

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 14592 - L2 Version 2  
Chandra X-Ray Center

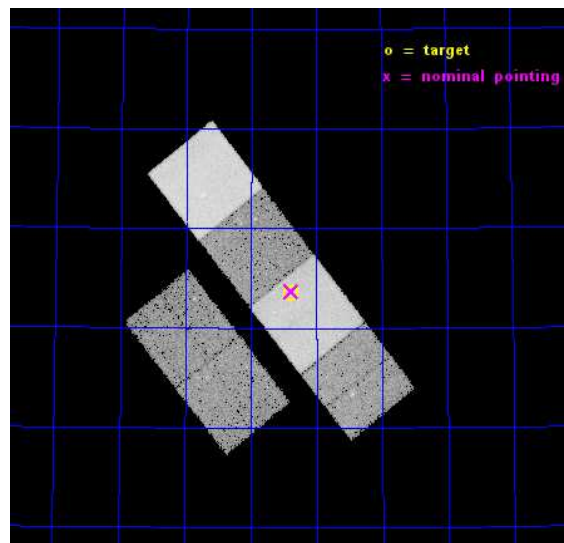
L2 Processing Date : Dec 2 2014

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# 1 Front

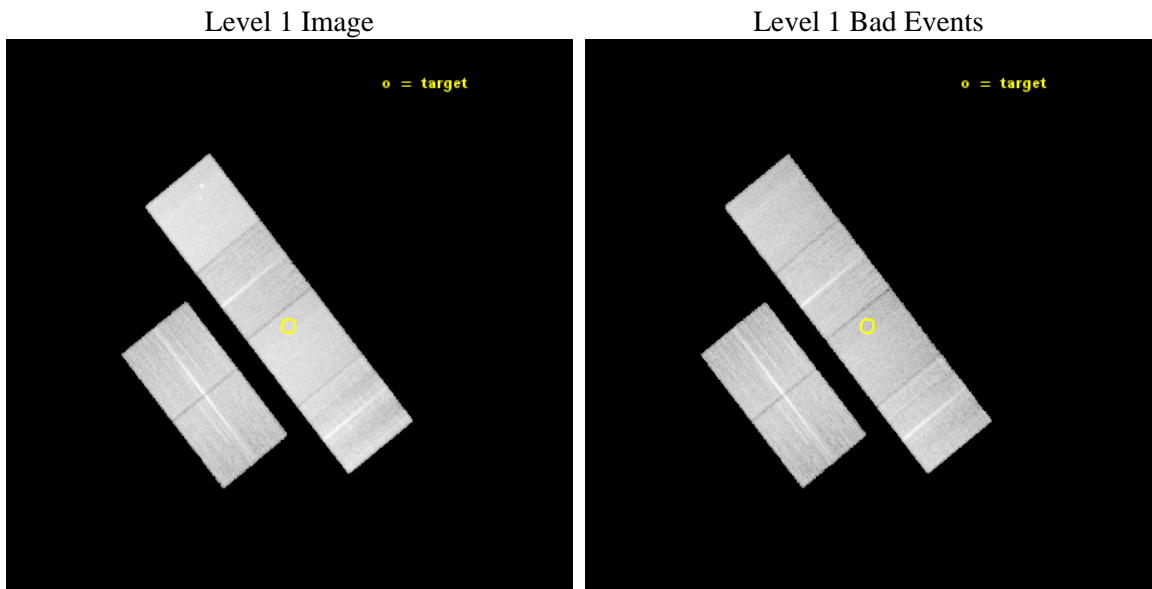
seq_num	200893	Sequence number
obs_id	14592	Observation id
title	COMPACT AND DIFFUSE X-RAY SOURCES IN THE YOUNGEST PLANETARY NEBULAE	&#160
observer	Dr. Joel Kastner	Principal investigator
object	NGC 7076	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	321.597917	Observer's specified target RA [deg]
dec_targ	62.892167	Observer's specified target Dec [deg]
ra_nom	321.59576099594	Nominal RA [deg]
dec_nom	62.895031314033	Nominal Dec [deg]
roll_nom	51.531770222287	Nominal Roll [deg]
revision	2	Processing version of data
ontime	29964.799888432	Sum of GTIs [s]
livetime	29585.367549608	Livetime [s]
ontime2	29958.318047166	Sum of GTIs [s]
ontime3	29964.799888432	Sum of GTIs [s]
ontime5	29964.799888432	Sum of GTIs [s]
ontime6	29958.318027139	Sum of GTIs [s]
ontime7	29964.799888432	Sum of GTIs [s]
ontime8	29961.558918118	Sum of GTIs [s]
l2events	274741	Number of level 2 events



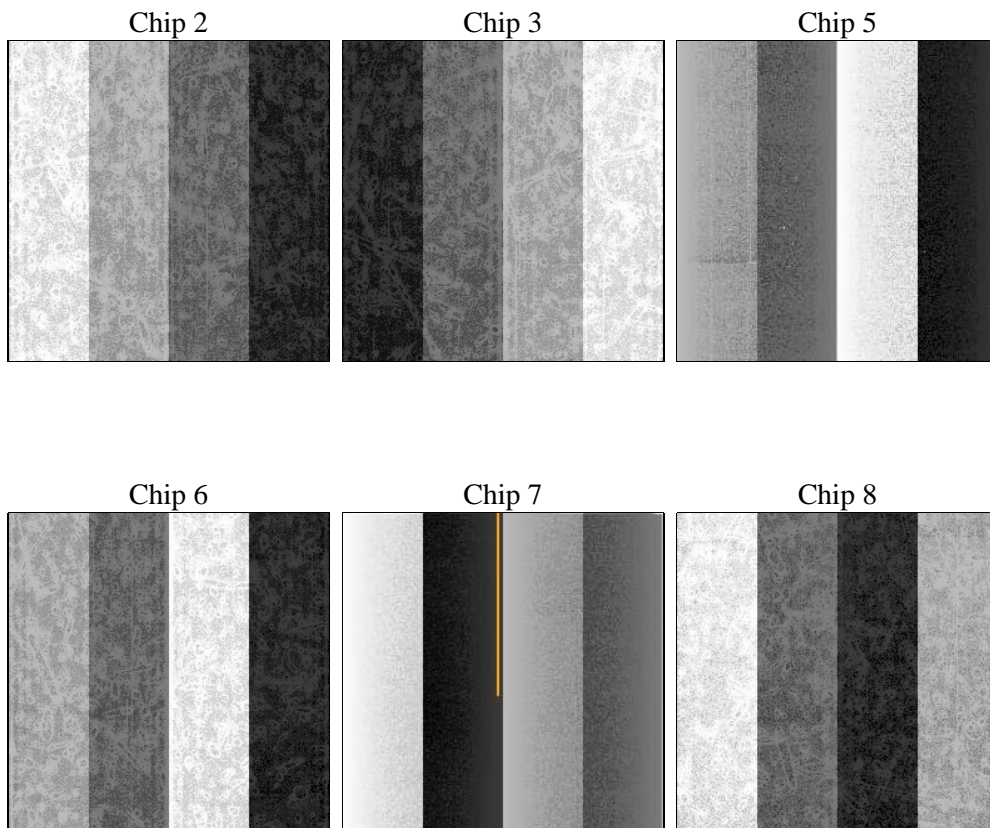
## 2 OBI

### 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	29964.799888432	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	29958.318047166	Sum of GTIs [s]
date	2014-12-02T13:26:47	Date and time of file creation	ontime3	29964.799888432	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	29964.799888432	Sum of GTIs [s]
			ontime6	29958.318027139	Sum of GTIs [s]
			ontime7	29964.799888432	Sum of GTIs [s]
			ontime8	29961.558918118	Sum of GTIs [s]
			l1events	1147229	Number of level 1 events

