

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 16335 - L2 Version 2  
Chandra X-Ray Center

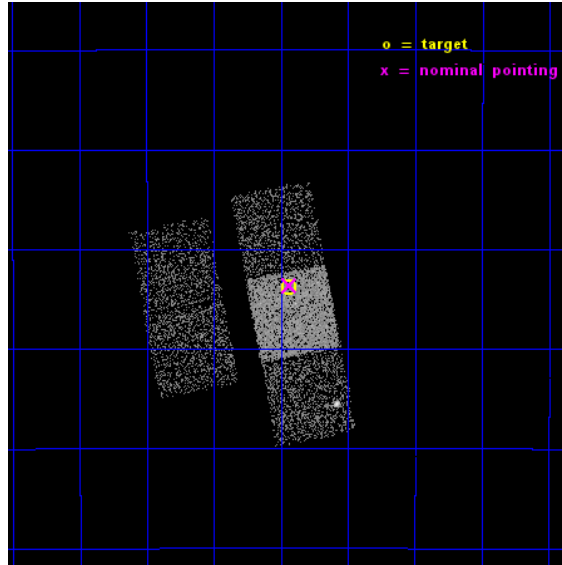
L2 Processing Date : Dec 9 2014

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# 1 Front

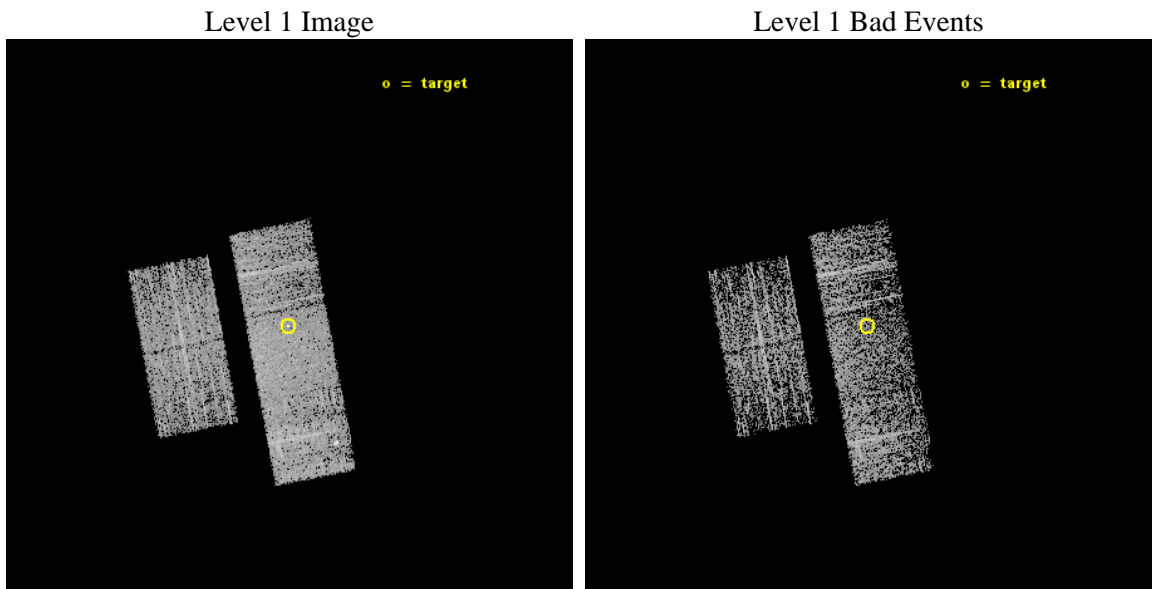
seq_num	200961	Sequence number
obs_id	16335	Observation id
title	X-rays and Disks around Upper Sco Stars	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	US 16085673-2033460	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	242.23625	Observer's specified target RA [deg]
dec_targ	-20.562778	Observer's specified target Dec [deg]
ra_nom	242.23403064948	Nominal RA [deg]
dec_nom	-20.560639431925	Nominal Dec [deg]
roll_nom	79.120472798023	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3041.1000233889	Sum of GTIs [s]
livetime	3001.365812758	Livetime [s]
ontime2	3041.1000233889	Sum of GTIs [s]
ontime3	3041.1000233889	Sum of GTIs [s]
ontime6	3041.1000233889	Sum of GTIs [s]
ontime7	3041.1000233889	Sum of GTIs [s]
ontime8	3041.1000233889	Sum of GTIs [s]
l2events	15110	Number of level 2 events



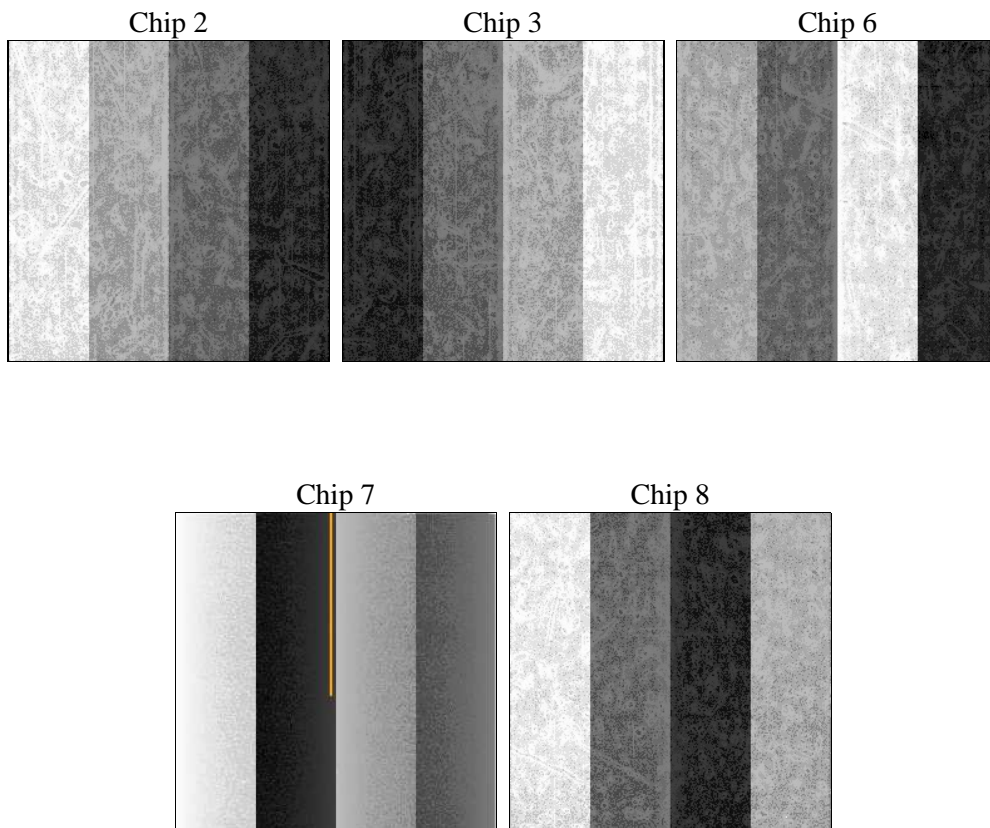
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2972.339000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	3041.1000233889	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	3041.1000233889	Sum of GTIs [s]
date	2014-12-09T21:53:36	Date and time of file creation	ontime3	3041.1000233889	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	3041.1000233889	Sum of GTIs [s]
			ontime7	3041.1000233889	Sum of GTIs [s]
			ontime8	3041.1000233889	Sum of GTIs [s]
			l1events	82928	Number of level 1 events

