

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 14794 - L2 Version 2  
Chandra X-Ray Center

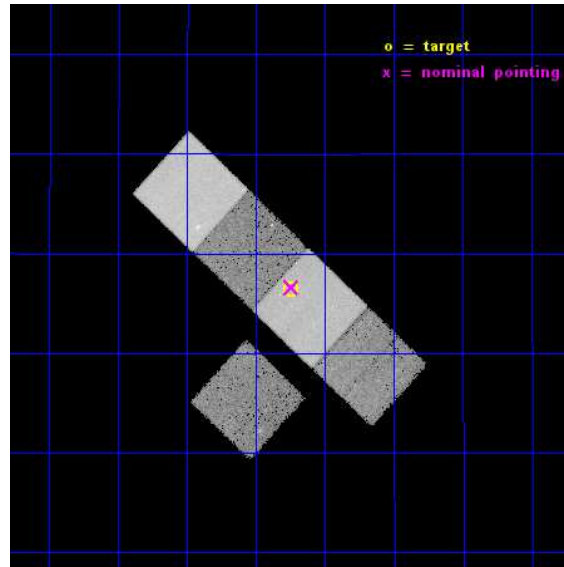
L2 Processing Date : Dec 8 2014

## 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

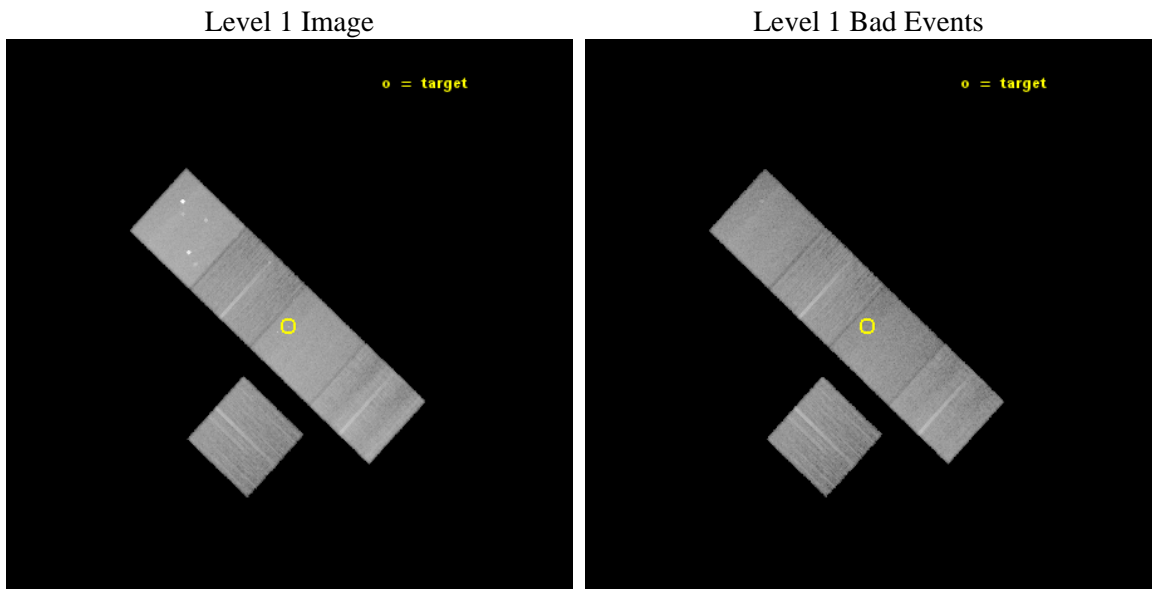
seq_num	501922	Sequence number
obs_id	14794	Observation id
title	Late-time X-rays to extract the true energy of nearby GRBs	Proposa
observer	Dr Raffaella Margutti	Principal investigator
object	GRB130702A	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	217.311583	Observer's specified target RA [deg]
dec_targ	15.774	Observer's specified target Dec [deg]
ra_nom	217.31101411586	Nominal RA [deg]
dec_nom	15.776991210139	Nominal Dec [deg]
roll_nom	43.077540654167	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35064.100269675	Sum of GTIs [s]
livetime	34605.961985837	Livetime [s]
ontime3	35064.100269675	Sum of GTIs [s]
ontime5	35064.100269675	Sum of GTIs [s]
ontime6	35064.100269675	Sum of GTIs [s]
ontime7	35064.100269675	Sum of GTIs [s]
ontime8	35060.959428728	Sum of GTIs [s]
l2events	284052	Number of level 2 events



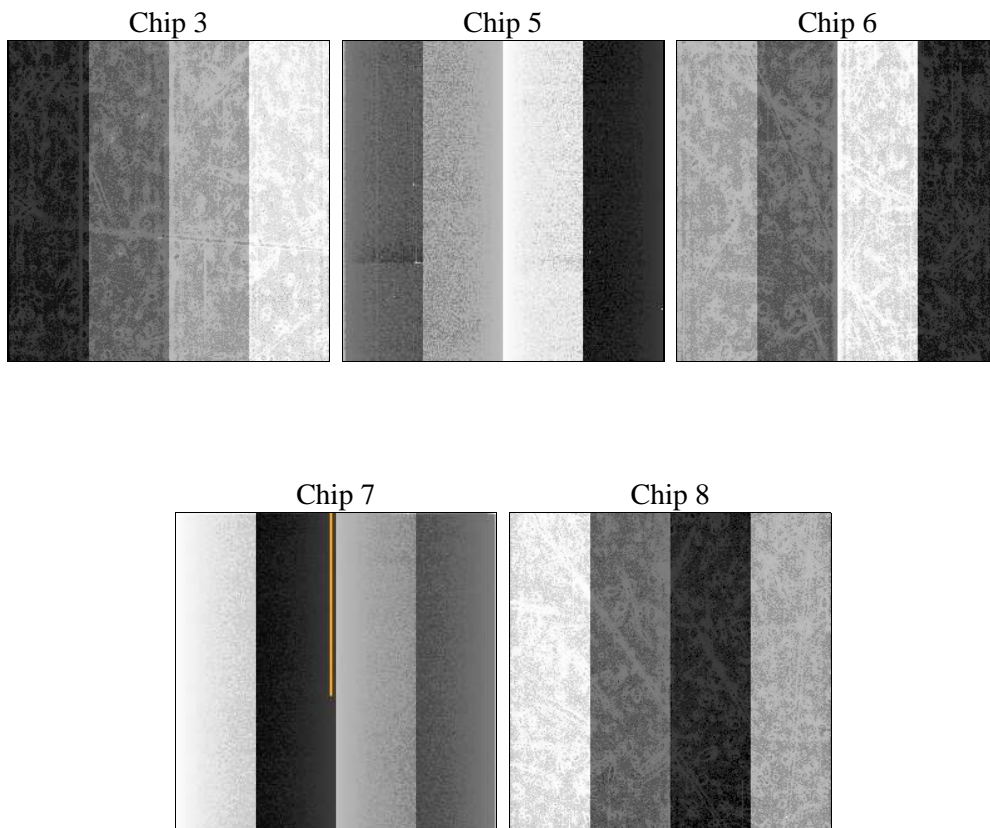
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	35064.100269675	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime3	35064.100269675	Sum of GTIs [s]
date	2014-12-08T07:36:32	Date and time of file creation	ontime5	35064.100269675	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	35064.100269675	Sum of GTIs [s]
			ontime7	35064.100269675	Sum of GTIs [s]
			ontime8	35060.959428728	Sum of GTIs [s]
			l1events	1077977	Number of level 1 events

