

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 14519 - L2 Version 2  
Chandra X-Ray Center

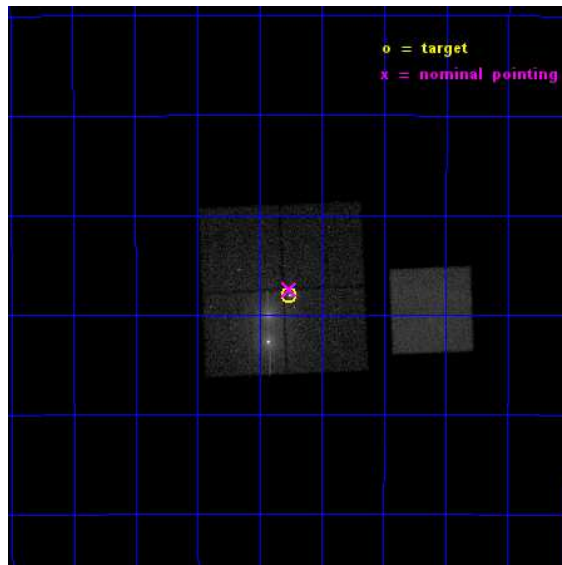
L2 Processing Date : Dec 2 2014

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# 1 Front

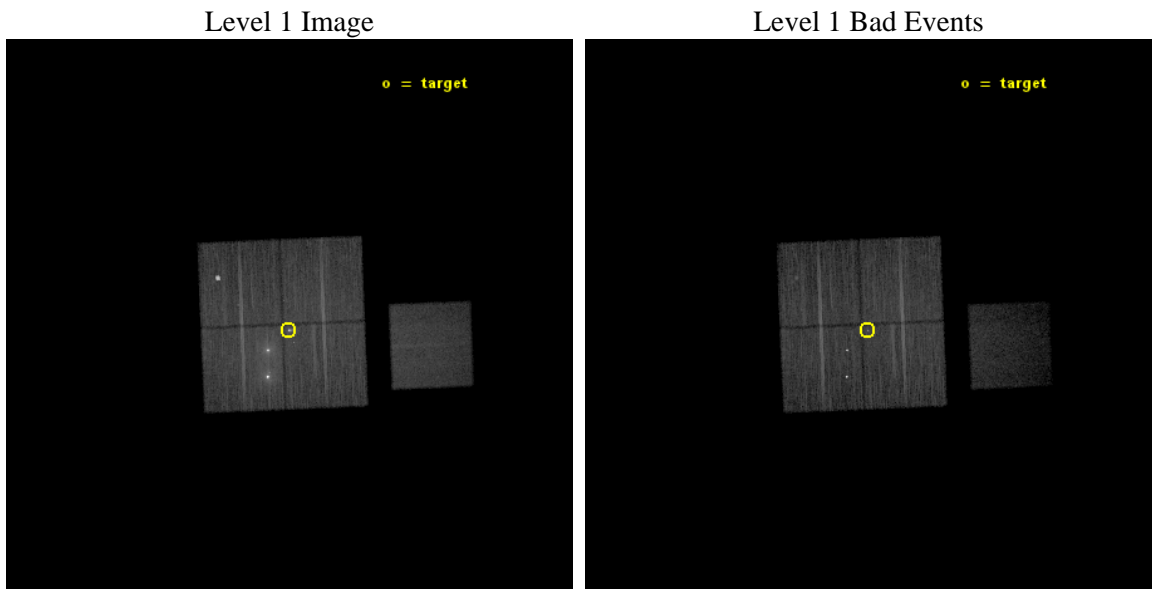
seq_num	501804	Sequence number
obs_id	14519	Observation id
title	A comparative study of two outstanding pulsar tails	Proposal title
observer	Dr Oleg Kargaltsev	Principal investigator
object	The Mouse	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.81625	Observer's specified target RA [deg]
dec_targ	-29.967222	Observer's specified target Dec [deg]
ra_nom	266.81490181788	Nominal RA [deg]
dec_nom	-29.957788890682	Nominal Dec [deg]
roll_nom	87.644073472641	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30108.869509757	Sum of GTIs [s]
livetime	29715.474963784	Livetime [s]
ontime0	30111.887420118	Sum of GTIs [s]
ontime1	30108.787479758	Sum of GTIs [s]
ontime2	30102.546409488	Sum of GTIs [s]
ontime3	30108.869509757	Sum of GTIs [s]
ontime7	30112.051580131	Sum of GTIs [s]
l2events	207228	Number of level 2 events



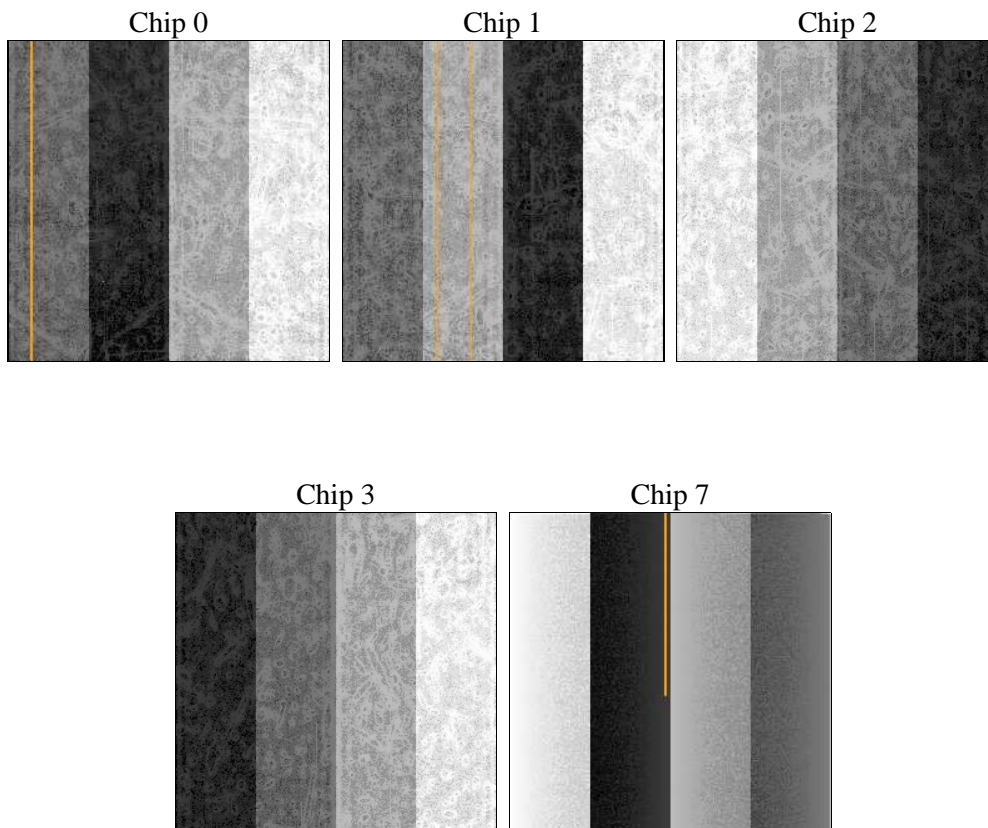
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	30108.869509757	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	30111.887420118	Sum of GTIs [s]
date	2014-12-02T12:45:41	Date and time of file creation	ontime1	30108.787479758	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	30102.546409488	Sum of GTIs [s]
			ontime3	30108.869509757	Sum of GTIs [s]
			ontime7	30112.051580131	Sum of GTIs [s]
			l1events	738196	Number of level 1 events