### 2.1.4 Events

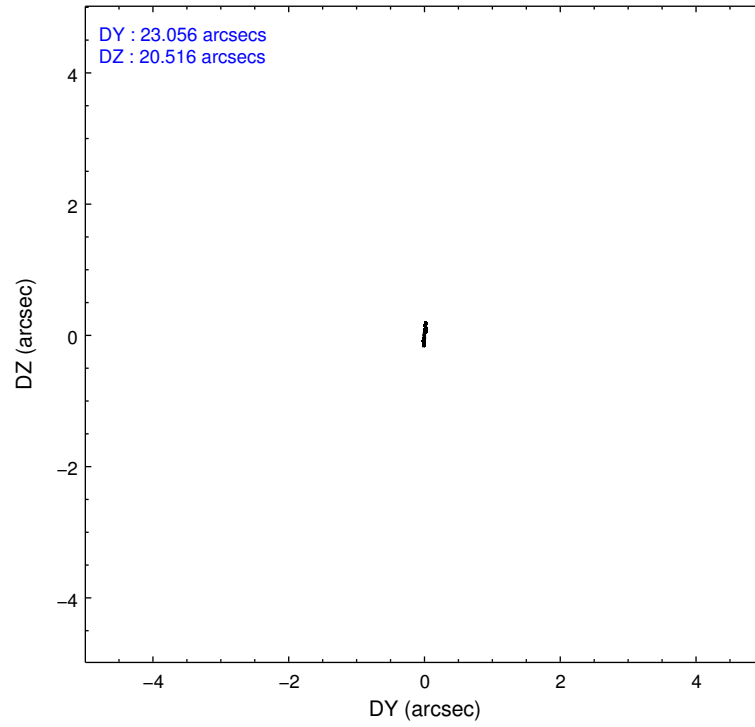
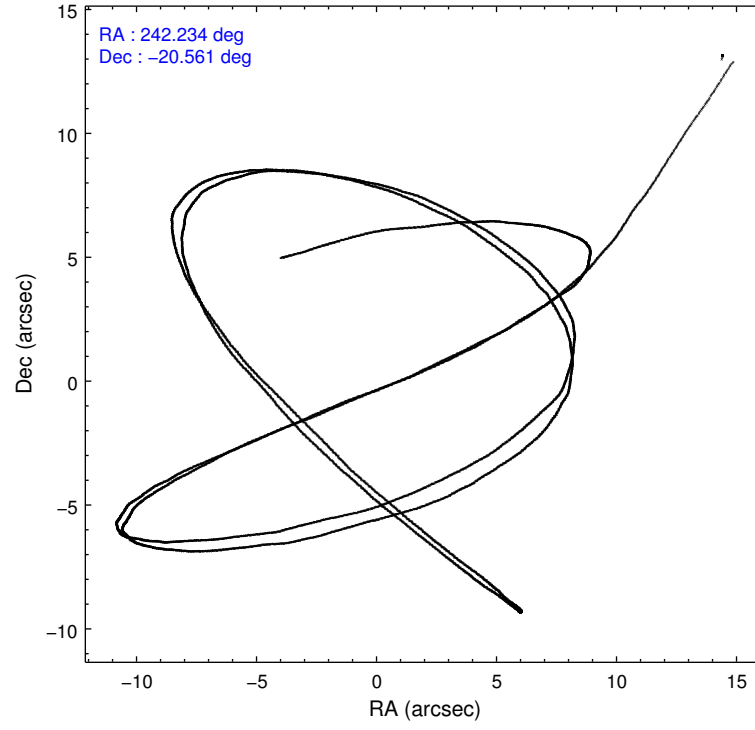
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	14024	13426	14727	20122	20629
rejected events	12415	11825	13066	11250	14153
rejected %	88%	88%	88%	55%	68%

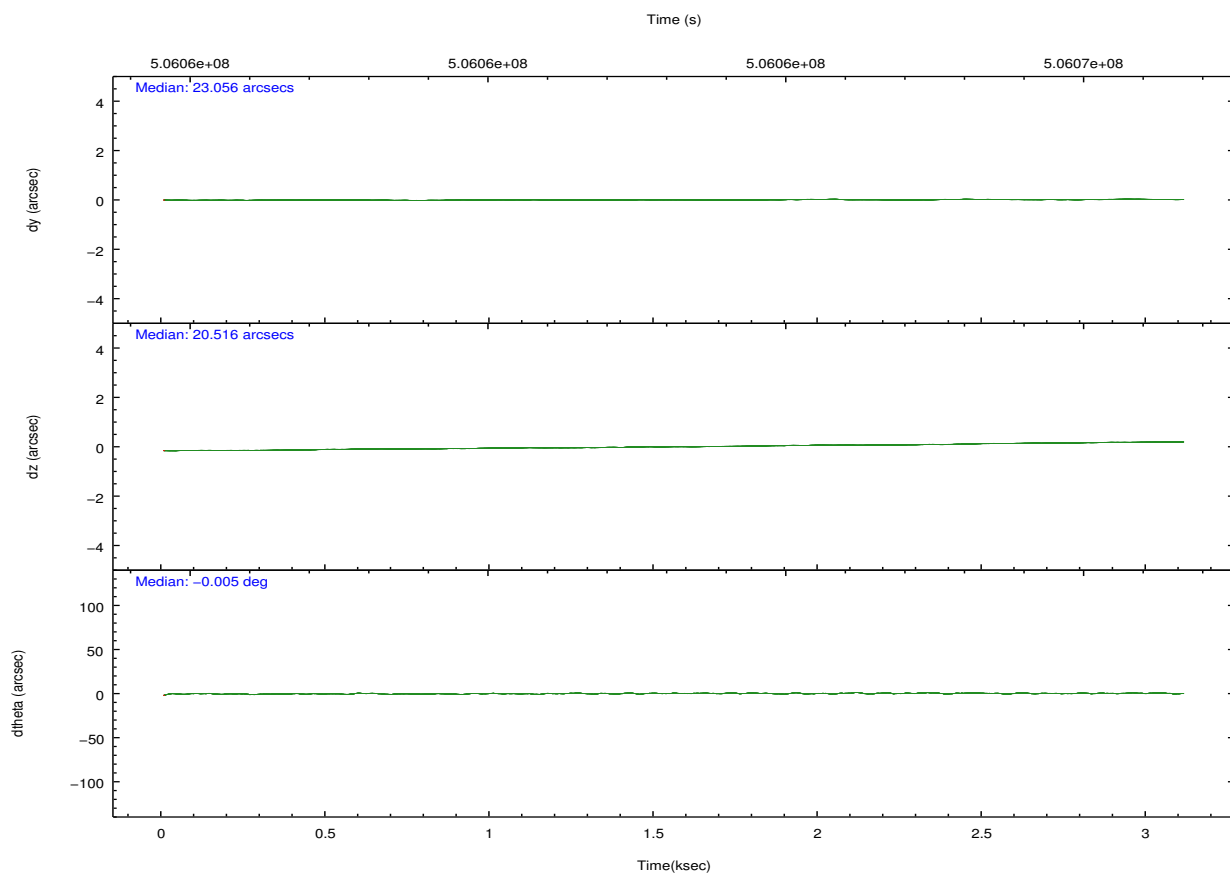
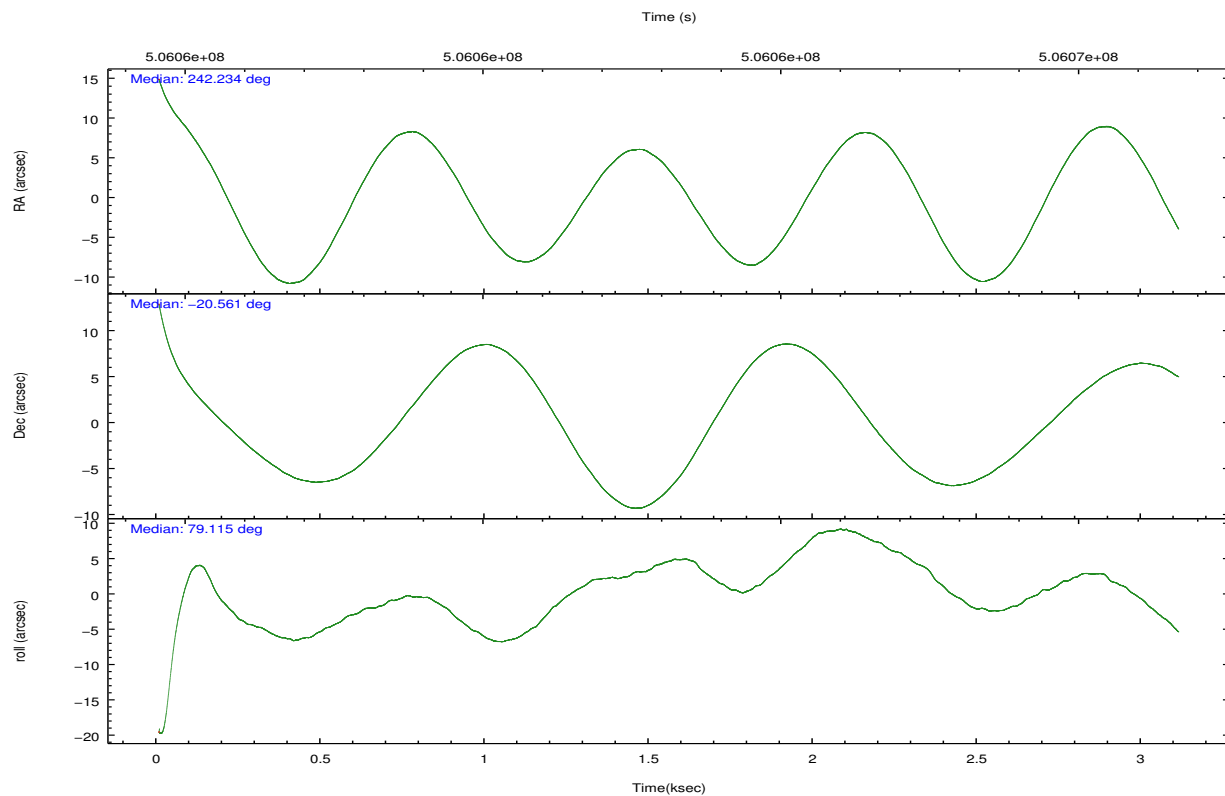
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	554	569	613	888	2135
	3%	4%	4%	4%	10%
grade 1 events	6	7	8	27	20
	0%	0%	0%	0%	0%
grade 2 events	391	323	354	1848	1256
	2%	2%	2%	9%	6%
grade 3 events	173	182	155	747	795
	1%	1%	1%	3%	3%
grade 4 events	168	182	136	715	716
	1%	1%	0%	3%	3%
grade 5 events	591	809	766	2080	1105
	4%	6%	5%	10%	5%
grade 6 events	328	346	406	4687	1577
	2%	2%	2%	23%	7%
grade 7 events	11813	11008	12289	9130	13025
	84%	81%	83%	45%	63%

