

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10915 - L2 Version 2  
Chandra X-Ray Center

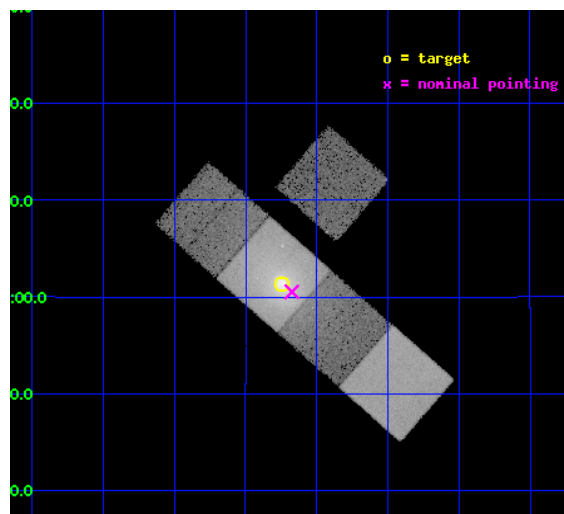
L2 Processing Date : Jun 8 2012

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# 1 Front

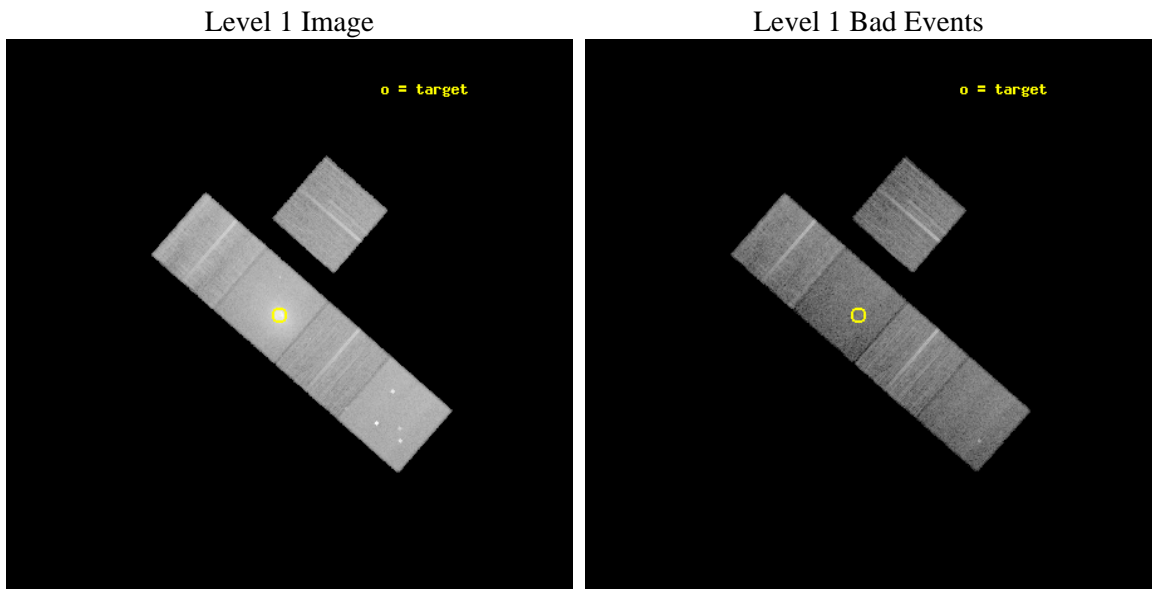
seq_num	800835	Sequence number
obs_id	10915	Observation id
title	Shocks, Ripples, and Bubbles: A Very Deep Observation of Abell 2052	&#160
observer	Prof. Elizabeth Blanton	Principal investigator
object	Abell 2052	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	229.185417	Observer's specified target RA [deg]
dec_targ	7.021278	Observer's specified target Dec [deg]
ra_nom	229.16858663095	Nominal RA [deg]
dec_nom	7.0088386666129	Nominal Dec [deg]
roll_nom	221.15867032145	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15162.100116611	Sum of GTIs [s]
livetime	14963.996116411	Livetime [s]
ontime3	15152.677155554	Sum of GTIs [s]
ontime5	15162.100116611	Sum of GTIs [s]
ontime6	15162.100116611	Sum of GTIs [s]
ontime7	15162.100116611	Sum of GTIs [s]
ontime8	15158.959106386	Sum of GTIs [s]
l2events	303215	Number of level 2 events



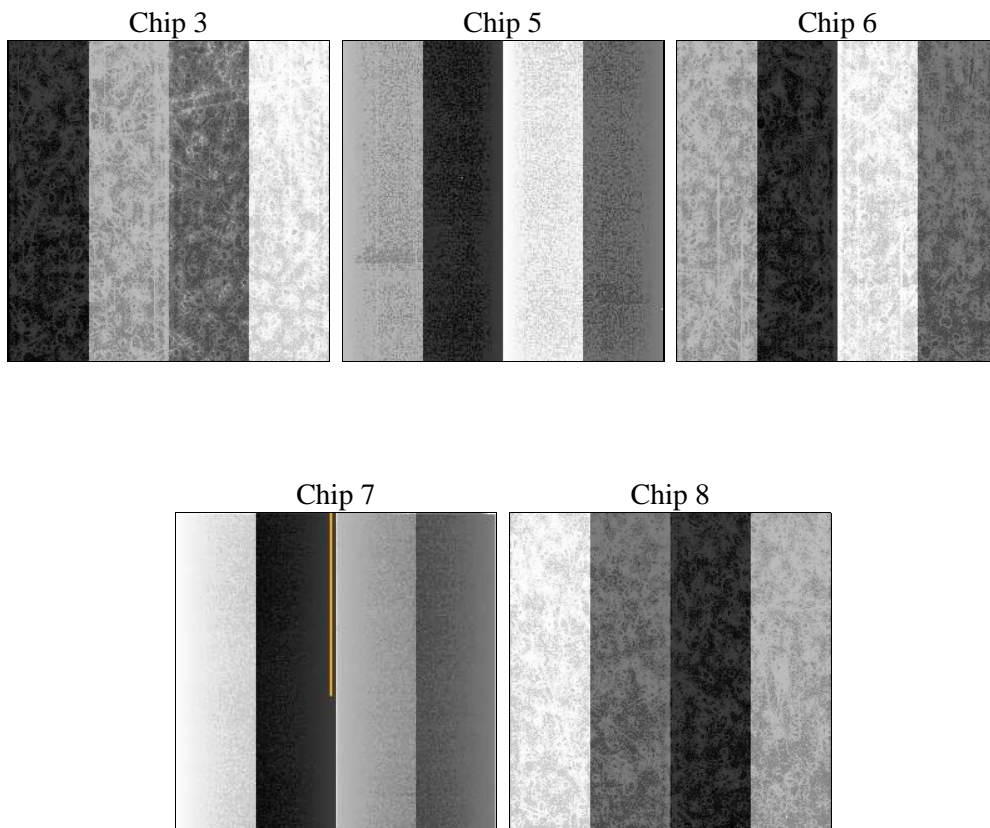
## 2 OBI

### 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	8.4.5	Processing system revision	ontime	15162.100116611	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime3	15152.677155554	Sum of GTIs [s]
date	2012-06-08T06:52:39	Date and time of file creation	ontime5	15162.100116611	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15162.100116611	Sum of GTIs [s]
			ontime7	15162.100116611	Sum of GTIs [s]
			ontime8	15158.959106386	Sum of GTIs [s]
			l1events	931983	Number of level 1 events

