

# V&V Reference Report

## L2 ASCDS Version : 10.2.2

Observation 15771 - L2 Version 2  
Chandra X-Ray Center

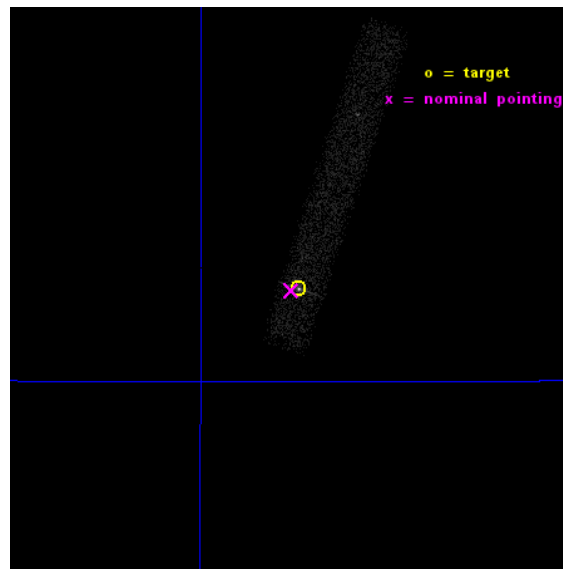
L2 Processing Date : Dec 11 2014

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# 1 Front

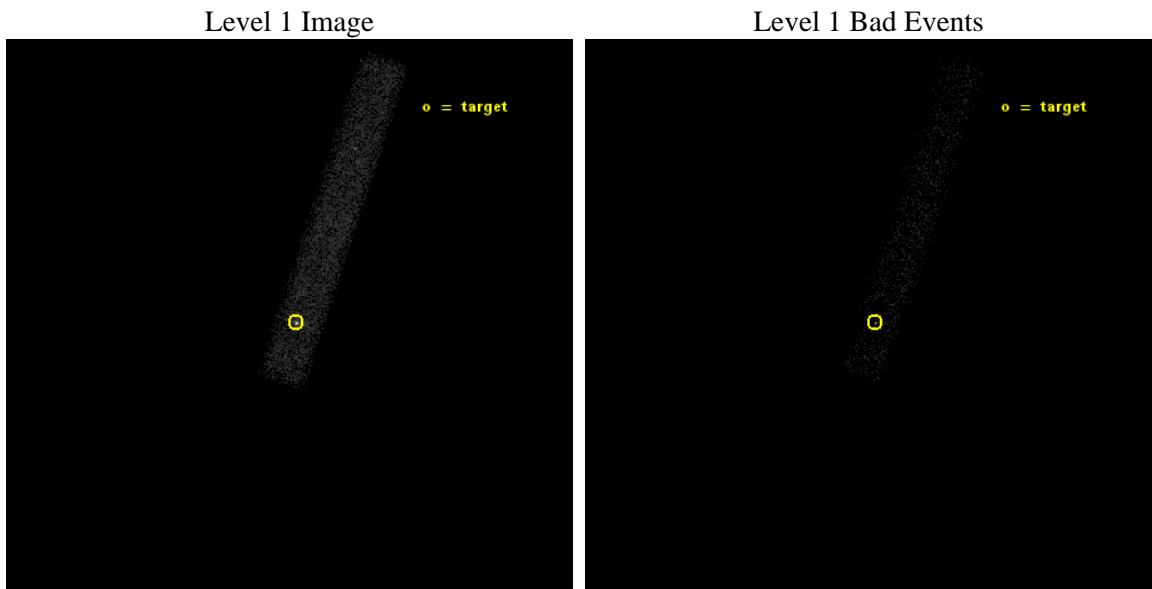
seq_num	401568	Sequence number
obs_id	15771	Observation id
title	Does Holmberg II X-1 harbor an intermediate-mass black hole?	Propo
observer	dr Peter Jonker	Principal investigator
object	Holmberg II X-1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	124.870833	Observer's specified target RA [deg]
dec_targ	70.705361	Observer's specified target Dec [deg]
ra_nom	124.87964043657	Nominal RA [deg]
dec_nom	70.704653765751	Nominal Dec [deg]
roll_nom	288.69565121559	Nominal Roll [deg]
revision	2	Processing version of data
ontime	13069.580583394	Sum of GTIs [s]
livetime	11853.41972011	Livetime [s]
ontime7	13069.580583394	Sum of GTIs [s]
l2events	12108	Number of level 2 events



## 2 OBI

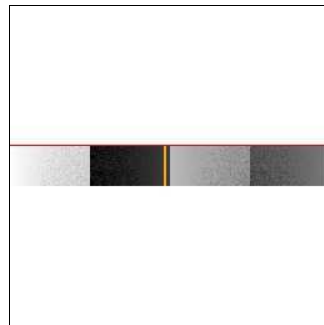
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	13000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	13069.580583394	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime7	13069.580583394	Sum of GTIs [s]
date	2014-12-11T22:43:00	Date and time of file creation	l1events	18591	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

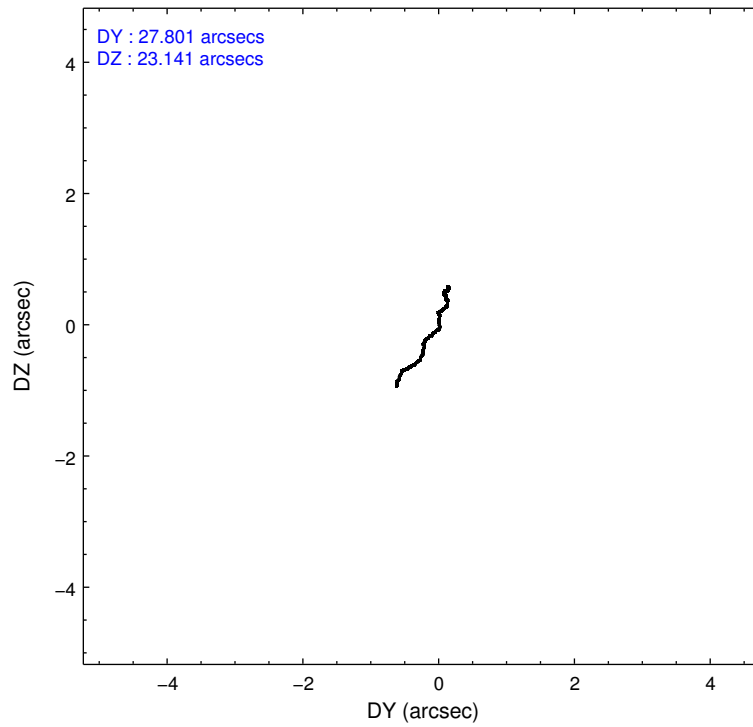
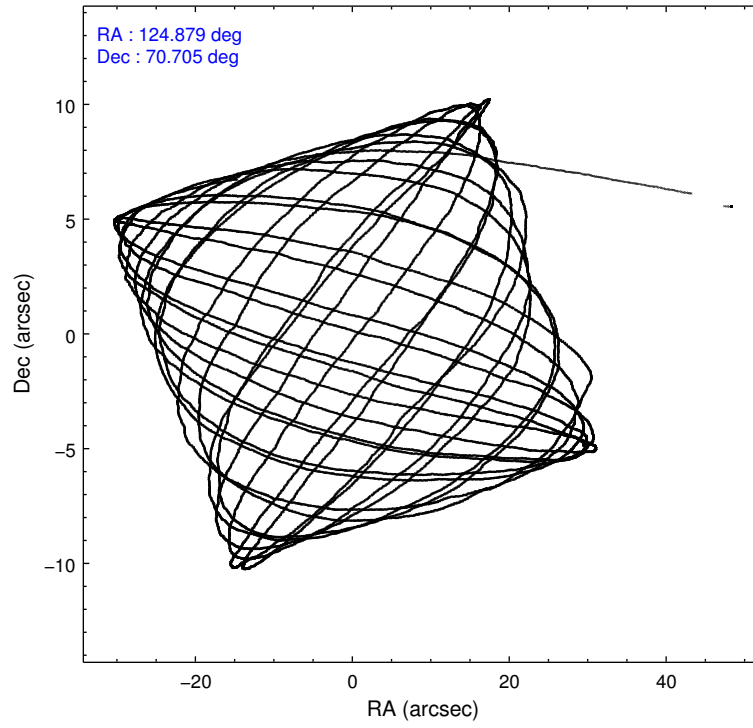
	<b>ccd 7</b>
level 1 events	18591
rejected events	6265
rejected %	33%

