

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 14625 - L2 Version 2  
Chandra X-Ray Center

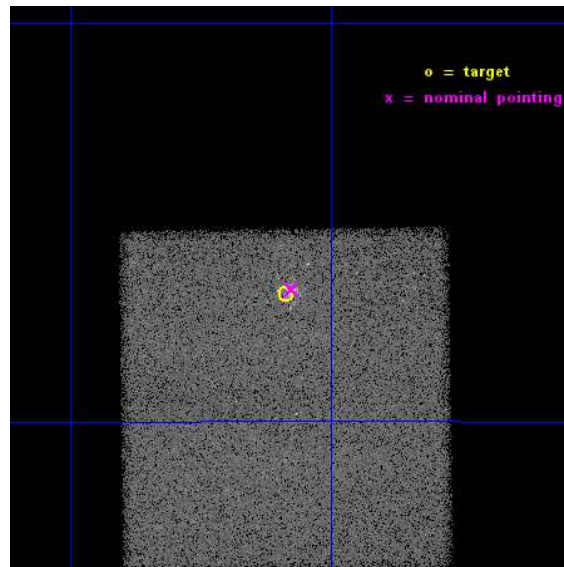
L2 Processing Date : Dec 1 2014

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# 1 Front

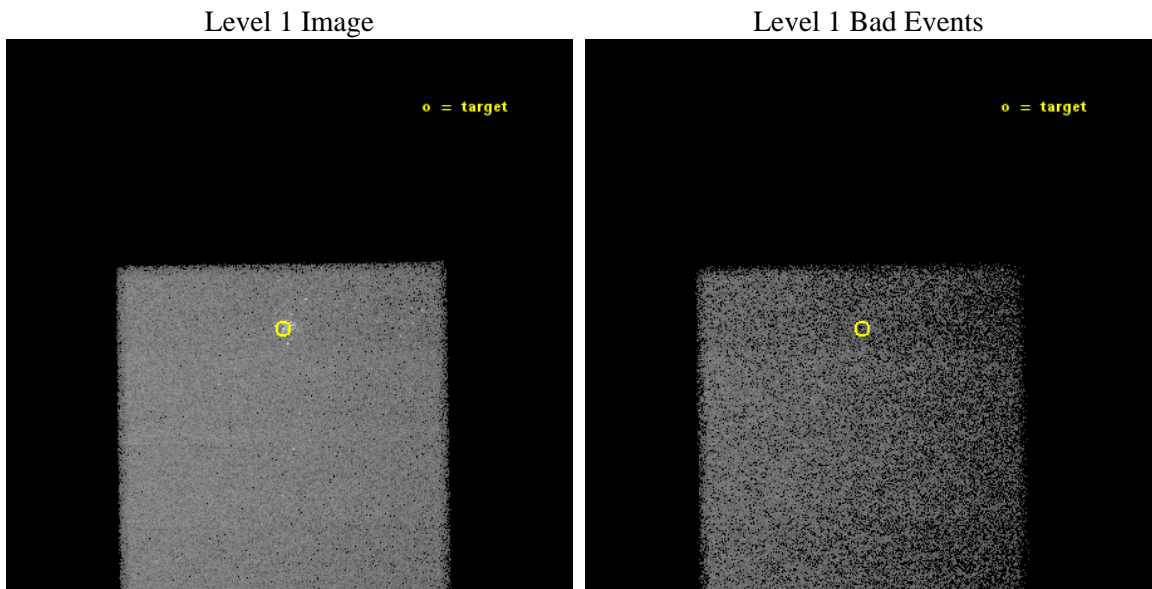
seq_num	401458	Sequence number
obs_id	14625	Observation id
title	Observations of a cooling neutron star crust in Terzan 5	Proposal
observer	Dr Nathalie Degenaar	Principal investigator
object	Terzan 5	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.021667	Observer's specified target RA [deg]
dec_targ	-24.779806	Observer's specified target Dec [deg]
ra_nom	267.01889158014	Nominal RA [deg]
dec_nom	-24.778144701313	Nominal Dec [deg]
roll_nom	89.155462353156	Nominal Roll [deg]
revision	2	Processing version of data
ontime	49875.0	Sum of GTIs [s]
livetime	49201.917764975	Livetime [s]
ontime7	49875.0	Sum of GTIs [s]
l2events	167703	Number of level 2 events



## 2 OBI

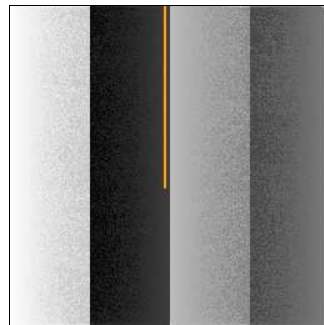
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	49784.835000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	49875.0	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime7	49875.0	Sum of GTIs [s]
date	2014-12-01T22:36:41	Date and time of file creation	l1events	371615	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

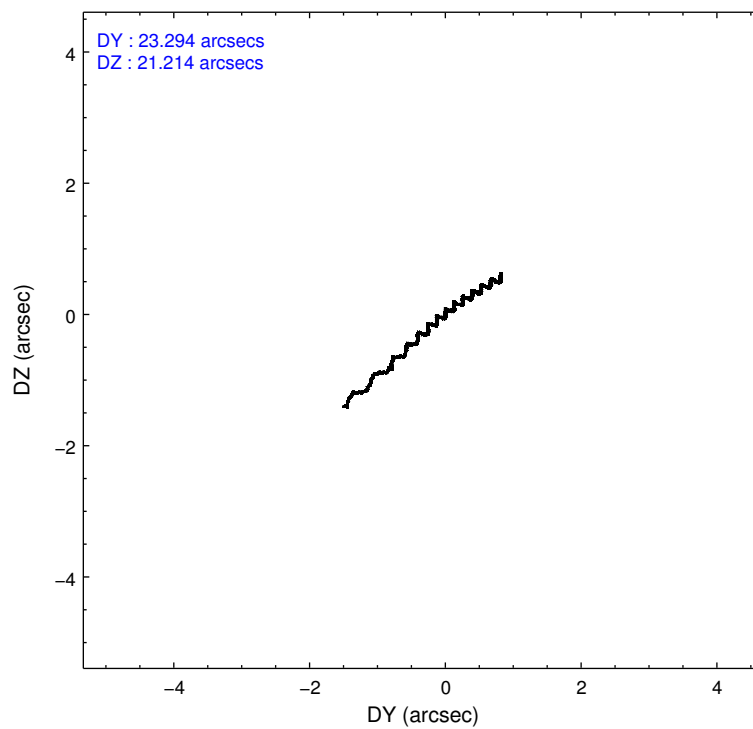
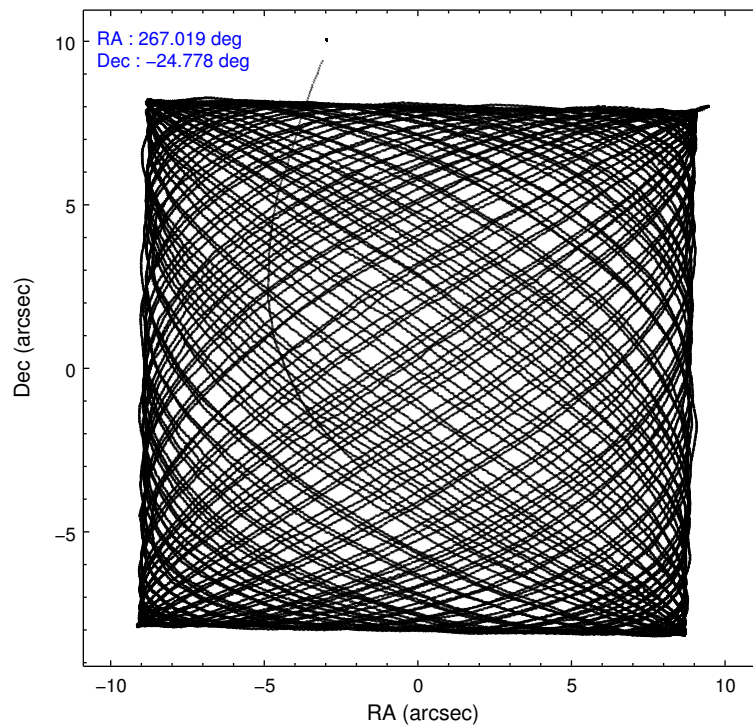
	<b>ccd 7</b>
level 1 events	371615
rejected events	199630
rejected %	53%

