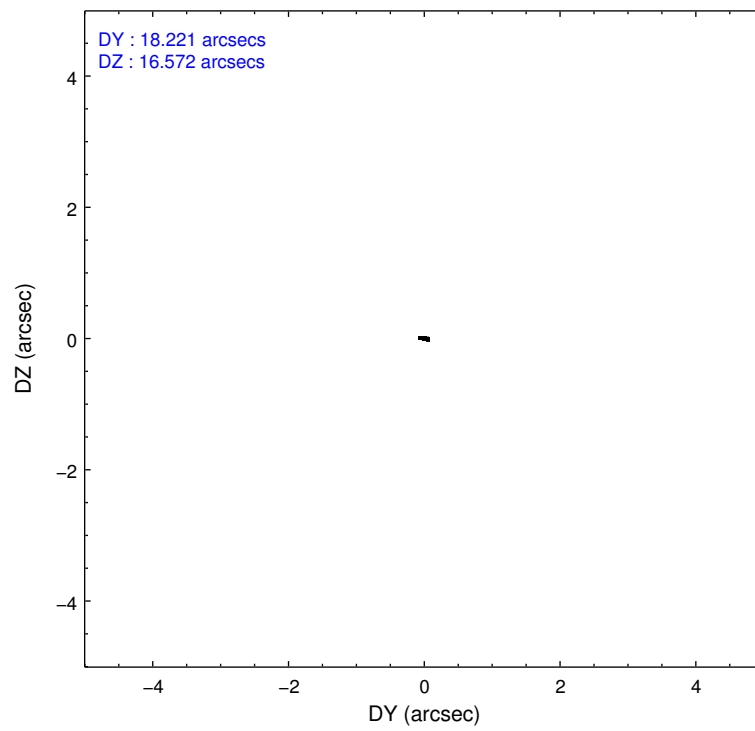
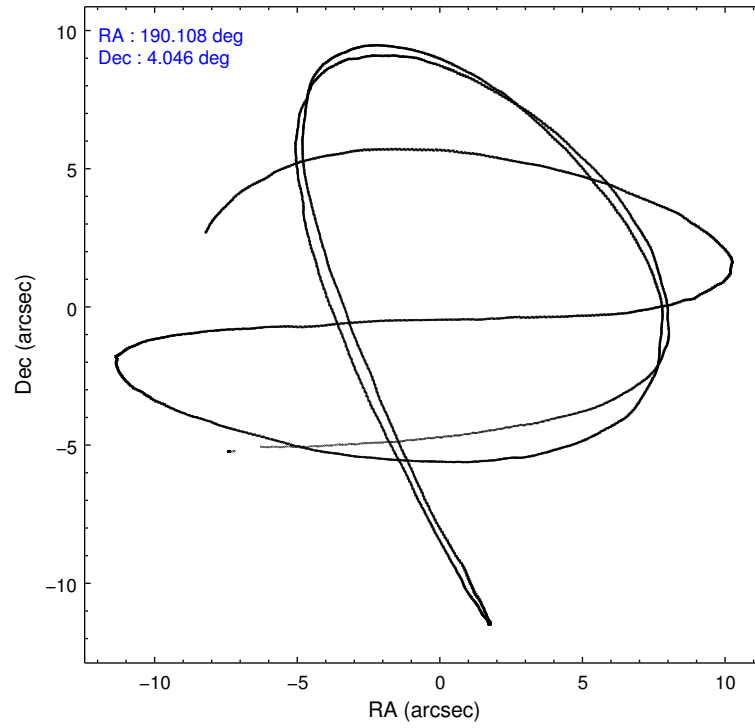
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	28085	37531	25110	29793	31610	26708
rejected events	25243	22378	22959	19045	25042	22848
rejected %	89%	59%	91%	63%	79%	85%

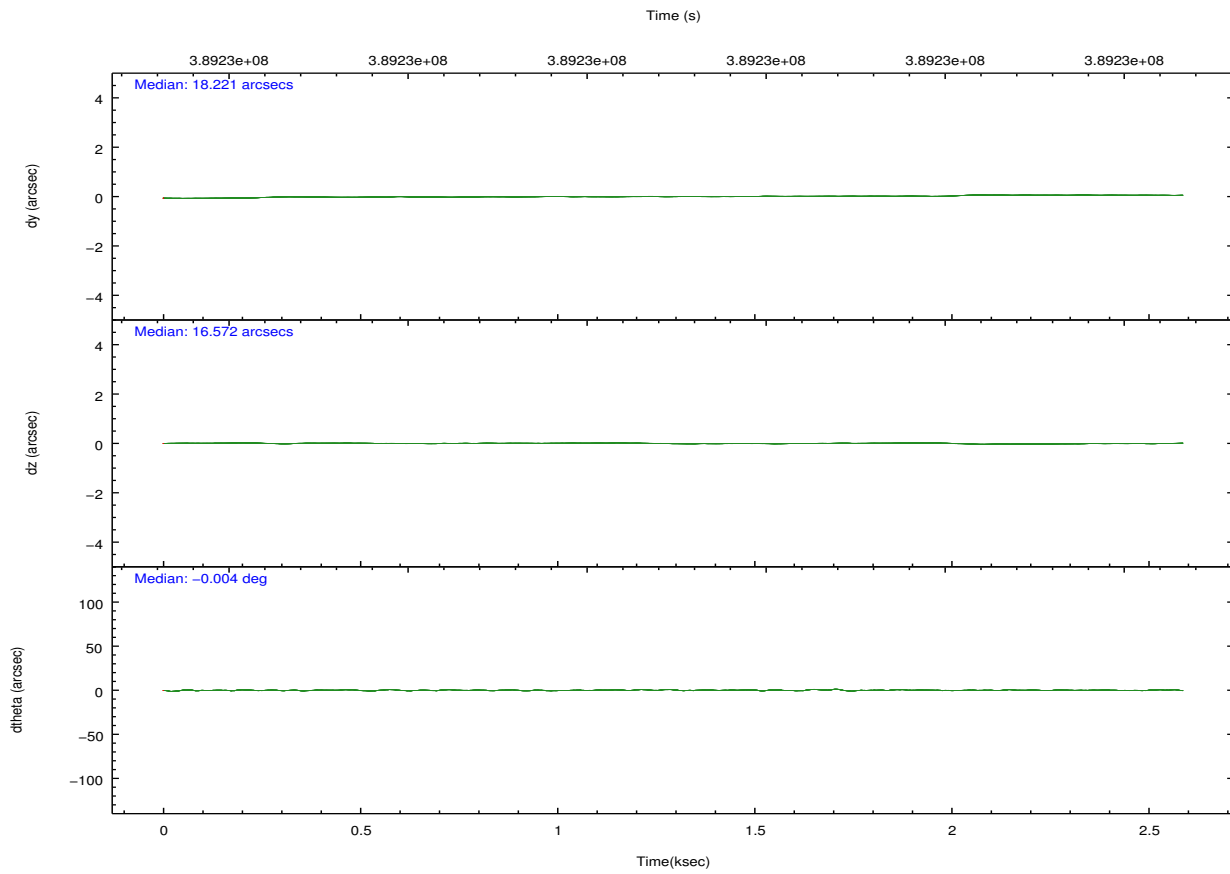
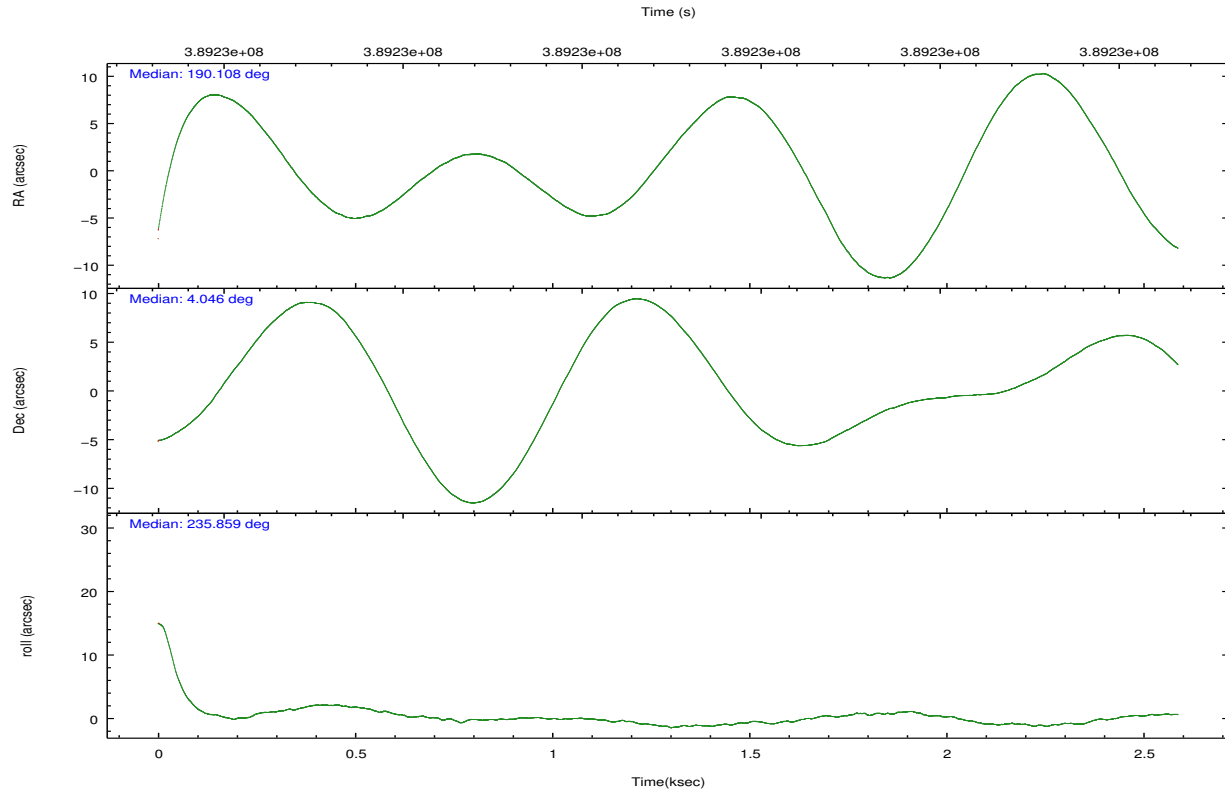
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1725	2440	937	1307	2538	2023
	6%	6%	3%	4%	8%	7%
grade 1 events	36	109	17	42	31	18
	0%	0%	0%	0%	0%	0%
grade 2 events	768	5619	582	2716	2032	1566
	2%	14%	2%	9%	6%	5%
grade 3 events	305	753	252	1139	847	337
	1%	2%	1%	3%	2%	1%
grade 4 events	289	730	274	1234	755	286
	1%	1%	1%	4%	2%	1%
grade 5 events	1046	3007	1070	3052	1517	1235
	3%	8%	4%	10%	4%	4%
grade 6 events	458	9438	614	7045	2216	607
	1%	25%	2%	23%	7%	2%
grade 7 events	23458	15435	21364	13258	21674	20636
	83%	41%	85%	44%	68%	77%

