

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9369 - L2 Version 2  
Chandra X-Ray Center

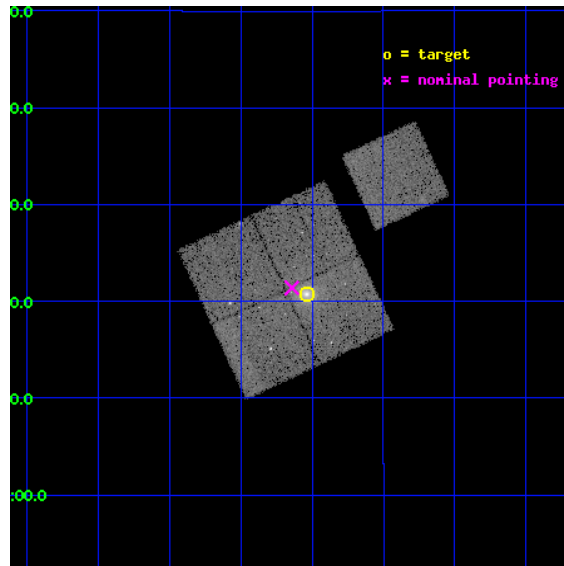
L2 Processing Date : May 4 2012

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# 1 Front

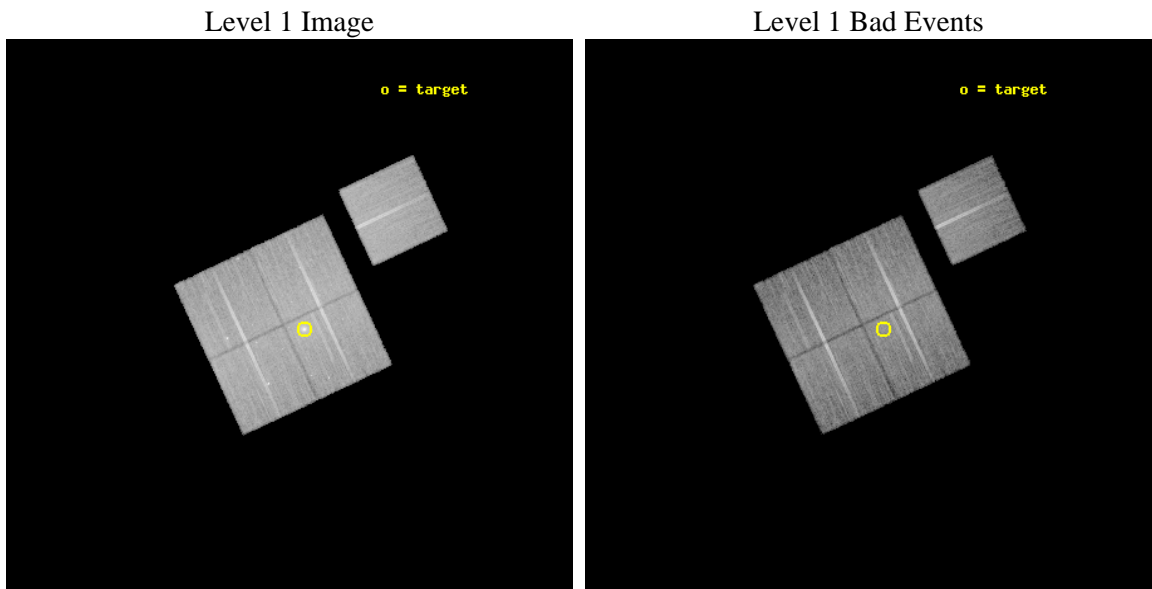
seq_num	800706	Sequence number
obs_id	9369	Observation id
title	Probing Dark Energy with Relaxed Galaxy Clusters	Proposal title
observer	Prof. Steven Allen	Principal investigator
object	RXJ0439-0520	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	69.759583	Observer's specified target RA [deg]
dec_targ	5.345444	Observer's specified target Dec [deg]
ra_nom	69.785317683445	Nominal RA [deg]
dec_nom	5.35660774857	Nominal Dec [deg]
roll_nom	64.956287689001	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20125.200154781	Sum of GTIs [s]
livetime	19862.249598802	Livetime [s]
ontime0	20125.200154781	Sum of GTIs [s]
ontime1	20122.059174418	Sum of GTIs [s]
ontime2	20125.200154781	Sum of GTIs [s]
ontime3	20125.200154781	Sum of GTIs [s]
ontime6	20122.059174418	Sum of GTIs [s]
l2events	81609	Number of level 2 events



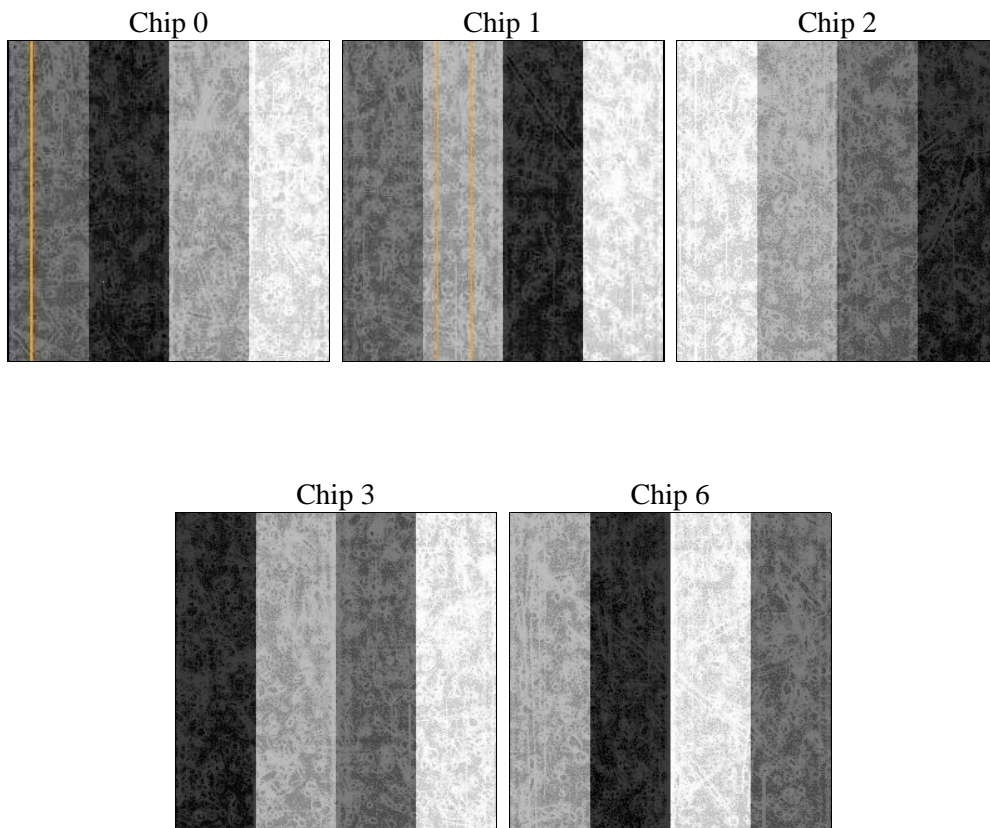
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	20125.200154781	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	20125.200154781	Sum of GTIs [s]
date	2012-05-04T13:57:38	Date and time of file creation	ontime1	20122.059174418	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20125.200154781	Sum of GTIs [s]
			ontime3	20125.200154781	Sum of GTIs [s]
			ontime6	20122.059174418	Sum of GTIs [s]
			l1events	854973	Number of level 1 events

