

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 14914 - L2 Version 2  
Chandra X-Ray Center

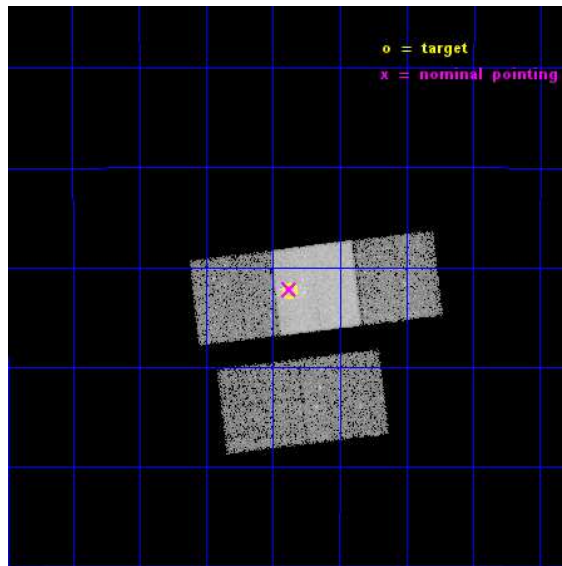
L2 Processing Date : Nov 30 2014

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# 1 Front

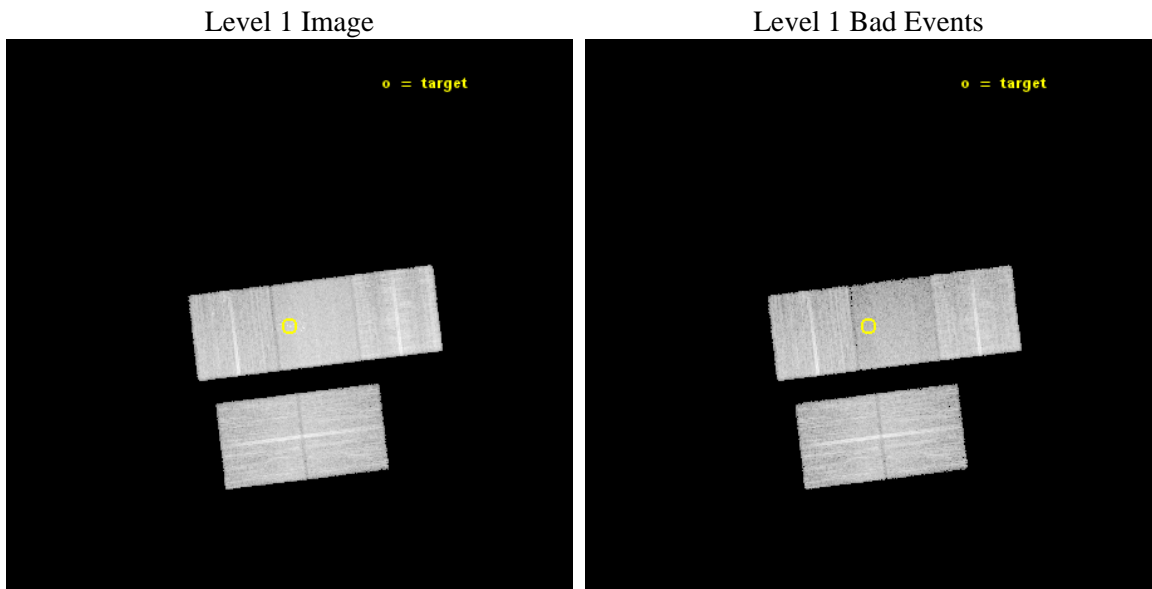
seq_num	601044	Sequence number
obs_id	14914	Observation id
title	Galaxies in Collision: NGC 2207 & IC 2163	Proposal title
observer	Prof. Saul Rappaport	Principal investigator
object	NGC 2207/IC 2163	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	94.092083	Observer's specified target RA [deg]
dec_targ	-21.372722	Observer's specified target Dec [deg]
ra_nom	94.094129200813	Nominal RA [deg]
dec_nom	-21.370380998235	Nominal Dec [deg]
roll_nom	353.15326890421	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20109.688419998	Sum of GTIs [s]
livetime	19846.940536253	Livetime [s]
ontime2	20109.524259984	Sum of GTIs [s]
ontime3	20109.606339991	Sum of GTIs [s]
ontime6	20103.365339398	Sum of GTIs [s]
ontime7	20109.688419998	Sum of GTIs [s]
ontime8	20109.565299988	Sum of GTIs [s]
l2events	97219	Number of level 2 events



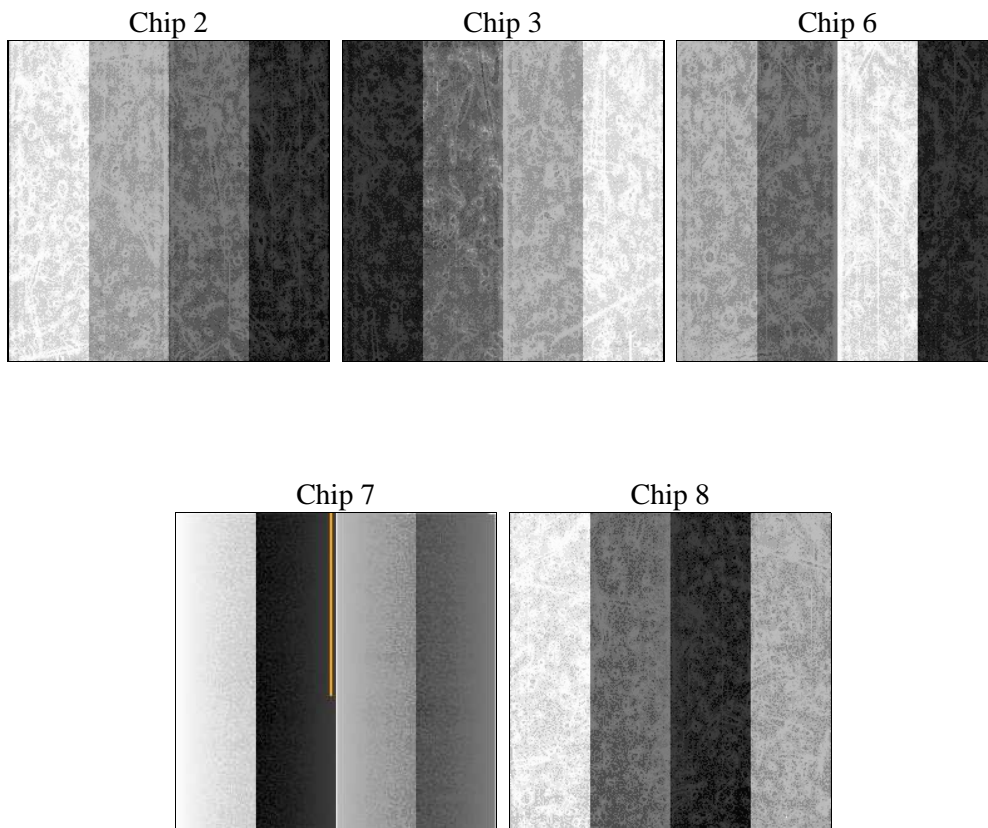
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20109.688419998	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	20109.524259984	Sum of GTIs [s]
date	2014-11-30T19:45:14	Date and time of file creation	ontime3	20109.606339991	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	20103.365339398	Sum of GTIs [s]
			ontime7	20109.688419998	Sum of GTIs [s]
			ontime8	20109.565299988	Sum of GTIs [s]
			l1events	555625	Number of level 1 events