## 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	190.109393	190.1079951792827	CCD I2 on	N	N
[deg] Pointing Dec	4.072736	4.04559130580654	CCD I3 on	N	N
[deg] Pointing Roll	235.710573	235.8673697521212	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)	389227130.184000	389225733.58351	CCD S5 on	O2	Y
Observation start date	2010-05-02T22:37:44	2010-05-02T22:15:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	389229530.184000	389231009.77128	On-chip summing requested	N	N
Observation end date	2010-05-02T23:17:44	2010-05-02T23:43:29	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



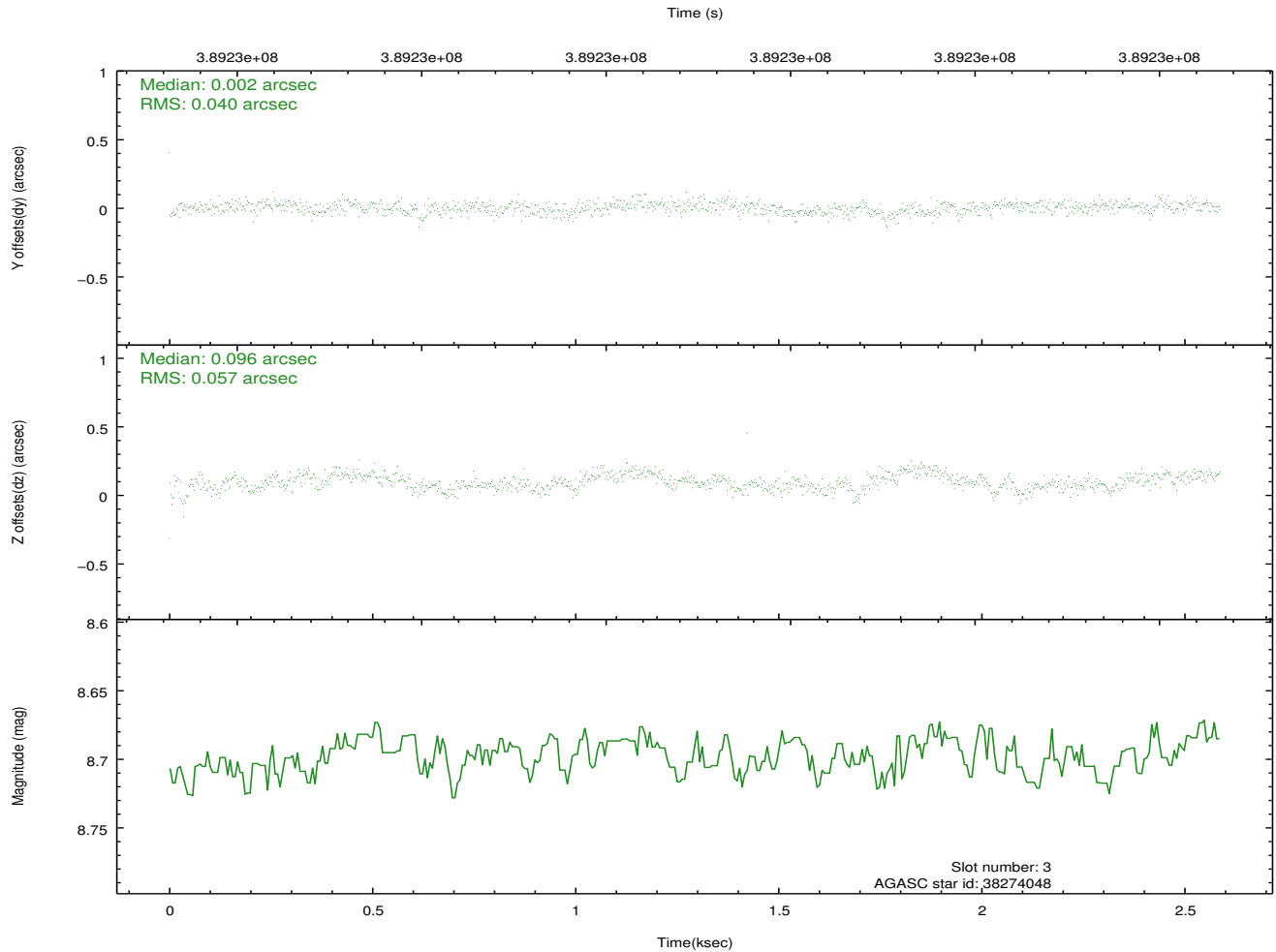
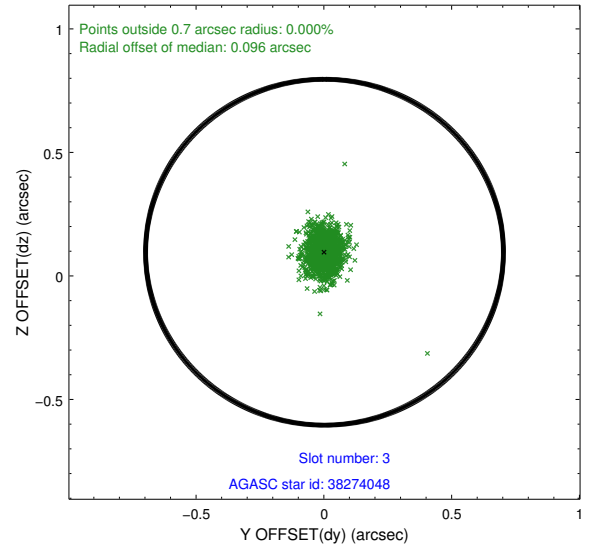
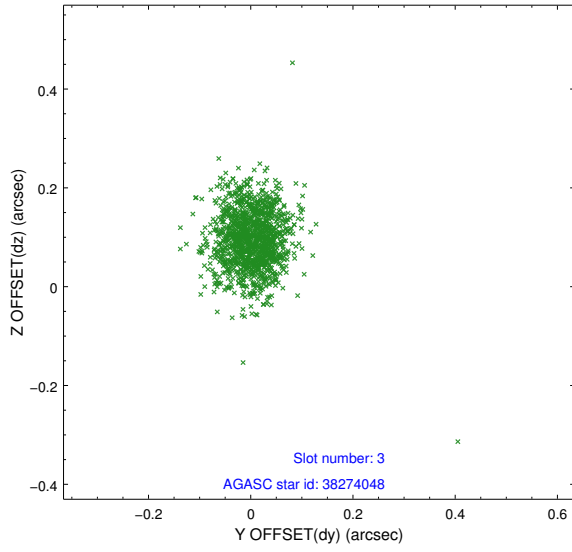


