

# V&V Reference Report

## L2 ASCDS Version : 10.8

Observation 22730 - L2 Version 1  
Chandra X-Ray Center

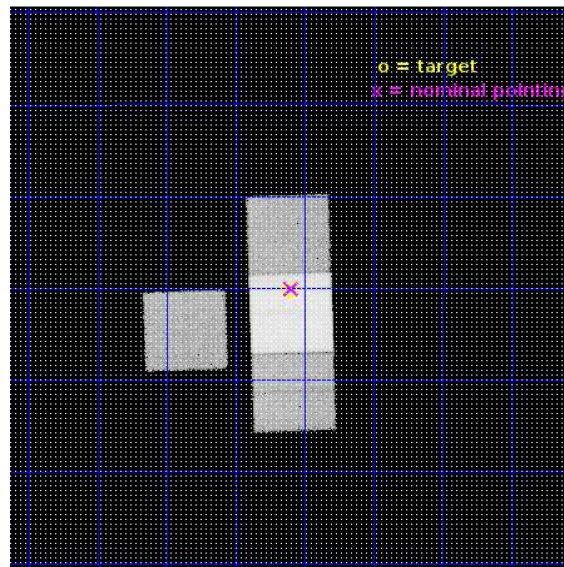
L2 Processing Date : Aug 25 2019

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# 1 Front

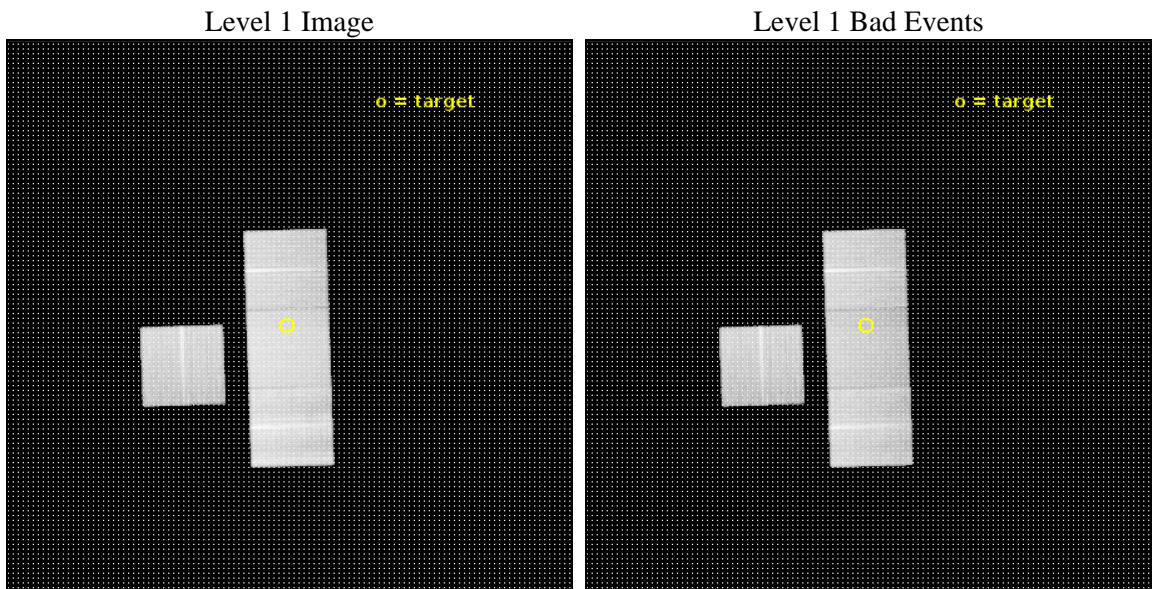
seq_num	703713	Sequence number
obs_id	22730	Observation id
title	X-rays from the brightest radio source at z~6	Proposal title
observer	Eduardo Banados	Principal investigator
object	P352-15	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	352.403333	Observer's specified target RA [deg]
dec_targ	-15.337333	Observer's specified target Dec [deg]
ra_nom	352.39944709869	Nominal RA [deg]
dec_nom	-15.334797491478	Nominal Dec [deg]
roll_nom	88.155590344513	Nominal Roll [deg]
revision	1	Processing version of data
ontime	38750.000298142	Sum of GTIs [s]
livetime	38243.703016912	Livetime [s]
ontime3	38746.859207749	Sum of GTIs [s]
ontime6	38746.859247804	Sum of GTIs [s]
ontime7	38750.000298142	Sum of GTIs [s]
ontime8	38750.000298142	Sum of GTIs [s]
l2events	253498	Number of level 2 events