### 2.1.4 Events

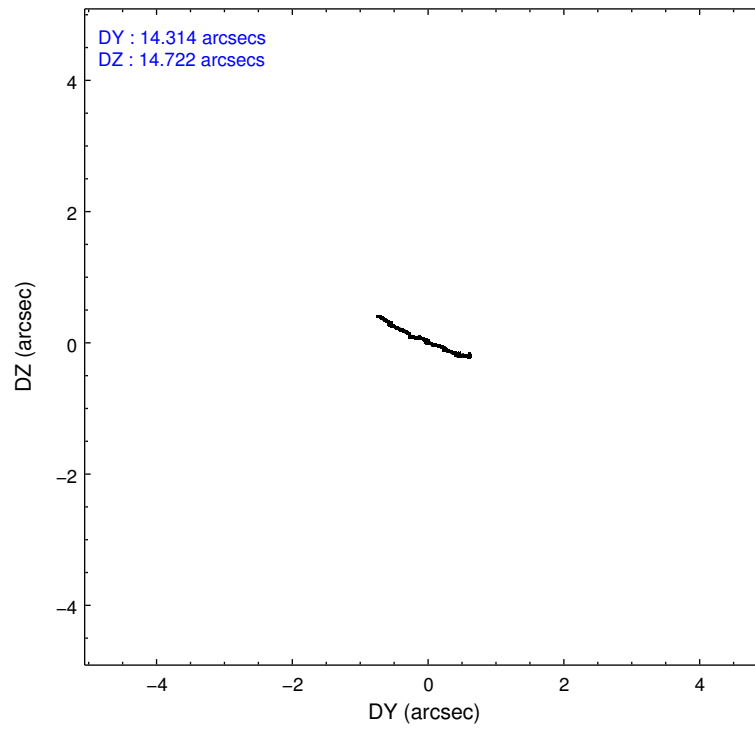
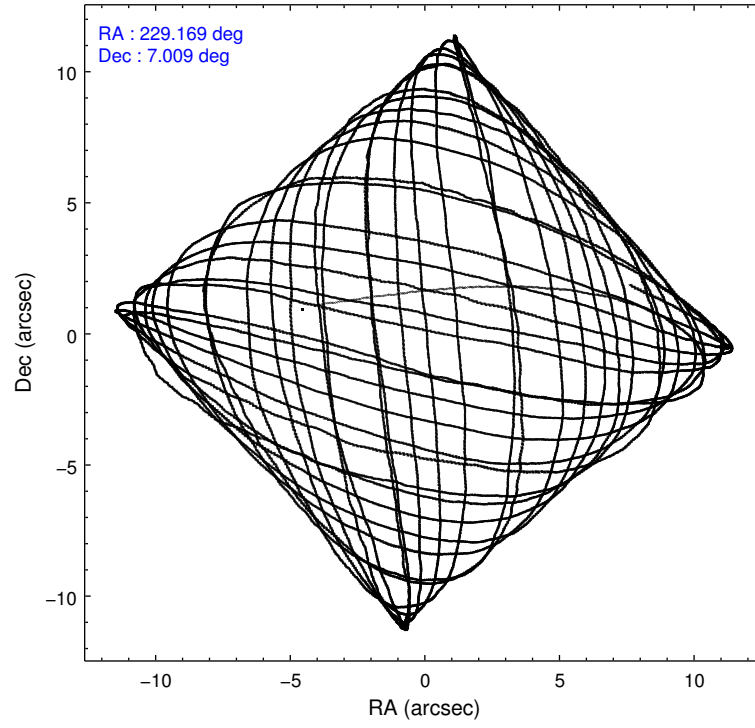
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	133614	204945	151471	258721	183232
rejected events	119894	104916	128653	92801	136459
rejected %	89%	51%	84%	35%	74%

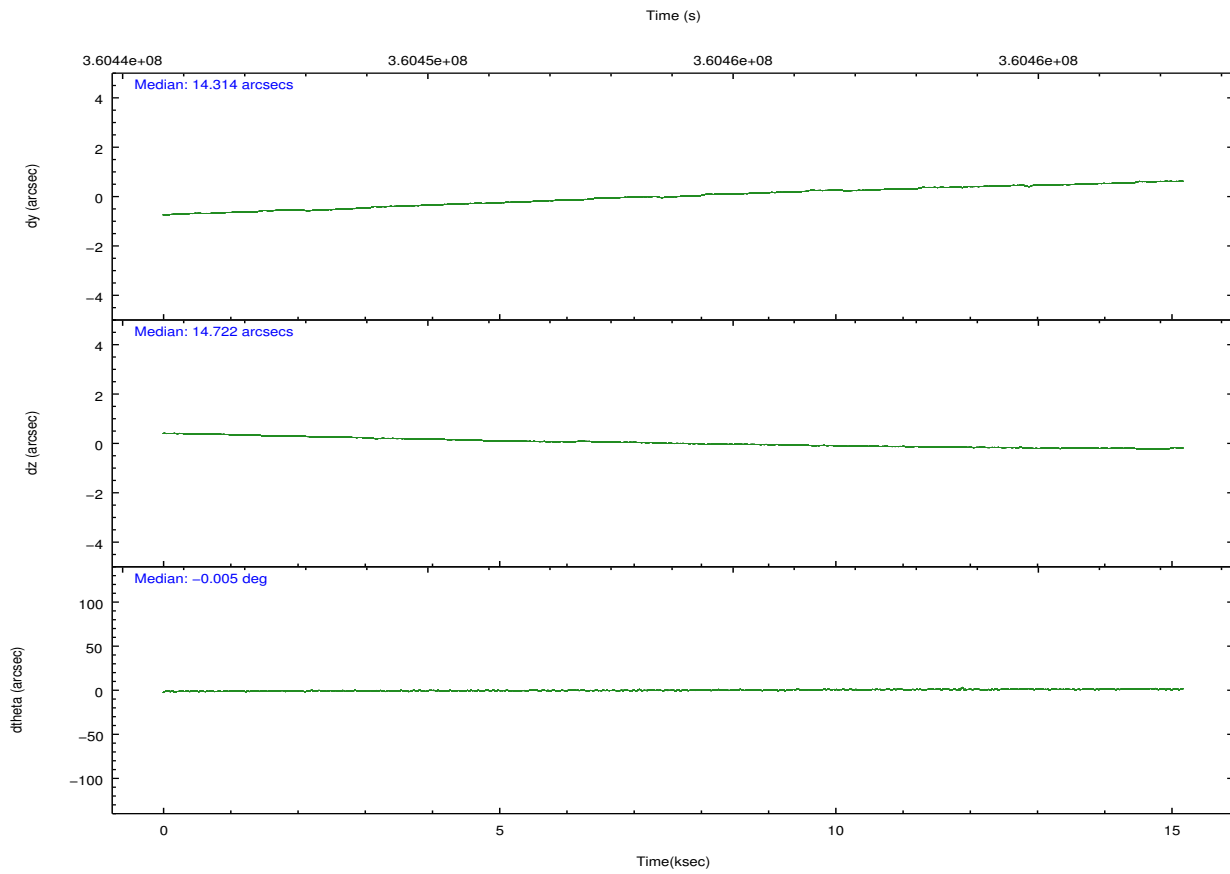
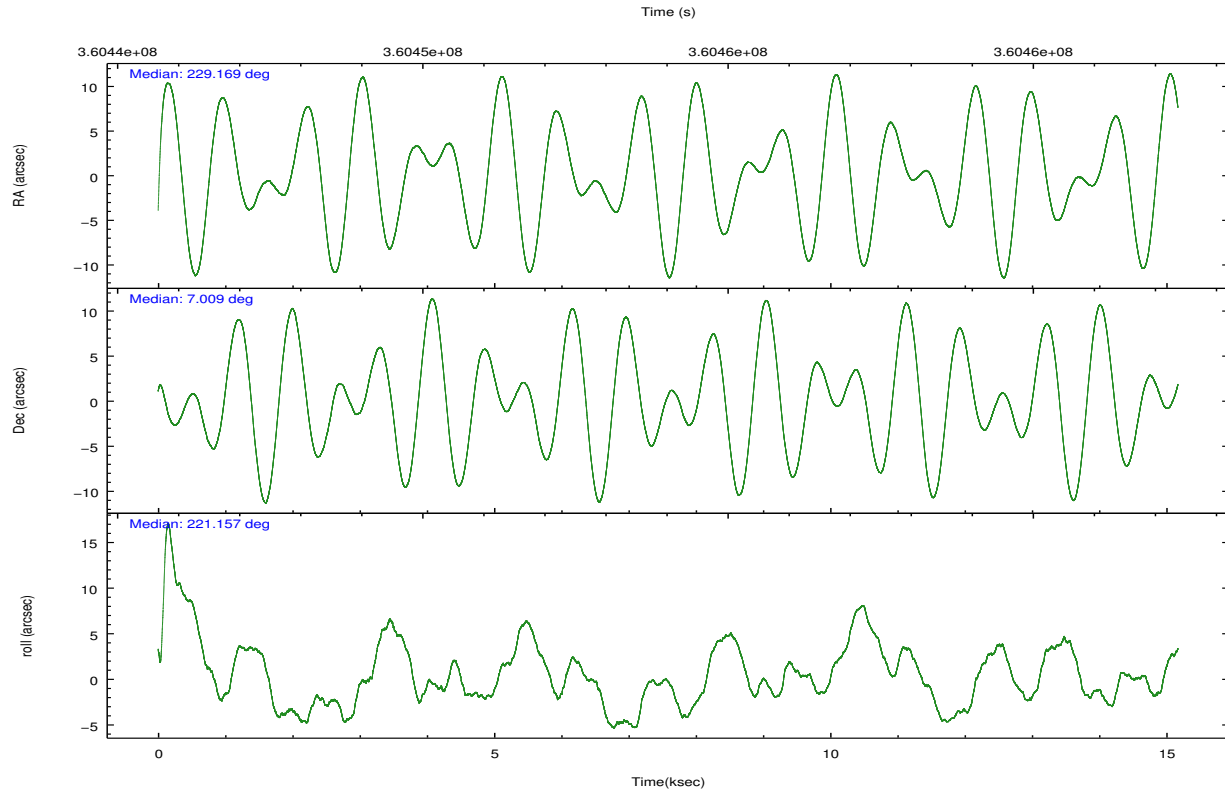
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	5765	15508	12610	37880	16414
	4%	7%	8%	14%	8%
grade 1 events	84	401	106	247	172
	0%	0%	0%	0%	0%
grade 2 events	3098	30455	4281	40976	10904
	2%	14%	2%	15%	5%
grade 3 events	1482	4295	1801	18239	4911
	1%	2%	1%	7%	2%
grade 4 events	1531	4189	1814	17891	4687
	1%	2%	1%	6%	2%
grade 5 events	5492	15725	5705	17252	8445
	4%	7%	3%	6%	4%
grade 6 events	2587	51445	3258	55956	12501
	1%	25%	2%	21%	6%
grade 7 events	113575	82927	121896	70280	125198
	85%	40%	80%	27%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	229.177088	229.1685866309516	Subarray requested	NONE	NONE
[deg] Pointing Dec	7.034849	7.008838666612866	Alternating exposures requested	N	N
[deg] Pointing Roll	221.001020	221.158670321455	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	360446595.184000	360445164.05786			
Observation start date	2009-06-03T20:02:09	2009-06-03T19:39:24			
[s] Observation end time (MET)	360461595.184000	360462467.08372			
Observation end date	2009-06-04T00:12:09	2009-06-04T00:27:47			
Read mode	TIMED	TIMED			

