

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12158 - L2 Version 2  
Chandra X-Ray Center

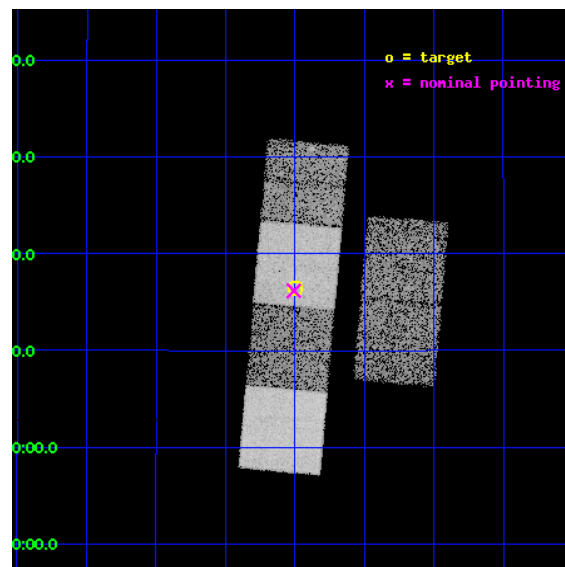
L2 Processing Date : Feb 7 2012

## 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

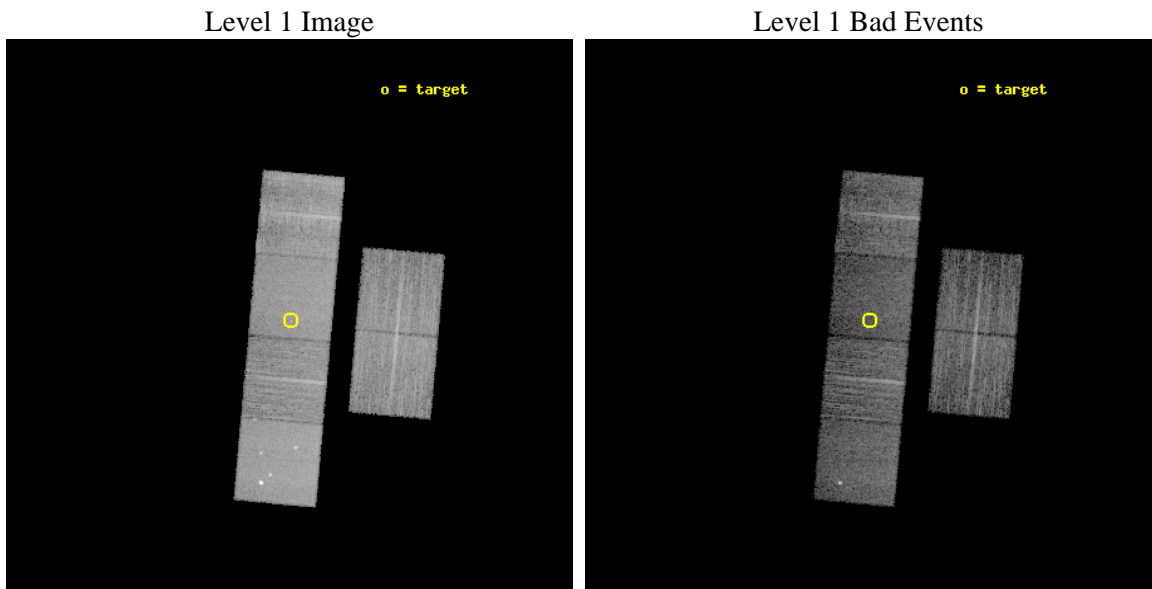
seq_num	702328	Sequence number
obs_id	12158	Observation id
title	Snapshot survey of 3CRR radio galaxies	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	4C 14.11	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	63.624167	Observer's specified target RA [deg]
dec_targ	14.273333	Observer's specified target Dec [deg]
ra_nom	63.627131815435	Nominal RA [deg]
dec_nom	14.269472534376	Nominal Dec [deg]
roll_nom	275.10487534198	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10054.399962604	Sum of GTIs [s]
livetime	9927.0850962447	Livetime [s]
ontime2	10054.399962604	Sum of GTIs [s]
ontime3	10054.399962604	Sum of GTIs [s]
ontime5	10054.399962604	Sum of GTIs [s]
ontime6	10054.399962604	Sum of GTIs [s]
ontime7	10054.399962604	Sum of GTIs [s]
ontime8	10054.399962604	Sum of GTIs [s]
l2events	106624	Number of level 2 events



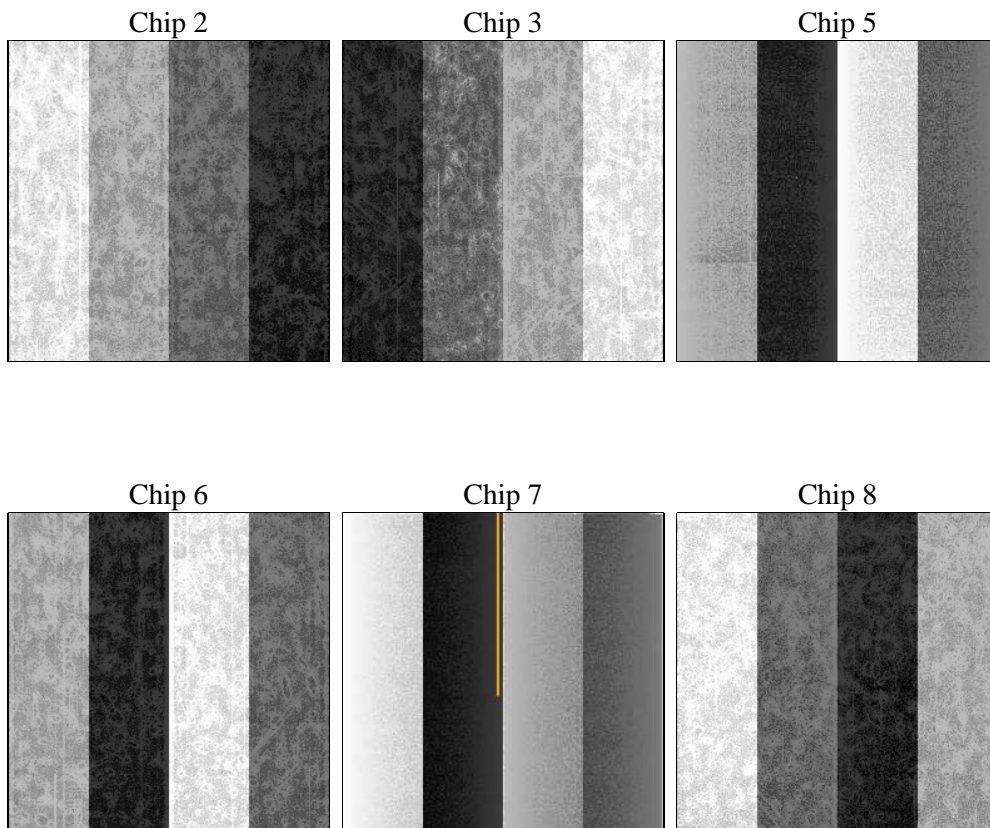
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10054.399962604	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	10054.399962604	Sum of GTIs [s]
date	2012-02-07T13:44:17	Date and time of file creation	ontime3	10054.399962604	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	10054.399962604	Sum of GTIs [s]
			ontime6	10054.399962604	Sum of GTIs [s]
			ontime7	10054.399962604	Sum of GTIs [s]
			ontime8	10054.399962604	Sum of GTIs [s]
			l1events	458585	Number of level 1 events

