

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15584 - L2 Version 2  
Chandra X-Ray Center

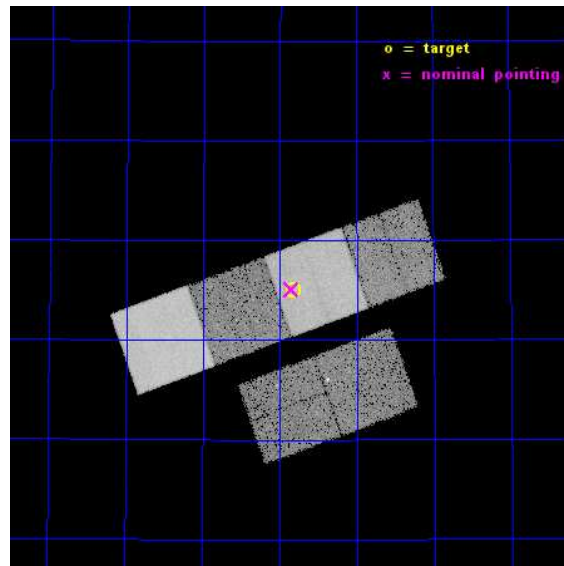
L2 Processing Date : Nov 29 2014

## 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

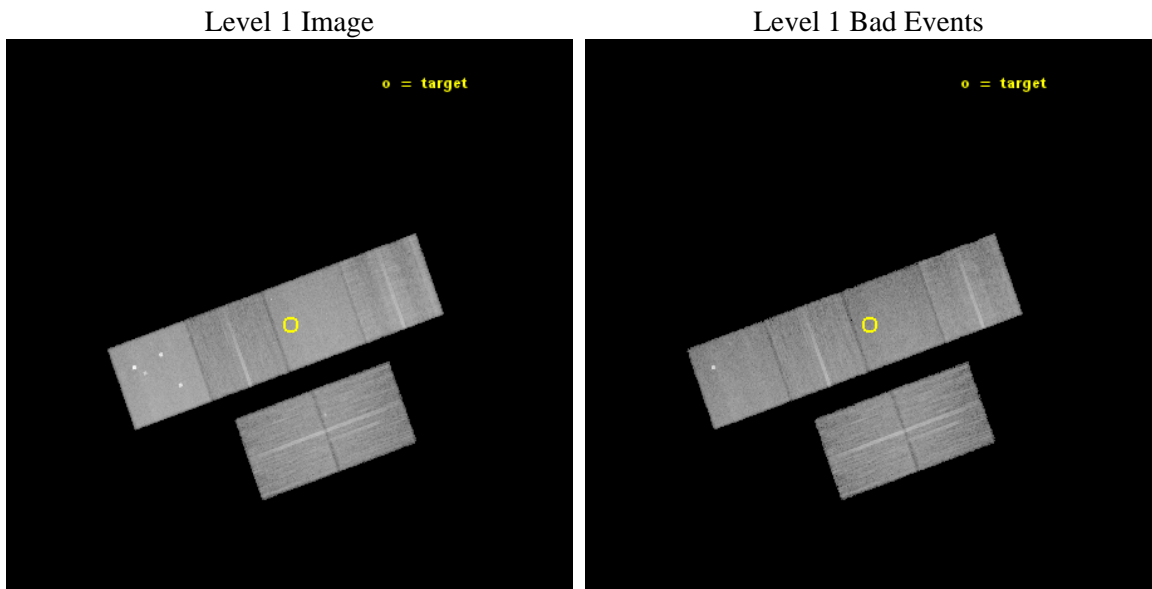
seq_num	702920	Sequence number
obs_id	15584	Observation id
title	Sw1644+57: a relativistic jet that switched on and is now switching off	Proposal title
observer	Prof Nial Tanvir	Principal investigator
object	Swift-J1644+57	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	251.208333	Observer's specified target RA [deg]
dec_targ	57.58325	Observer's specified target Dec [deg]
ra_nom	251.21280557661	Nominal RA [deg]
dec_nom	57.58511566386	Nominal Dec [deg]
roll_nom	340.15283723205	Nominal Roll [deg]
revision	2	Processing version of data
ontime	24966.257717669	Sum of GTIs [s]
livetime	24650.119929572	Livetime [s]
ontime2	24956.575886548	Sum of GTIs [s]
ontime3	24962.893607438	Sum of GTIs [s]
ontime5	24966.216677666	Sum of GTIs [s]
ontime6	24966.175637662	Sum of GTIs [s]
ontime7	24966.257717669	Sum of GTIs [s]
ontime8	24966.093557656	Sum of GTIs [s]
l2events	217656	Number of level 2 events



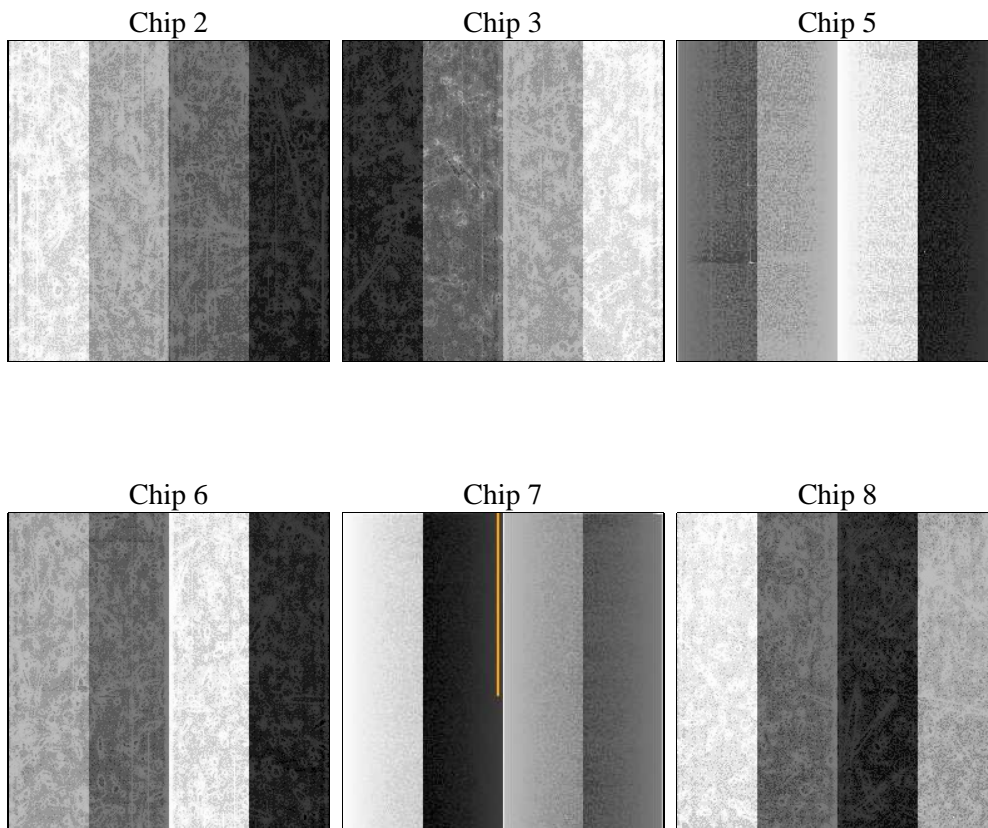
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	24966.257717669	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	24956.575886548	Sum of GTIs [s]
date	2014-11-30T05:37:40	Date and time of file creation	ontime3	24962.893607438	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	24966.216677666	Sum of GTIs [s]
			ontime6	24966.175637662	Sum of GTIs [s]
			ontime7	24966.257717669	Sum of GTIs [s]
			ontime8	24966.093557656	Sum of GTIs [s]
			l1events	911990	Number of level 1 events

