

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 15699 - L2 Version 2
Chandra X-Ray Center

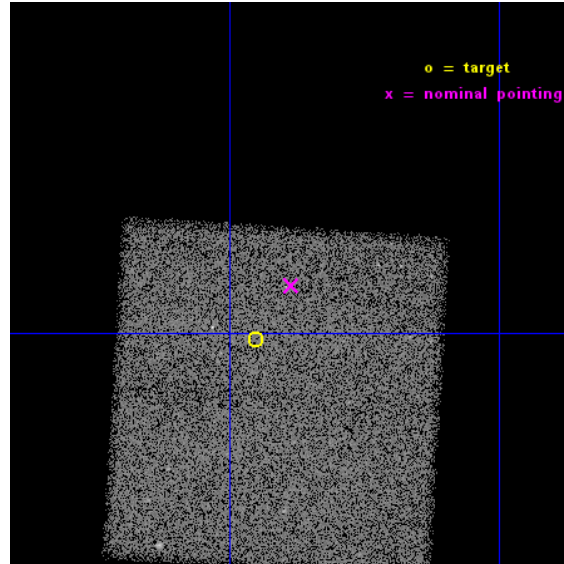
L2 Processing Date : Dec 10 2014

Contents

1	Front	2
2	OBI	3
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
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

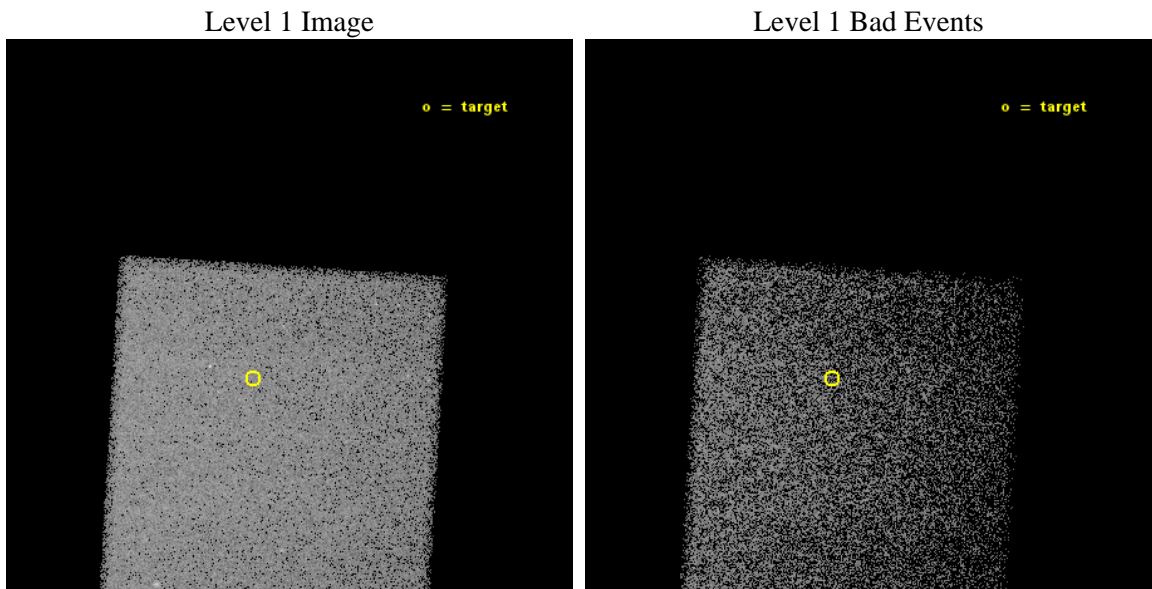
seq_num	100128	Sequence number
obs_id	15699	Observation id
title	Chandra Observations of Pluto's Escaping Atmosphere in Support of the New Horizons Mission	Proposal title
observer	Dr. Ralph McNutt	Principal investigator
object	Pluto	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	283.6127	Observer's specified target RA [deg]
dec_targ	-20.1692	Observer's specified target Dec [deg]
ra_nom	283.59633363775	Nominal RA [deg]
dec_nom	-20.146661231755	Nominal Dec [deg]
roll_nom	93.432677877148	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35092.930826902	Sum of GTIs [s]
livetime	34619.338279242	Livetime [s]
ontime7	35092.930826902	Sum of GTIs [s]
l2events	91873	Number of level 2 events



2 OBI

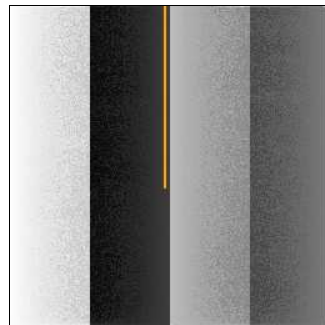
2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 7



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	35092.930826902	Sum of GTIs [s]
caldbver	4.6.4	 	ontime7	35092.930826902	Sum of GTIs [s]
date	2014-12-10T14:21:55	Date and time of file creation	l1events	211061	Number of level 1 events
revision	2	Processing version of data			

2.1.4 Events

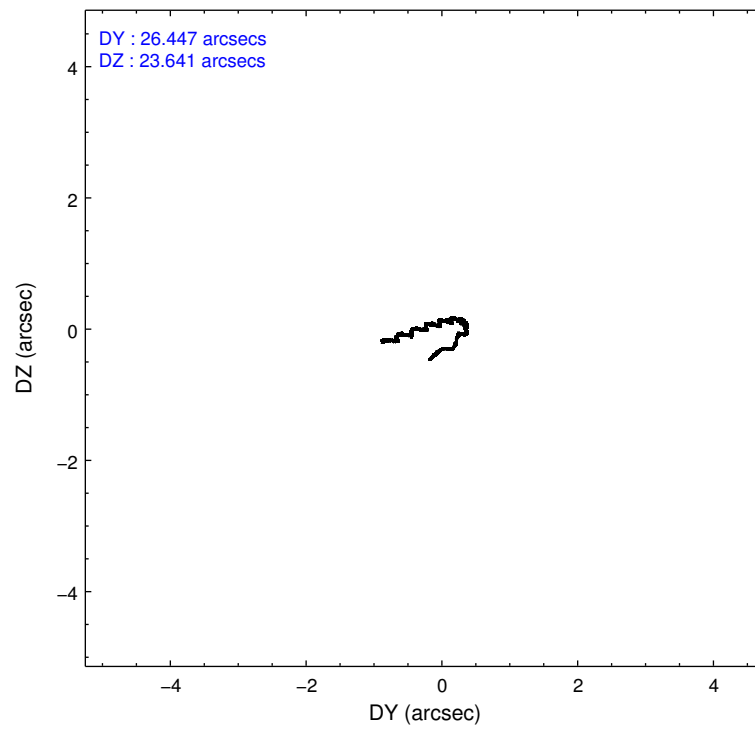
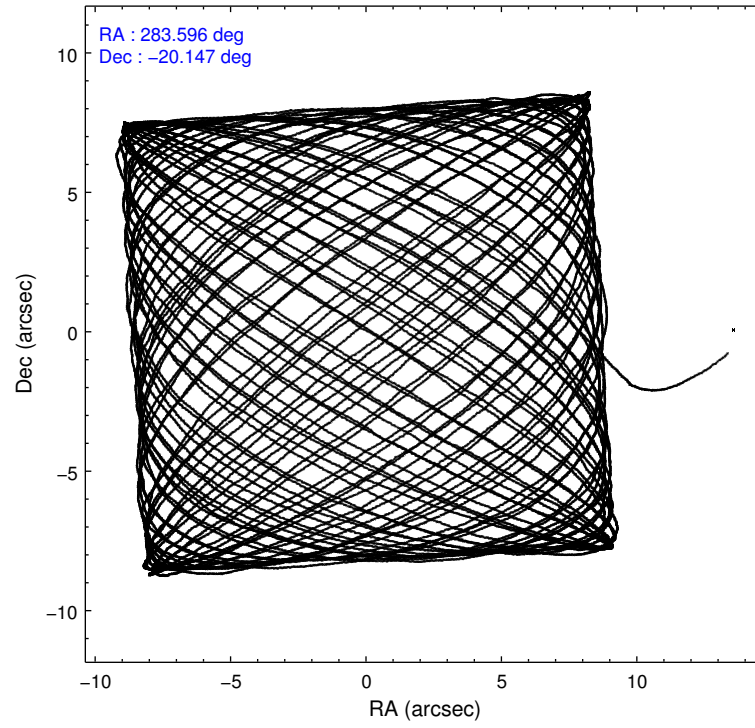
	ccd 7
level 1 events	211061
rejected events	116913
rejected %	55%

