

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12962 - L2 Version 2  
Chandra X-Ray Center

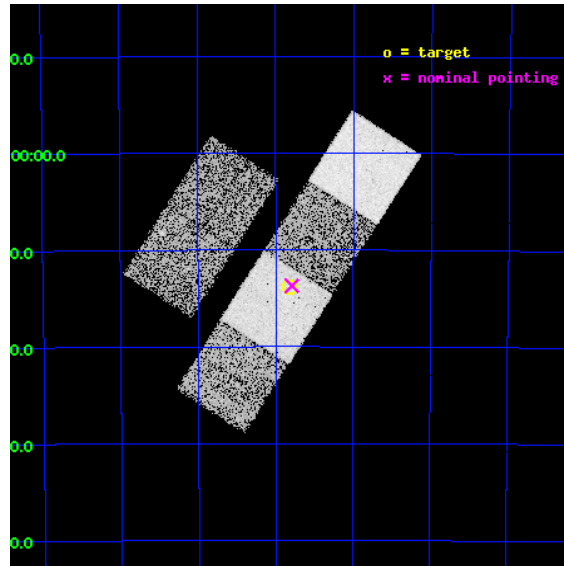
L2 Processing Date : Feb 3 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

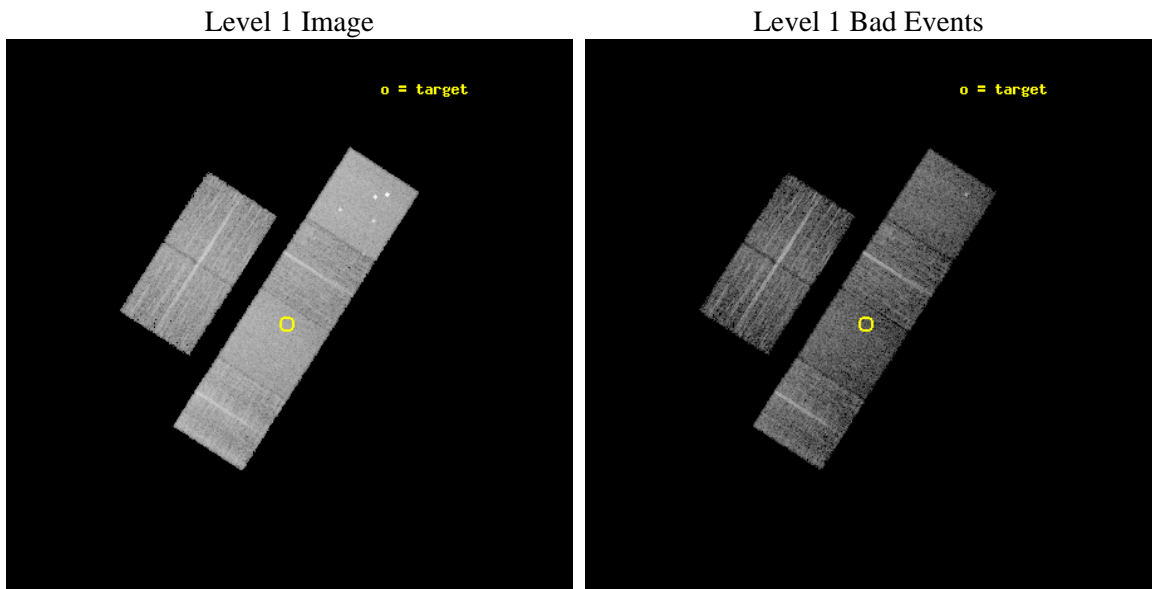
seq_num	600930	Sequence number
obs_id	12962	Observation id
title	X-rays from Isolated Elliptical Galaxies	Proposal title
observer	Dr. DAVID BUOTE	Principal investigator
object	ESO182-007	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	274.205833	Observer's specified target RA [deg]
dec_targ	-57.230528	Observer's specified target Dec [deg]
ra_nom	274.19782966381	Nominal RA [deg]
dec_nom	-57.22851153392	Nominal Dec [deg]
roll_nom	122.66558947084	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7614.6718221307	Sum of GTIs [s]
livetime	7518.250262514	Livetime [s]
ontime2	7614.712862134	Sum of GTIs [s]
ontime3	7611.3077318668	Sum of GTIs [s]
ontime5	7614.6307821274	Sum of GTIs [s]
ontime6	7611.3487817645	Sum of GTIs [s]
ontime7	7614.6718221307	Sum of GTIs [s]
ontime8	7614.5076621175	Sum of GTIs [s]
l2events	88737	Number of level 2 events



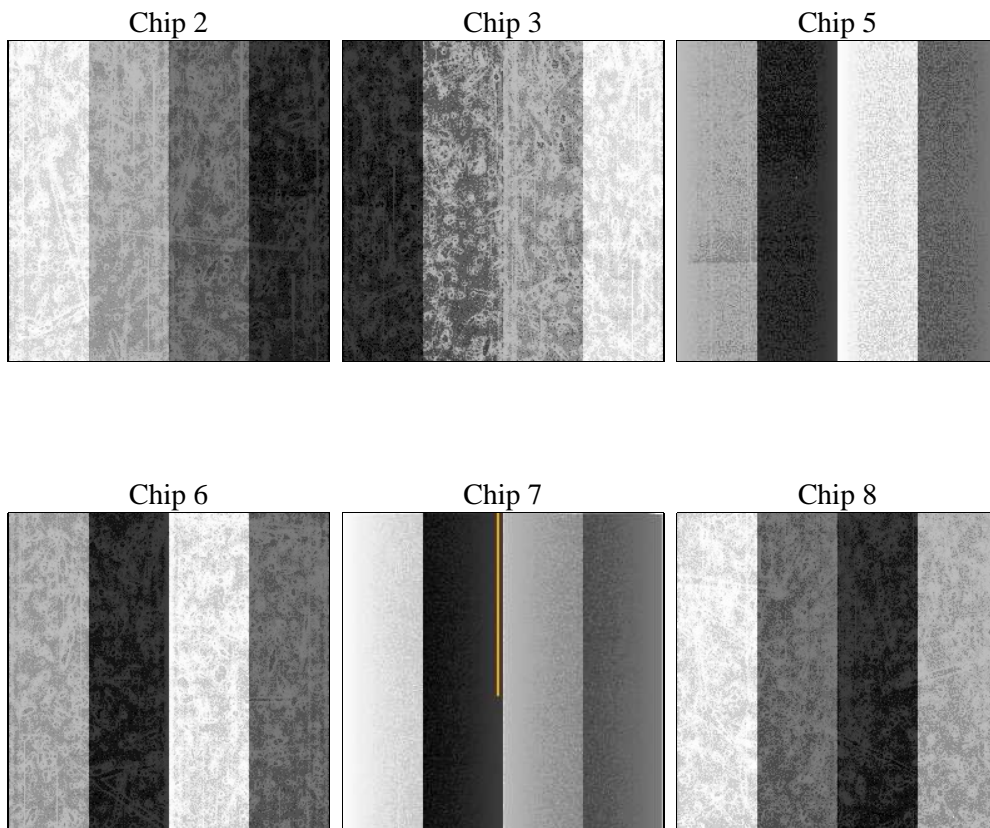
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7565.062000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	7614.6718221307	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	7614.712862134	Sum of GTIs [s]
date	2012-02-03T14:43:02	Date and time of file creation	ontime3	7611.3077318668	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	7614.6307821274	Sum of GTIs [s]
			ontime6	7611.3487817645	Sum of GTIs [s]
			ontime7	7614.6718221307	Sum of GTIs [s]
			ontime8	7614.5076621175	Sum of GTIs [s]
			l1events	375718	Number of level 1 events