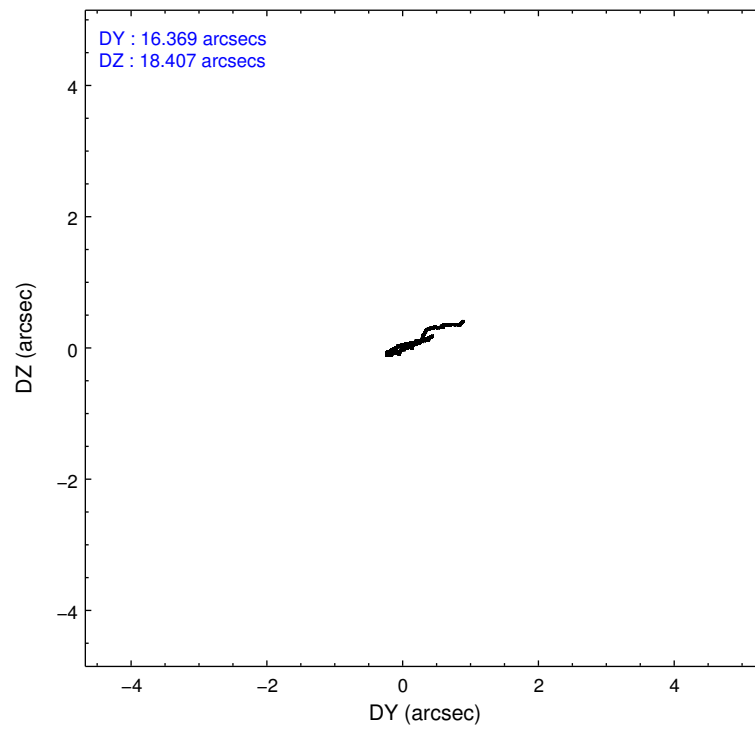
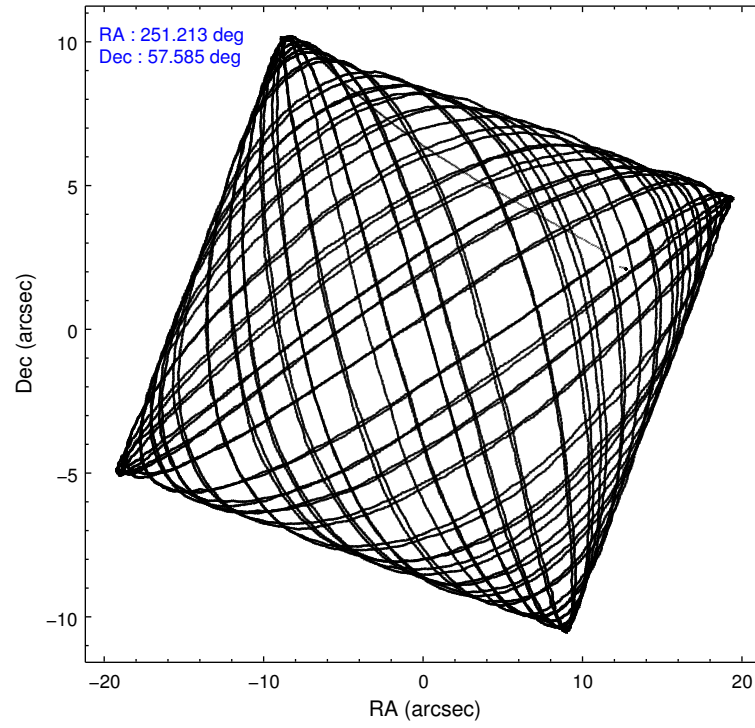
### 2.1.4 Events

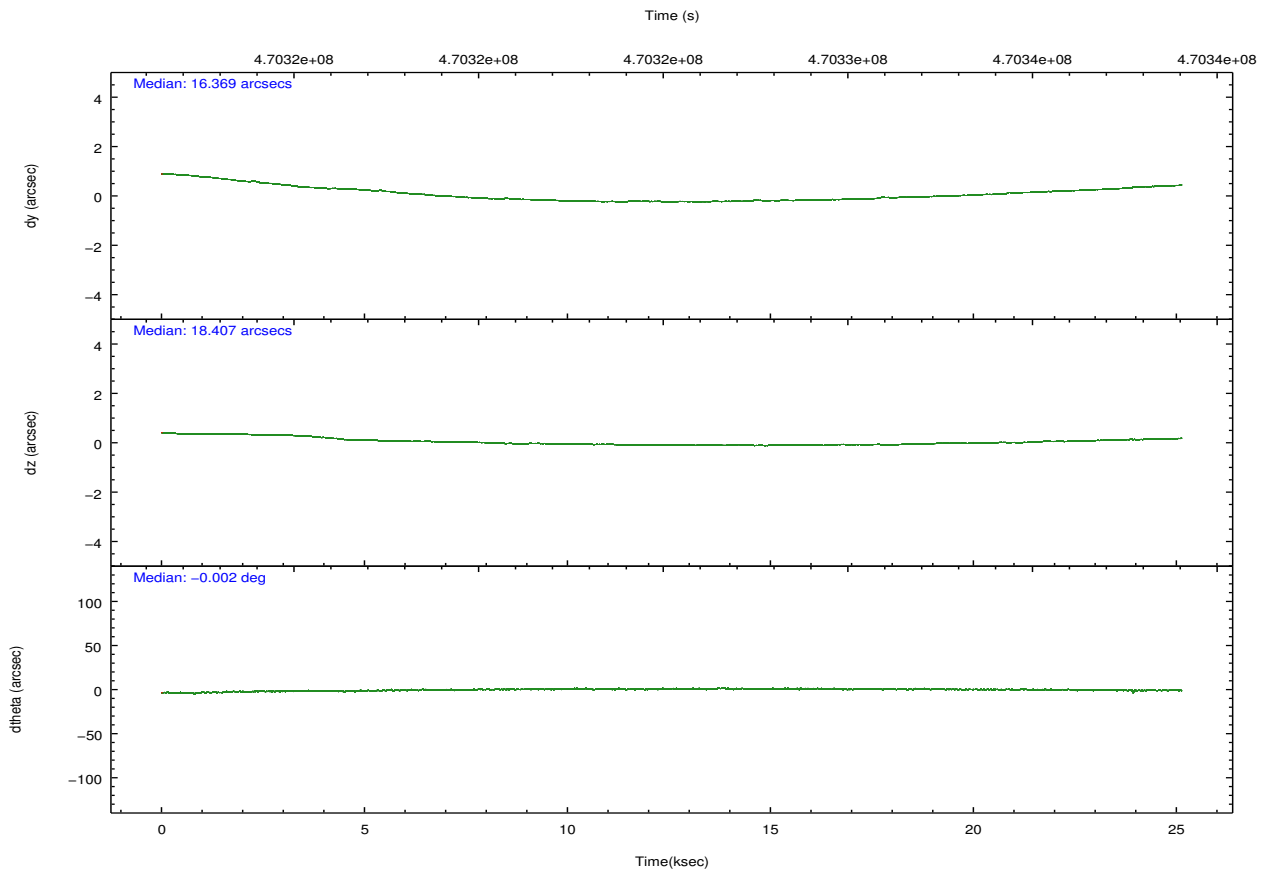
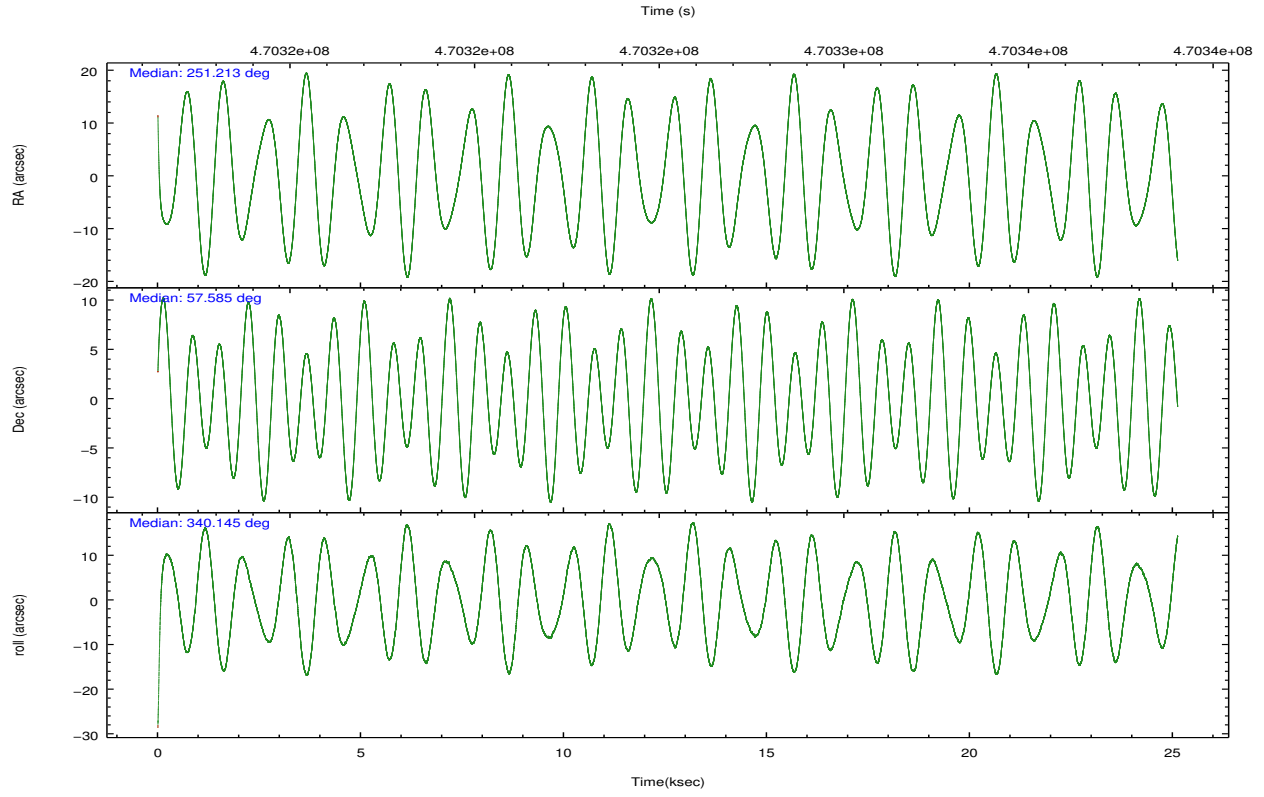
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	124786	117184	216363	125010	168083	160564	grade 0 events	4991	4997	14973	5061	6690	12680
rejected events	110493	103513	107949	109822	94586	117576		3%	4%	6%	4%	3%	7%
rejected %	88%	88%	49%	87%	56%	73%	grade 1 events	70	62	344	73	235	120
								0%	0%	0%	0%	0%	0%
							grade 2 events	3631	2917	32872	3516	15134	10158
								2%	2%	15%	2%	9%	6%
							grade 3 events	1476	1465	4002	1517	6308	4449
								1%	1%	1%	1%	3%	2%
							grade 4 events	1488	1473	3386	1595	6114	4141
								1%	1%	1%	1%	3%	2%
							grade 5 events	5500	6377	15865	6496	17545	9331
								4%	5%	7%	5%	10%	5%
							grade 6 events	2711	2821	53212	3505	39268	11562
								2%	2%	24%	2%	23%	7%
							grade 7 events	104919	97072	91709	103247	76789	108123
								84%	82%	42%	82%	45%	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	251.162743	251.2128055766107	CCD I2 on	O2	Y
[deg] Pointing Dec	57.579901	57.58511566386008	CCD I3 on	O4	Y
[deg] Pointing Roll	340.038481	340.1528372320507	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	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	O3	Y
[s] Observation start time (MET)	470312803.184000	470311296.30076	CCD S5 on	N	N
Observation start date	2012-11-26T10:25:36	2012-11-26T10:01:36	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	470337803.184000	470338627.41473	On-chip summing requested	N	N
Observation end date	2012-11-26T17:22:16	2012-11-26T17:37:07	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