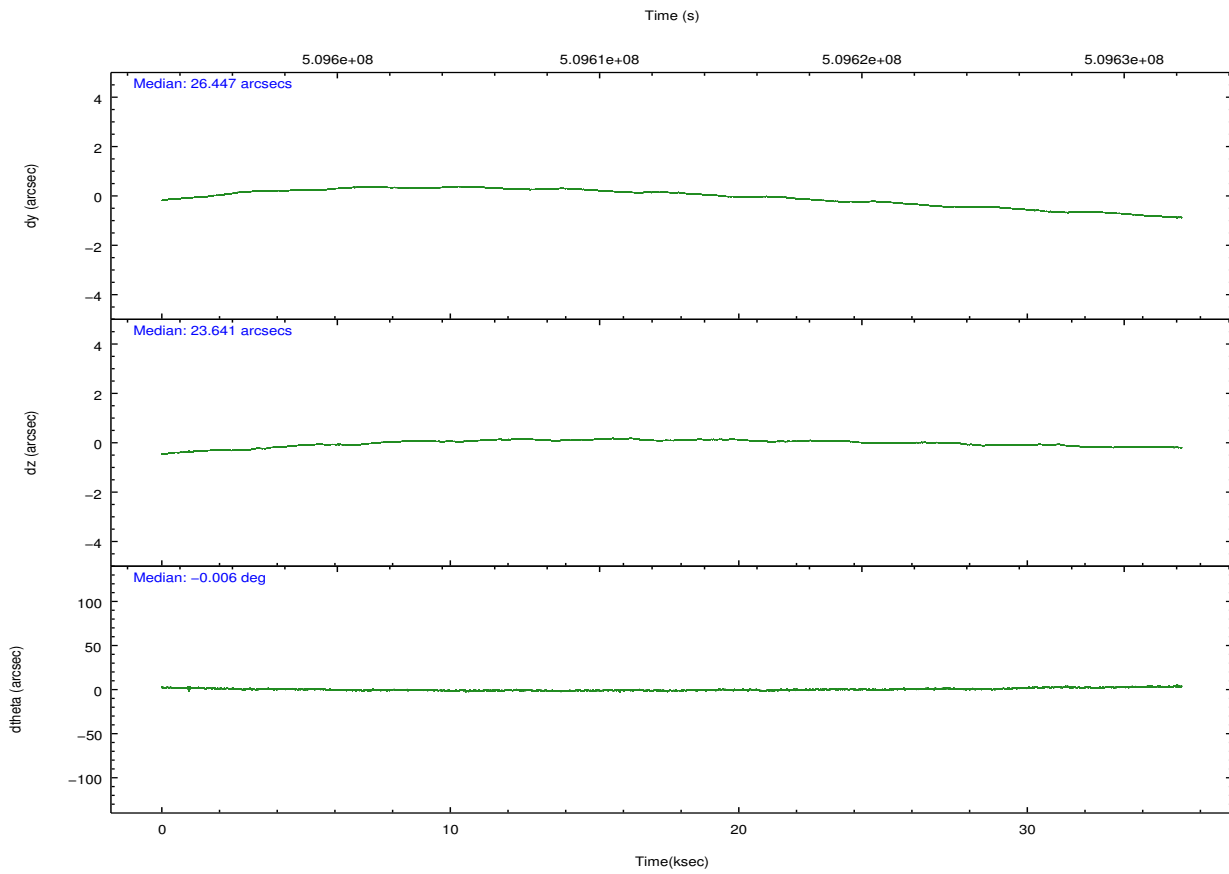
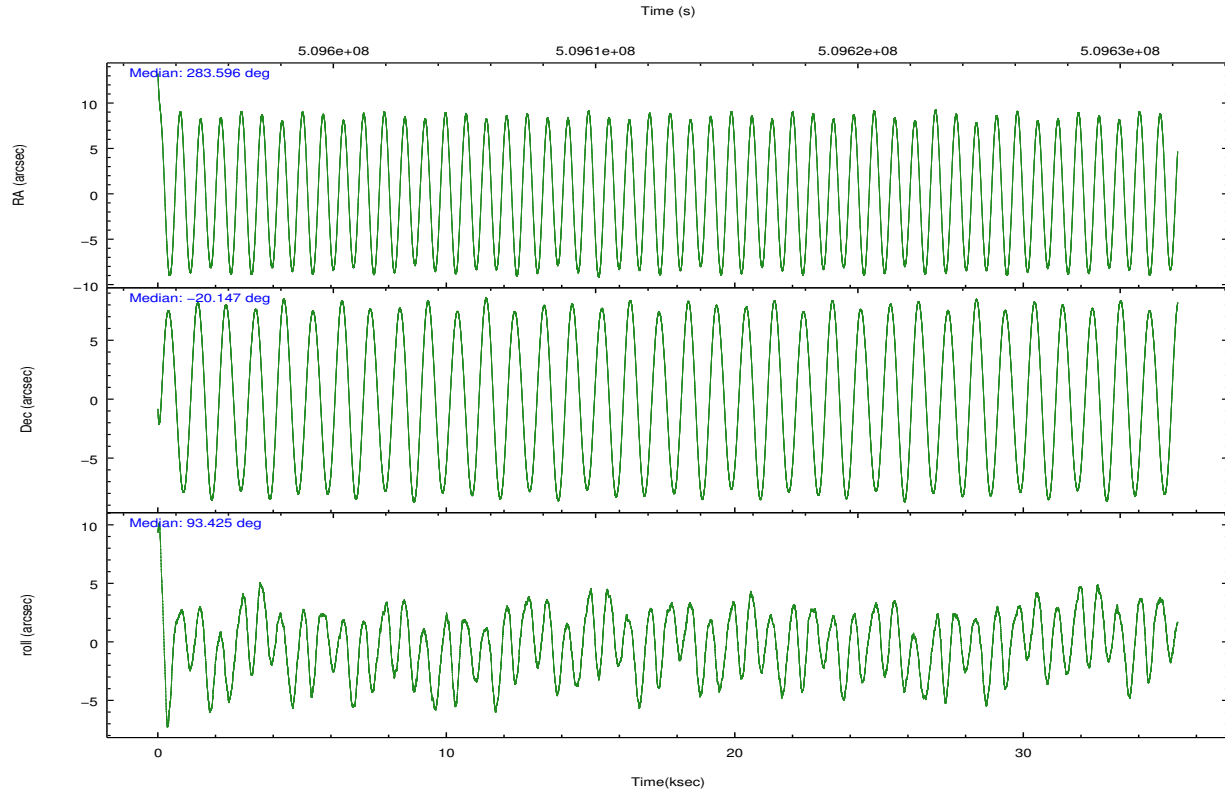
	ccd 7
grade 0 events	9201
	4%
grade 1 events	246
	0%
grade 2 events	19228
	9%
grade 3 events	8271
	3%
grade 4 events	8273
	3%
grade 5 events	21627
	10%
grade 6 events	49184
	23%
grade 7 events	95031
	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	283.612711	283.5963336377519	Subarray requested	NONE	NONE
[deg] Pointing Dec	-20.169279	-20.14666123175534	Alternating exposures requested	N	N
[deg] Pointing Roll	93.281694	93.43267787714782	[s] Primary exposure time	0.000000	3
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	509595424.184000	509594571.03848			
Observation start date	2014-02-24T02:15:57	2014-02-24T02:02:51			
[s] Observation end time (MET)	509630424.184000	509631435.67801			
Observation end date	2014-02-24T11:59:17	2014-02-24T12:17:15			
Read mode	TIMED	TIMED			