### Slot Statistics

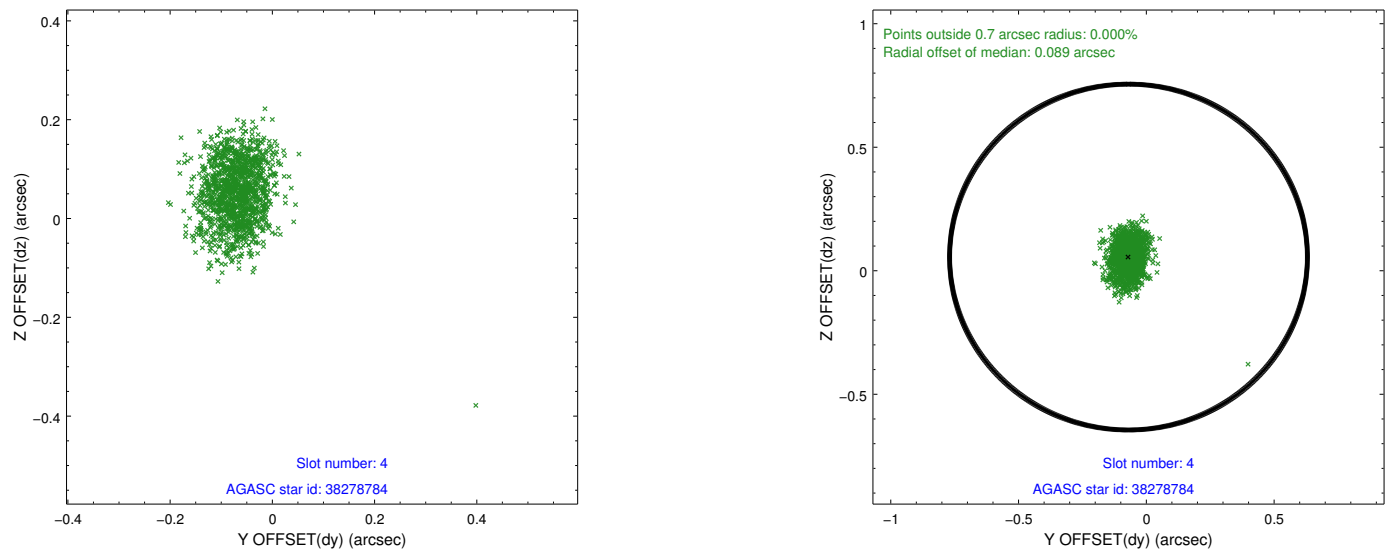
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.89	632	-0.070	-0.012	0.007	0.012	0.000000	0.000000	-771.36	-1738.00
1	FID	ACIS-S-4	6.96	632	0.207	0.037	0.007	0.011	0.000000	0.000000	2141.06	167.93
2	FID	ACIS-S-5	6.99	632	-0.170	-0.016	0.007	0.011	0.000000	0.000000	-1821.10	164.41
3	GUIDE	38274048	8.70	1263	0.002	0.096	0.071	0.118	189.542875	4.186450	808.74	-1911.37
4	GUIDE	38278784	8.32	1262	-0.070	0.055	0.076	0.123	189.868198	4.894633	-1954.56	-2384.37
5	GUIDE	38280608	7.44	1263	0.112	-0.062	0.085	0.141	189.465936	4.288610	659.03	-2348.74
6	GUIDE	38406888	7.90	1263	0.065	-0.123	0.070	0.123	190.208023	3.869695	406.64	702.18
7	GUIDE	38408616	7.22	1262	-0.113	0.030	0.067	0.106	190.567573	4.292608	-1579.66	912.85