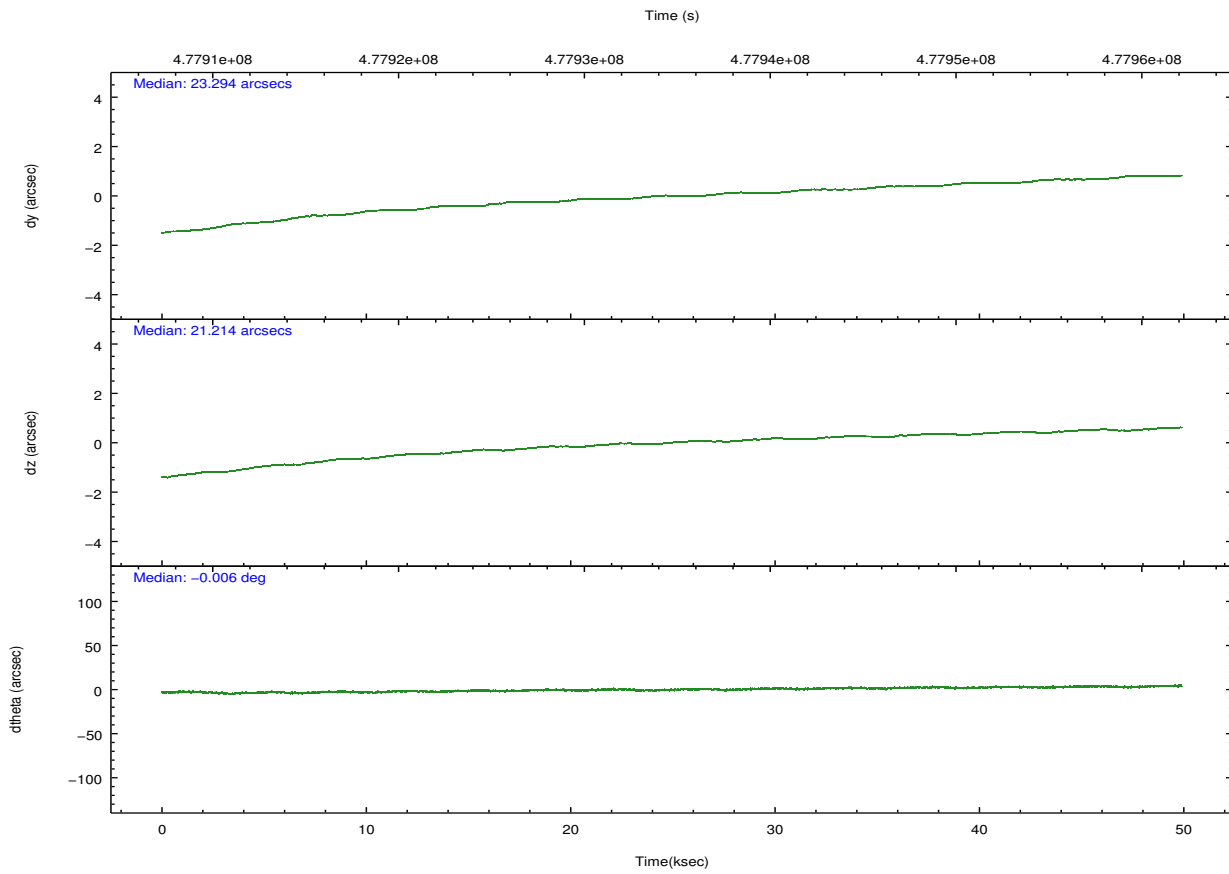
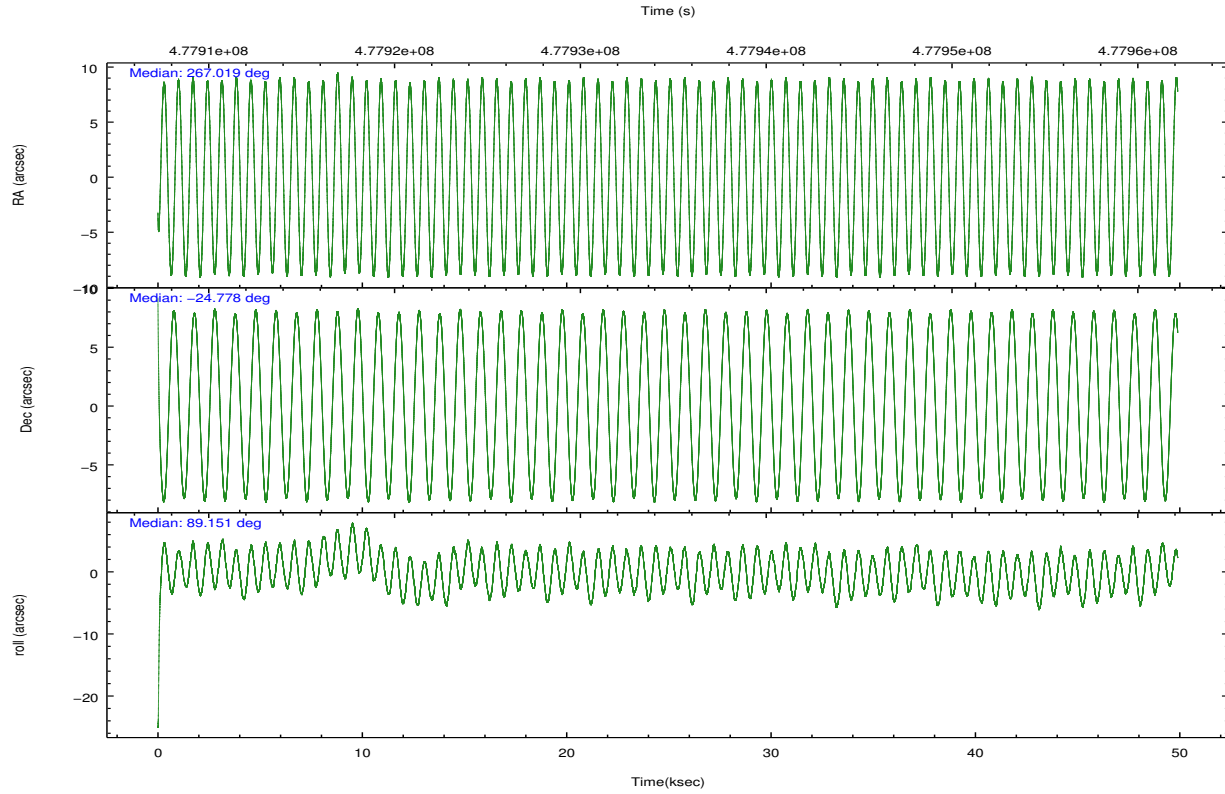
	<b>ccd 7</b>
grade 0 events	16857
	4%
grade 1 events	438
	0%
grade 2 events	35953
	9%
grade 3 events	15371
	4%
grade 4 events	15299
	4%
grade 5 events	37904
	10%
grade 6 events	88524
	23%
grade 7 events	161269
	43%

## 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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	267.033910	267.0188915801397	Subarray requested	NONE	NONE
[deg] Pointing Dec	-24.801830	-24.77814470131324	Alternating exposures requested	N	N
[deg] Pointing Roll	89.005134	89.15546235315604	[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	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	477909872.184000	477908619.26035			
Observation start date	2013-02-22T08:43:25	2013-02-22T08:23:39			
[s] Observation end time (MET)	477959657.184000	477959883.10062			
Observation end date	2013-02-22T22:33:10	2013-02-22T22:38:03			
Read mode	TIMED	TIMED			