2.3 Aspect





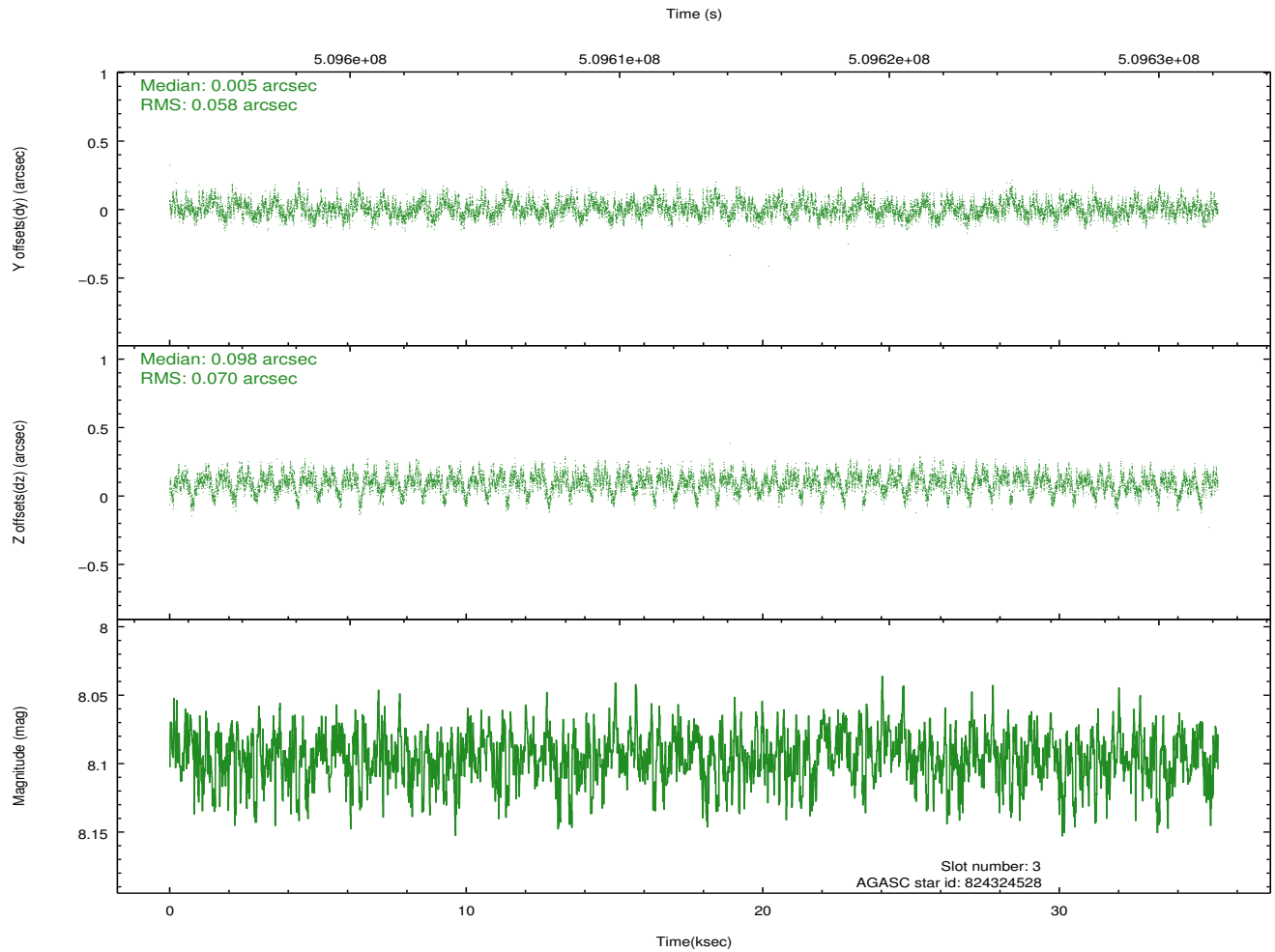
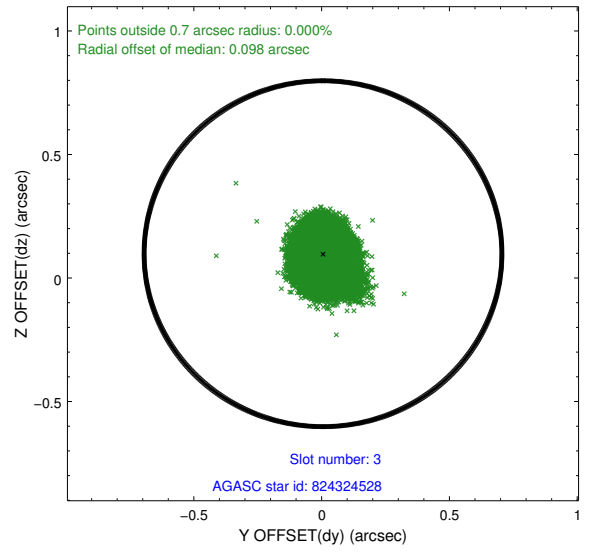
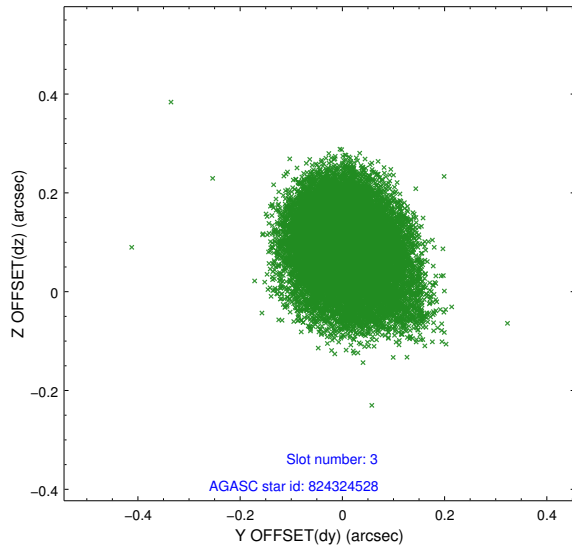
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.00	8622	-0.012	0.029	0.013	0.019	0.000000	0.000000	916.38	-1740.81
1	FID		ACIS-S-4	7.00	8621	0.239	-0.010	0.010	0.016	0.000000	0.000000	2134.04	163.28
2	FID		ACIS-S-5	7.04	8622	-0.256	-0.006	0.017	0.025	0.000000	0.000000	-1832.71	156.86
3	GUIDE	used	824324528	8.09	17240	0.005	0.098	0.096	0.157	283.928195	-20.016464	487.39	-1096.60
4	GUIDE	used	824447392	7.57	17244	-0.179	0.389	0.121	0.196	284.166387	-19.631670	1821.93	-1984.33
5	GUIDE	used	824327360	8.44	17235	0.197	-0.236	0.086	0.138	282.874999	-19.637345	2049.66	2387.99
6	GUIDE	used	824318672	7.96	17238	0.168	-0.224	0.083	0.136	283.150244	-20.533021	-1220.13	1631.48
7	GUIDE	used	824848592	8.87	17238	-0.187	-0.033	0.114	0.205	282.957002	-20.860759	-2363.96	2344.91