## 2.4 Star Slots

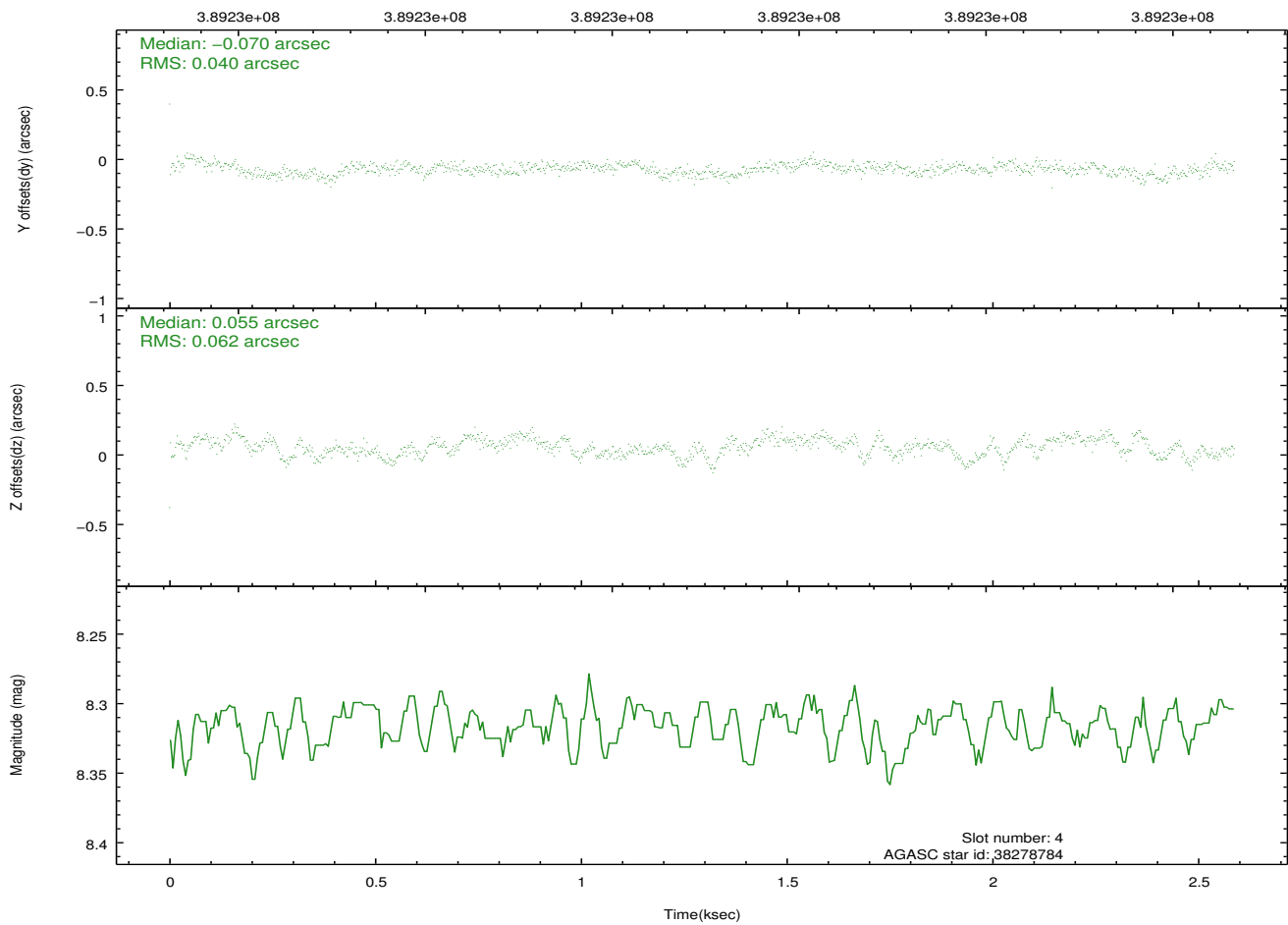
### 2.4.1 Slot 3



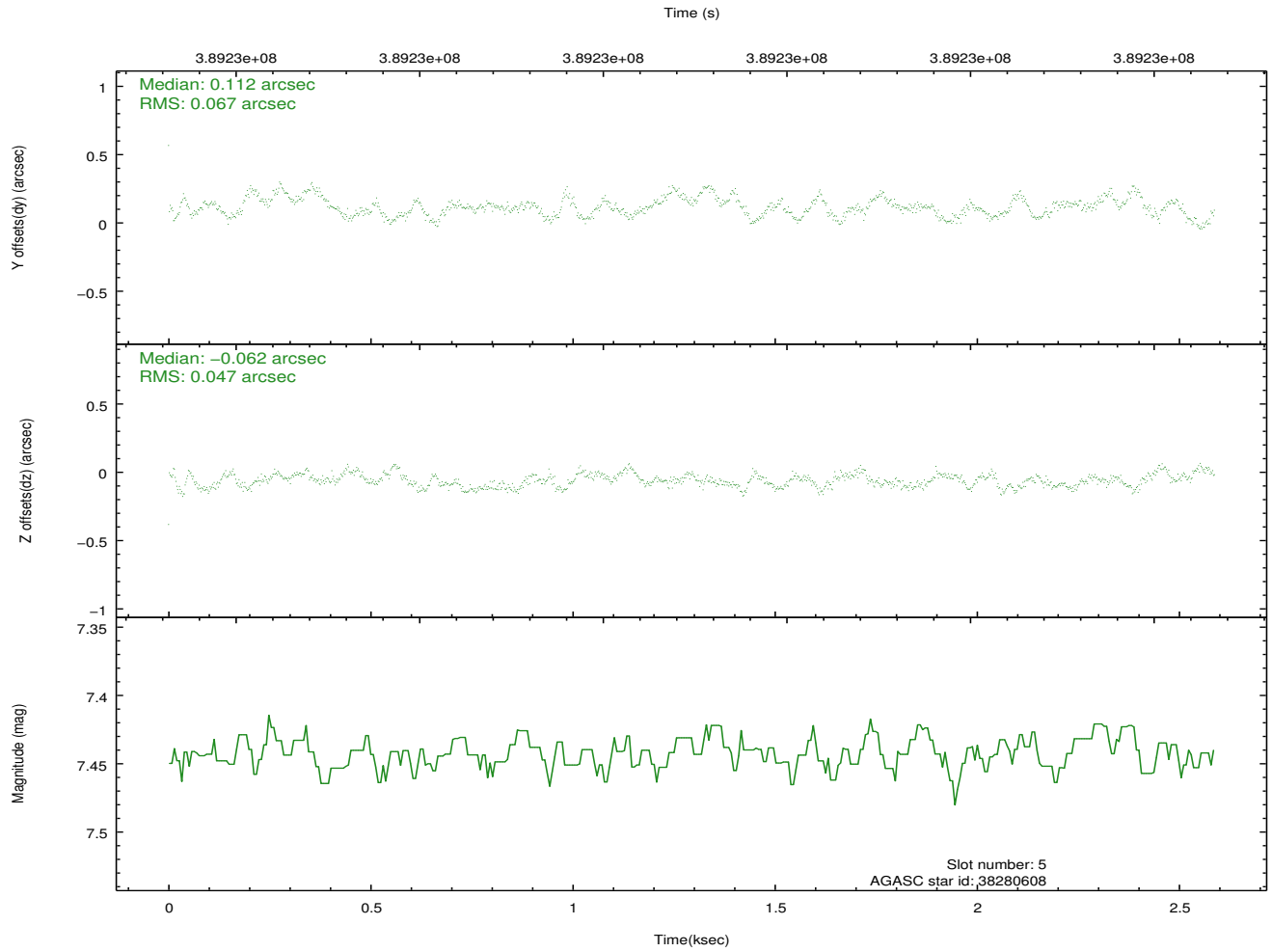
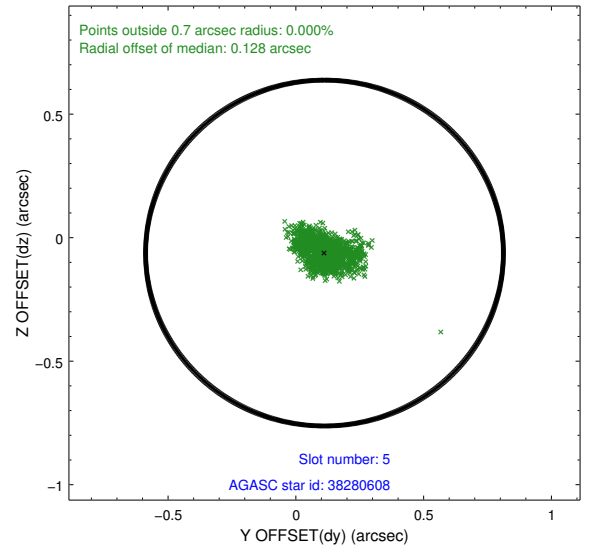
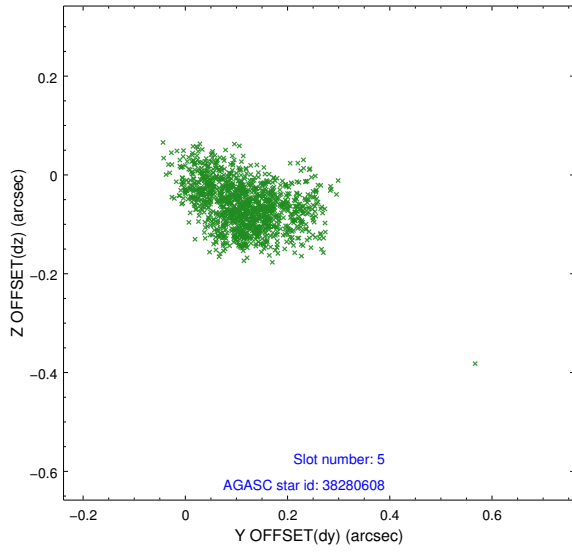
## 2.4.2 Slot 4