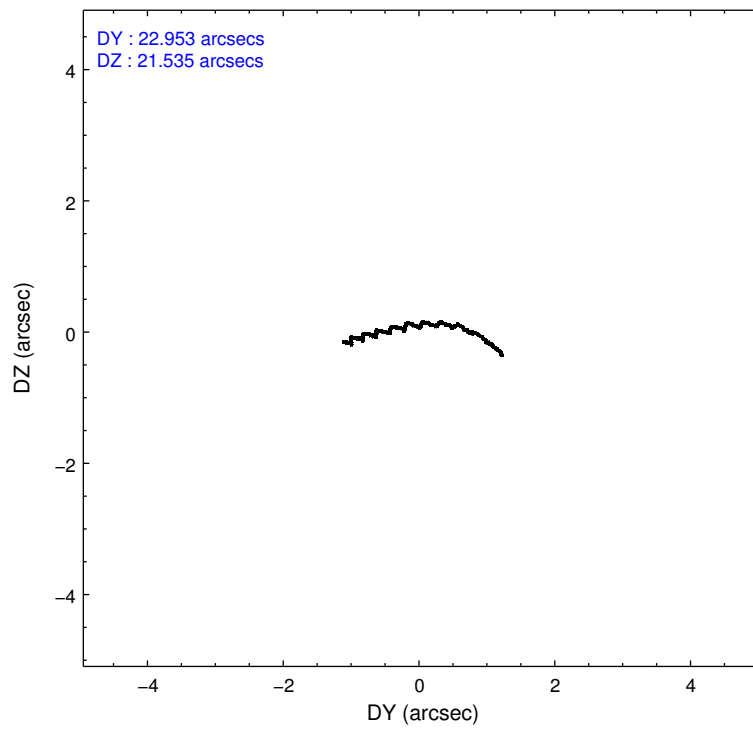
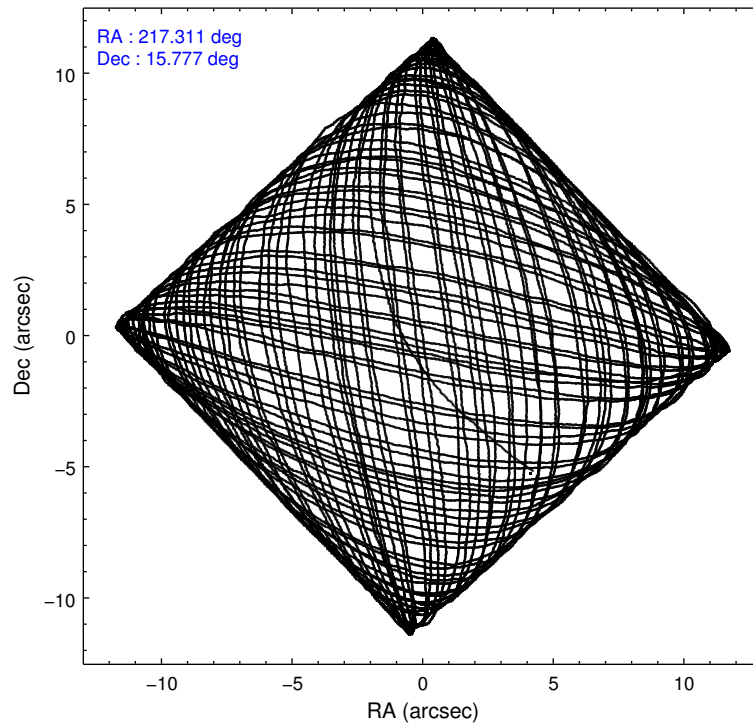
### 2.1.4 Events

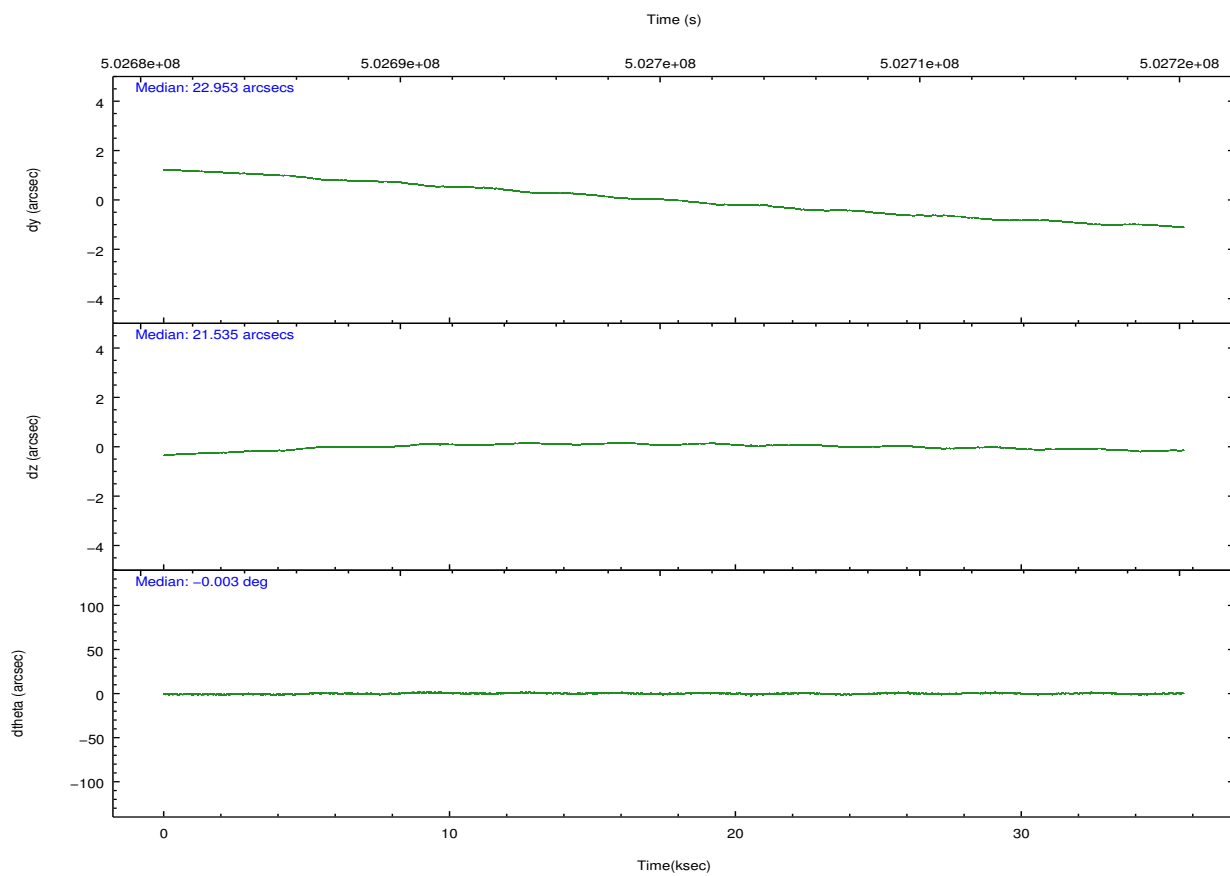
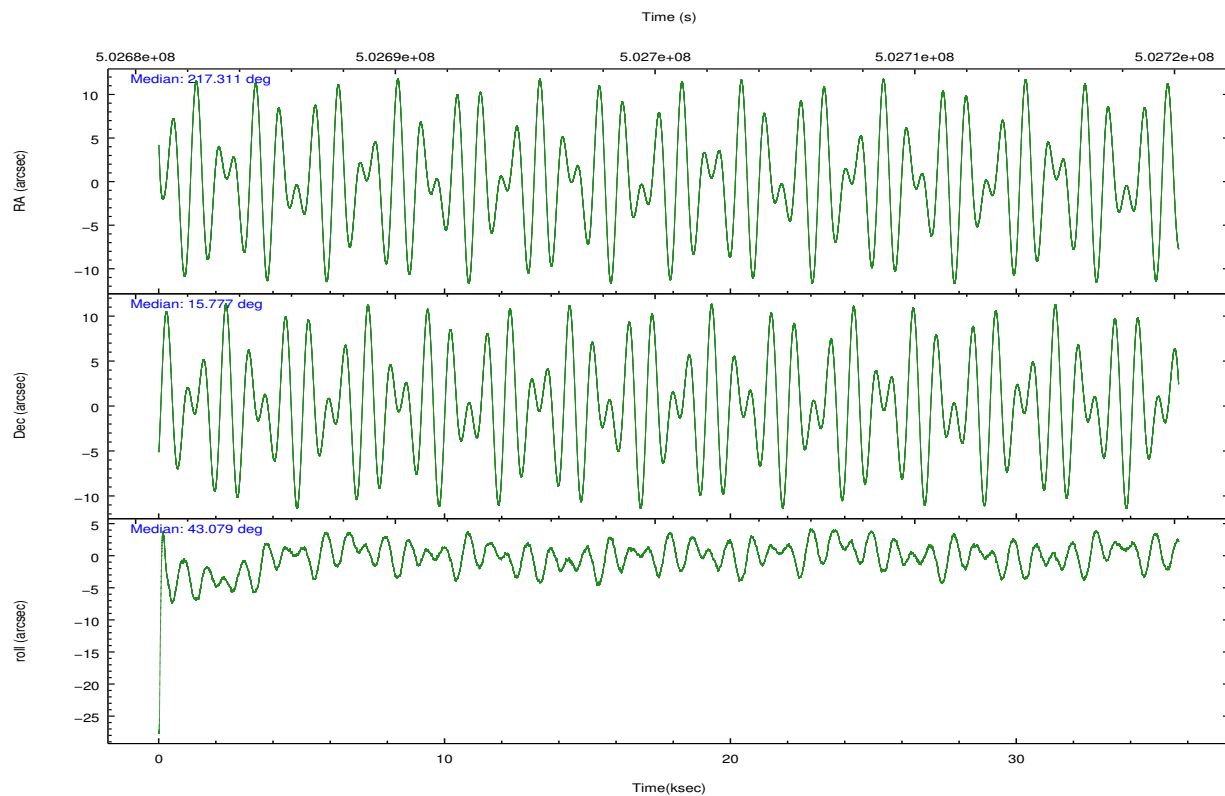
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	154916	293480	173430	229505	226646	grade 0 events	6695	17158	7077	9216	18770
rejected events	136271	145165	152780	128944	164957		4%	5%	4%	4%	8%
rejected %	87%	49%	88%	56%	72%	grade 1 events	92	693	82	270	177
							0%	0%	0%	0%	0%
						grade 2 events	4151	48957	4686	20829	14604
							2%	16%	2%	9%	6%
						grade 3 events	1940	4842	2079	8601	6221
							1%	1%	1%	3%	2%
						grade 4 events	2038	4816	1989	8441	5978
							1%	1%	1%	3%	2%
						grade 5 events	9013	21146	8996	23784	13044
							5%	7%	5%	10%	5%
						grade 6 events	3824	72553	4823	53485	16123
							2%	24%	2%	23%	7%
						grade 7 events	127163	123315	143698	104879	151729
							82%	42%	82%	45%	66%