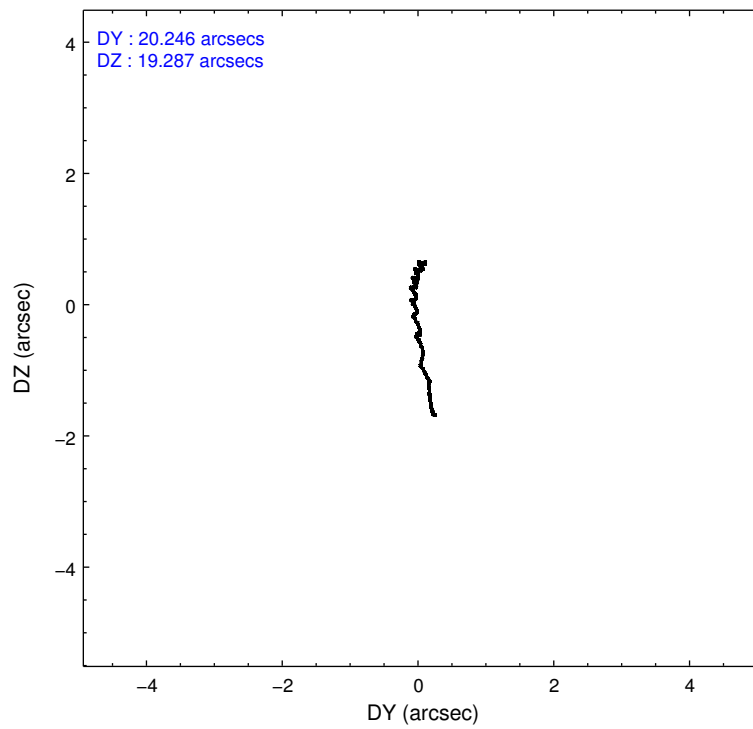
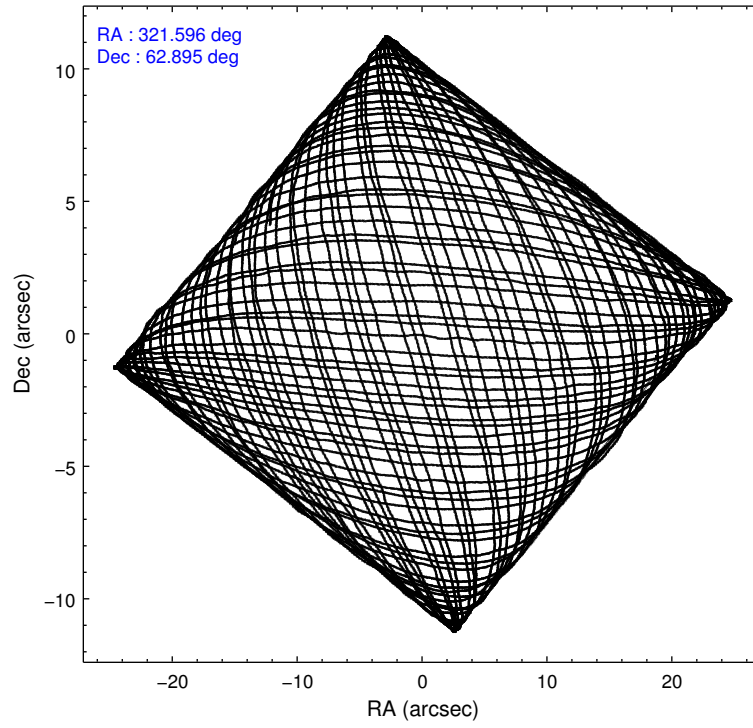
### 2.1.4 Events

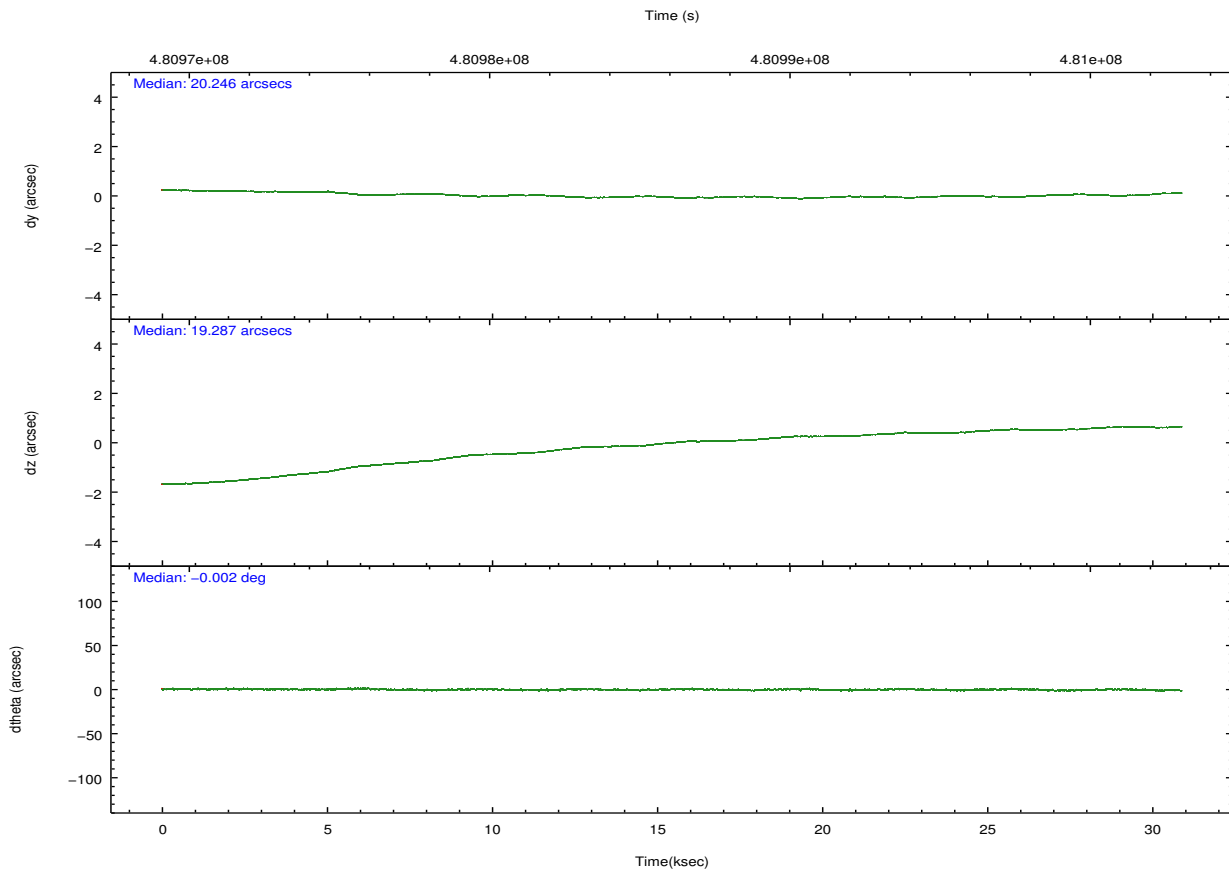
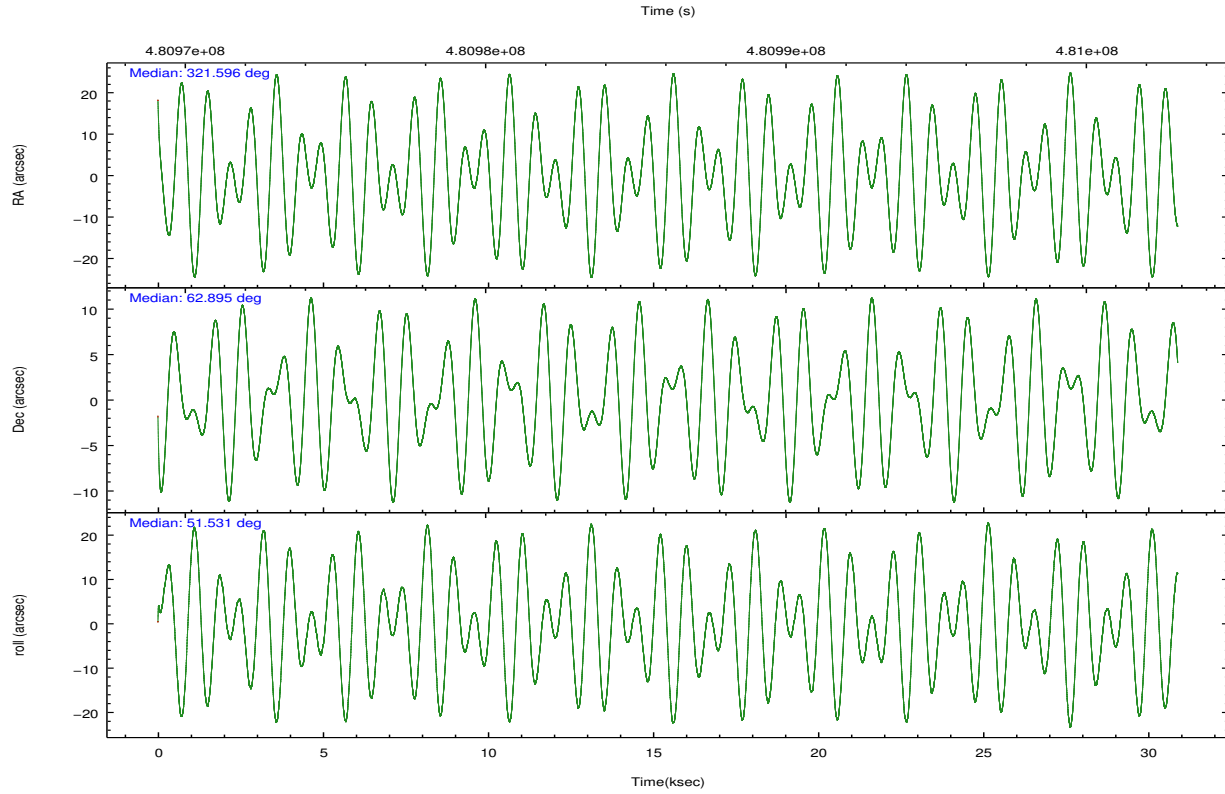
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	158006	152295	253351	162697	211458	209422	grade 0 events	6250	5990	7877	6460	8216	16521
rejected events	140327	135109	132474	143714	118817	152430		3%	3%	3%	3%	3%	7%
rejected %	88%	88%	52%	88%	56%	72%	grade 1 events	98	82	390	73	253	157
								0%	0%	0%	0%	0%	0%
							grade 2 events	4377	3870	36973	4401	18778	13195
								2%	2%	14%	2%	8%	6%
							grade 3 events	1793	1869	4287	1905	7934	5975
								1%	1%	1%	1%	3%	2%
							grade 4 events	1803	1866	4223	1919	7912	5579
								1%	1%	1%	1%	3%	2%
							grade 5 events	6961	7855	19078	8016	22163	11635
								4%	5%	7%	4%	10%	5%
							grade 6 events	3461	3591	67531	4301	49812	15725
								2%	2%	26%	2%	23%	7%
							grade 7 events	133263	127172	112992	135622	96390	140635
								84%	83%	44%	83%	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	321.587735	321.5957609959383	CCD I2 on	O3	Y
[deg] Pointing Dec	62.867937	62.89503131403313	CCD I3 on	O2	Y
[deg] Pointing Roll	51.382286	51.53177022228682	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	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	480971498.184000	480969633.30091	CCD S5 on	N	N
Observation start date	2013-03-29T19:10:31	2013-03-29T18:40:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	481001498.184000	481002182.69017	On-chip summing requested	N	N
Observation end date	2013-03-30T03:30:31	2013-03-30T03:43:02	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