### 2.1.4 Events

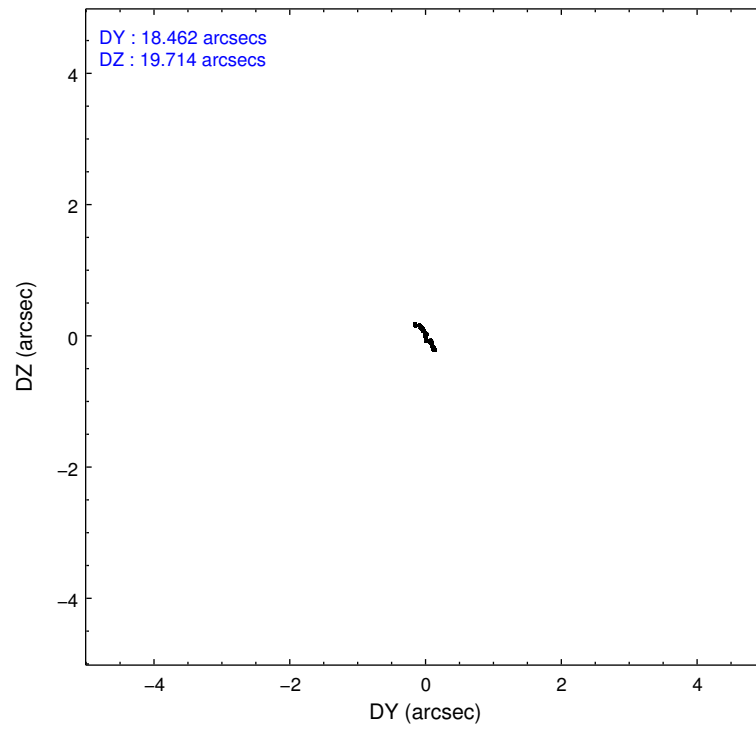
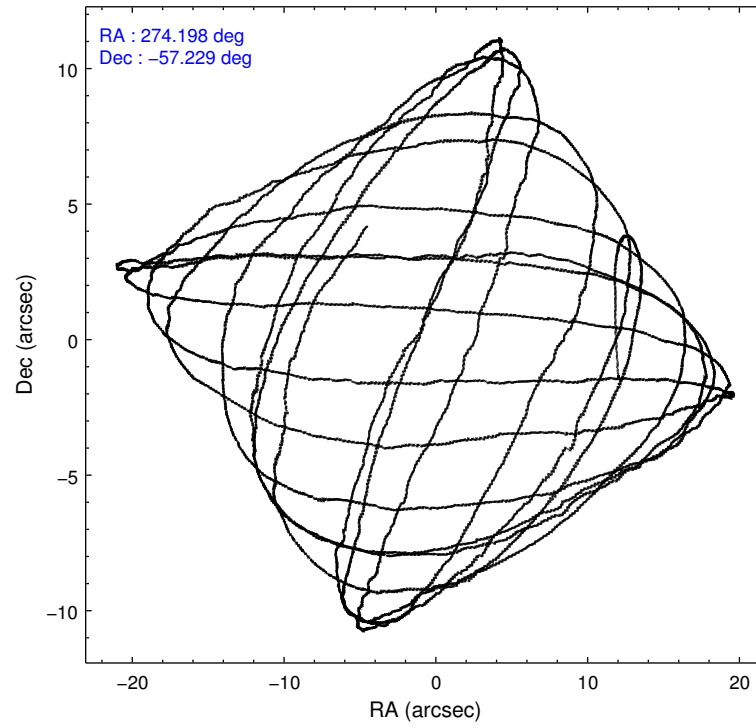
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	53294	50861	84434	52898	65916	68315	grade 0 events	2177	2051	5615	2266	2865	5759
rejected events	47407	45339	41197	46742	35935	50272		4%	4%	6%	4%	4%	8%
rejected %	88%	89%	48%	88%	54%	73%	grade 1 events	27	33	378	33	87	62
								0%	0%	0%	0%	0%	0%
							grade 2 events	1371	1186	13653	1402	6076	4150
								2%	2%	16%	2%	9%	6%
							grade 3 events	605	596	1590	579	2661	1849
								1%	1%	1%	1%	4%	2%
							grade 4 events	599	596	1486	617	2649	1729
								1%	1%	1%	1%	4%	2%
							grade 5 events	2162	2274	6290	2405	6825	3560
								4%	4%	7%	4%	10%	5%
							grade 6 events	1146	1100	20929	1299	15751	4567
								2%	2%	24%	2%	23%	6%
							grade 7 events	45207	43025	34493	44297	29002	46639
								84%	84%	40%	83%	43%	68%