### 2.1.4 Events

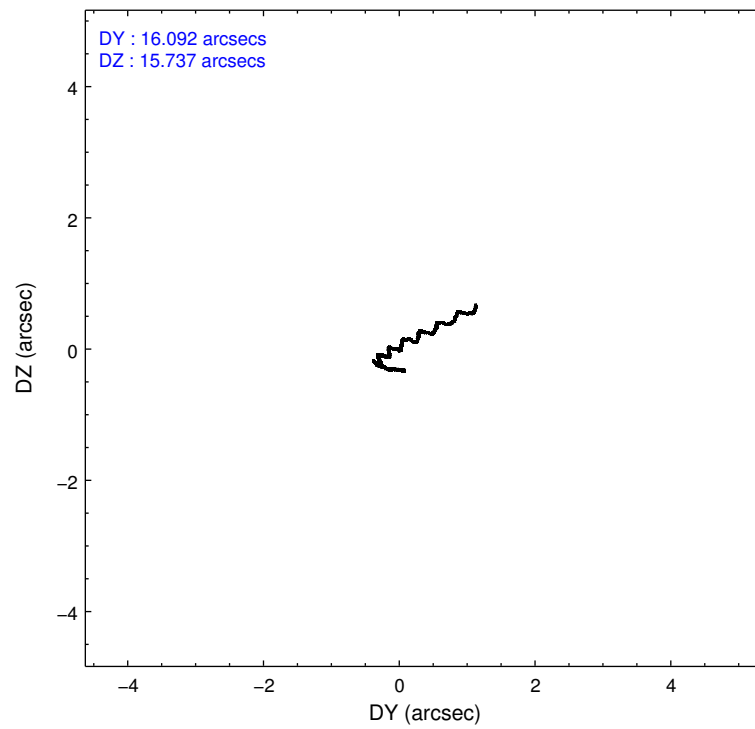
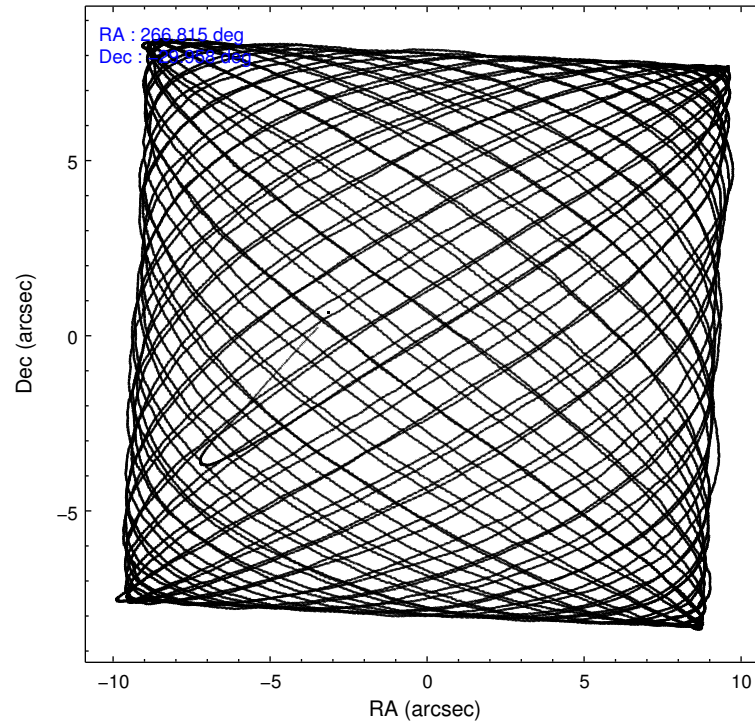
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	141416	215896	133816	148851	98217
rejected events	102158	116458	115571	116473	42619
rejected %	72%	53%	86%	78%	43%

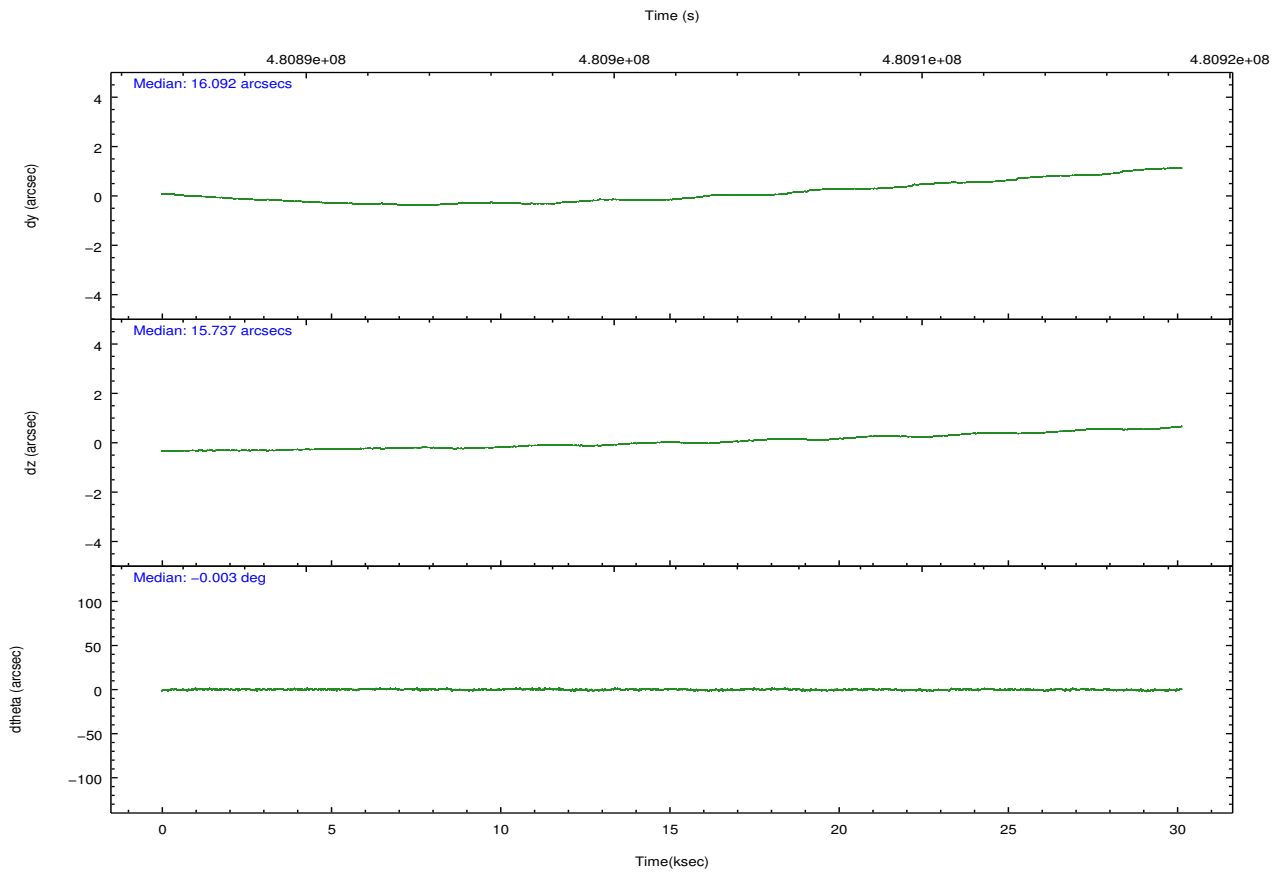
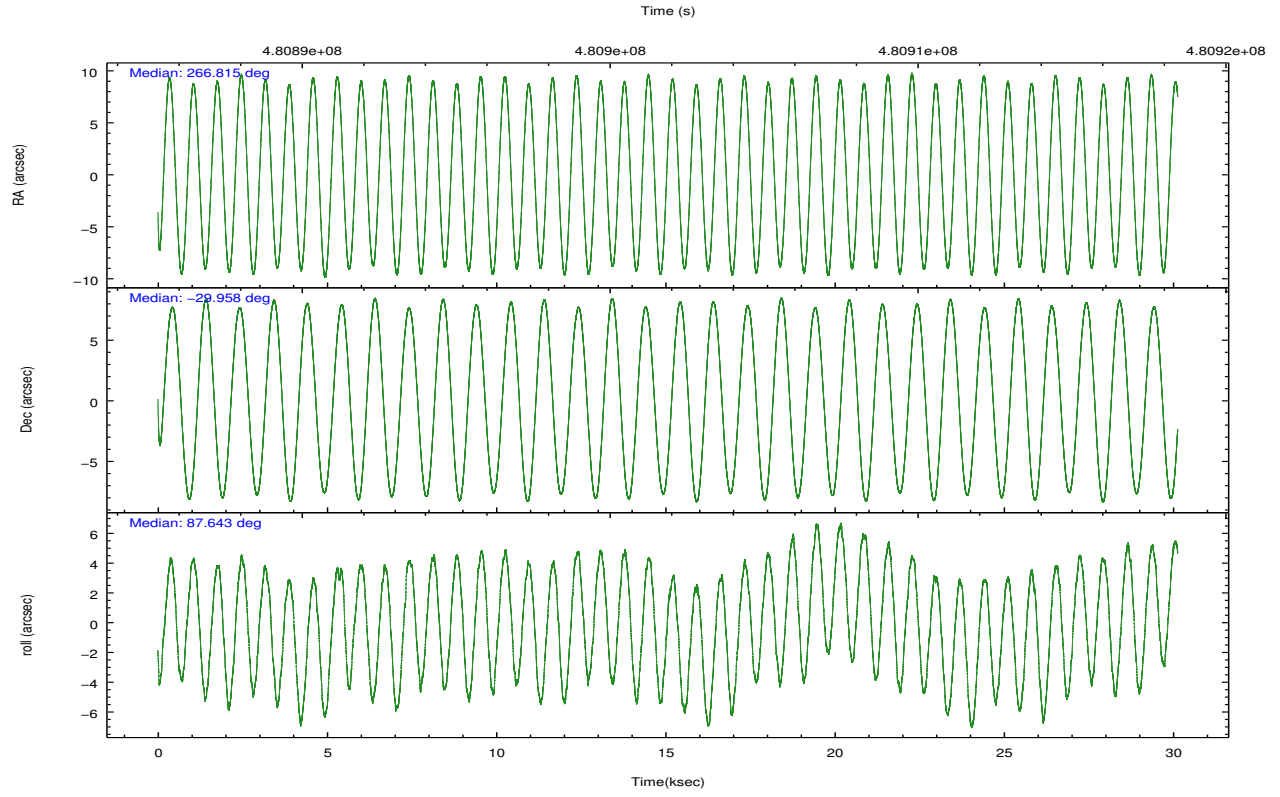
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	29452	58971	9126	19810	7249
	20%	27%	6%	13%	7%
grade 1 events	179	4932	82	284	235
	0%	2%	0%	0%	0%
grade 2 events	4285	17386	3851	5238	13316
	3%	8%	2%	3%	13%
grade 3 events	1621	6349	1419	2124	5149
	1%	2%	1%	1%	5%
grade 4 events	1543	6083	1544	2123	5120
	1%	2%	1%	1%	5%
grade 5 events	3198	7759	2925	3810	10056
	2%	3%	2%	2%	10%
grade 6 events	2359	10655	2306	3083	24773
	1%	4%	1%	2%	25%
grade 7 events	98779	103761	112563	112379	32319
	69%	48%	84%	75%	32%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	266.829734	266.8149018178764	CCD I2 on	Y	Y
[deg] Pointing Dec	-29.982089	-29.95778889068174	CCD I3 on	Y	Y
[deg] Pointing Roll	87.442793	87.64407347264063	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	480886936.184000	480885788.80887	CCD S5 on	N	N
Observation start date	2013-03-28T19:41:09	2013-03-28T19:23:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	480916936.184000	480917509.48559	On-chip summing requested	N	N
Observation end date	2013-03-29T04:01:09	2013-03-29T04:11:49	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