### 2.1.4 Events

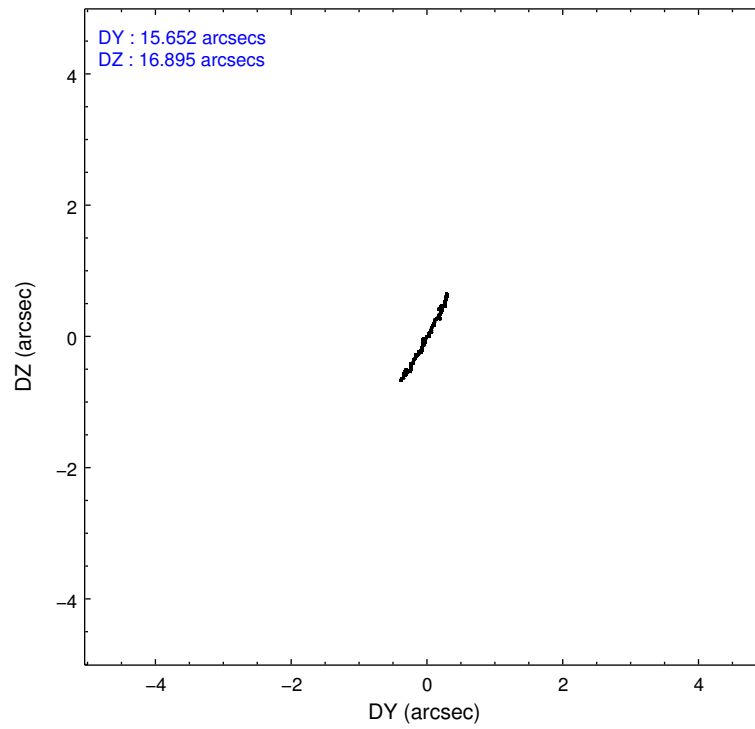
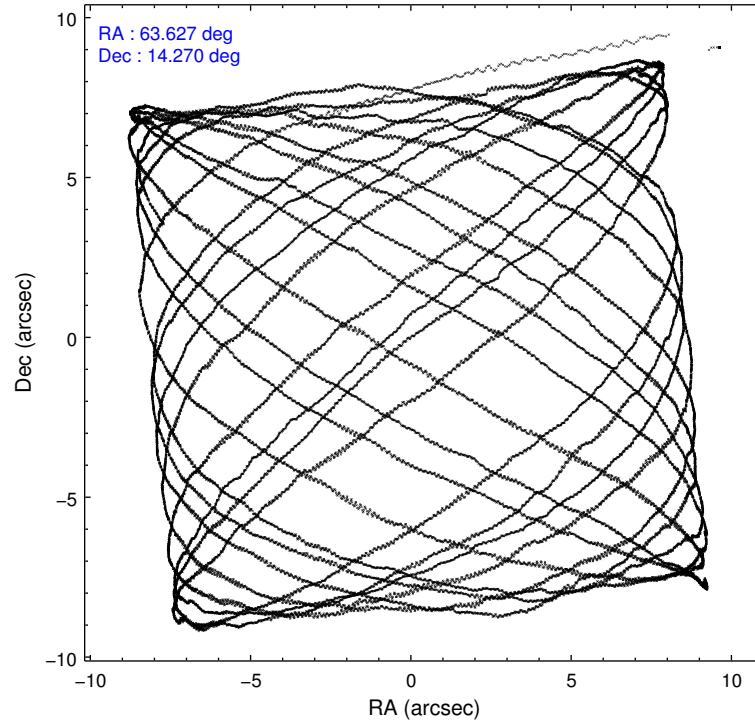
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	66663	59946	103492	63322	80414	84748	grade 0 events	2392	2267	5417	2492	3330	7038
rejected events	59744	53457	51934	56107	44359	61909		3%	3%	5%	3%	4%	8%
rejected %	89%	89%	50%	88%	55%	73%	grade 1 events	47	41	587	40	75	79
								0%	0%	0%	0%	0%	0%
							grade 2 events	1716	1459	16457	1605	7287	5100
								2%	2%	15%	2%	9%	6%
							grade 3 events	682	682	1794	730	3136	2516
								1%	1%	1%	1%	3%	2%
							grade 4 events	777	718	1779	782	3110	2388
								1%	1%	1%	1%	3%	2%
							grade 5 events	2609	2977	7584	2975	8363	4356
								3%	4%	7%	4%	10%	5%
							grade 6 events	1357	1364	26150	1610	19219	5802
								2%	2%	25%	2%	23%	6%
							grade 7 events	57083	50438	43724	53088	35894	57469
								85%	84%	42%	83%	44%	67%