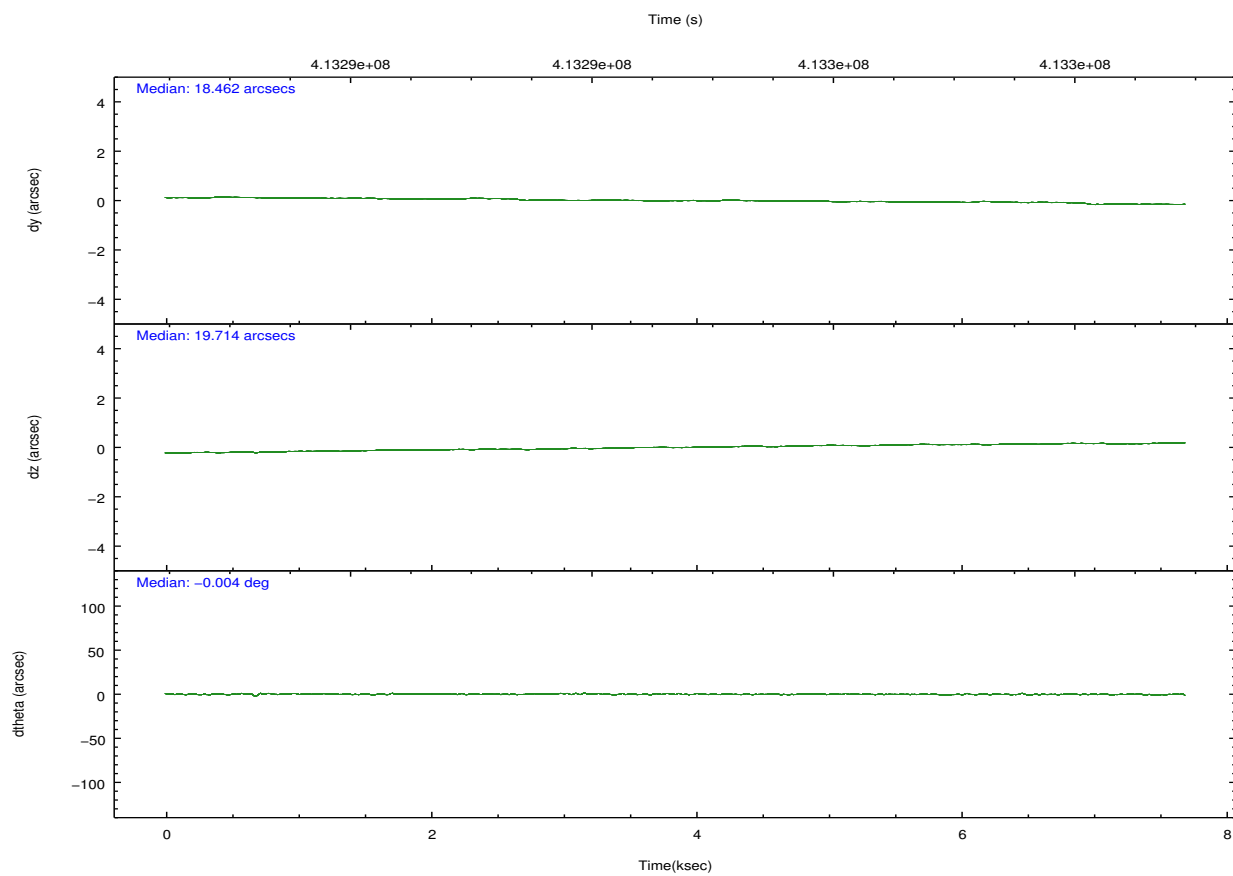
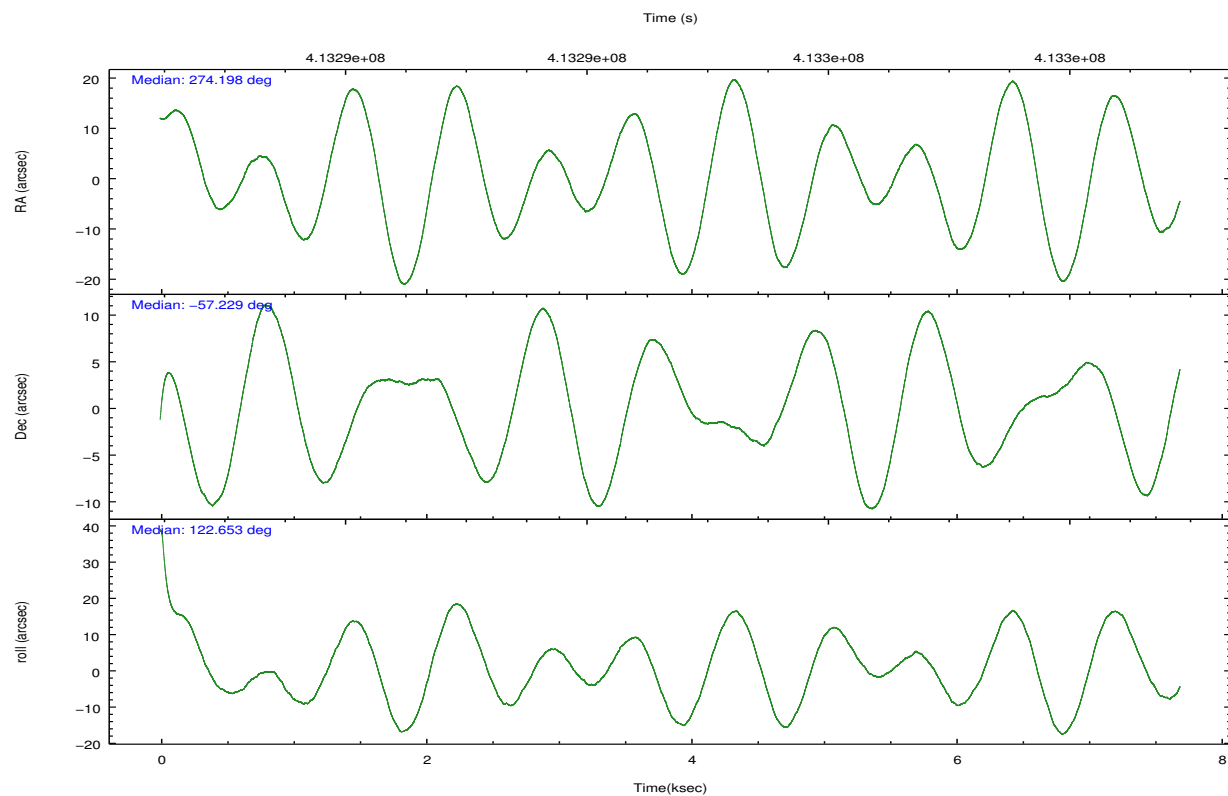


## 2.2 Compared Parameters

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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	274.242959	274.1978296638133	CCD I2 on	O2	Y
[deg] Pointing Dec	-57.240647	-57.22851153392	CCD I3 on	Y	Y
[deg] Pointing Roll	122.546870	122.665589470844	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	O1	Y
[s] Observation start time (MET)	413290964.184000	413289494.2809	CCD S5 on	N	N
Observation start date	2011-02-05T11:01:38	2011-02-05T10:38:14	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	413298529.184000	413298758.74388	On-chip summing requested	N	N
Observation end date	2011-02-05T13:07:43	2011-02-05T13:12:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