## 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	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	242.243846	242.2340306494789	Subarray requested	NONE	NONE
[deg] Pointing Dec	-20.586411	-20.56063943192494	Alternating exposures requested	N	N
[deg] Pointing Roll	78.967386	79.12047279802276	[s] Primary exposure time	0.000000	3.1
[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)	506063216.184000	506061956.00667			
Observation start date	2014-01-14T05:05:49	2014-01-14T04:45:56			
[s] Observation end time (MET)	506066189.184000	506066414.75692			
Observation end date	2014-01-14T05:55:22	2014-01-14T06:00:14			
Read mode	TIMED	TIMED			

## 2.3 Aspect





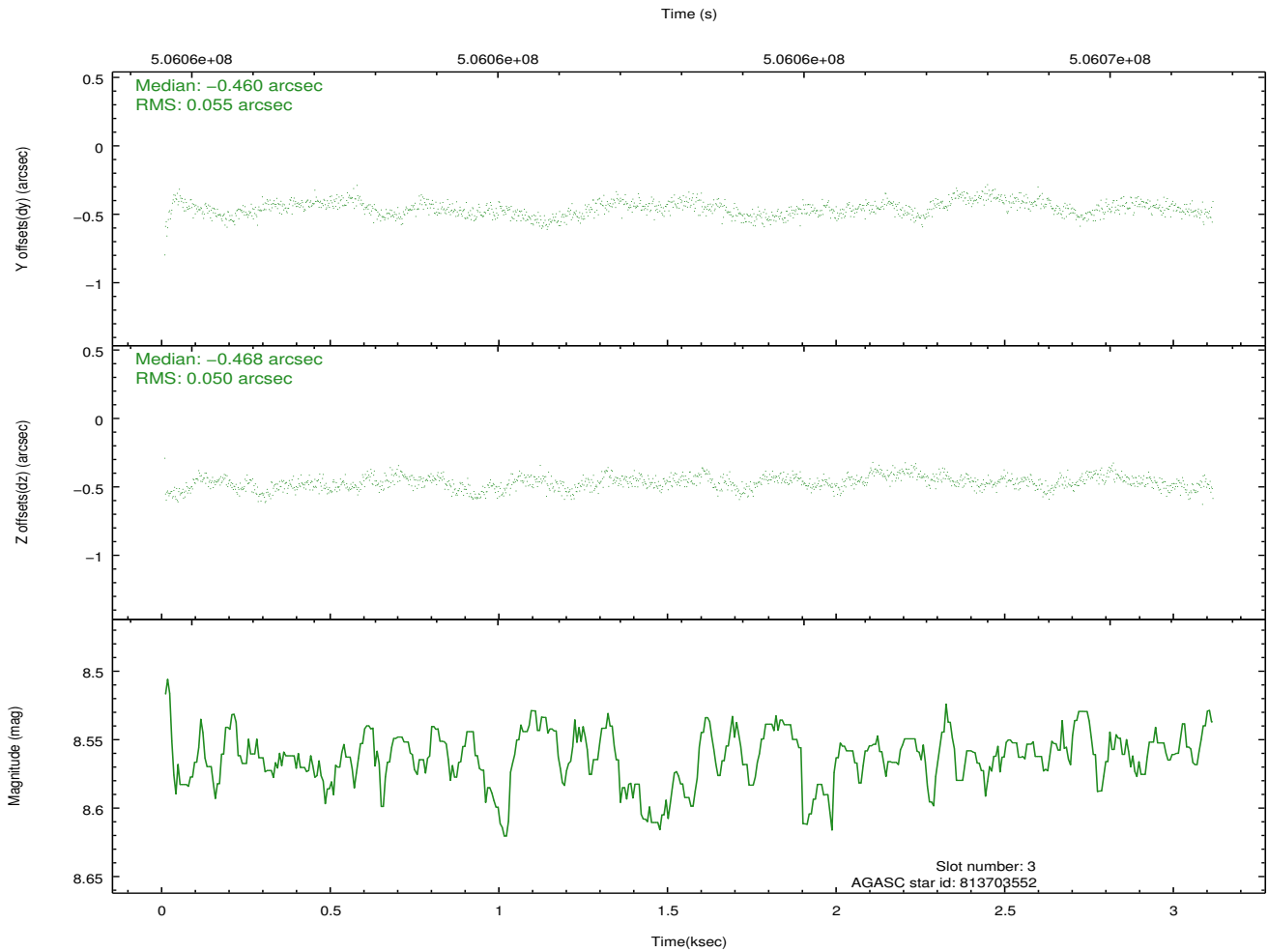
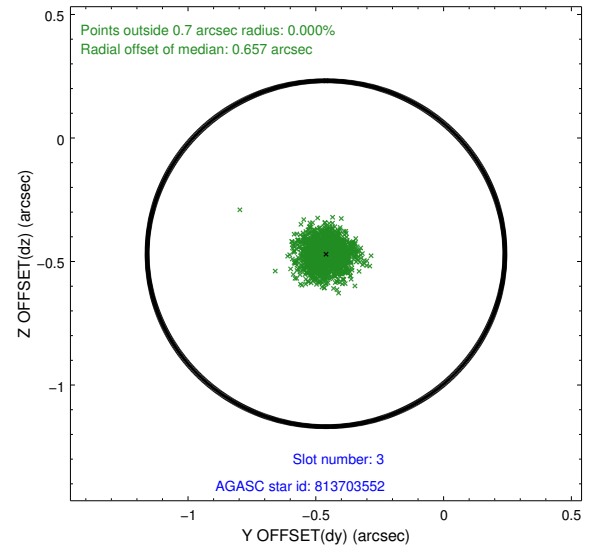
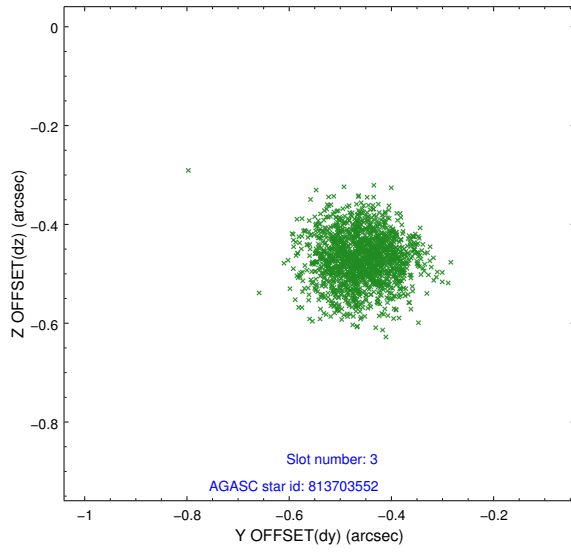
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	759	-0.137	-0.023	0.008	0.013	0.000000	0.000000	-776.36	-1742.08
1	FID		ACIS-S-4	7.11	759	0.327	0.072	0.006	0.011	0.000000	0.000000	2136.40	164.40
2	FID		ACIS-S-5	7.14	758	-0.222	-0.041	0.008	0.015	0.000000	0.000000	-1826.69	160.24
3	GUIDE	used	813703552	8.56	1516	-0.460	-0.468	0.080	0.125	241.959292	-19.989482	1923.49	1356.17
4	GUIDE	used	814364208	9.06	1516	0.263	0.335	0.106	0.173	242.662956	-20.702551	-140.52	-1464.00
5	GUIDE	used	814365144	9.04	1516	0.477	-0.140	0.096	0.155	242.047612	-20.821491	-957.66	485.90
6	GUIDE	used	813829504	9.16	1517	-0.462	0.045	0.130	0.224	242.725539	-20.011904	2338.40	-1203.00
7	GUIDE	used	813826304	8.18	1515	0.189	0.234	0.075	0.119	242.739718	-20.398996	981.54	-1513.49