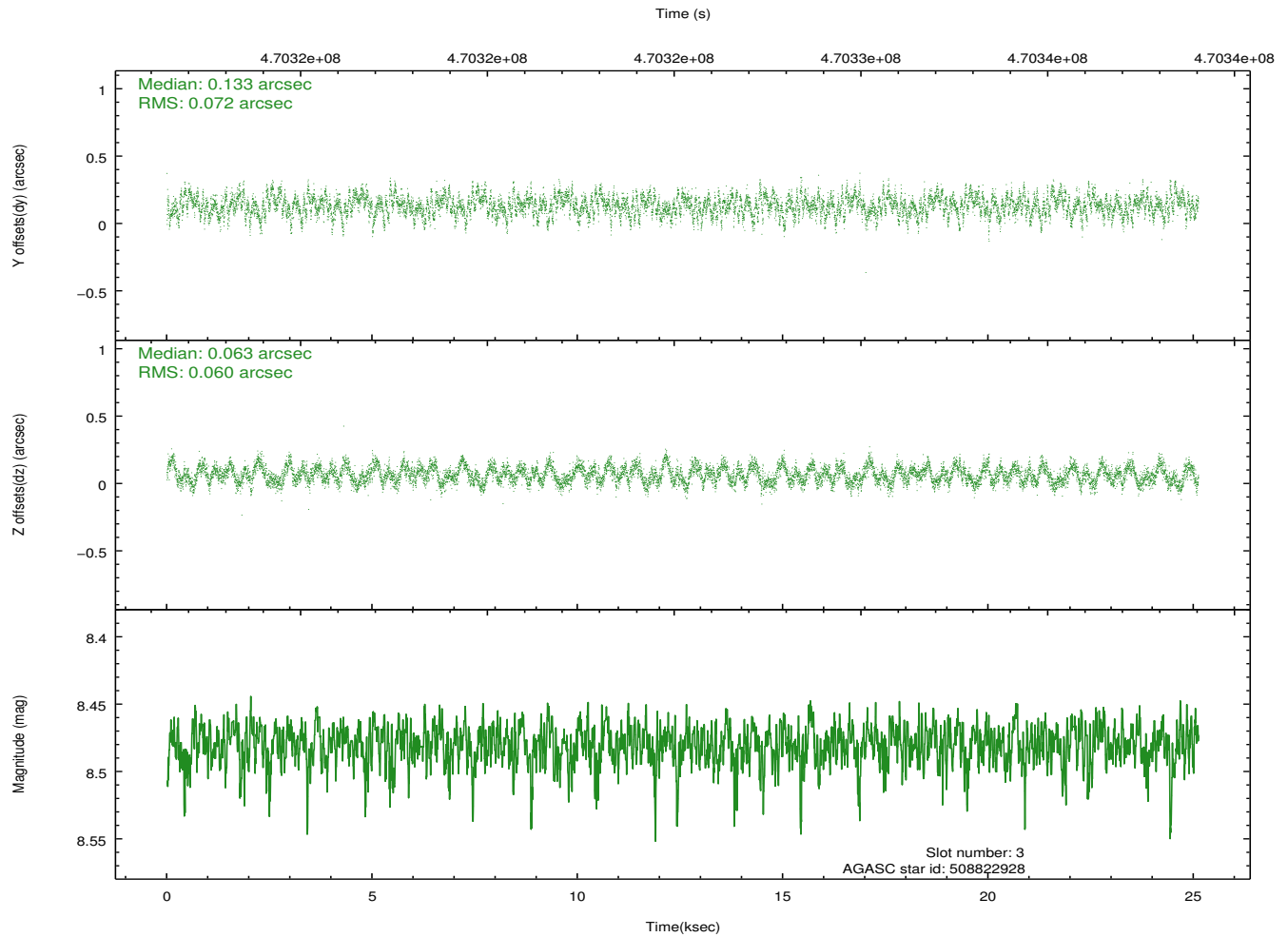
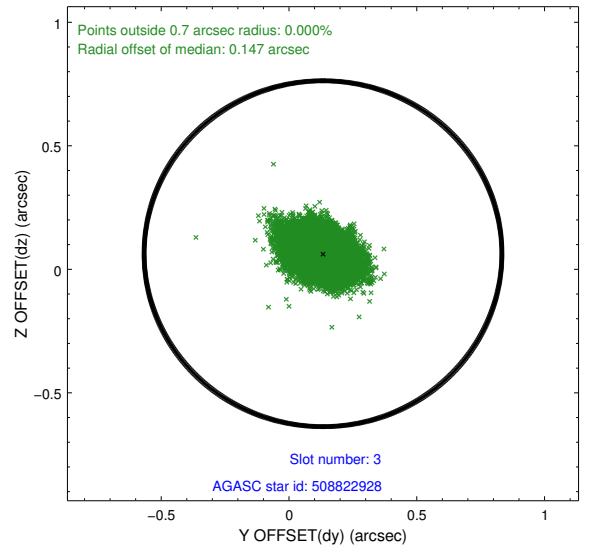
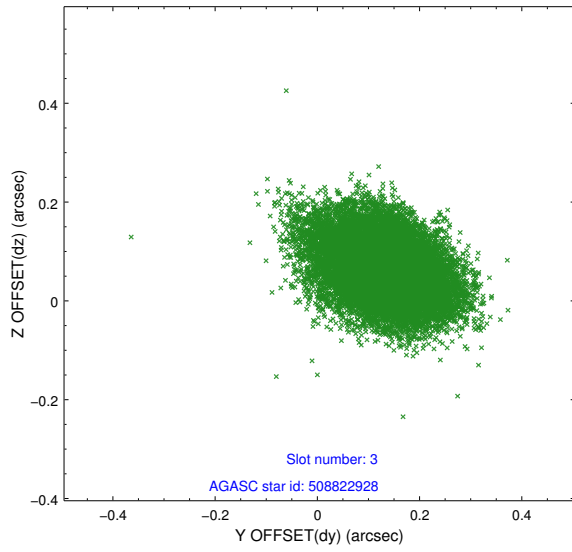