### 2.1.4 Events

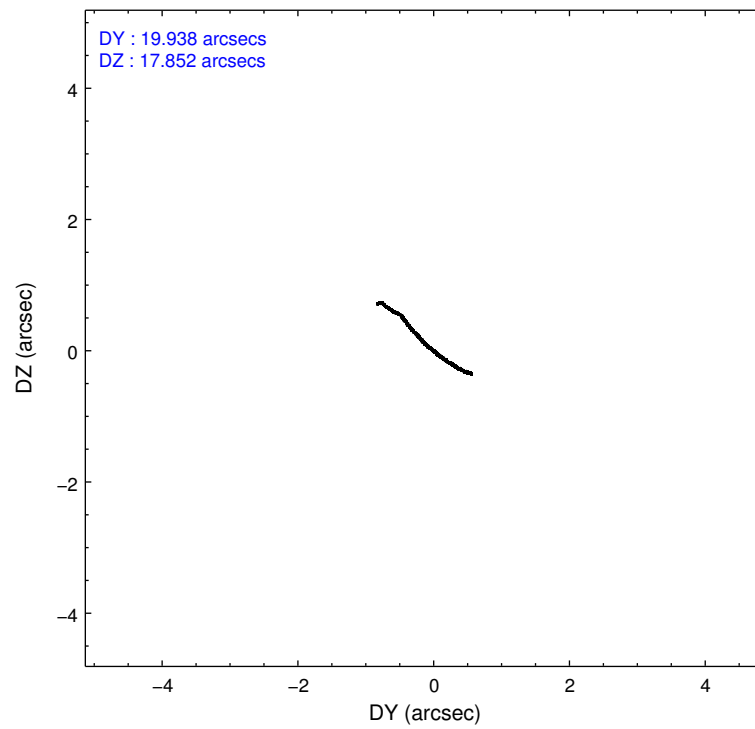
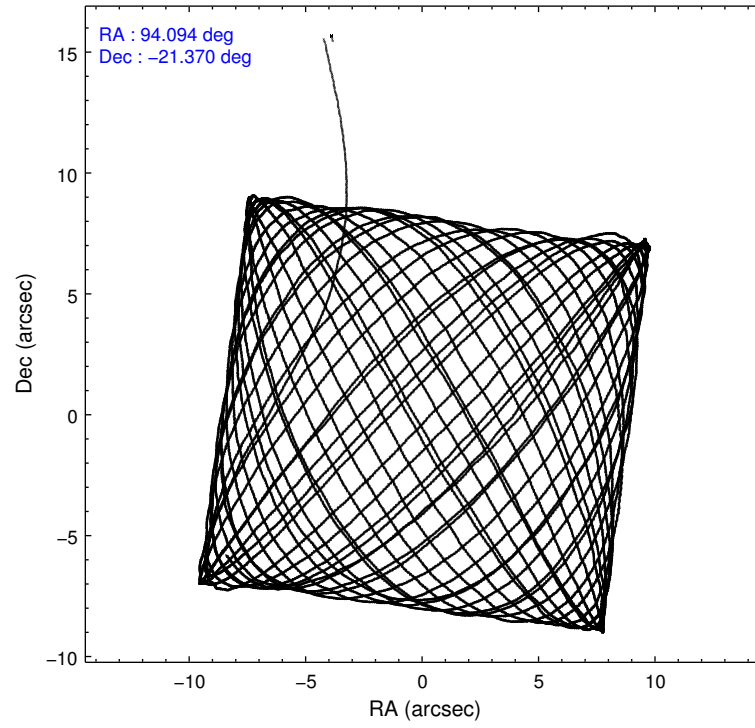
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	100781	98488	102083	119778	134495
rejected events	89295	87428	89710	62517	97898
rejected %	88%	88%	87%	52%	72%

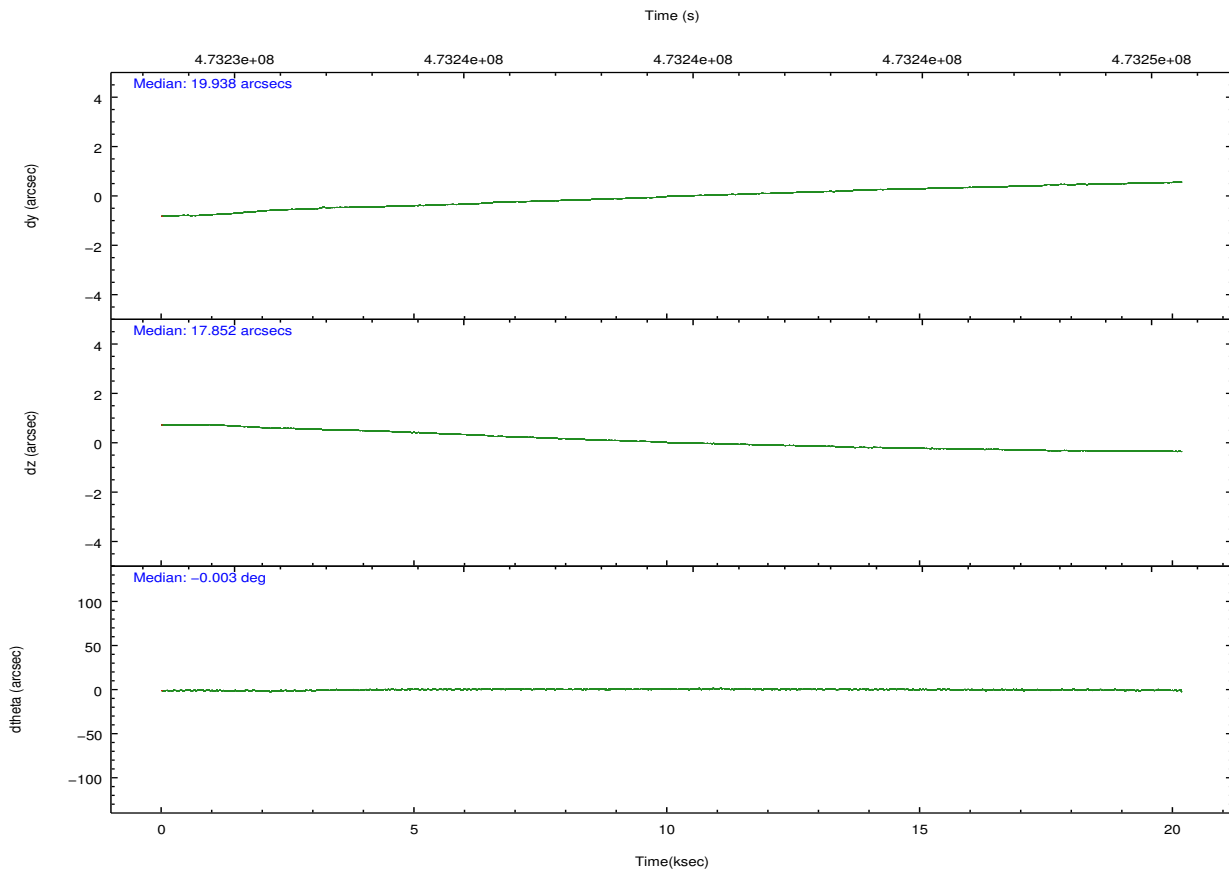
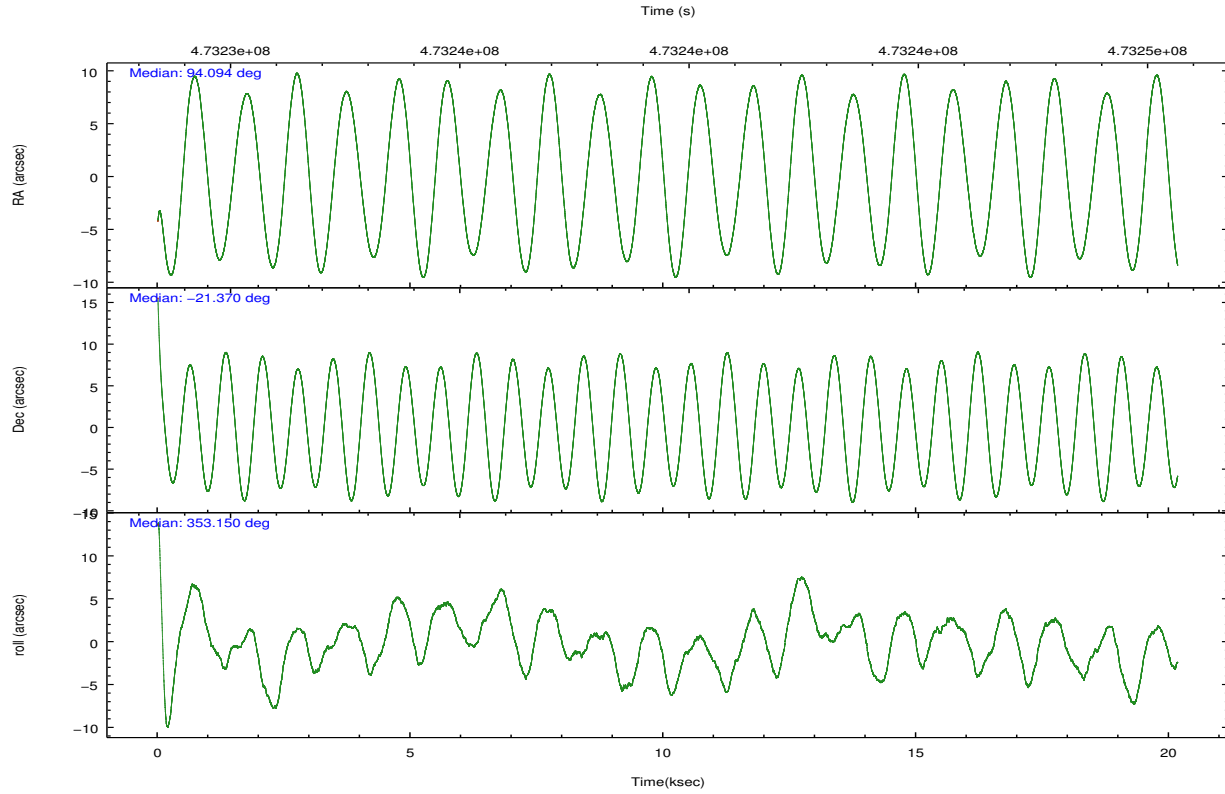
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	4147	4029	4370	5665	10168
	4%	4%	4%	4%	7%
grade 1 events	52	67	54	183	116
	0%	0%	0%	0%	0%
grade 2 events	2830	2468	2796	12480	8654
	2%	2%	2%	10%	6%
grade 3 events	1202	1162	1290	5205	3927
	1%	1%	1%	4%	2%
grade 4 events	1176	1216	1261	5041	3750
	1%	1%	1%	4%	2%
grade 5 events	3628	4454	4510	12591	6669
	3%	4%	4%	10%	4%
grade 6 events	2131	2188	2660	28884	10124
	2%	2%	2%	24%	7%
grade 7 events	85615	82904	85142	49729	91087
	84%	84%	83%	41%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	94.067313	94.09412920081311	CCD I2 on	O3	Y
[deg] Pointing Dec	-21.381469	-21.37038099823459	CCD I3 on	O2	Y
[deg] Pointing Roll	352.986862	353.1532689042129	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	N
[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)	473229624.184000	473228631.47024	CCD S5 on	N	N
Observation start date	2012-12-30T04:39:17	2012-12-30T04:23:51	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	473249624.184000	473250488.57142	On-chip summing requested	N	N
Observation end date	2012-12-30T10:12:37	2012-12-30T10:28:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