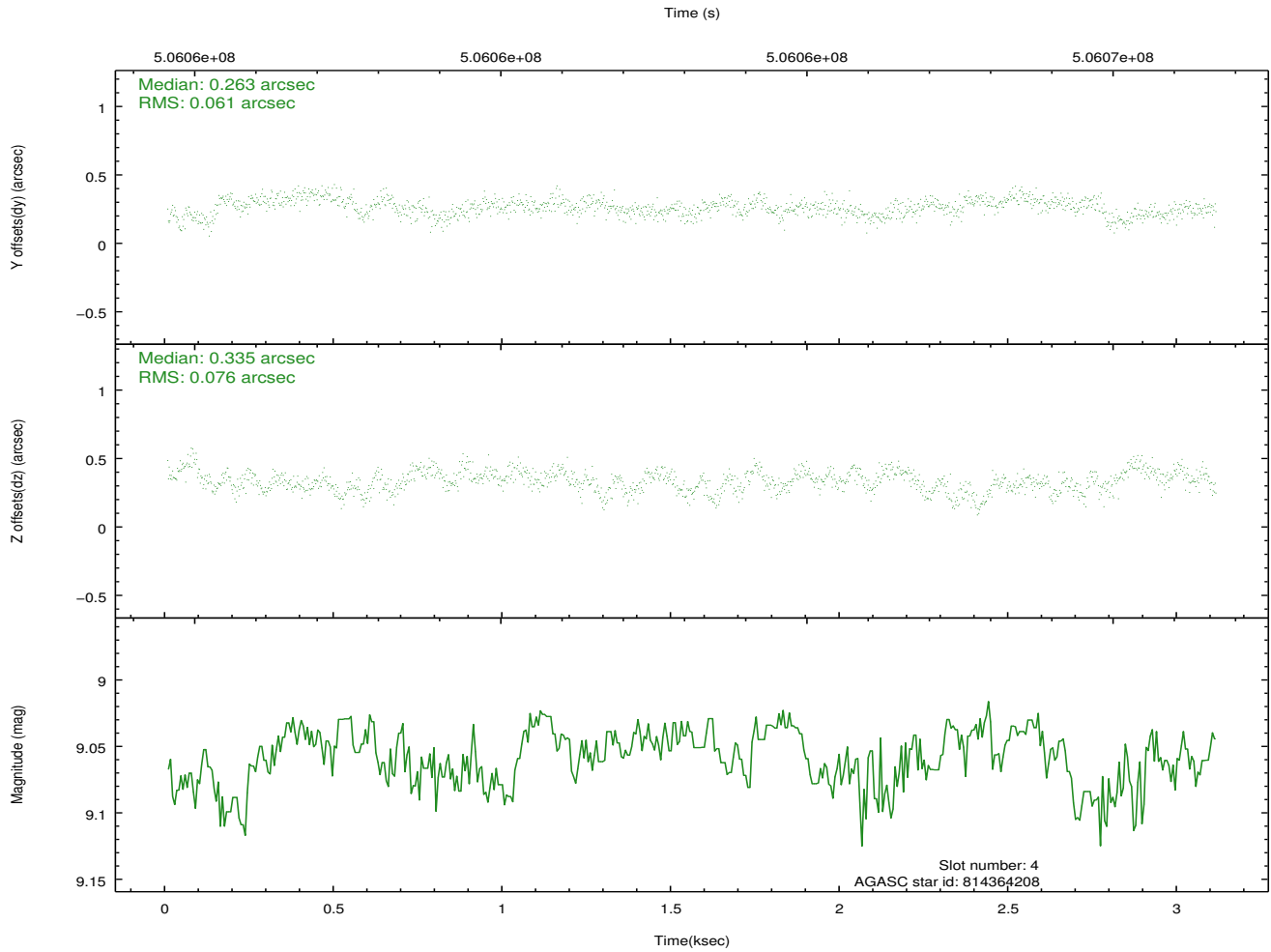
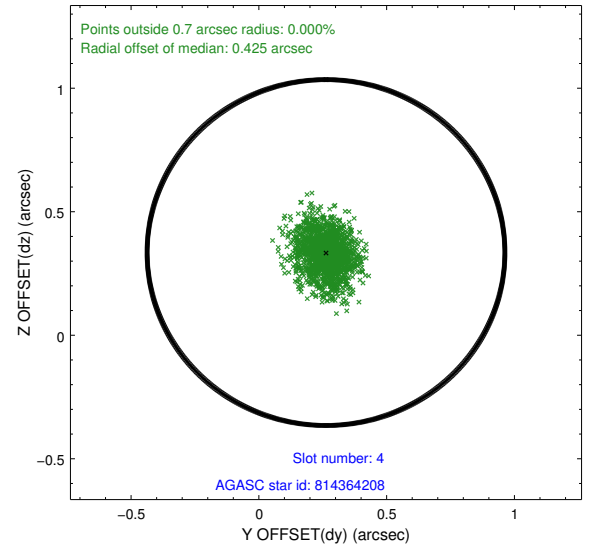
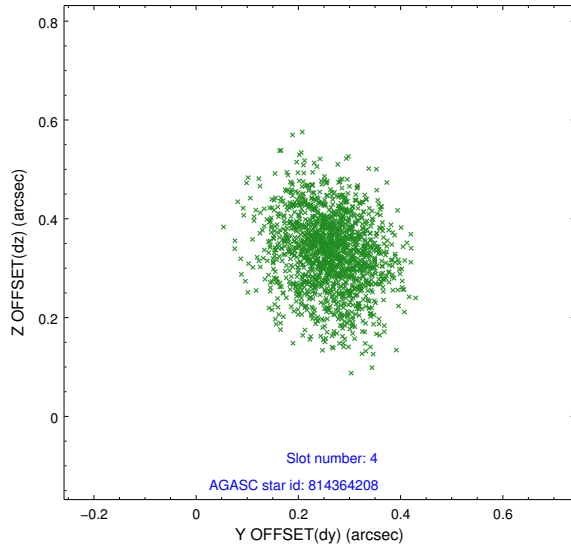