### Slot Statistics

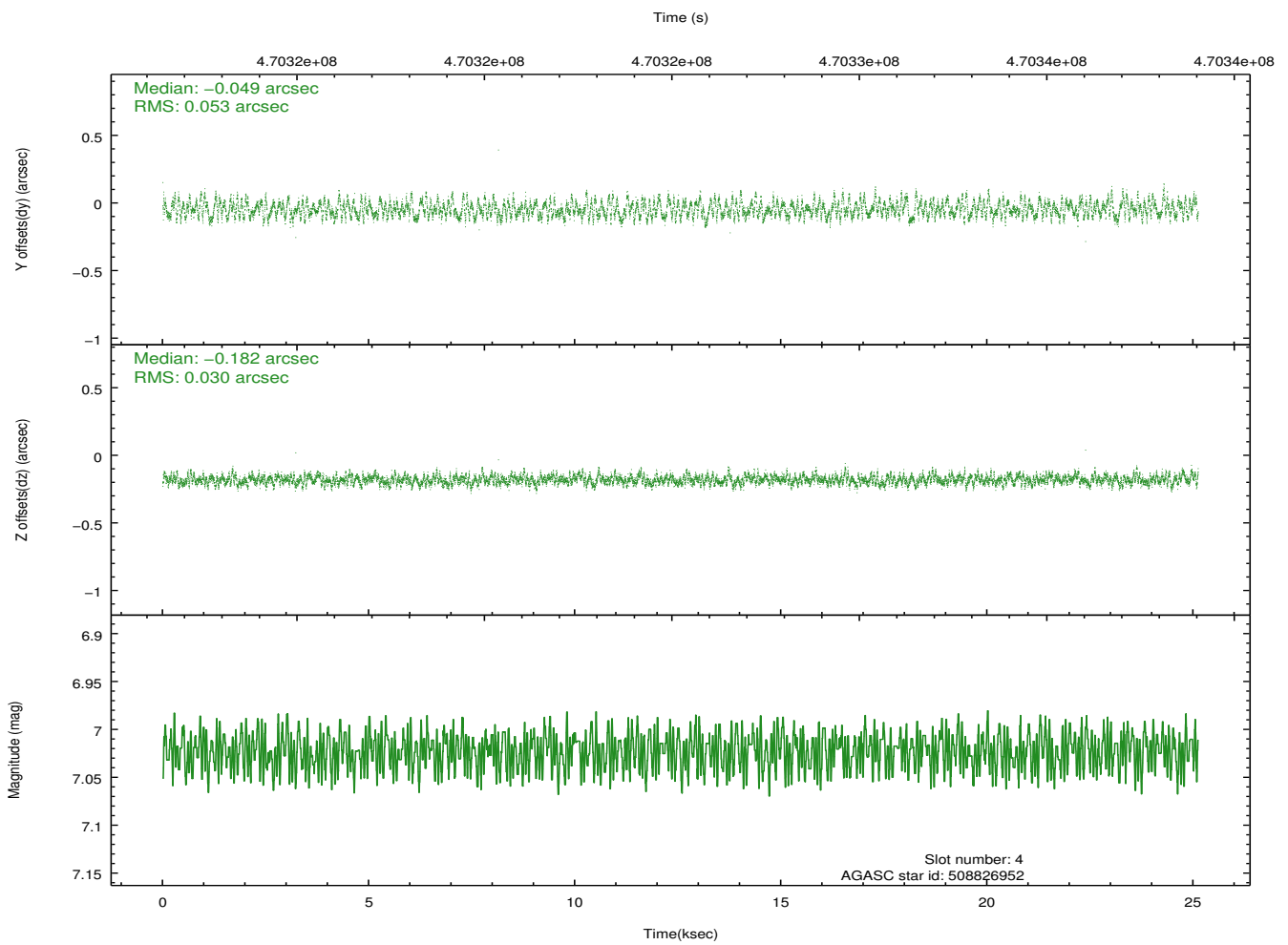
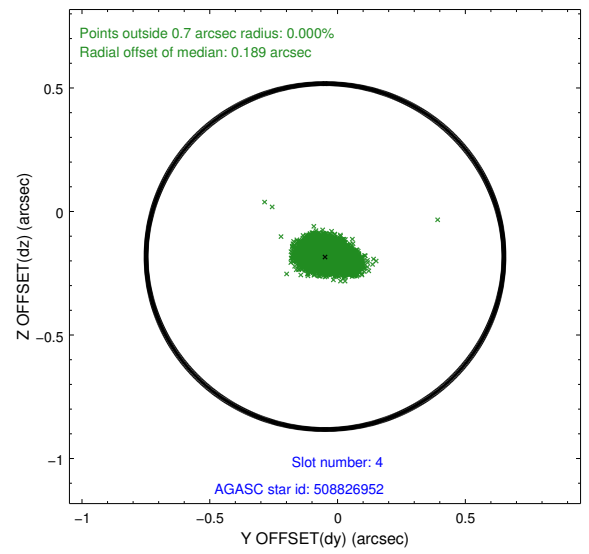
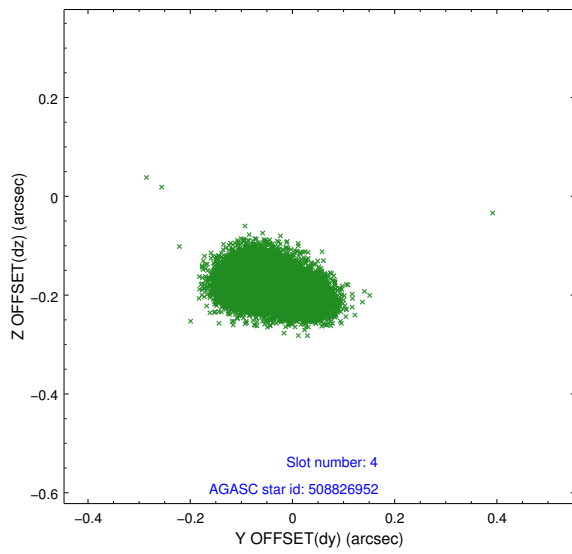
lot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	6.91	6128	-0.087	-0.034	0.007	0.011	0.000000	0.000000	-769.60	-1739.85
1	FID		ACIS-S-4	7.00	6128	0.193	0.052	0.006	0.012	0.000000	0.000000	2143.95	168.48
2	FID		ACIS-S-5	7.03	6128	-0.136	-0.008	0.008	0.015	0.000000	0.000000	-1822.29	162.33
3	GUIDE	used	508822928	8.48	12247	0.133	0.063	0.099	0.160	251.922984	56.892498	2247.92	-1806.87
4	GUIDE	used	508826952	7.02	12255	-0.049	-0.182	0.065	0.105	252.003832	57.489272	1638.15	258.10
5	GUIDE	used	509214760	8.35	12255	0.077	0.284	0.075	0.119	250.589992	57.556199	-1011.50	-453.34
6	GUIDE	used	509223192	7.74	12255	-0.018	-0.095	0.075	0.114	251.320493	58.085113	-338.82	1812.09
7	BAD	used	509225640	5.11	6124	-0.287	-0.149	0.079	0.117	252.069297	57.813712	1342.31	1395.62