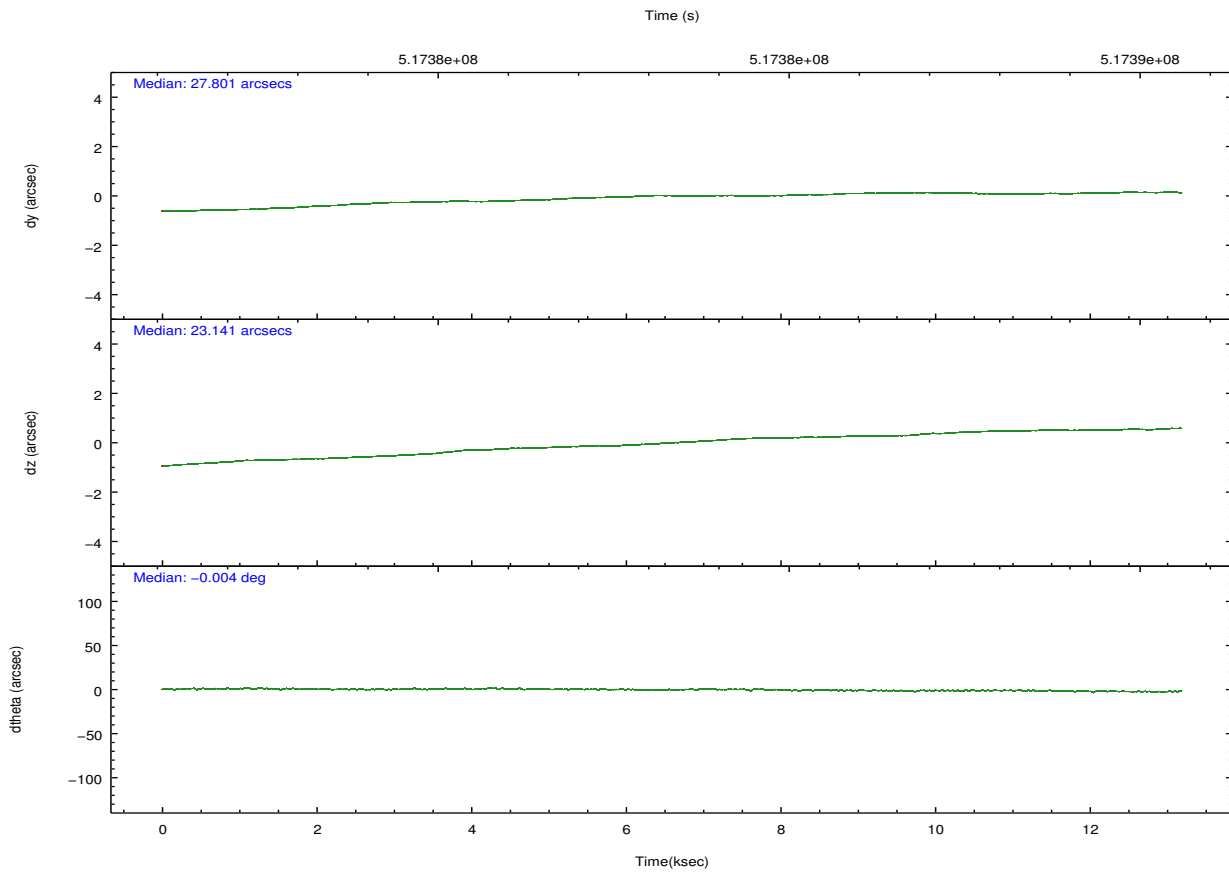
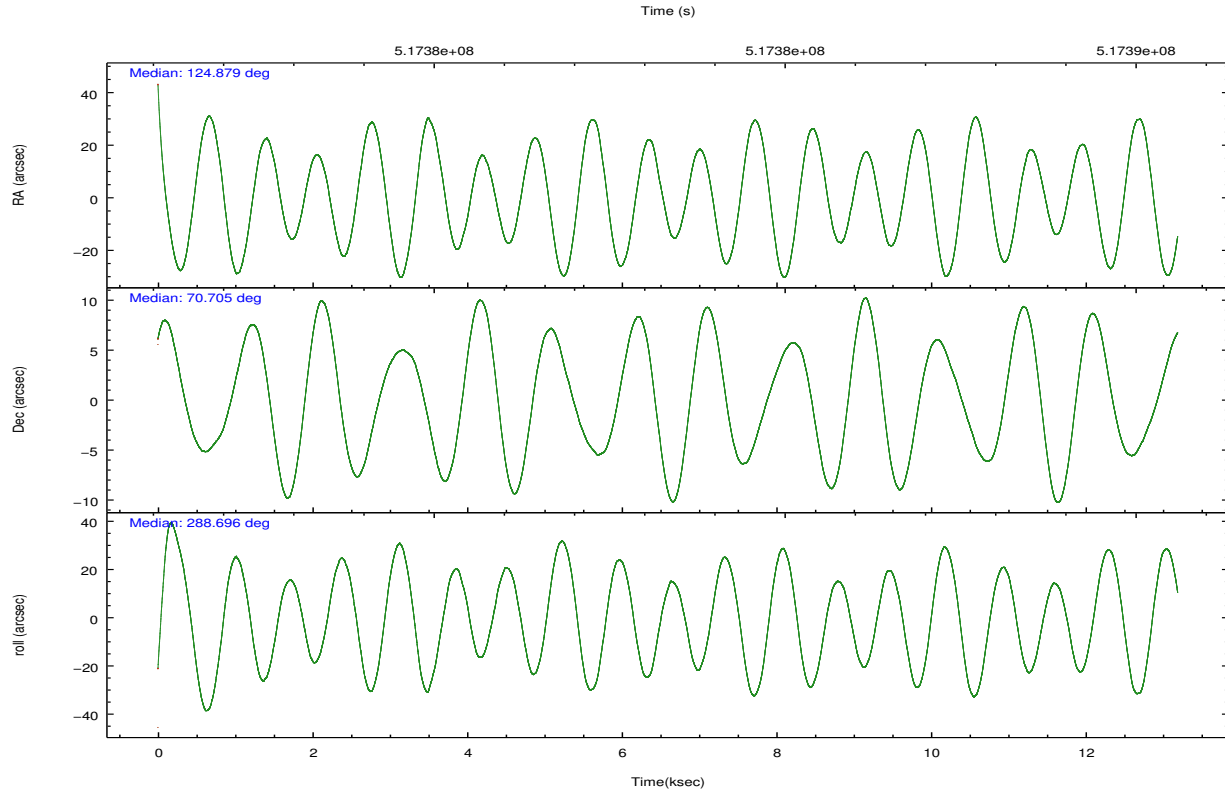
	<b>ccd 7</b>
grade 0 events	2319
	12%
grade 1 events	52
	0%
grade 2 events	2870
	15%
grade 3 events	1492
	8%
grade 4 events	1466
	7%
grade 5 events	1353
	7%
grade 6 events	4180
	22%
grade 7 events	4859
	26%

## 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	124.816751	124.8796404365653	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	70.722390	70.70465376575066	Subarray start row	449	449
[deg] Pointing Roll	288.598390	288.69565121559	Subarray row count	128	128
[s] Window start time (MET)	508723267.184000	508723267.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	517536067.184000	517536067.184000	[s] Primary exposure time	0.000000	0.4
[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)	517376920.184000	517375312.13017			
Observation start date	2014-05-25T03:47:33	2014-05-25T03:21:52			
[s] Observation end time (MET)	517389920.184000	517390718.39352			
Observation end date	2014-05-25T07:24:13	2014-05-25T07:38:38			
Read mode	TIMED	TIMED			