## 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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	217.303105	217.3110141158626	CCD I2 on	N	N
[deg] Pointing Dec	15.750716	15.77699121013922	CCD I3 on	O1	Y
[deg] Pointing Roll	42.923076	43.0775406541673	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	Y	Y
[s] Observation start time (MET)	502683370.184000	502682185.39607	CCD S5 on	N	N
Observation start date	2013-12-06T02:15:03	2013-12-06T01:56:25	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	502718370.184000	502719382.13561	On-chip summing requested	N	N
Observation end date	2013-12-06T11:58:23	2013-12-06T12:16:22	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



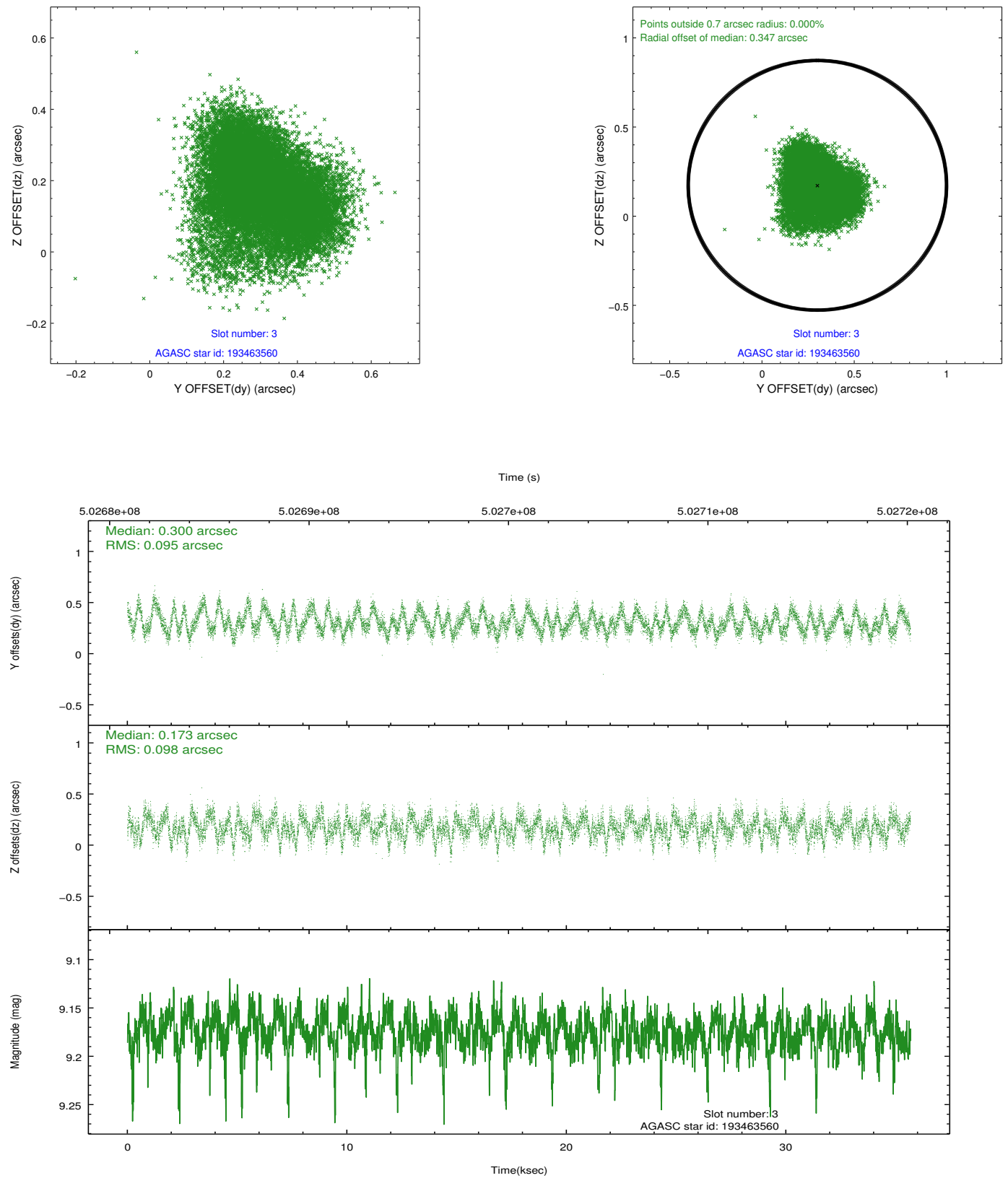


### Slot Statistics

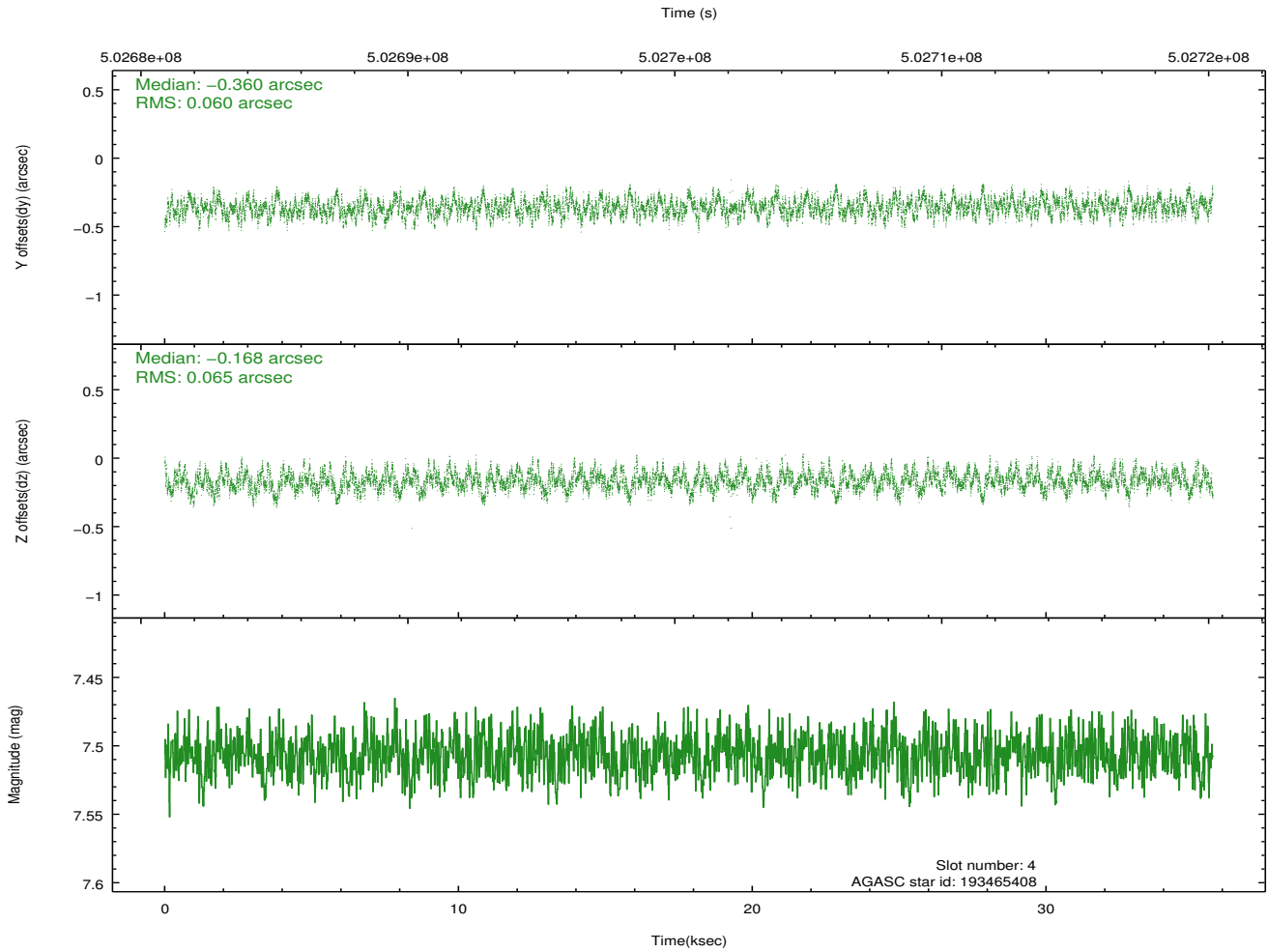
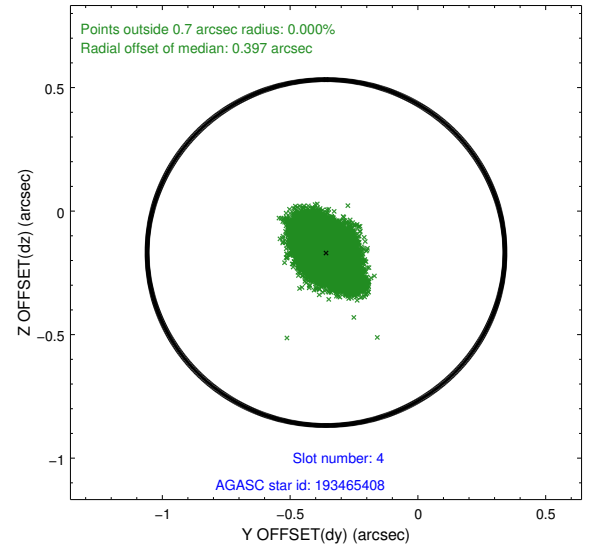
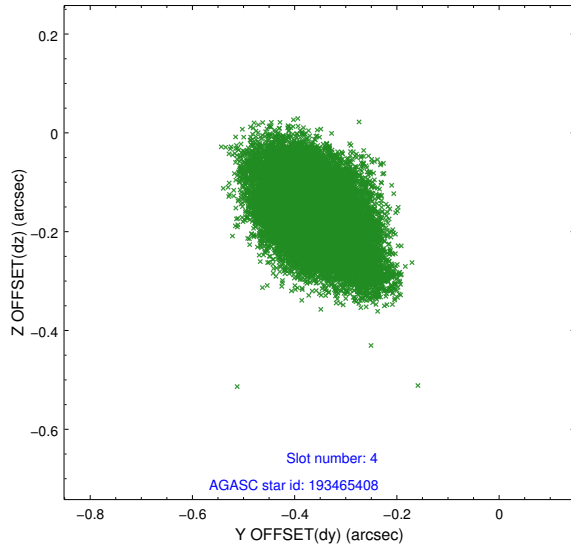
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.91	8701	-0.104	-0.012	0.017	0.051	0.000000	0.000000	-776.27	-1743.08
1	FID		ACIS-S-4	6.99	8701	0.277	0.054	0.044	0.059	0.000000	0.000000	2137.40	165.41
2	FID		ACIS-S-5	7.02	8700	-0.202	-0.033	0.028	0.045	0.000000	0.000000	-1829.13	159.06
3	GUIDE	used	193463560	9.17	17395	0.300	0.173	0.149	0.231	217.129546	15.752946	-436.00	415.53
4	GUIDE	used	193465408	7.51	17398	-0.360	-0.168	0.093	0.157	217.063048	16.118636	293.27	1532.92
5	GUIDE	used	193470264	9.06	17390	0.262	0.088	0.122	0.191	216.768786	15.498636	-1973.13	599.90
6	GUIDE	used	193471584	6.99	17402	-0.398	-0.128	0.078	0.132	217.473702	16.208762	1553.92	806.10
7	GUIDE	used	193472112	8.94	17394	0.190	0.039	0.105	0.170	217.074657	15.670966	-775.15	330.33