## 2.3 Aspect





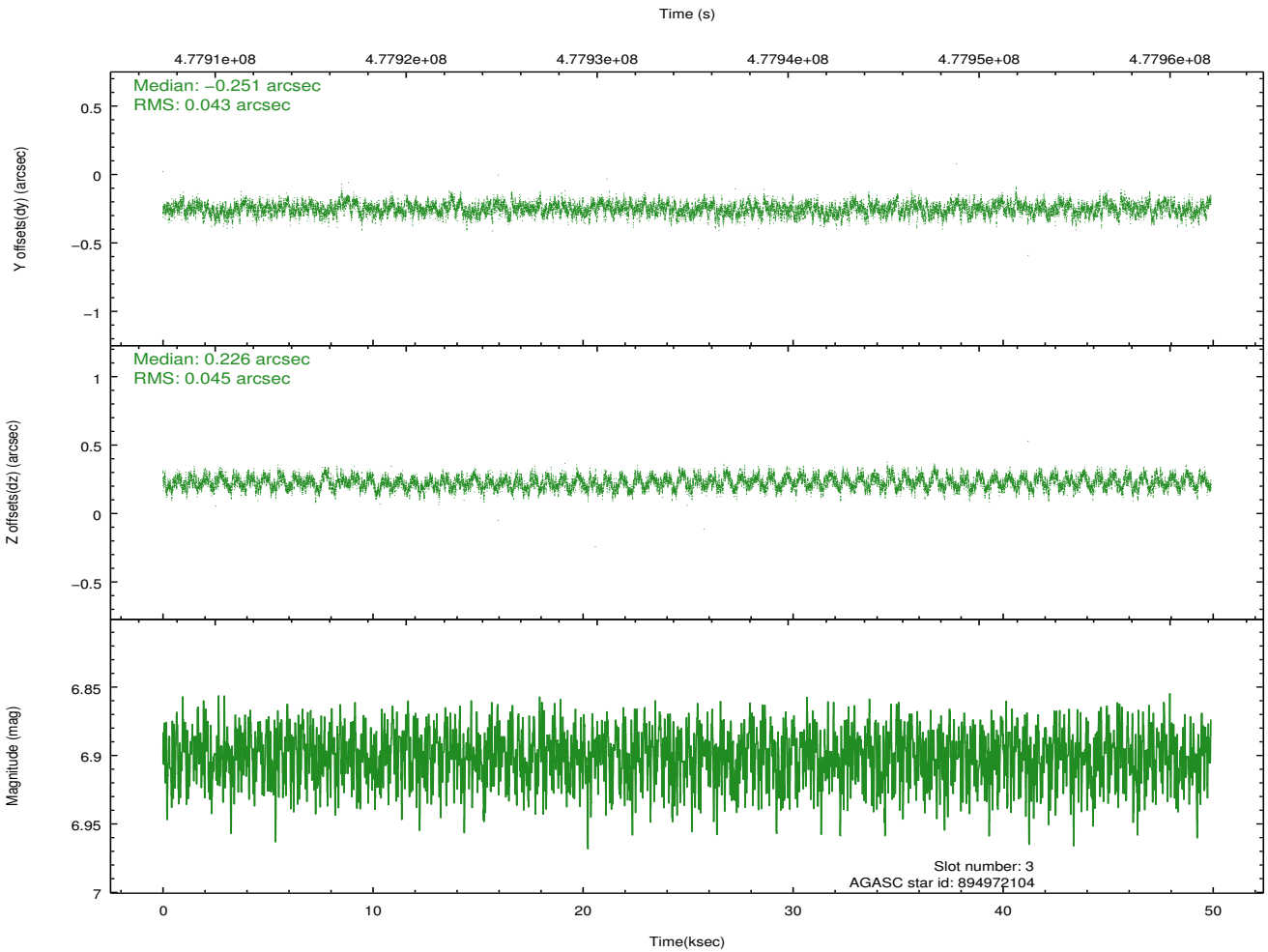
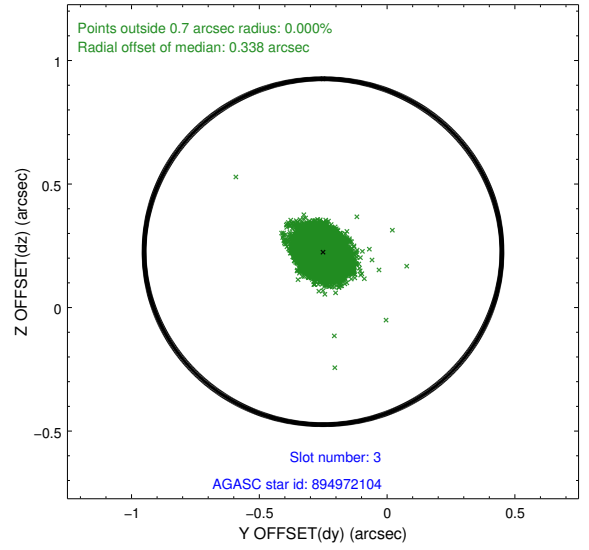
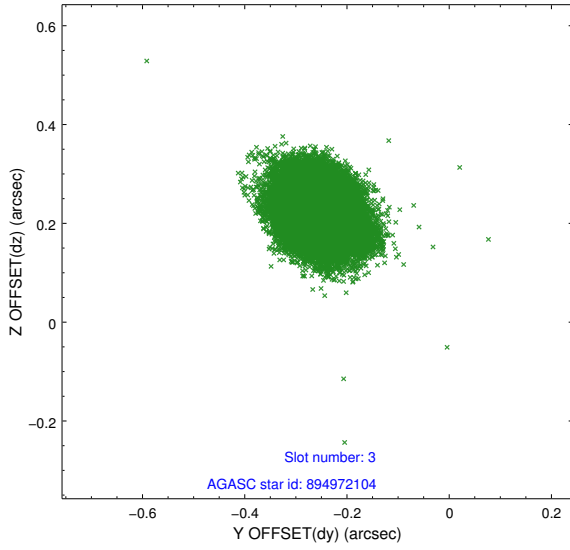
### Slot Statistics

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	12170	0.096	-0.090	0.015	0.039	0.000000	0.000000	919.76	-1738.29
1	FID		ACIS-S-5	7.04	12170	-0.214	0.040	0.015	0.067	0.000000	0.000000	-1829.57	159.38
2	FID		ACIS-S-6	7.13	12171	0.095	0.062	0.018	0.049	0.000000	0.000000	385.30	803.36
3	GUIDE	used	894972104	6.90	24338	-0.251	0.226	0.066	0.104	267.489380	-24.207054	2163.98	-1456.97
4	GUIDE	used	895486672	9.01	24280	0.492	0.502	0.095	0.150	267.522168	-25.216127	-1466.15	-1615.20
5	GUIDE	used	895488888	8.55	24332	-0.017	-0.035	0.071	0.113	266.751949	-24.913497	-418.83	913.49
6	GUIDE	used	895489704	8.79	24325	0.283	-0.300	0.102	0.170	266.328076	-25.361339	-2060.52	2260.28
7	GUIDE	used	894973544	8.07	24338	-0.508	-0.389	0.085	0.134	266.605572	-24.141151	2350.71	1448.54