## 2.3 Aspect





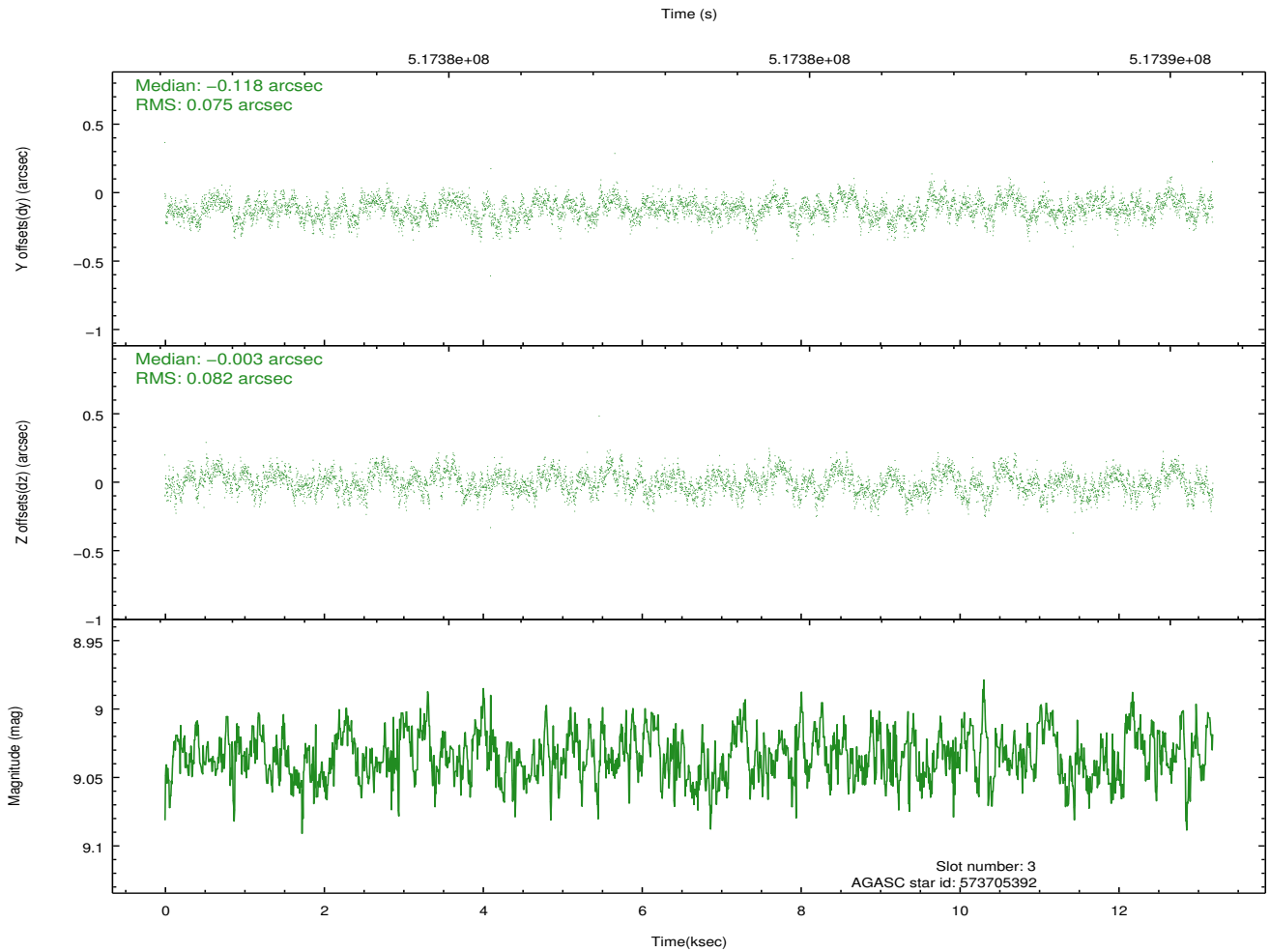
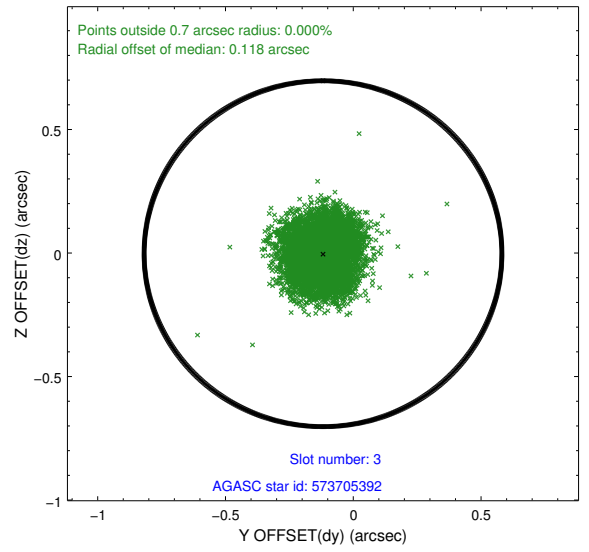
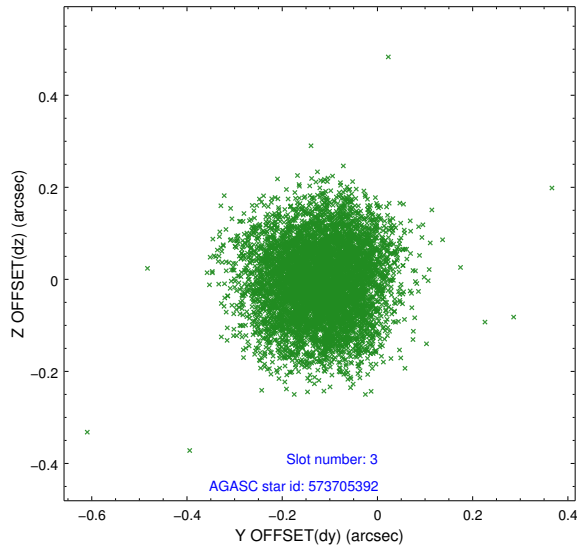
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.94	3218	-0.162	-0.043	0.015	0.024	0.000000	0.000000	-781.17	-1744.67
1	FID		ACIS-S-4	7.02	3218	0.362	0.091	0.015	0.034	0.000000	0.000000	2132.45	163.55
2	FID		ACIS-S-5	7.06	3218	-0.226	-0.038	0.011	0.018	0.000000	0.000000	-1833.61	157.52
3	GUIDE	used	573705392	9.03	6433	-0.118	-0.003	0.119	0.186	124.654348	70.443954	887.72	-504.93
4	GUIDE	used	573706576	9.13	6432	0.228	-0.096	0.126	0.205	124.971812	70.209854	1809.94	-409.12
5	GUIDE	used	573708320	9.13	6431	0.170	-0.025	0.141	0.221	123.335431	70.465373	289.17	-1978.12
6	GUIDE	used	573719824	8.77	6434	-0.075	0.044	0.102	0.169	124.187277	71.200735	-1867.89	-141.62
7	GUIDE	used	573723816	6.83	6434	-0.215	0.085	0.072	0.119	124.391876	70.177108	1693.90	-1116.65