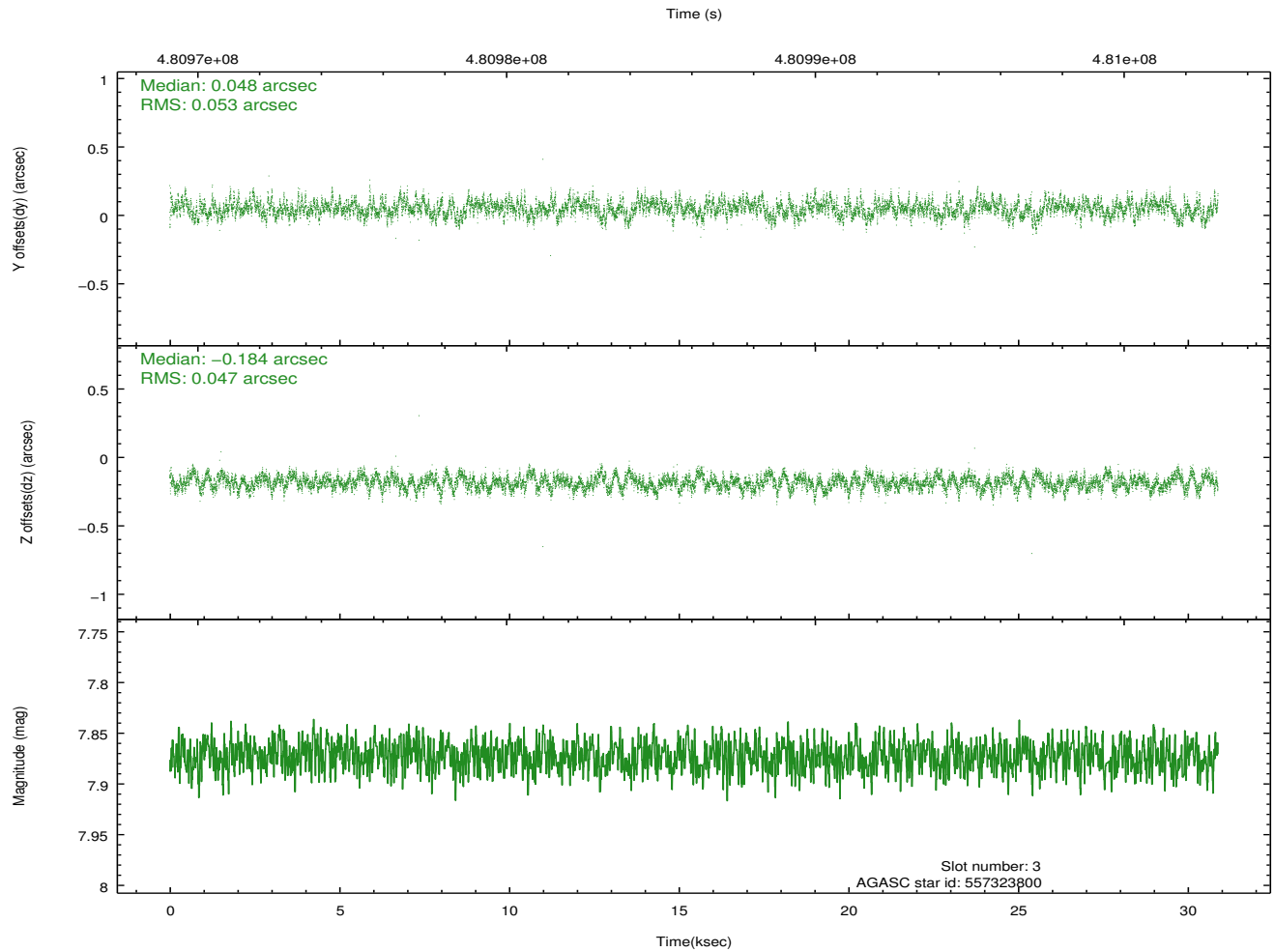
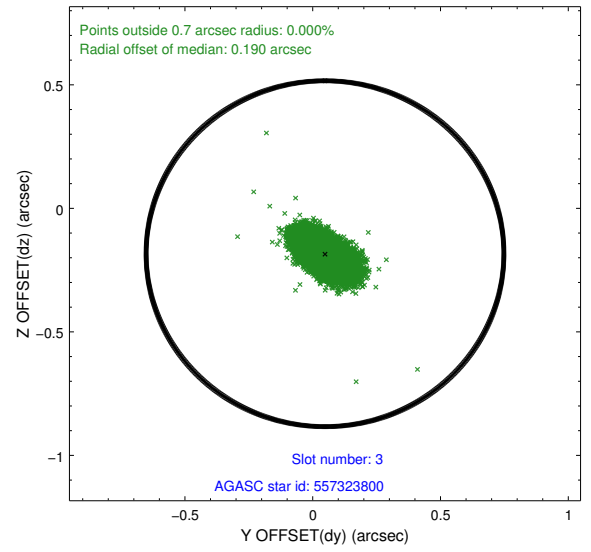
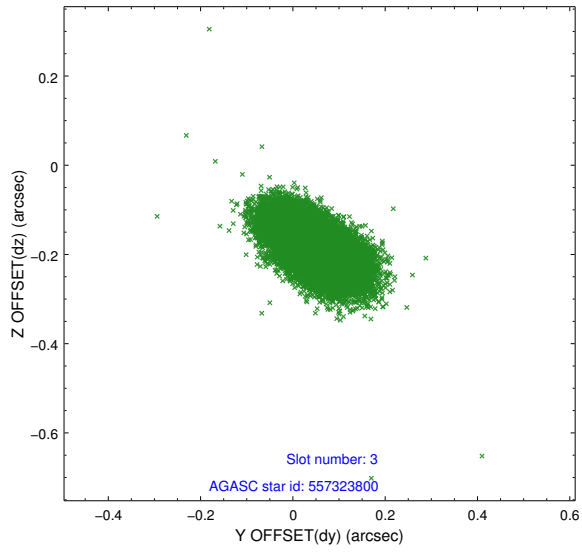
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.95	7534	-0.146	-0.079	0.007	0.014	0.000000	0.000000	-773.59	-1740.61
1	FID		ACIS-S-4	7.03	7535	0.164	0.088	0.008	0.014	0.000000	0.000000	2140.03	167.88
2	FID		ACIS-S-6	7.16	7535	-0.046	-0.001	0.010	0.016	0.000000	0.000000	388.66	805.32
3	GUIDE	used	557323800	7.87	15062	0.048	-0.184	0.074	0.126	321.068927	62.993482	-173.02	946.78
4	GUIDE	used	557449400	8.01	15067	-0.130	-0.123	0.097	0.148	321.730674	63.585767	2161.52	1434.50
5	GUIDE	used	557452488	8.79	15041	0.218	0.199	0.090	0.148	323.159913	63.063212	2174.03	-1544.56
6	GUIDE	used	557454408	8.26	15066	-0.143	-0.187	0.066	0.108	321.793140	63.080848	808.53	216.97
7	GUIDE	used	557461032	6.92	15067	0.007	0.295	0.057	0.089	321.824626	62.101051	-1907.12	-2034.06