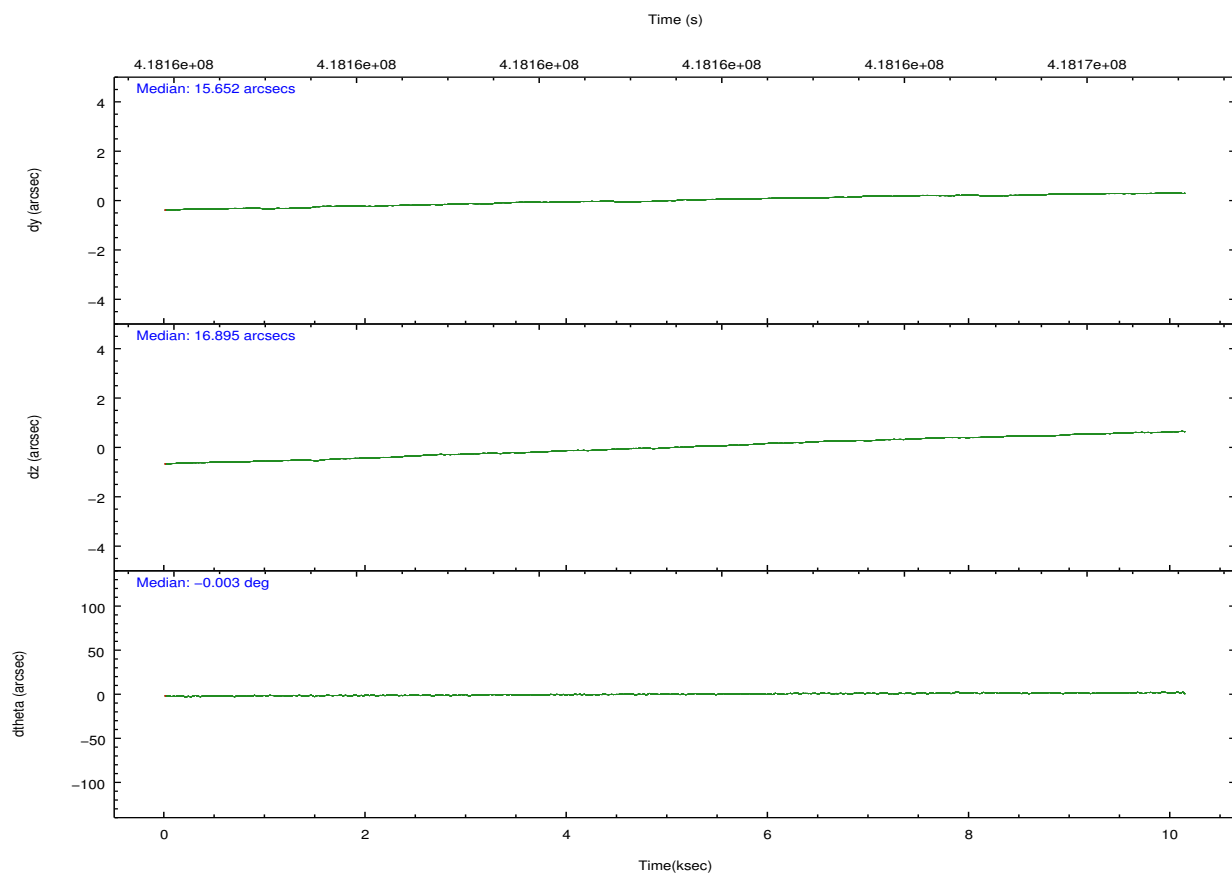
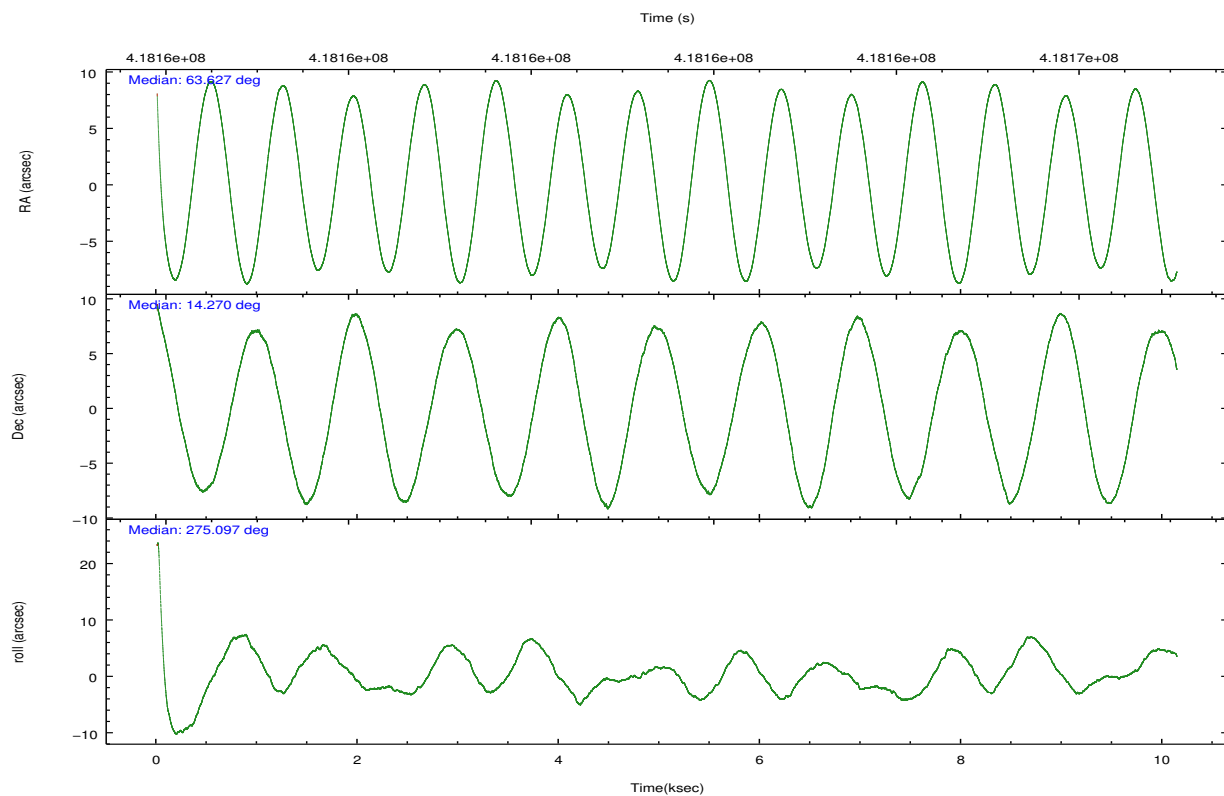


## 2.2 Compared Parameters

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	63.610626	63.62713181543546	CCD I2 on	O1	Y
[deg] Pointing Dec	14.291602	14.26947253437628	CCD I3 on	Y	Y
[deg] Pointing Roll	274.952271	275.1048753419818	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	418156568.184000	418155300.73288	CCD S5 on	N	N
Observation start date	2011-04-02T18:35:02	2011-04-02T18:15:00	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	418166568.184000	418167603.80851	On-chip summing requested	N	N
Observation end date	2011-04-02T21:21:42	2011-04-02T21:40:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