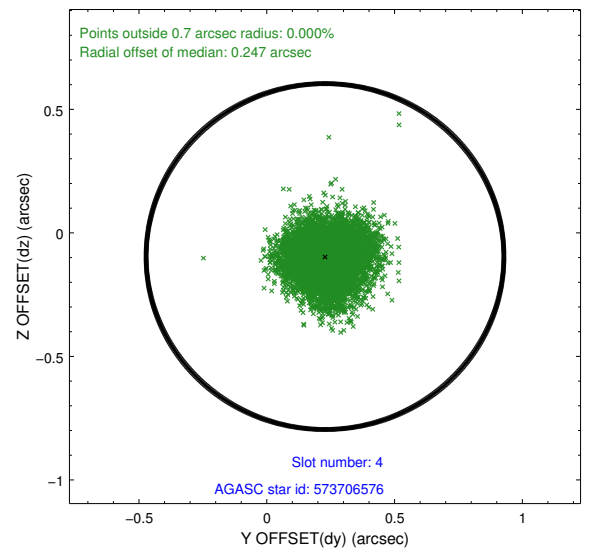
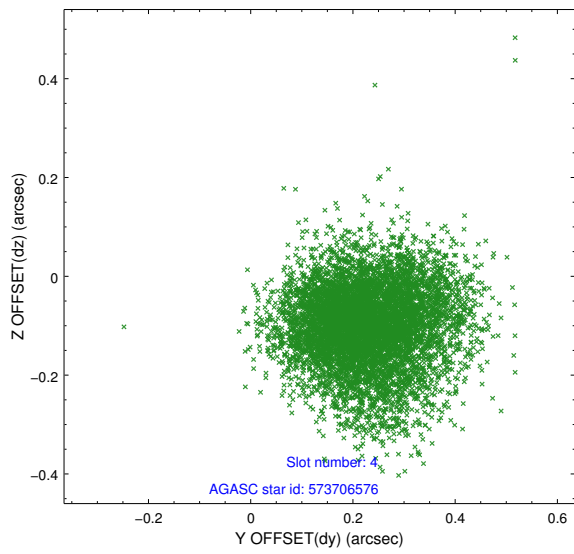
∞