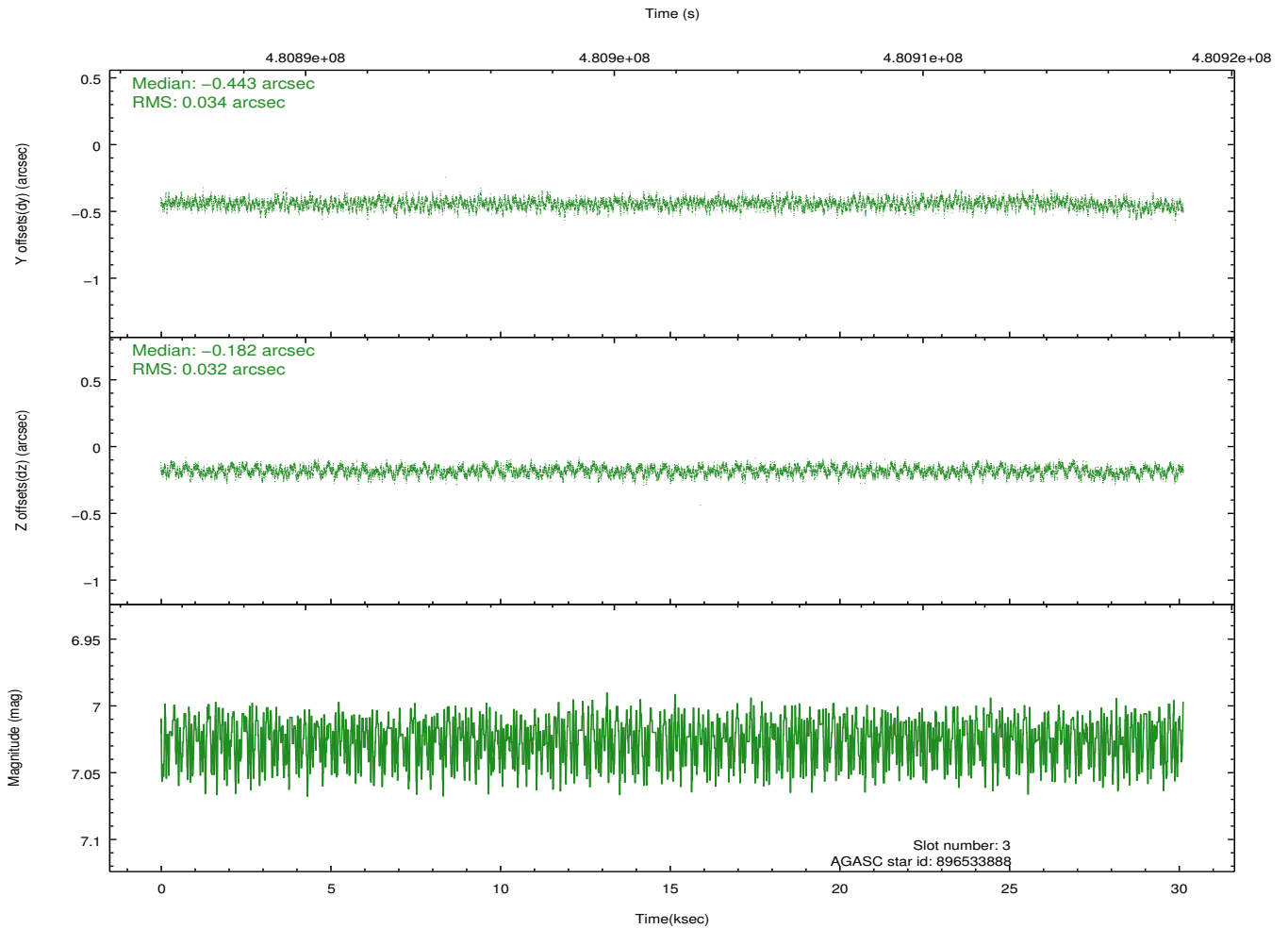
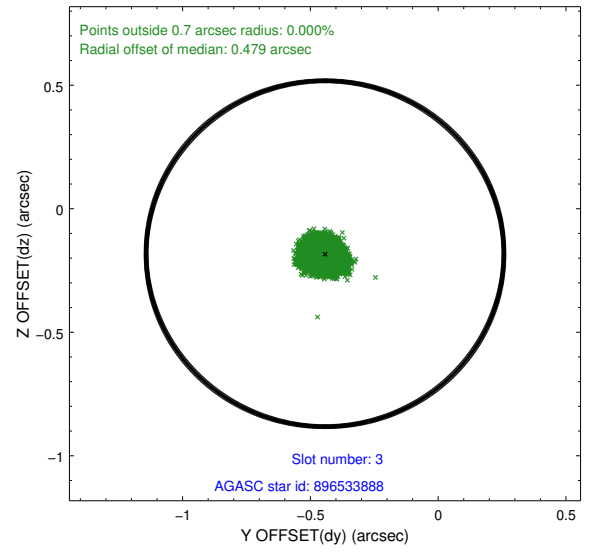
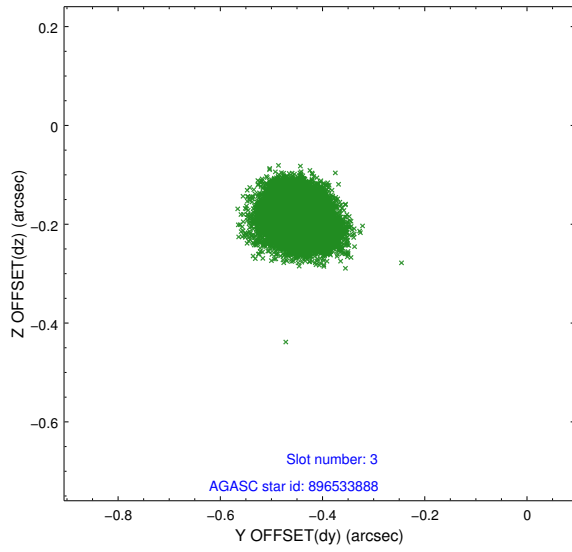