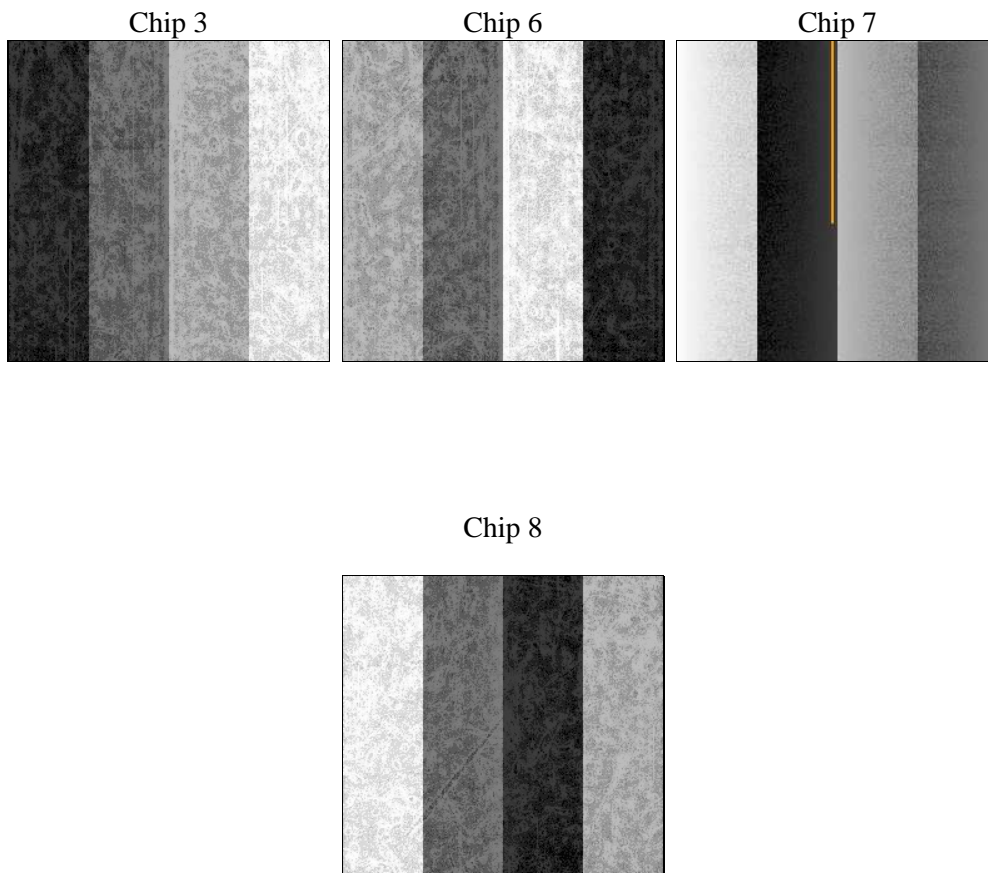
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38682.617000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	38750.000298142	Sum of GTIs [s]
caldsver	4.8.3.1	&#160	ontime3	38746.859207749	Sum of GTIs [s]
date	2019-08-26T02:25:43	Date and time of file creation	ontime6	38746.859247804	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	38750.000298142	Sum of GTIs [s]
			ontime8	38750.000298142	Sum of GTIs [s]
			l1events	1392680	Number of level 1 events