### 2.1.4 Events

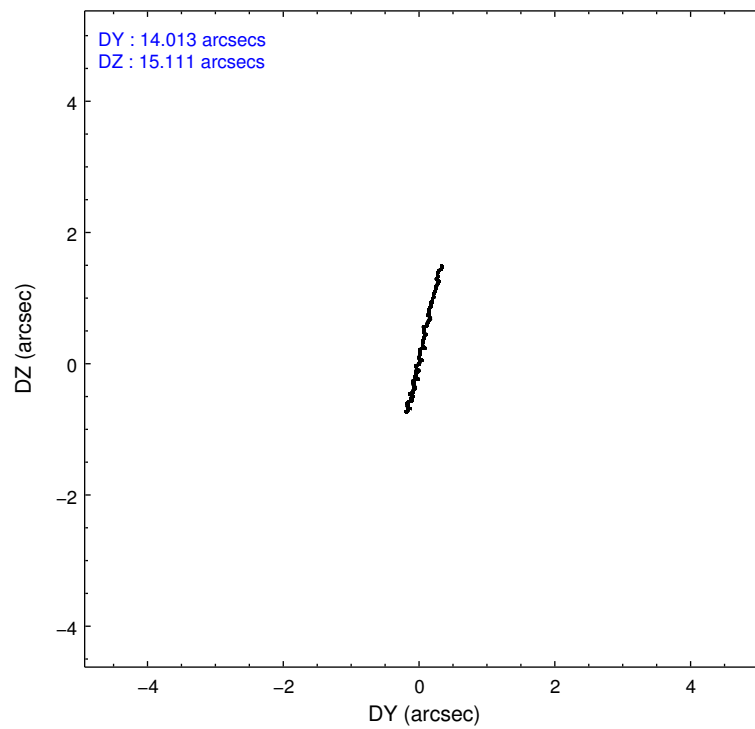
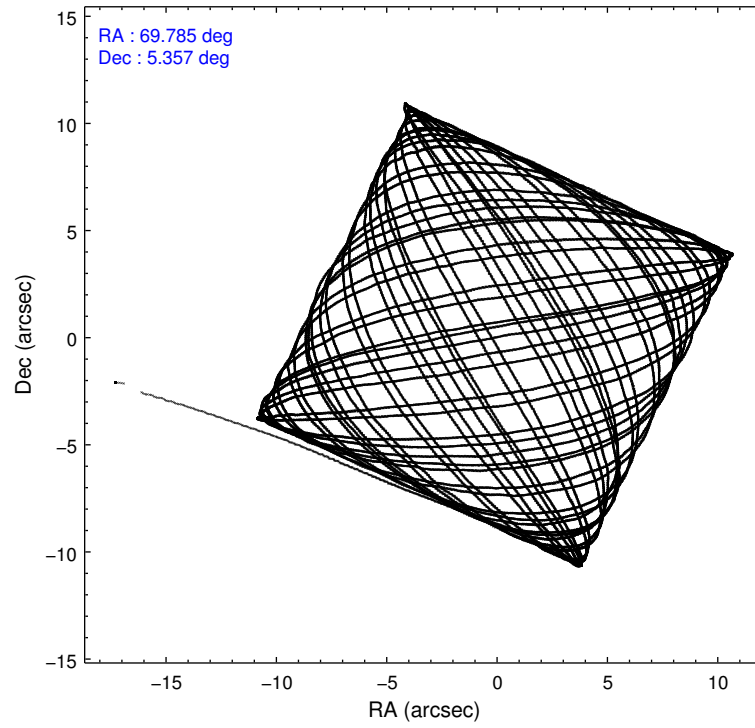
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	161125	165748	178815	177514	171771
rejected events	143880	145666	162006	152234	154807
rejected %	89%	87%	90%	85%	90%

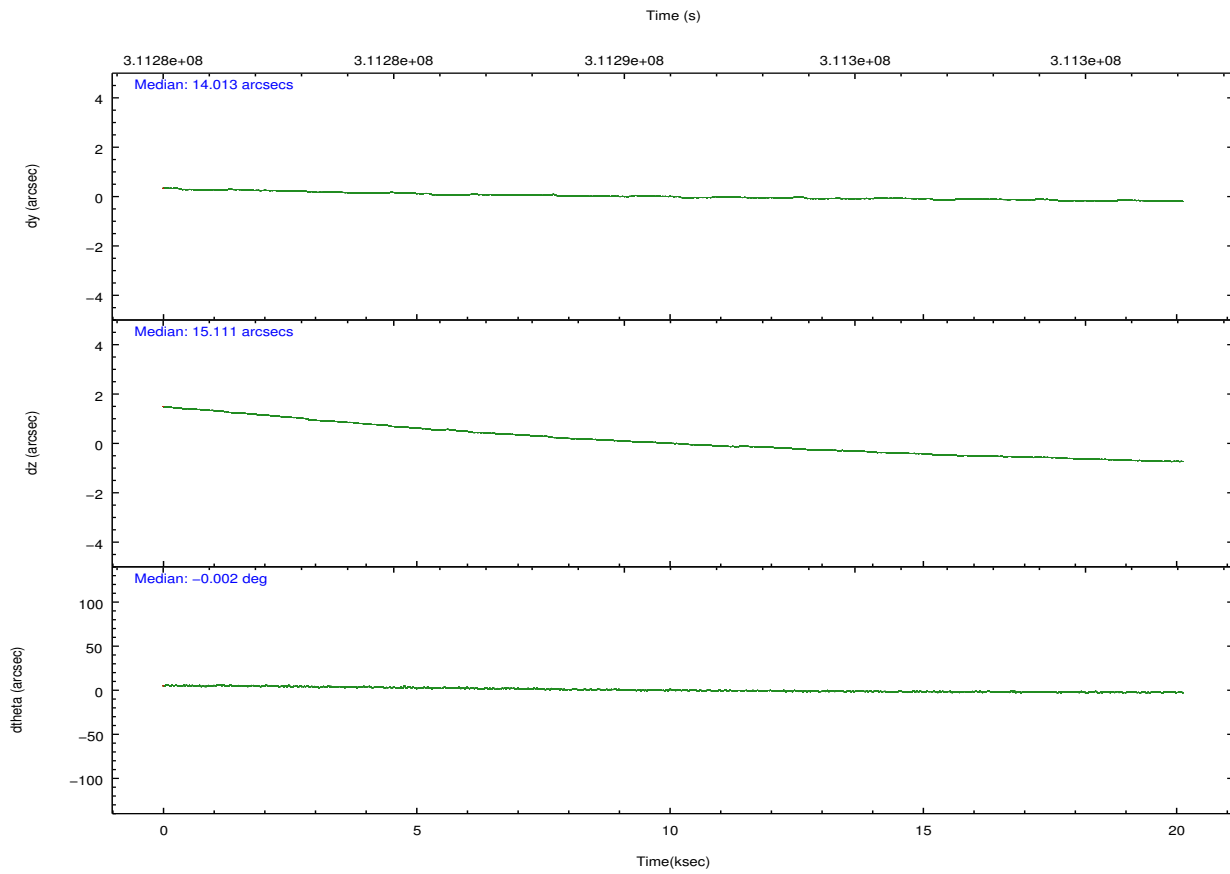
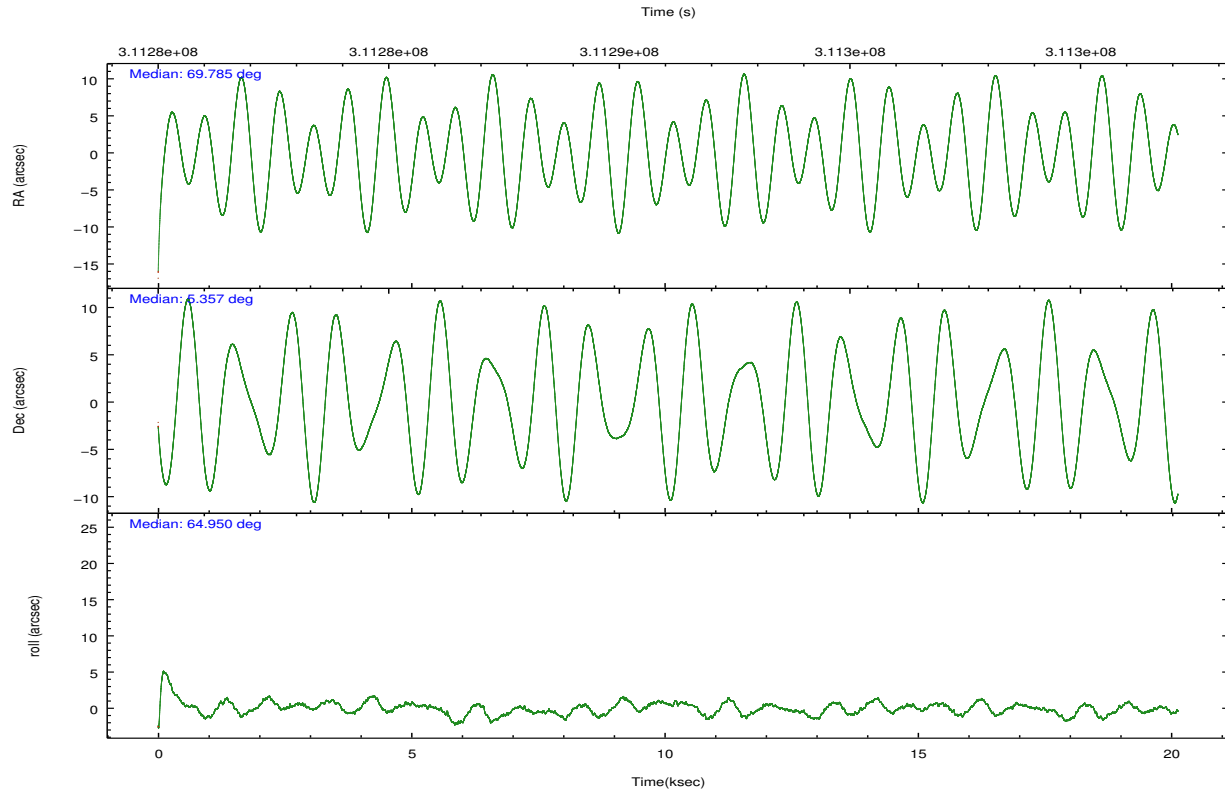
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6630	8131	6587	13722	6140
	4%	4%	3%	7%	3%
grade 1 events	128	90	116	170	90
	0%	0%	0%	0%	0%
grade 2 events	4298	4498	4128	4572	3914
	2%	2%	2%	2%	2%
grade 3 events	1889	2140	1792	2158	1947
	1%	1%	1%	1%	1%
grade 4 events	1766	2140	1928	2025	1861
	1%	1%	1%	1%	1%
grade 5 events	5815	6695	5499	7103	6757
	3%	4%	3%	4%	3%
grade 6 events	3308	3940	3032	3480	3803
	2%	2%	1%	1%	2%
grade 7 events	137291	138114	155733	144284	147259
	85%	83%	87%	81%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	69.787805	69.78531768344482	CCD I2 on	Y	Y
[deg] Pointing Dec	5.329241	5.356607748569954	CCD I3 on	Y	Y
[deg] Pointing Roll	64.747374	64.9562876890009	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	311281117.184000	311279759.72229	CCD S5 on	N	N
Observation start date	2007-11-12T18:57:32	2007-11-12T18:35:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	311301117.184000	311301734.69835	On-chip summing requested	N	N
Observation end date	2007-11-13T00:30:52	2007-11-13T00:42:14	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