## 2.3 Aspect



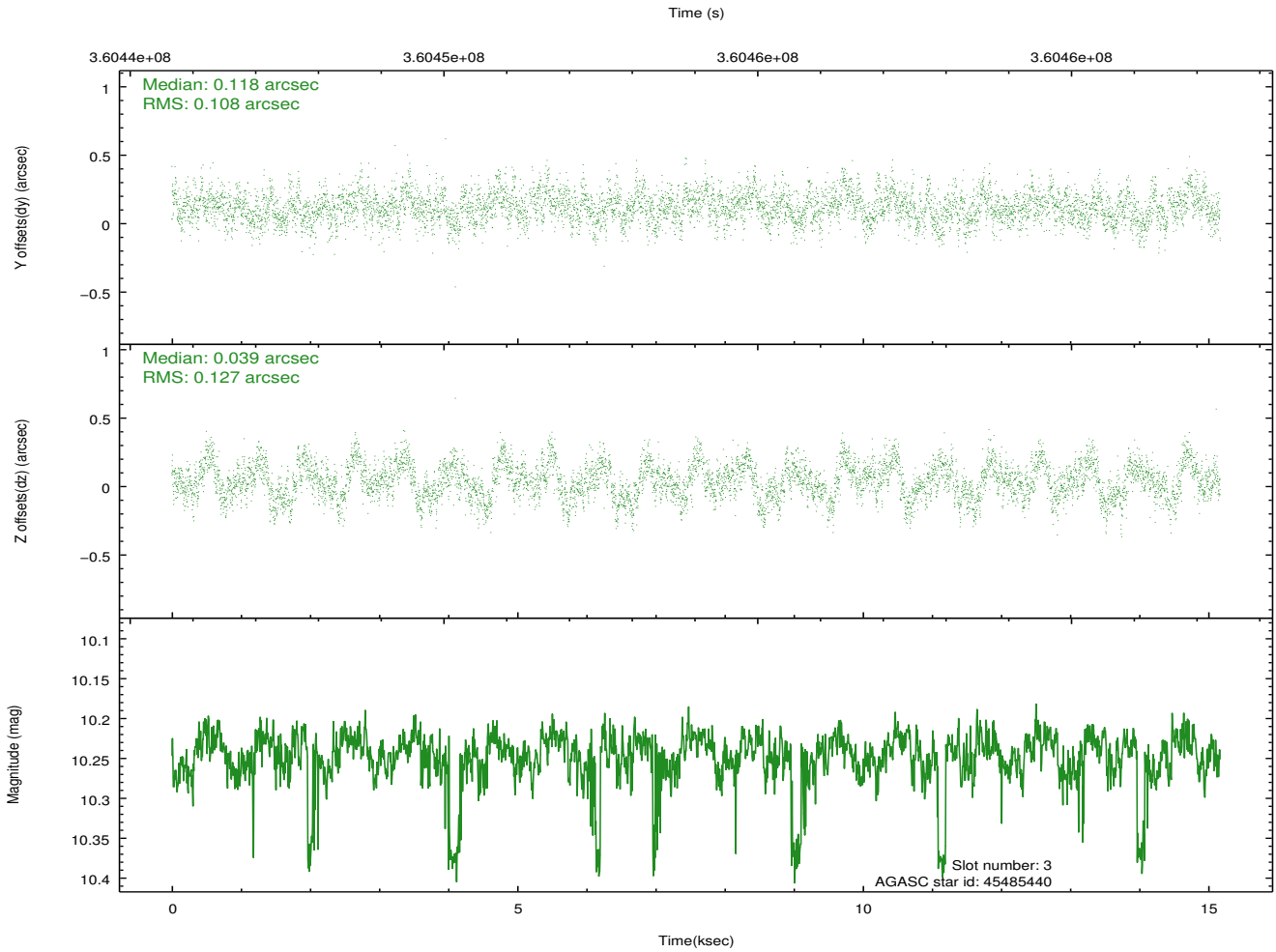
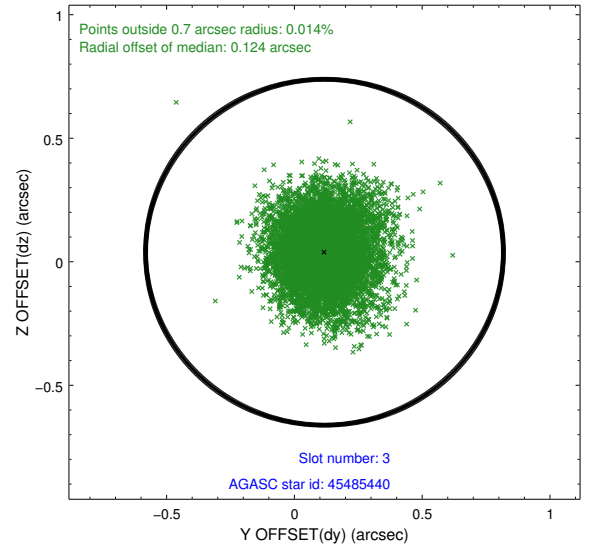
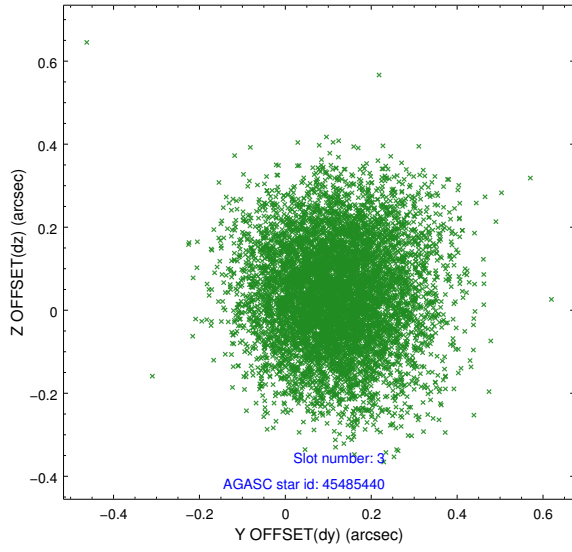