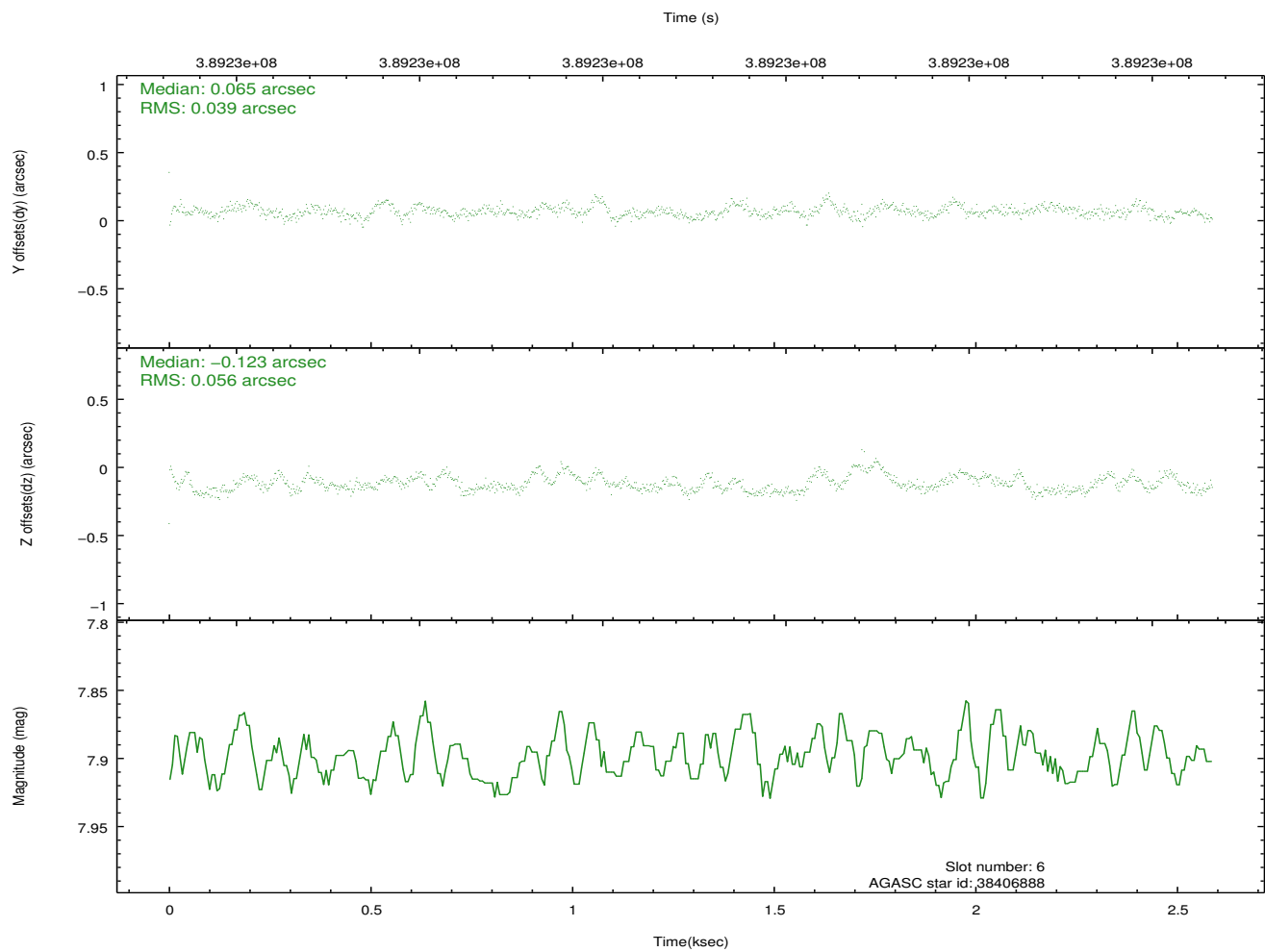
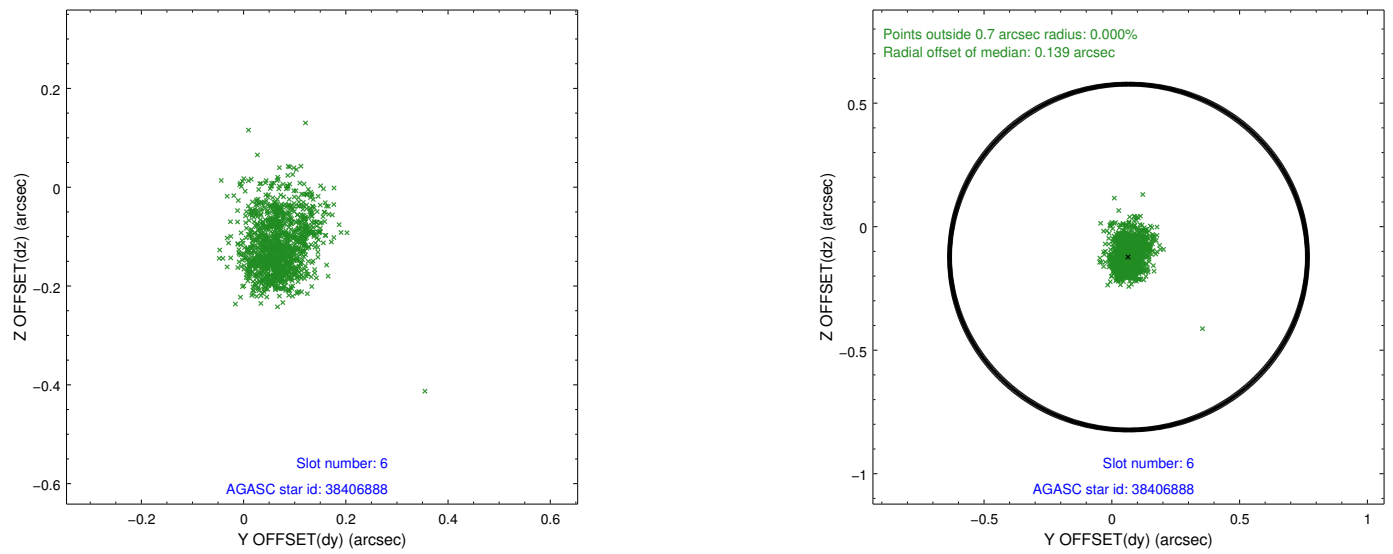
Time (s)