### Slot Statistics

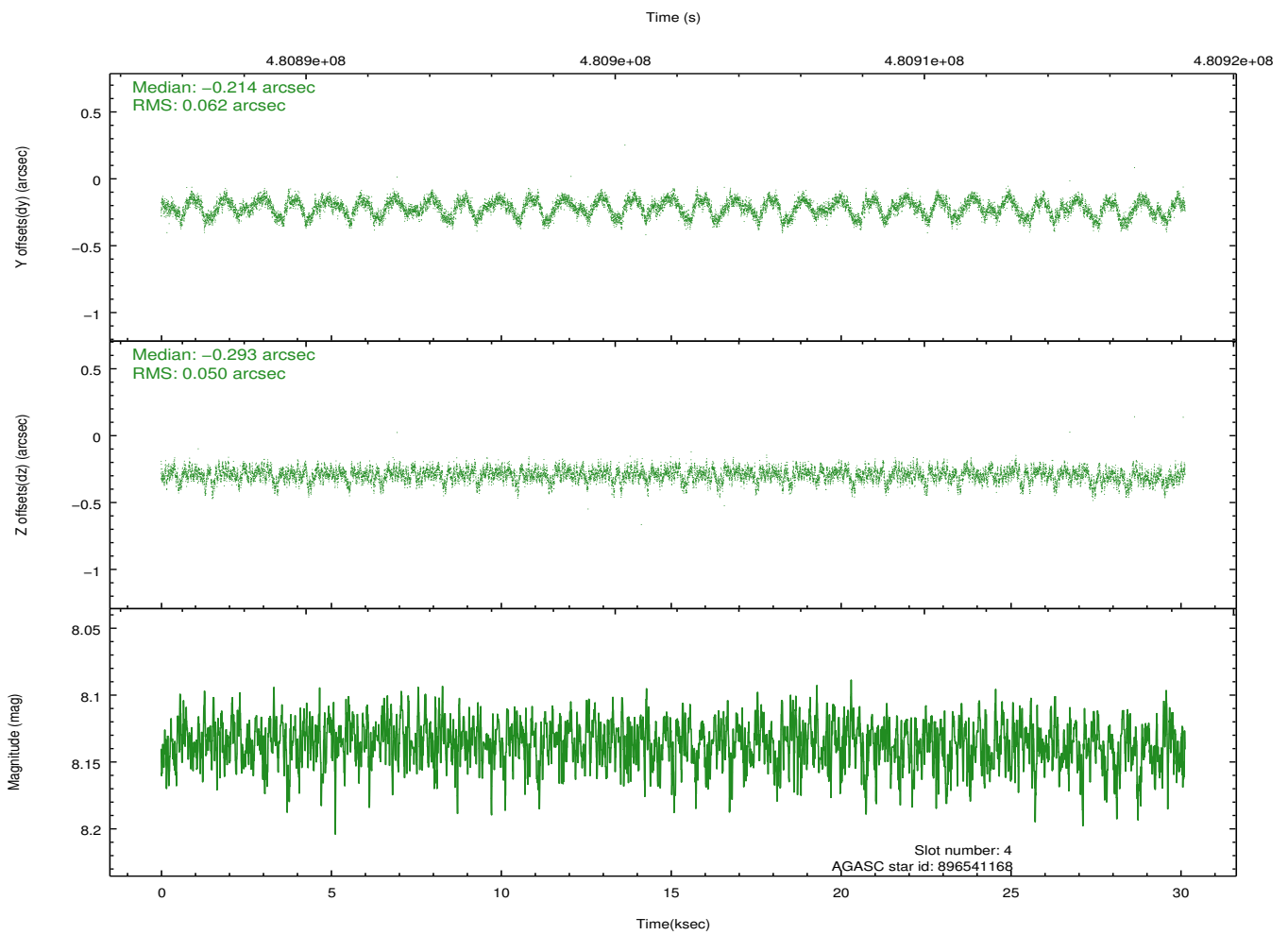
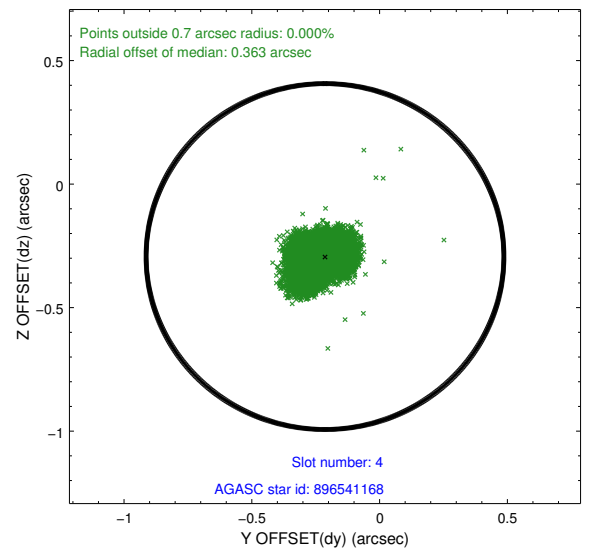
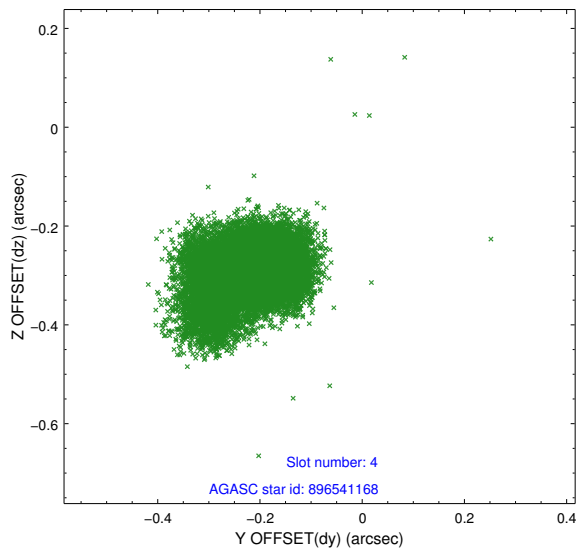
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.18	7350	-0.005	-0.056	0.026	0.040	0.000000	0.000000	923.22	-839.44
1	FID		ACIS-I-4	7.10	7350	0.180	0.064	0.024	0.056	0.000000	0.000000	2143.46	1060.47
2	FID		ACIS-I-5	7.17	7350	-0.275	0.063	0.020	0.043	0.000000	0.000000	-1825.00	1058.34
3	GUIDE	used	896533888	7.02	14700	-0.443	-0.182	0.050	0.080	266.666434	-29.392757	2095.99	606.38
4	GUIDE	used	896541168	8.14	14690	-0.214	-0.293	0.083	0.140	266.319970	-29.850801	397.53	1611.14
5	GUIDE	used	896541360	7.72	14699	-0.281	-0.185	0.062	0.098	266.684478	-29.453744	1879.46	539.88
6	GUIDE	used	966920512	8.36	14681	0.533	0.338	0.084	0.124	267.231170	-30.494681	-1789.29	-1325.99
7	GUIDE	used	966919736	6.89	14698	0.412	0.325	0.062	0.102	267.322278	-30.597445	-2148.35	-1624.26