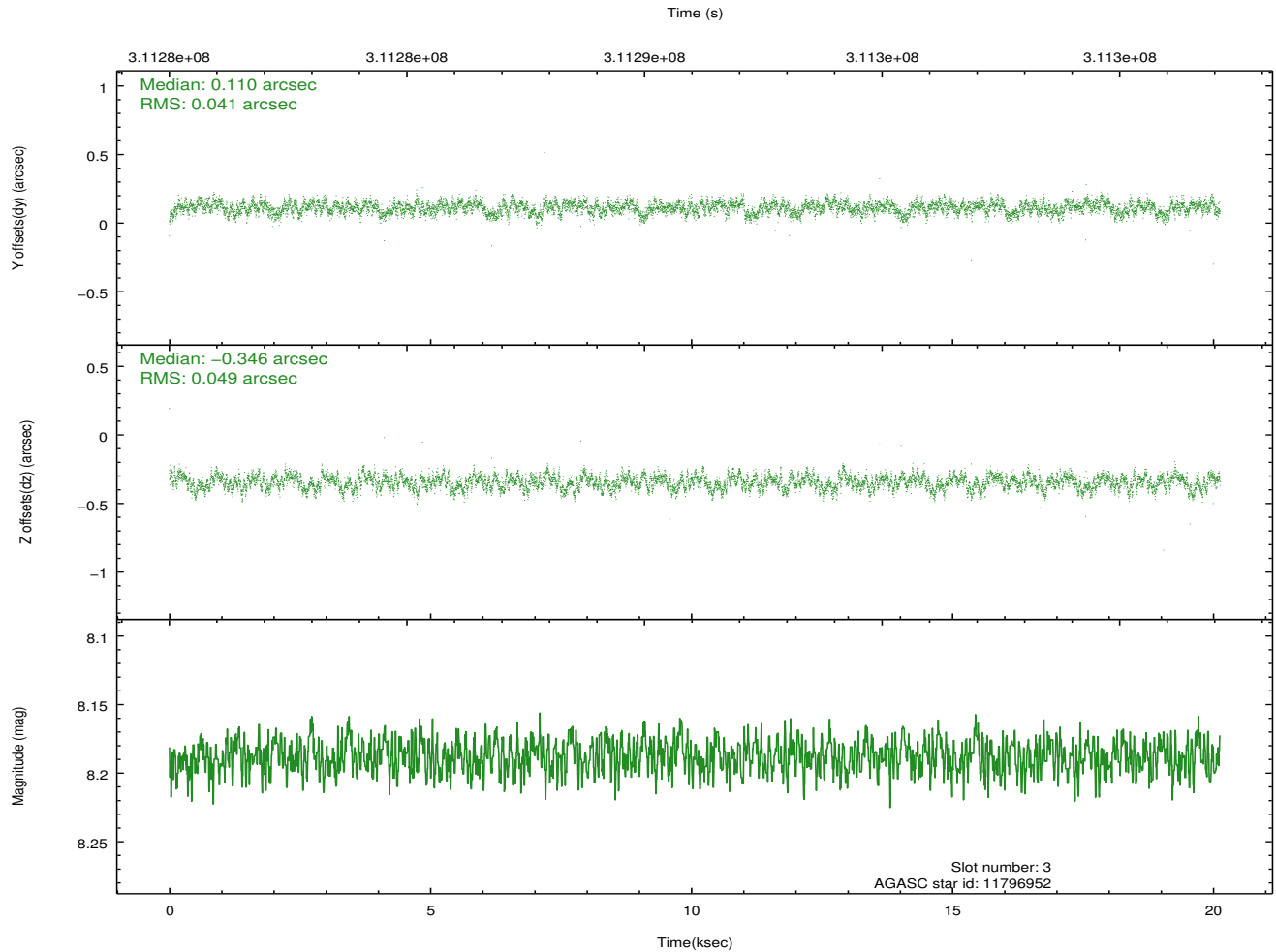
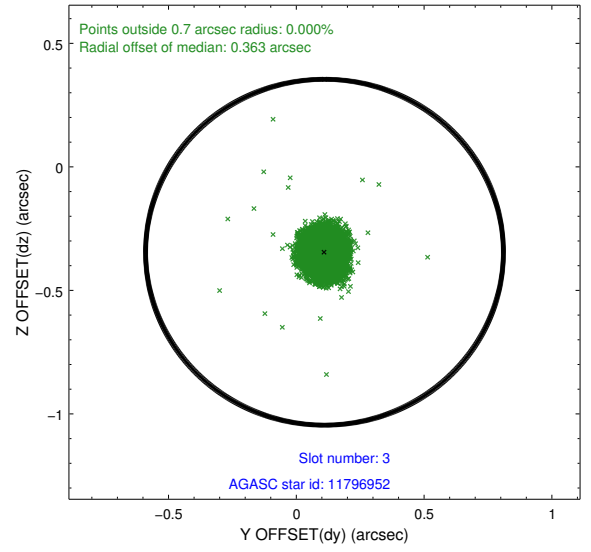
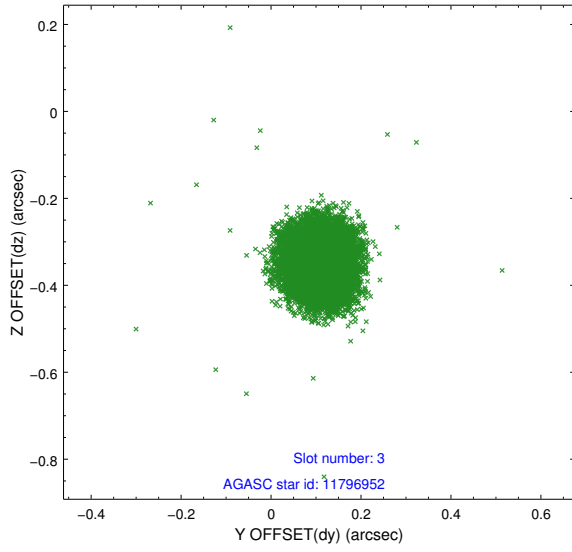