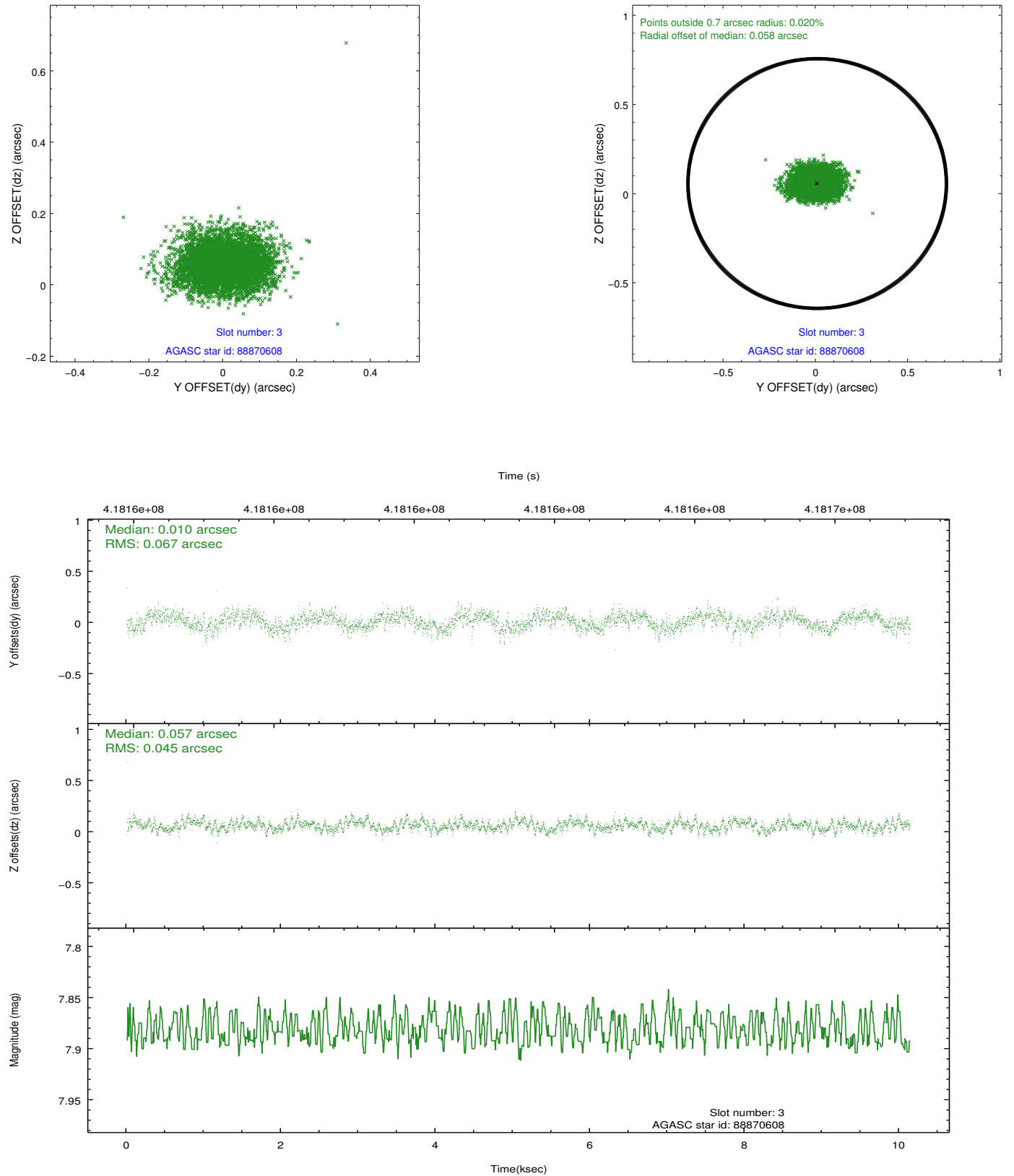


### Slot Statistics

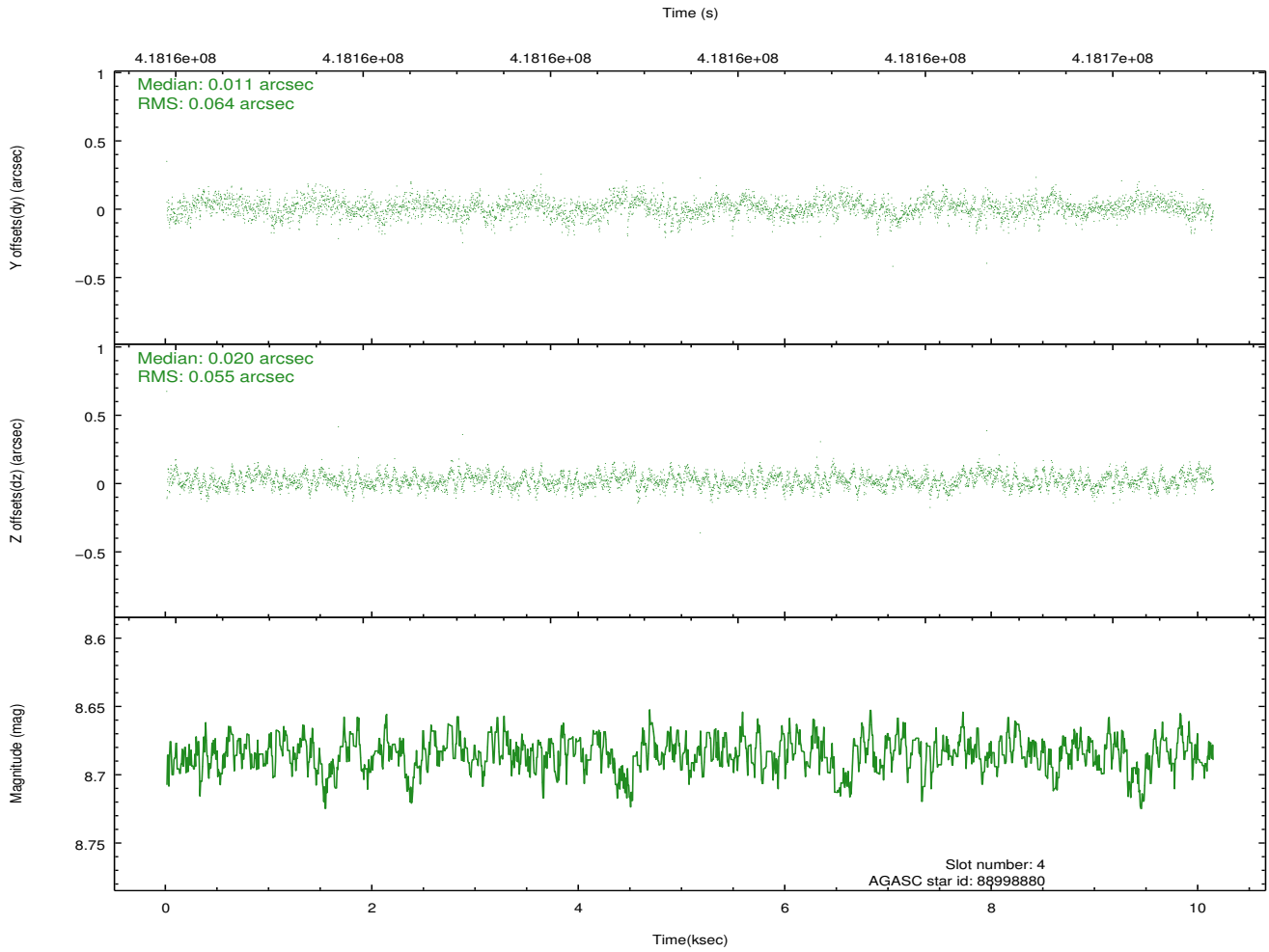
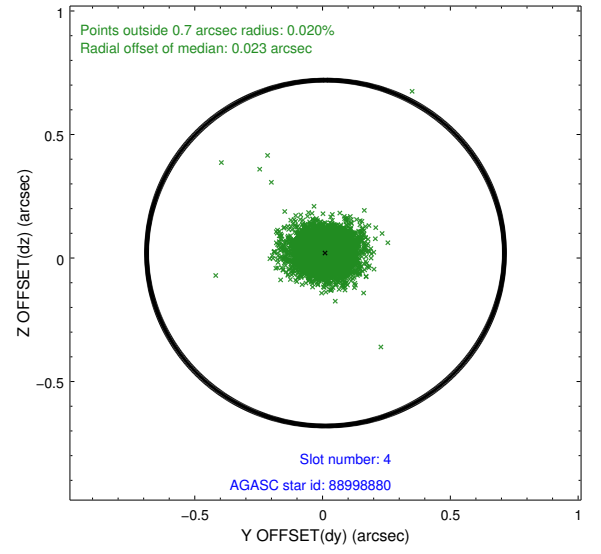
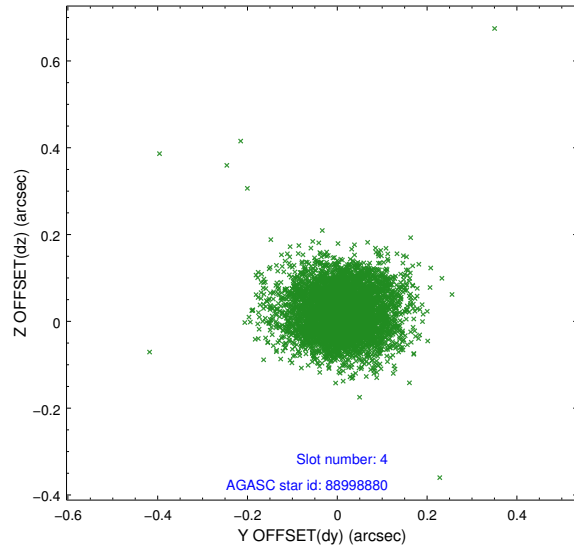
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.91	2472	-0.081	-0.026	0.015	0.022	0.000000	0.000000	-768.75	-1738.29
1	FID	ACIS-S-4	6.99	2473	0.172	0.046	0.009	0.017	0.000000	0.000000	2144.57	169.67
2	FID	ACIS-S-5	7.02	2473	-0.122	-0.011	0.013	0.020	0.000000	0.000000	-1820.93	163.95
3	GUIDE	88870608	7.88	4945	0.010	0.057	0.085	0.138	63.167967	14.635457	-1367.29	-1428.83
4	GUIDE	88998880	8.68	4934	0.011	0.020	0.088	0.145	63.382407	14.557450	-1021.67	-709.50
5	GUIDE	89002664	8.48	4943	-0.145	-0.145	0.094	0.151	63.606882	14.625032	-1196.65	91.81
6	GUIDE	89000448	9.19	4940	0.094	0.046	0.113	0.178	63.632493	14.427968	-482.31	118.79
7	GUIDE	89001088	9.35	4920	0.034	0.021	0.134	0.211	64.217530	14.366292	-87.75	2132.48