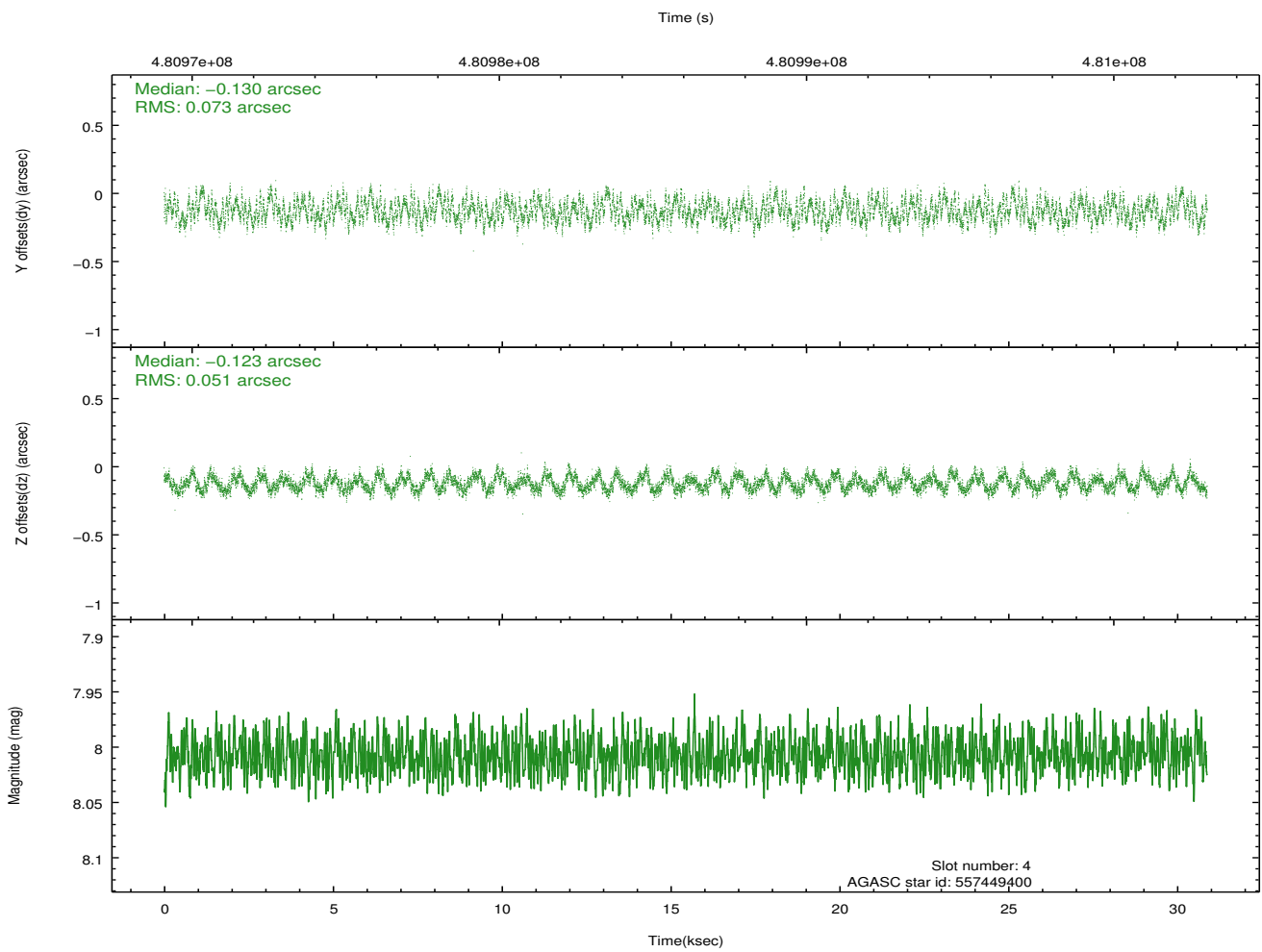
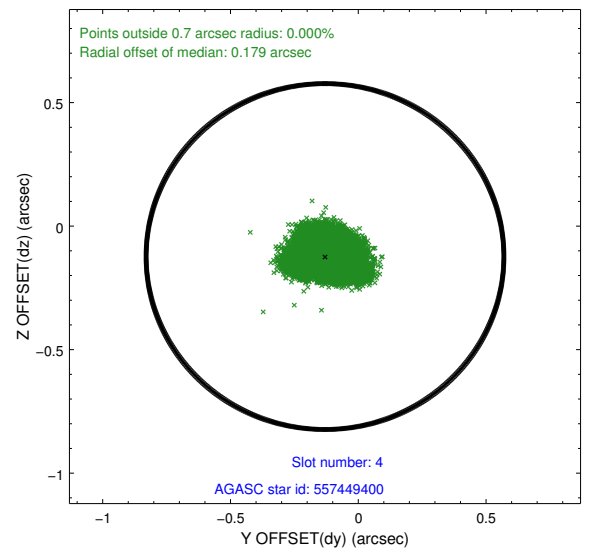
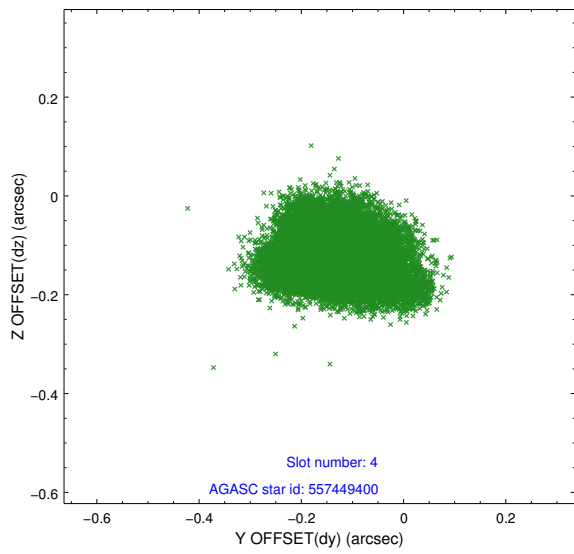
∞