### Slot Statistics

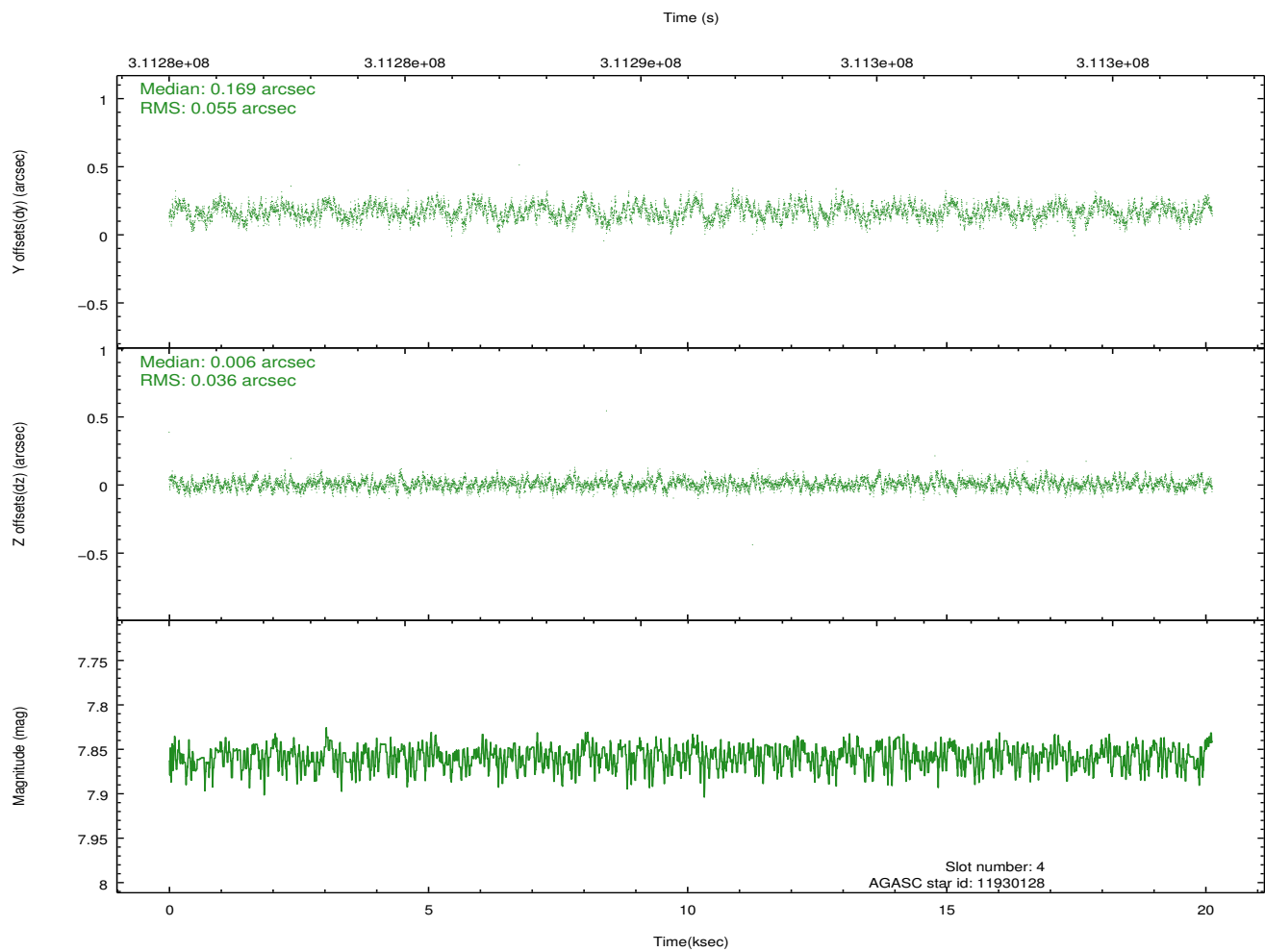
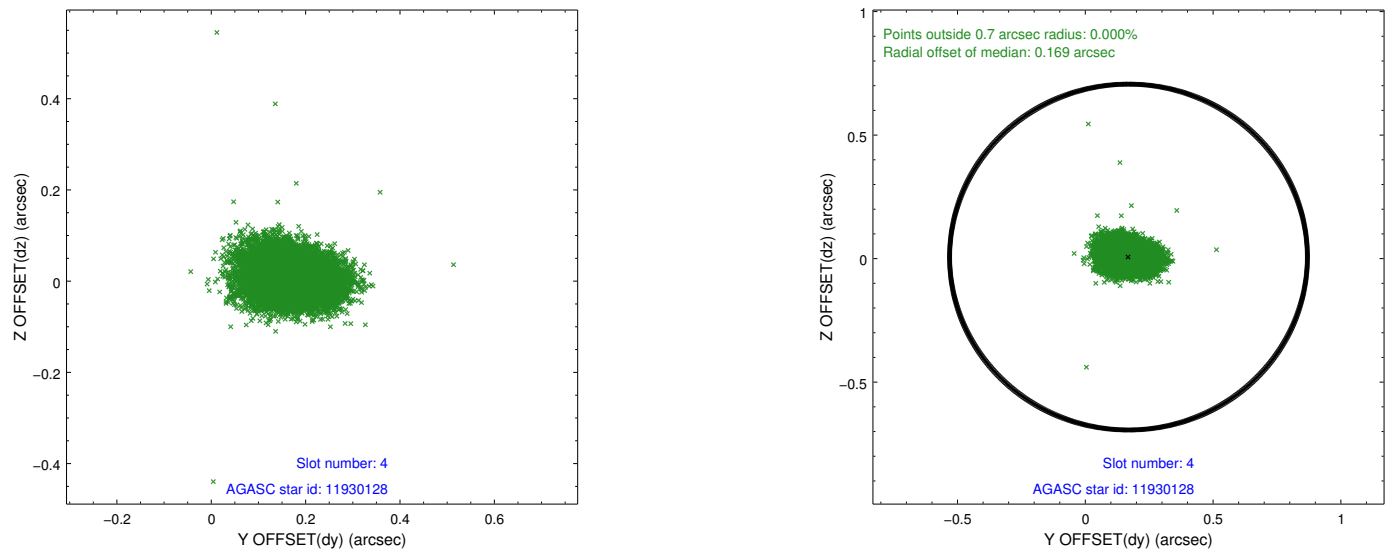
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.23	4911	0.033	-0.012	0.032	0.046	0.000000	0.000000	925.49	-838.86
1	FID	ACIS-I-5	7.22	4911	-0.211	0.037	0.012	0.029	0.000000	0.000000	-1822.76	1058.60
2	FID	ACIS-I-6	7.23	4910	0.085	0.044	0.022	0.029	0.000000	0.000000	390.89	1703.30
3	GUIDE	11796952	8.19	9818	0.110	-0.346	0.068	0.106	69.202168	5.375398	-744.21	1969.47
4	GUIDE	11930128	7.86	9815	0.169	0.006	0.069	0.112	69.405504	4.982791	-1712.53	708.58
5	GUIDE	11931216	8.17	9817	-0.044	0.208	0.067	0.107	69.809895	4.744134	-1871.18	-970.10
6	GUIDE	11934192	9.20	9807	-0.040	0.141	0.091	0.150	70.490469	5.609501	1988.07	-1845.50
7	GUIDE	12461880	8.86	9810	-0.194	-0.010	0.101	0.156	69.474578	5.770319	957.82	1692.30