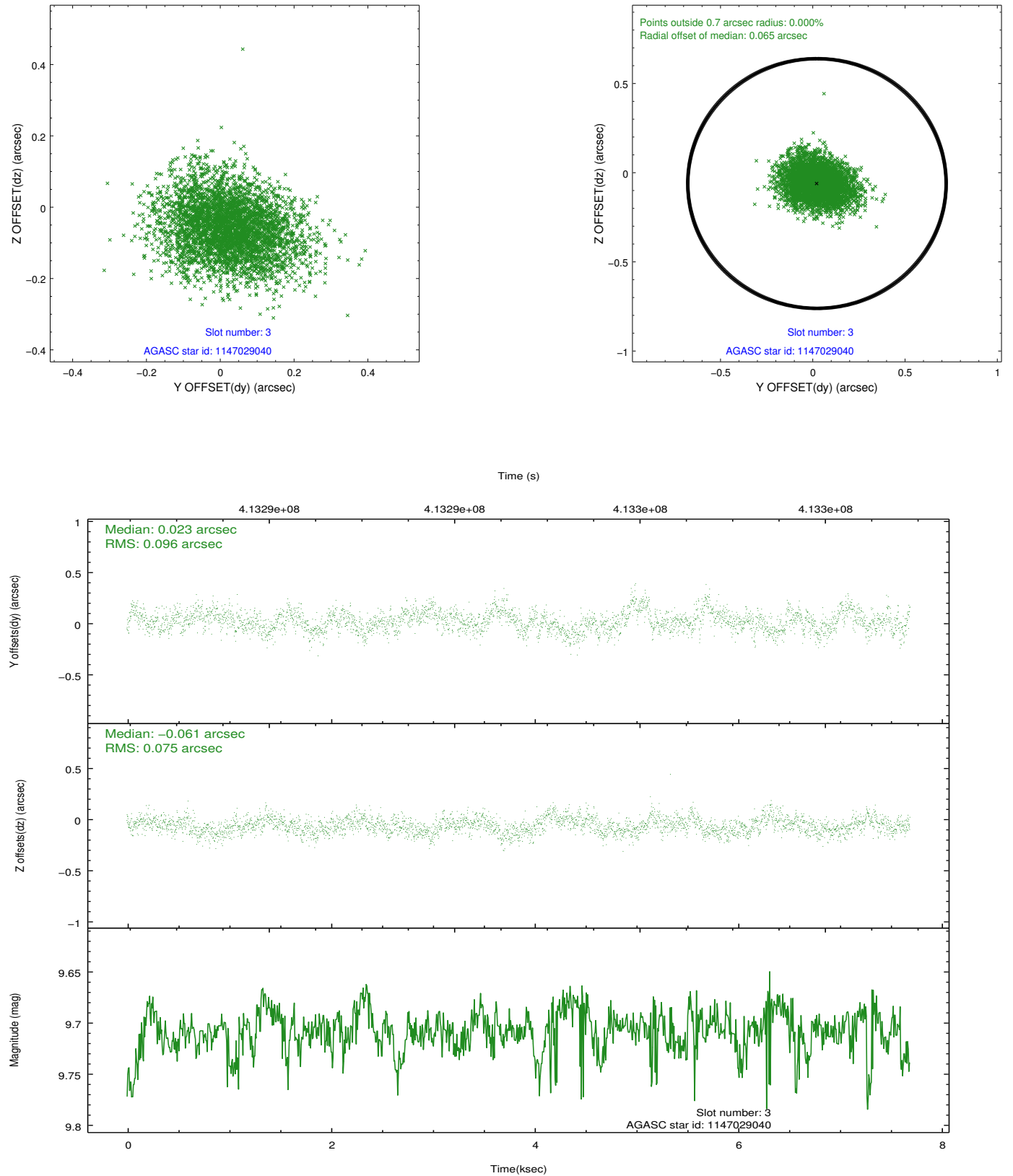


### Slot Statistics

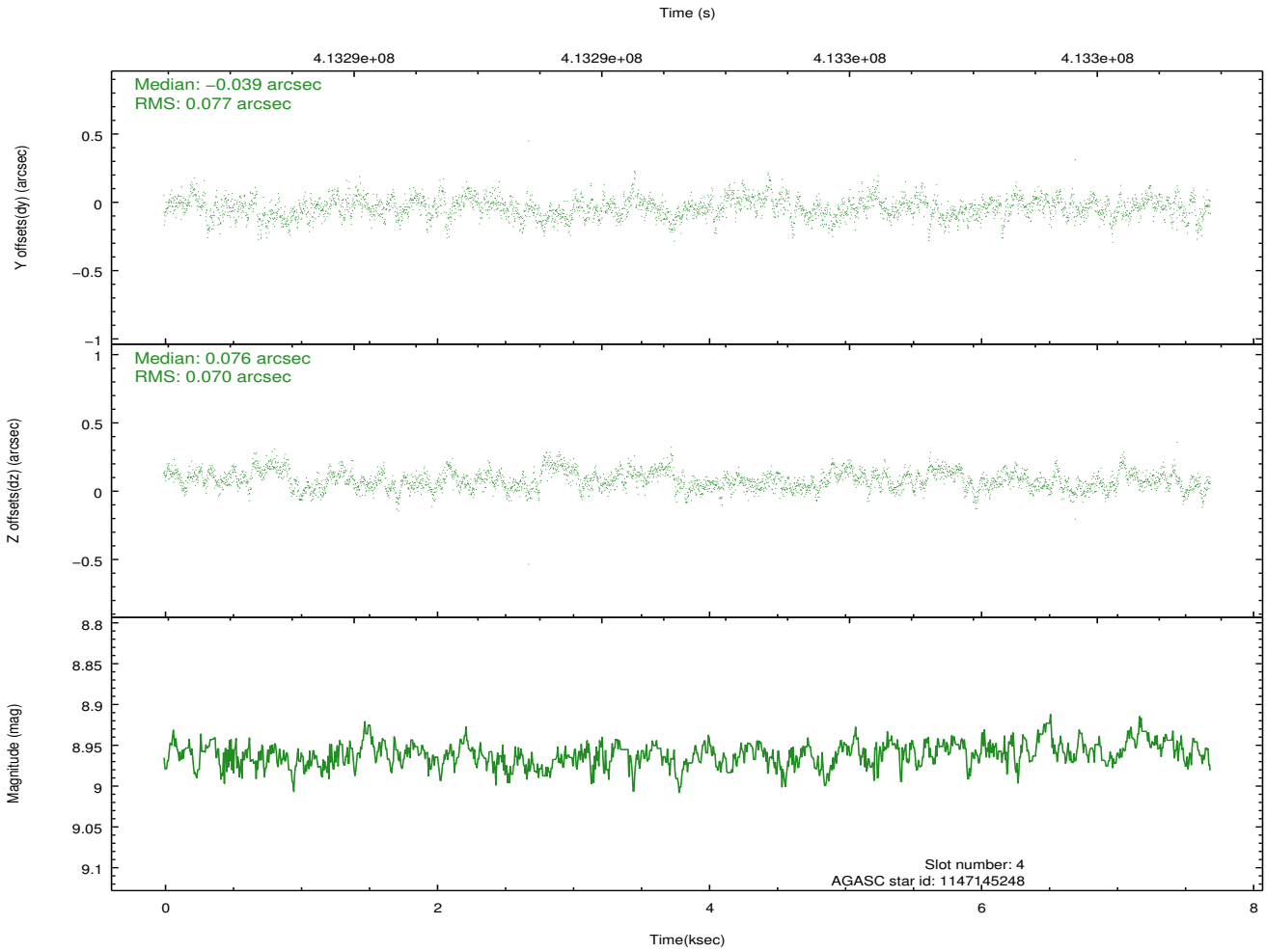
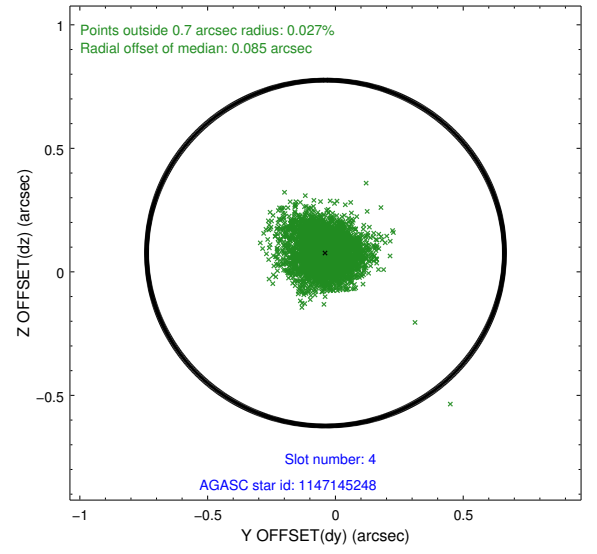
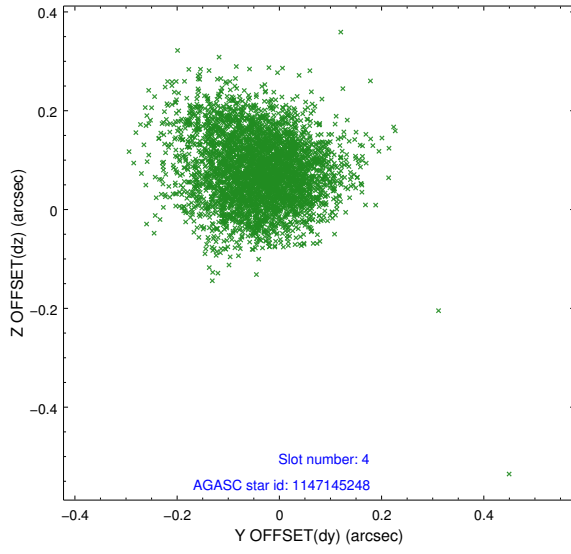
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	1877	-0.104	-0.041	0.008	0.013	0.000000	0.000000	-771.63	-1741.26
1	FID	ACIS-S-4	6.98	1876	0.250	0.061	0.007	0.013	0.000000	0.000000	2141.66	166.57
2	FID	ACIS-S-5	7.01	1876	-0.176	-0.012	0.008	0.014	0.000000	0.000000	-1823.61	160.99
3	GUIDE	1147029040	9.71	3745	0.023	-0.061	0.129	0.213	273.197850	-57.077881	1581.14	1417.10
4	GUIDE	1147145248	8.96	3751	-0.039	0.076	0.109	0.178	274.305706	-56.768069	1368.66	-1018.92
5	GUIDE	1147145576	7.96	3752	-0.324	0.093	0.072	0.119	274.221751	-56.817802	1306.47	-783.69
6	GUIDE	1147159720	7.24	3753	0.177	-0.094	0.093	0.155	274.118999	-57.447135	-496.89	602.06
7	GUIDE	1147159800	7.74	3753	0.160	-0.022	0.096	0.163	274.461895	-56.477936	2080.86	-1843.28