## 2.4 Star Slots

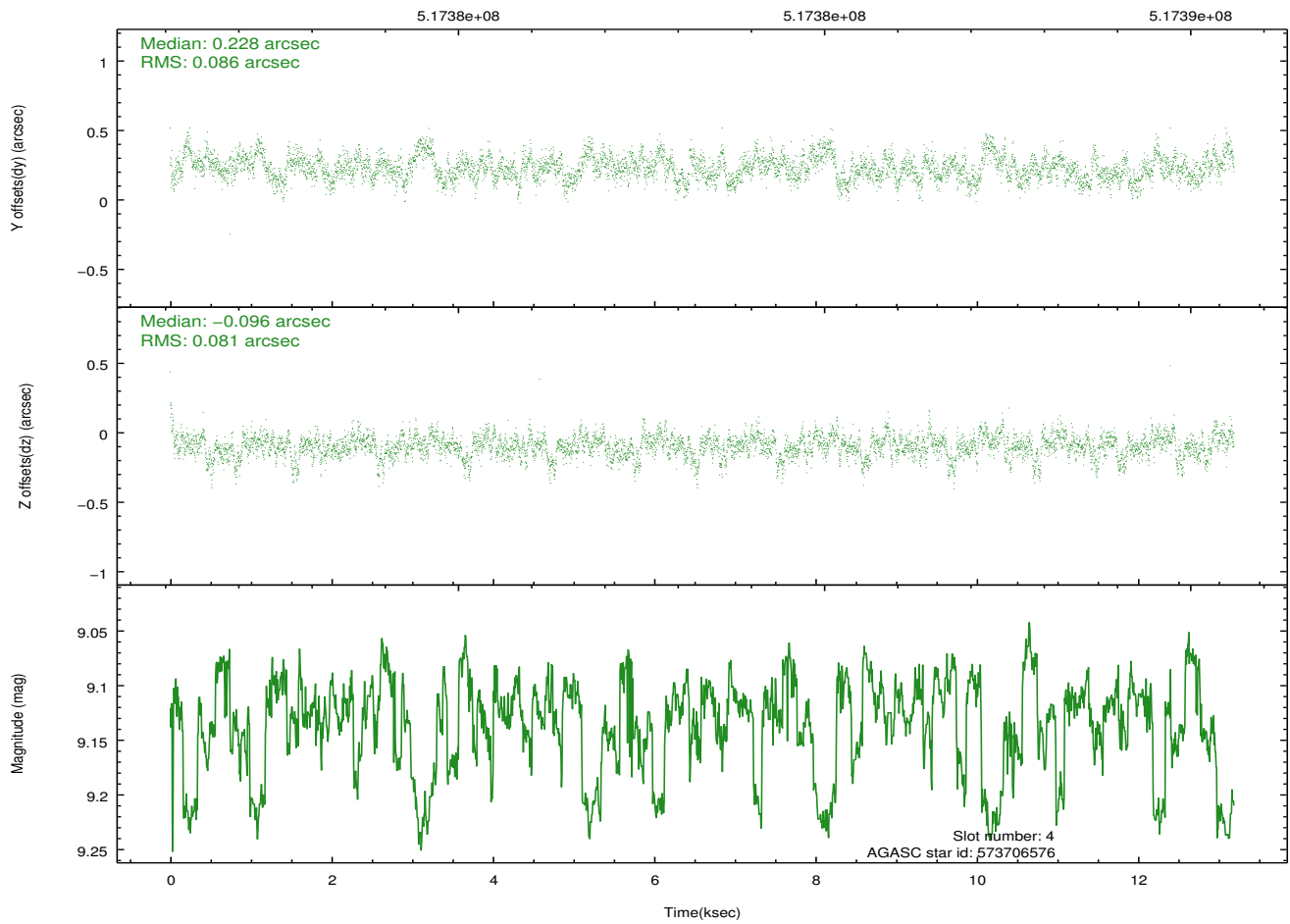
### 2.4.1 Slot 3



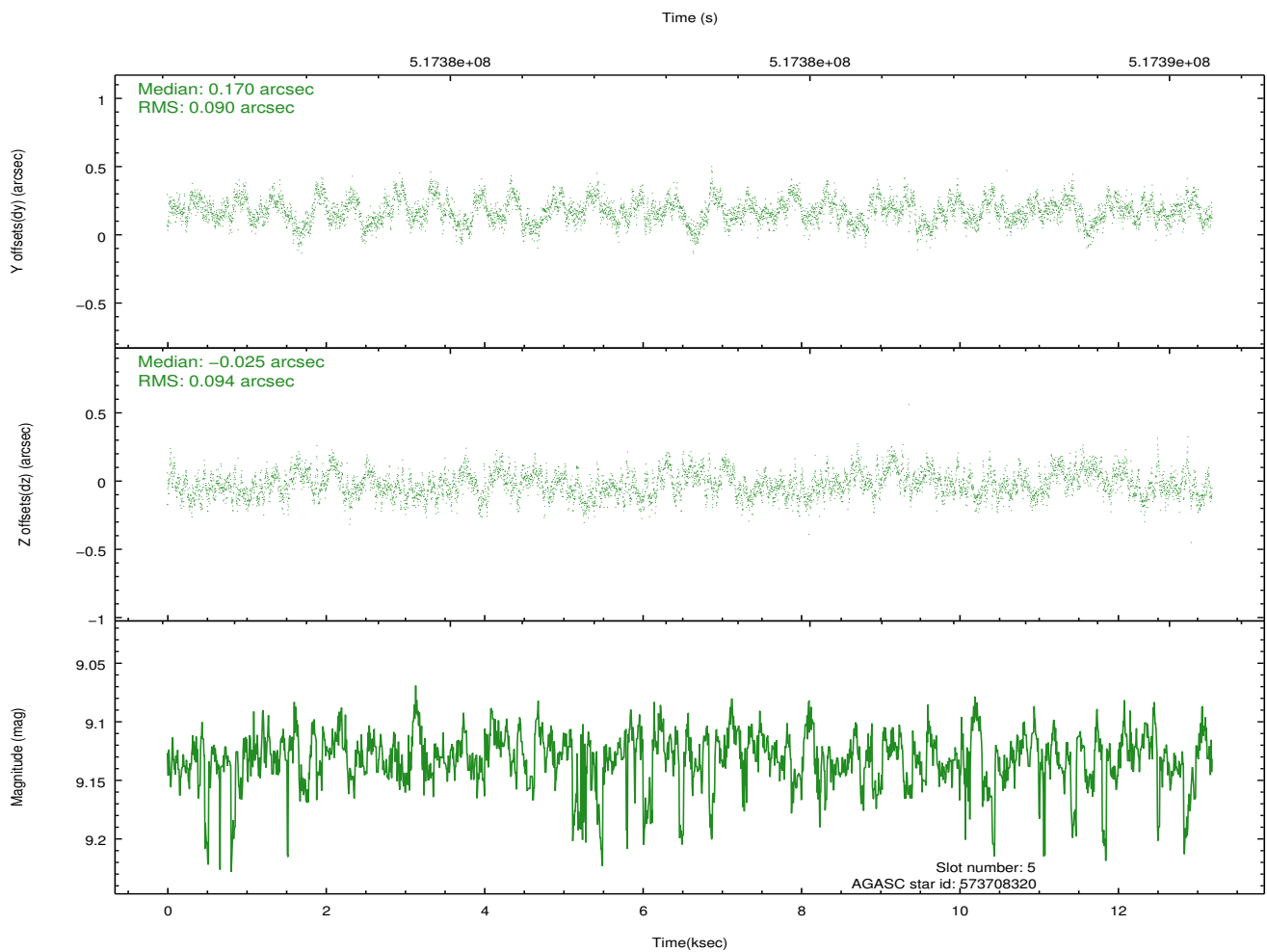
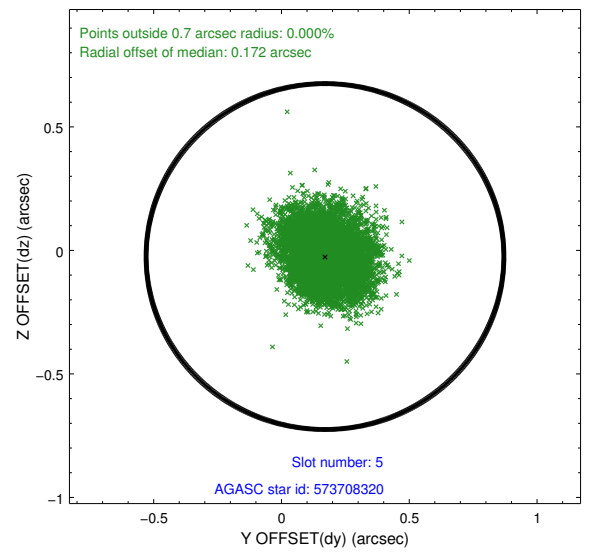
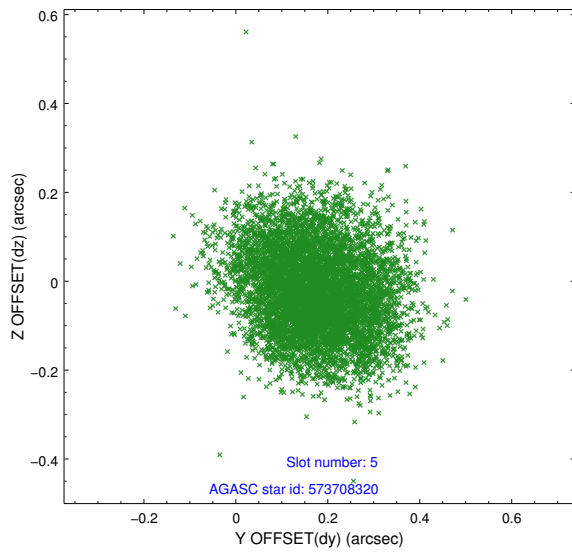
## 2.4.2 Slot 4



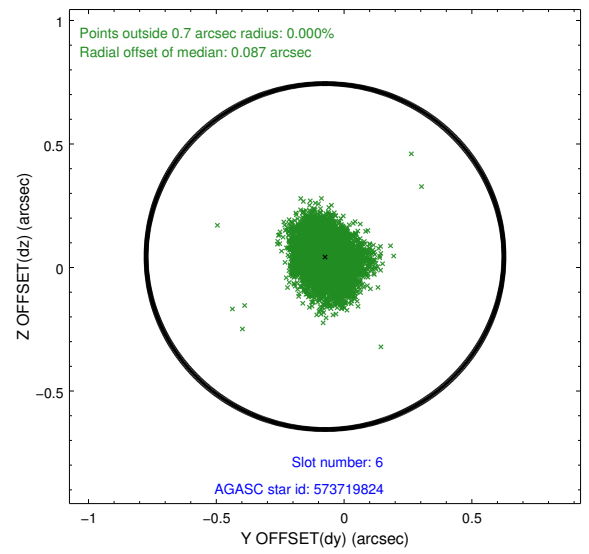
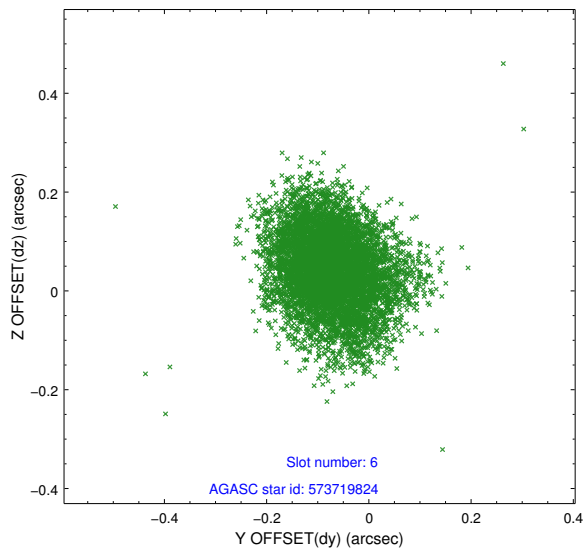
Time (s)