### Slot Statistics

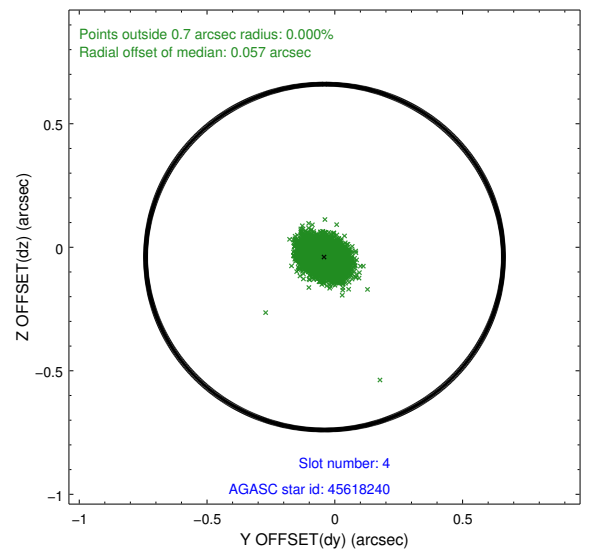
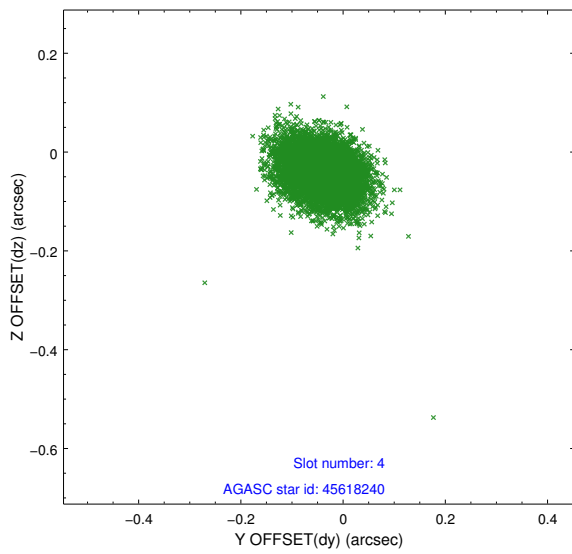
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	3700	-0.074	-0.033	0.012	0.020	0.000000	0.000000	-767.30	-1736.11
1	FID	ACIS-S-4	6.99	3700	0.196	0.045	0.011	0.018	0.000000	0.000000	2146.09	172.17
2	FID	ACIS-S-5	7.01	3700	-0.161	-0.002	0.016	0.027	0.000000	0.000000	-1819.87	166.09
3	GUIDE	45485440	10.24	7275	0.118	0.039	0.178	0.289	228.571035	6.780820	2235.20	-732.38
4	GUIDE	45618240	8.23	7397	-0.040	-0.040	0.059	0.097	229.756501	6.988062	-1452.16	1484.33
5	GUIDE	45619272	6.16	7401	-0.073	-0.164	0.071	0.113	228.973190	6.464840	1896.83	1070.16
6	GUIDE	120598184	10.15	7379	0.124	0.054	0.181	0.283	228.939530	7.597810	-687.93	-2084.58
7	GUIDE	120599960	10.20	7381	-0.131	0.109	0.173	0.276	229.604732	7.524393	-2308.51	-329.56