## 2.4 Star Slots

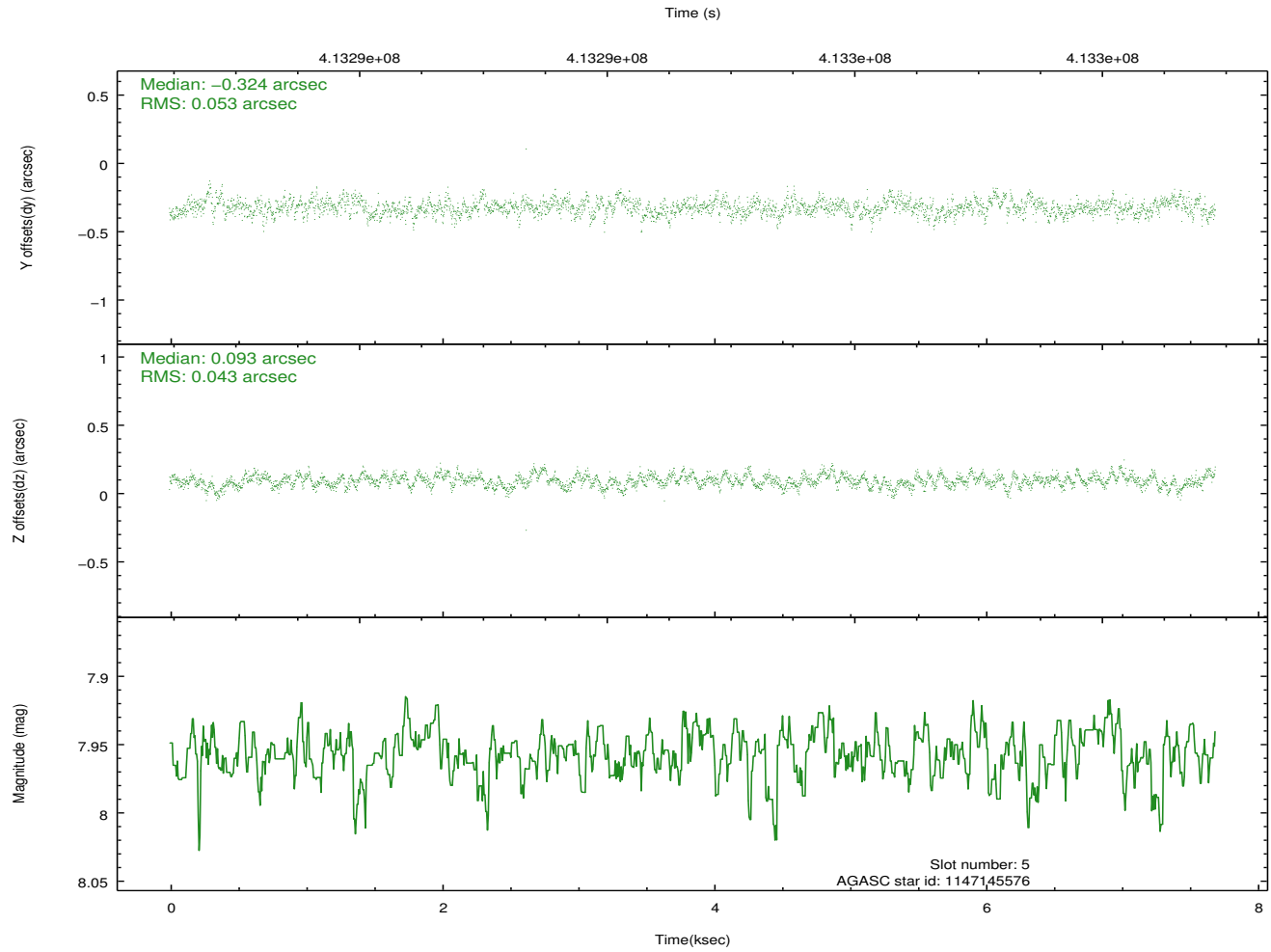
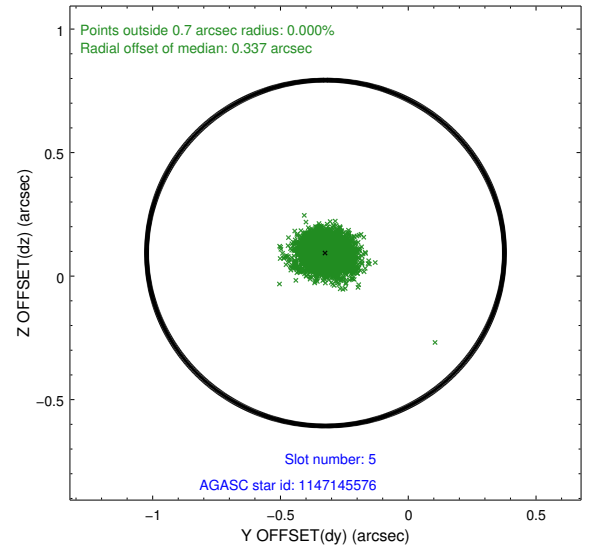
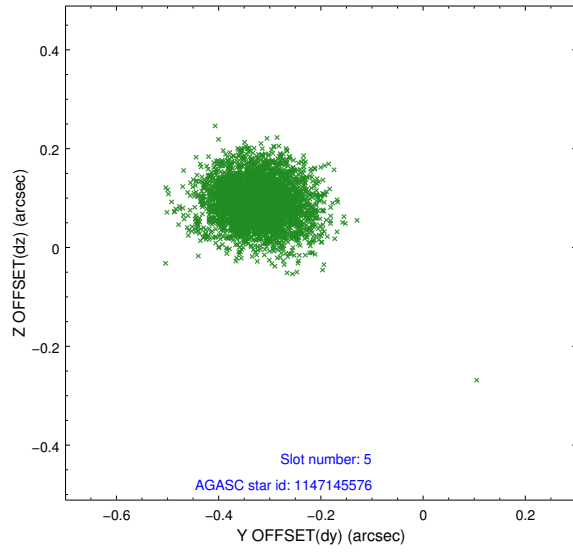
### 2.4.1 Slot 3