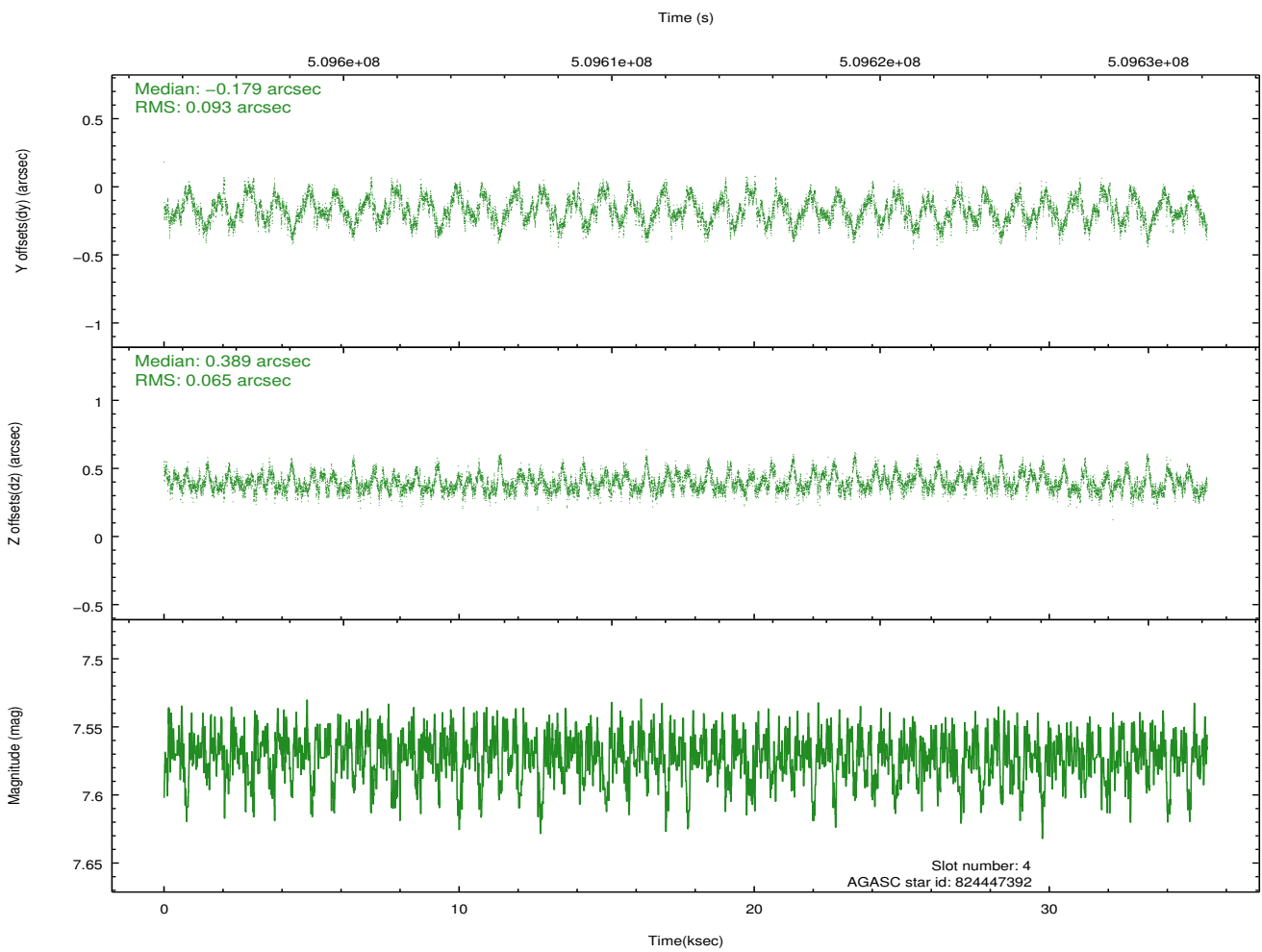
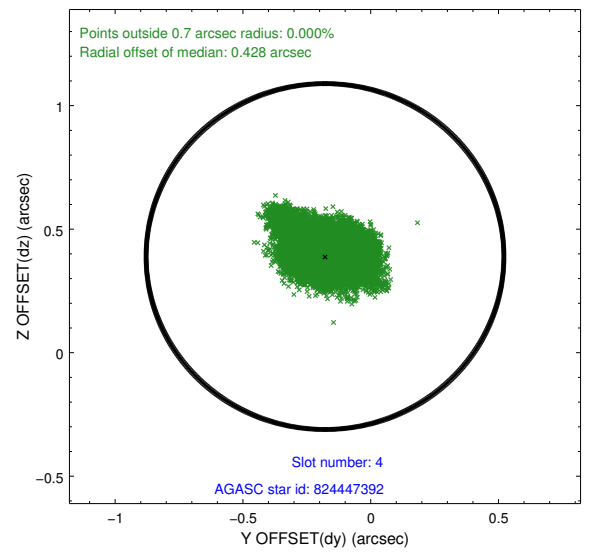
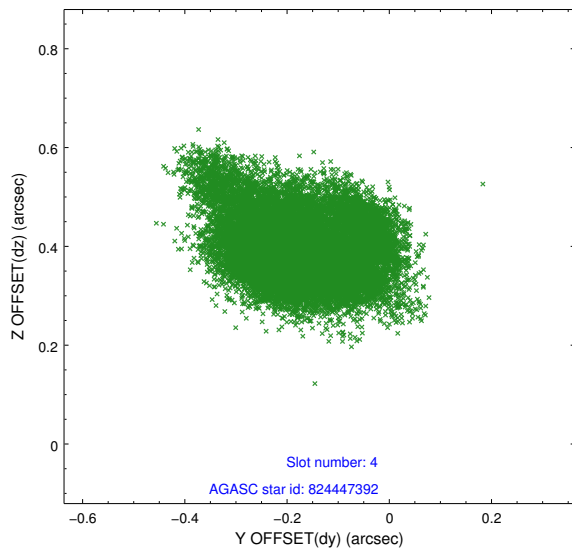
∞