## 2.4 Star Slots

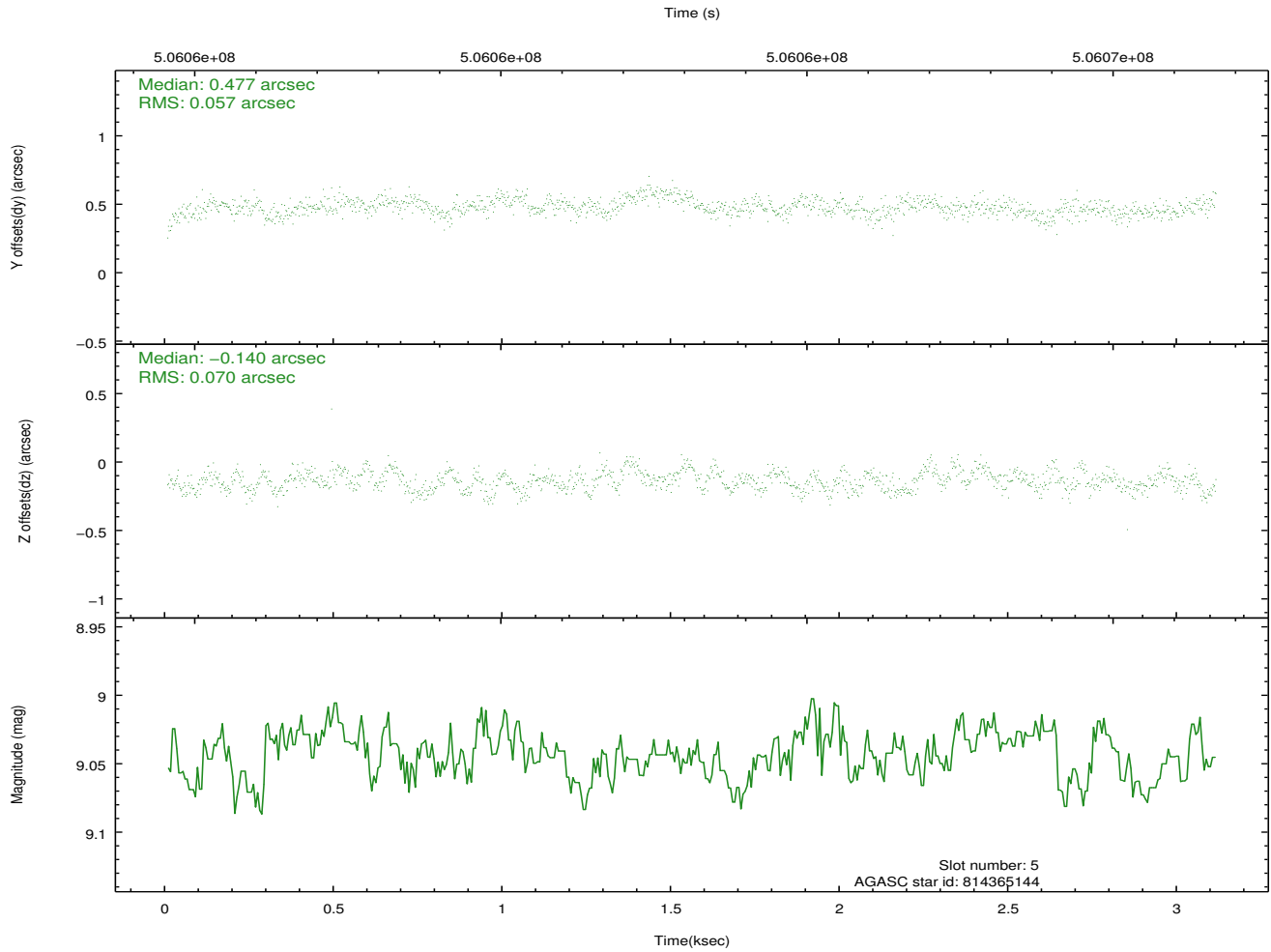
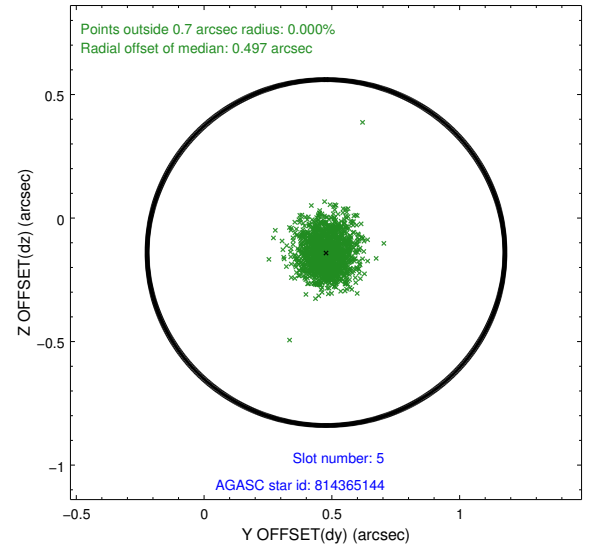
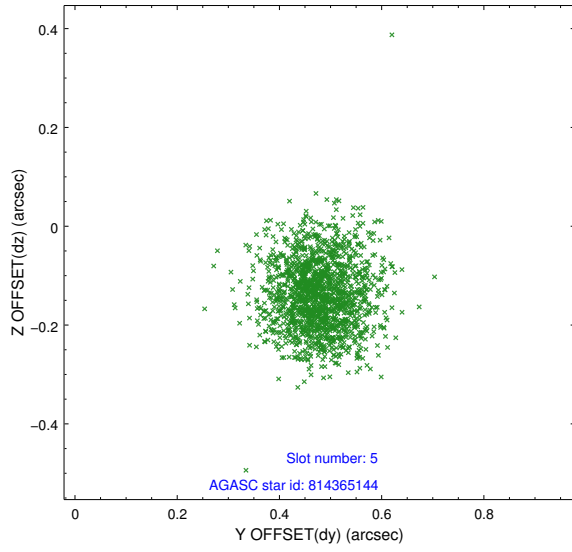
### 2.4.1 Slot 3



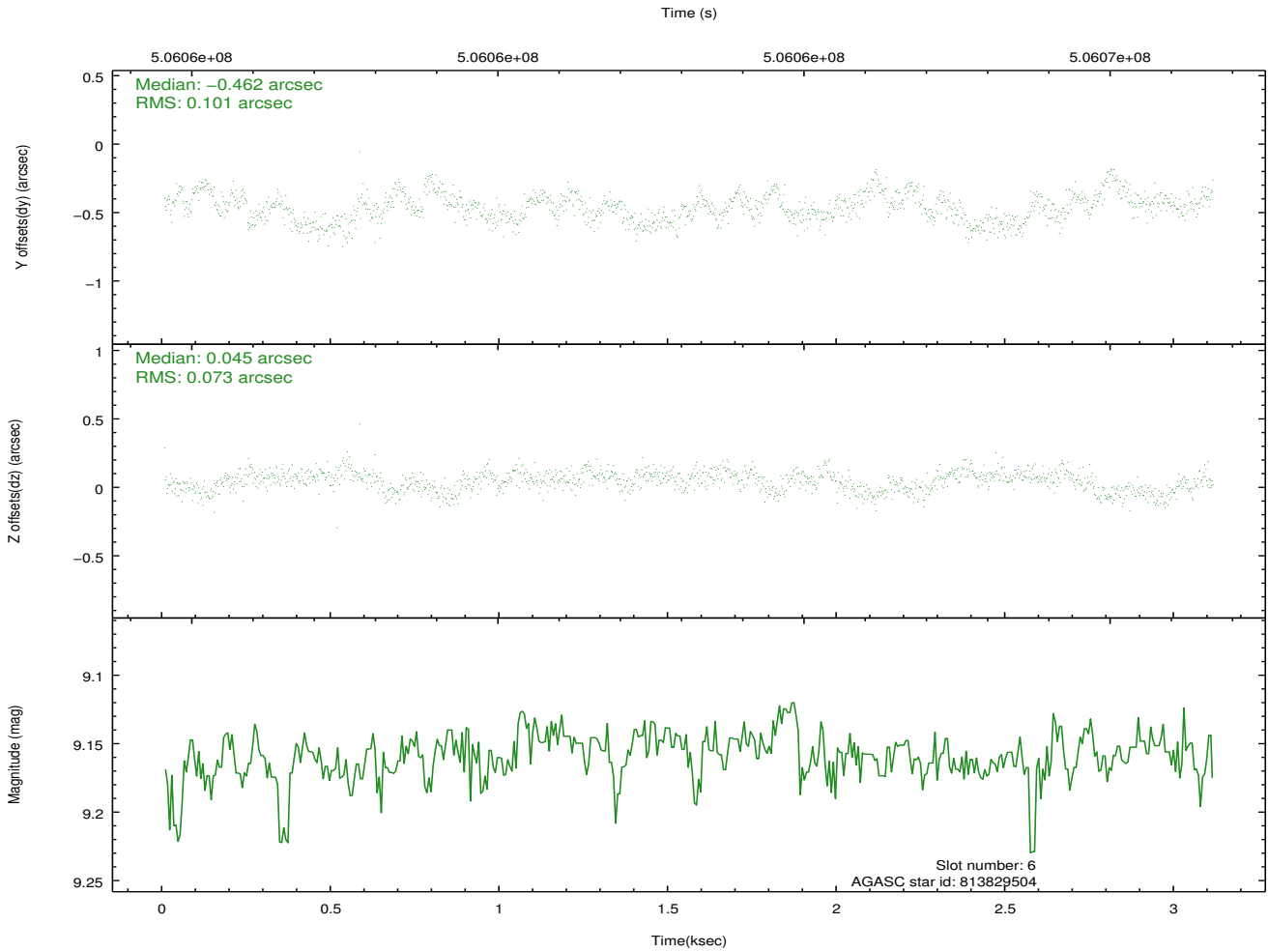
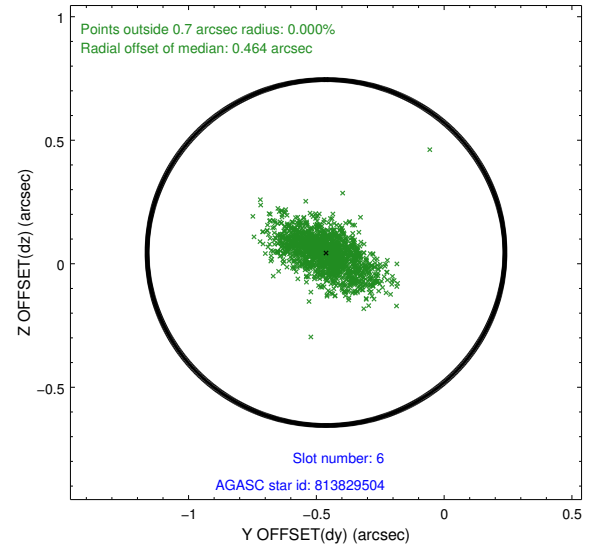
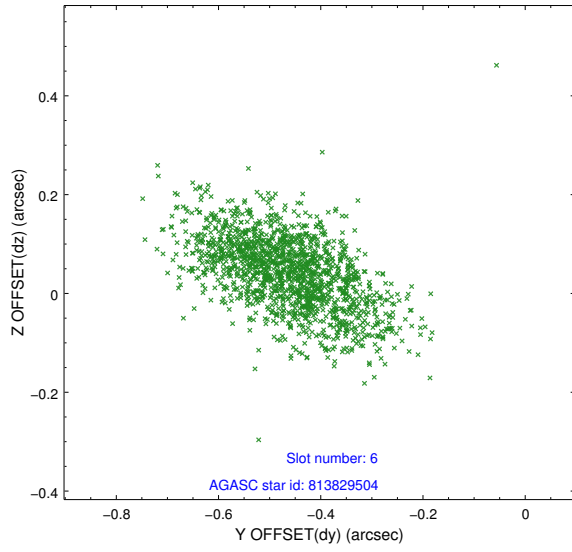
## 2.4.2 Slot 4