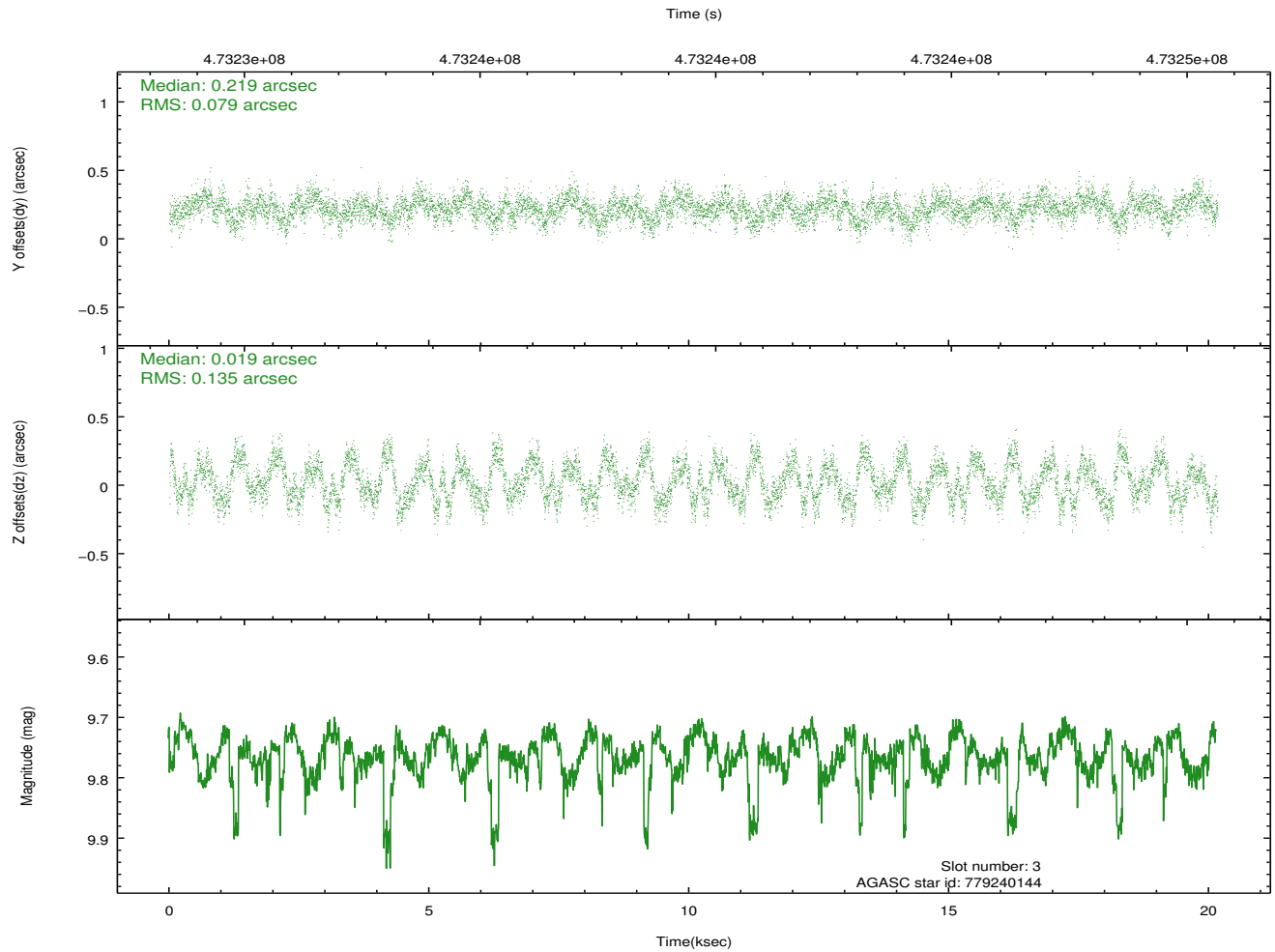
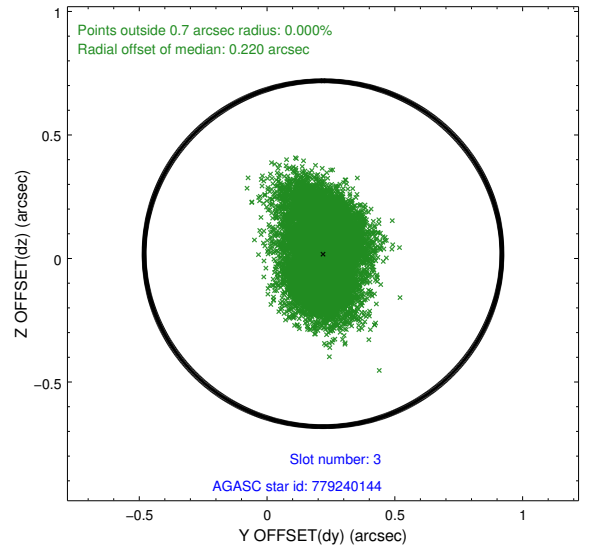
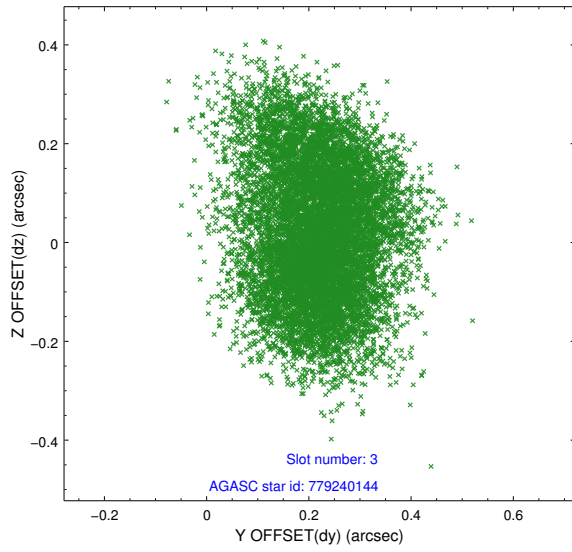
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.95	4920	-0.106	-0.050	0.010	0.018	0.000000	0.000000	-773.13	-1739.38
1	FID		ACIS-S-4	7.04	4919	0.253	0.064	0.013	0.025	0.000000	0.000000	2140.46	168.95
2	FID		ACIS-S-5	7.06	4919	-0.178	-0.006	0.014	0.026	0.000000	0.000000	-1825.77	162.86
3	GUIDE	used	779240144	9.76	9808	0.219	0.019	0.170	0.267	93.509679	-20.997554	-2028.00	1139.17
4	GUIDE	used	779358672	7.86	9833	-0.101	-0.163	0.076	0.121	94.260885	-21.171994	552.73	827.47
5	GUIDE	used	779373744	6.33	9839	-0.158	-0.092	0.094	0.146	94.745730	-20.925611	2064.40	1902.74
6	GUIDE	used	779239872	9.20	9836	0.019	0.024	0.102	0.168	93.445776	-20.763160	-2347.67	1949.97
7	GUIDE	used	779372064	8.57	9825	0.021	0.201	0.093	0.144	94.417701	-21.758407	1328.98	-1205.07