## 2.4 Star Slots

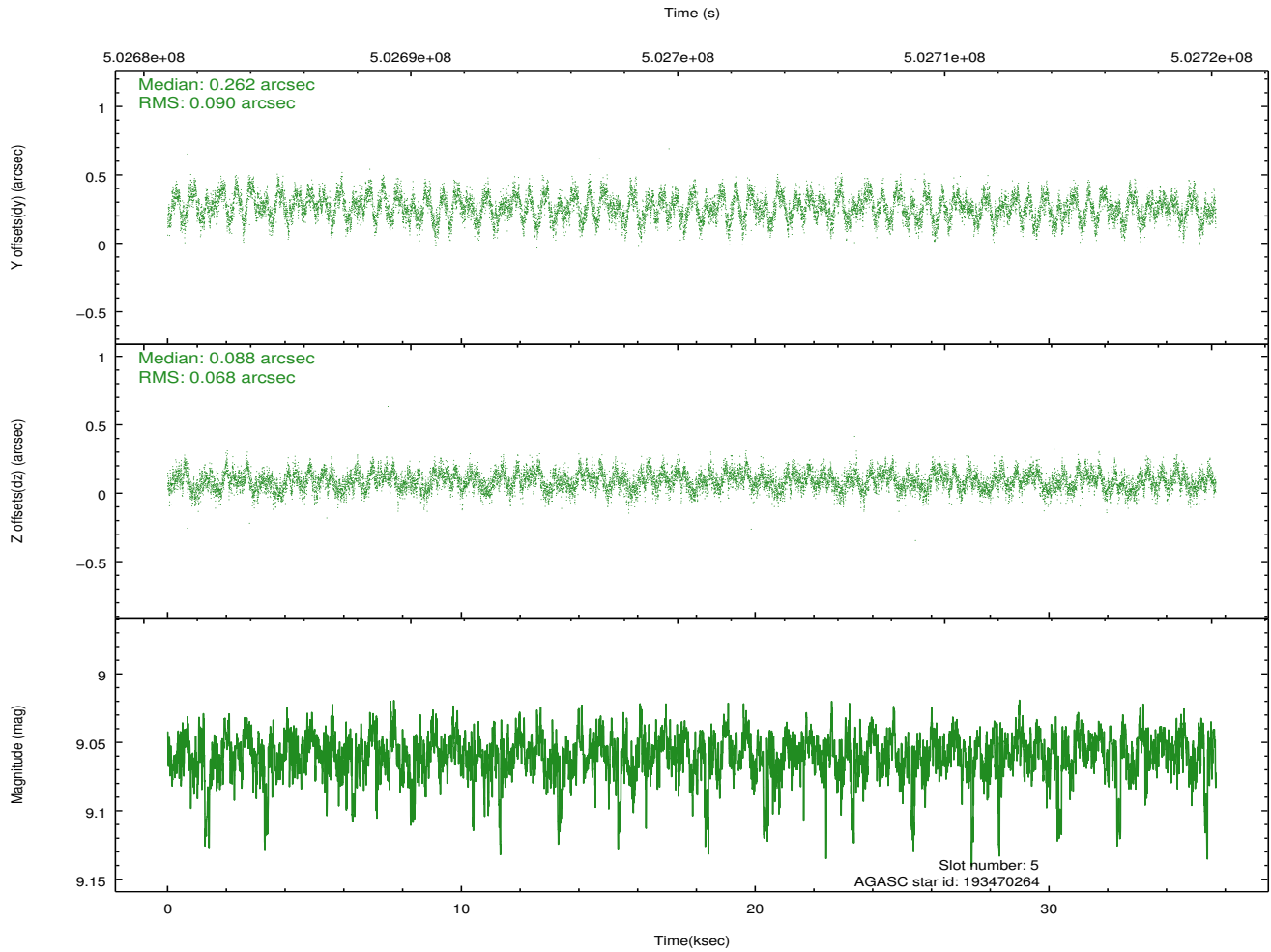
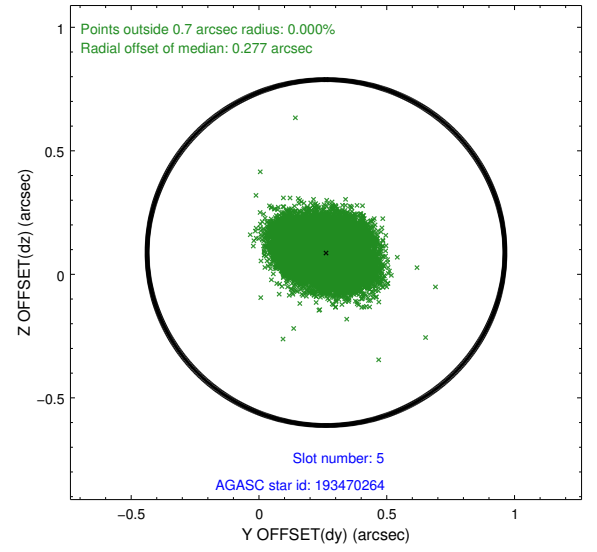
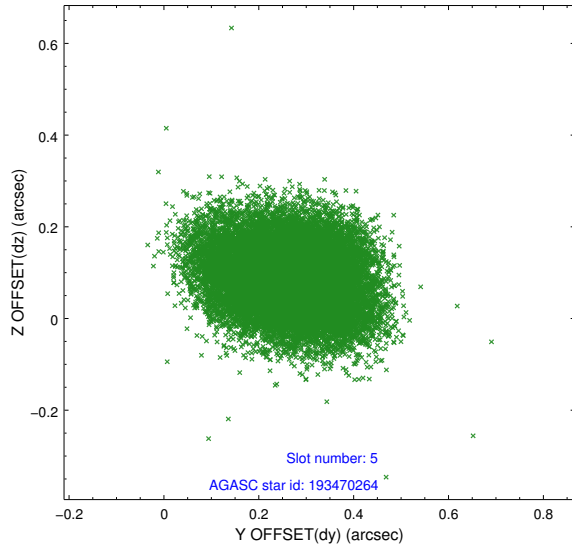