## 2.4 Star Slots

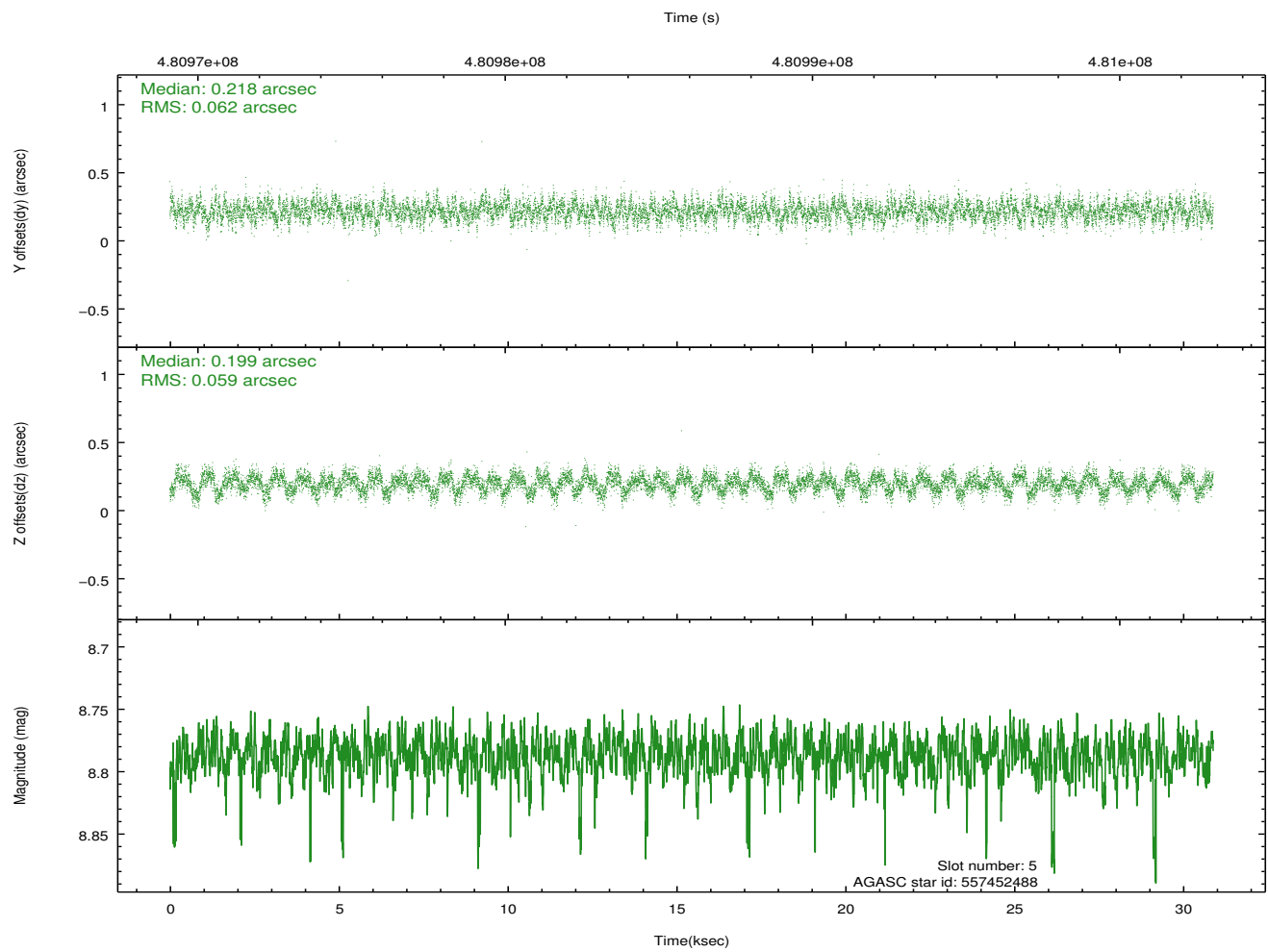
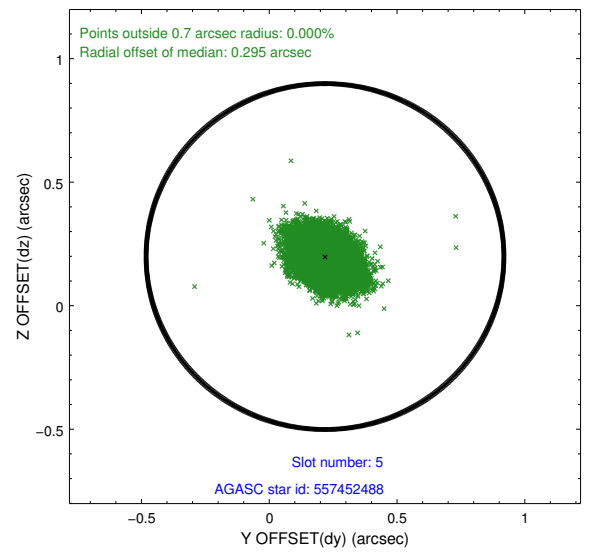
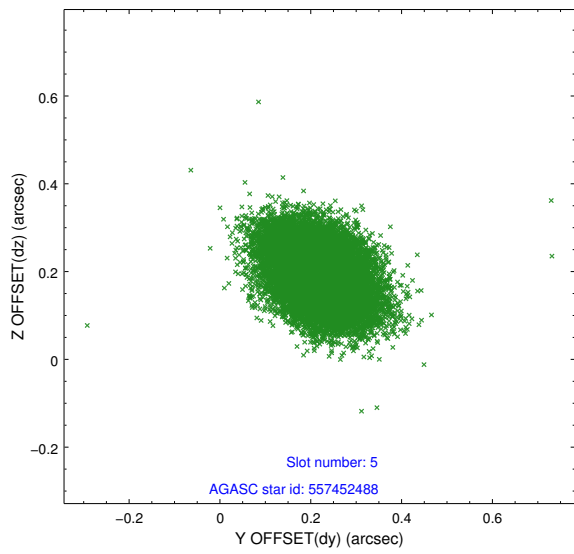
### 2.4.1 Slot 3



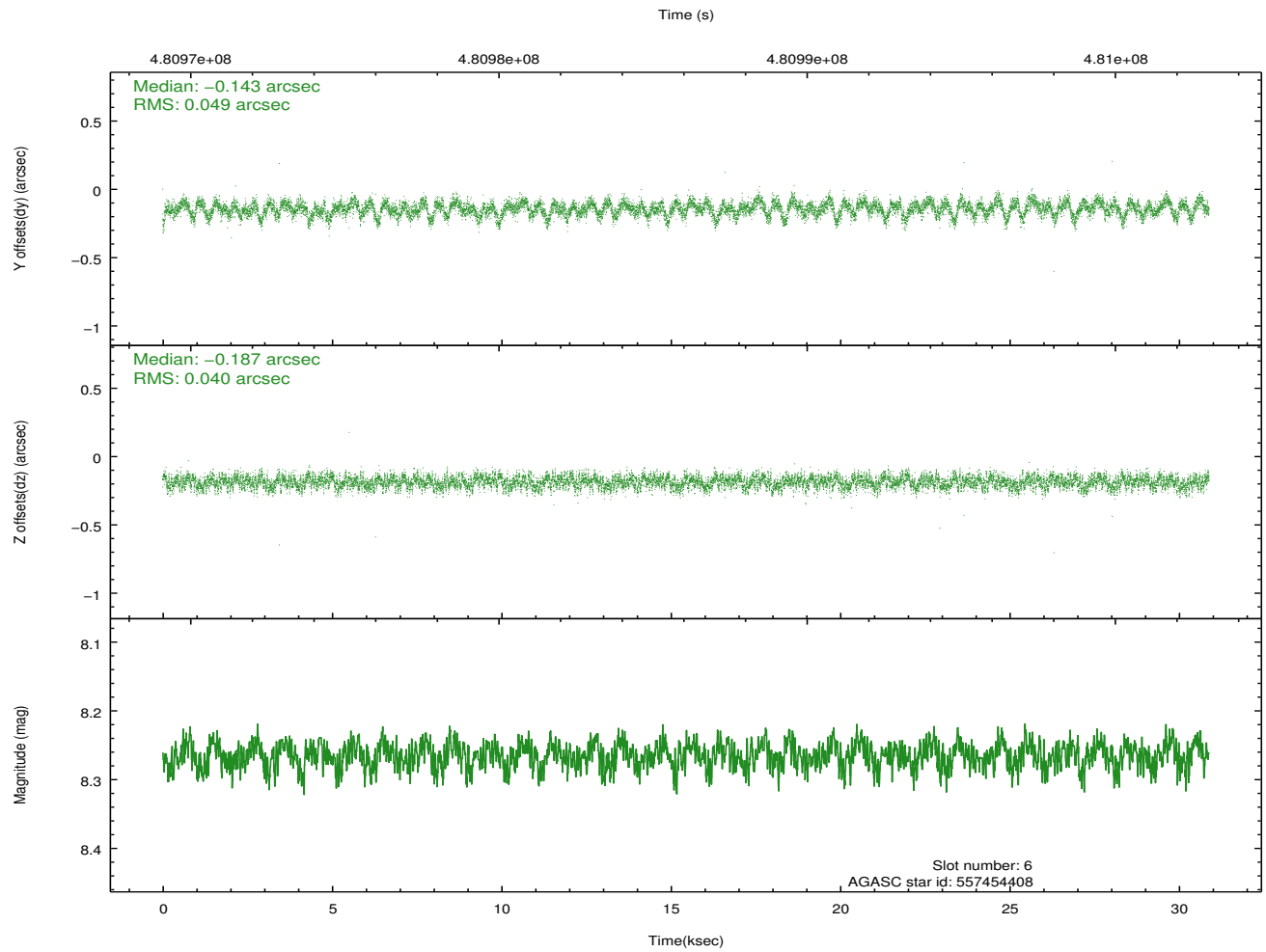
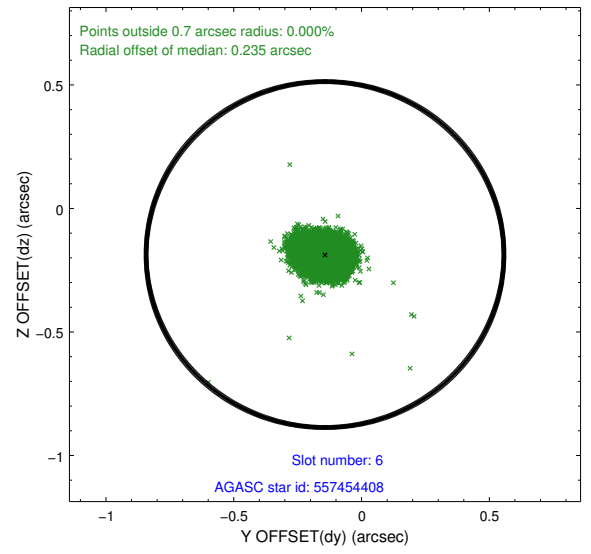
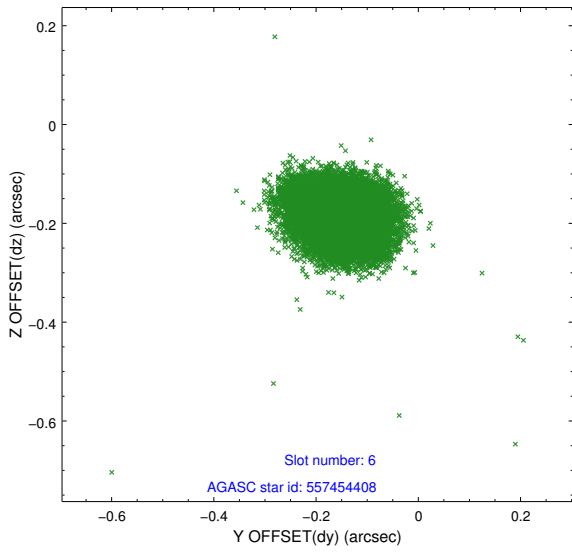
## 2.4.2 Slot 4