## 2.4 Star Slots

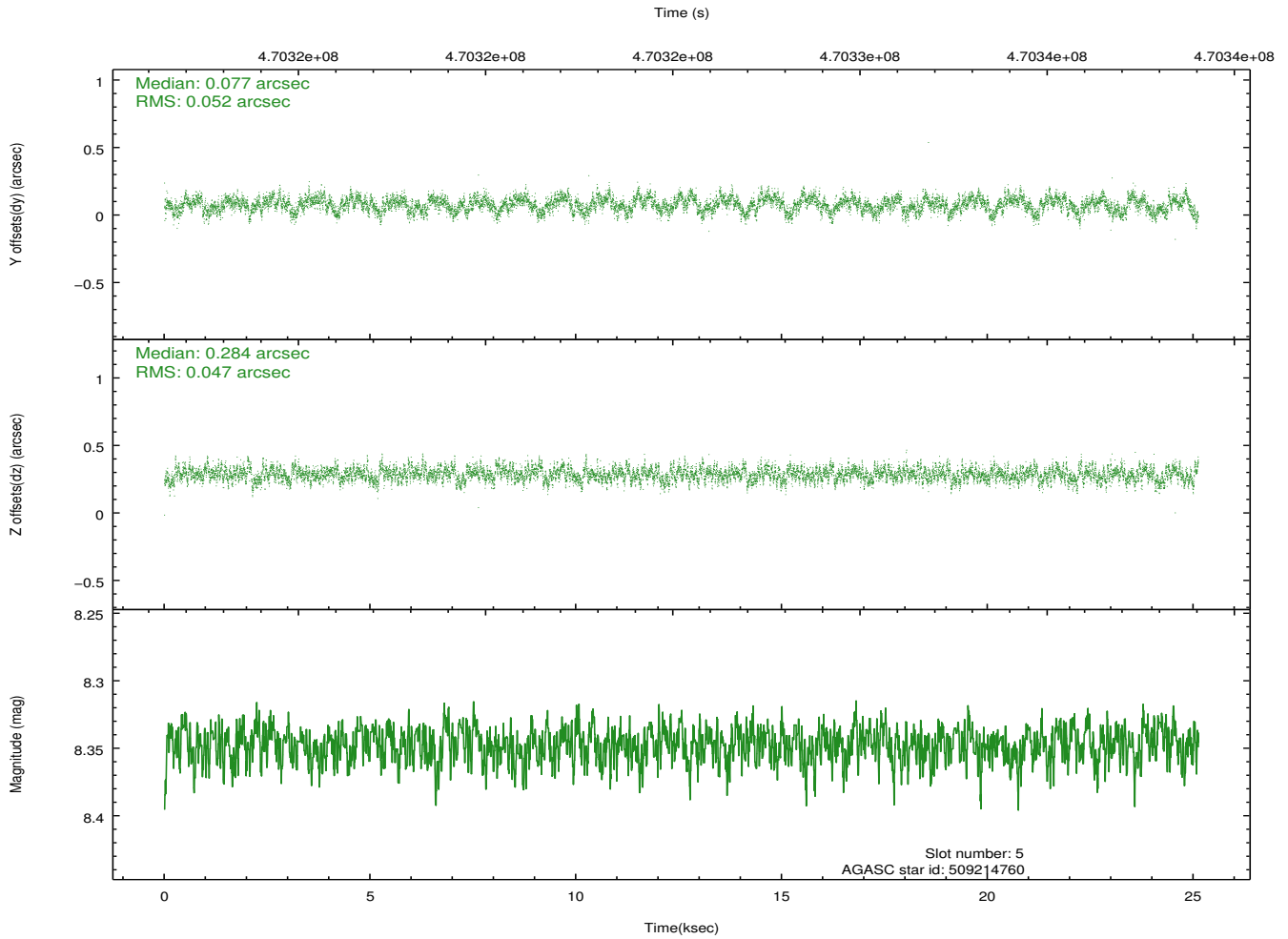
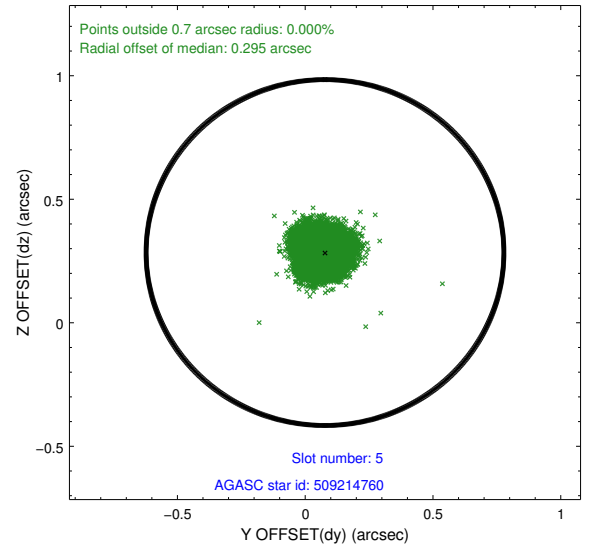
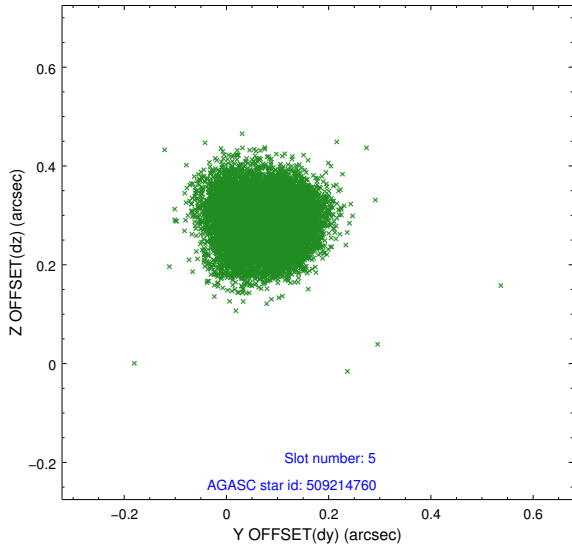
### 2.4.1 Slot 3