## 2.4 Star Slots

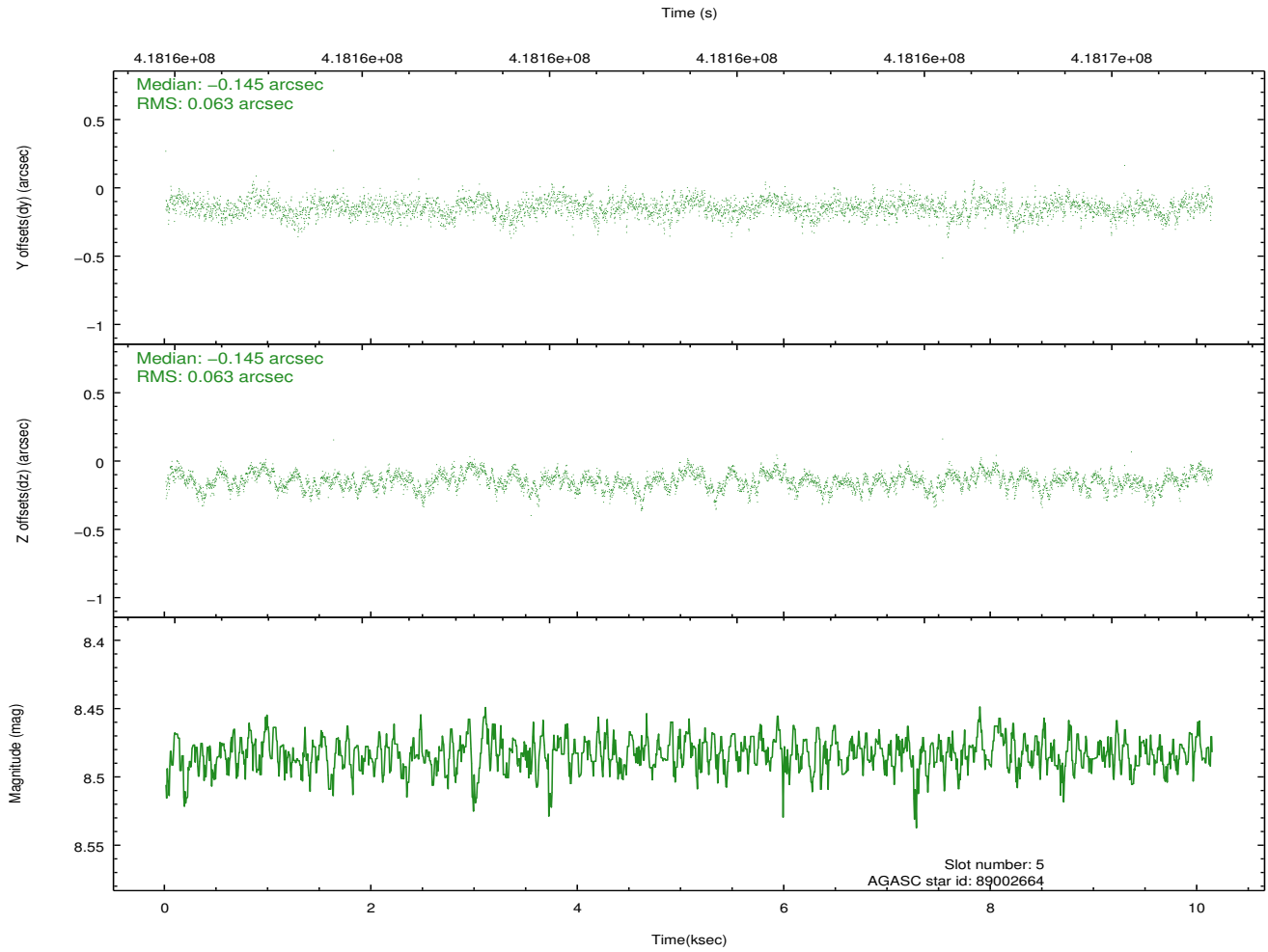
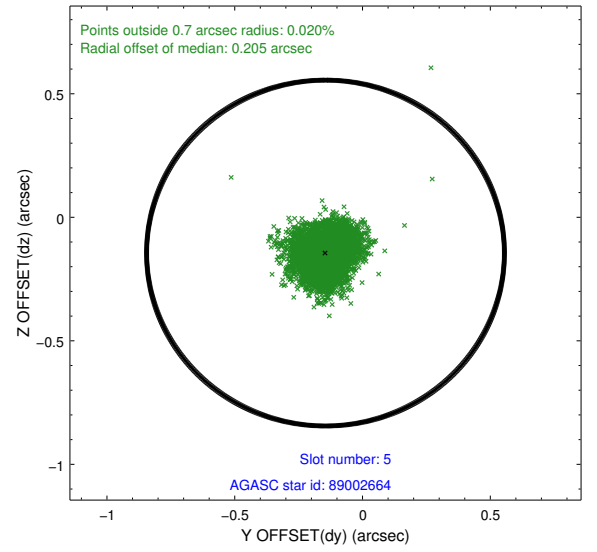
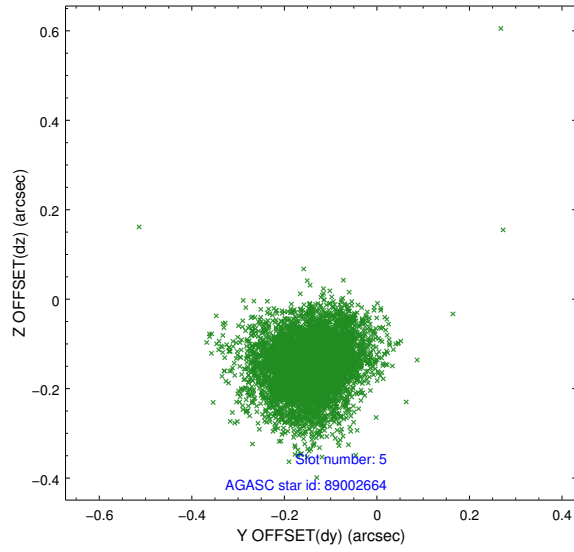
### 2.4.1 Slot 3