## 2.4 Star Slots

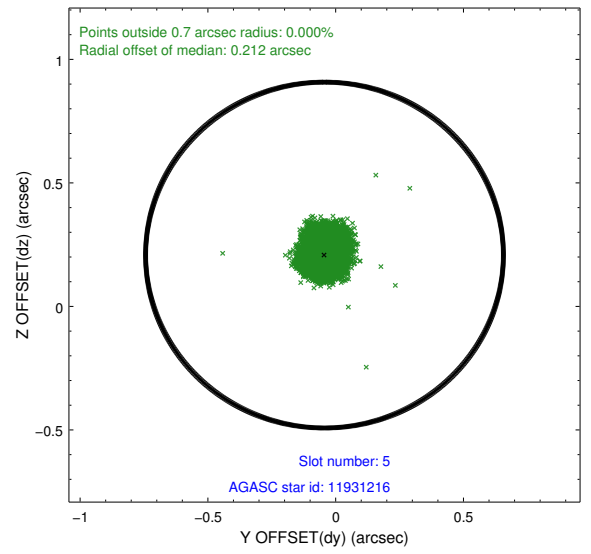
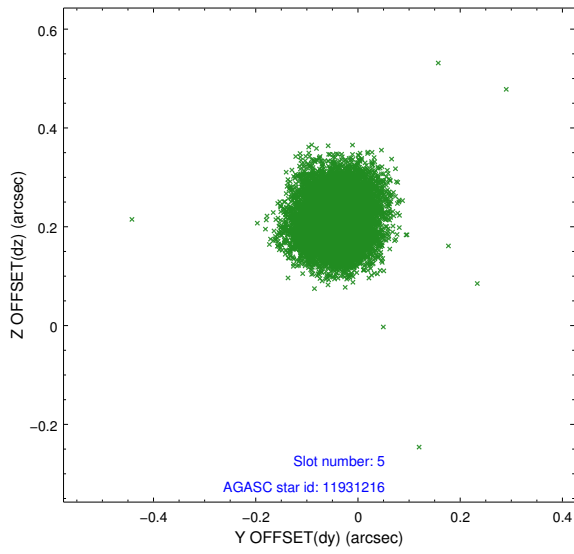
### 2.4.1 Slot 3



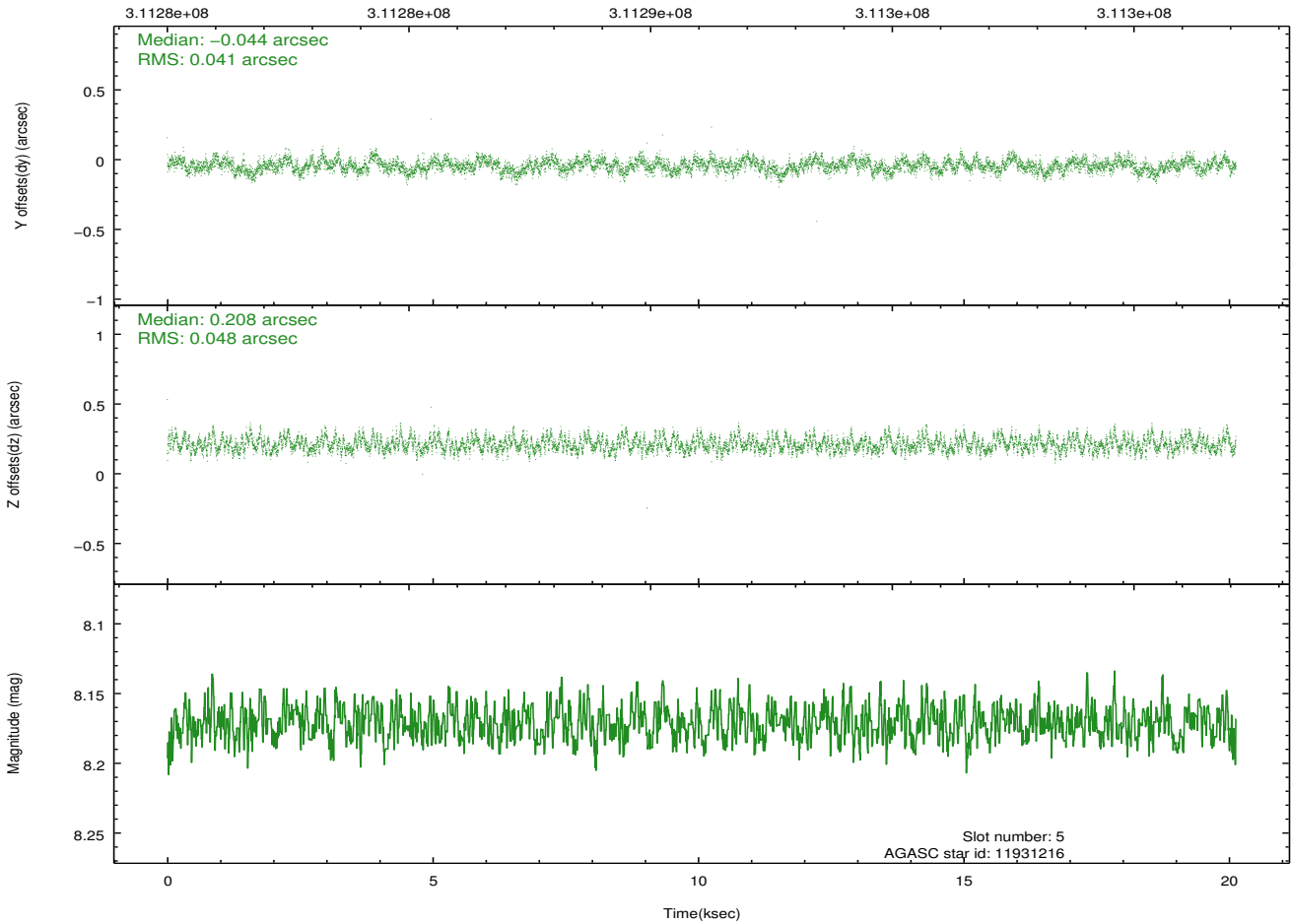
## 2.4.2 Slot 4



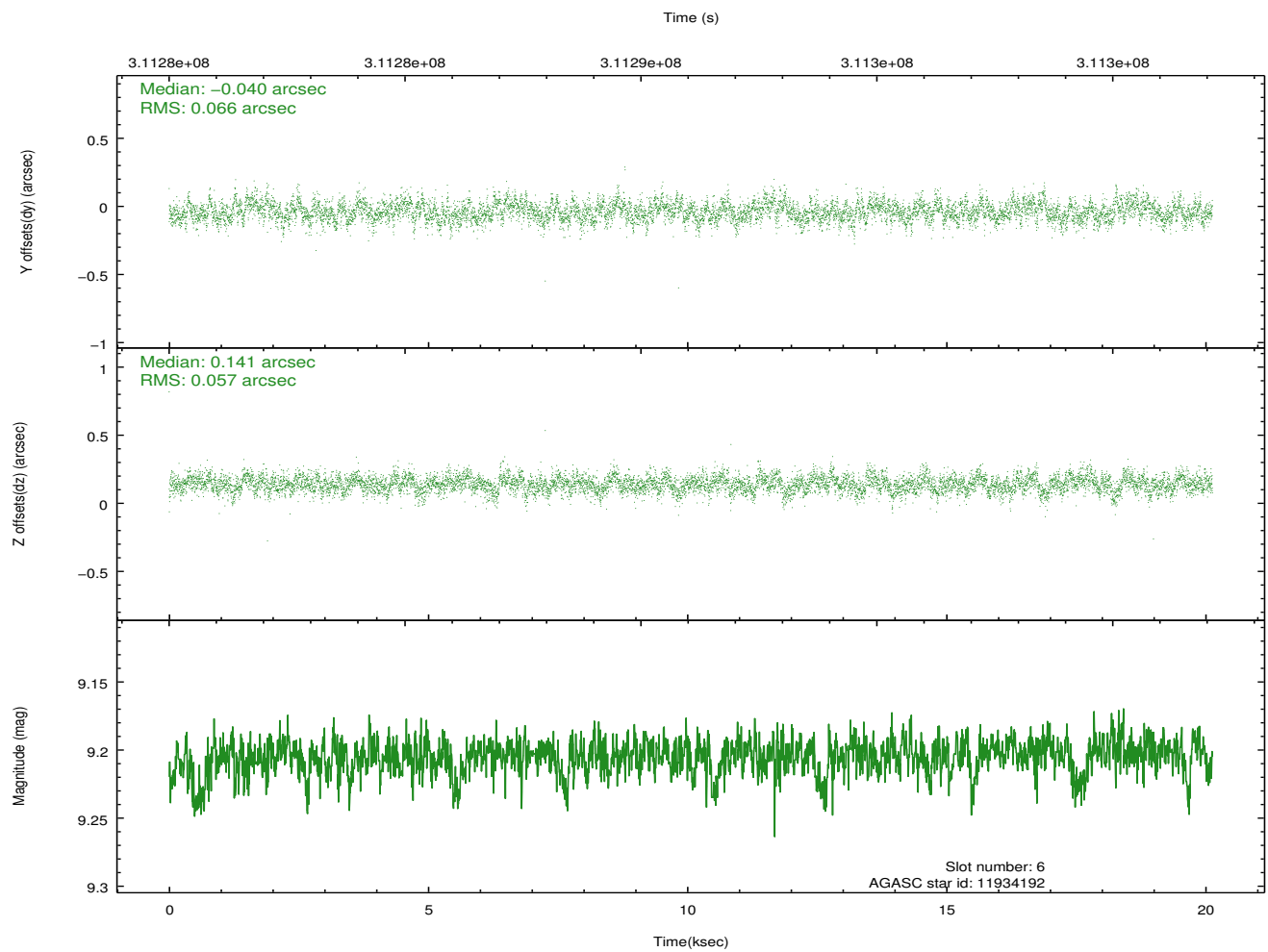
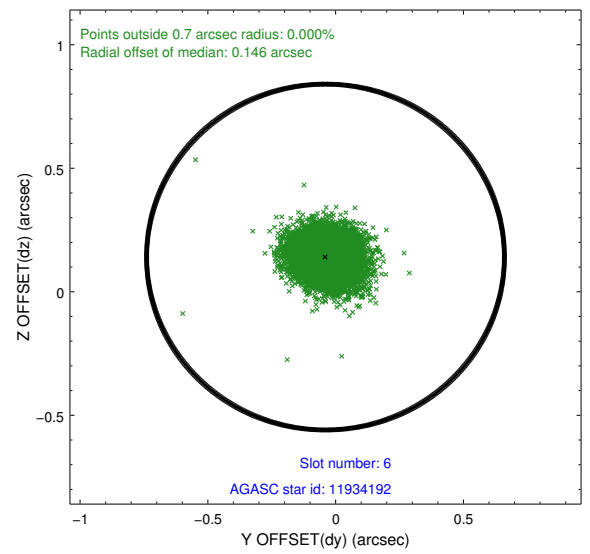
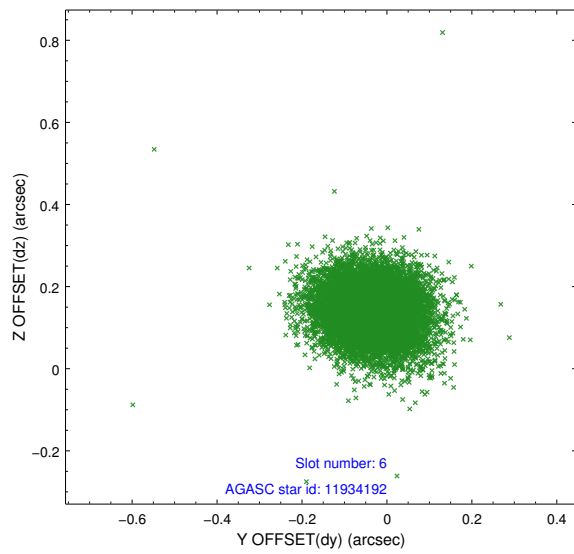
### 2.4.3 Slot 5