## 2.4 Star Slots

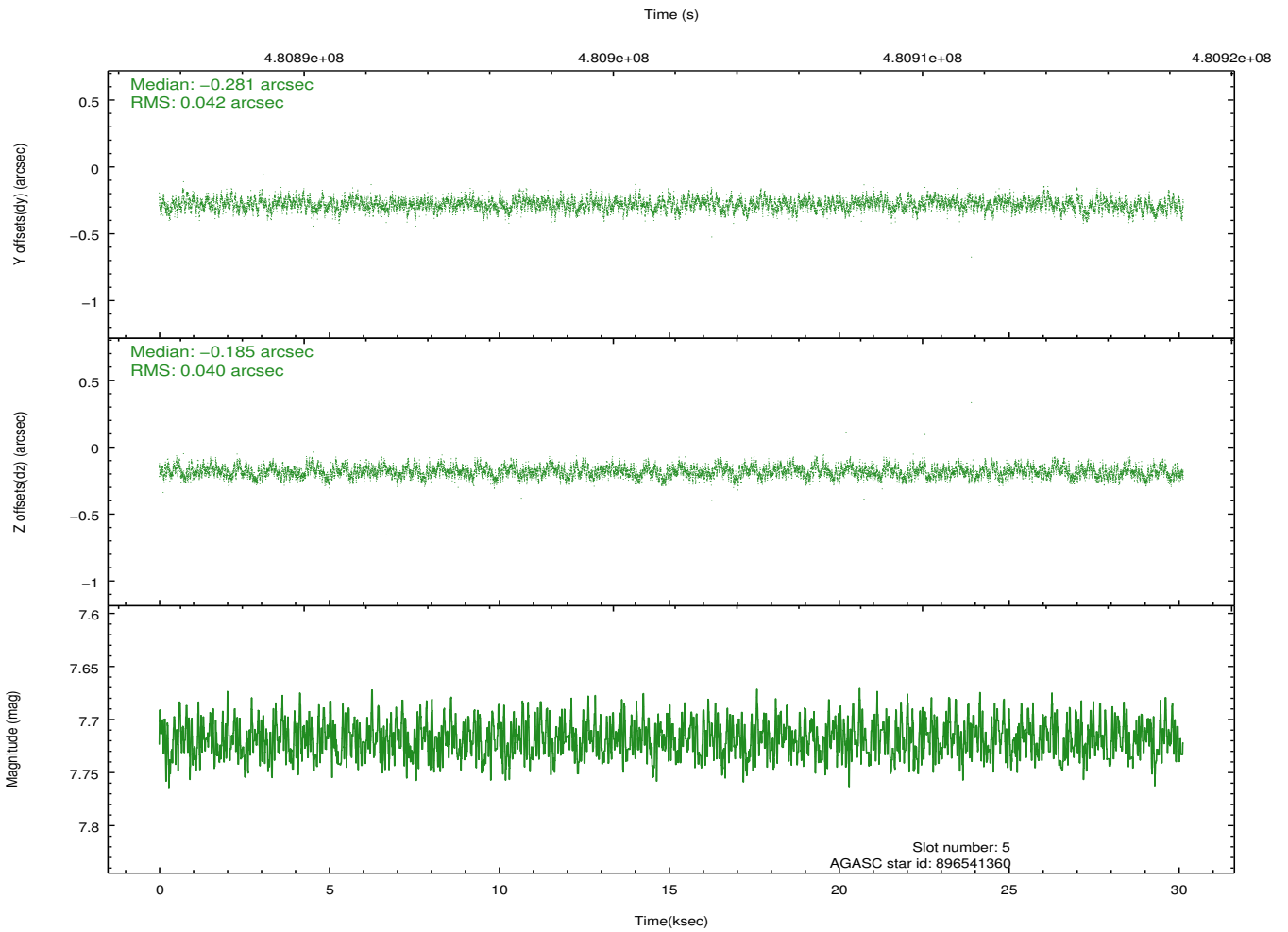
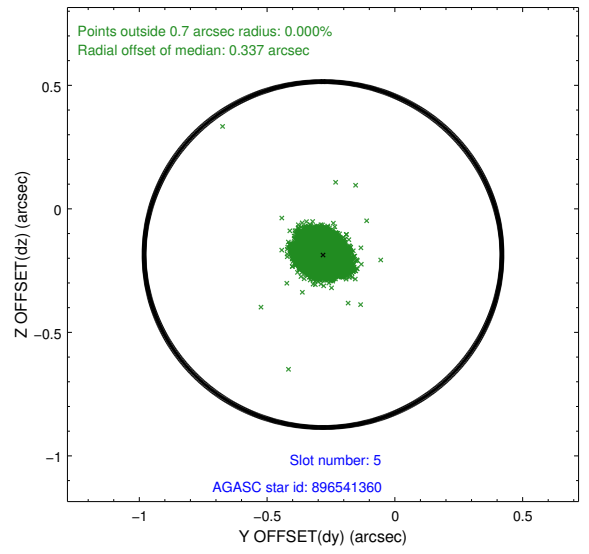
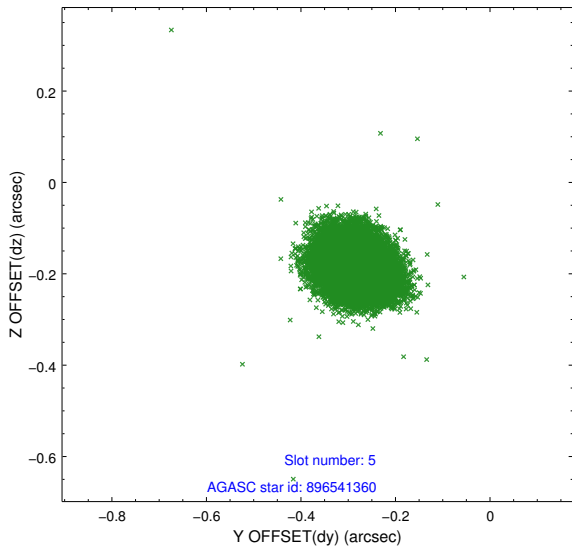
### 2.4.1 Slot 3



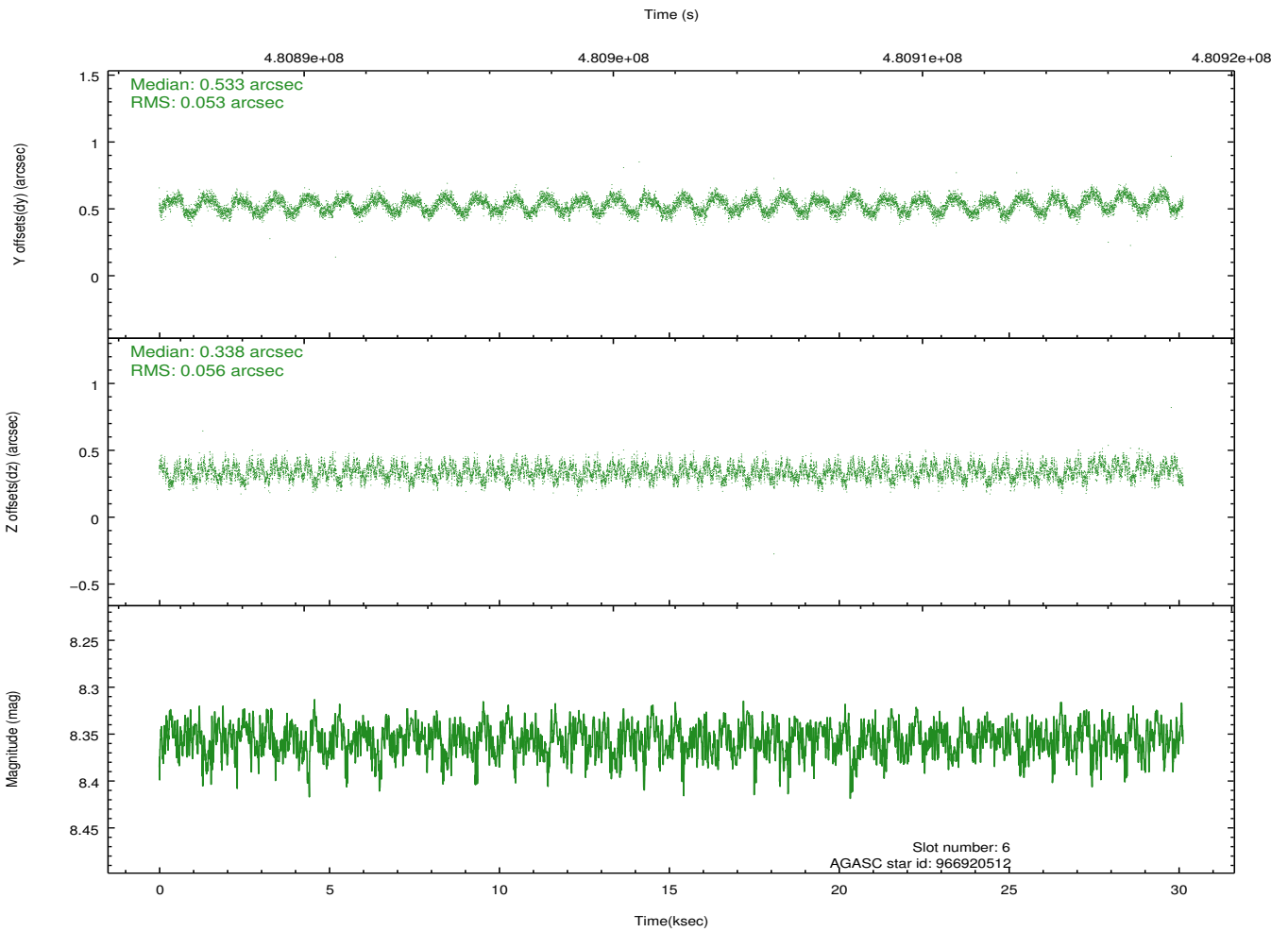
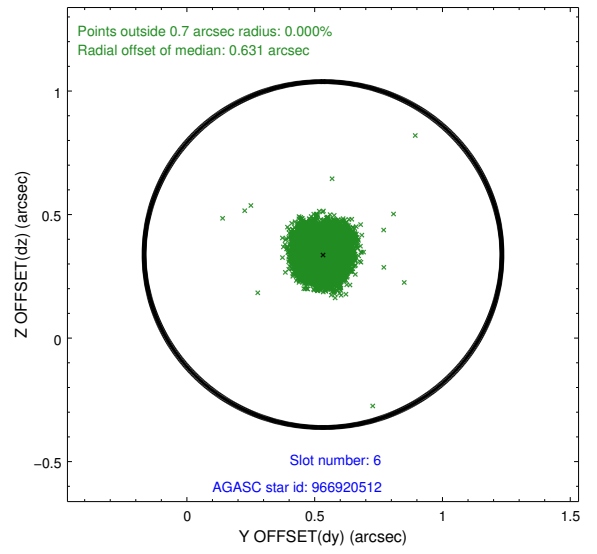
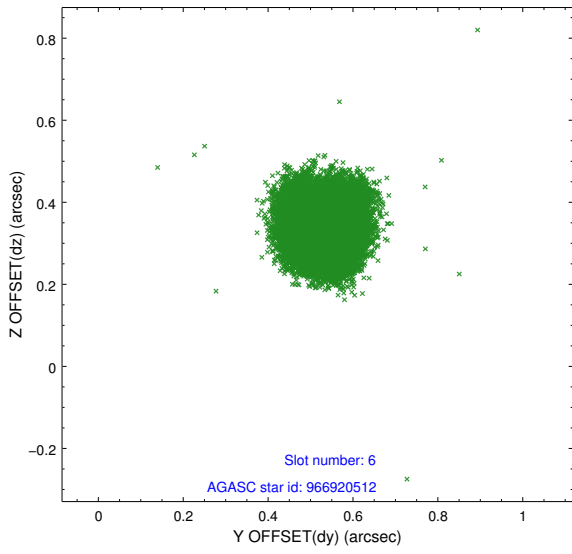
## 2.4.2 Slot 4