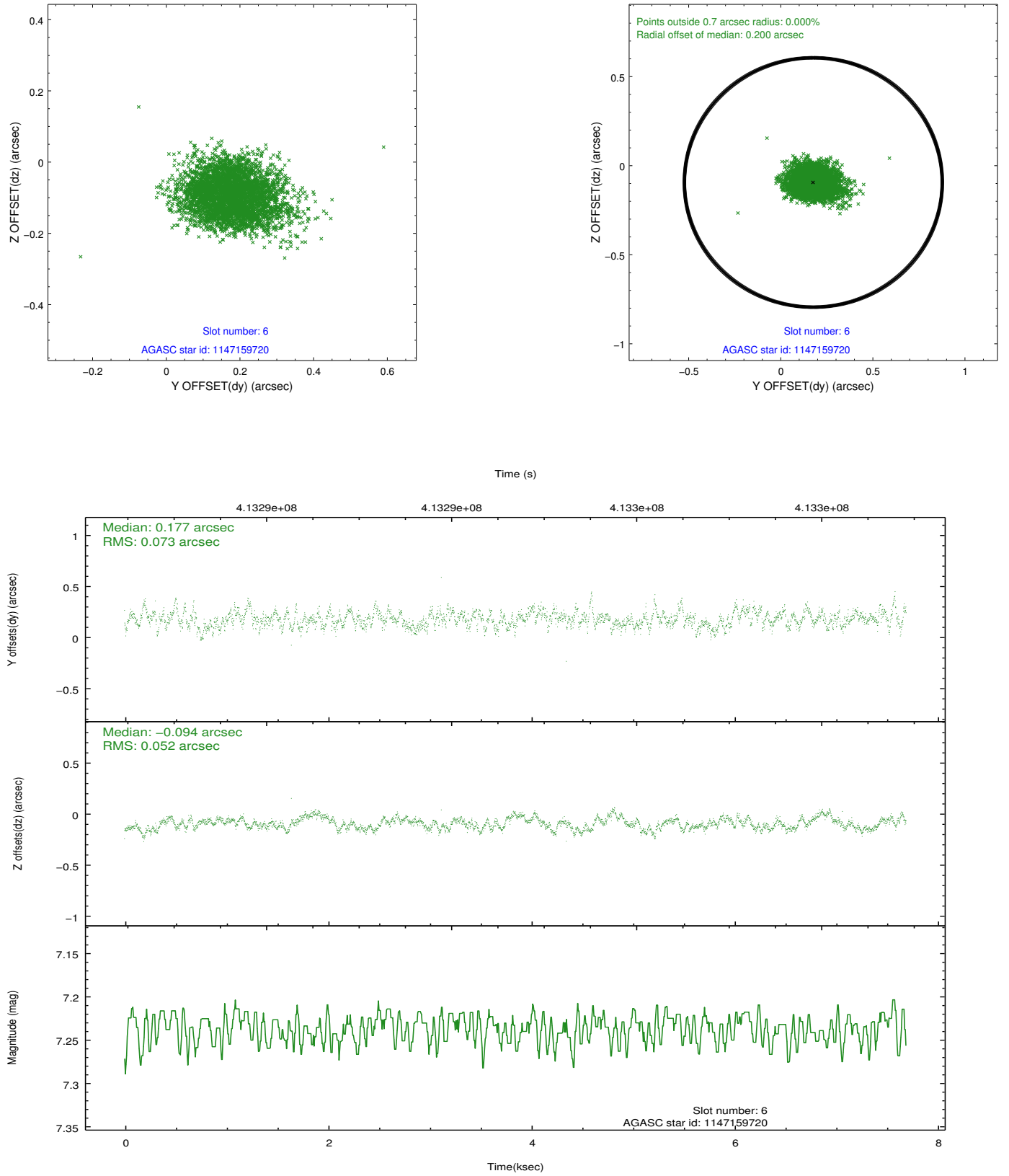
## 2.4.2 Slot 4



### 2.4.3 Slot 5

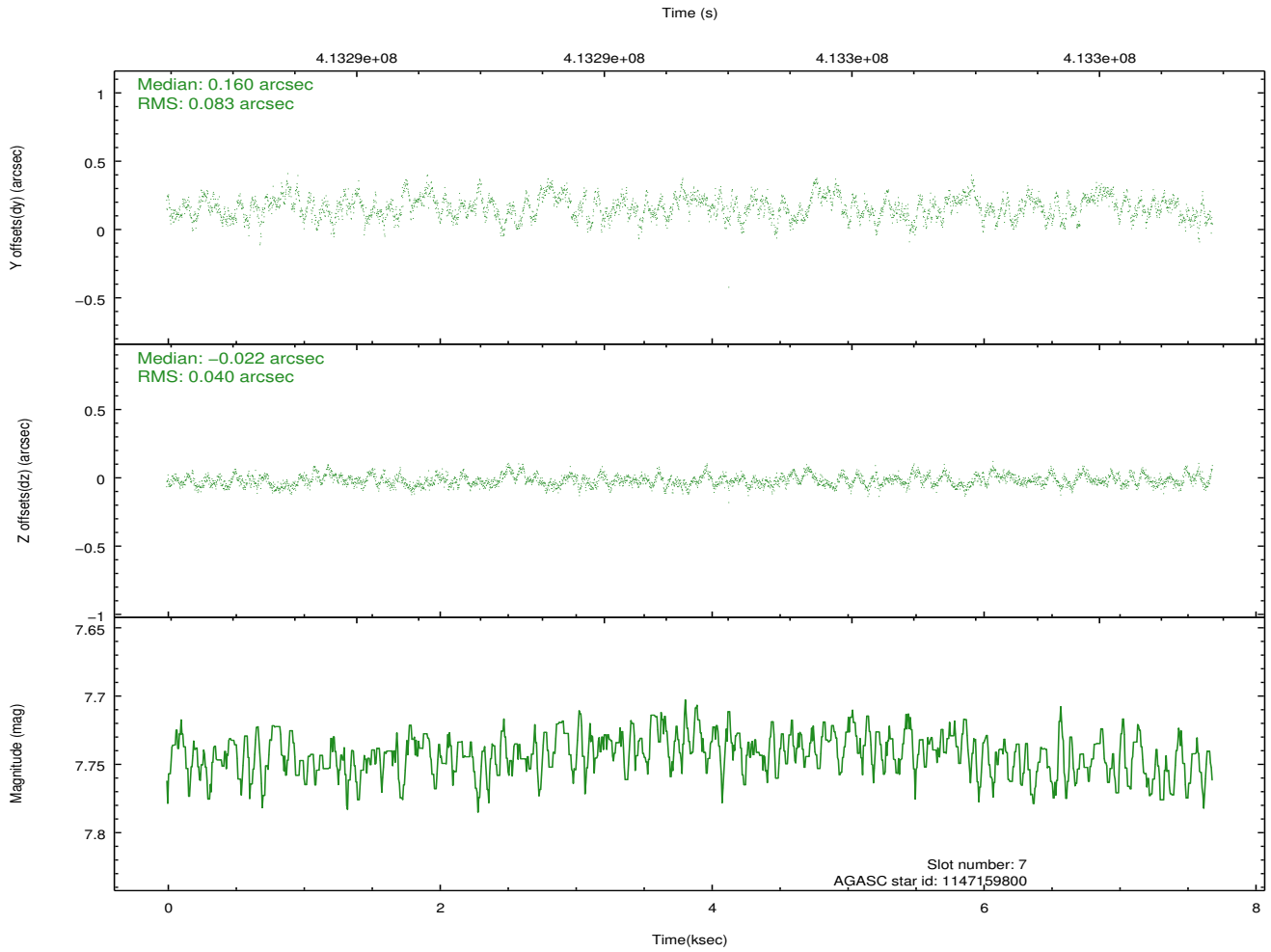
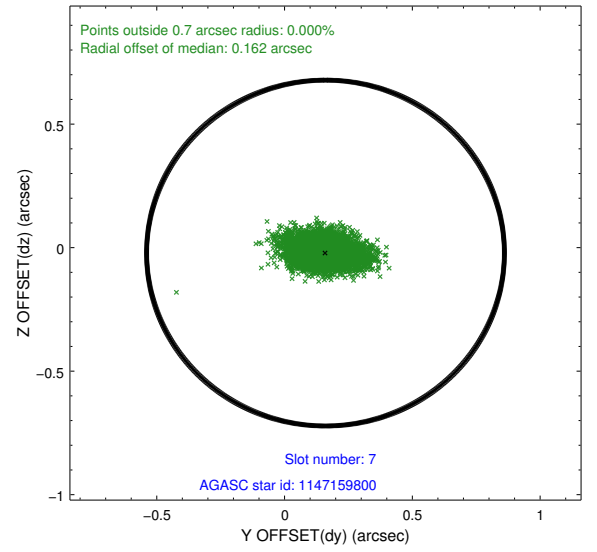
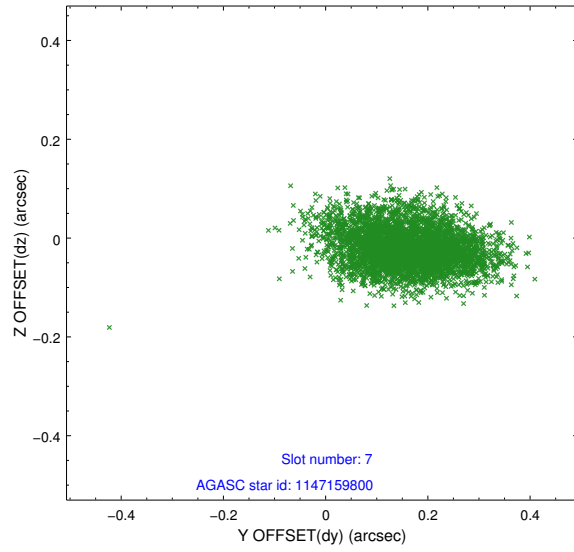