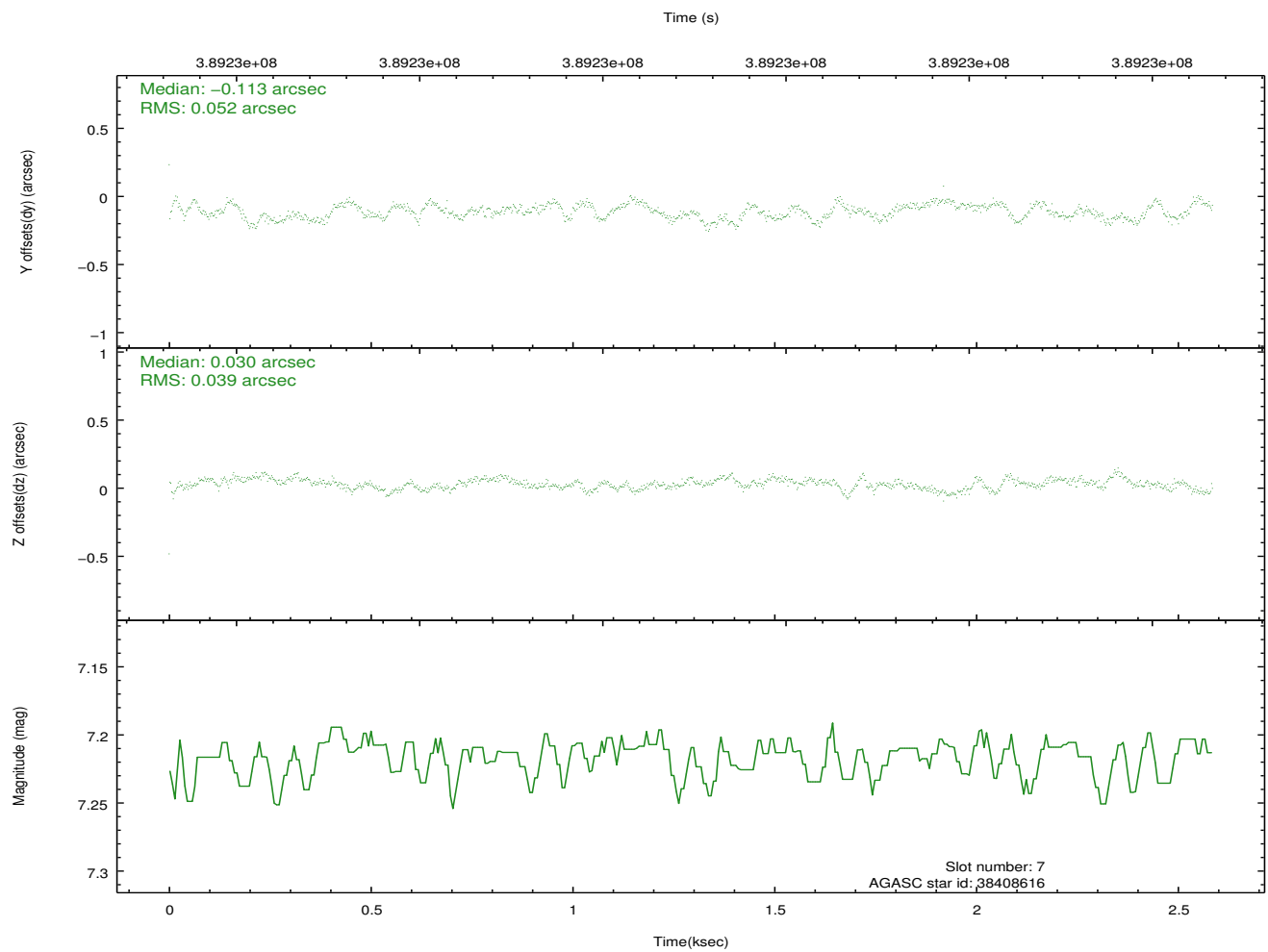
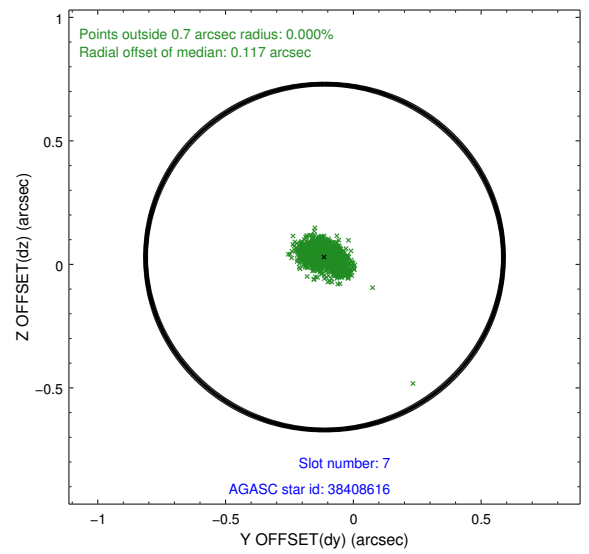
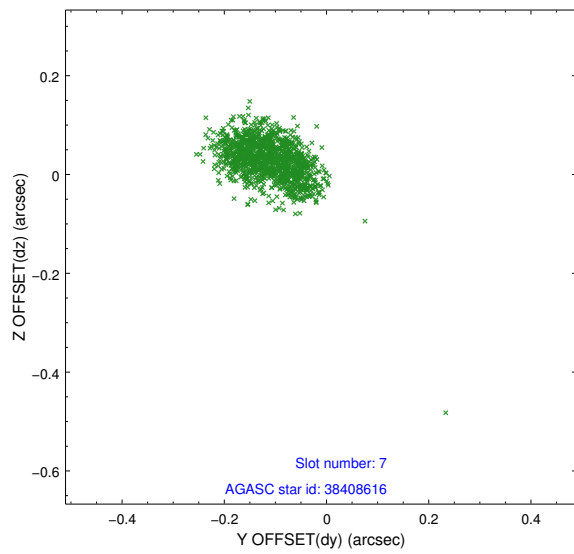
### 2.4.3 Slot 5