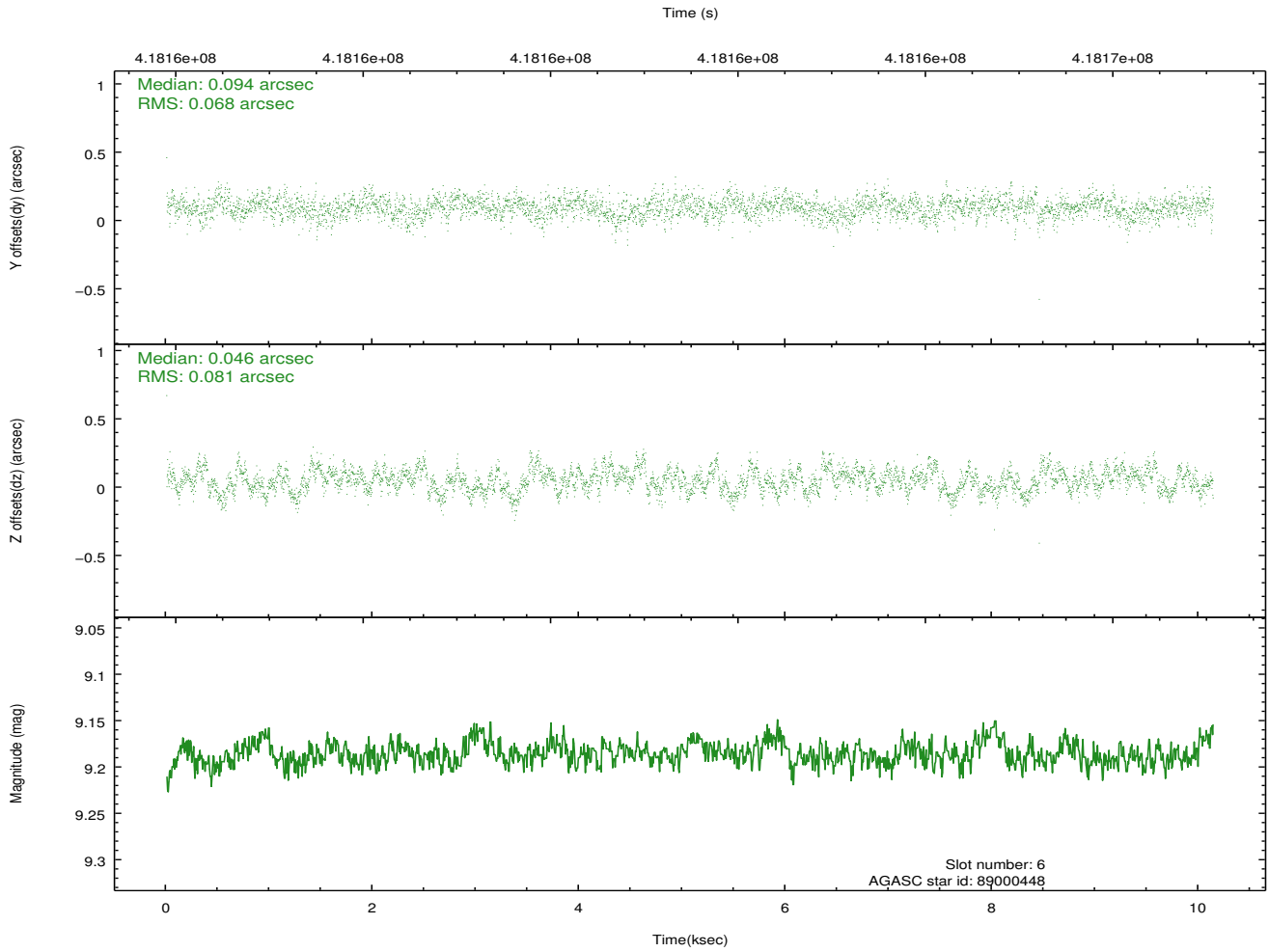
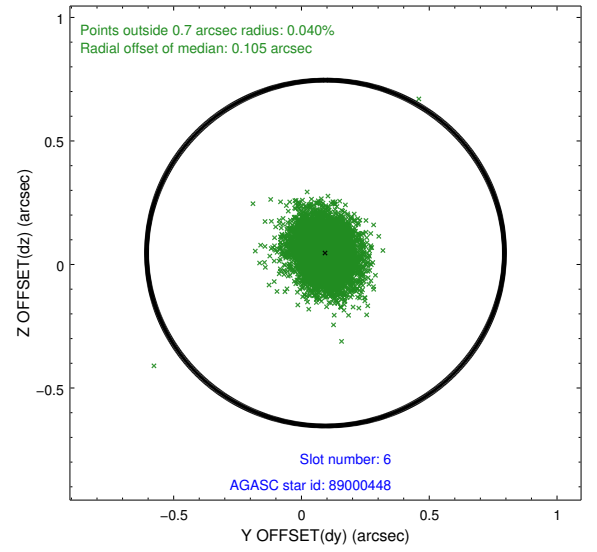
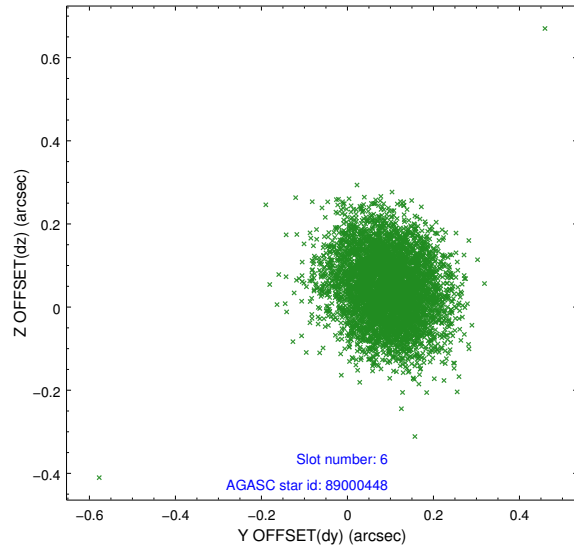
## 2.4.2 Slot 4