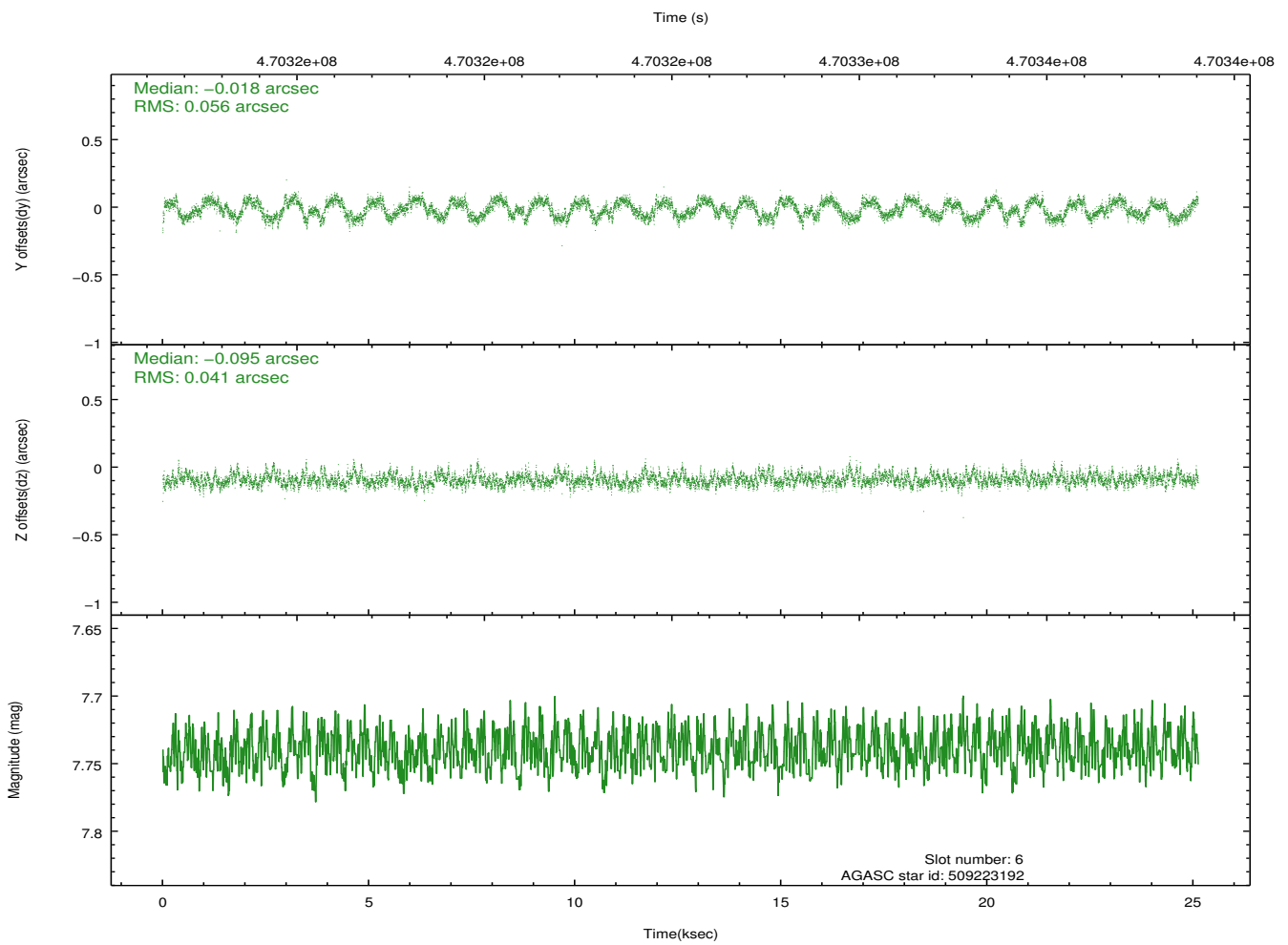
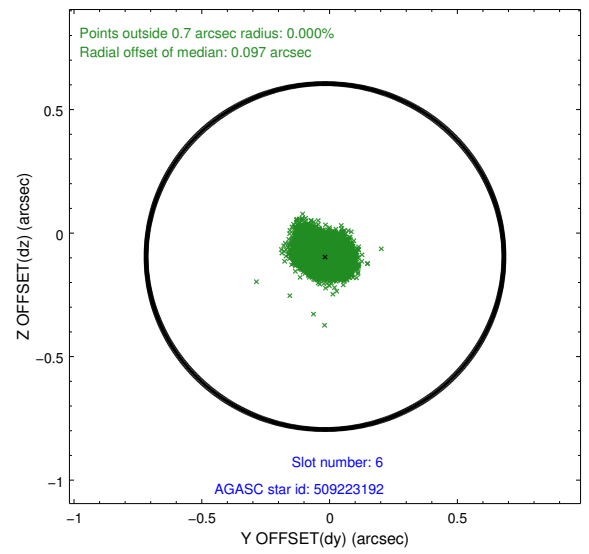
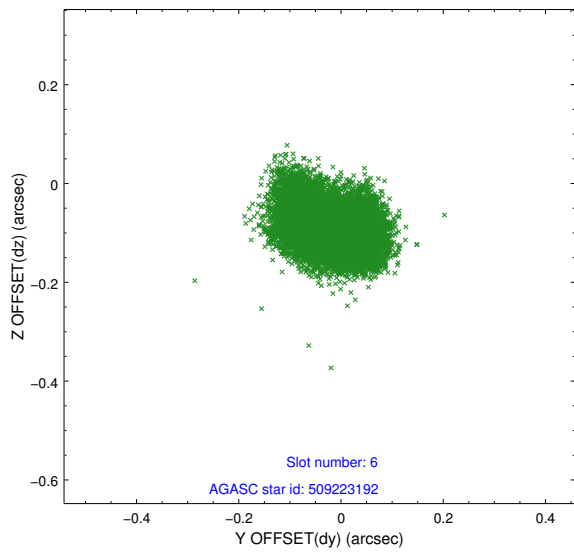
## 2.4.2 Slot 4



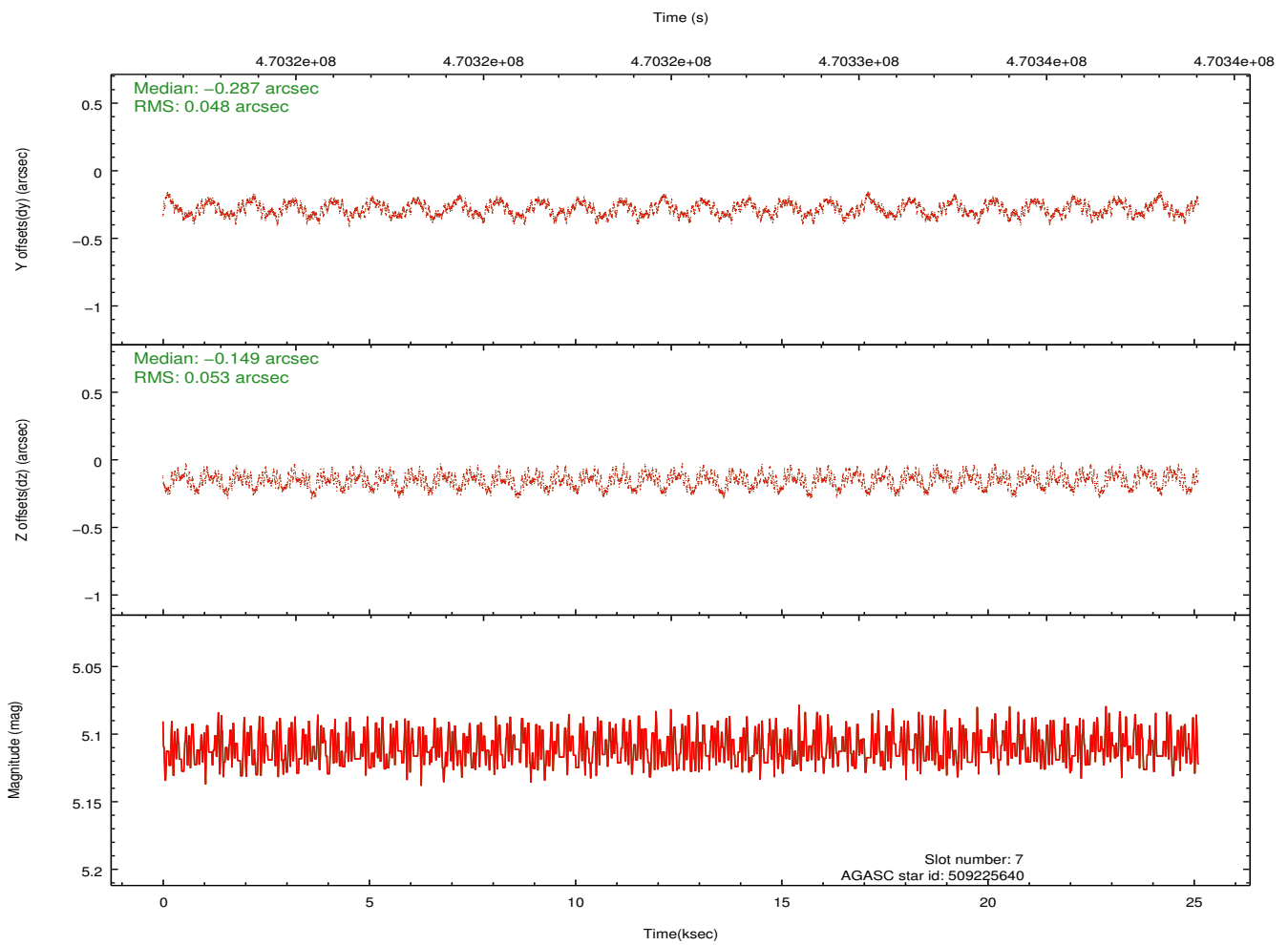
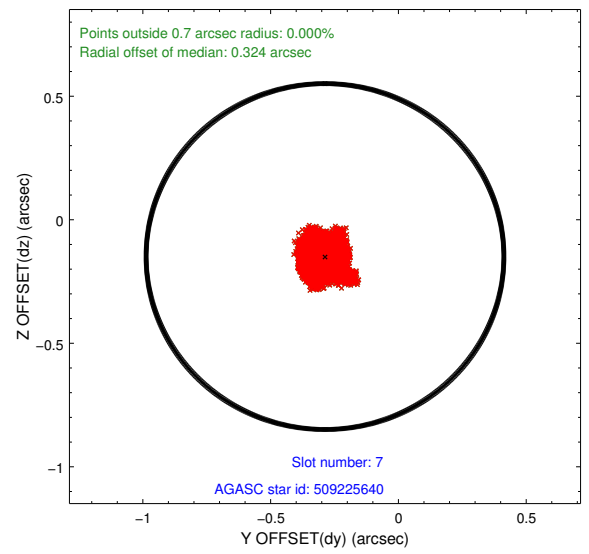
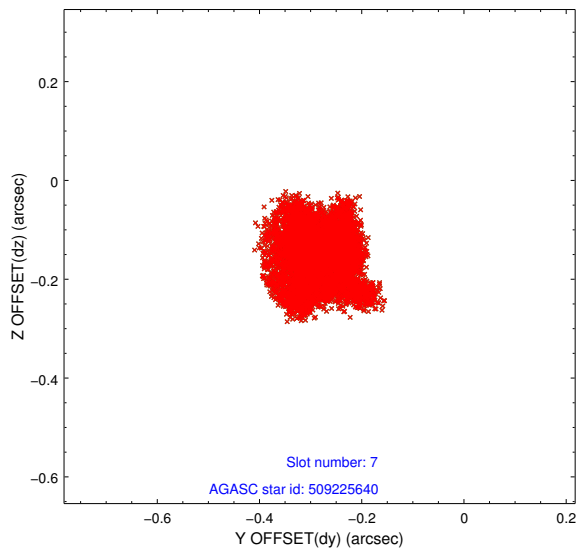
### 2.4.3 Slot 5