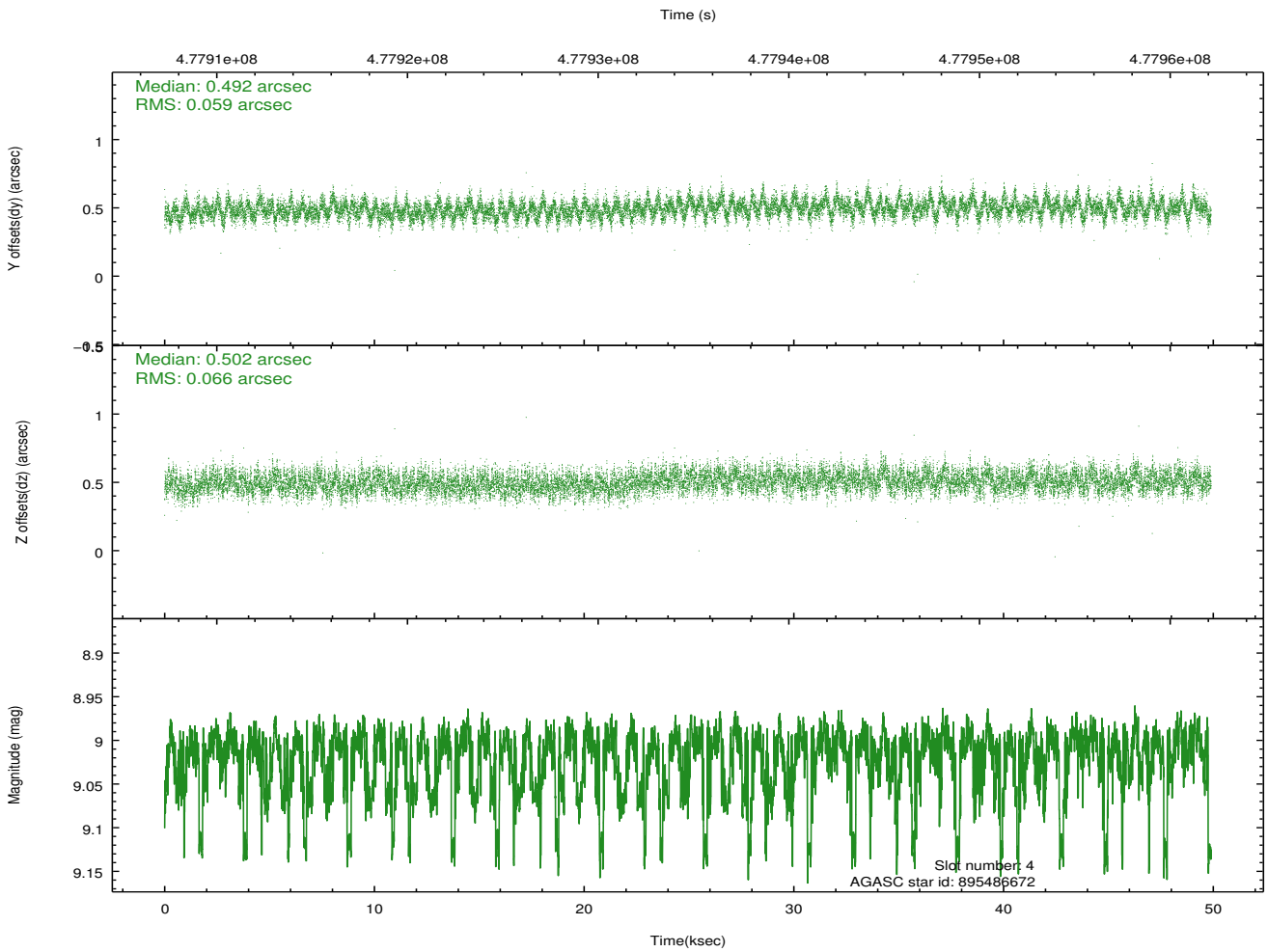
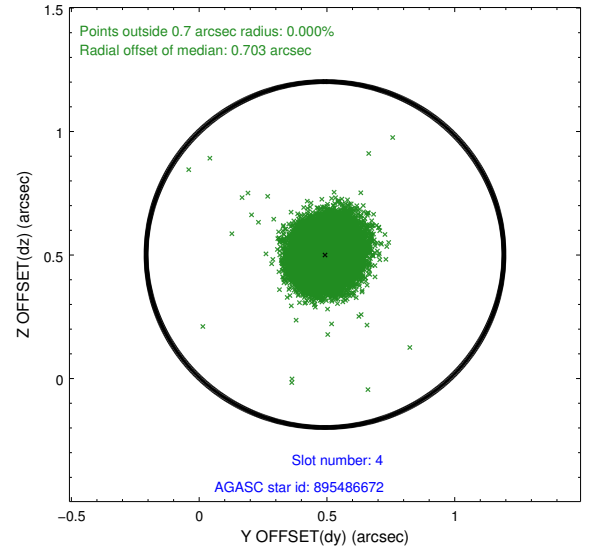
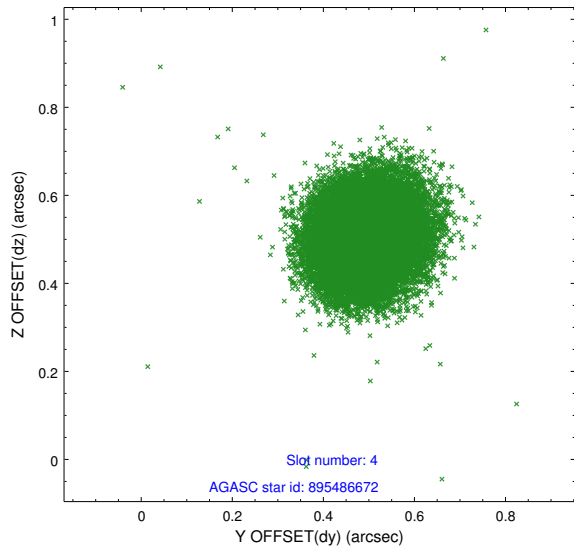
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## 2.4 Star Slots

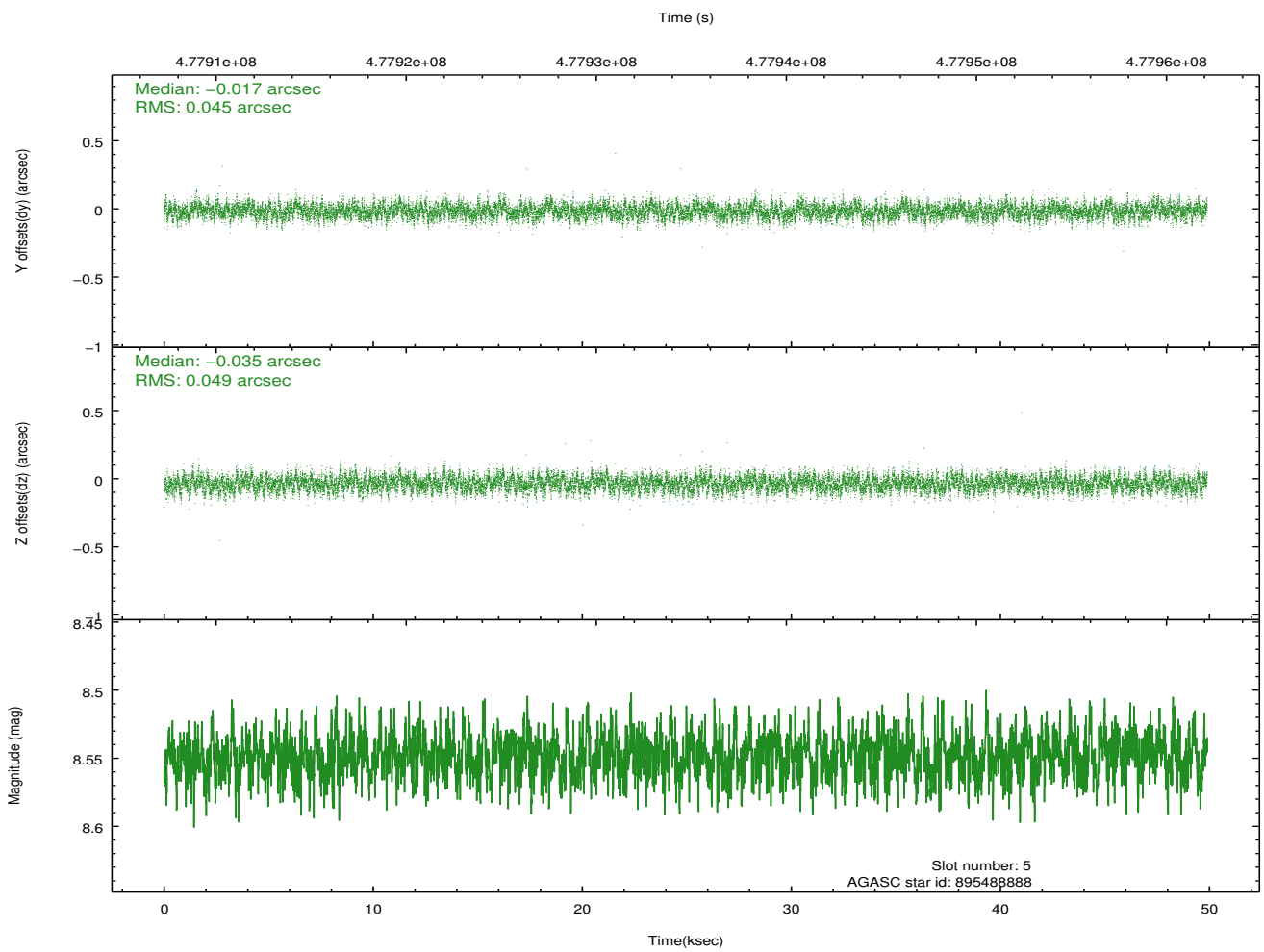
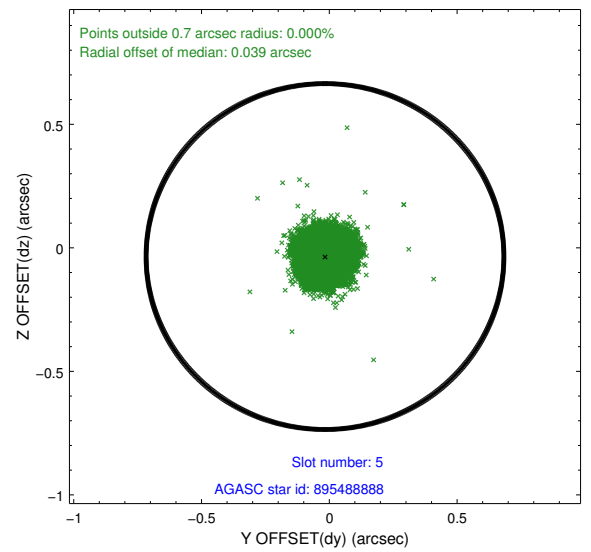
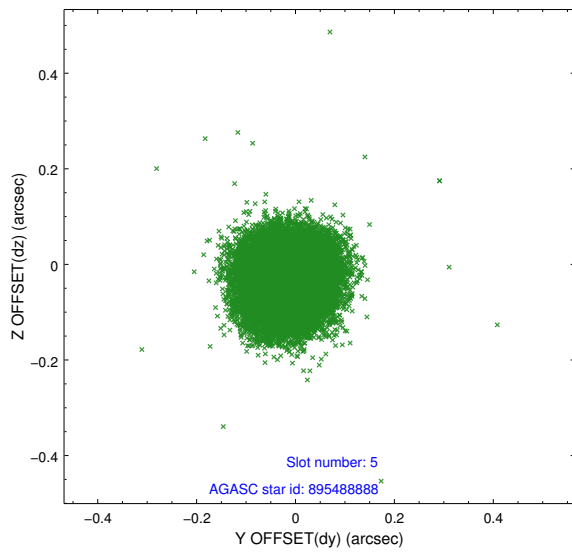
### 2.4.1 Slot 3