### 2.4.3 Slot 5

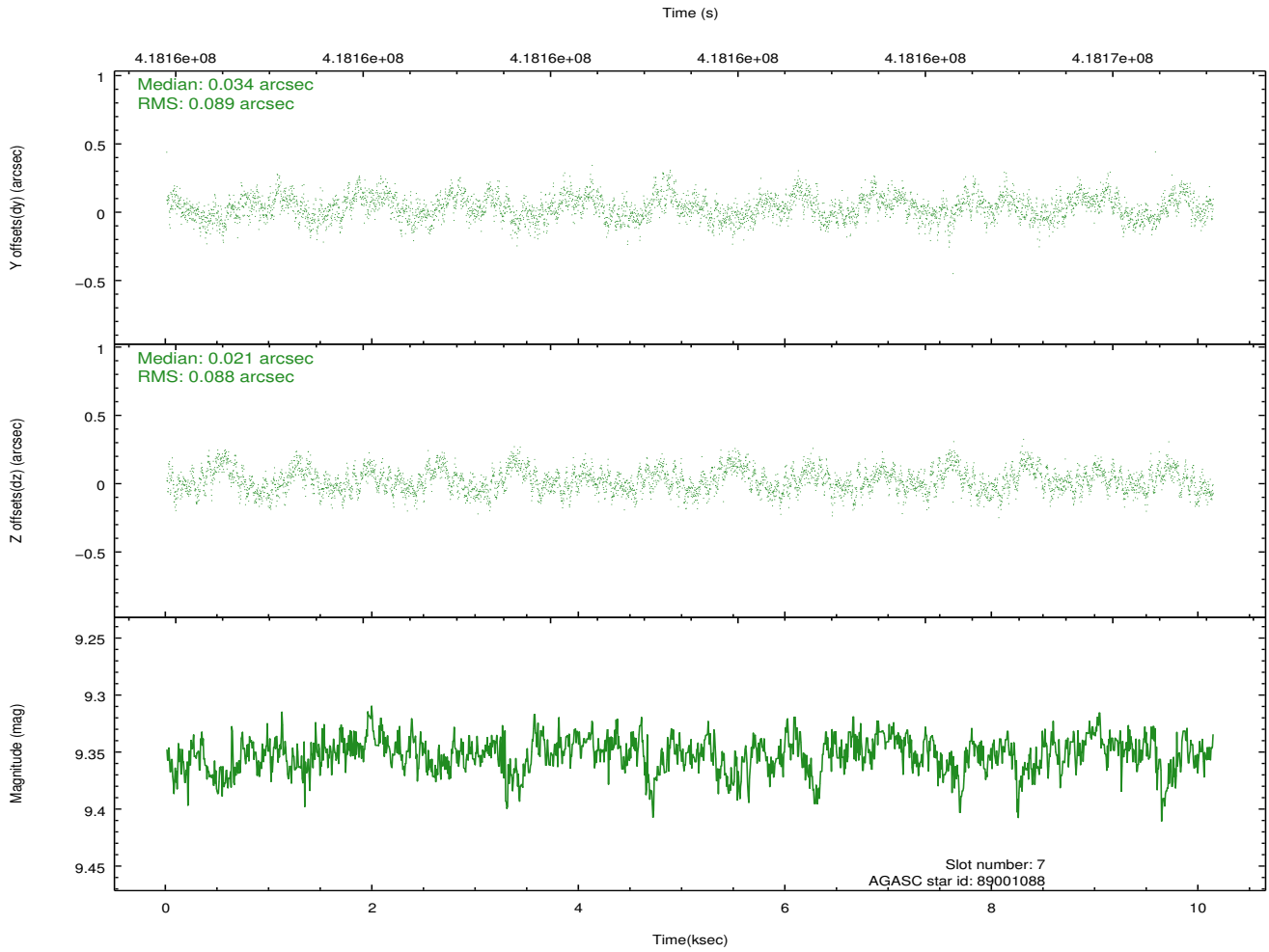
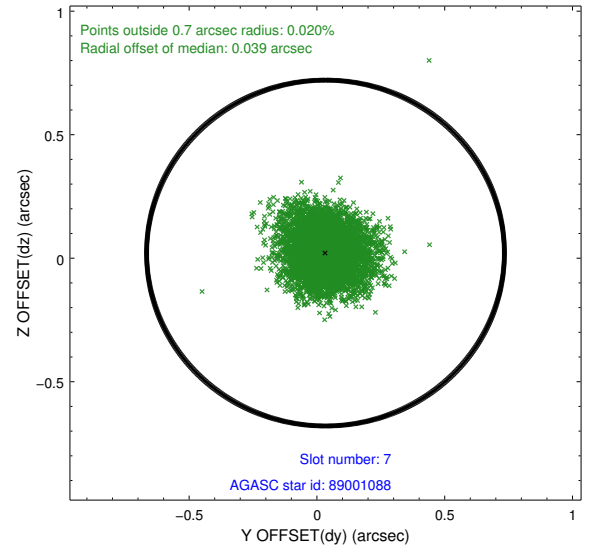
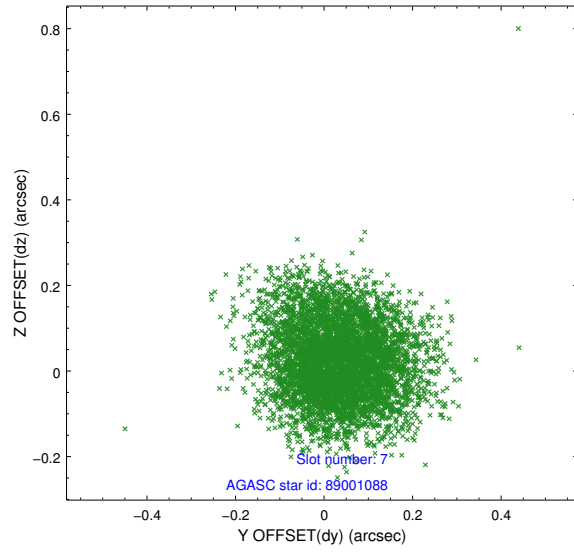