## 2.4.4 Slot 6

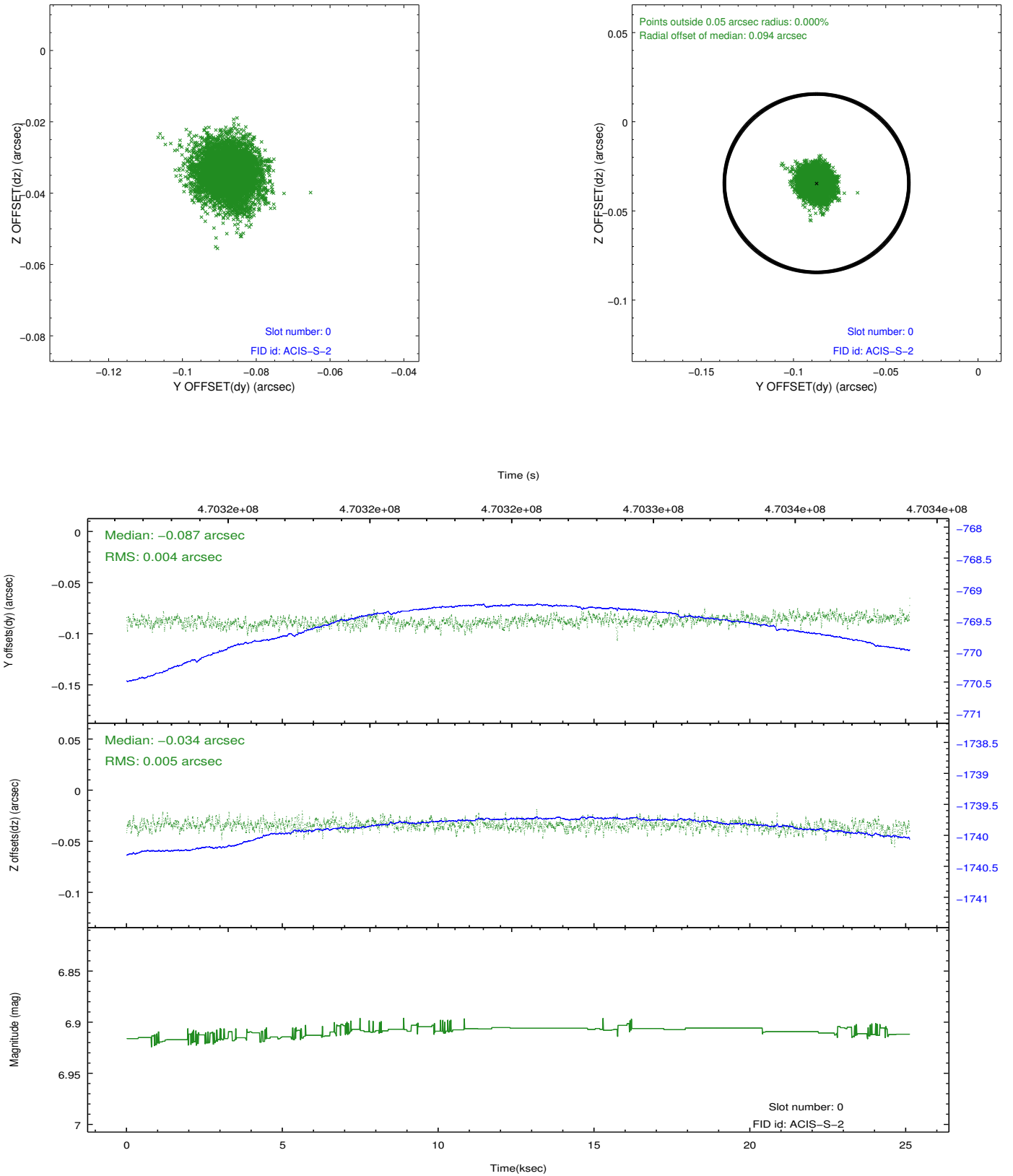


## 2.4.5 Slot 7

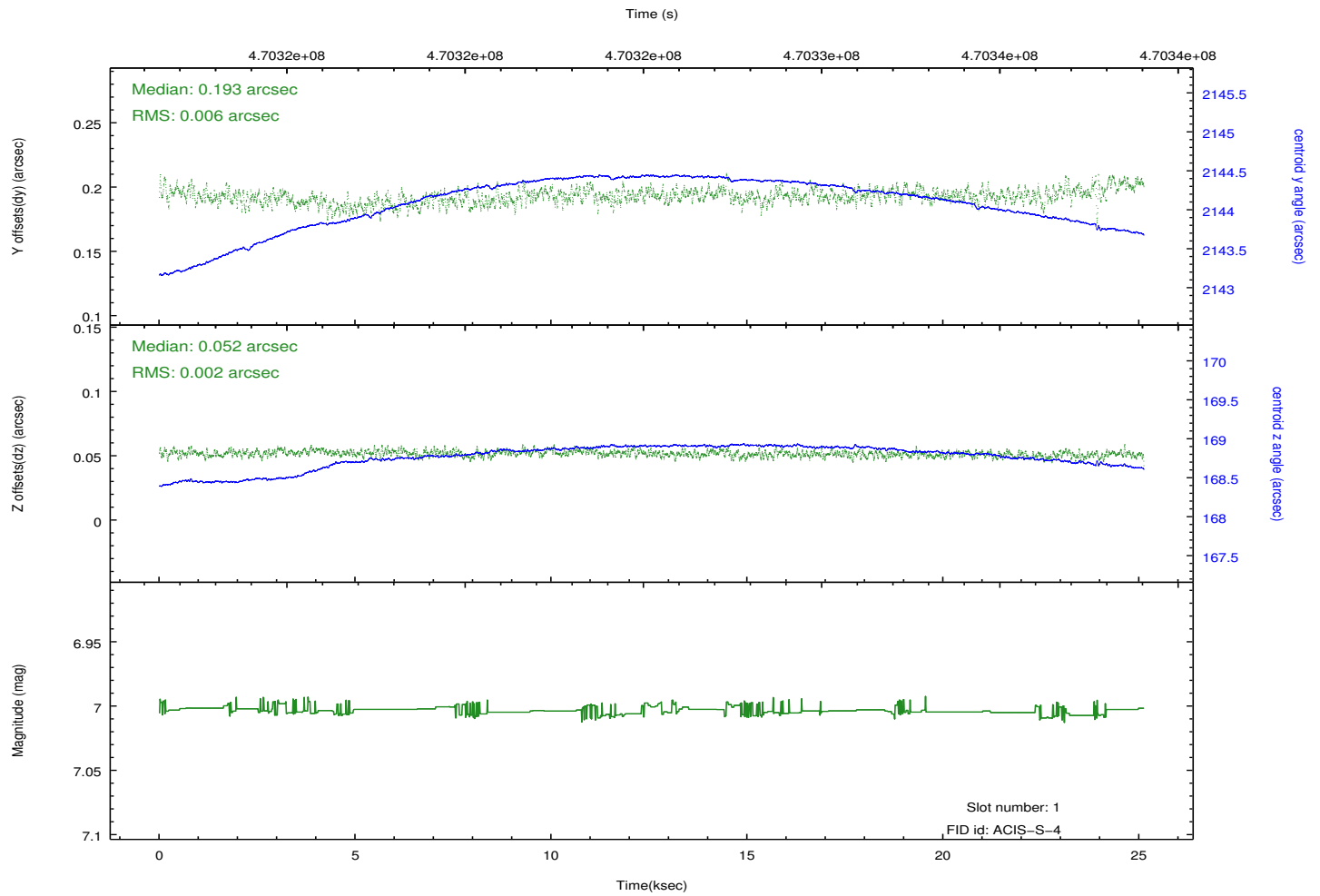
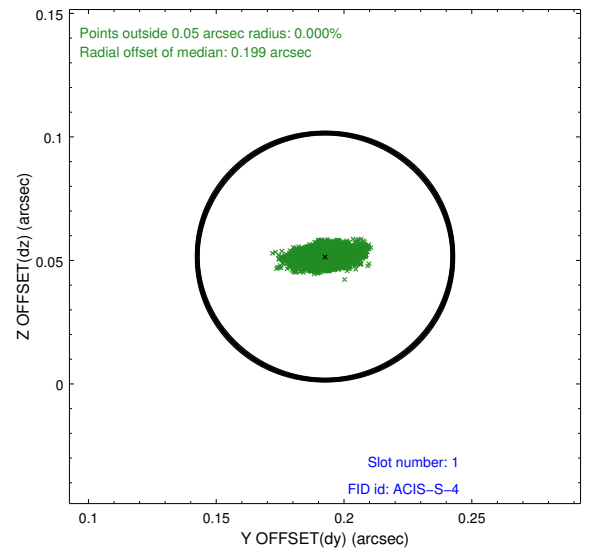
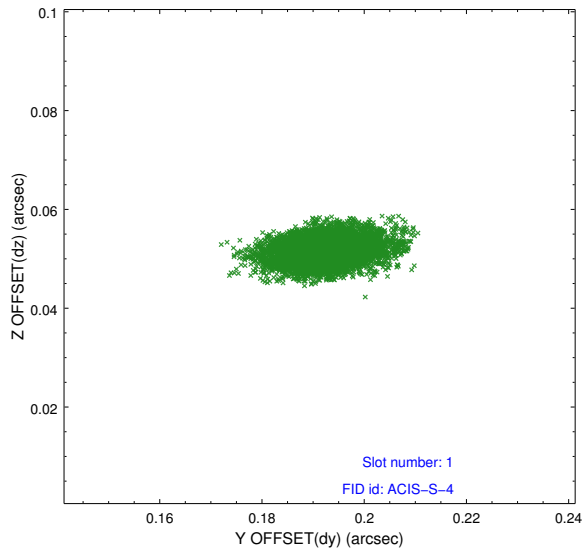