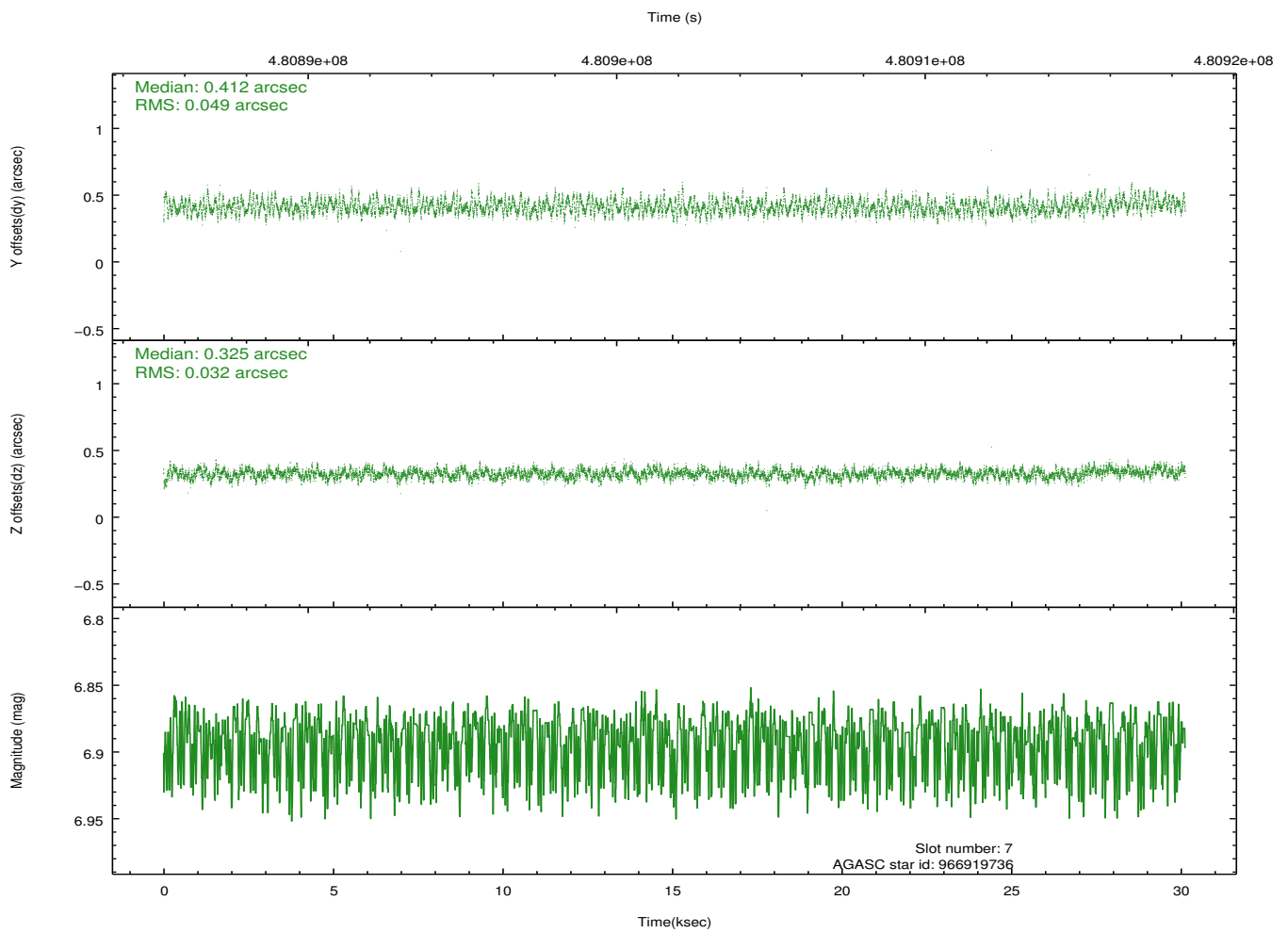
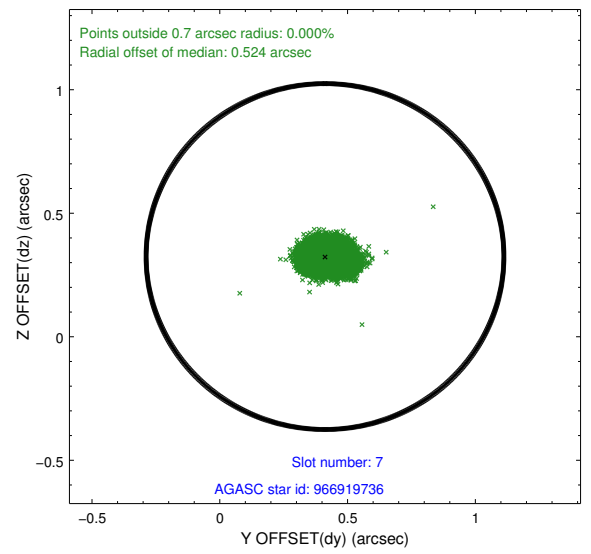
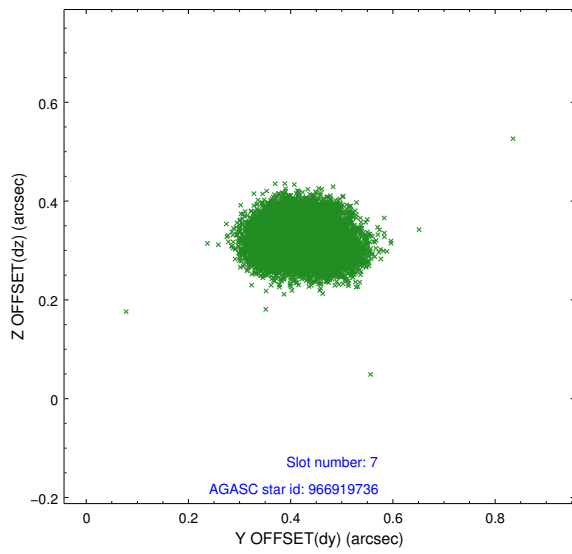
### 2.4.3 Slot 5