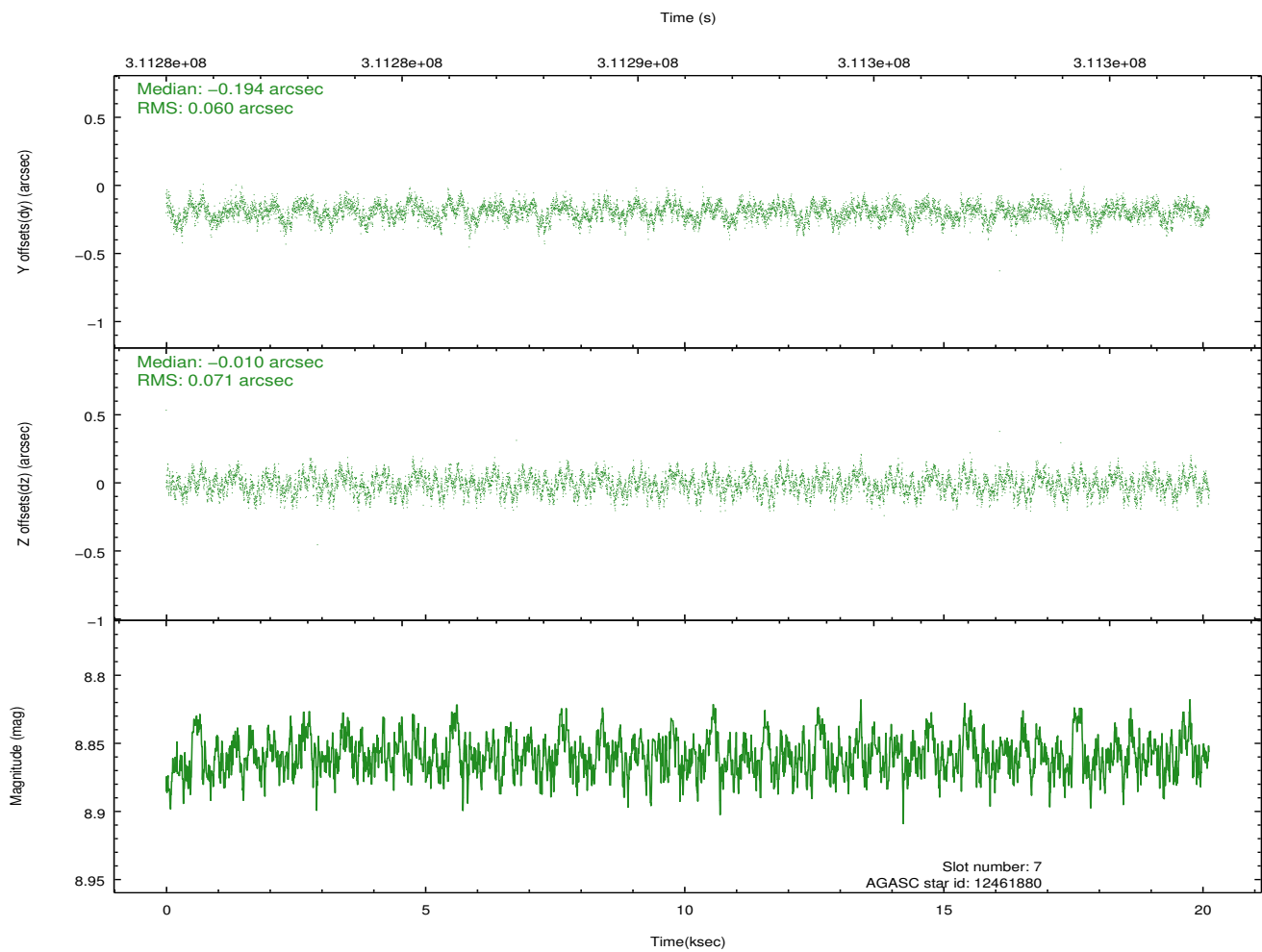
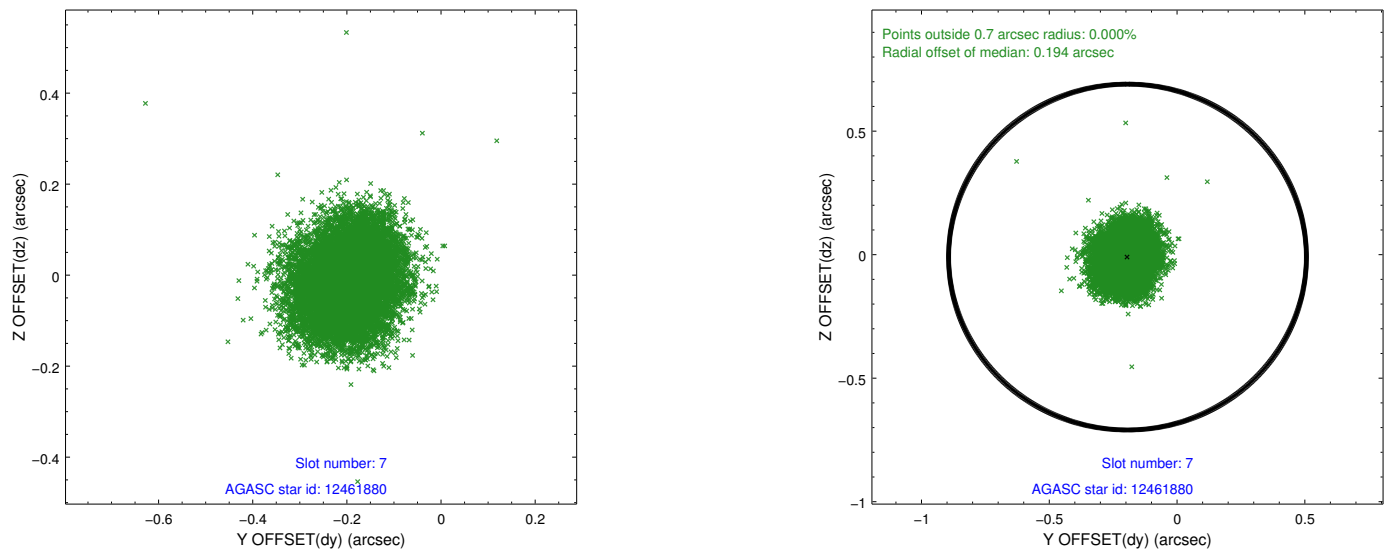
Time (s)