### 2.4.1 Slot 3



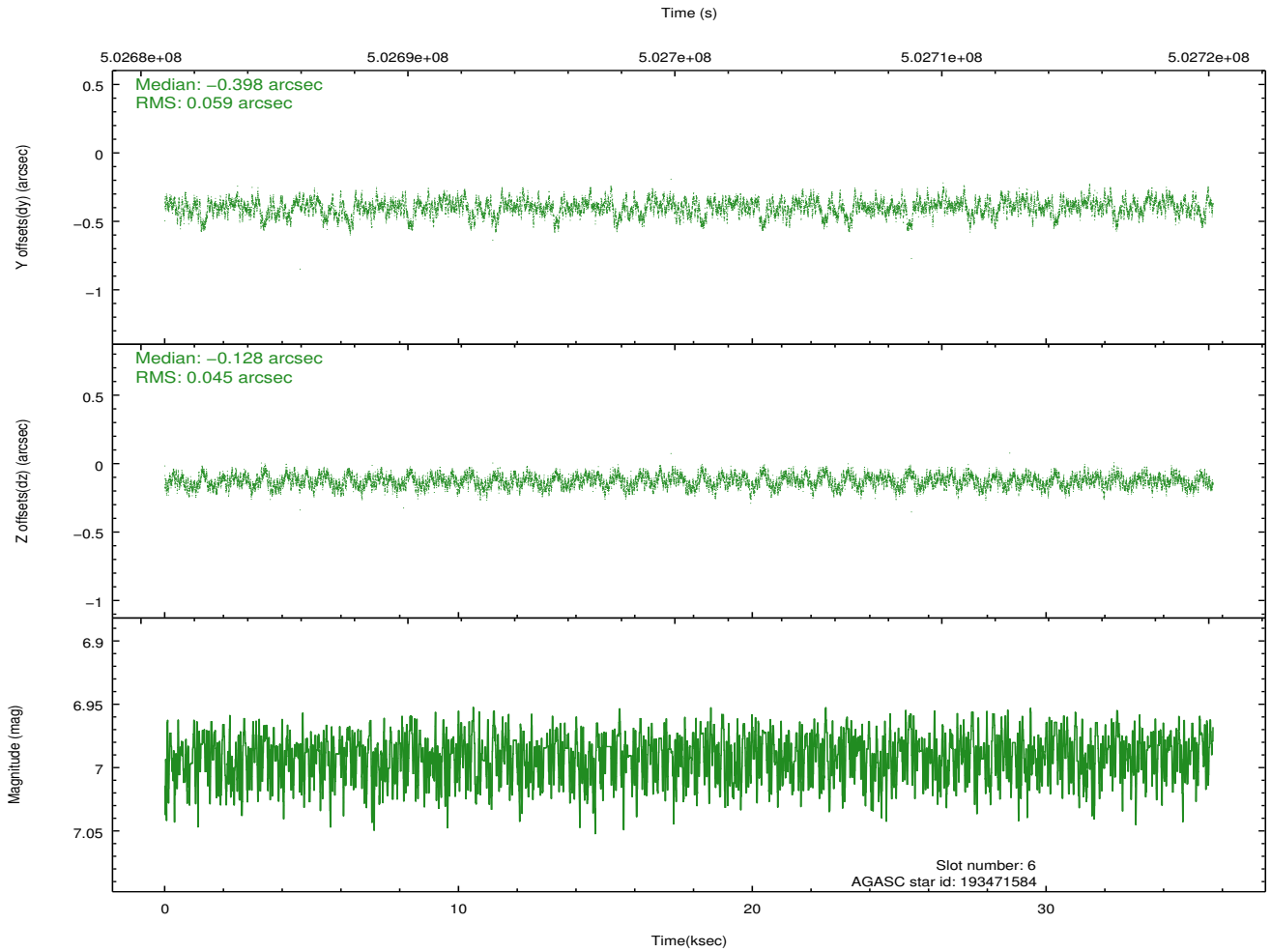
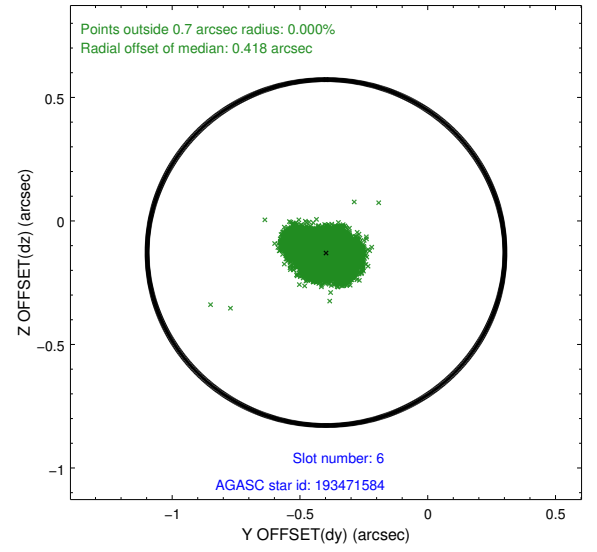
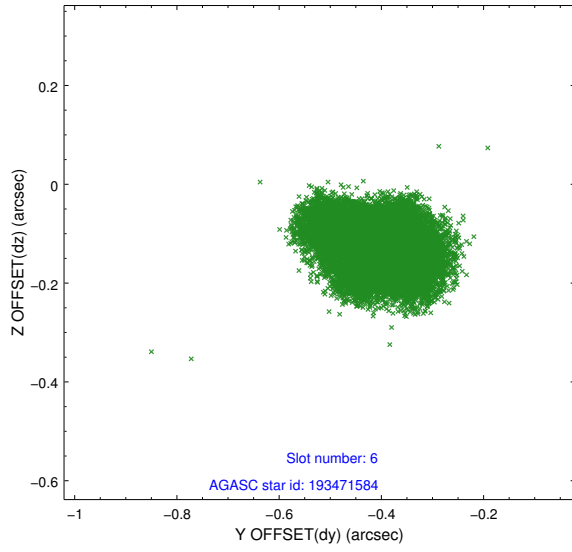
## 2.4.2 Slot 4