2.4 Star Slots

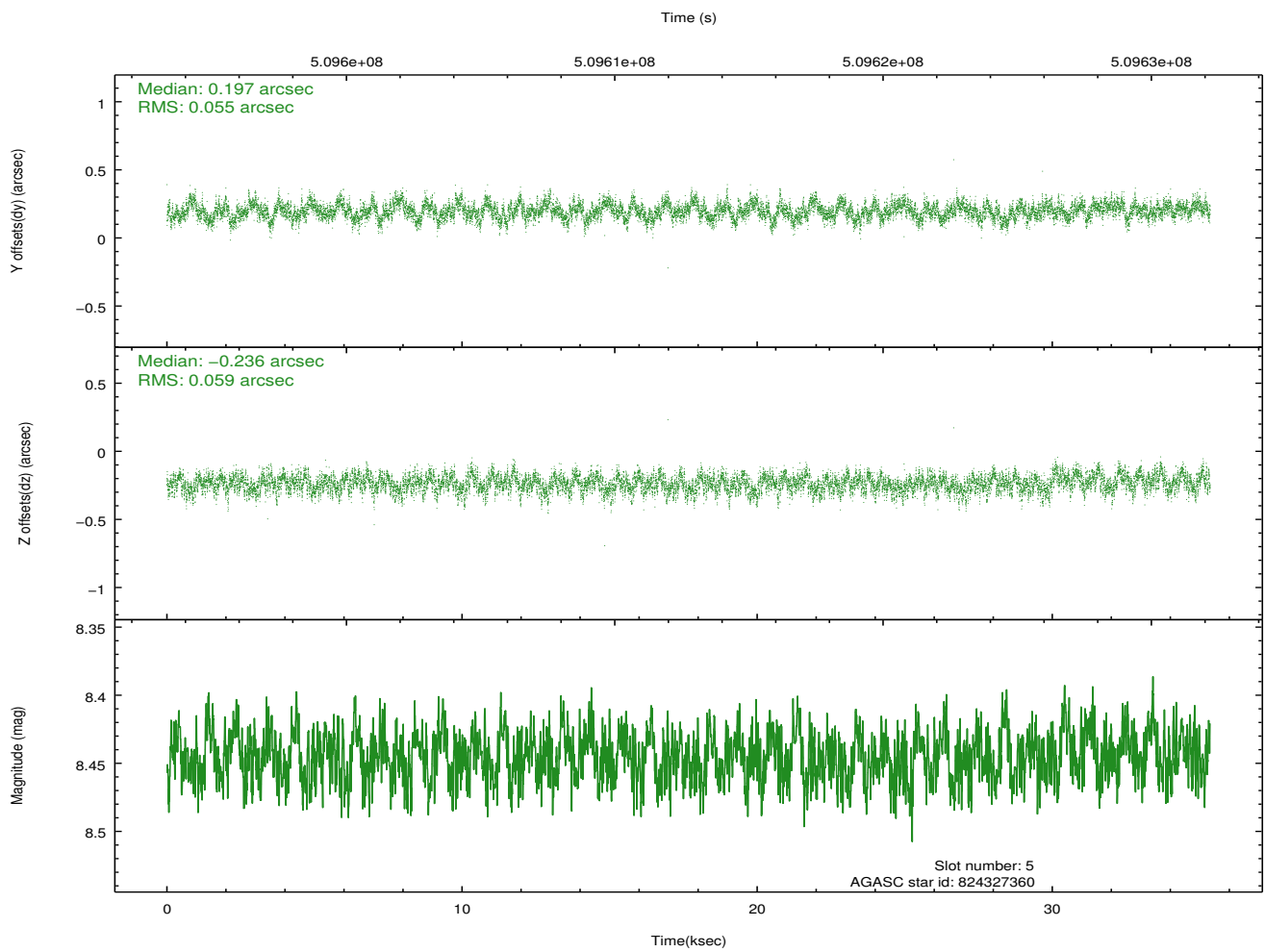
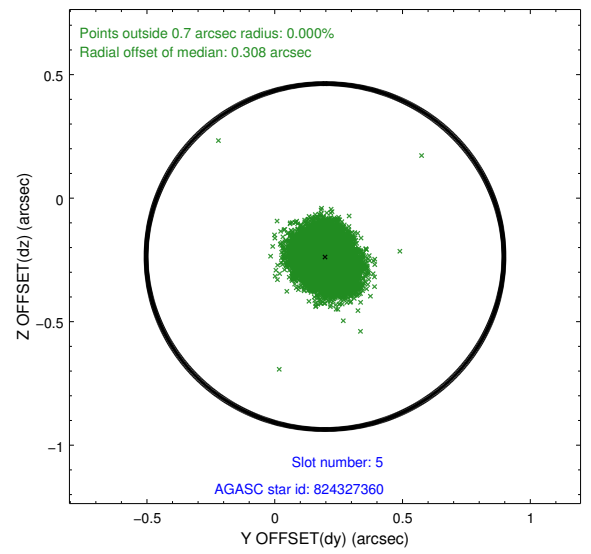
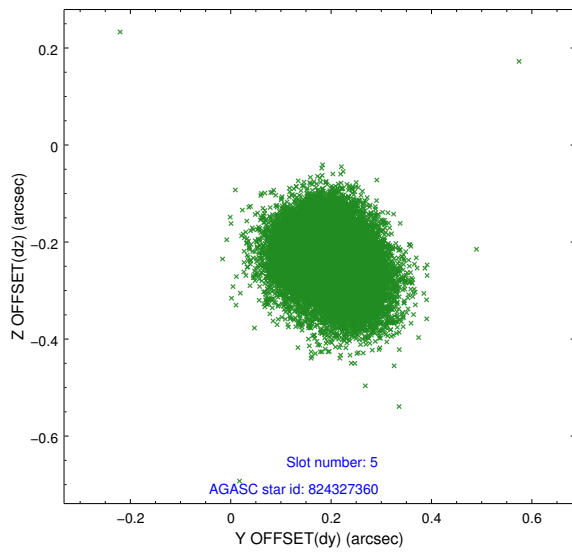
2.4.1 Slot 3



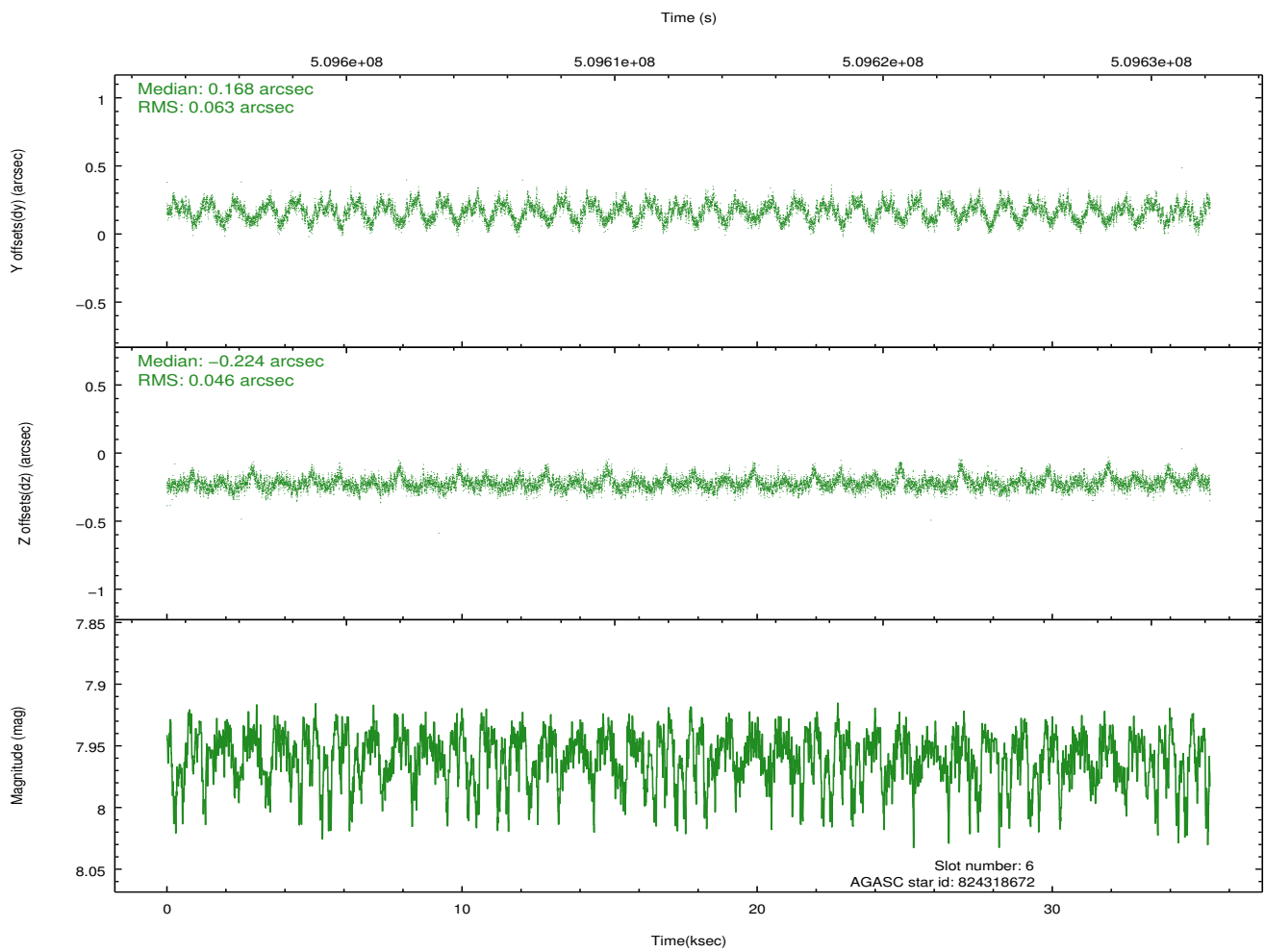
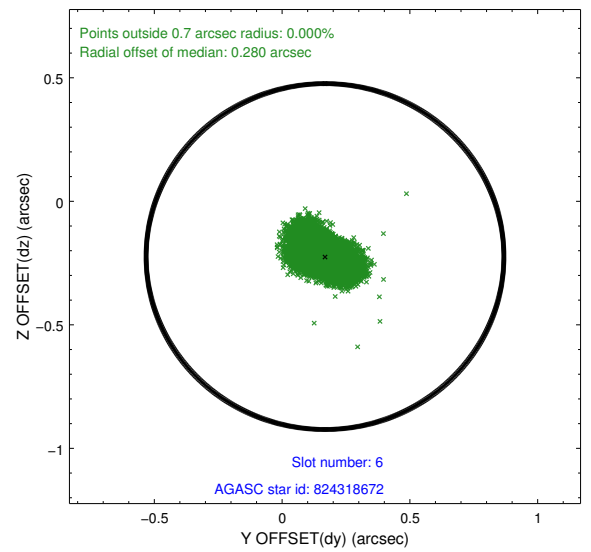
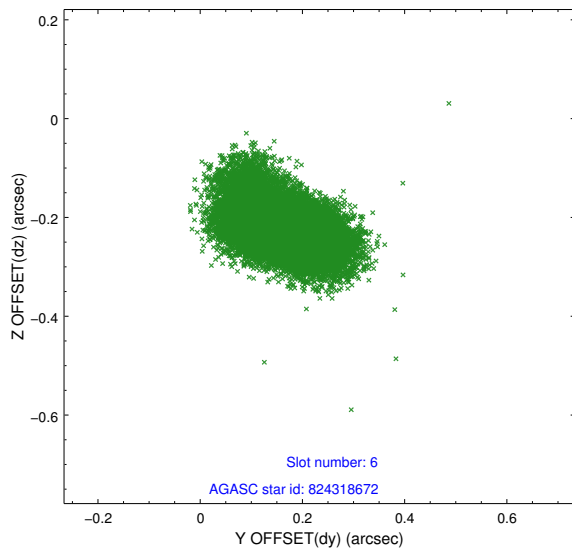
2.4.2 Slot 4