## 2.4 Star Slots

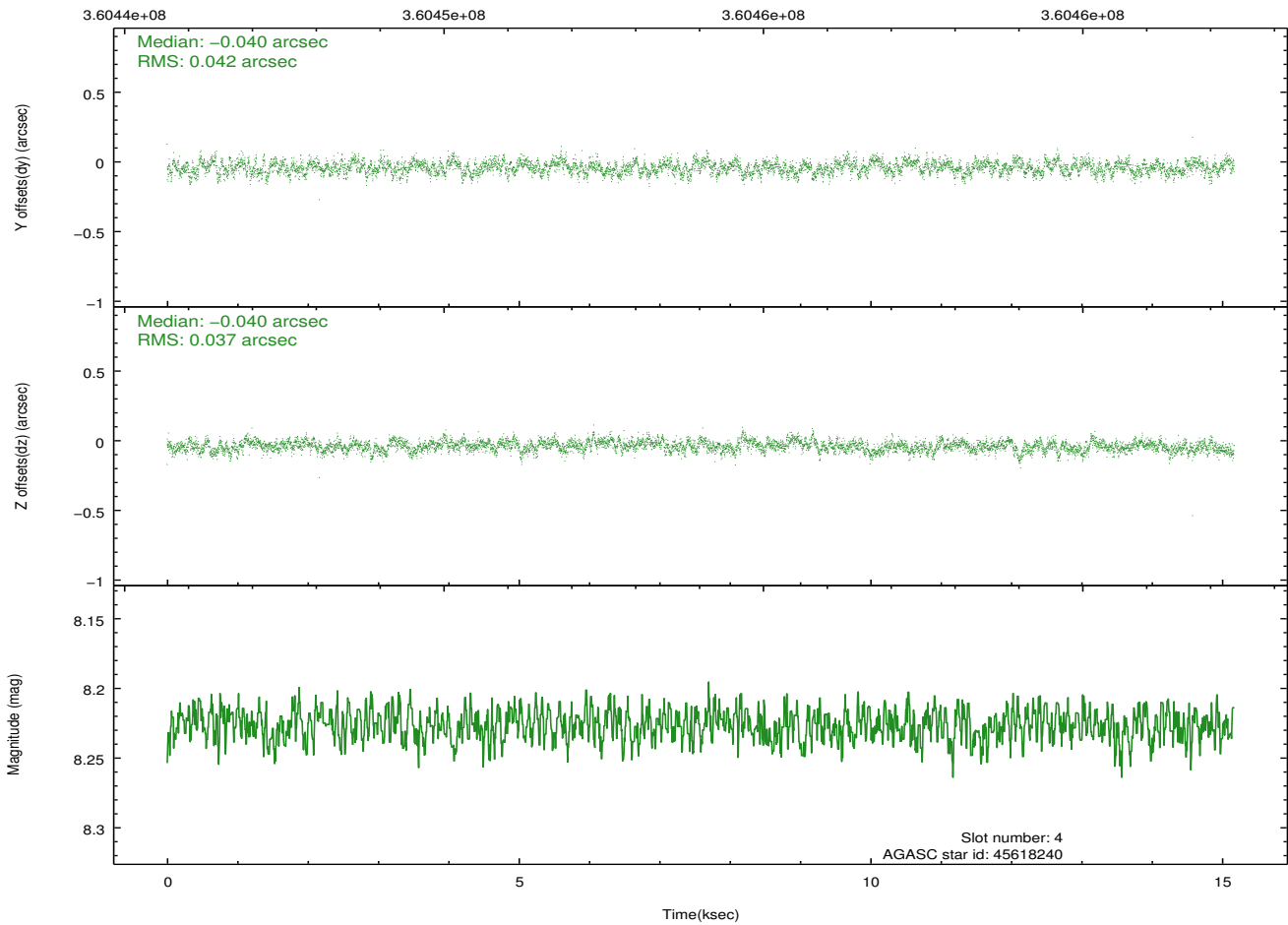
### 2.4.1 Slot 3



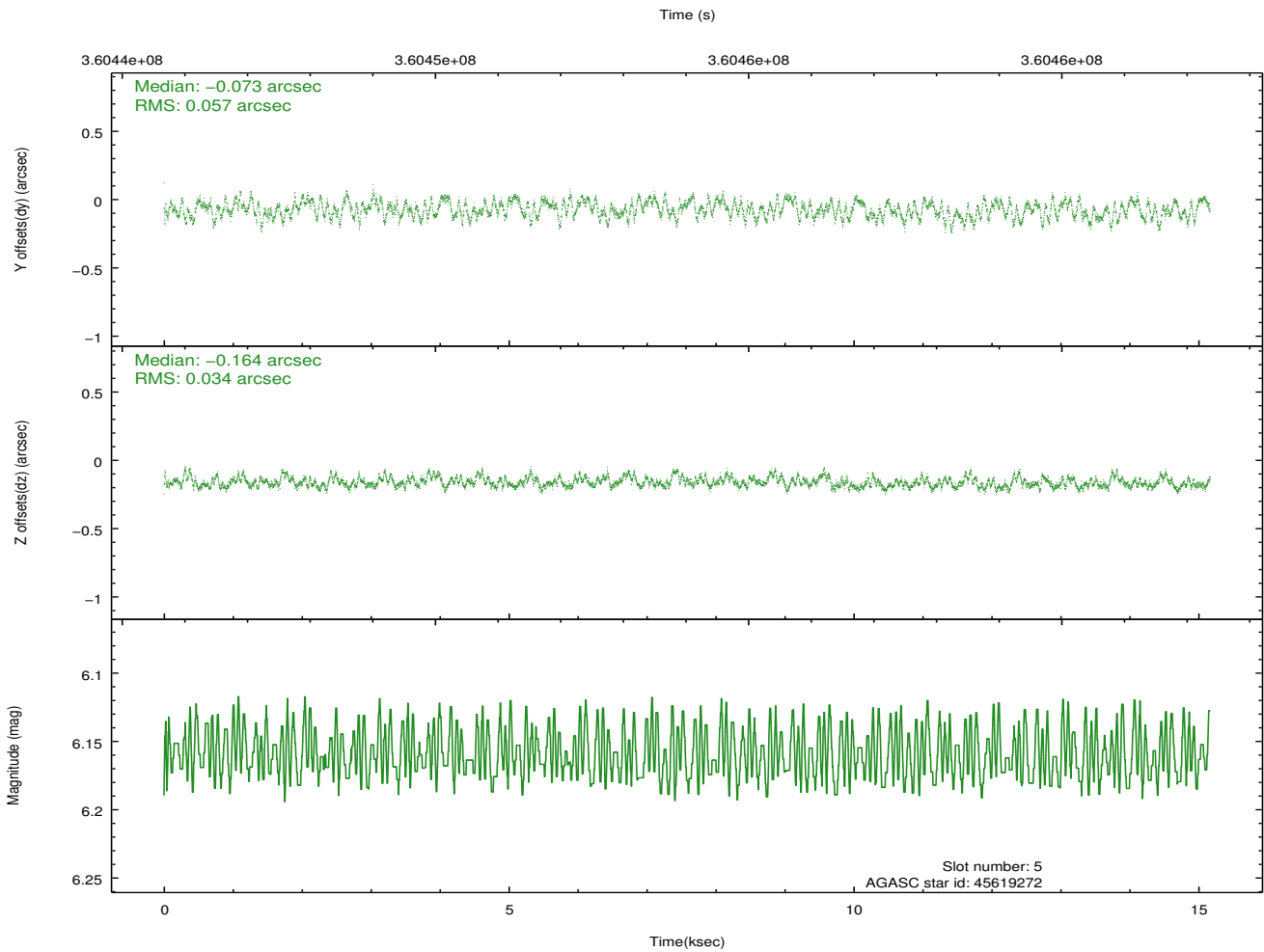
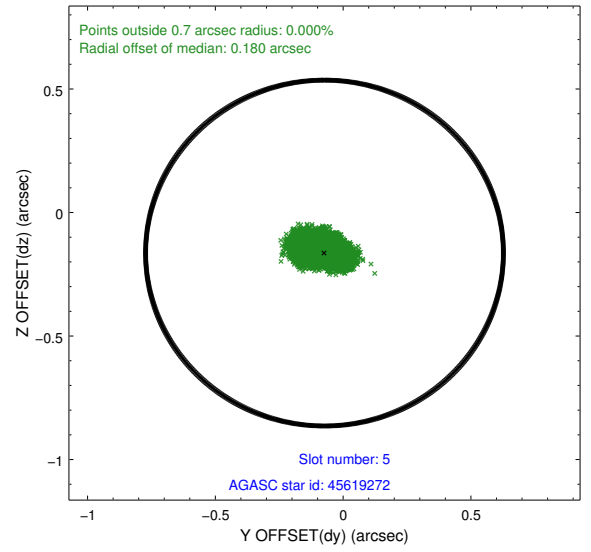
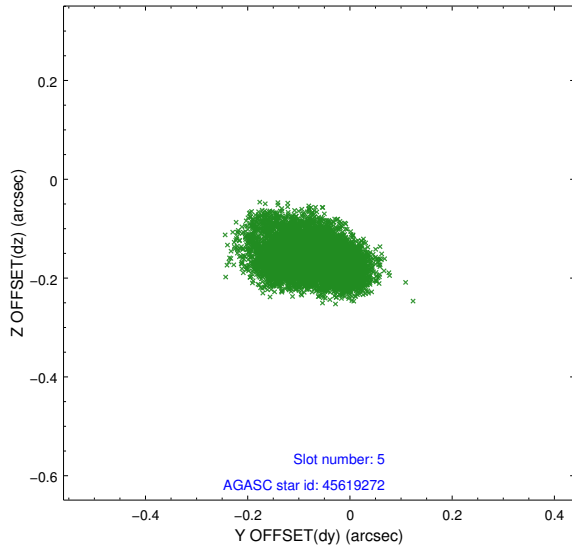
## 2.4.2 Slot 4