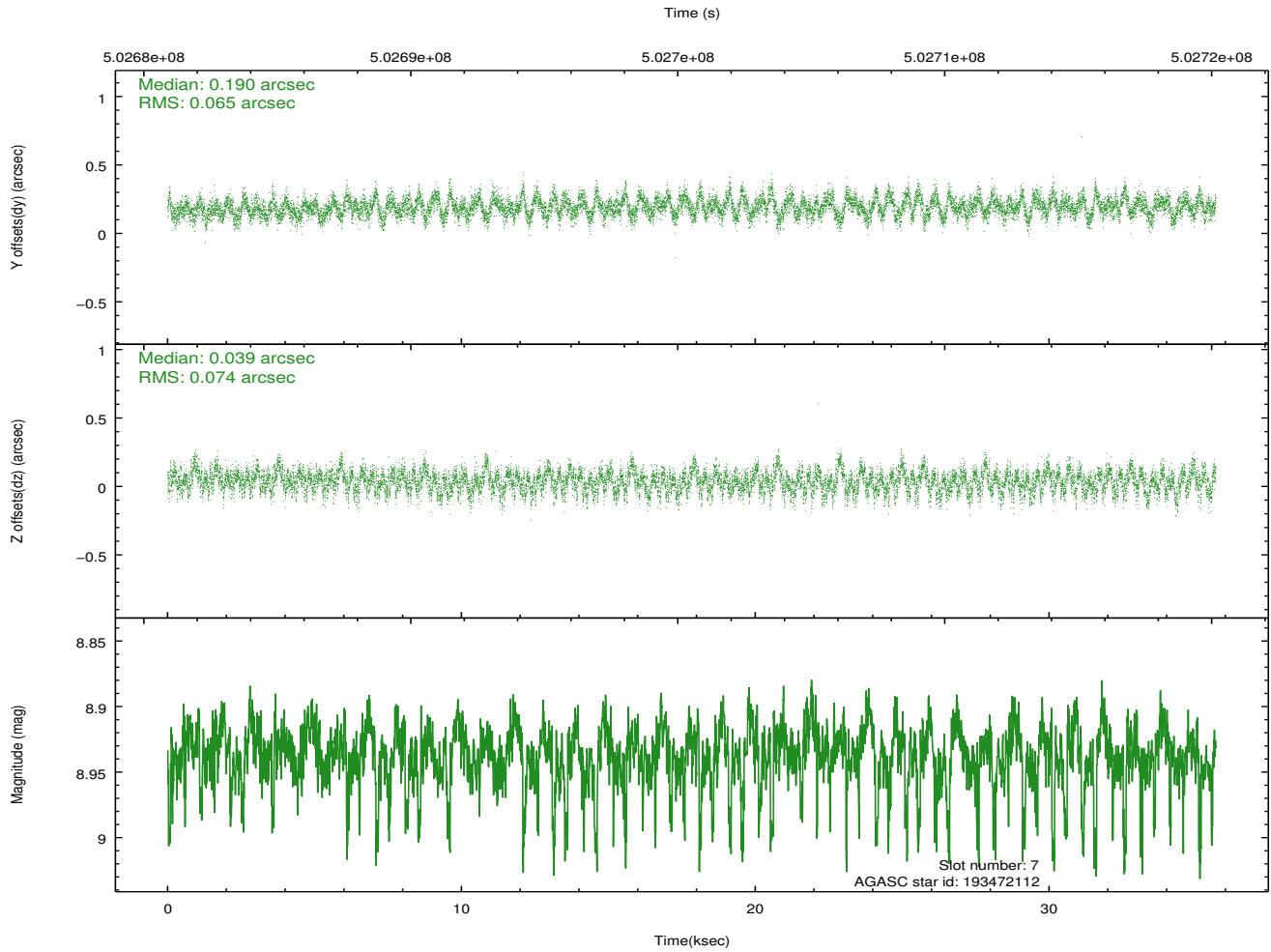
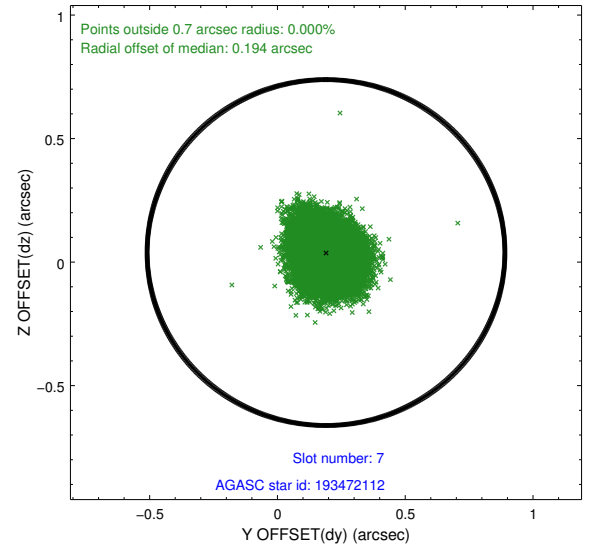
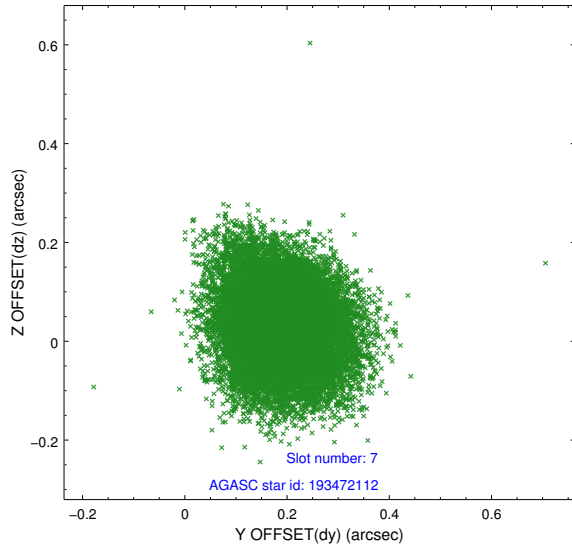
### 2.4.3 Slot 5