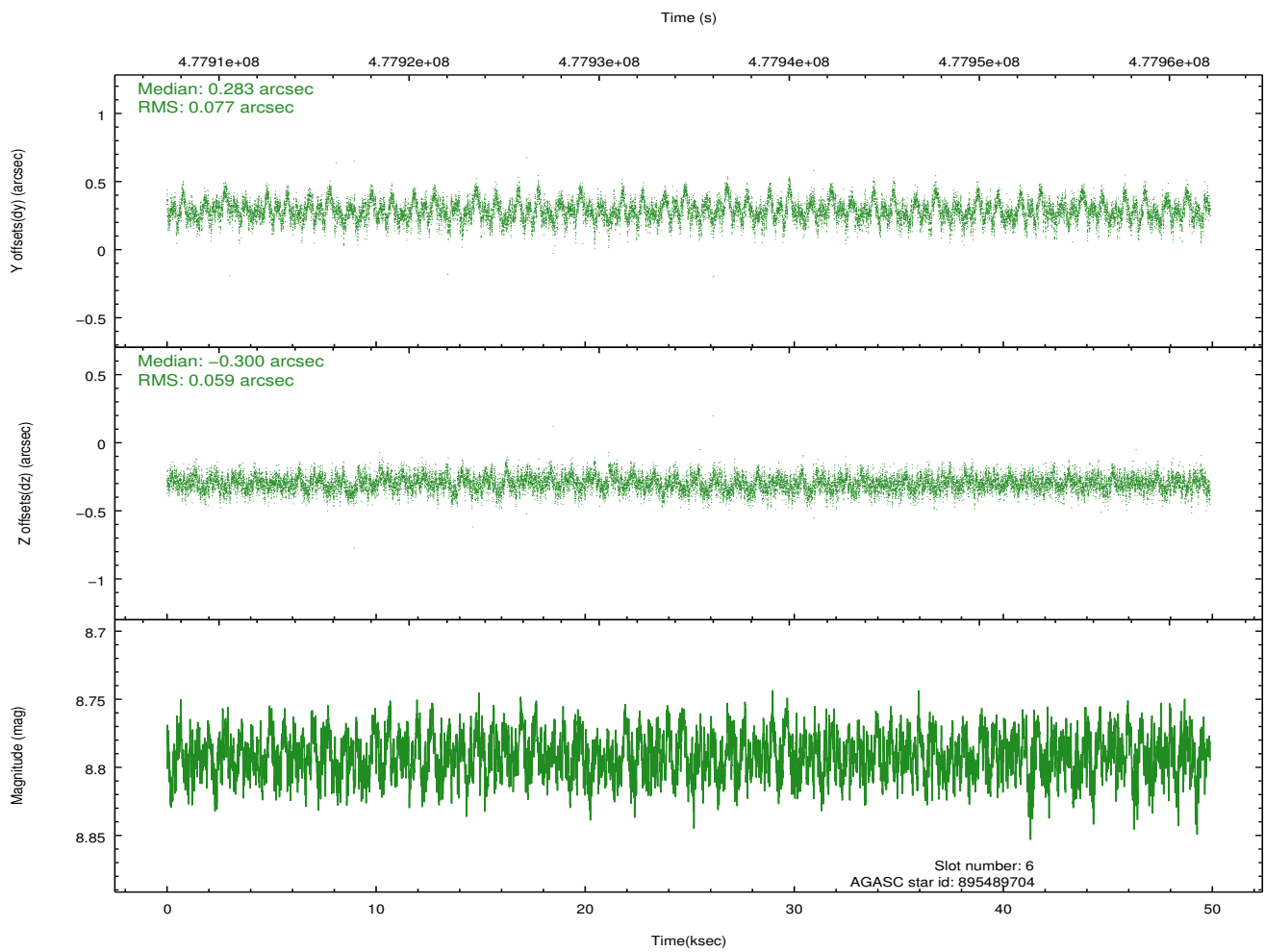
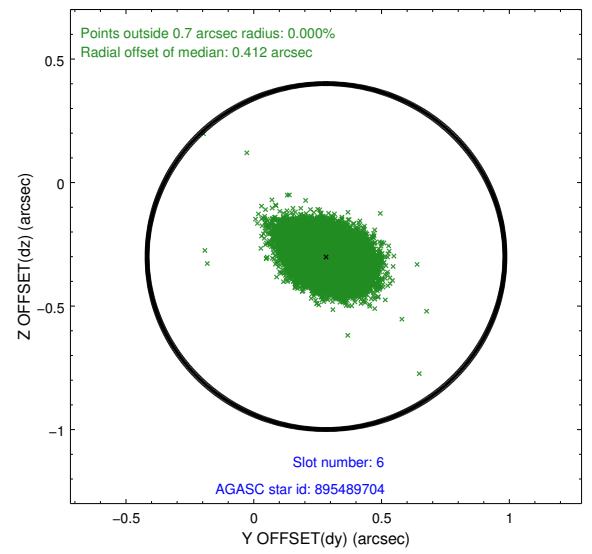
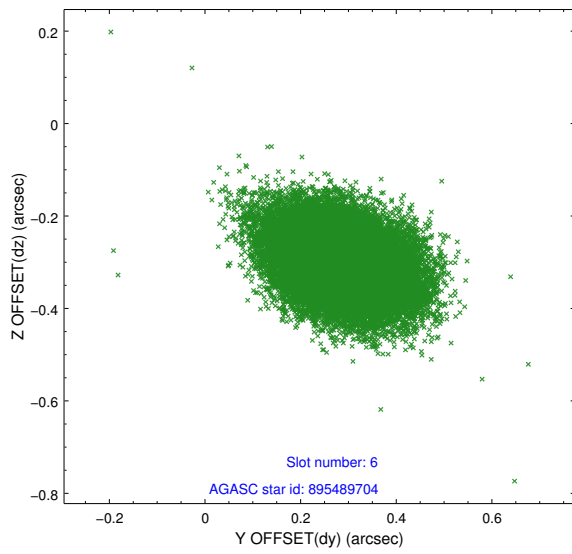
## 2.4.2 Slot 4