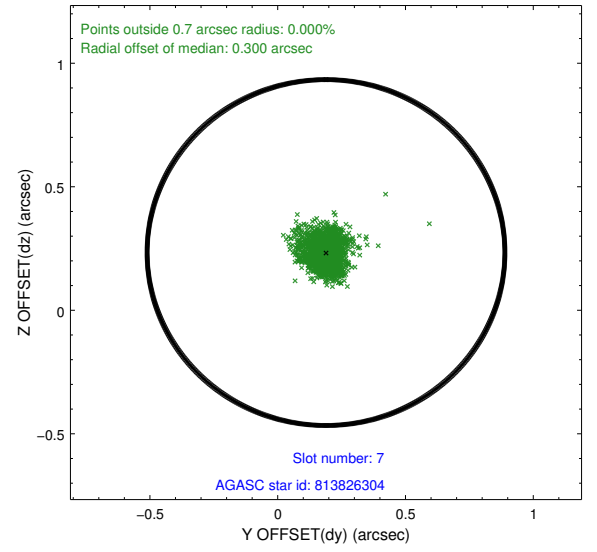
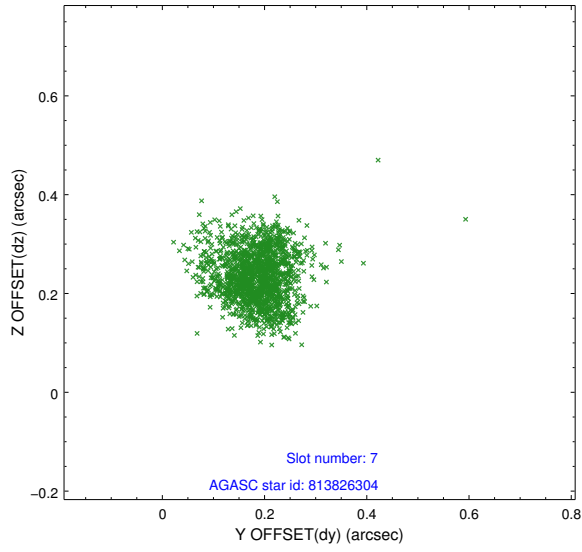
### 2.4.3 Slot 5