## 2.4.4 Slot 6

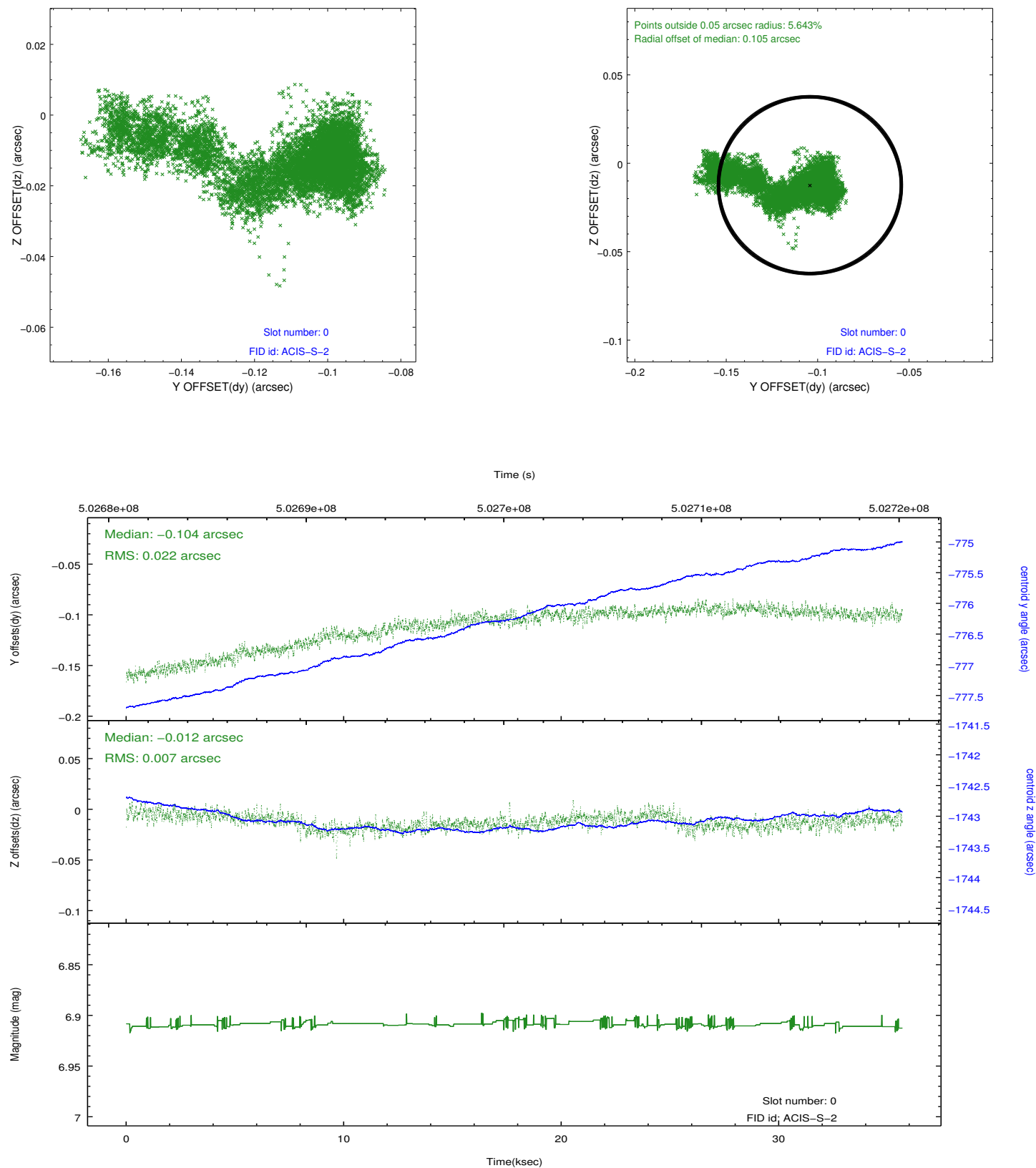


## 2.4.5 Slot 7

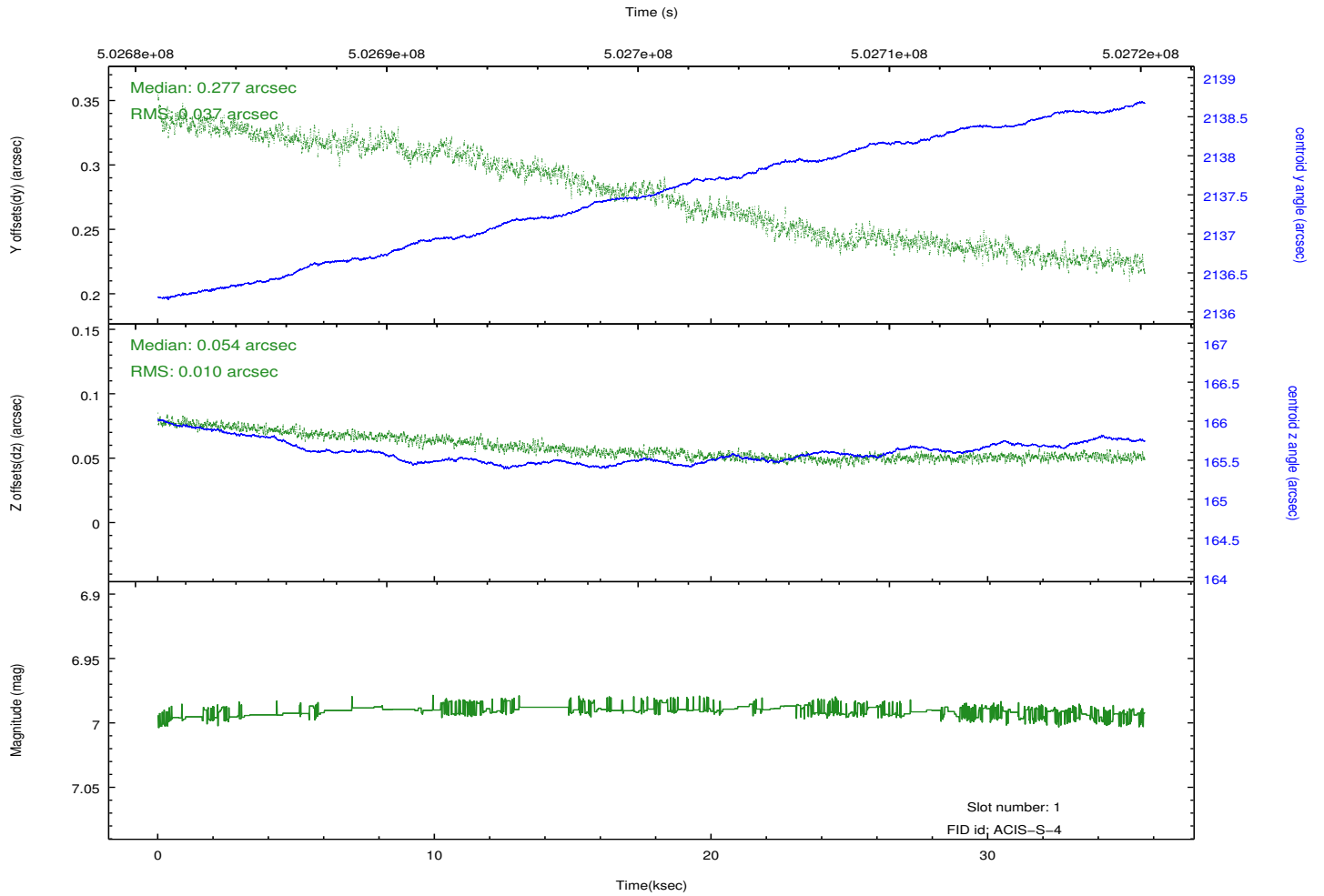
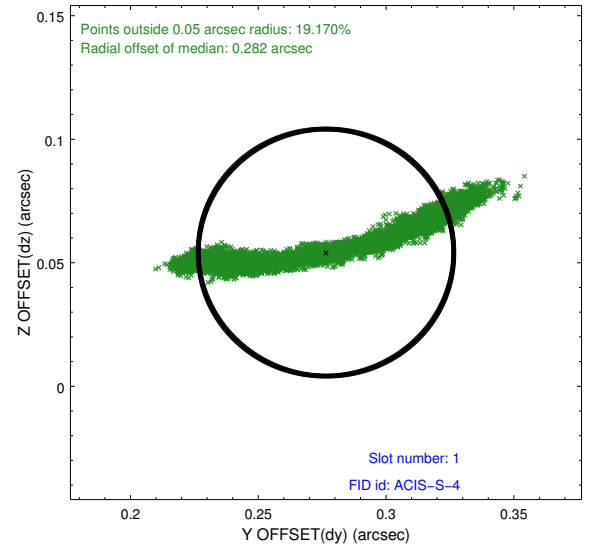
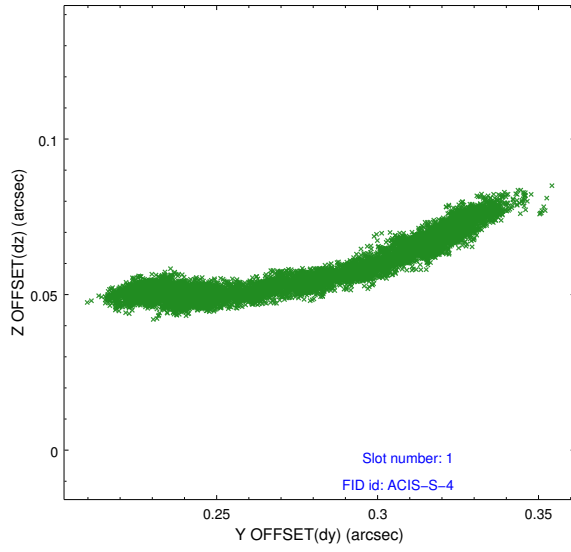