### 2.4.4 Slot 6

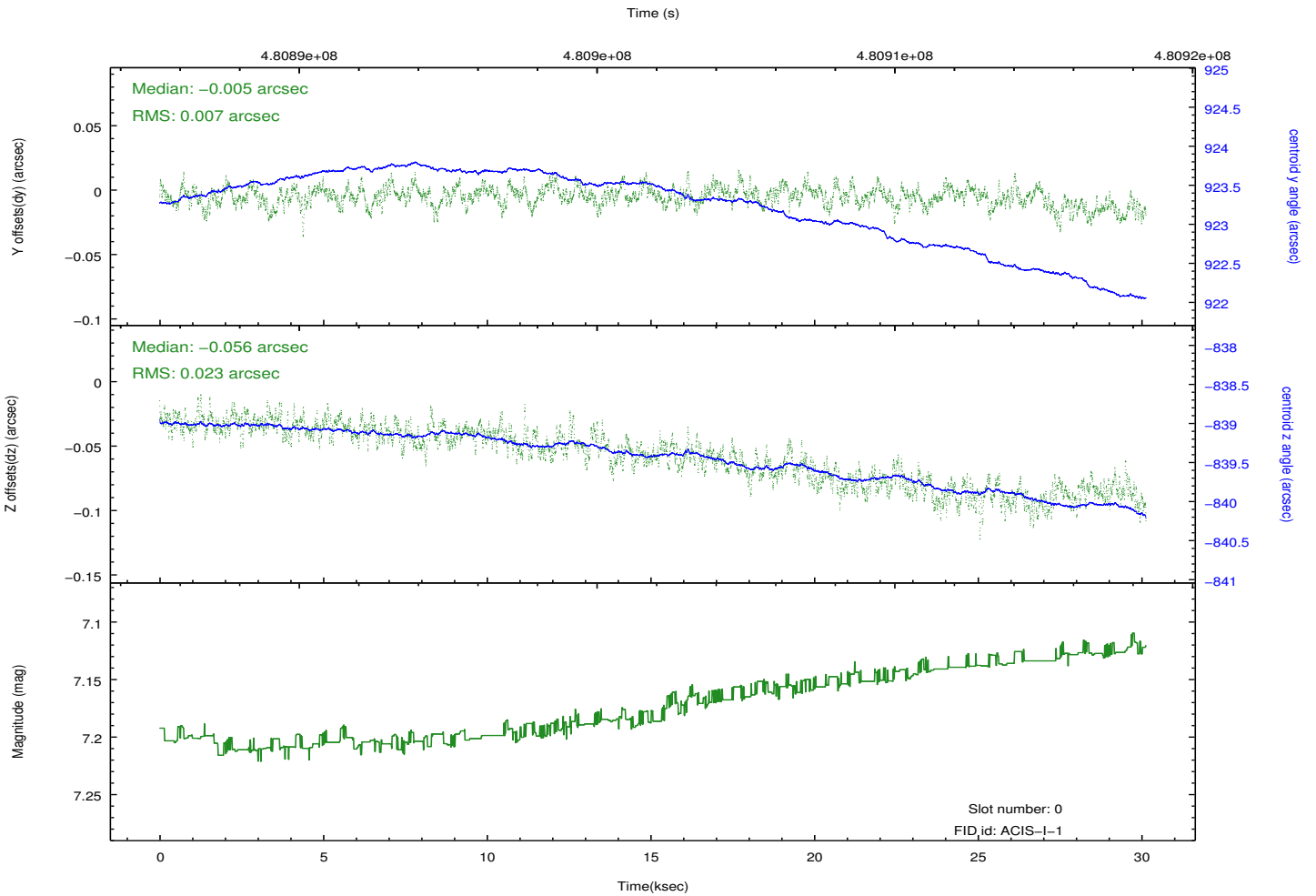
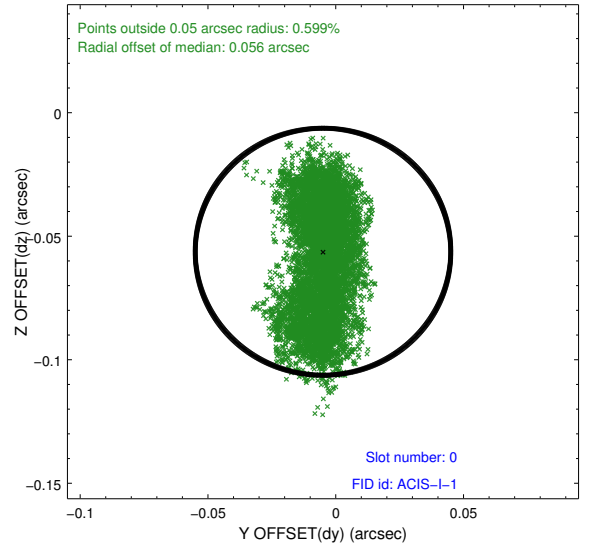
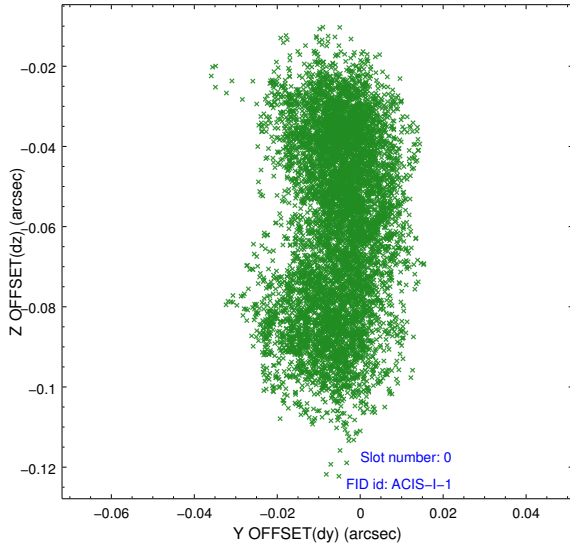


## 2.4.5 Slot 7

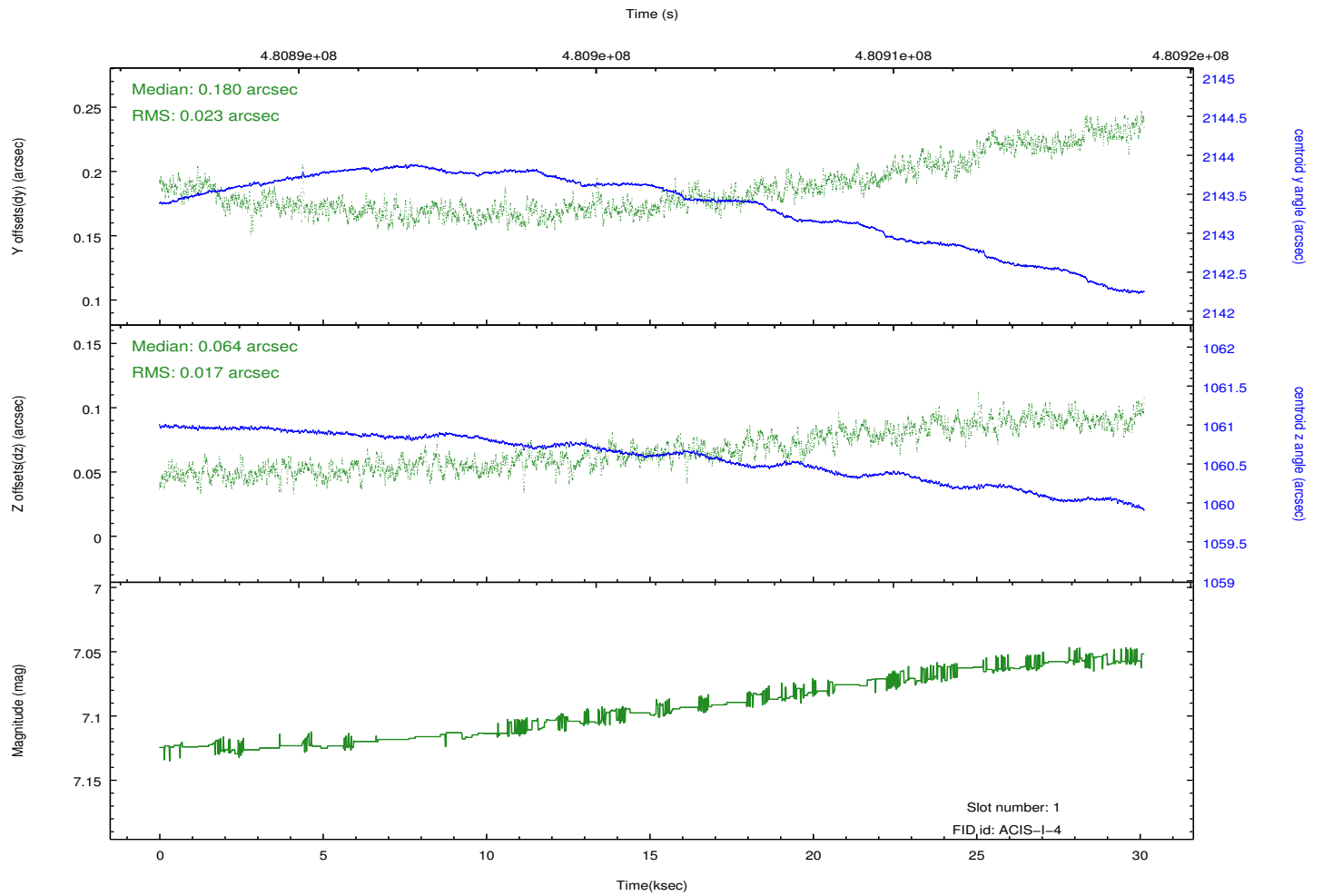
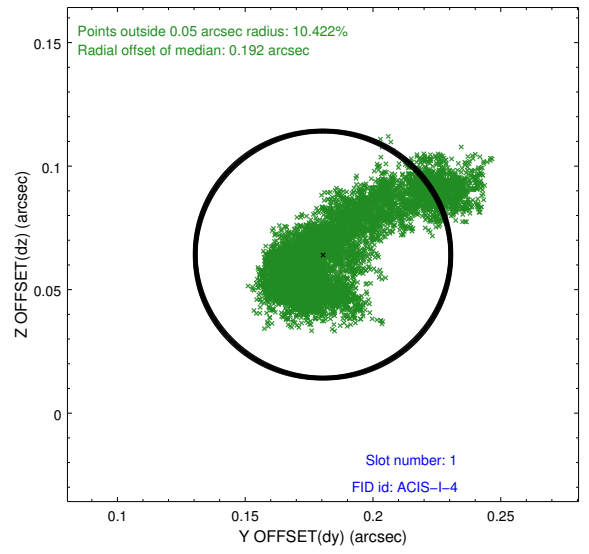
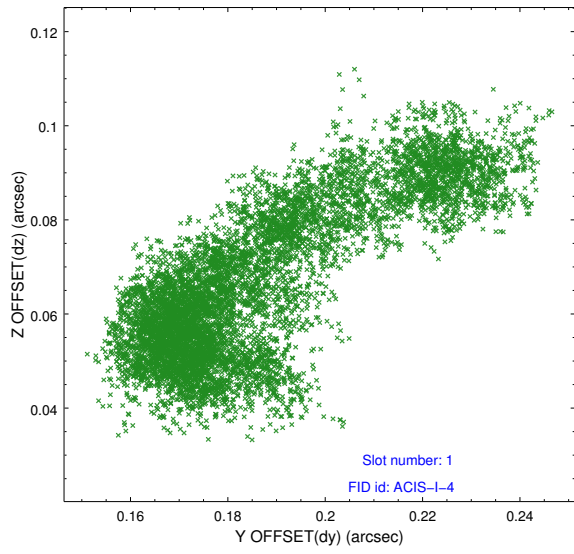