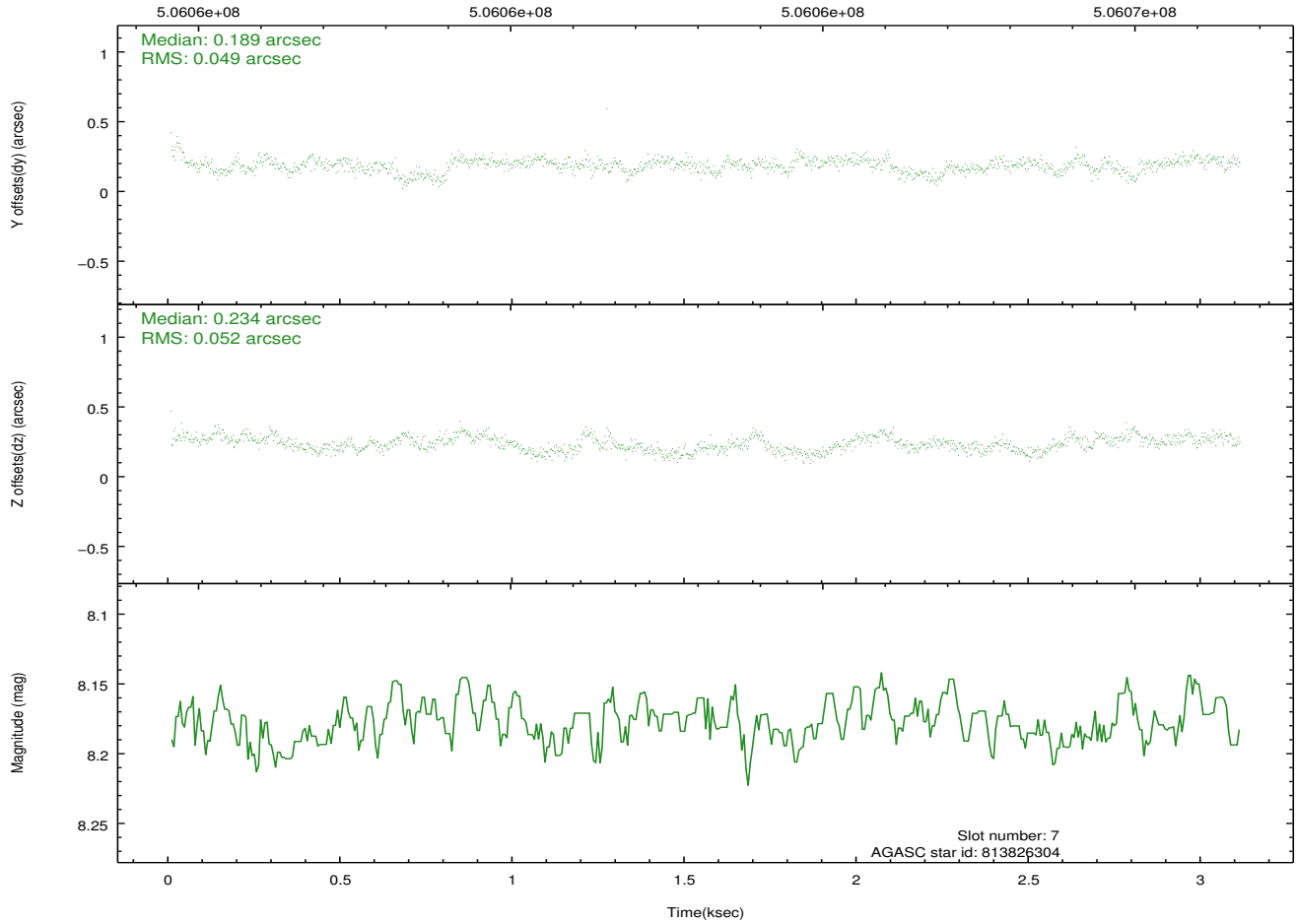
## 2.4.4 Slot 6



## 2.4.5 Slot 7

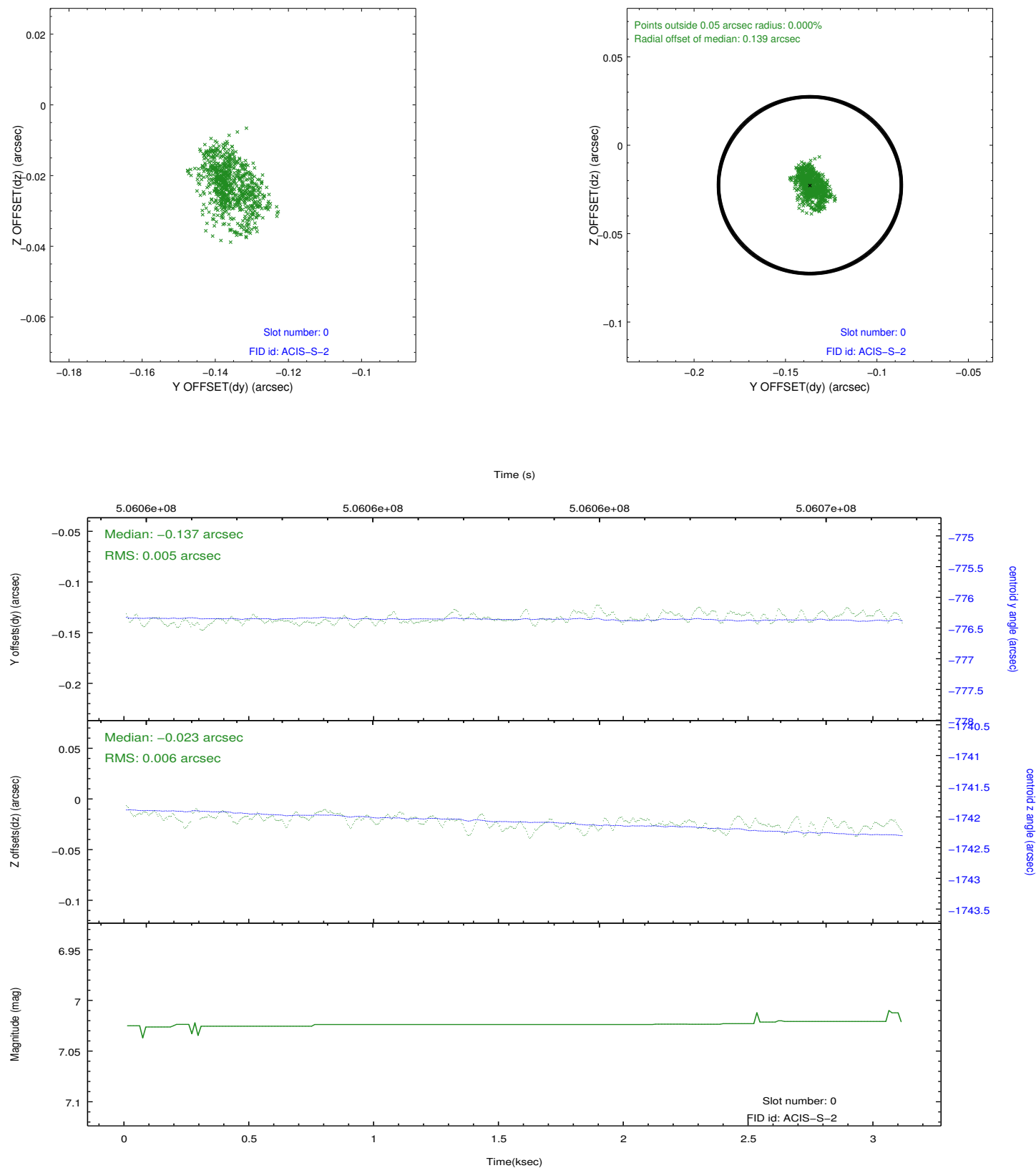


Time (s)

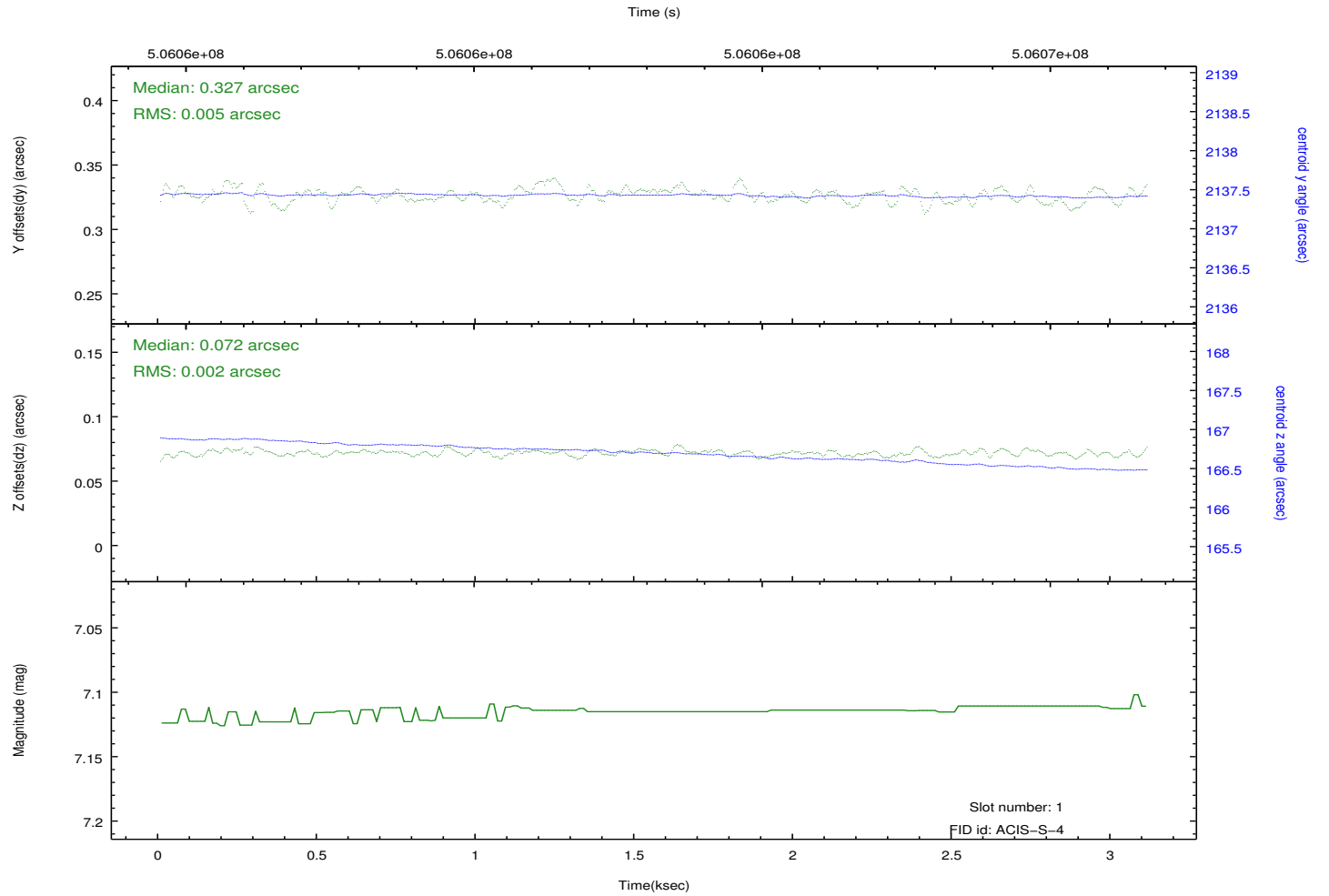
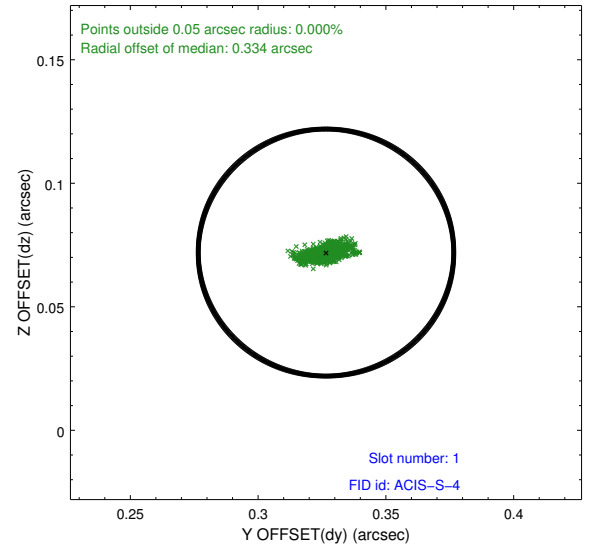
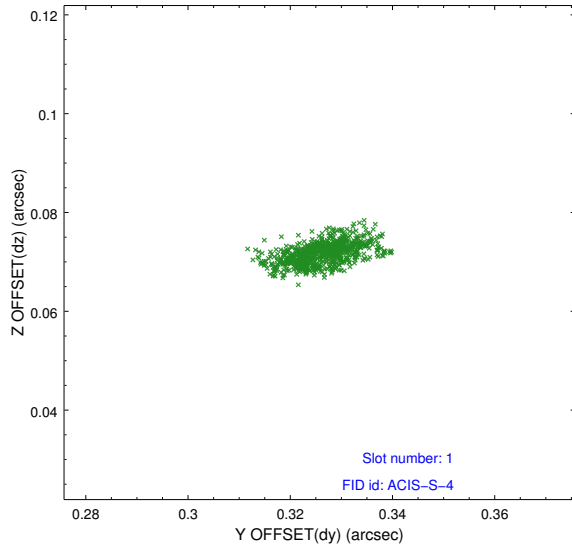