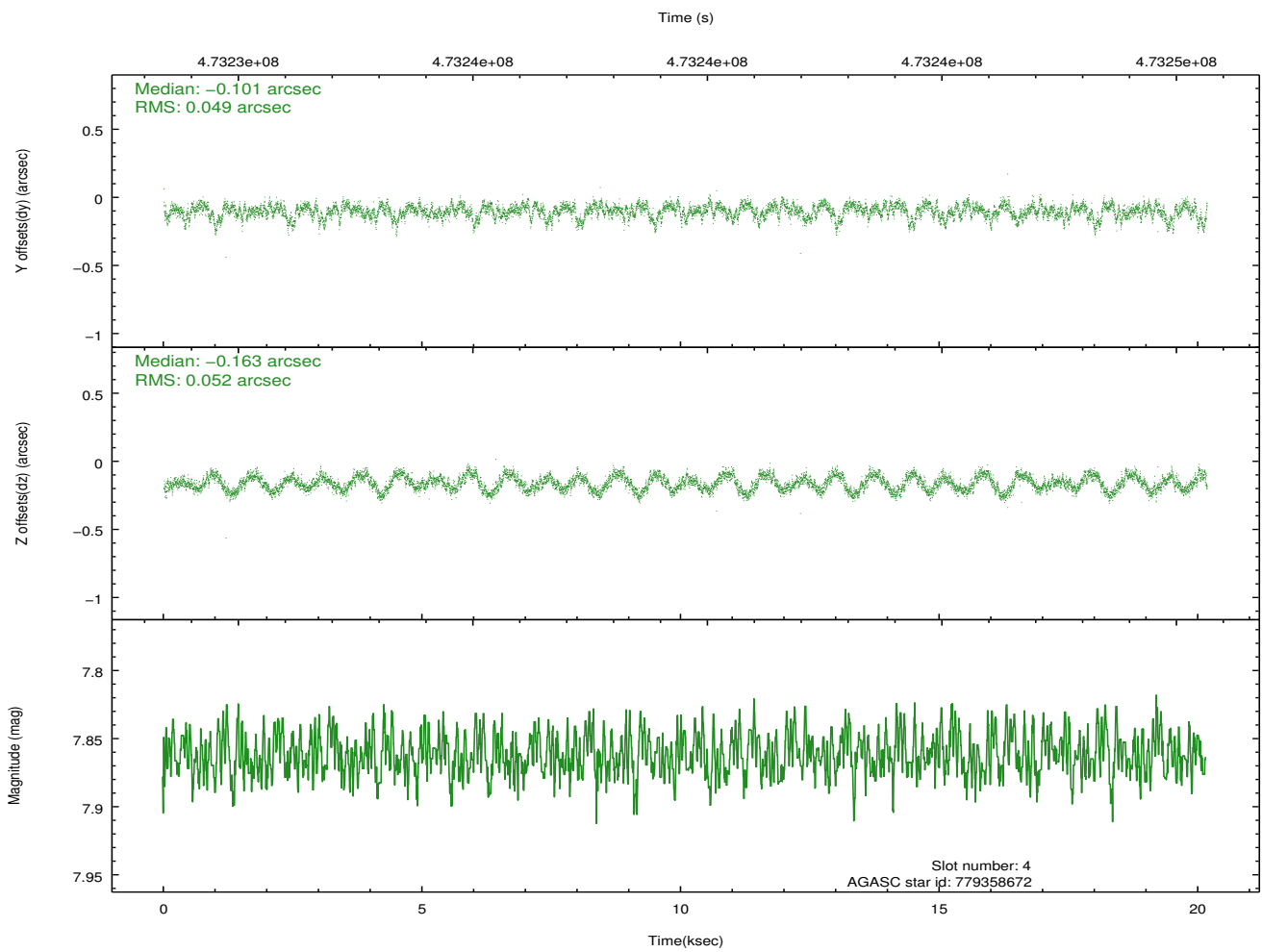
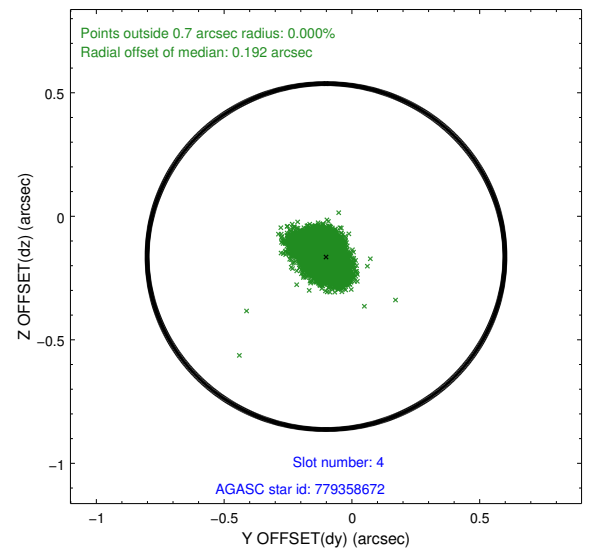
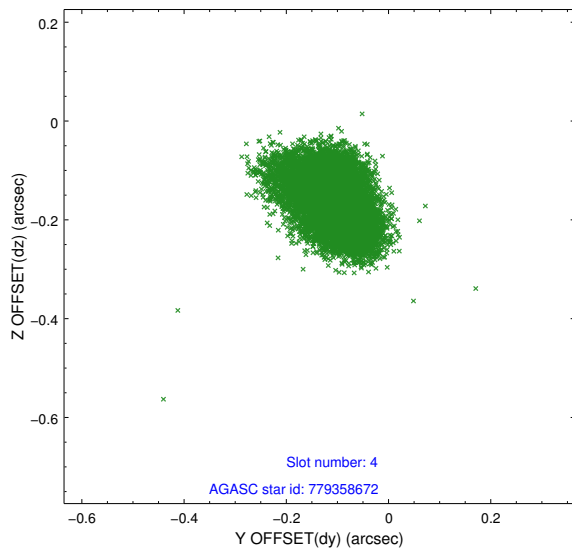
∞