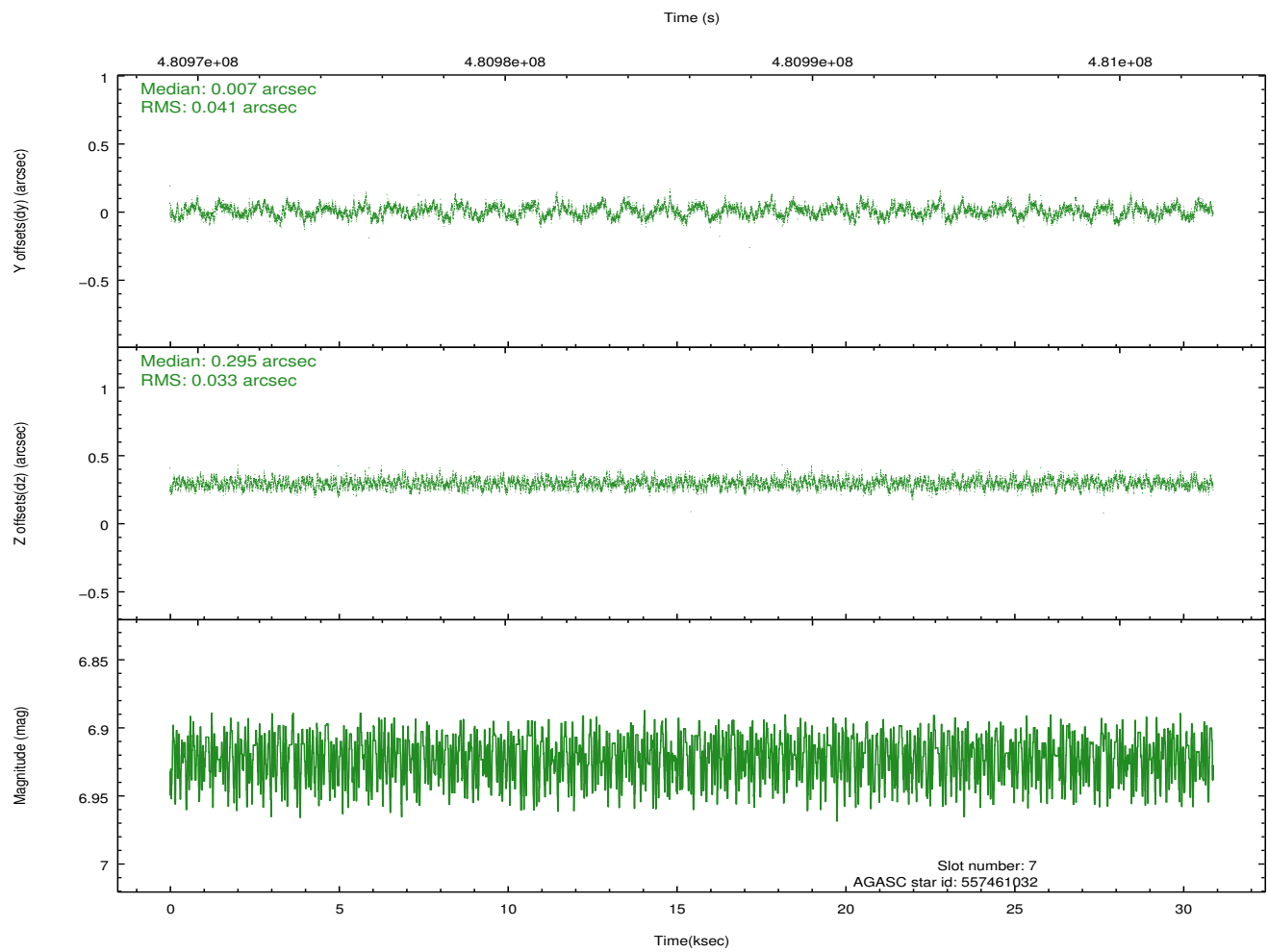
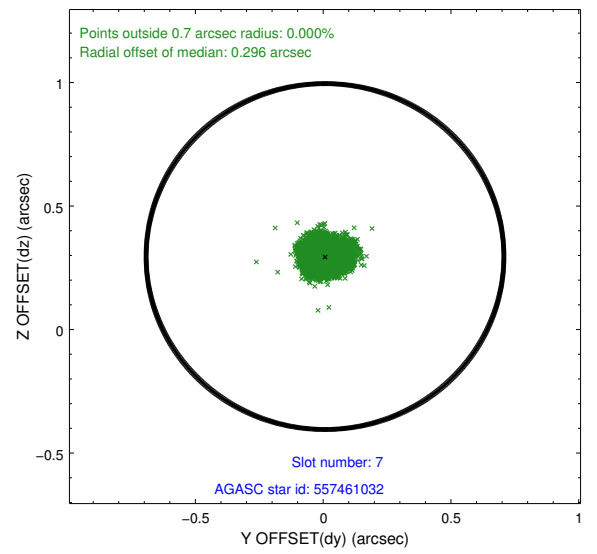
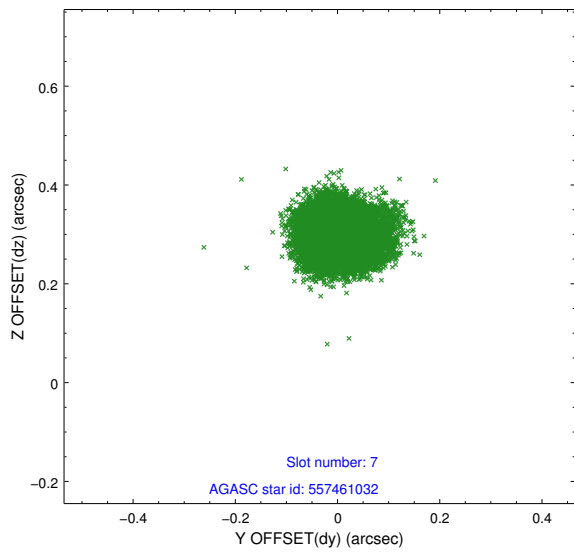
### 2.4.3 Slot 5