## 2.5 FID Slots

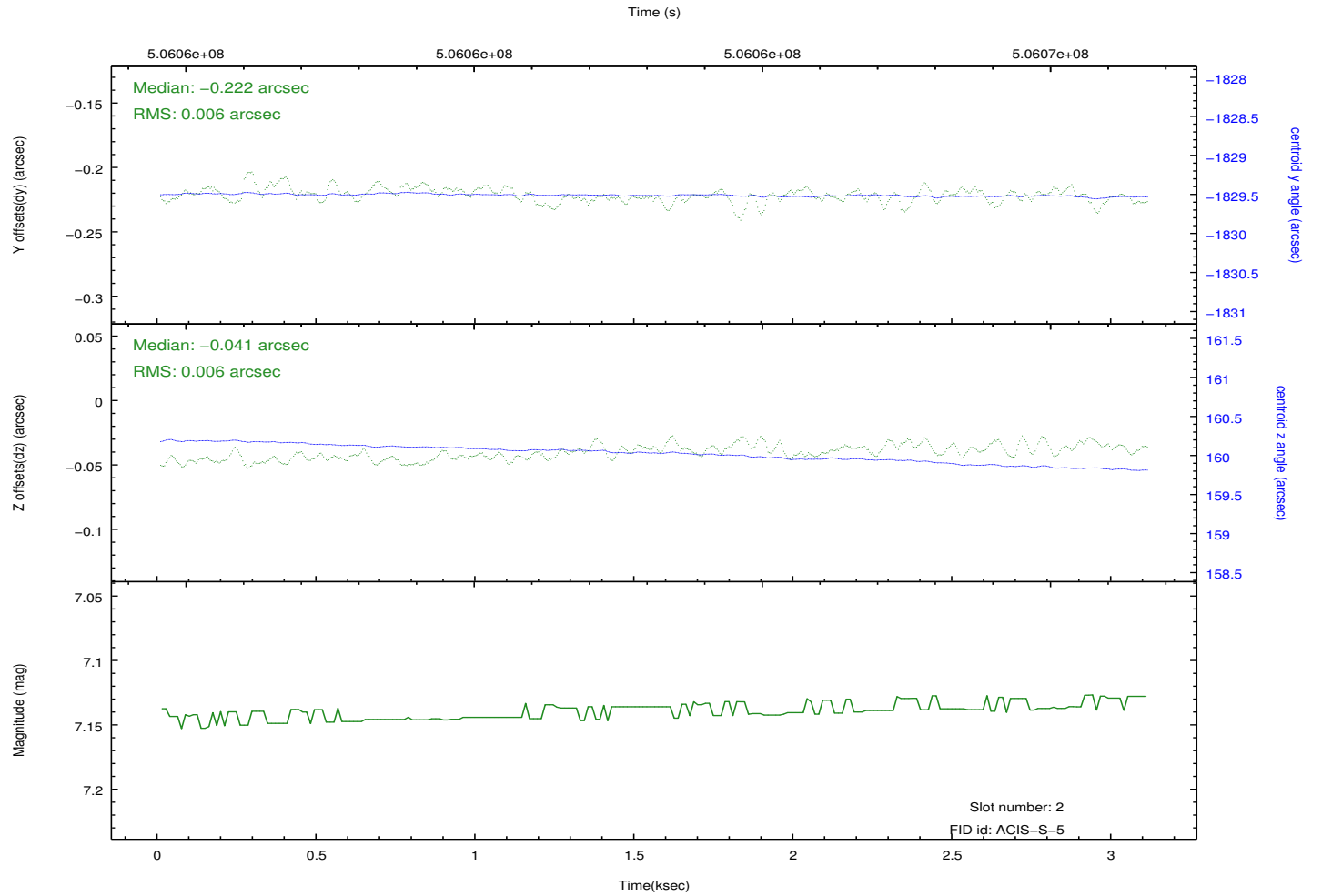
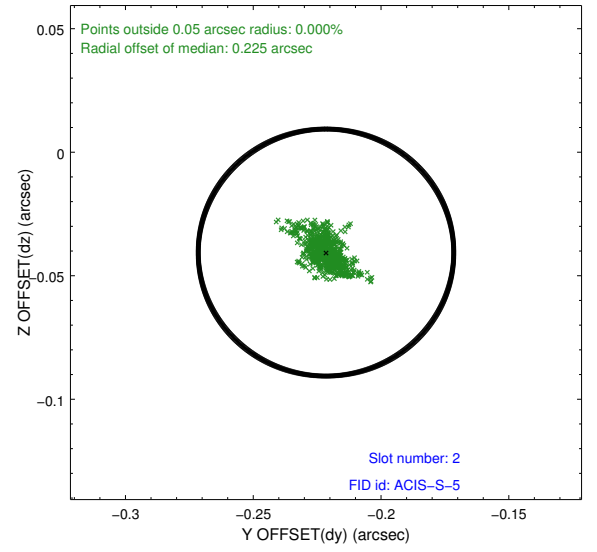
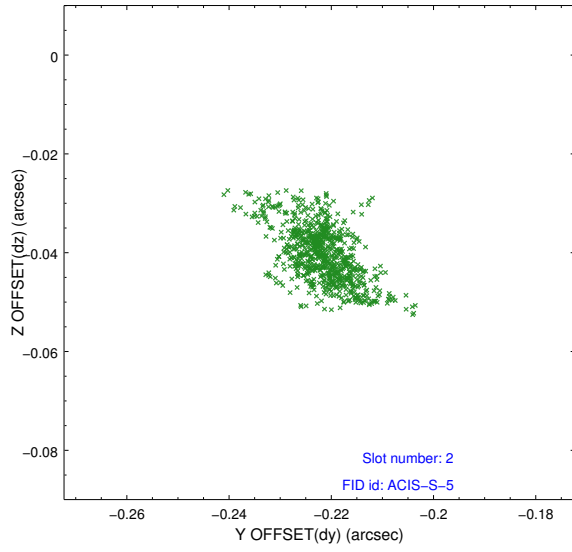
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2





# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.0411000233889

## 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.