## 2.4 Star Slots

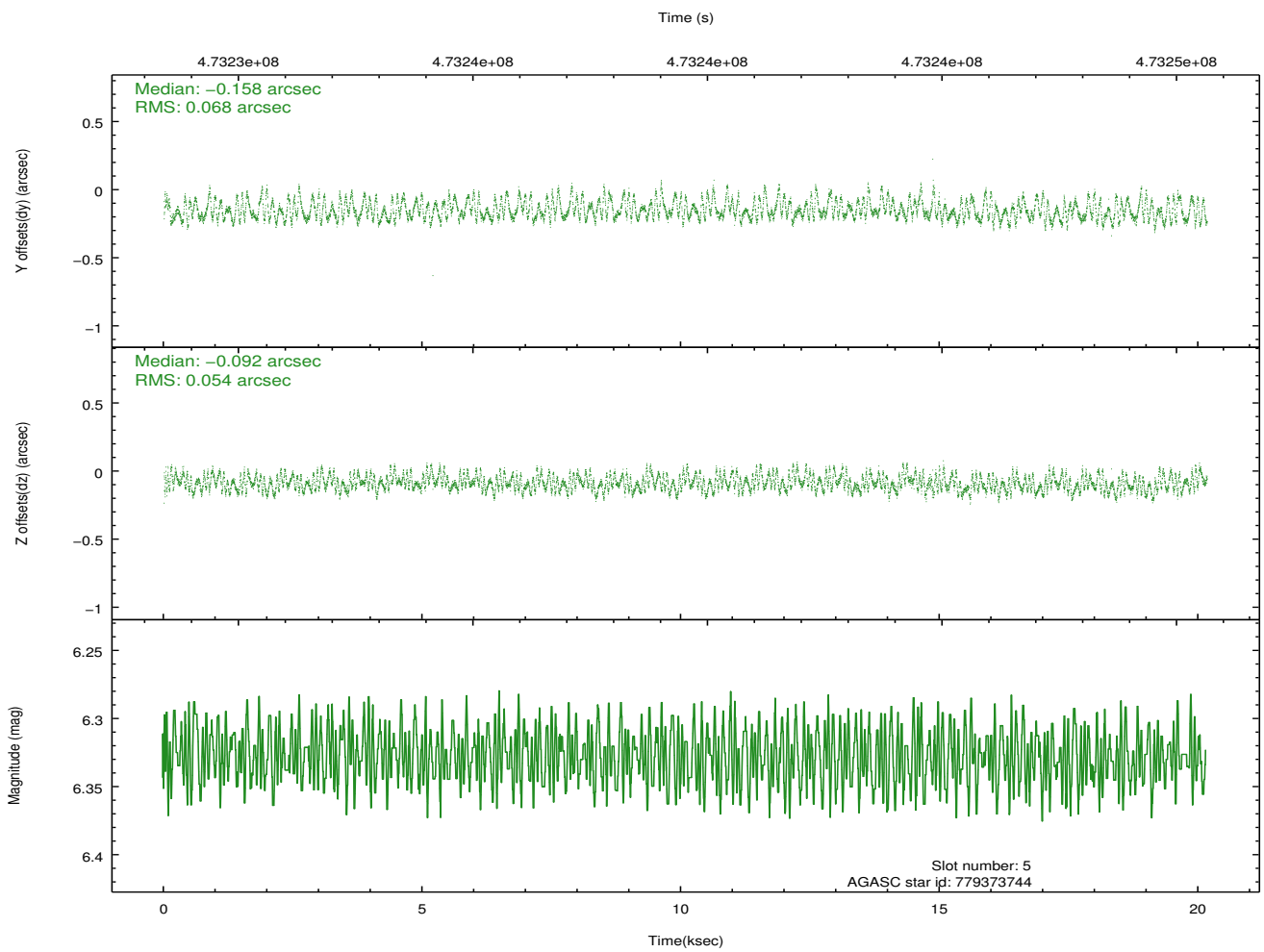
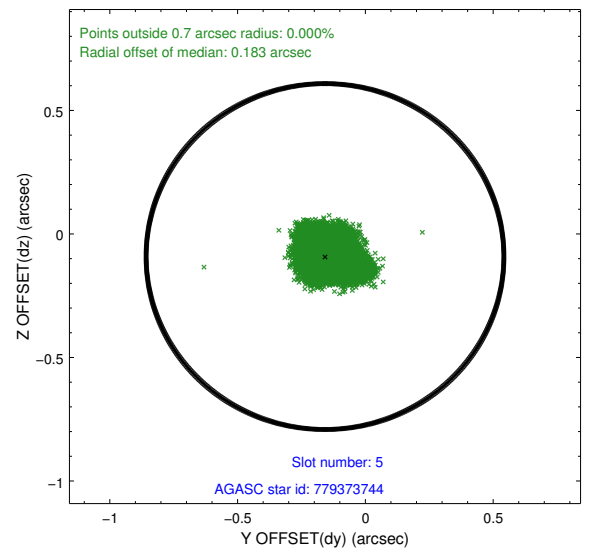
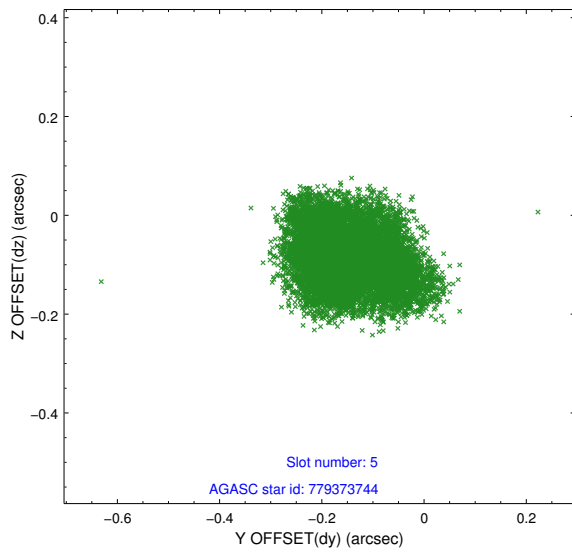
### 2.4.1 Slot 3



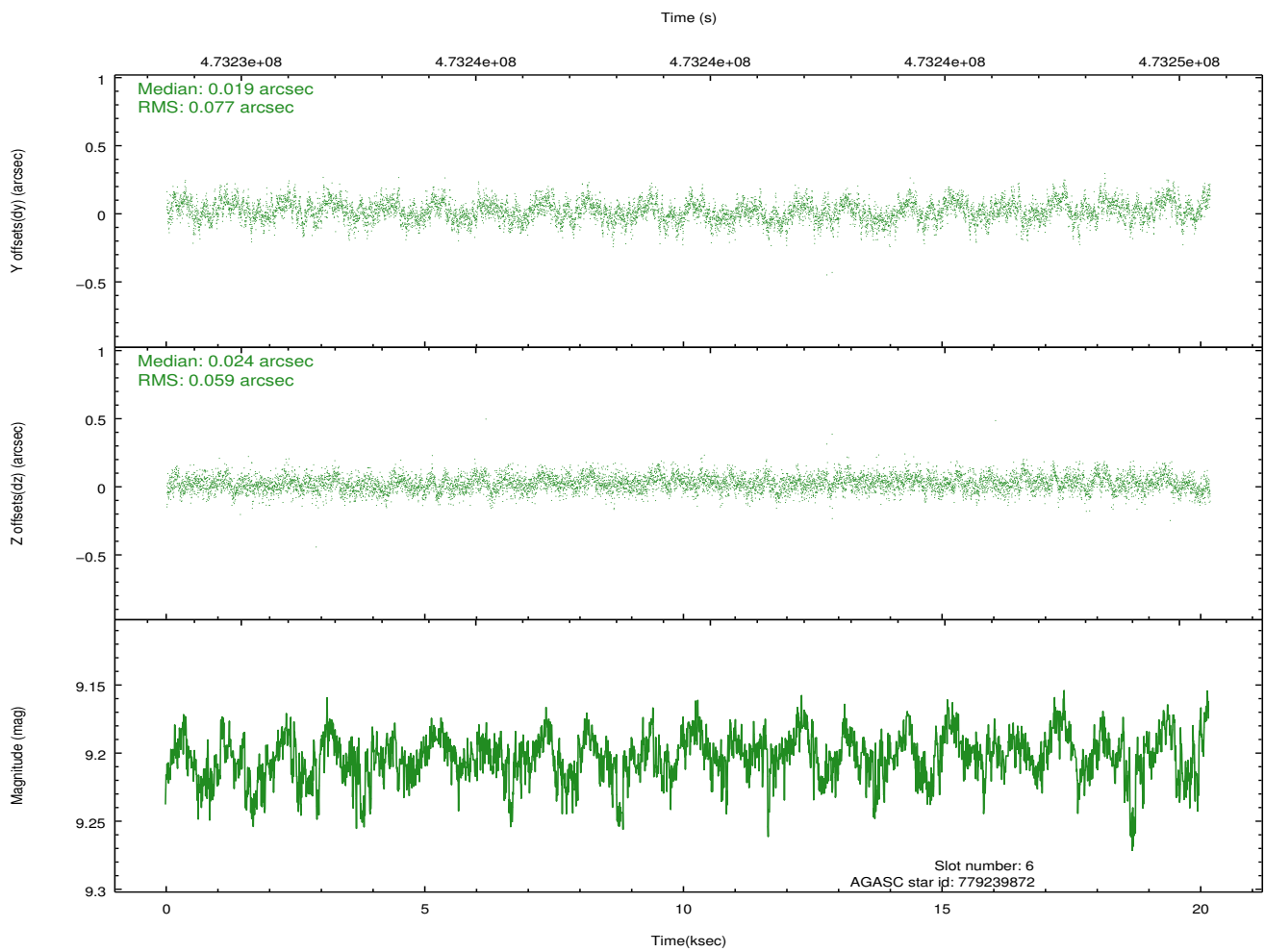
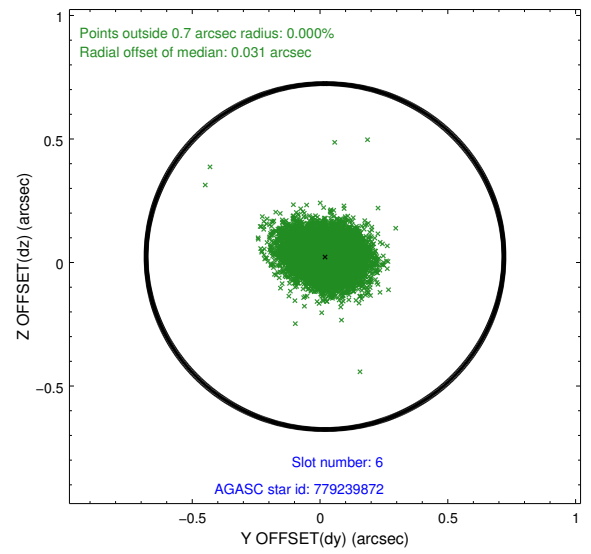
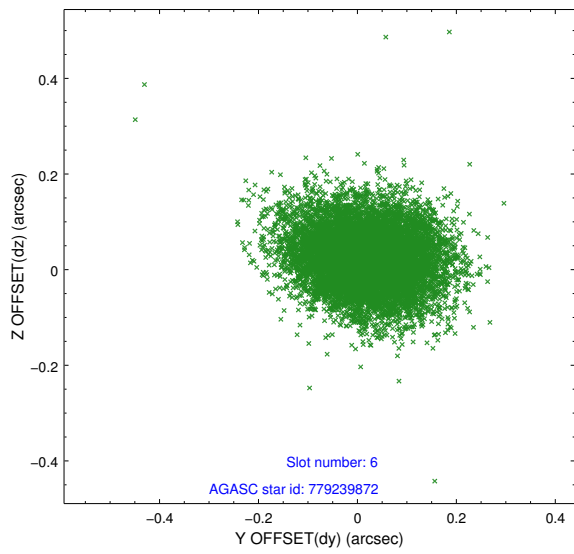
## 2.4.2 Slot 4