## 2.4.4 Slot 6

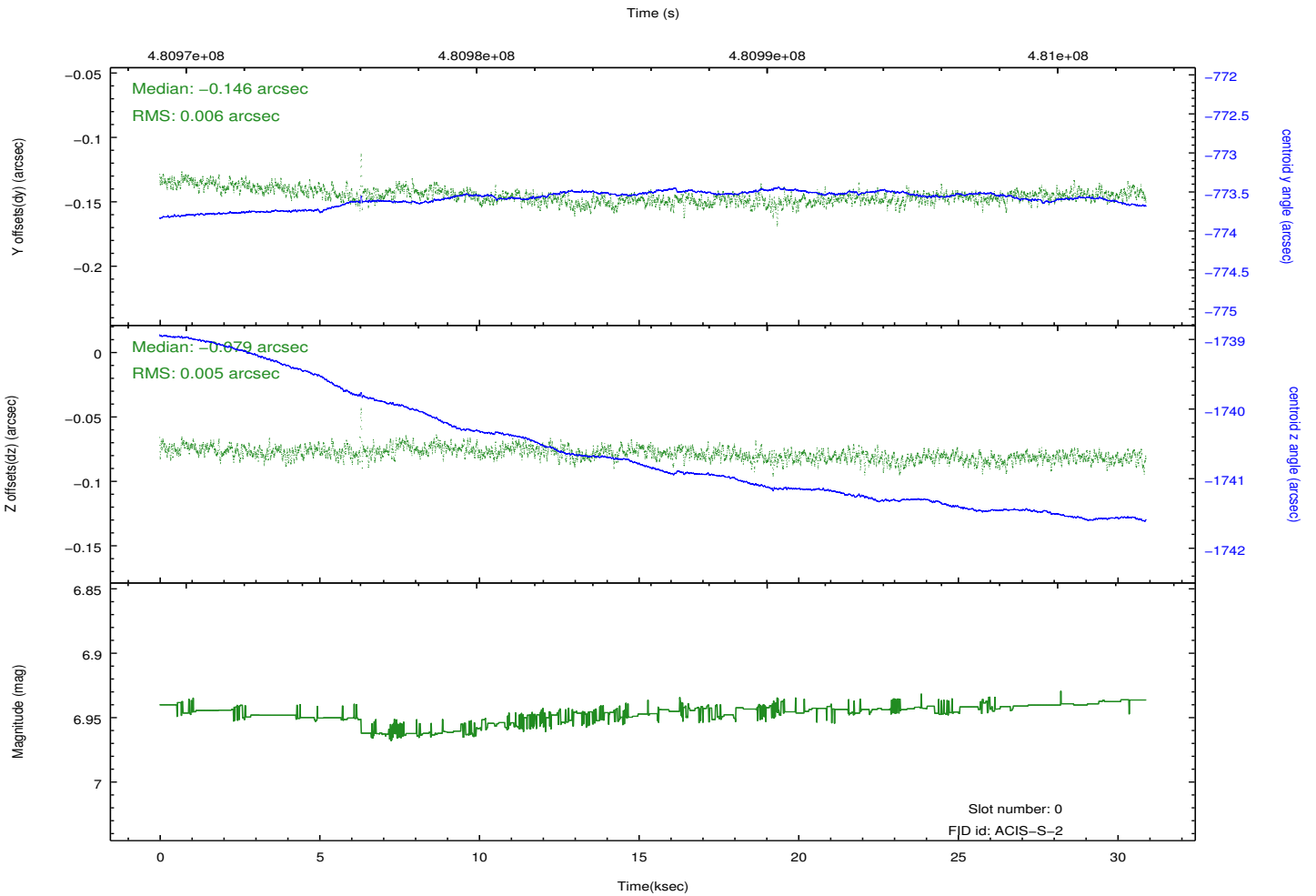
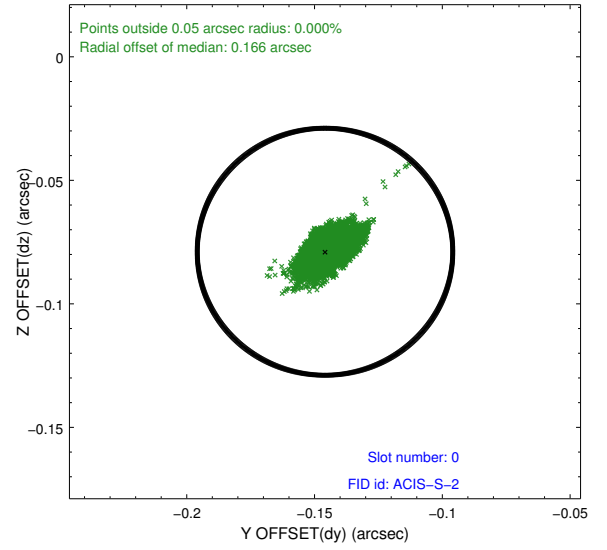
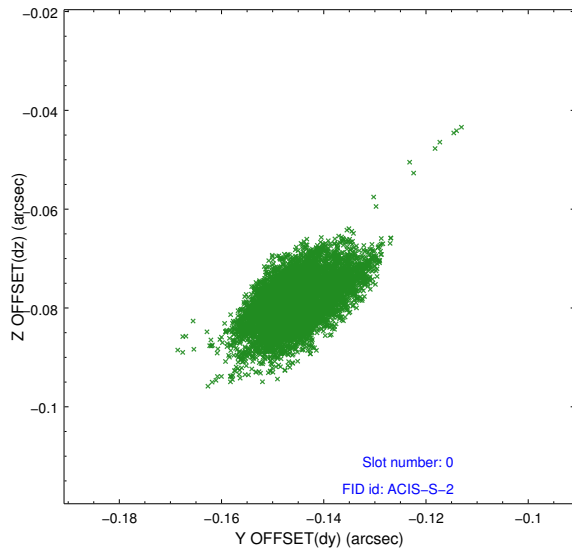


## 2.4.5 Slot 7

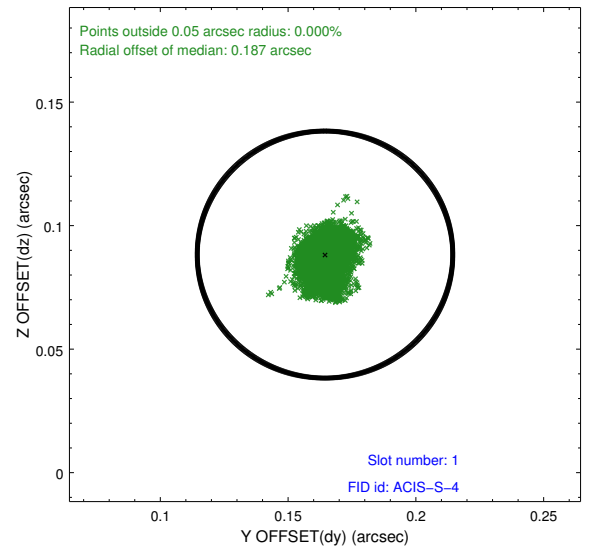
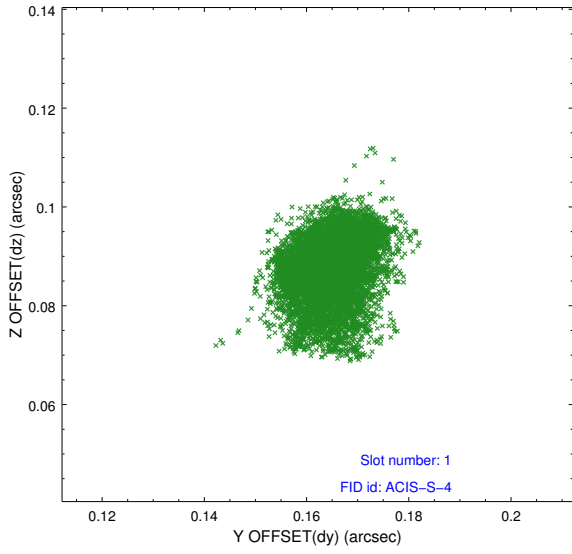