## 2.4.4 Slot 6

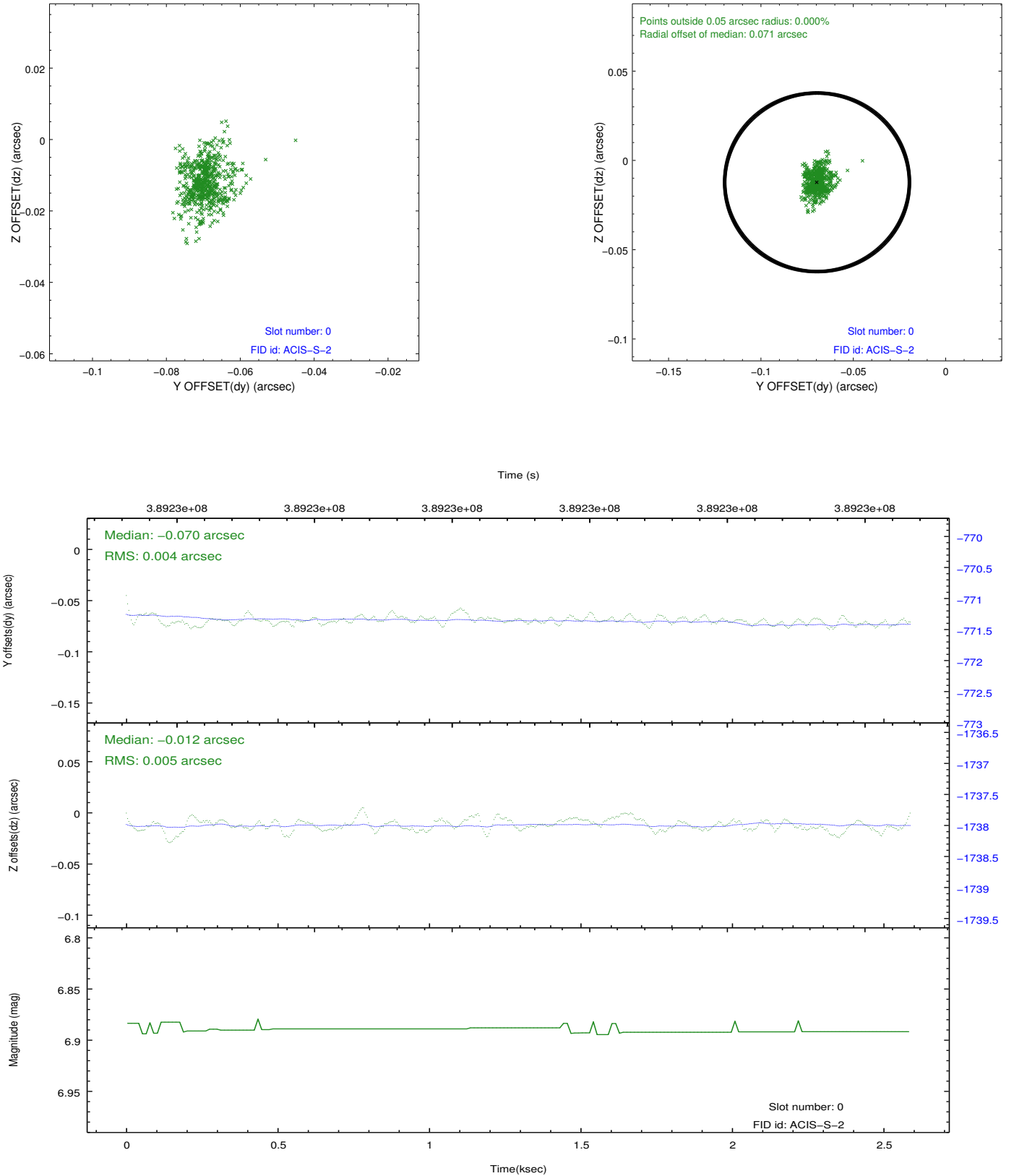


## 2.4.5 Slot 7

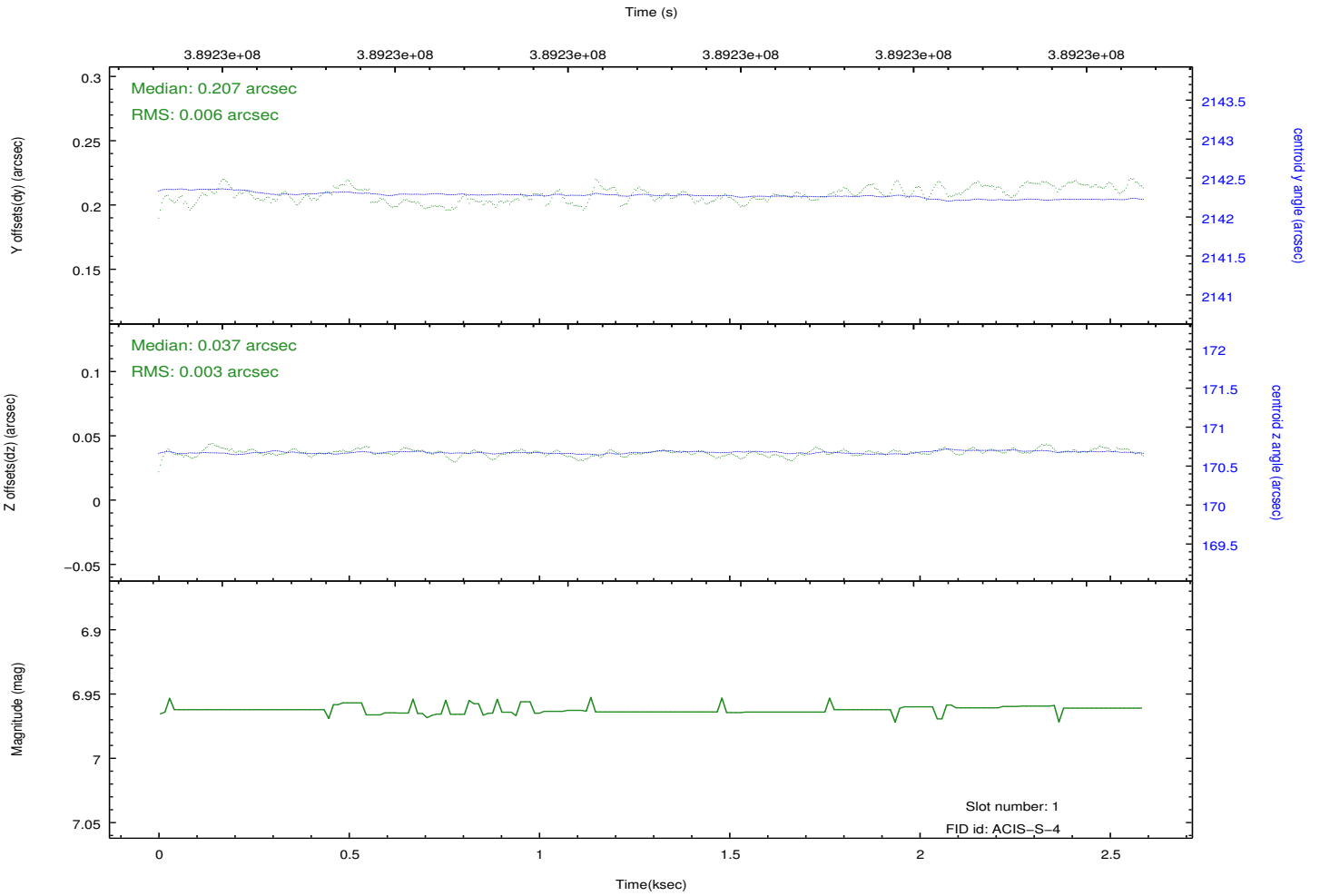
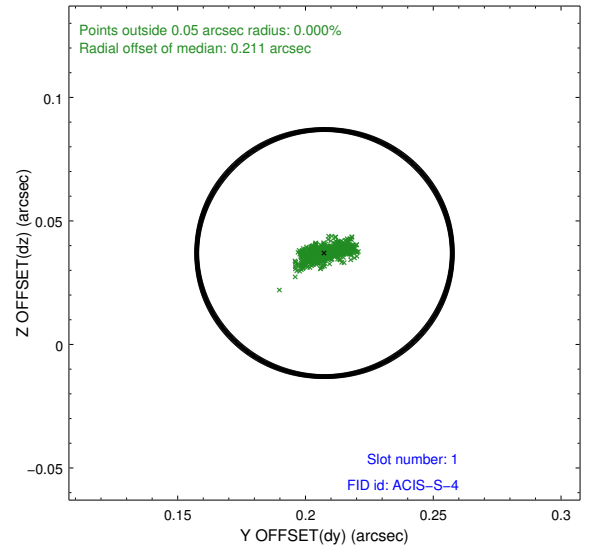
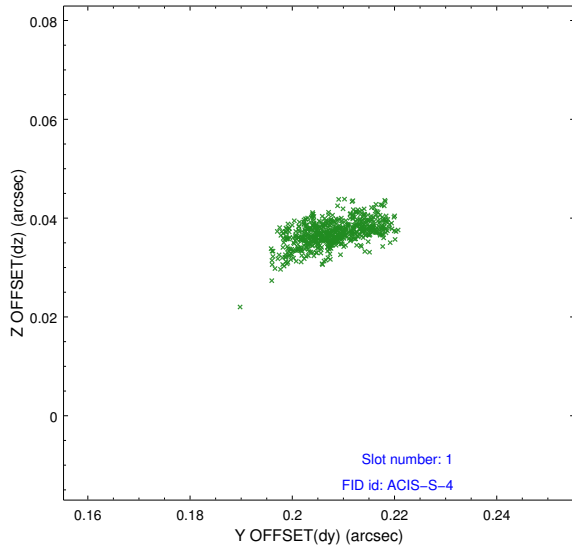