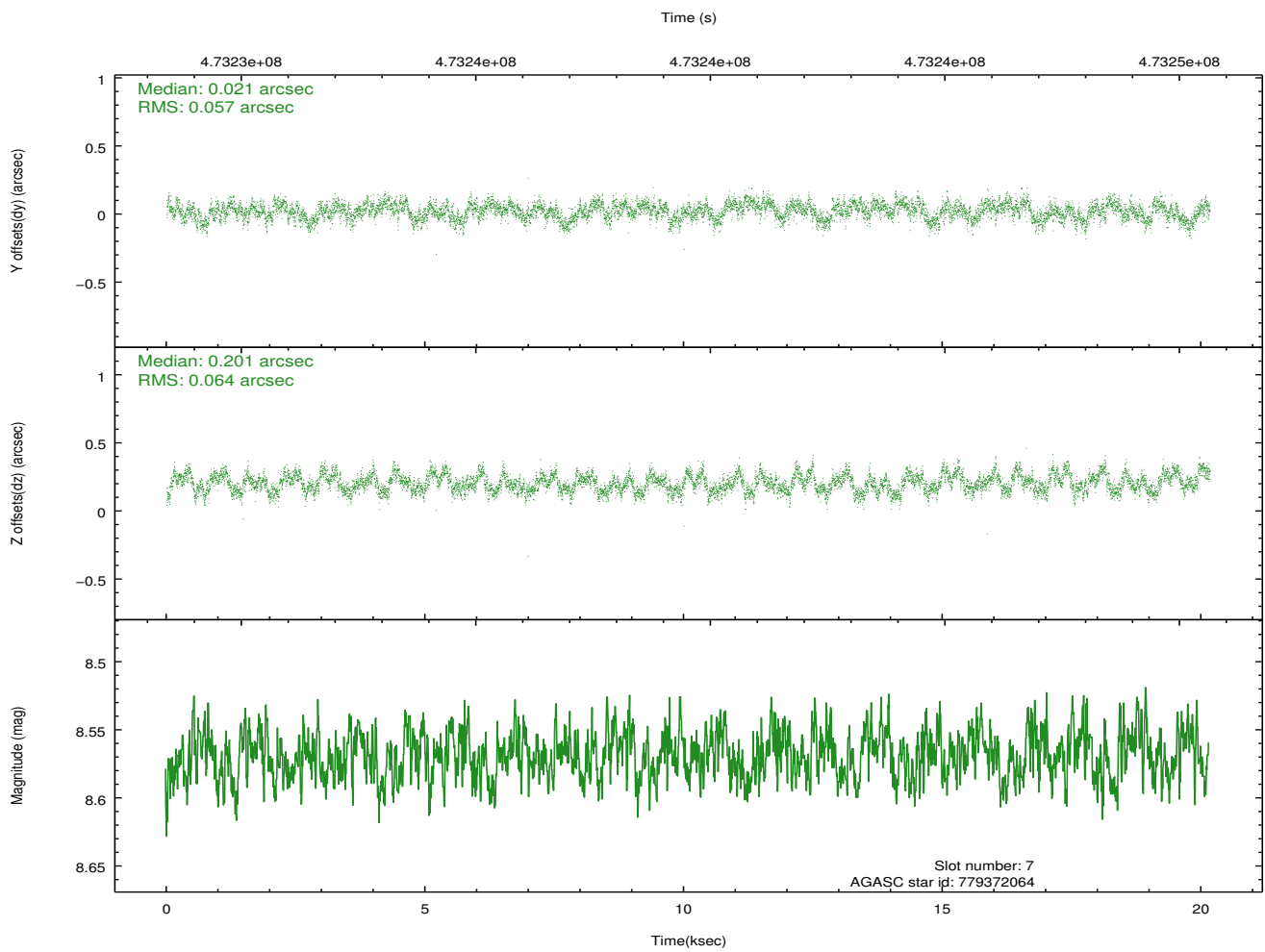
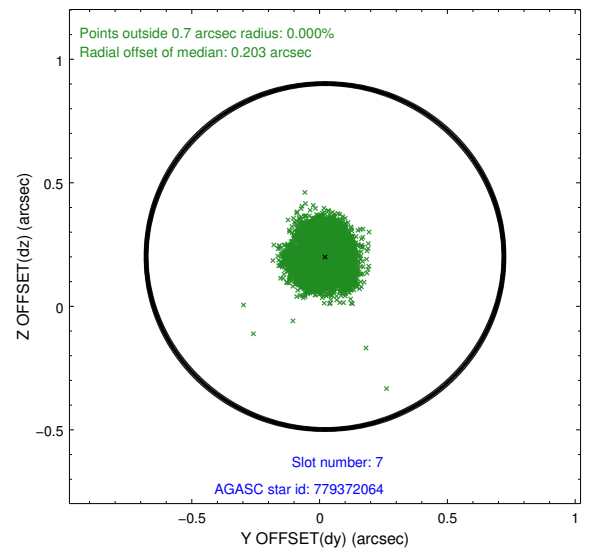
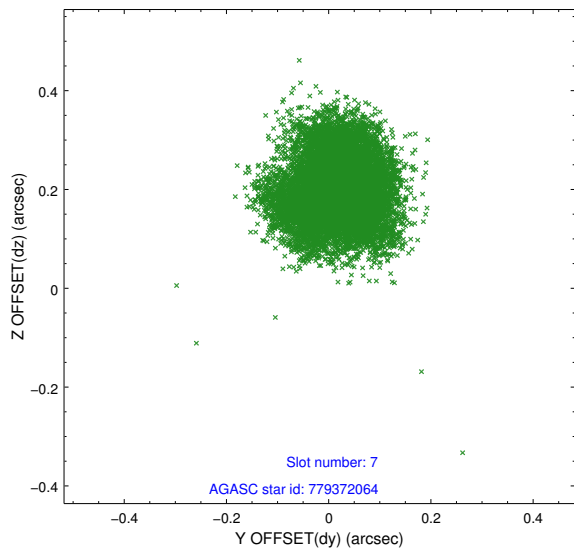
### 2.4.3 Slot 5