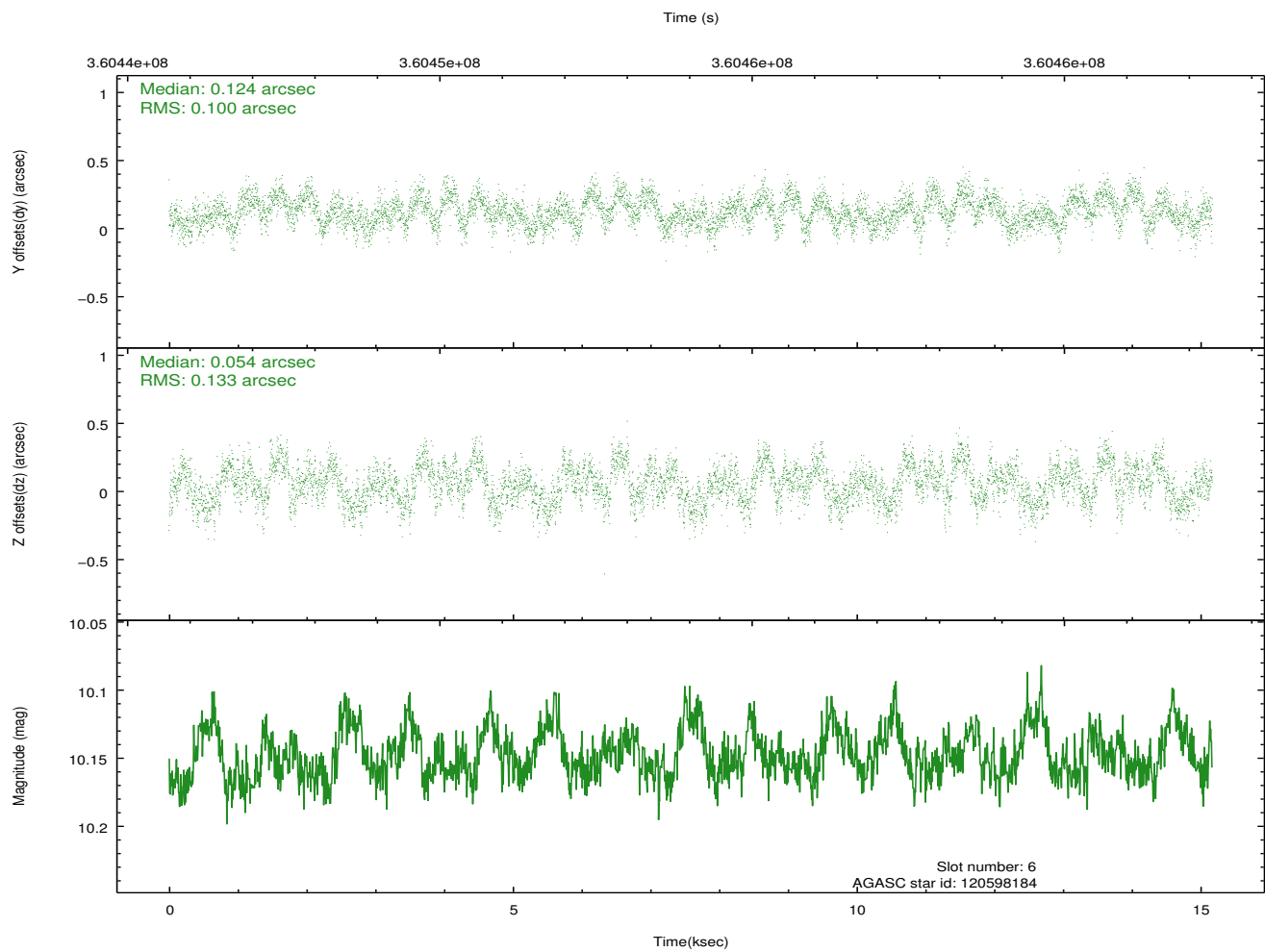
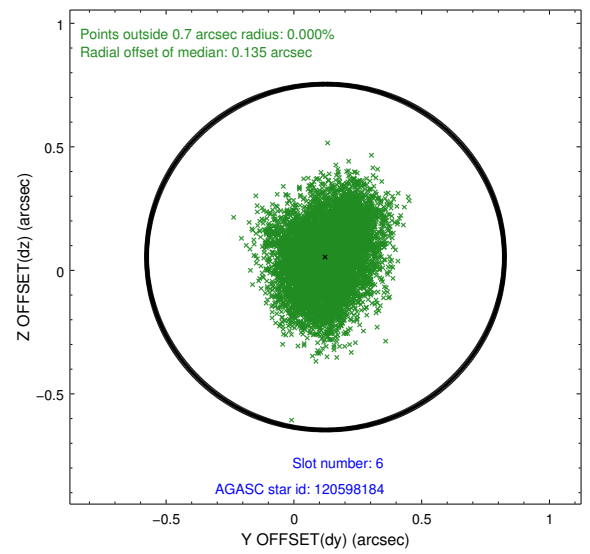
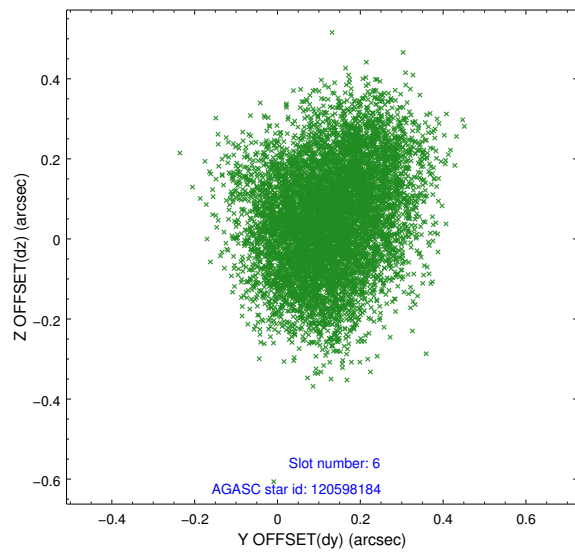
Time (s)