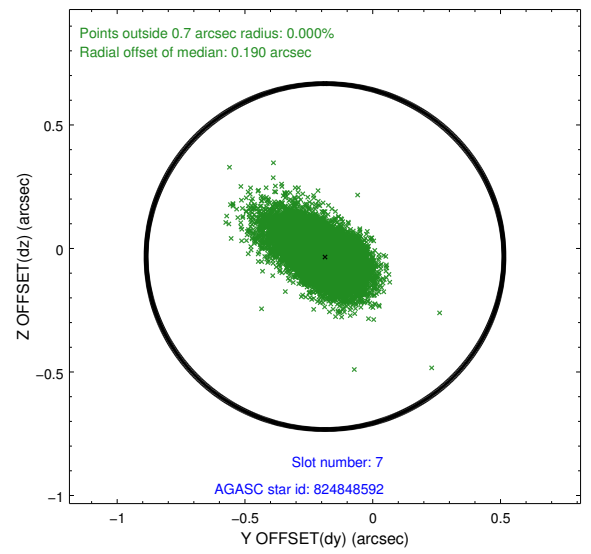
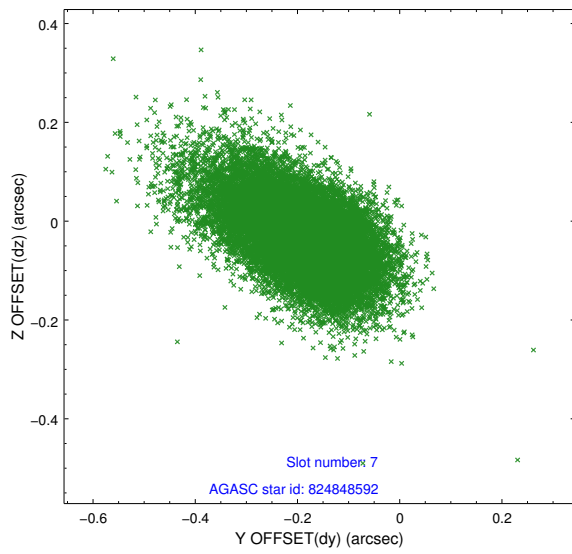
2.4.3 Slot 5