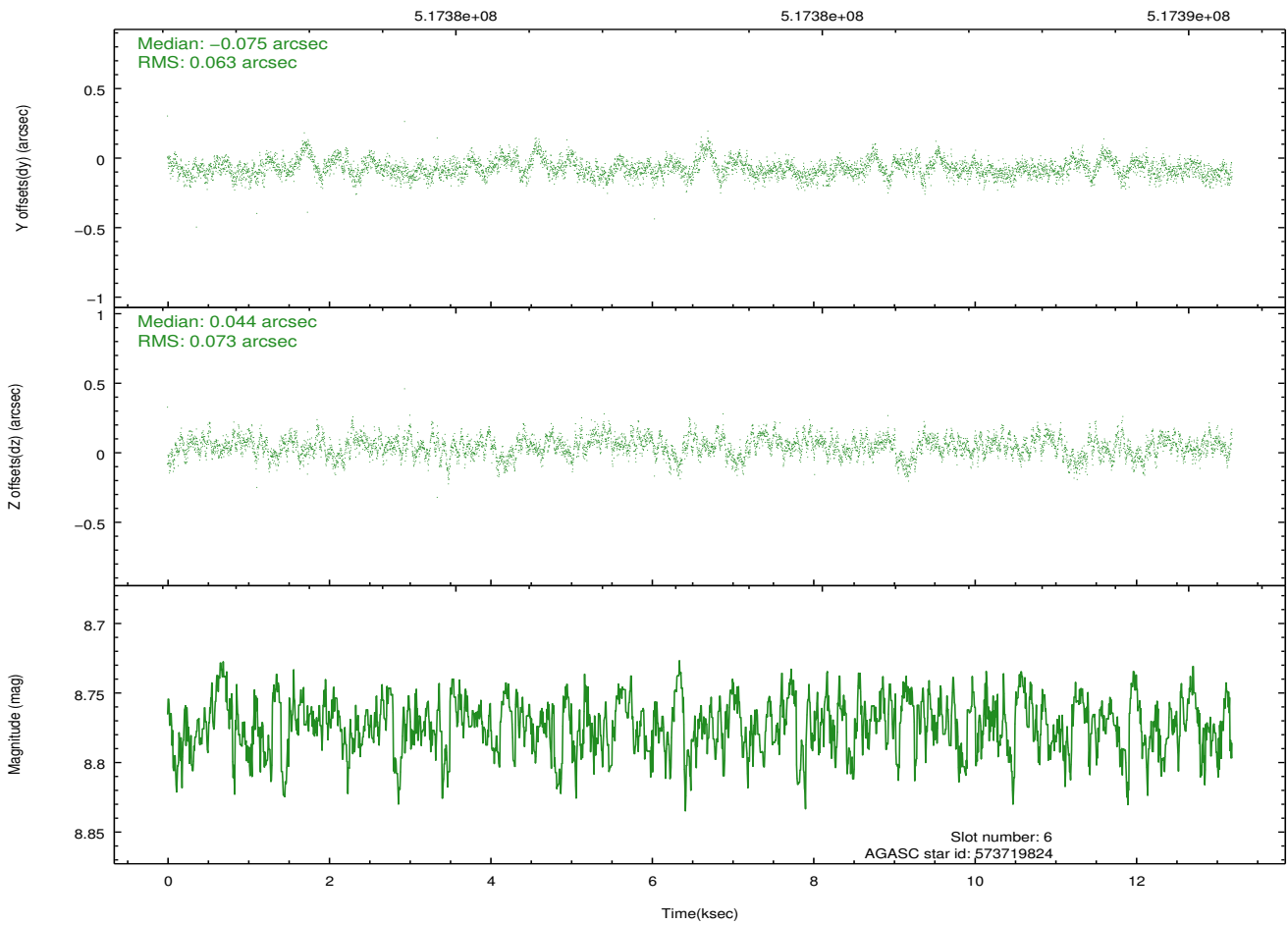
### 2.4.3 Slot 5



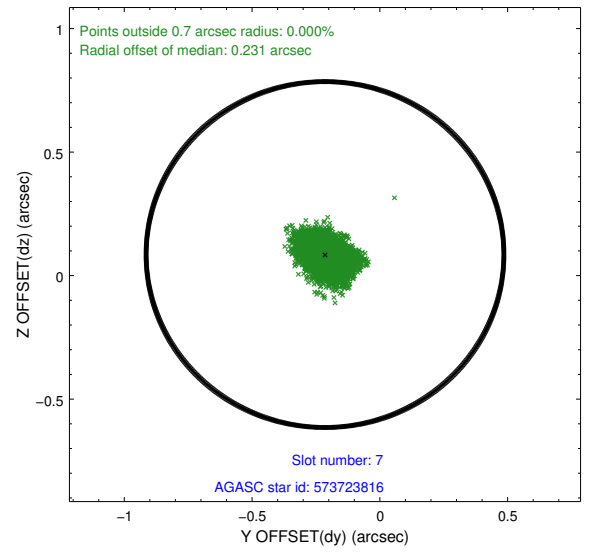
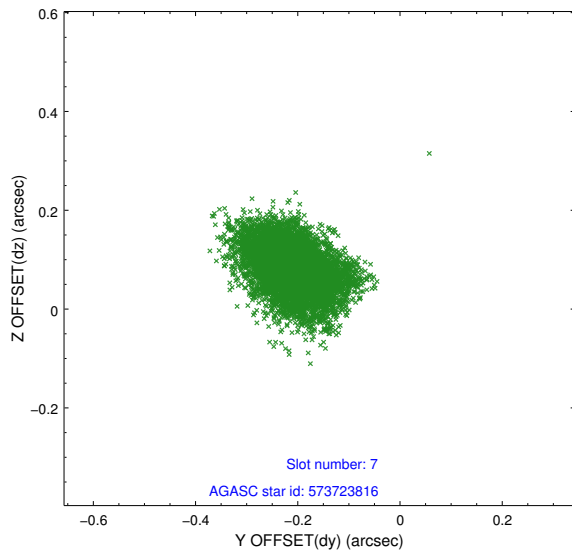
## 2.4.4 Slot 6



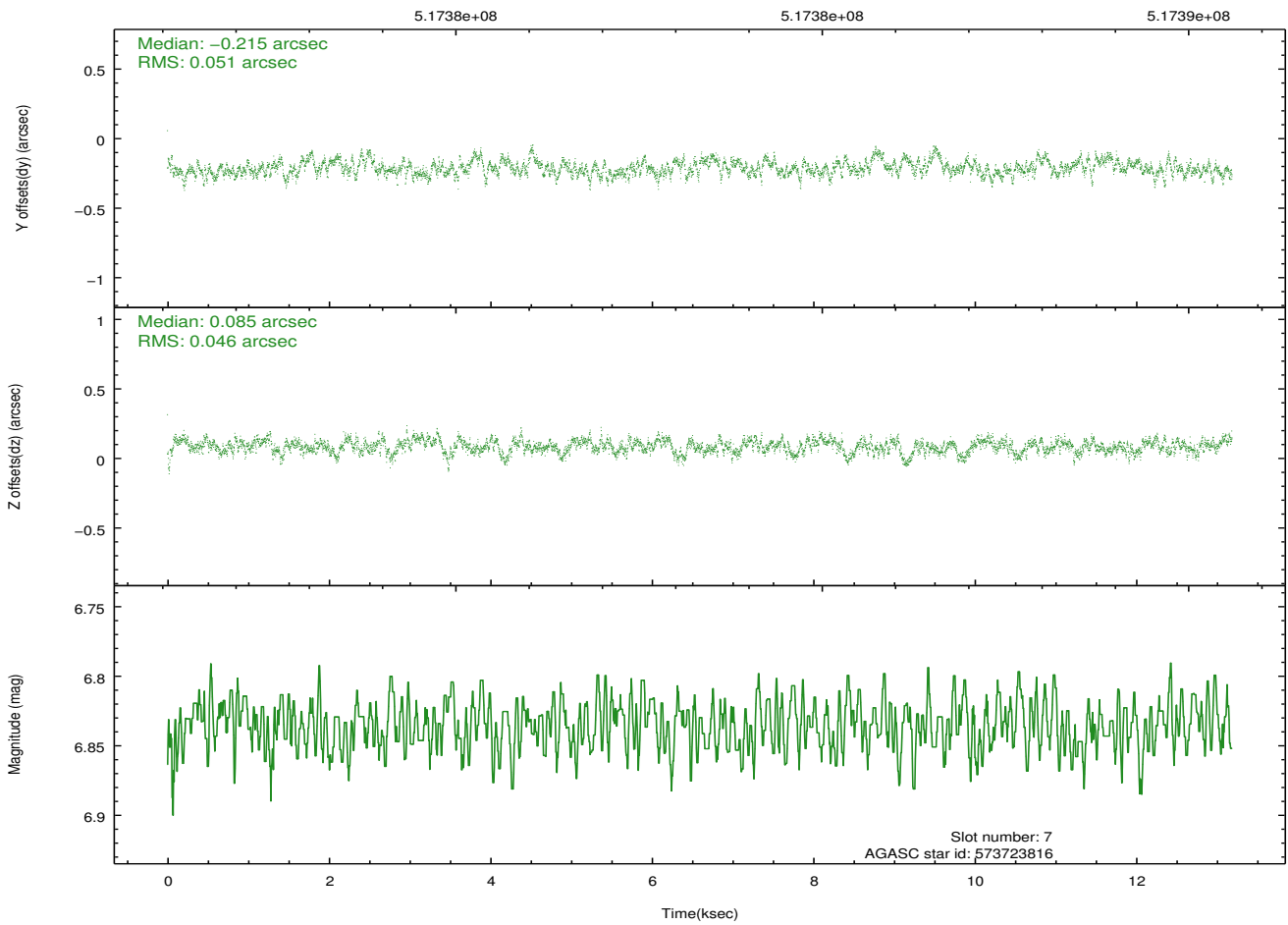
Time (s)