## 2.4.4 Slot 6

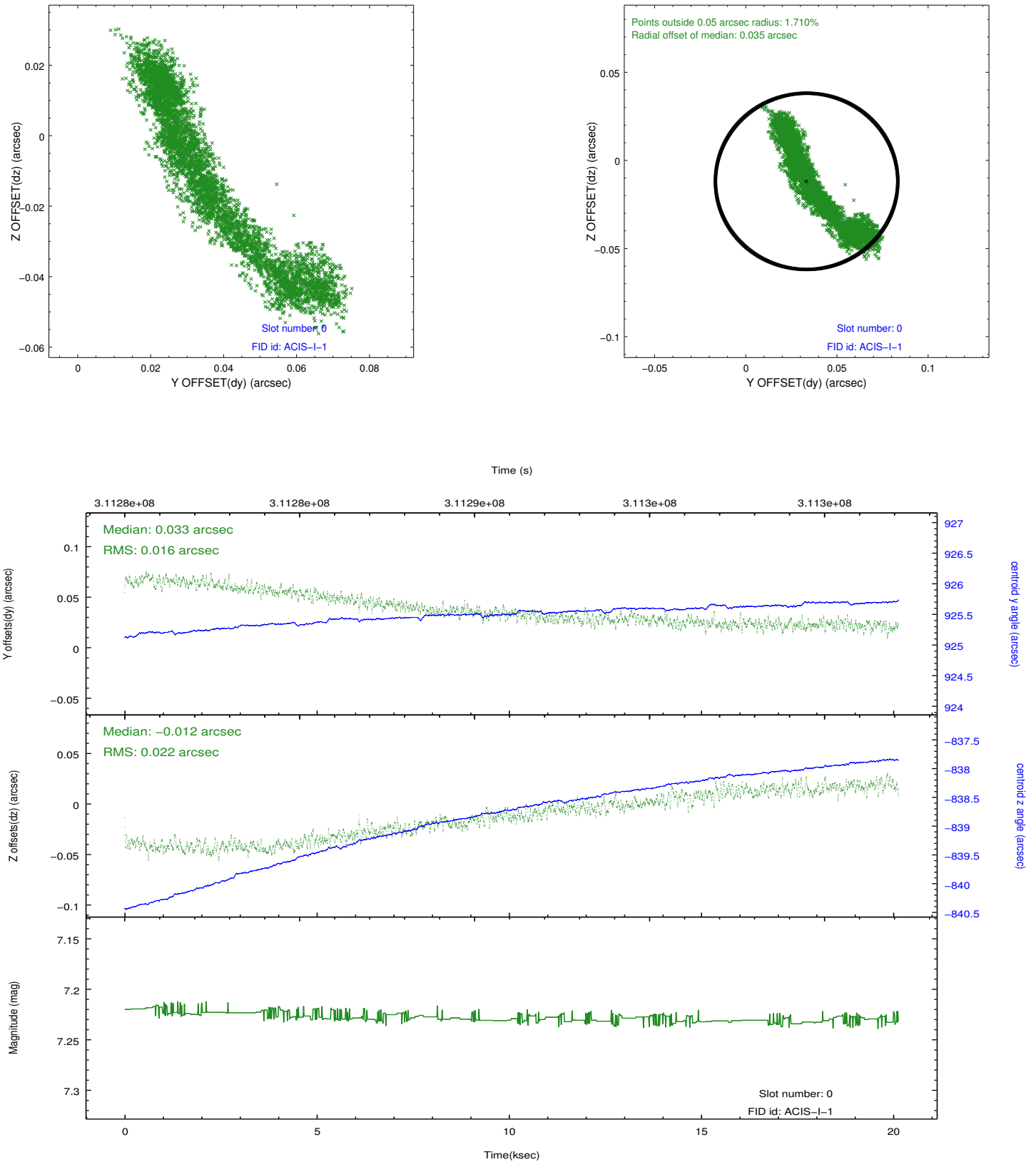


## 2.4.5 Slot 7

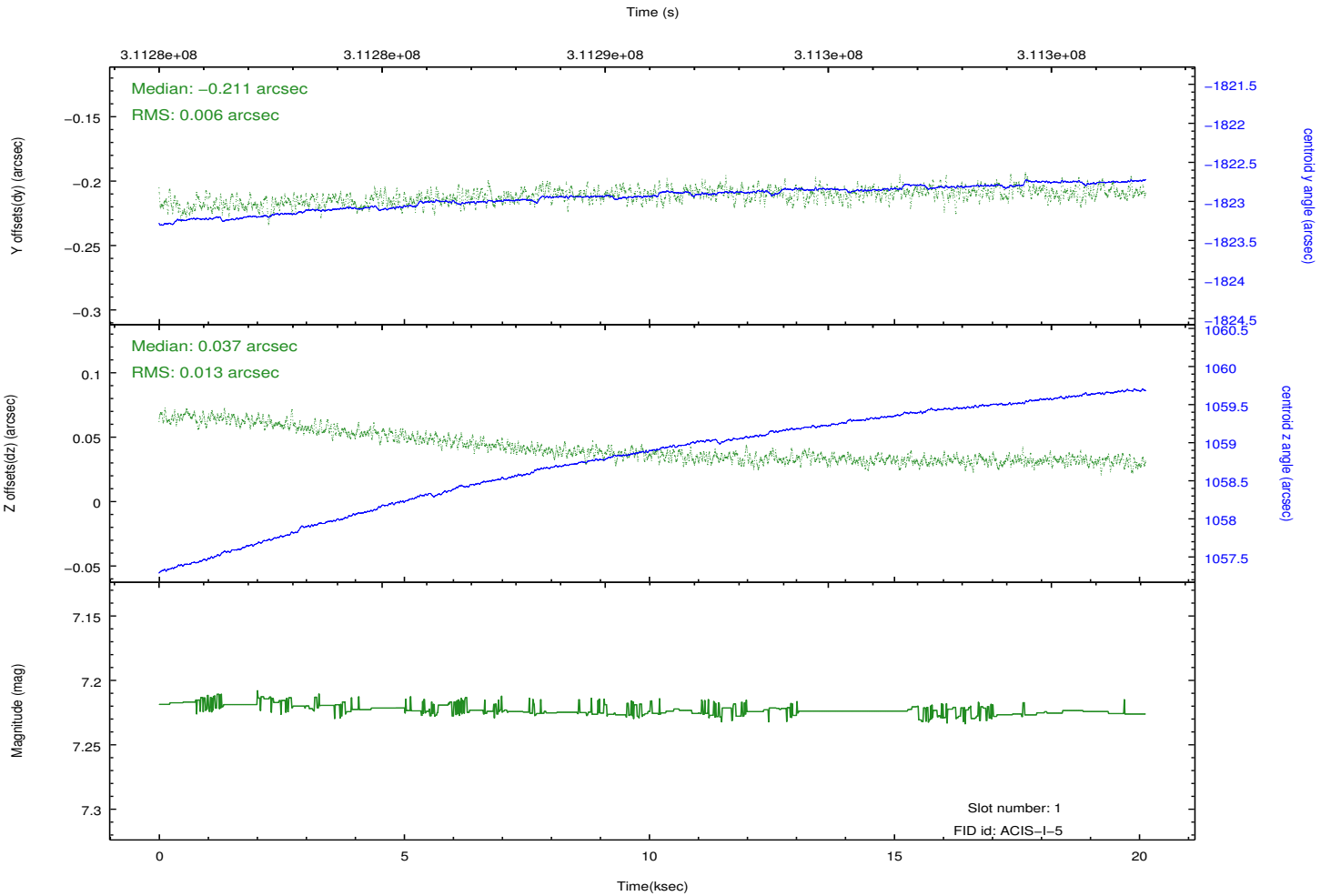
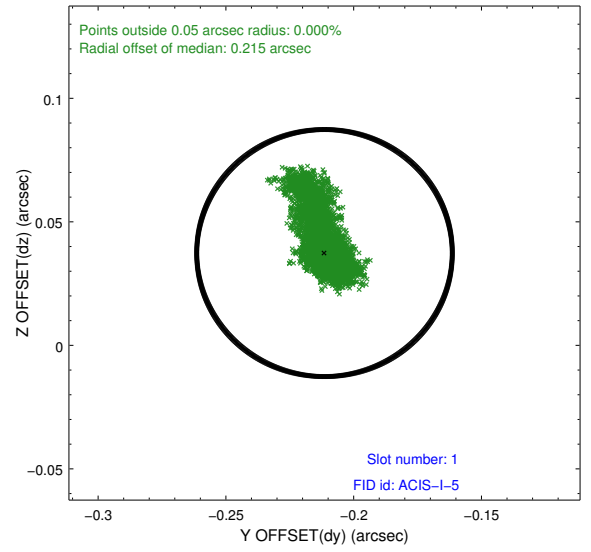
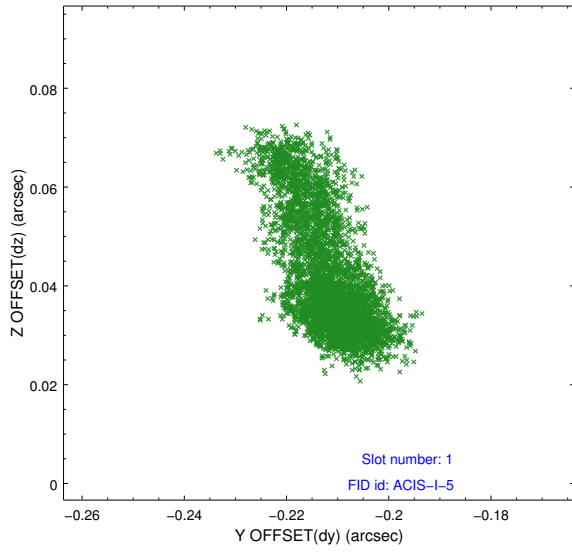