## 2.5 FID Slots

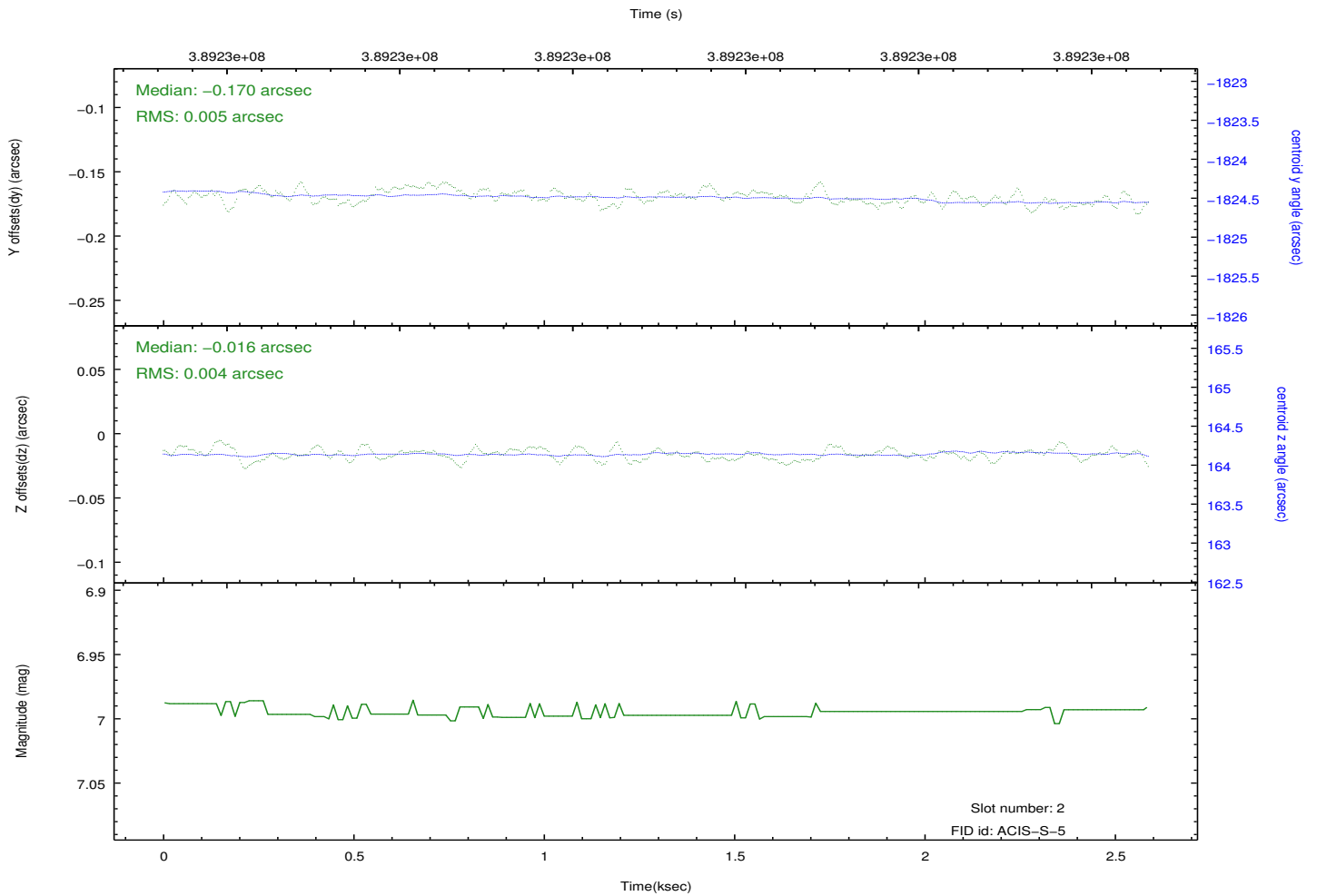
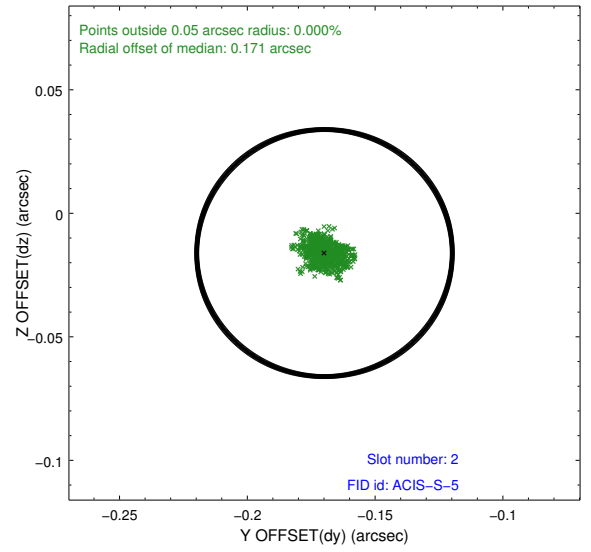
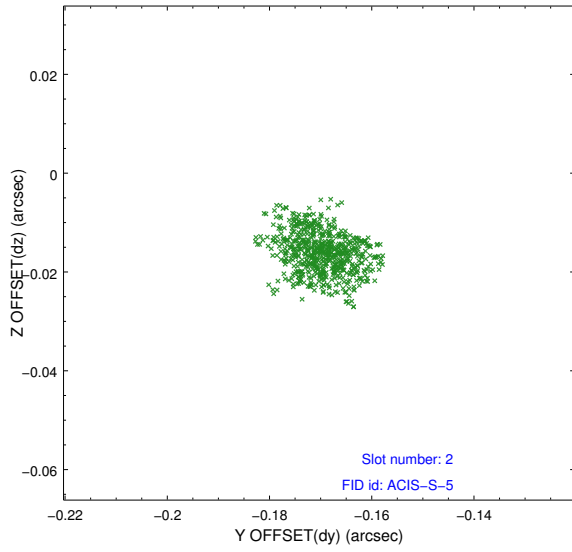
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.07.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.58239999

## A.2 Comments