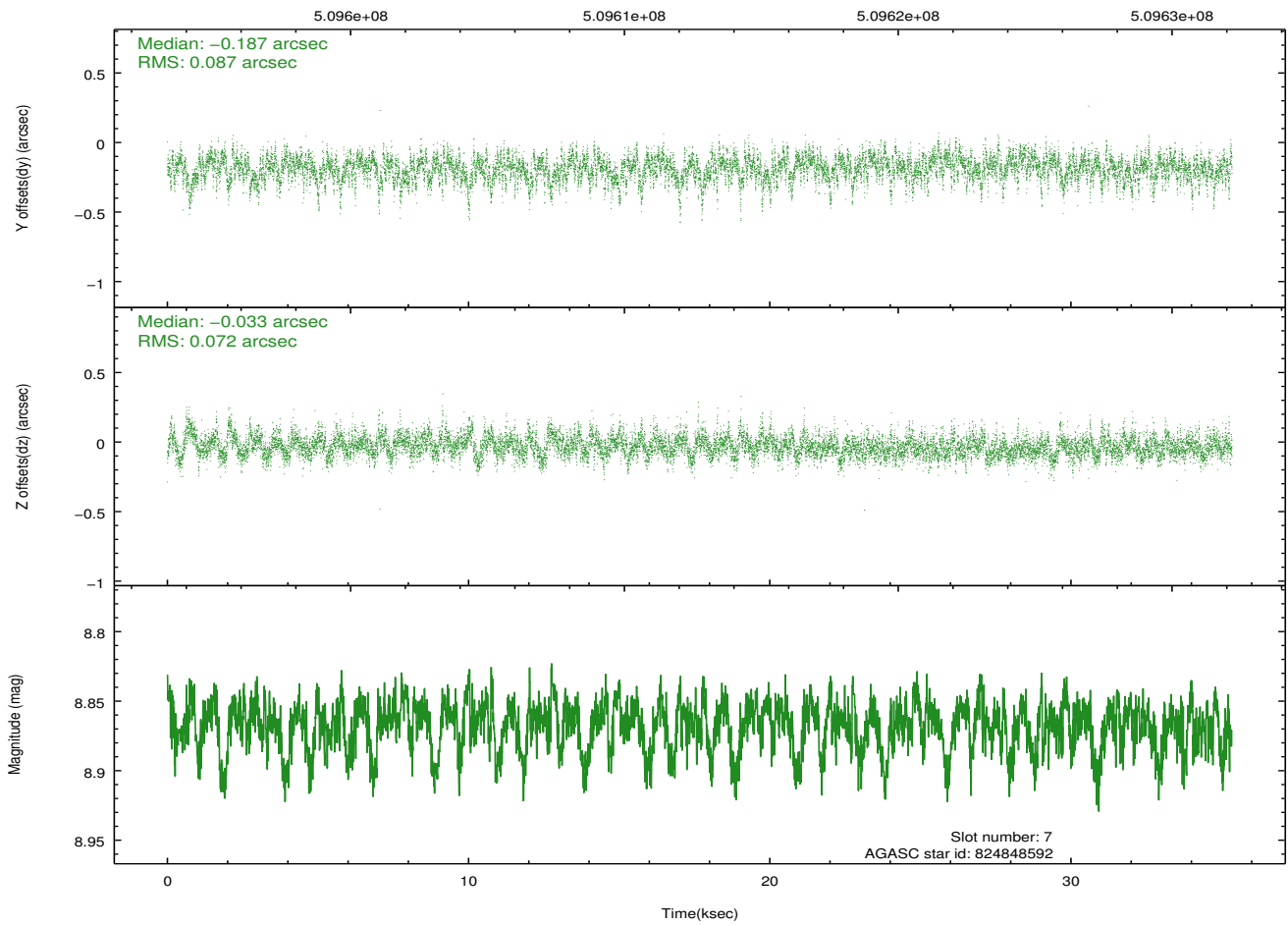
2.4.4 Slot 6



2.4.5 Slot 7

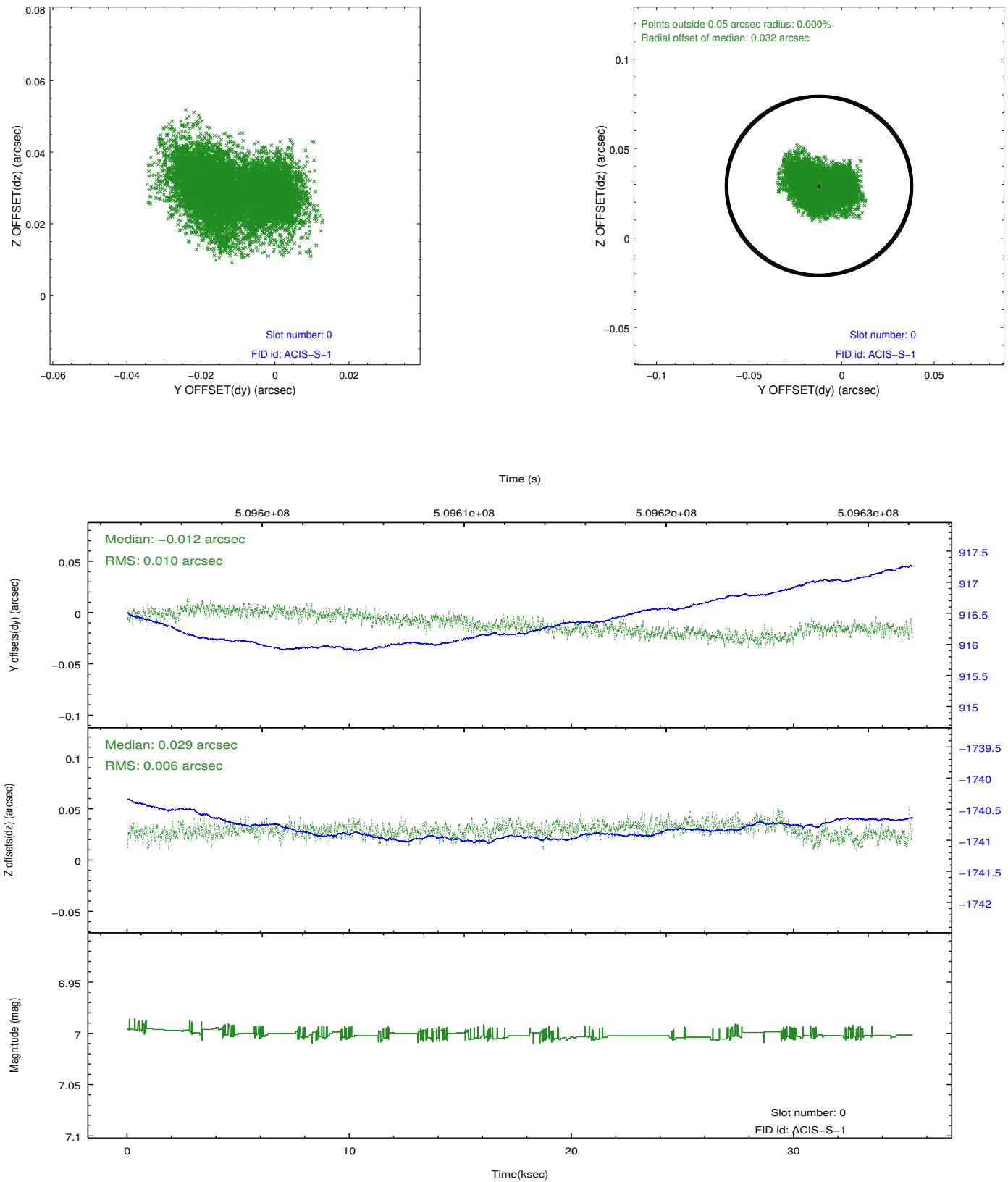


Time (s)

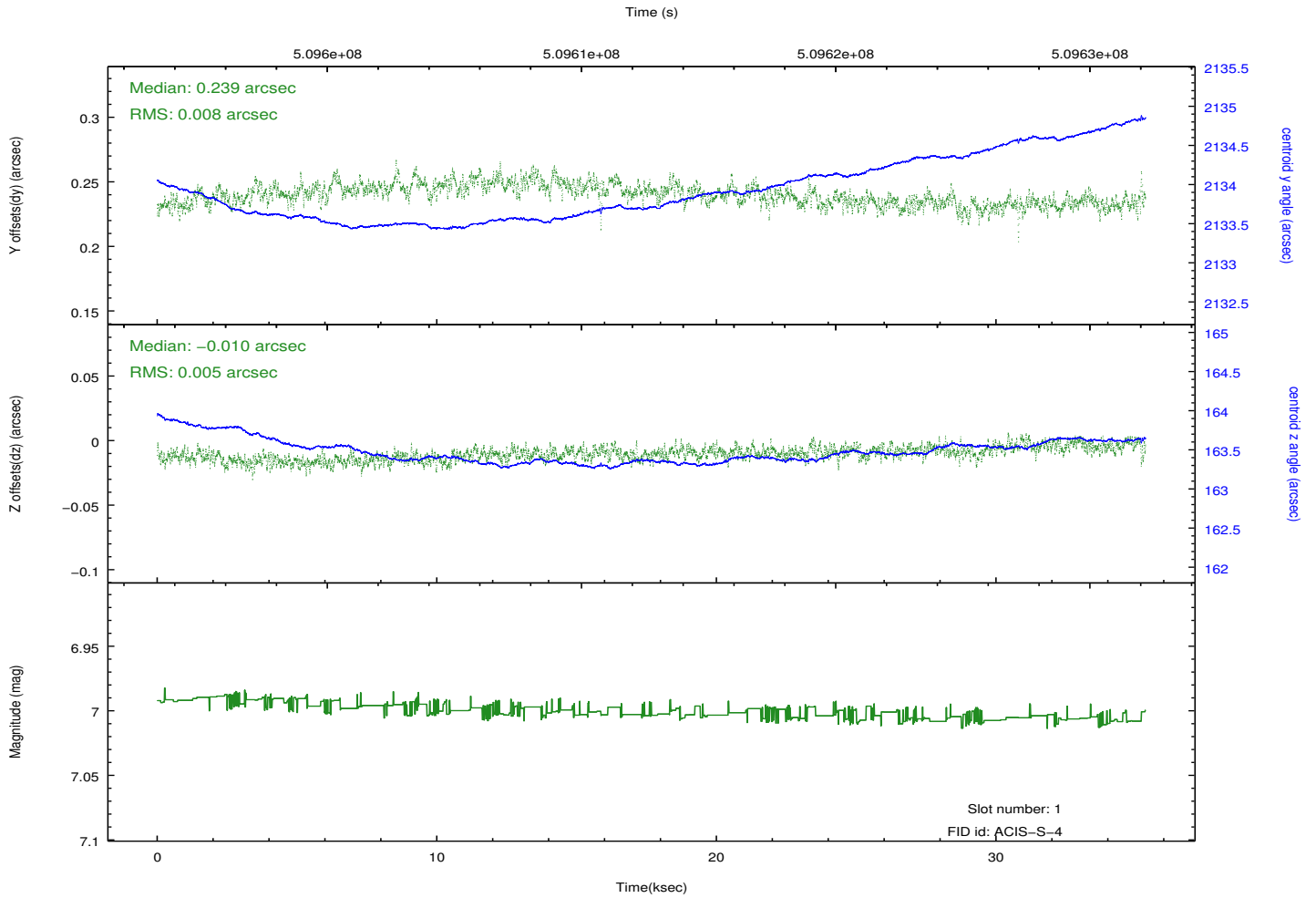
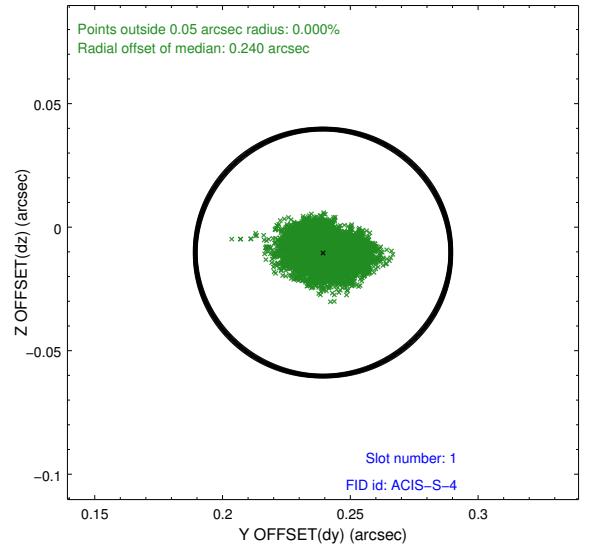
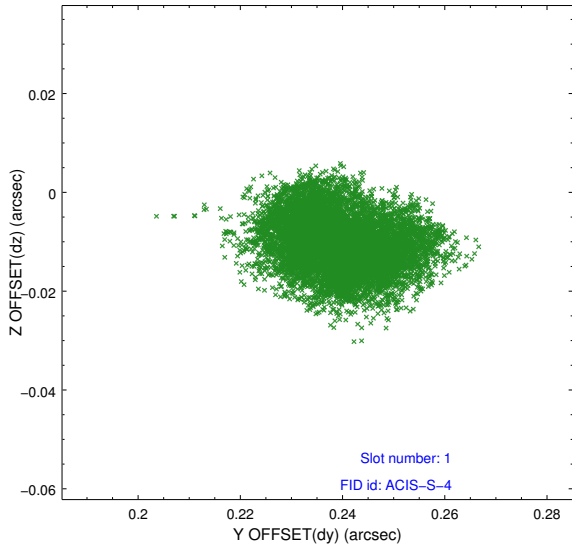