## 2.5 FID Slots

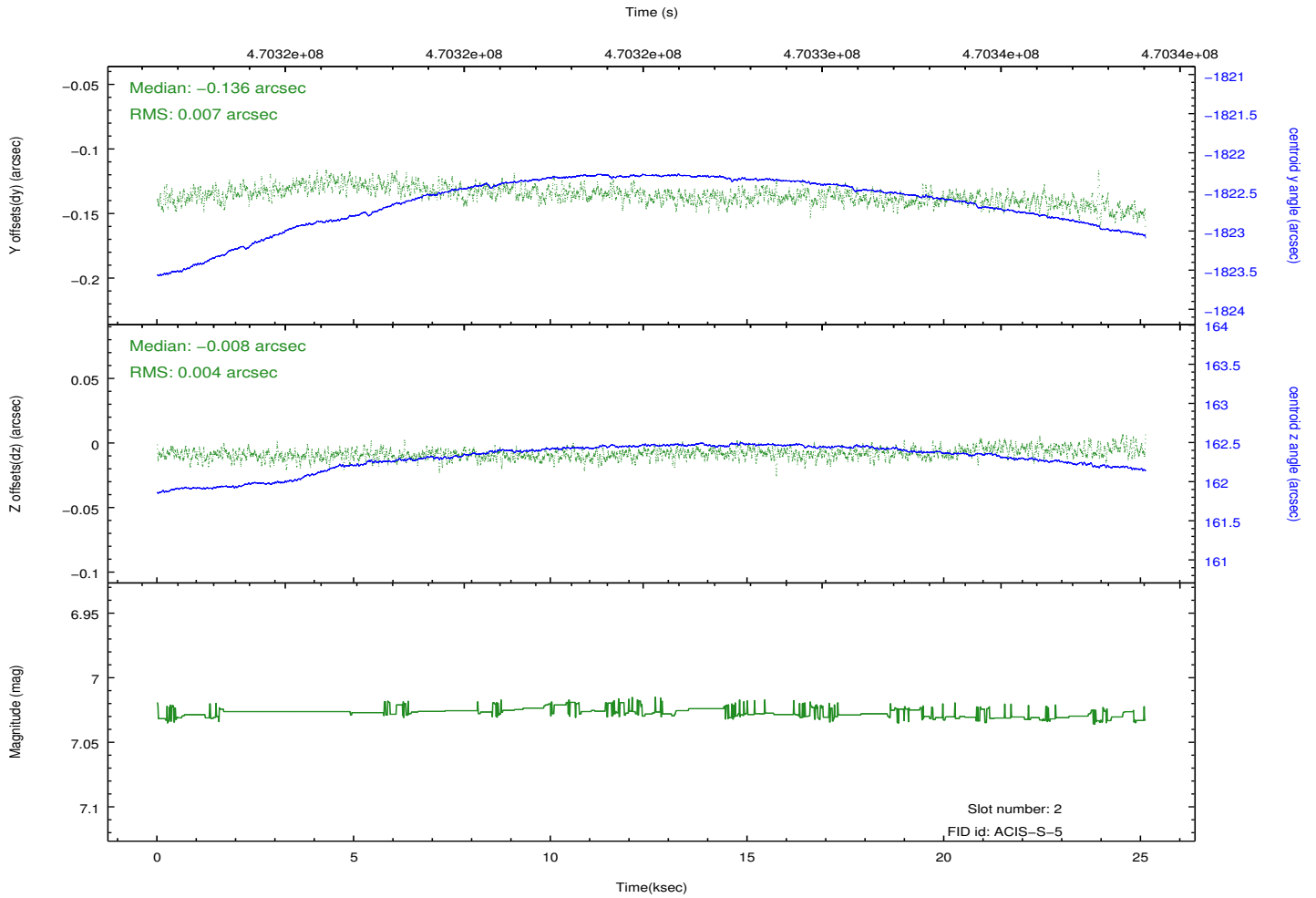
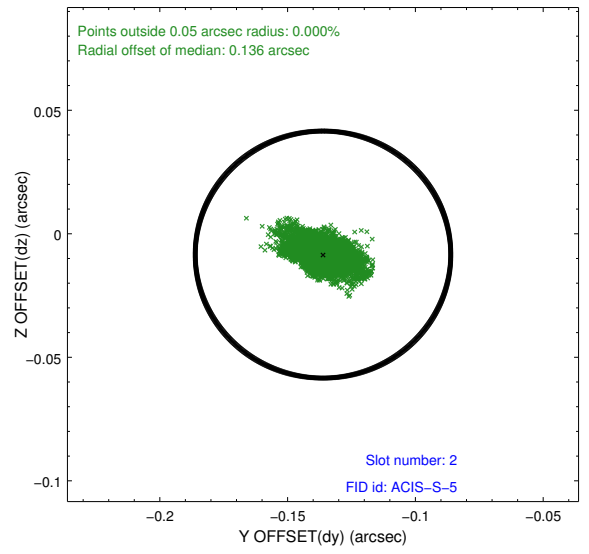
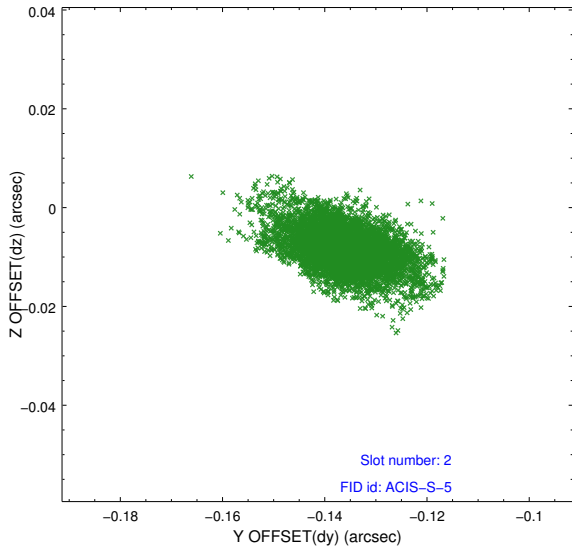
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.966257717669

## A.2 Comments

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.