## 2.4.4 Slot 6

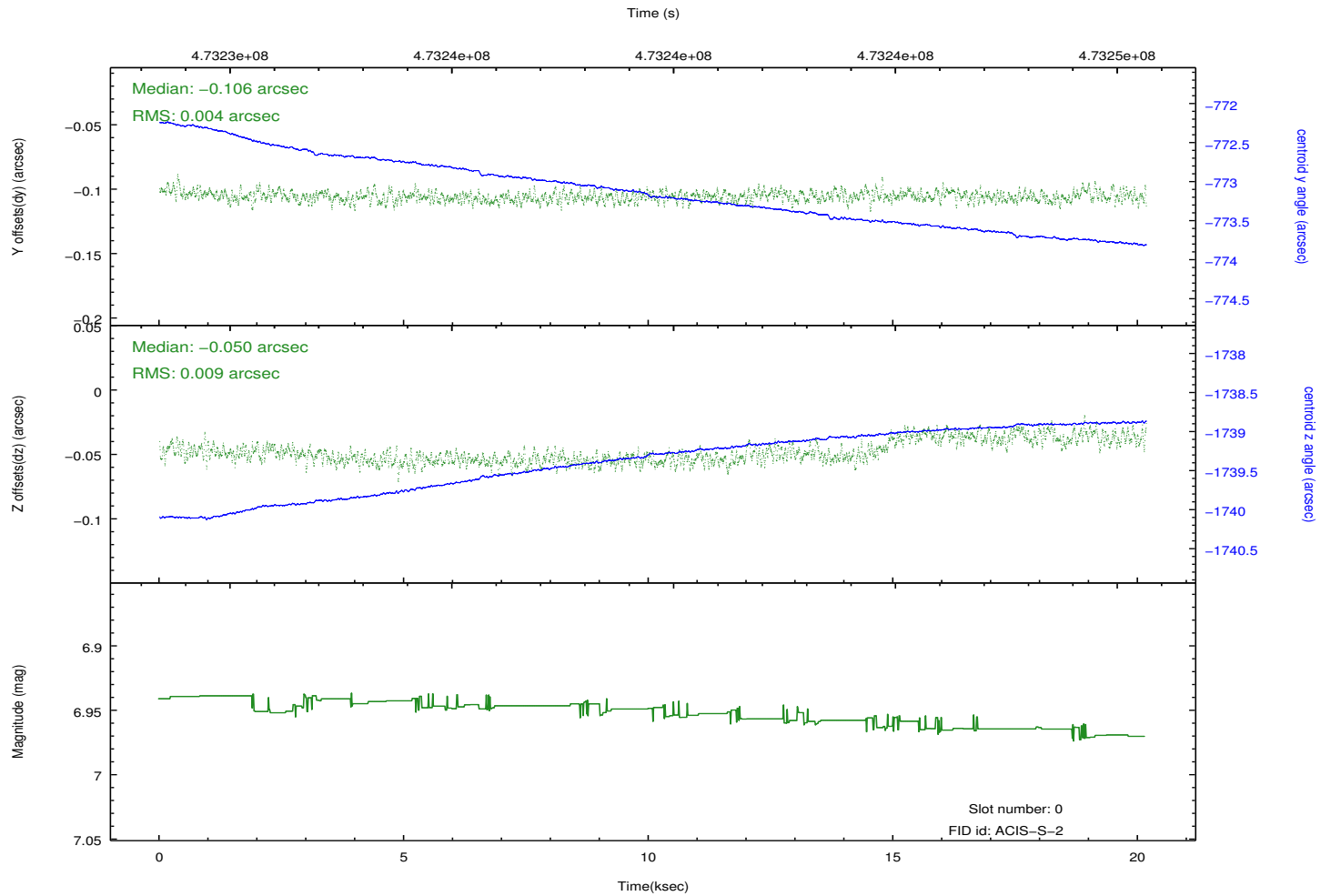
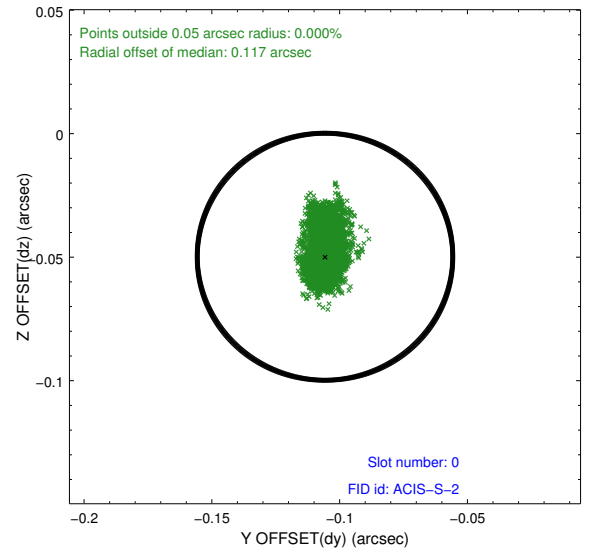
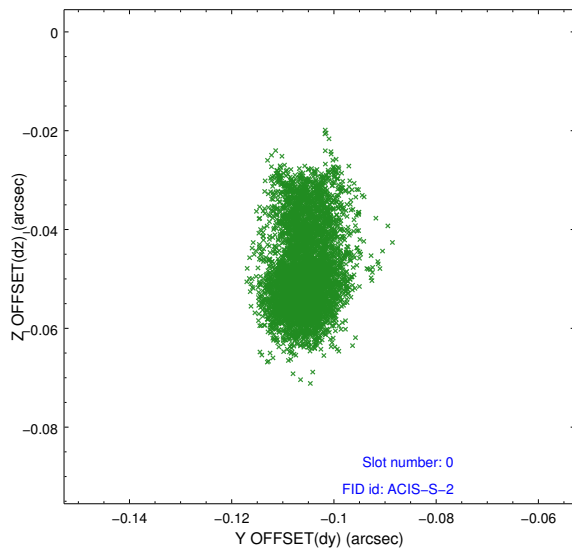


## 2.4.5 Slot 7

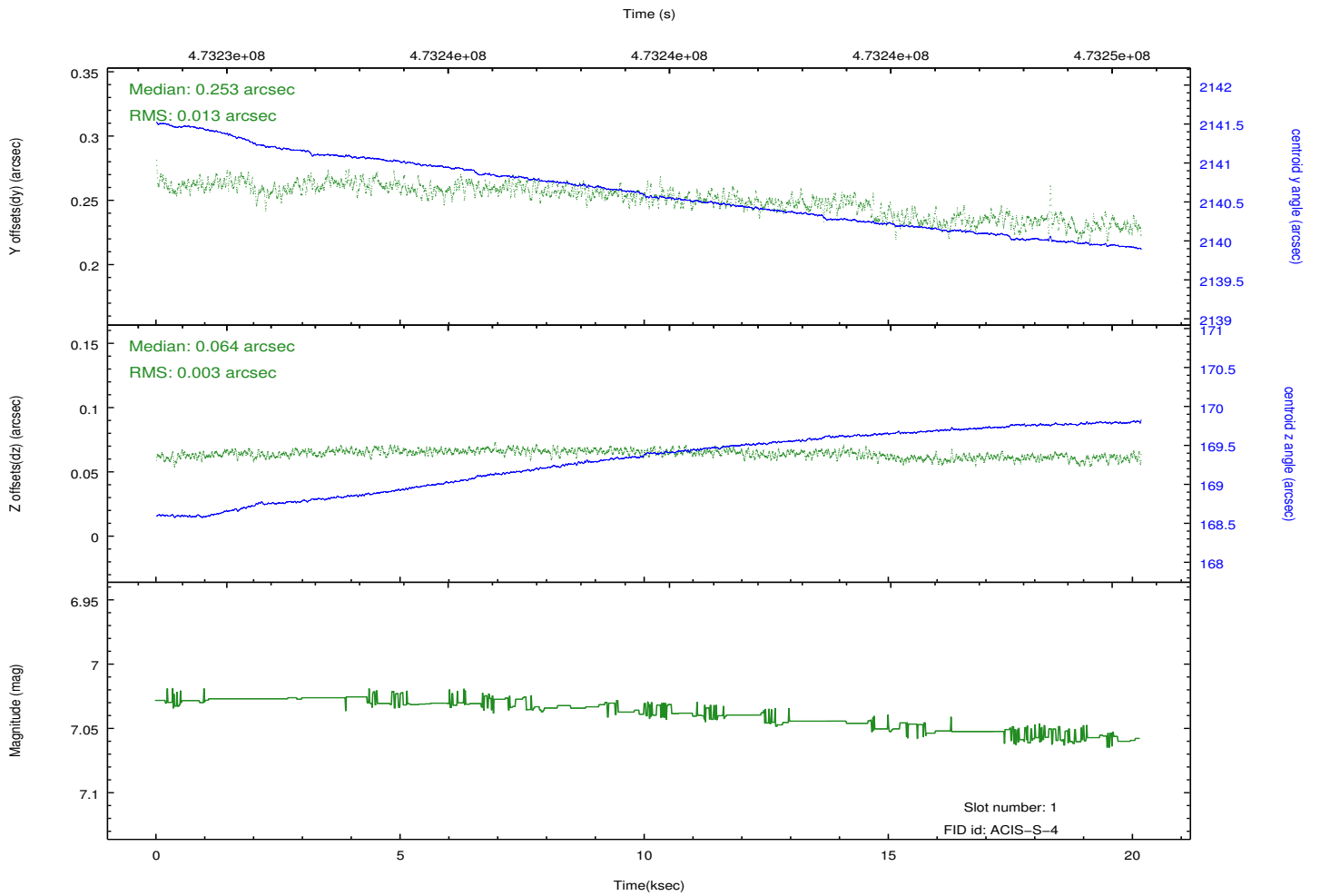
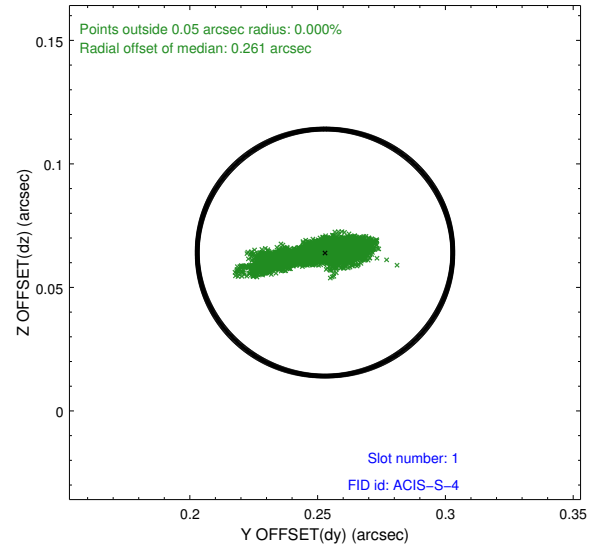
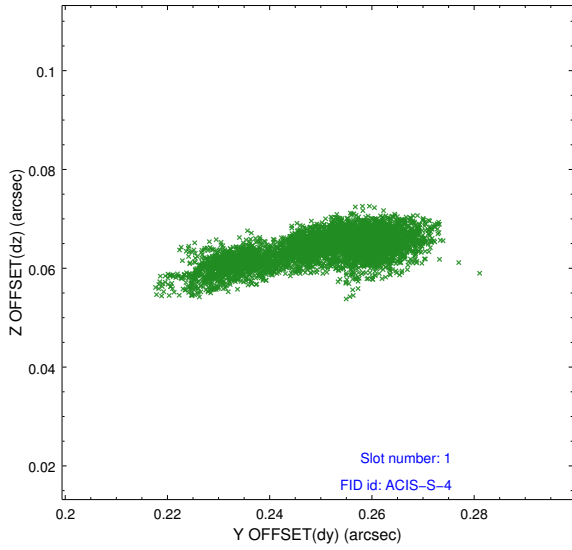