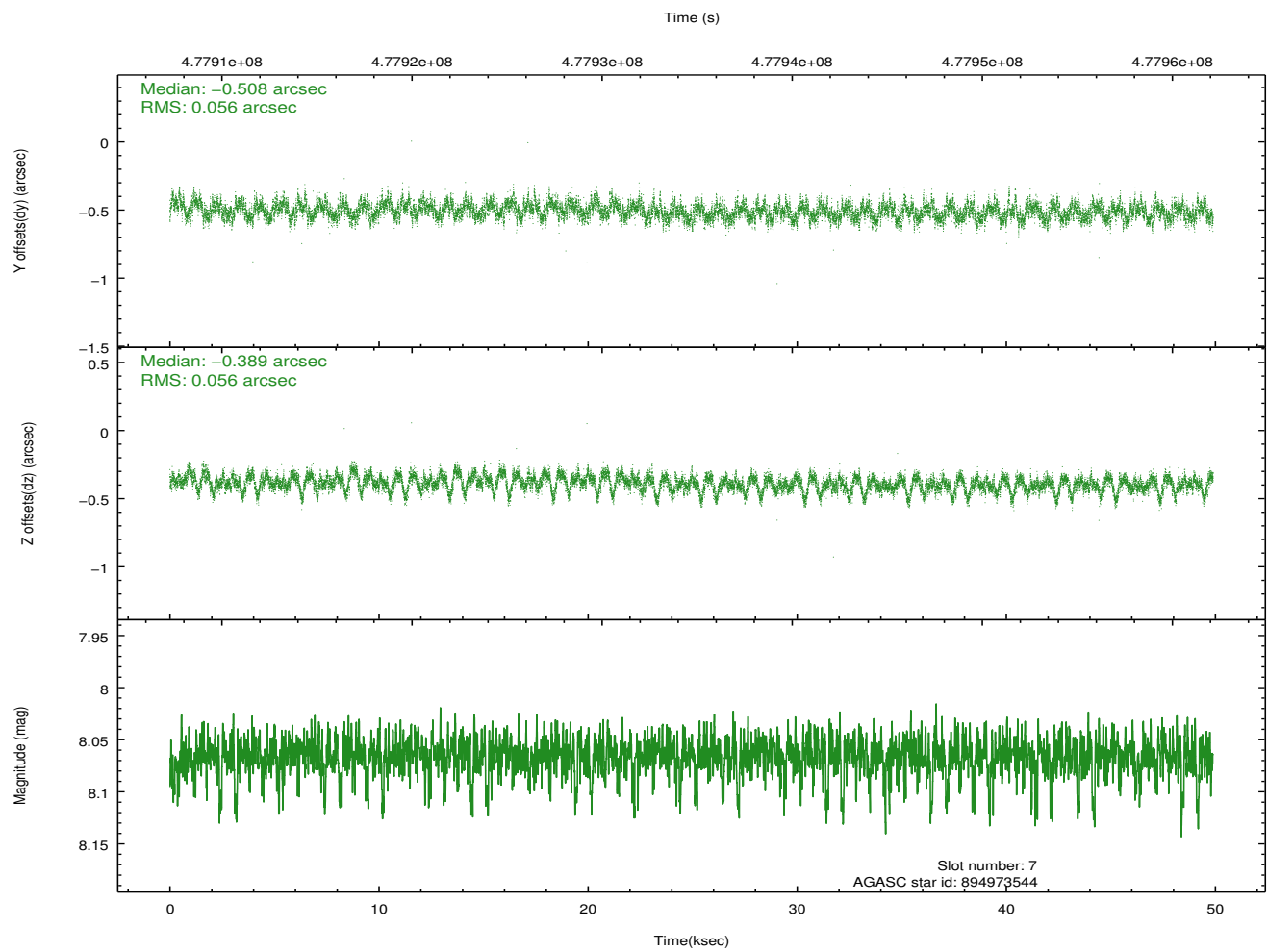
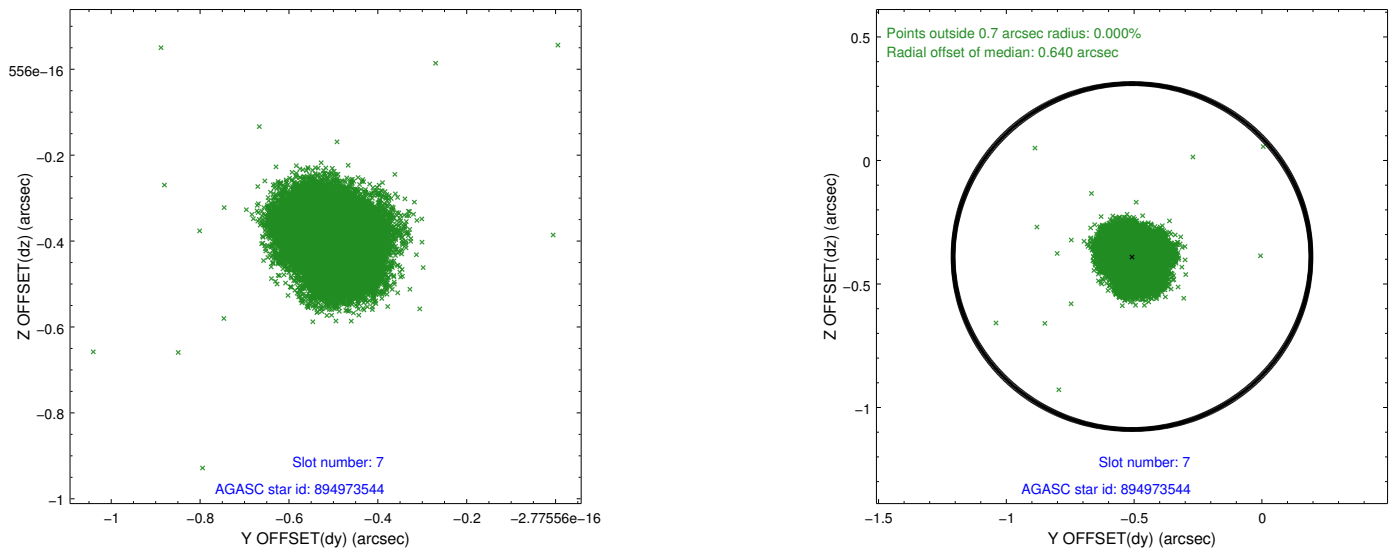
### 2.4.3 Slot 5