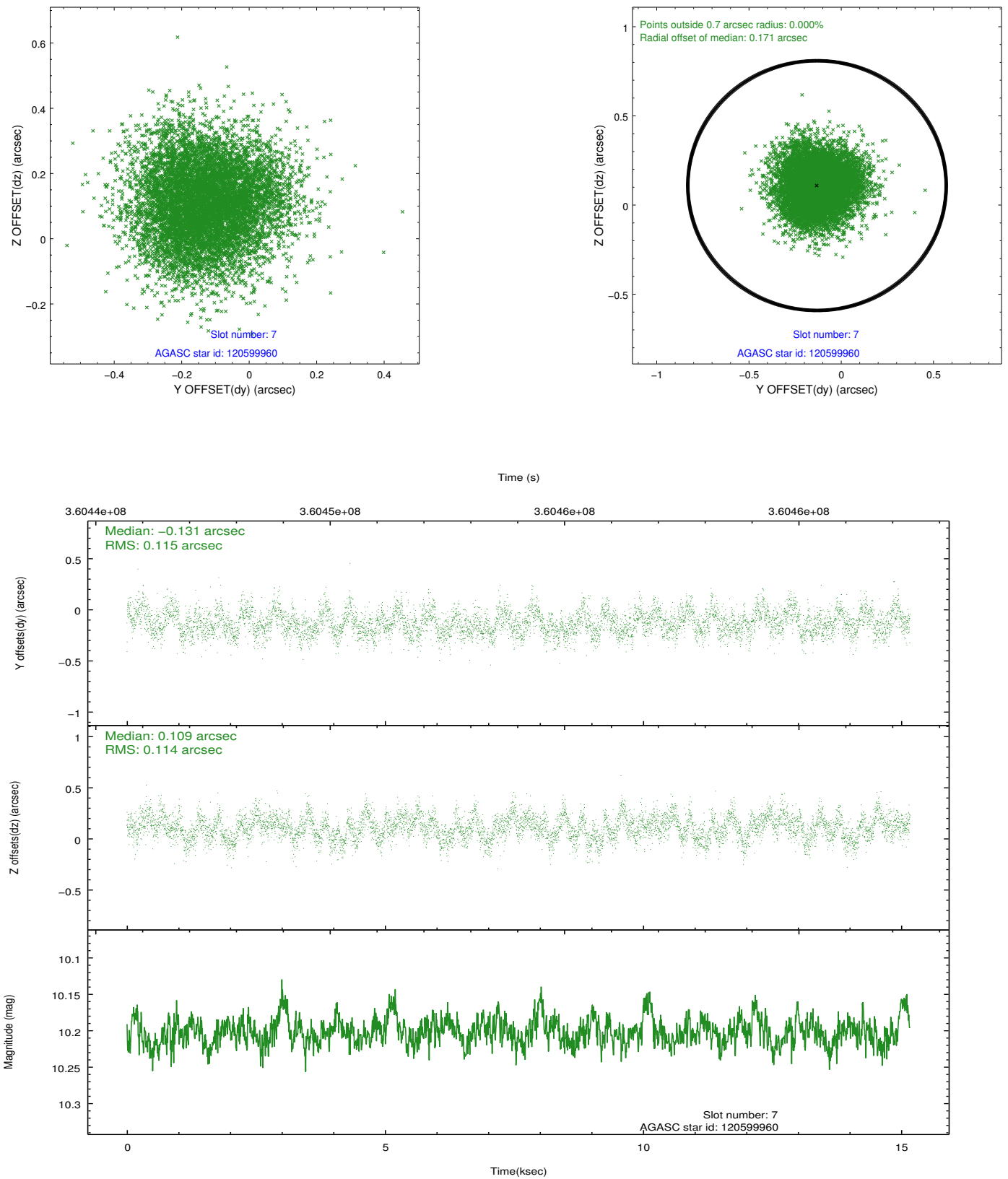
### 2.4.3 Slot 5



## 2.4.4 Slot 6

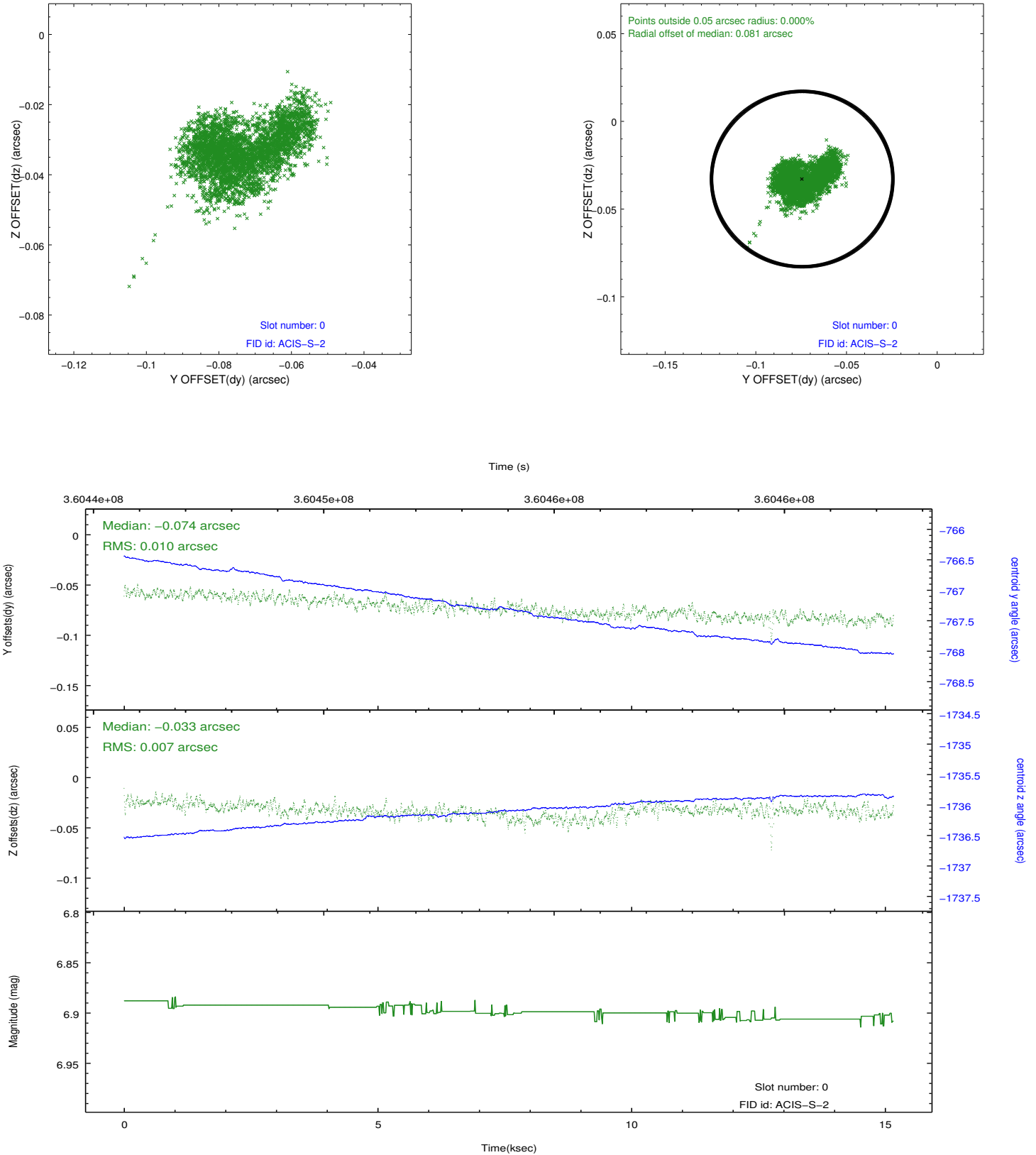


## 2.4.5 Slot 7

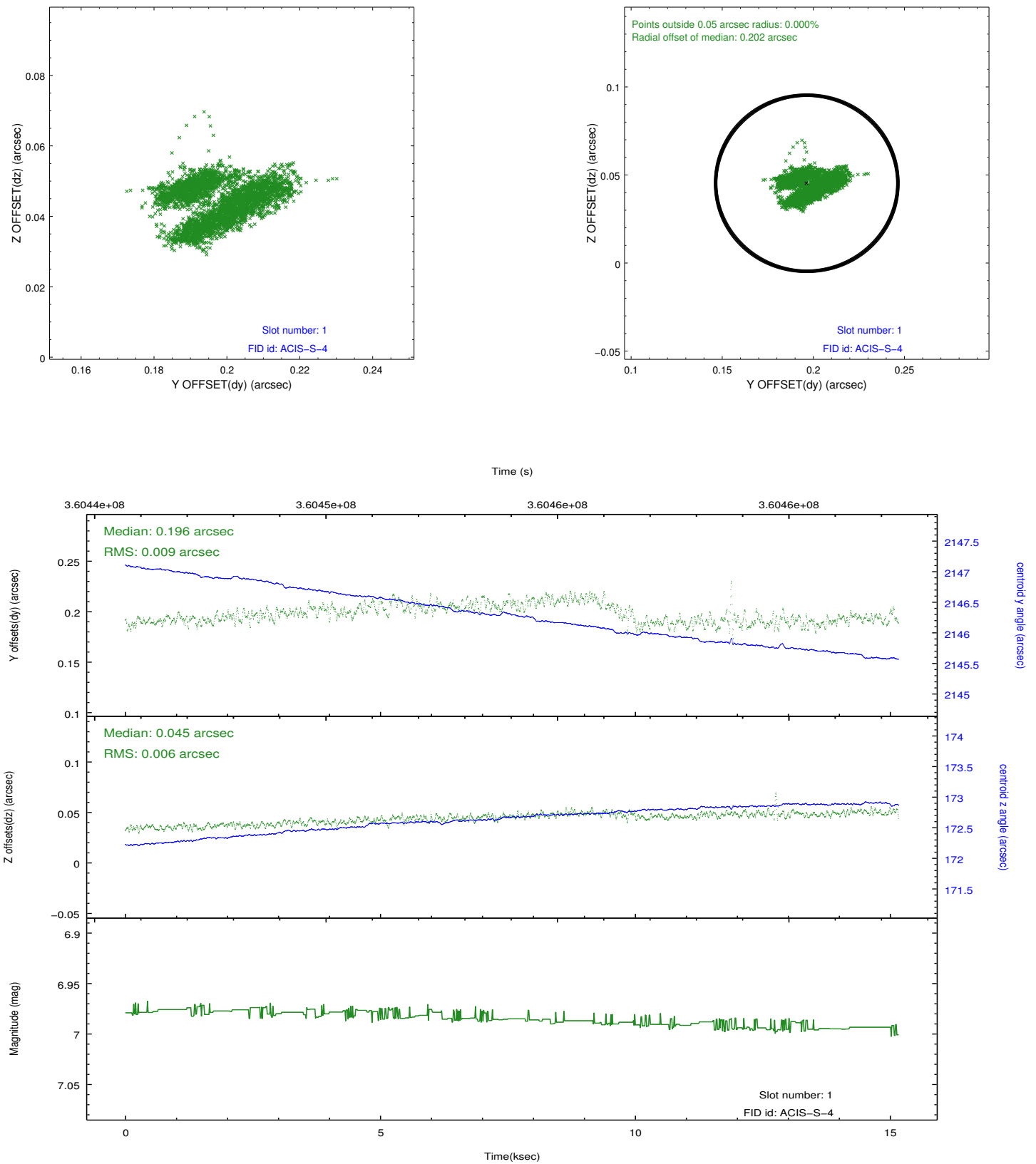