## 2.4.5 Slot 7

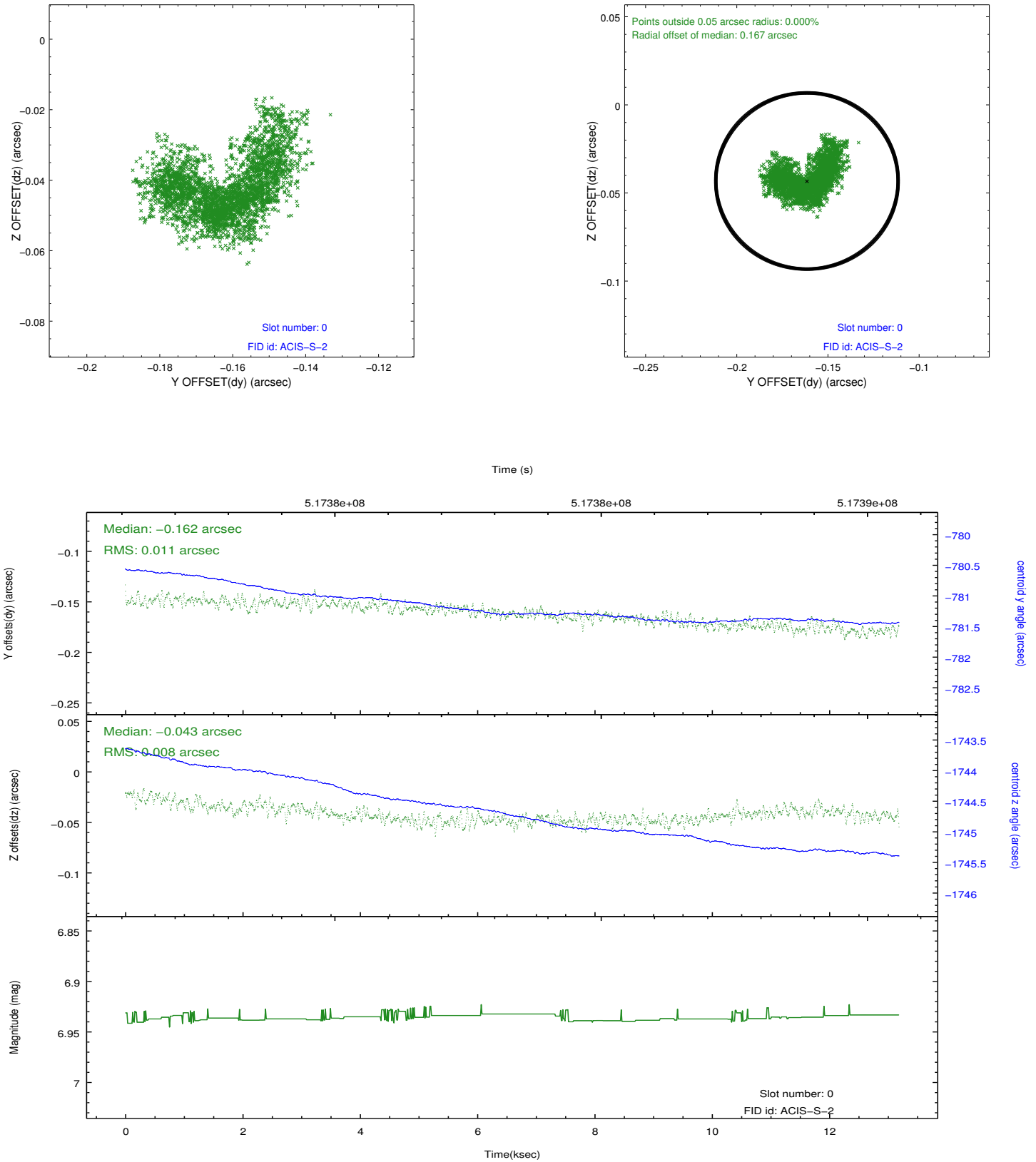


Time (s)

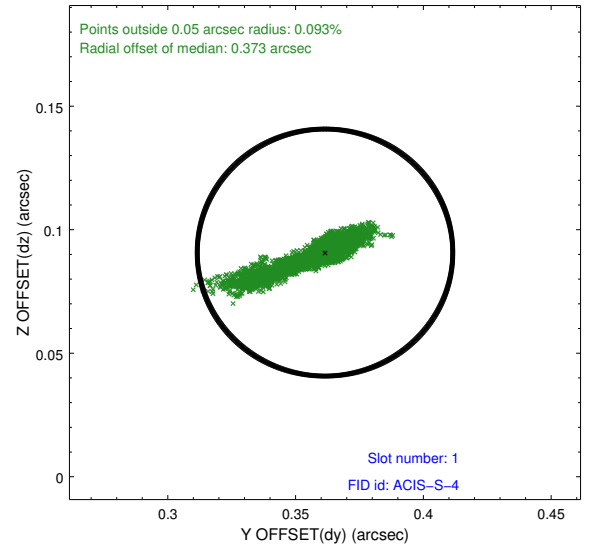
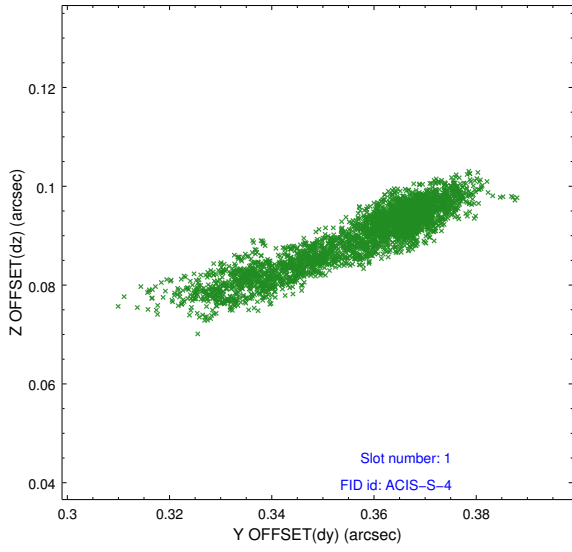