## 2.4.4 Slot 6

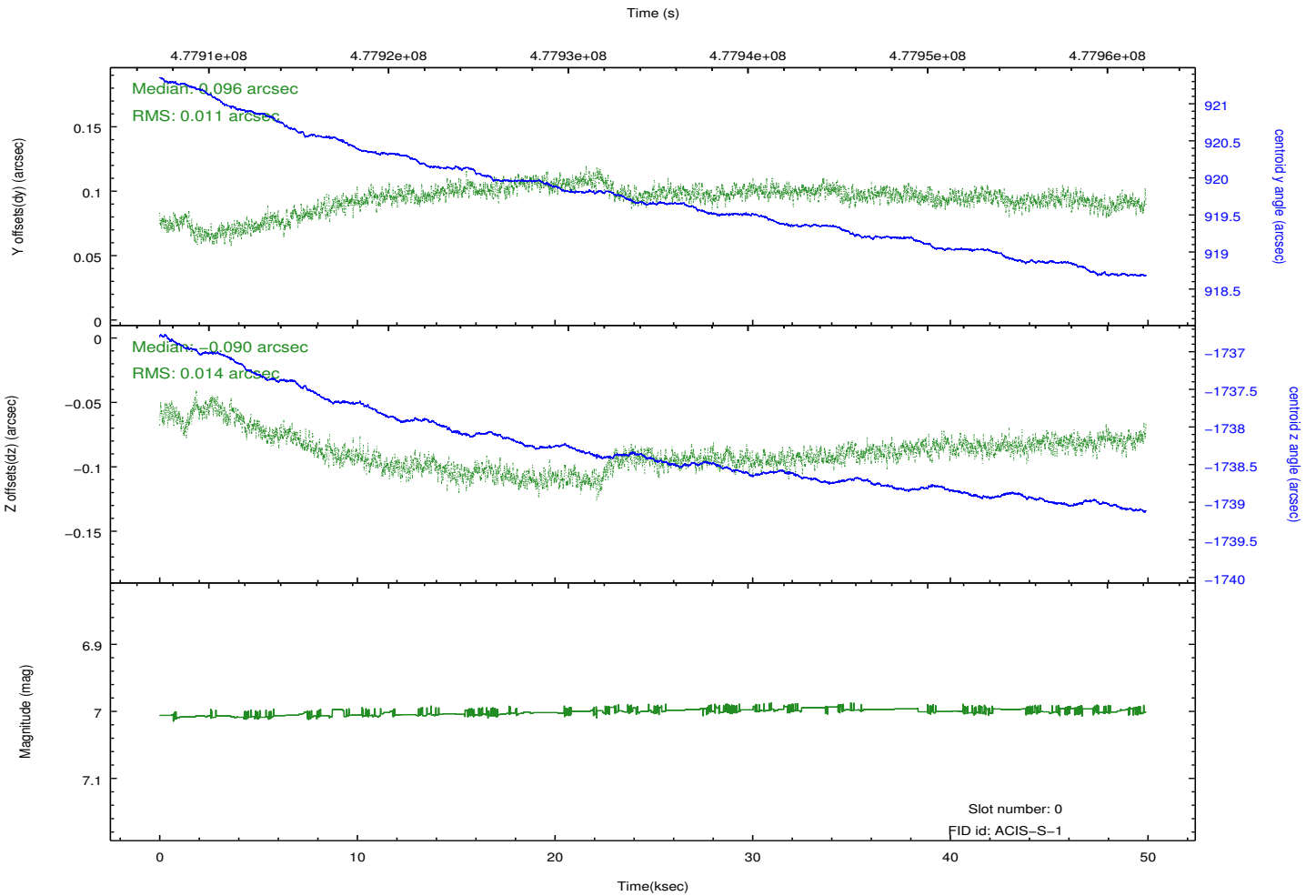
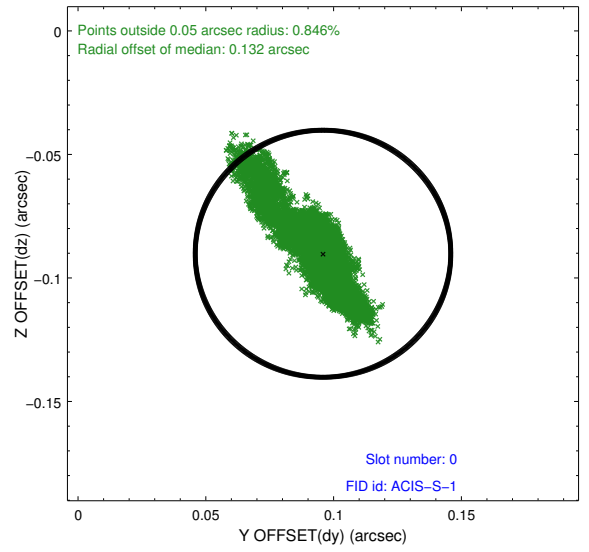
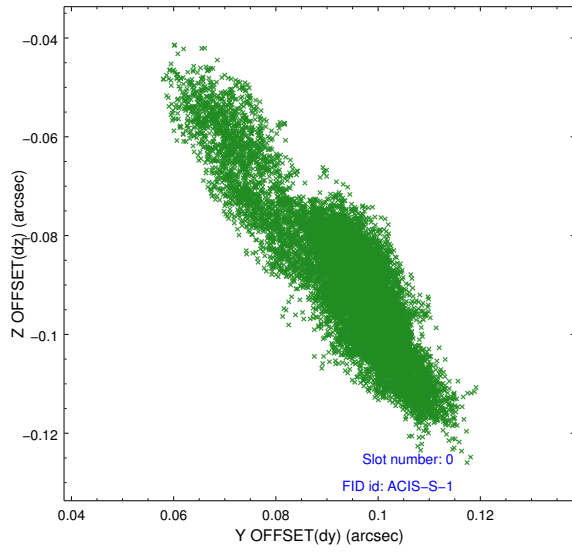


## 2.4.5 Slot 7

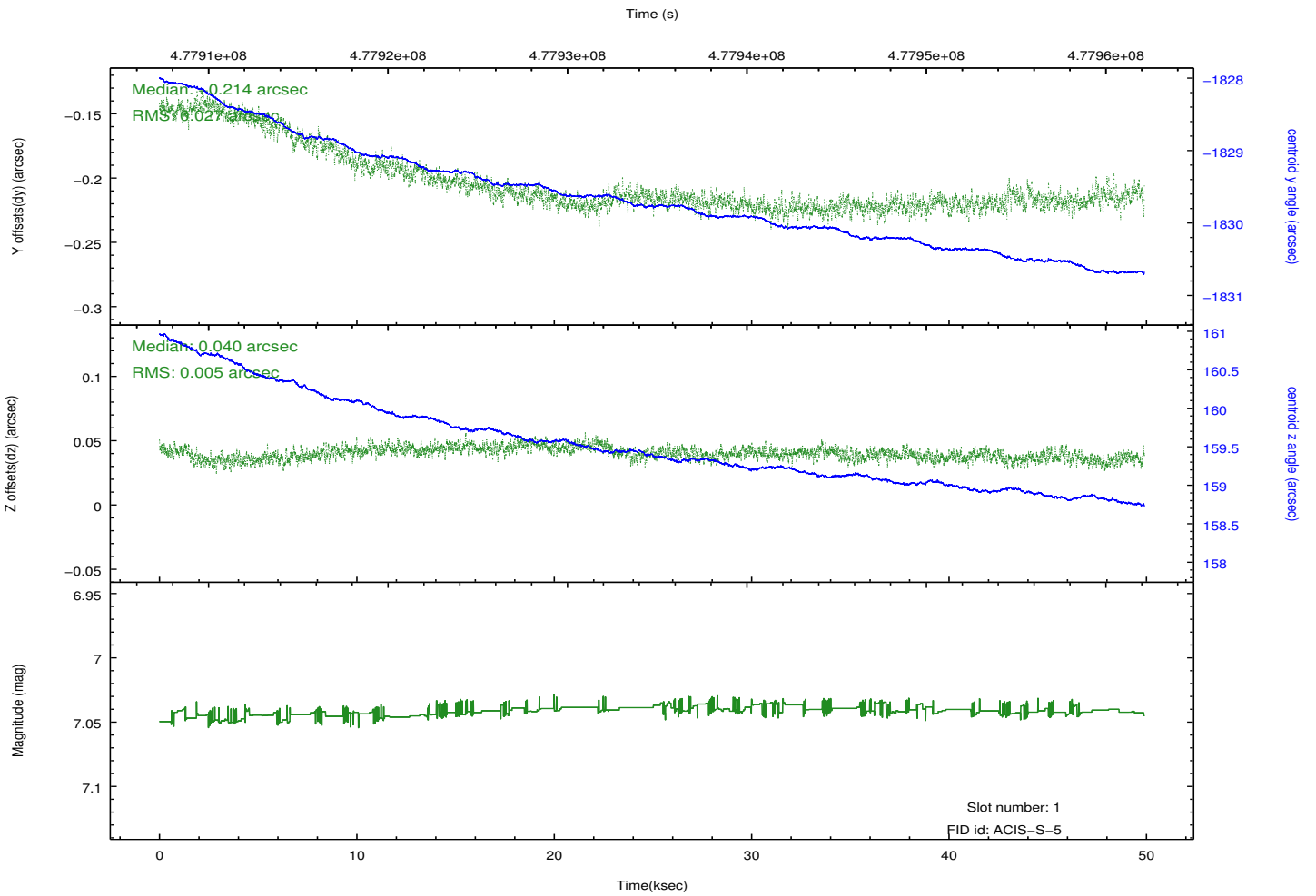
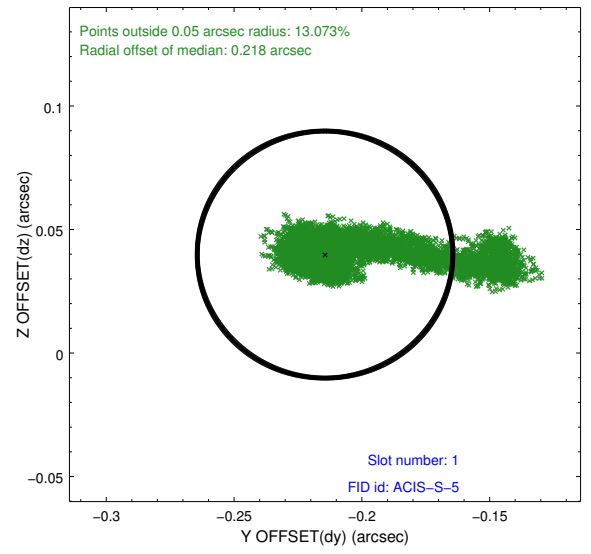
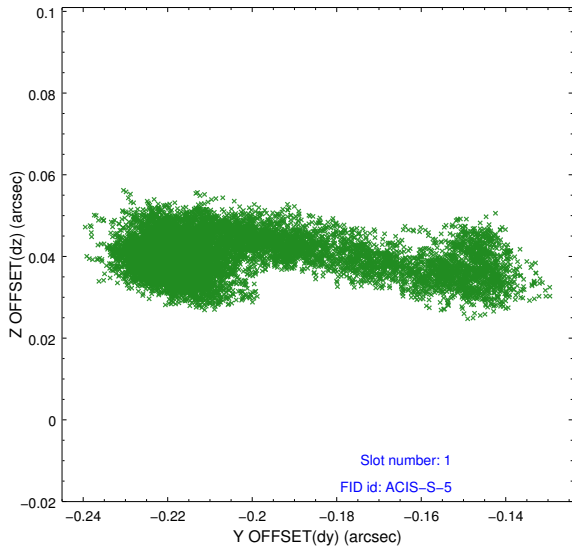