## 2.5 FID Slots

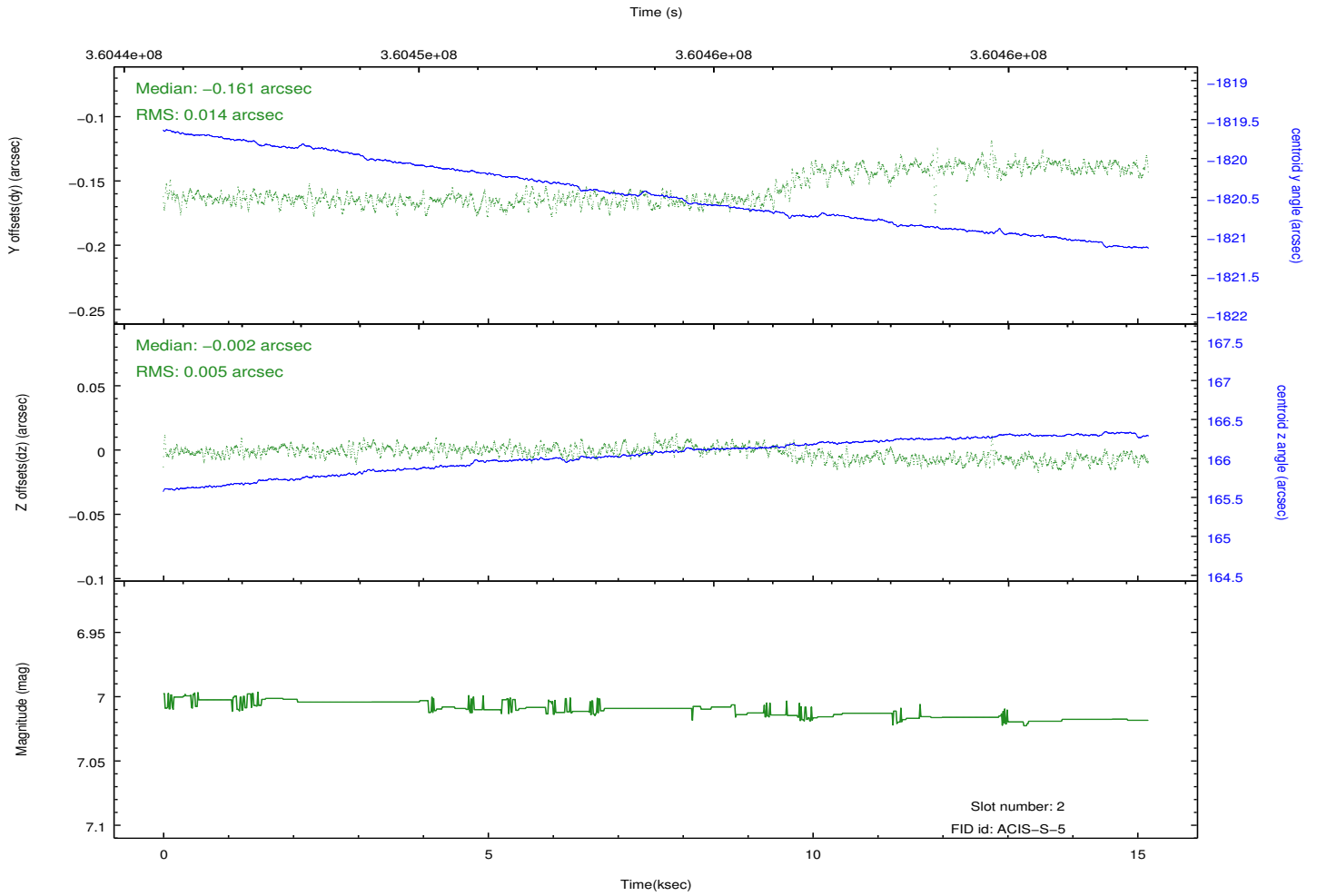
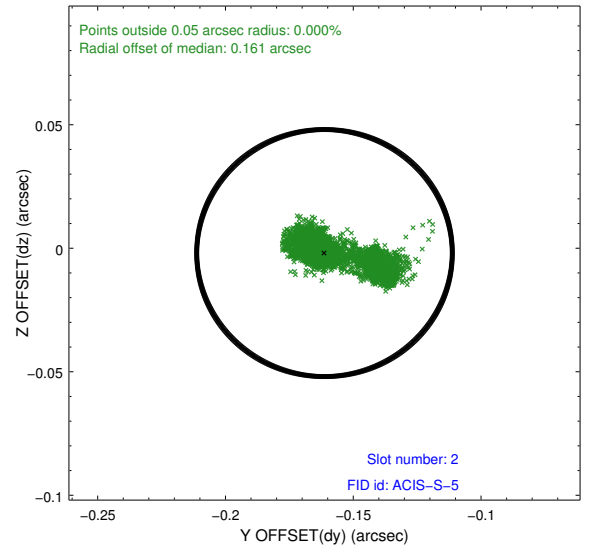
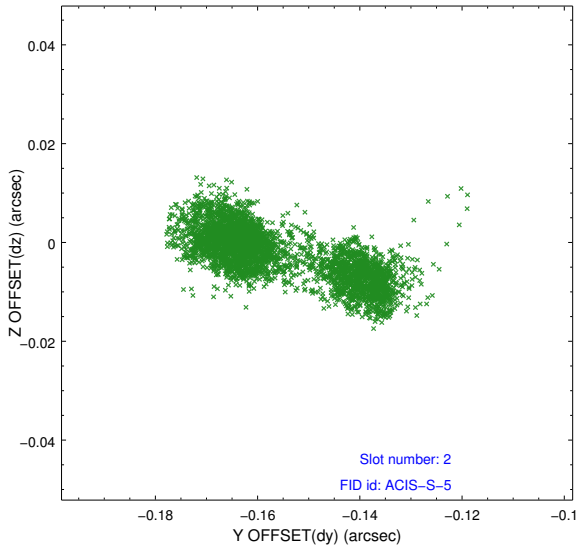
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.1621001

## A.2 Comments