## 2.5 FID Slots

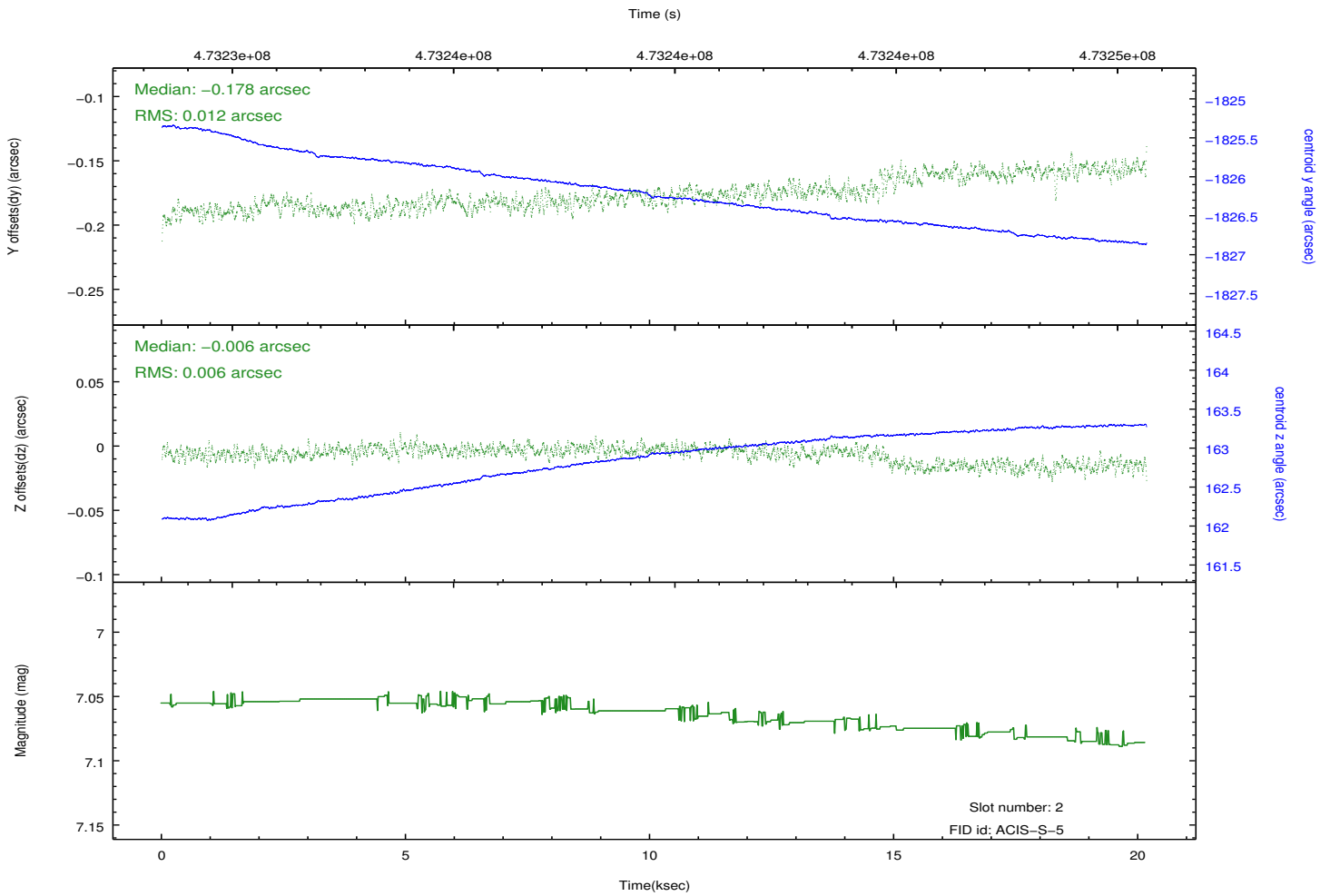
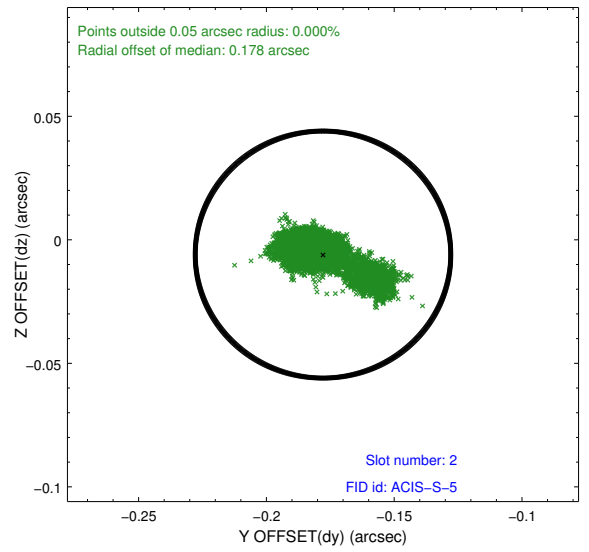
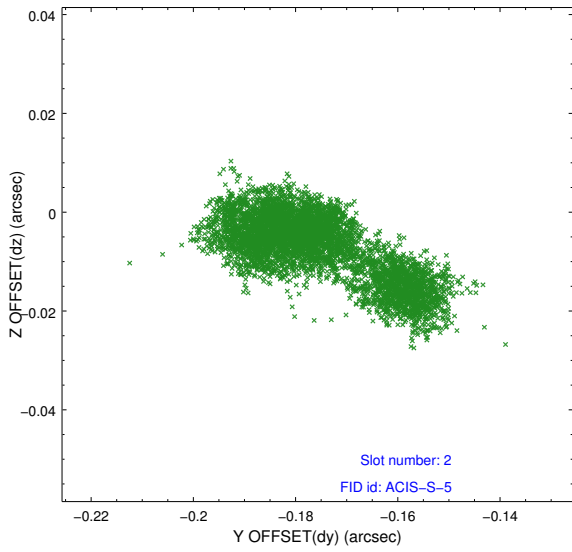
### 2.5.1 Slot 0



## 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)	2014.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.109688419998

## 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.