## 2.4.4 Slot 6



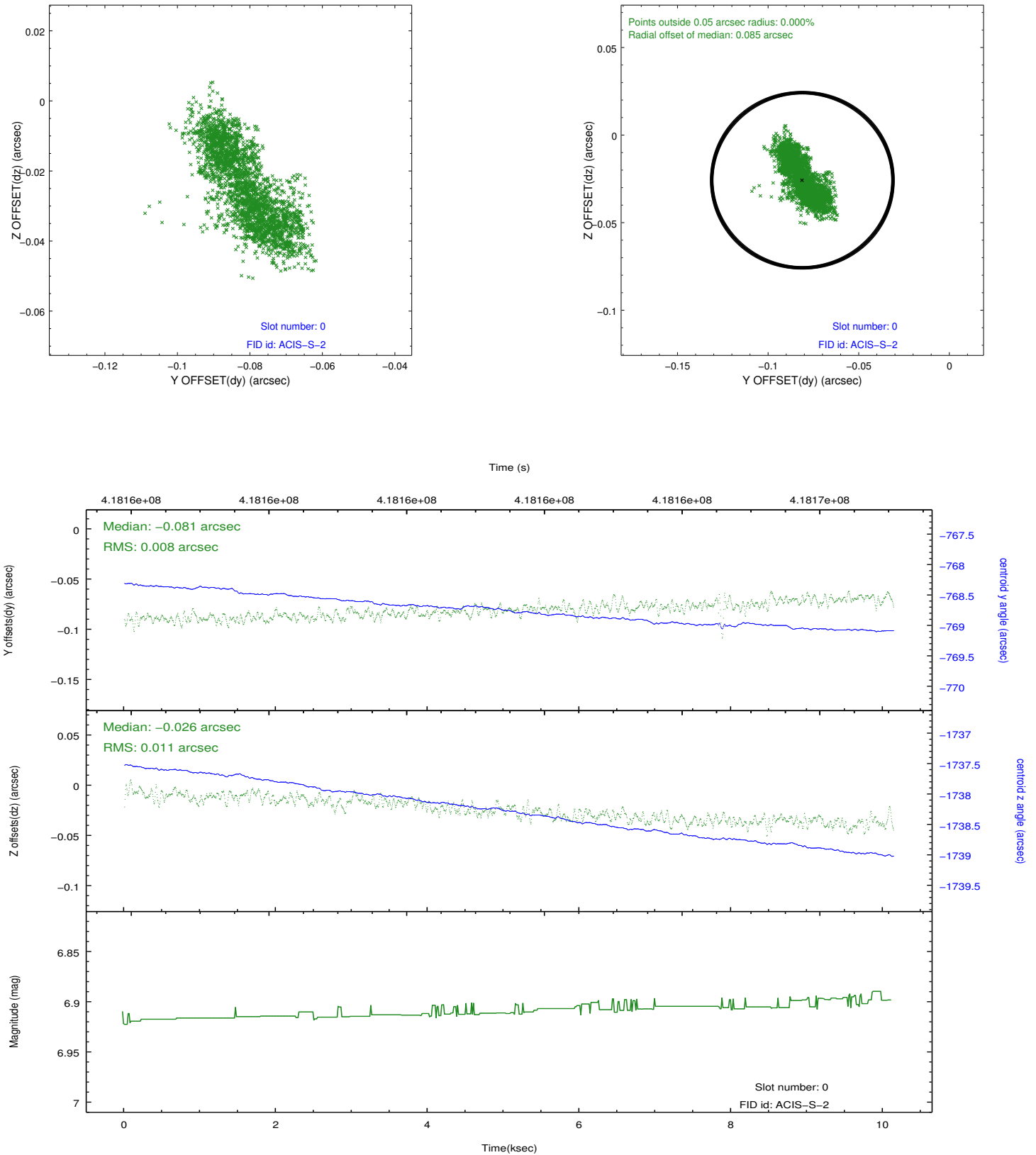


### 2.4.5 Slot 7

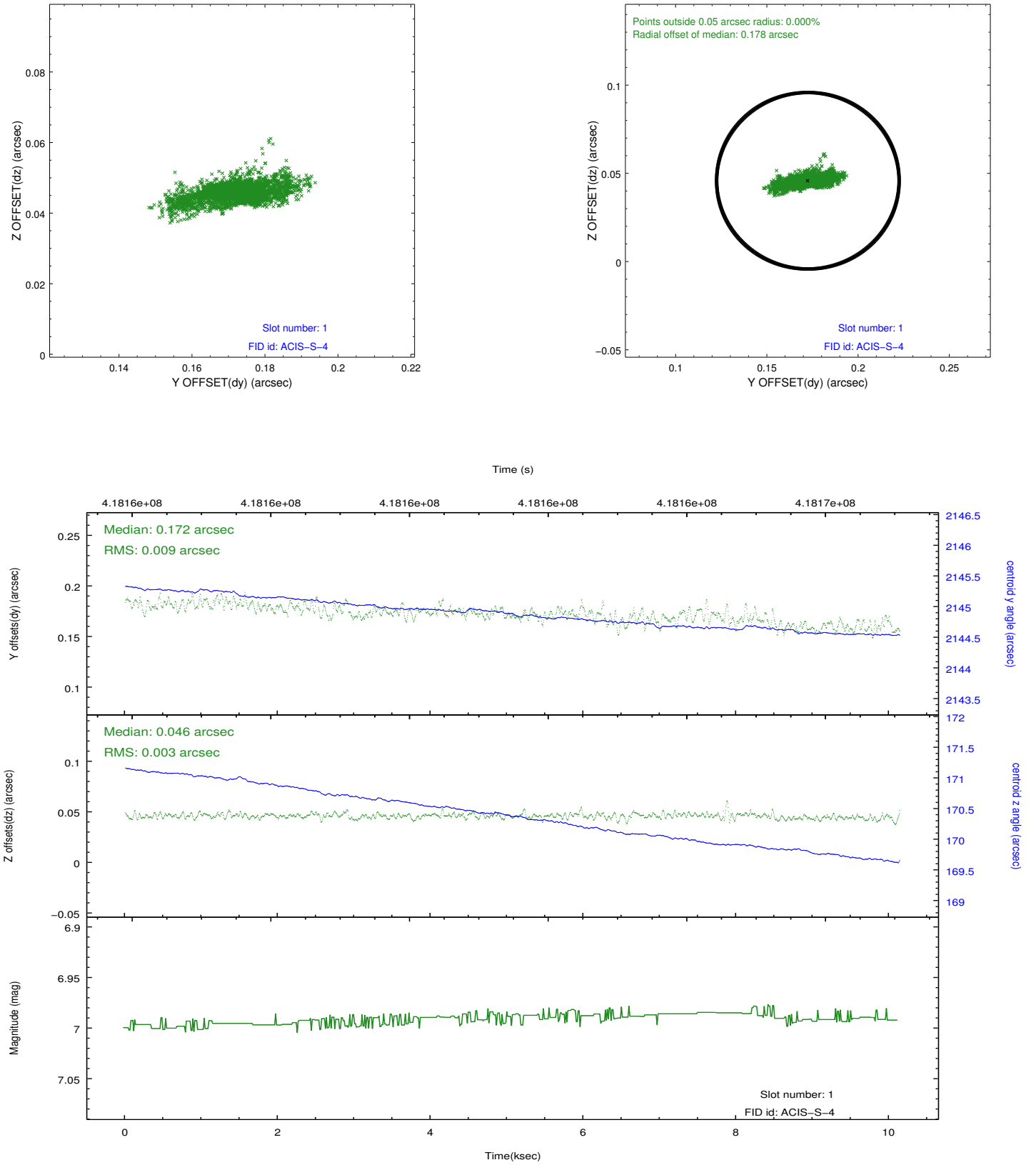


## 2.5 FID Slots

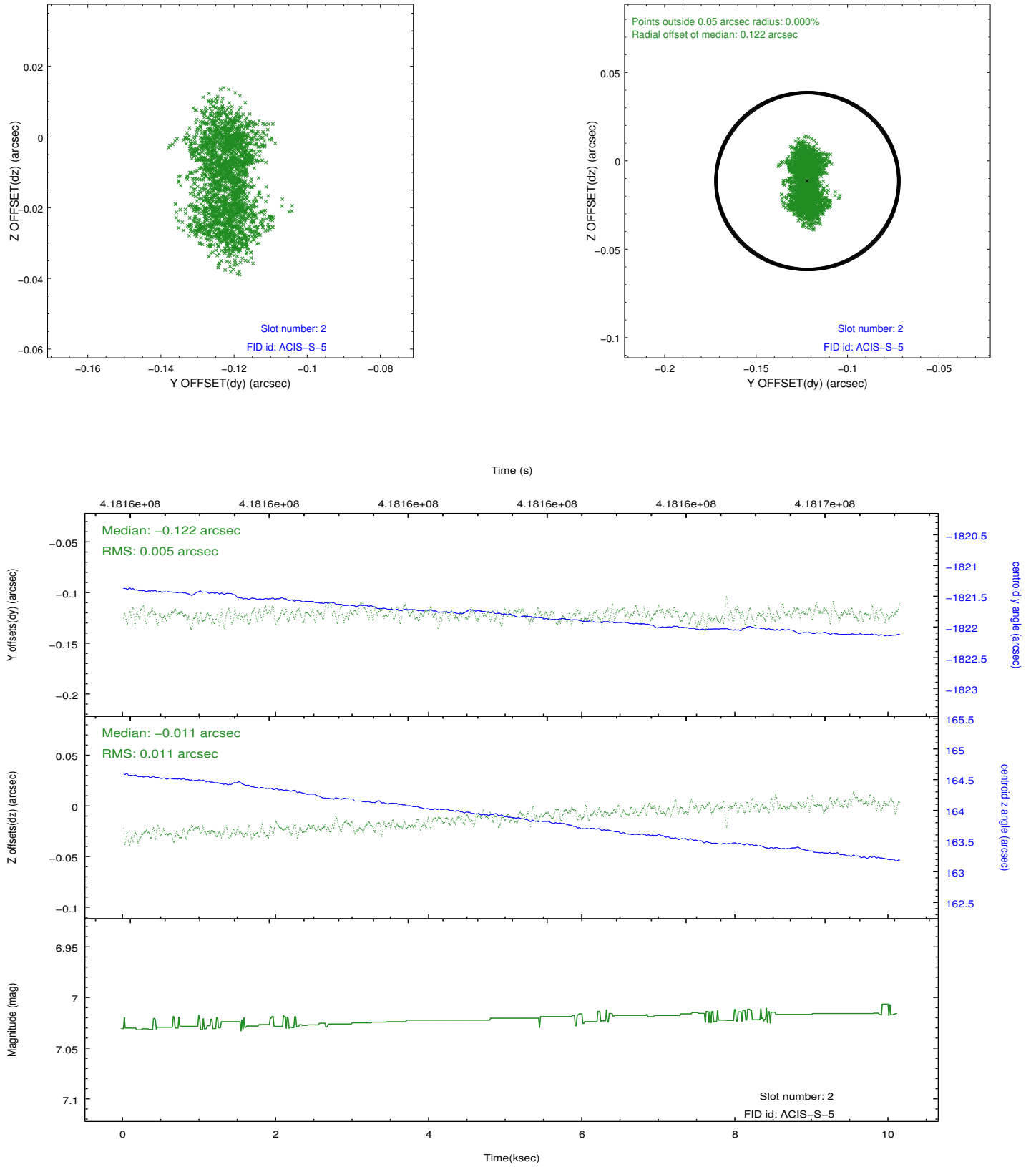
### 2.5.1 Slot 0



## 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)	2012.02.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.054399962604

## 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.