## 2.5 FID Slots

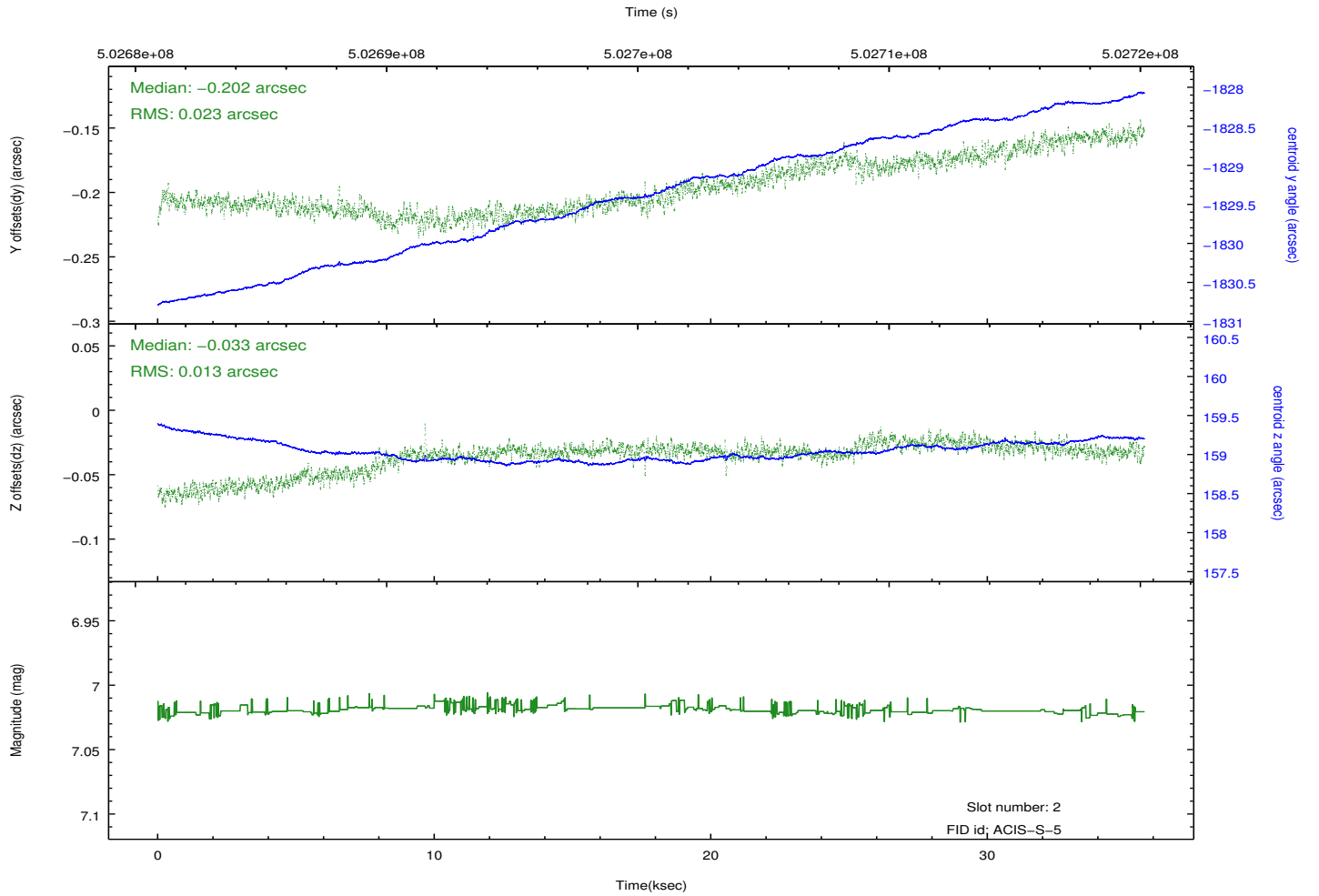
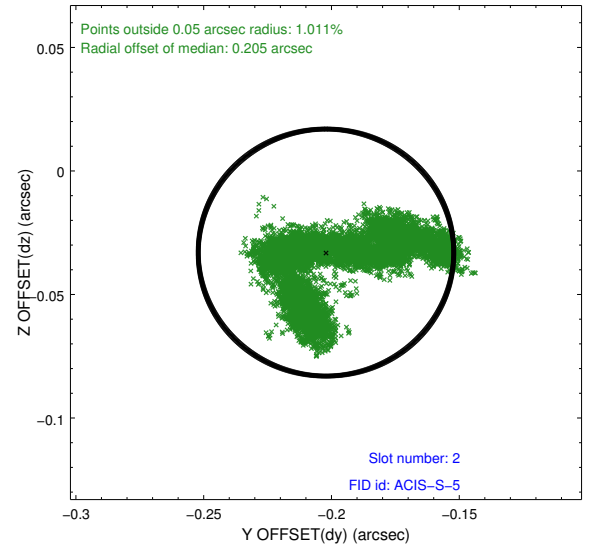
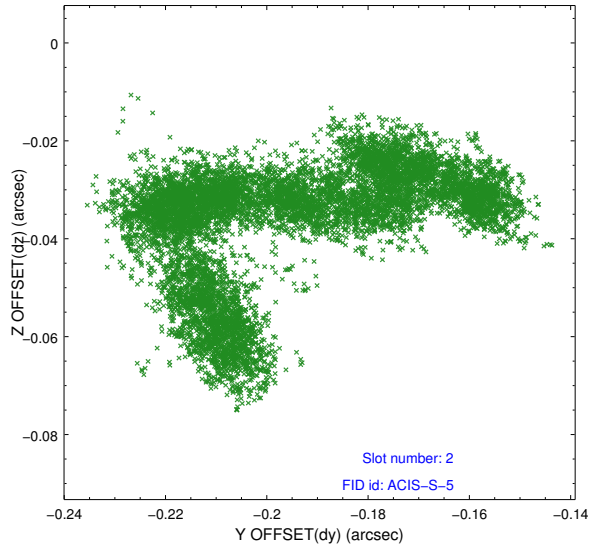
### 2.5.1 Slot 0



## 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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.064100269675

## A.2 Comments

Monitor constraint met.

=====

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.