2.5 FID Slots

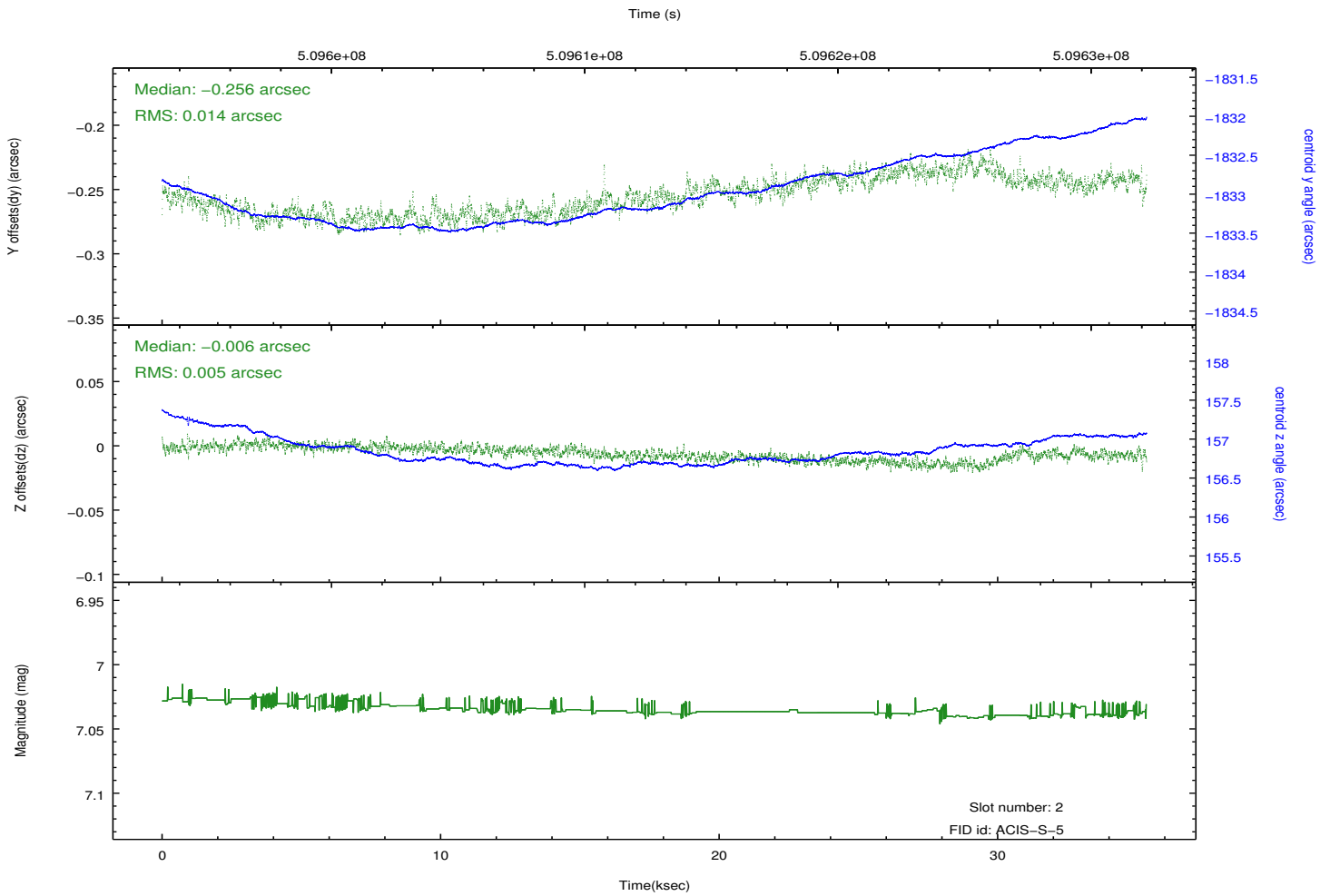
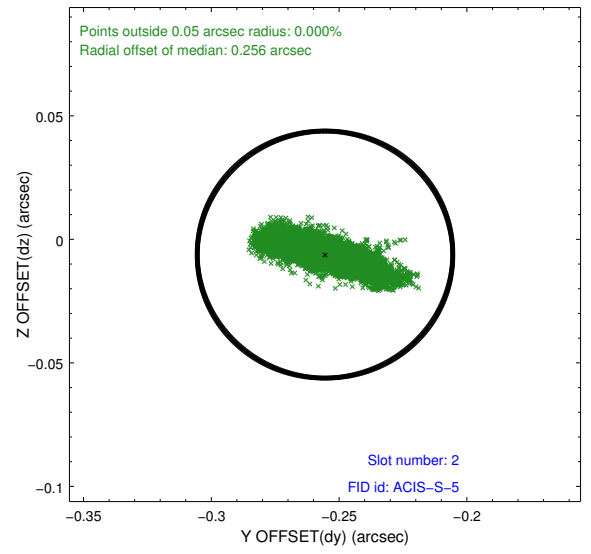
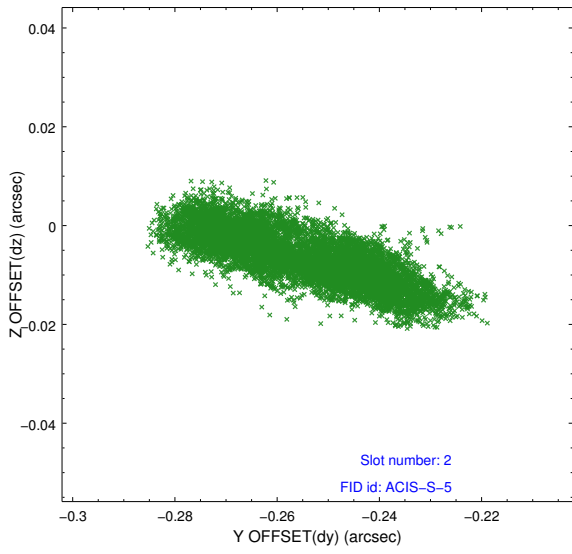
2.5.1 Slot 0



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)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.092930826902

A.2 Comments

This is a moving target. Users will need to run `sso_freeze` or similar software to position the events in the reference frame of the target.

=====

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.