## 2.5 FID Slots

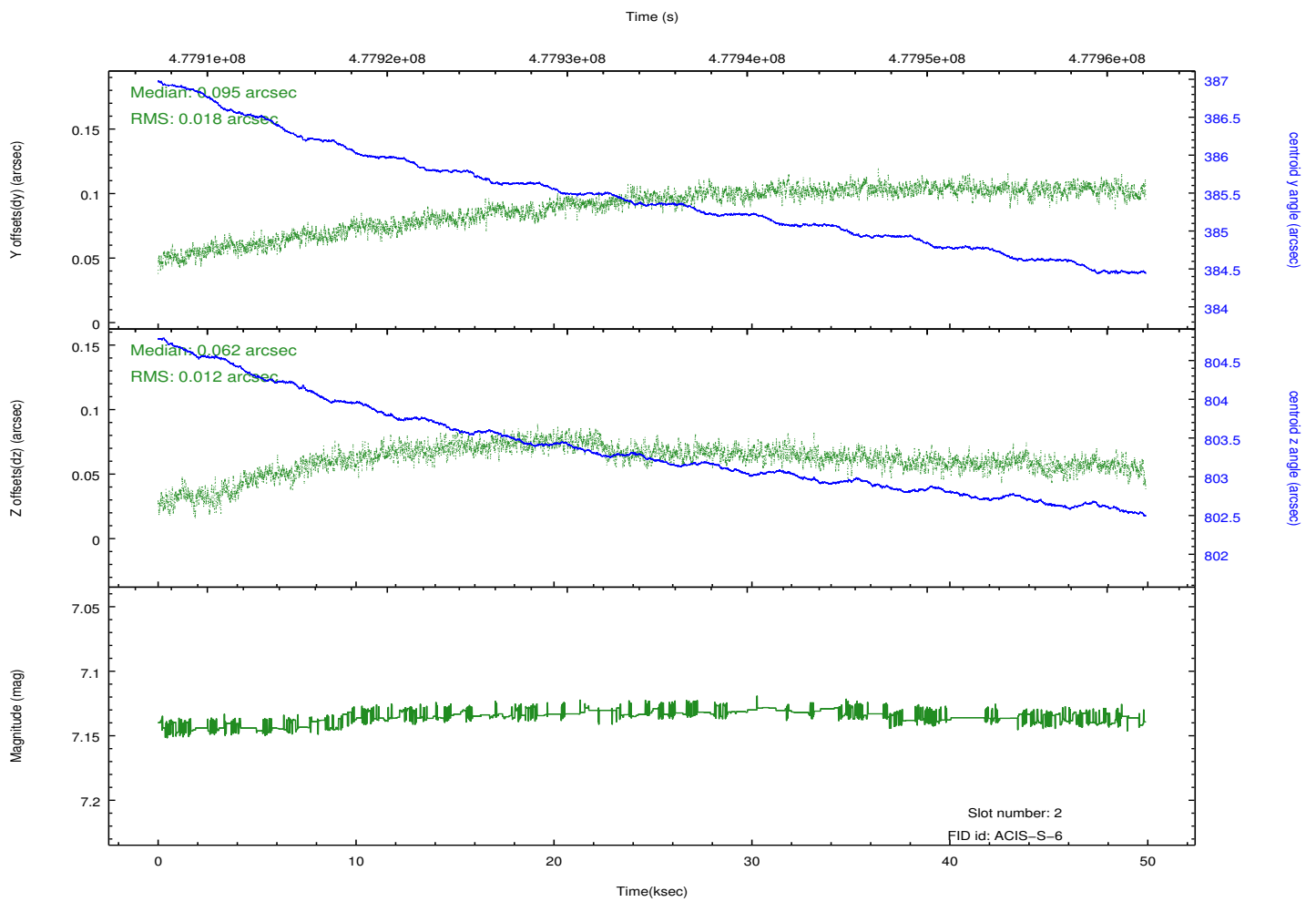
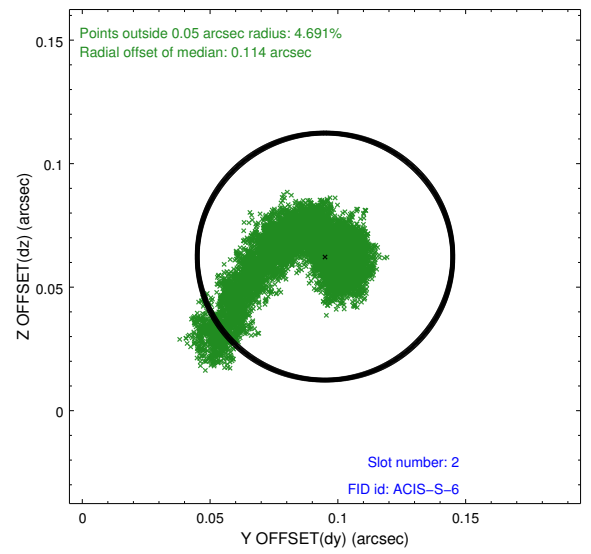
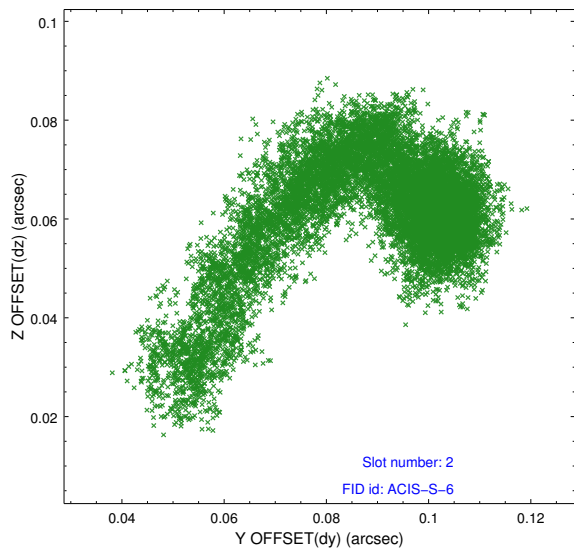
### 2.5.1 Slot 0



## 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)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.875

## 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.