## 2.5 FID Slots

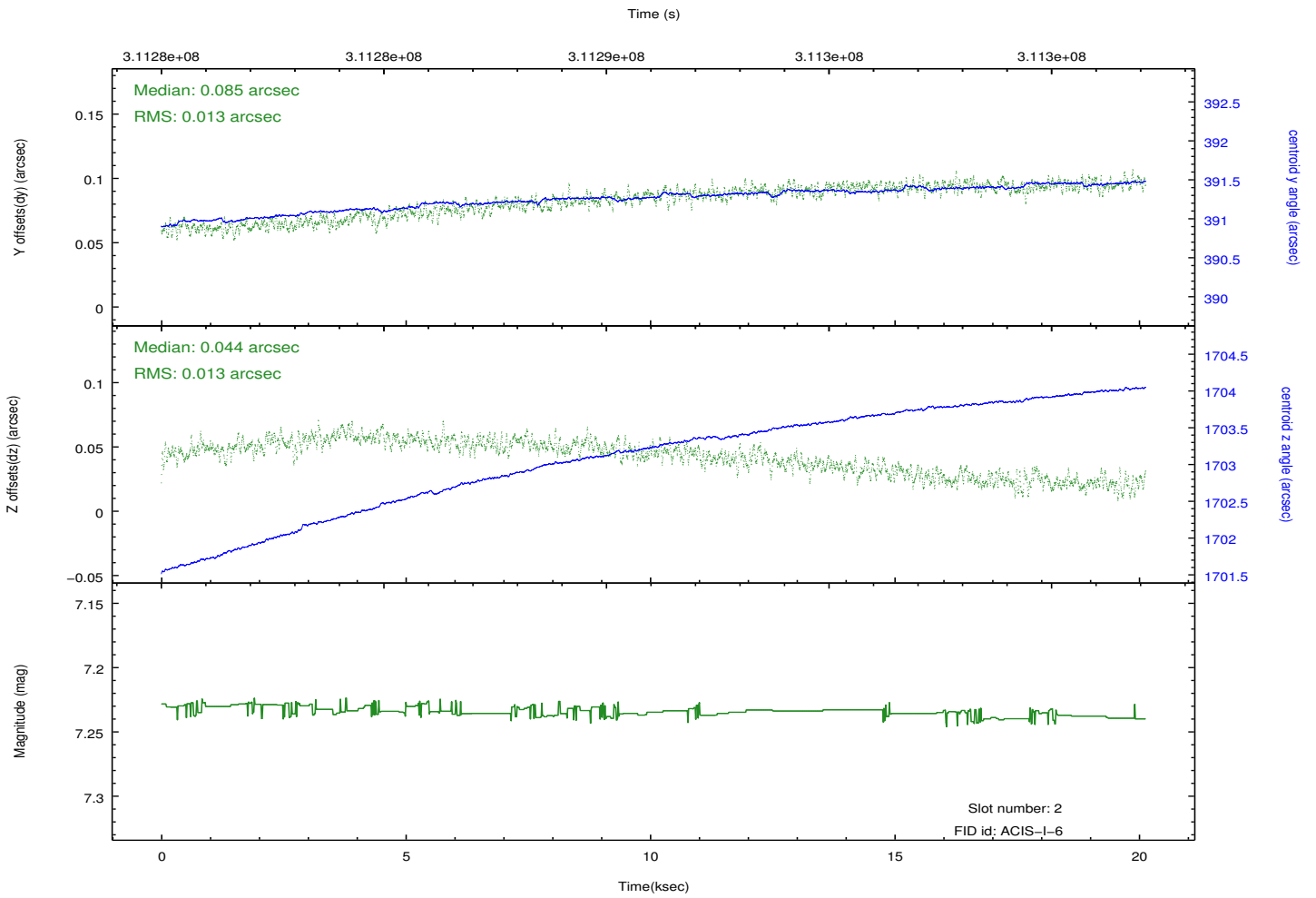
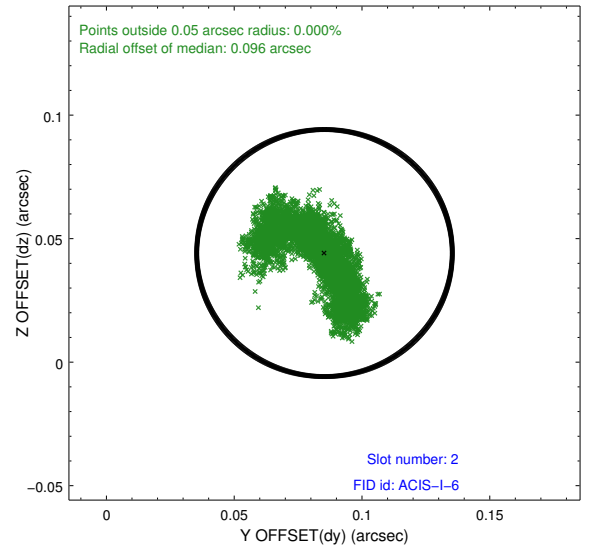
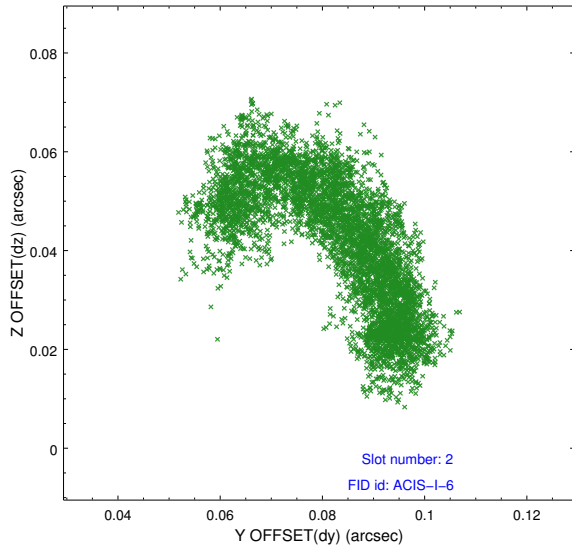
### 2.5.1 Slot 0



## 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)	2012.05.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.1252001

## A.2 Comments