## 2.5 FID Slots

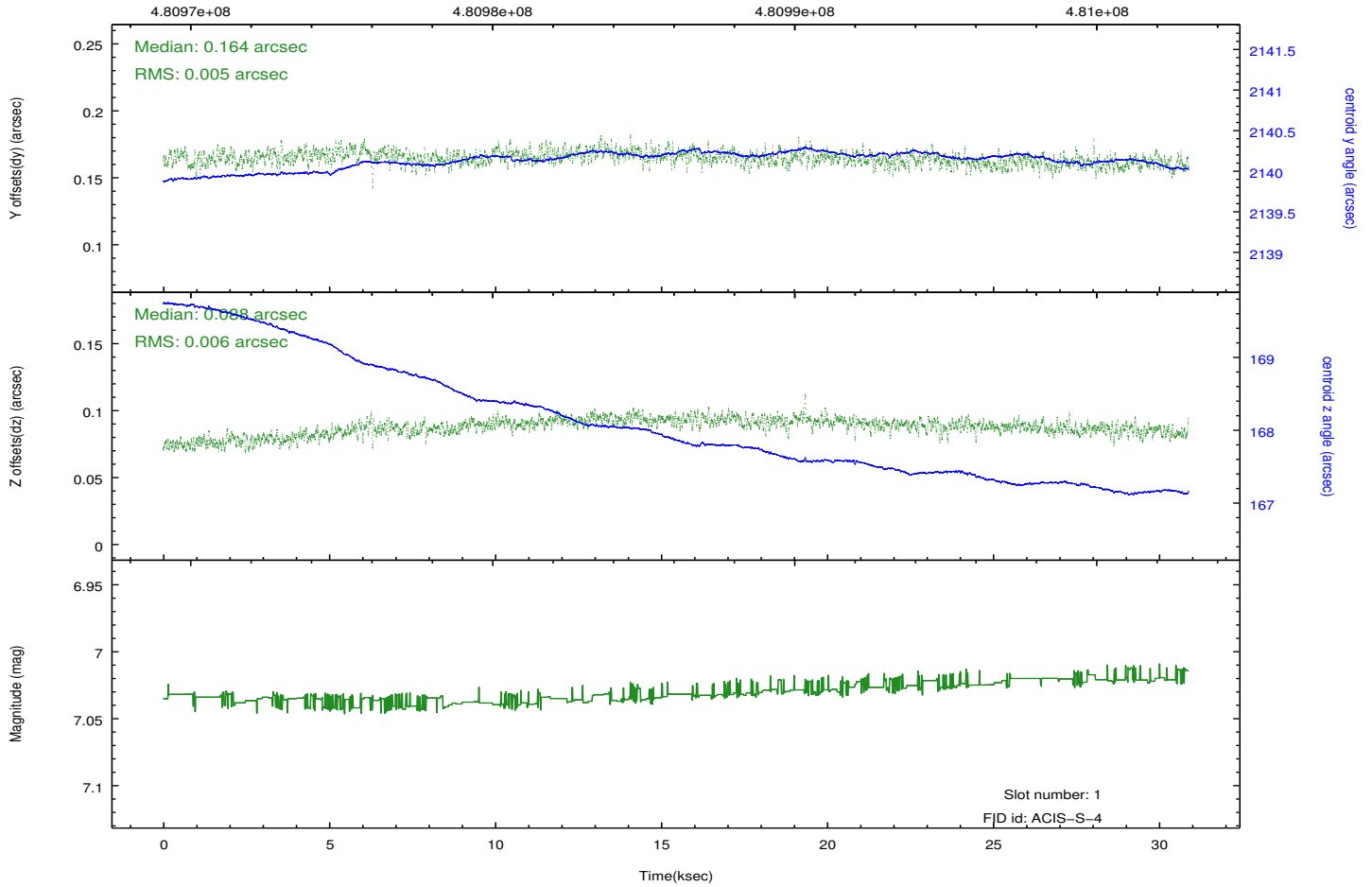
### 2.5.1 Slot 0



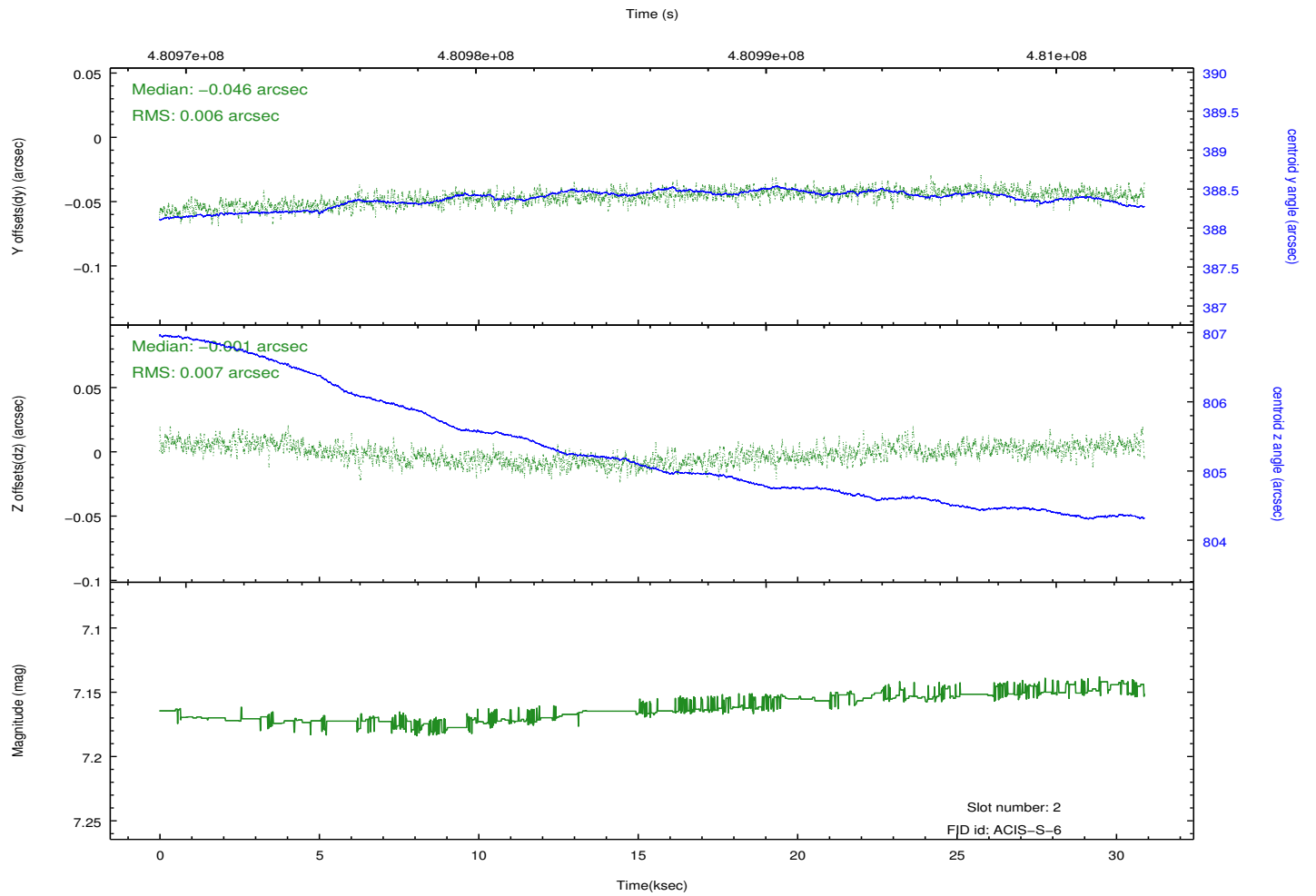
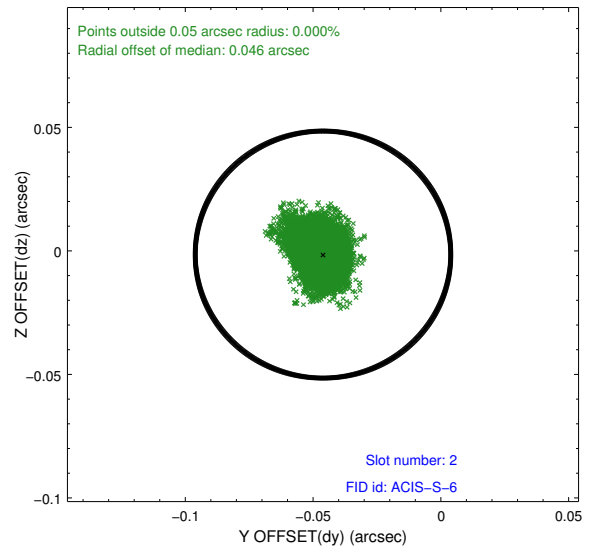
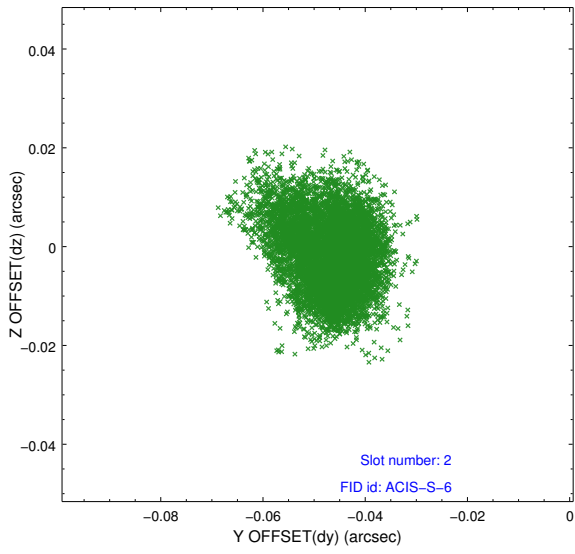
## 2.5.2 Slot 1



Time (s)



### 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	29.964799888432

## 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.