## 2.4.4 Slot 6



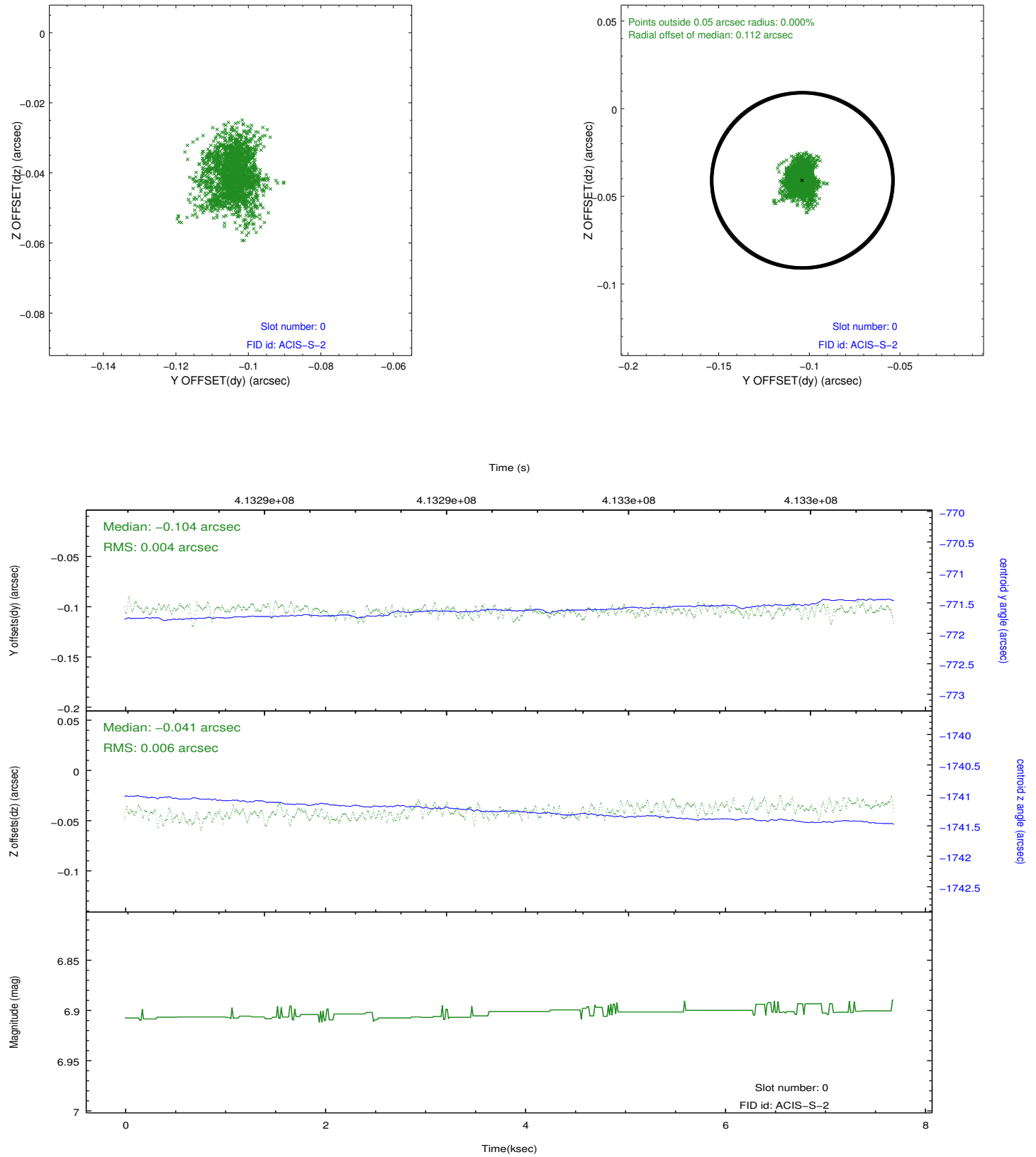


## 2.4.5 Slot 7

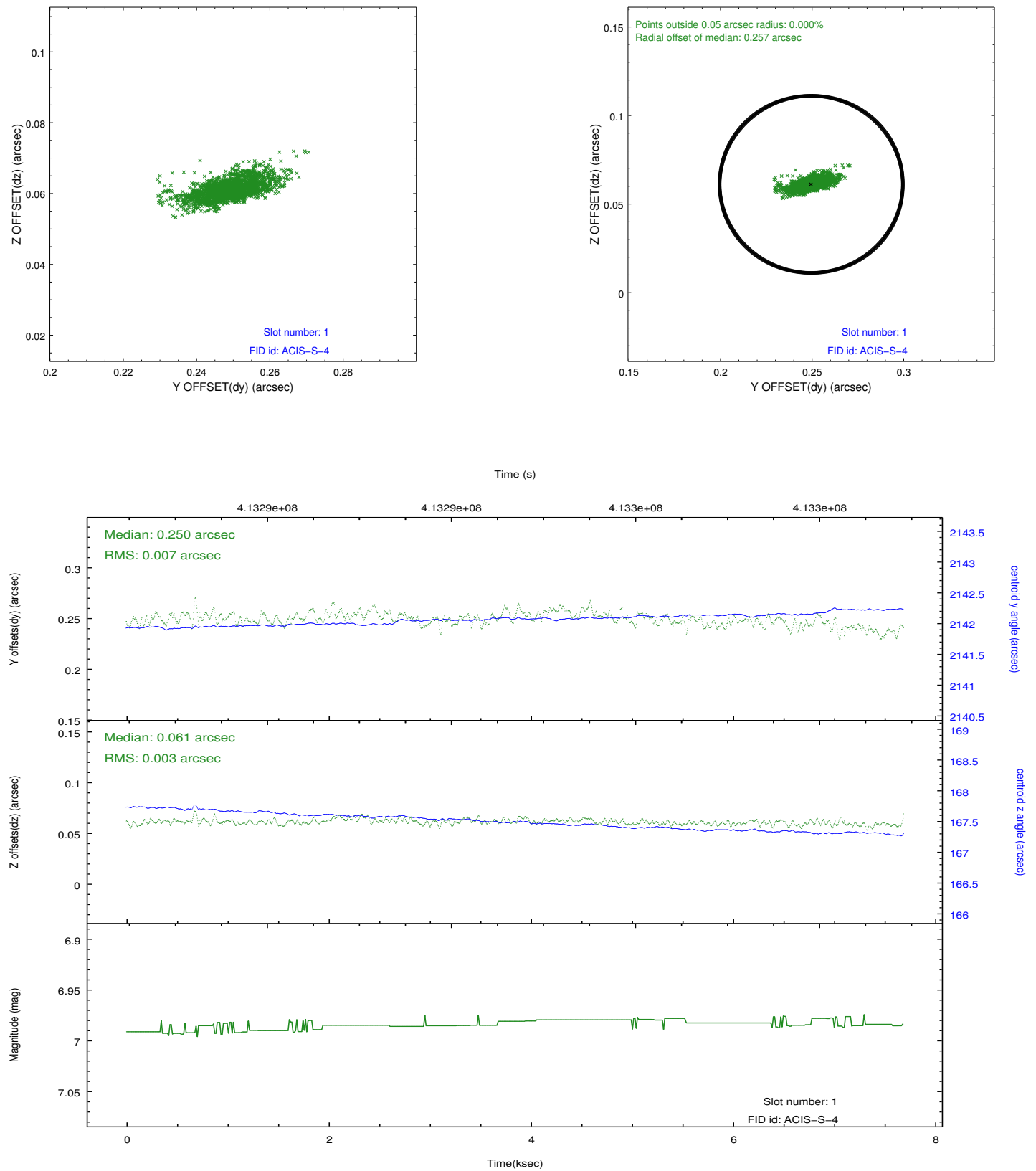


## 2.5 FID Slots

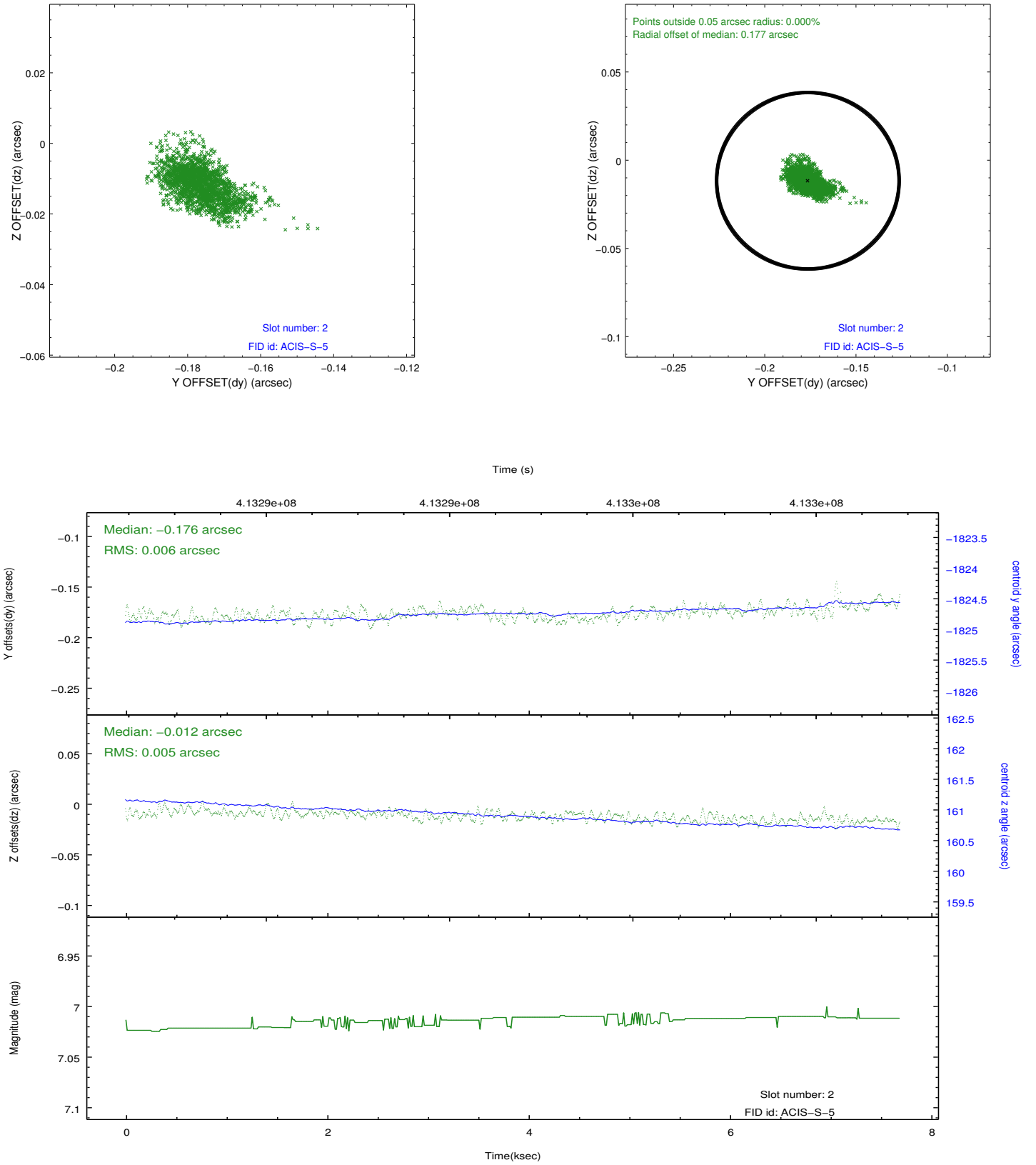
### 2.5.1 Slot 0



## 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)	2012.02.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.6146718193889

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.