## 2.5 FID Slots

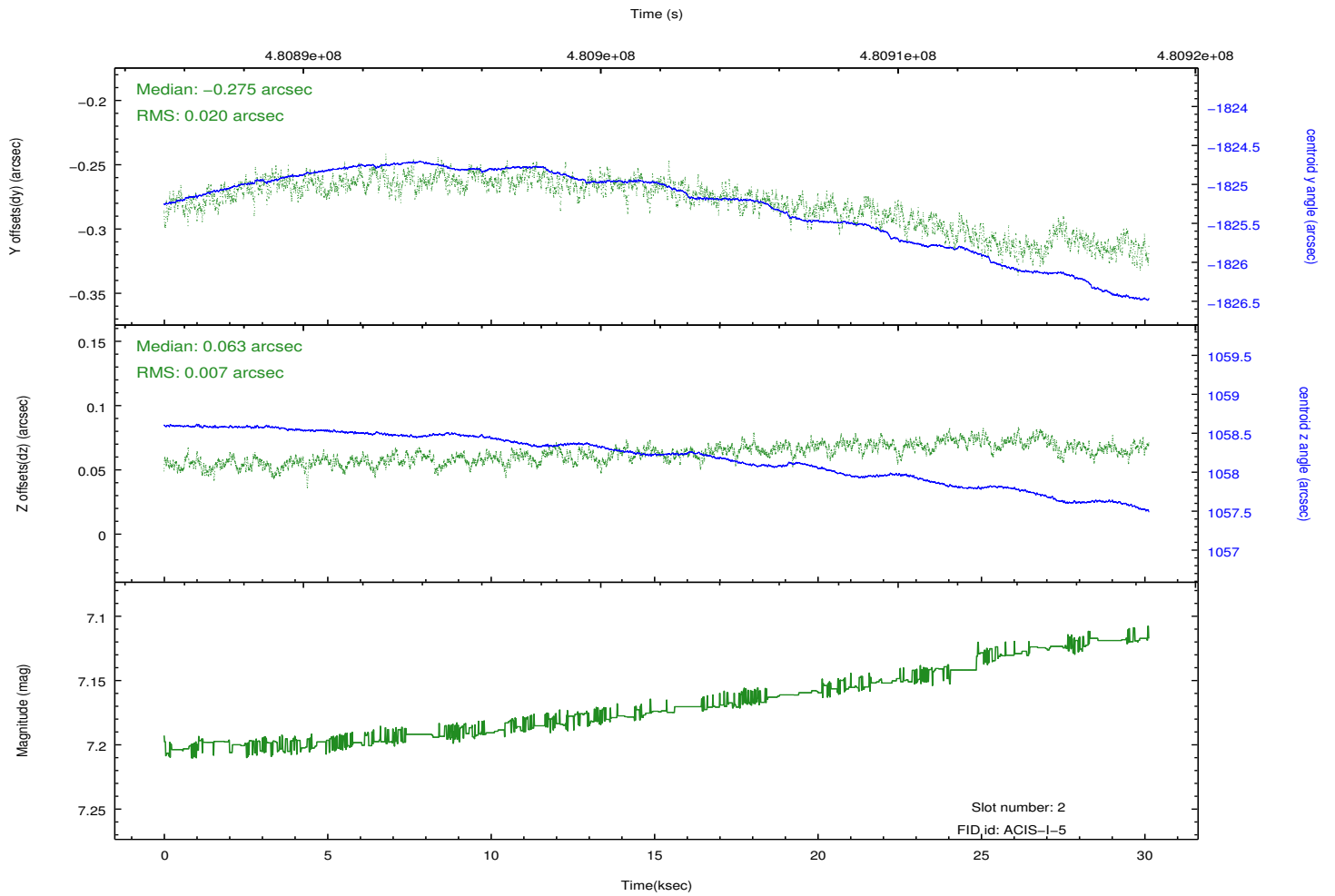
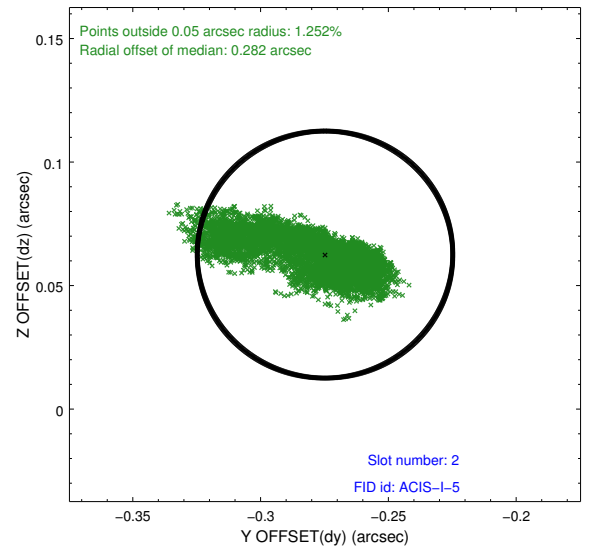
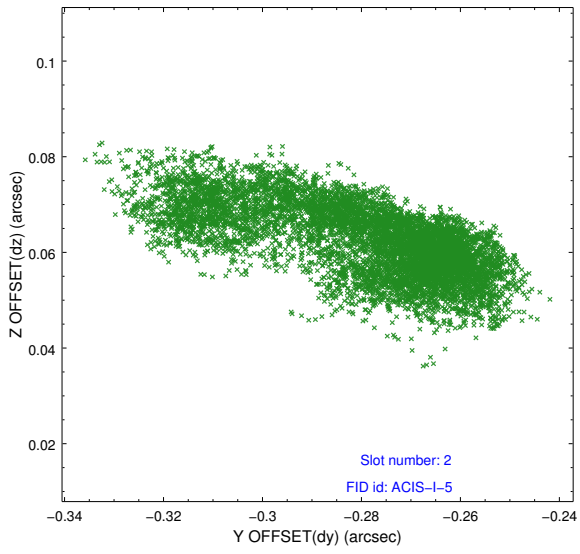
### 2.5.1 Slot 0



## 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)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.108869509757

## 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.