## 2.5 FID Slots

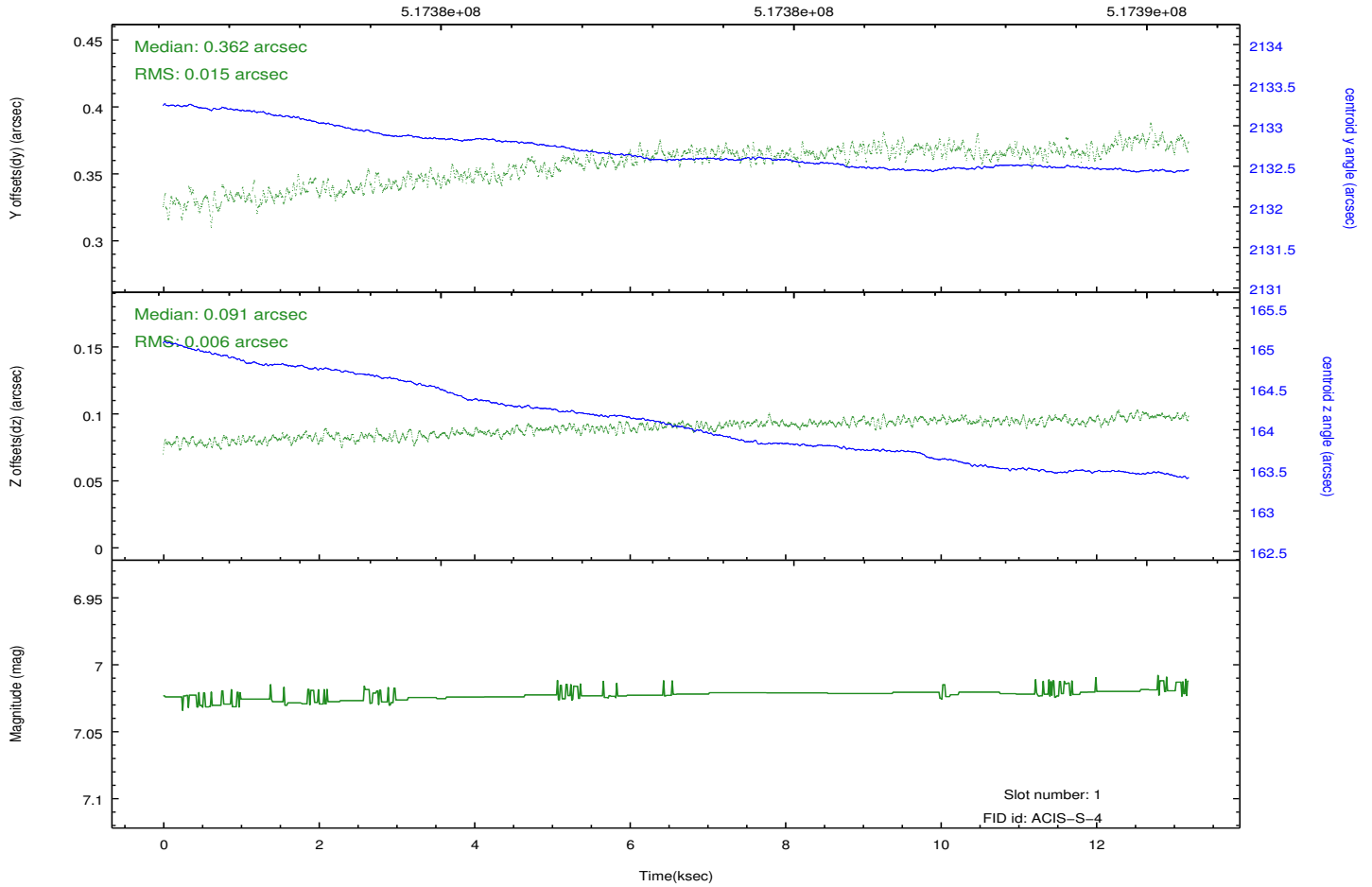
### 2.5.1 Slot 0



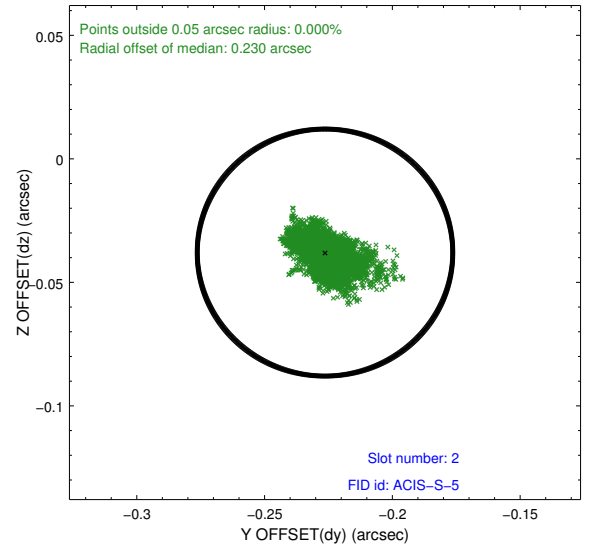
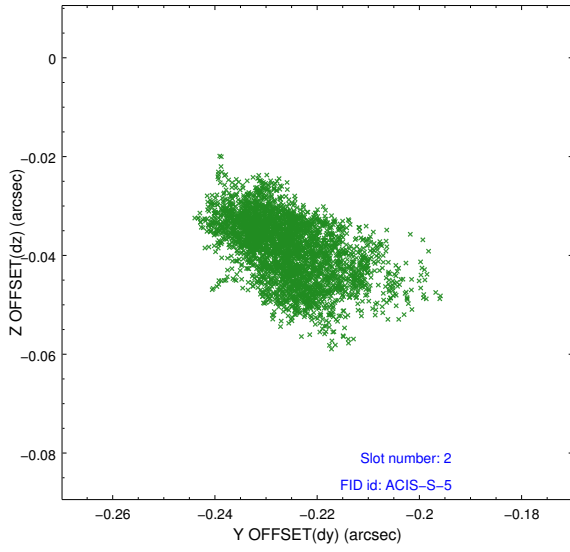
## 2.5.2 Slot 1



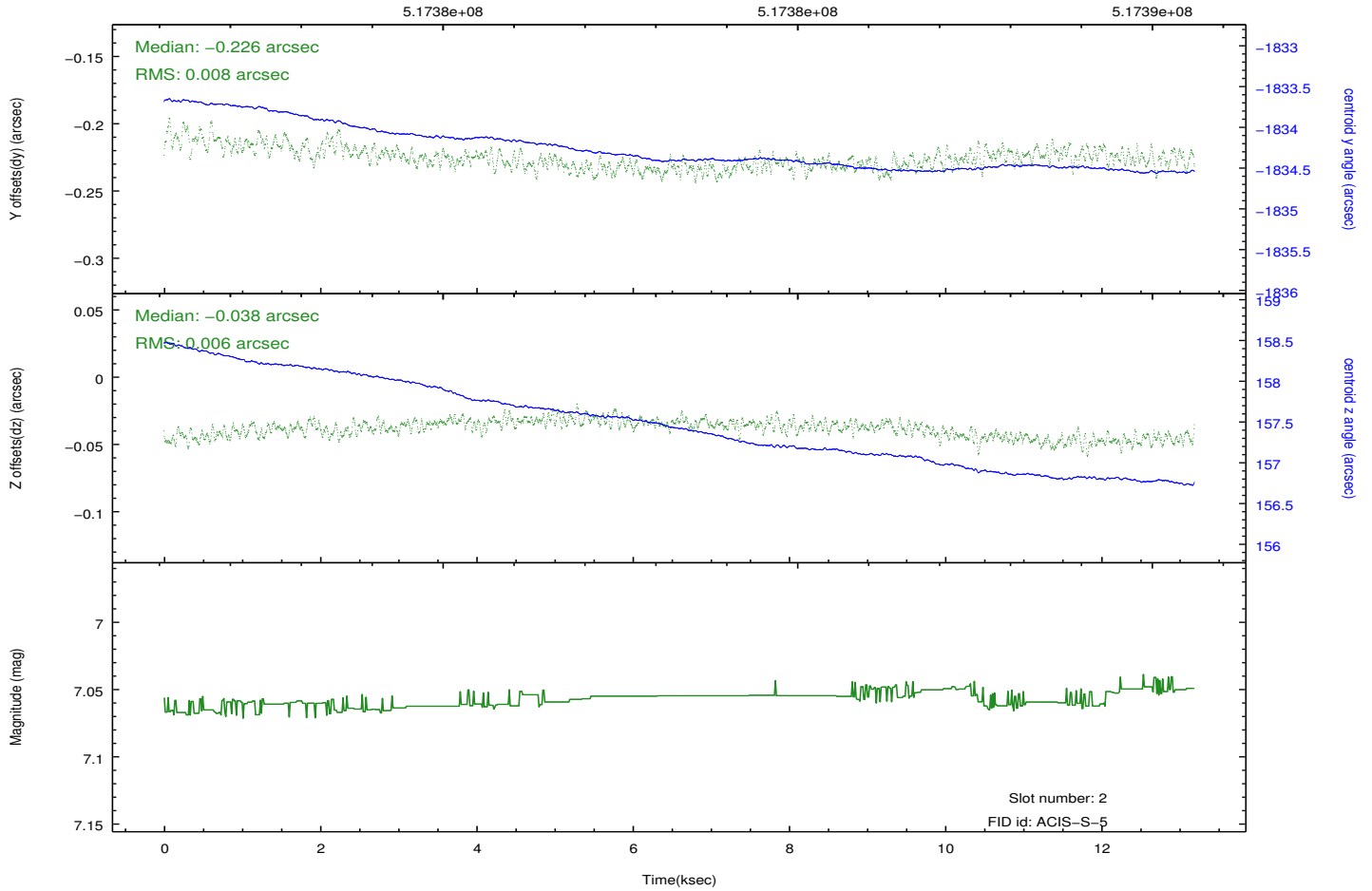
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.069580583394

## A.2 Comments

Joint proposal with NRAO.

Observation coordinated with VLA.

Window preference met.

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.