### 2.1.4 Events

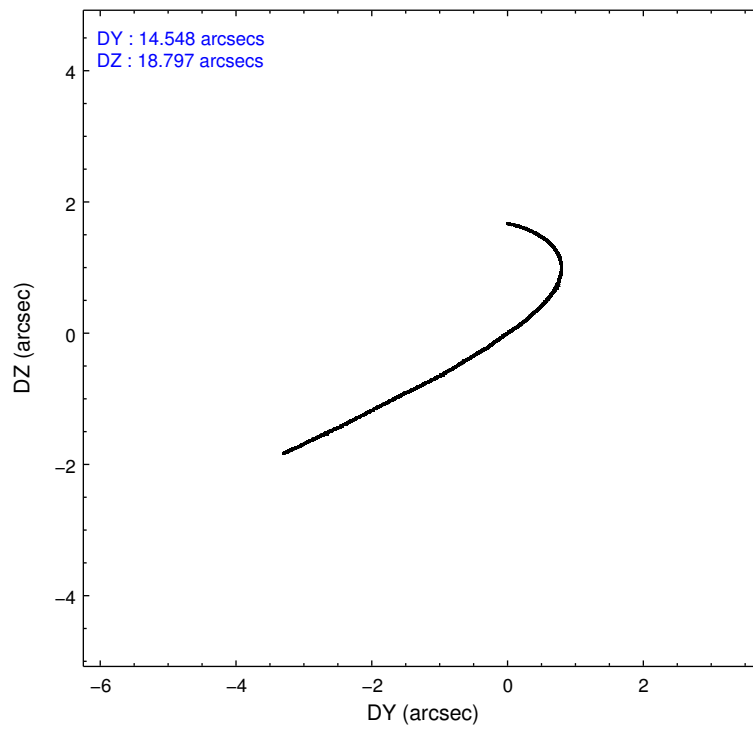
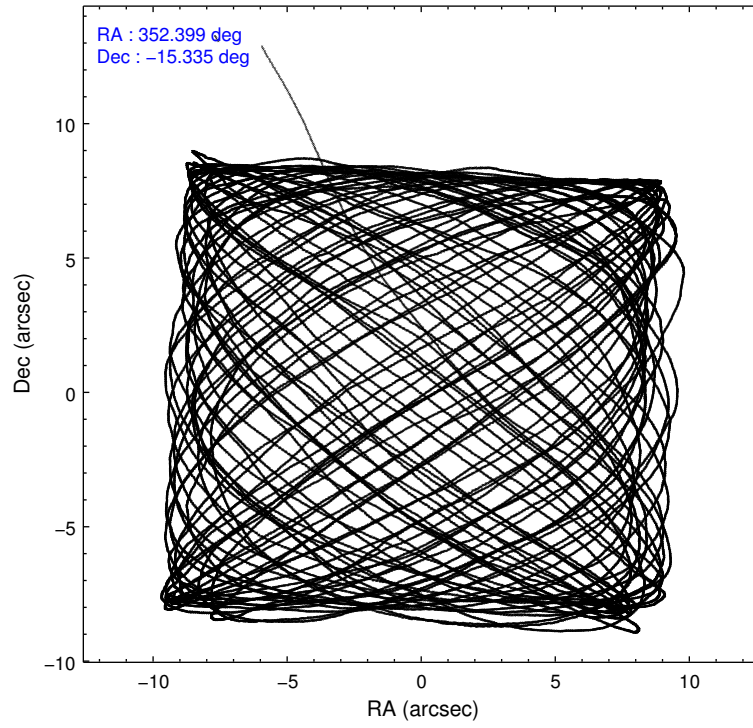
	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	289112	315947	390536	397085
rejected events	258705	282027	222709	291166
rejected %	89%	89%	57%	73%

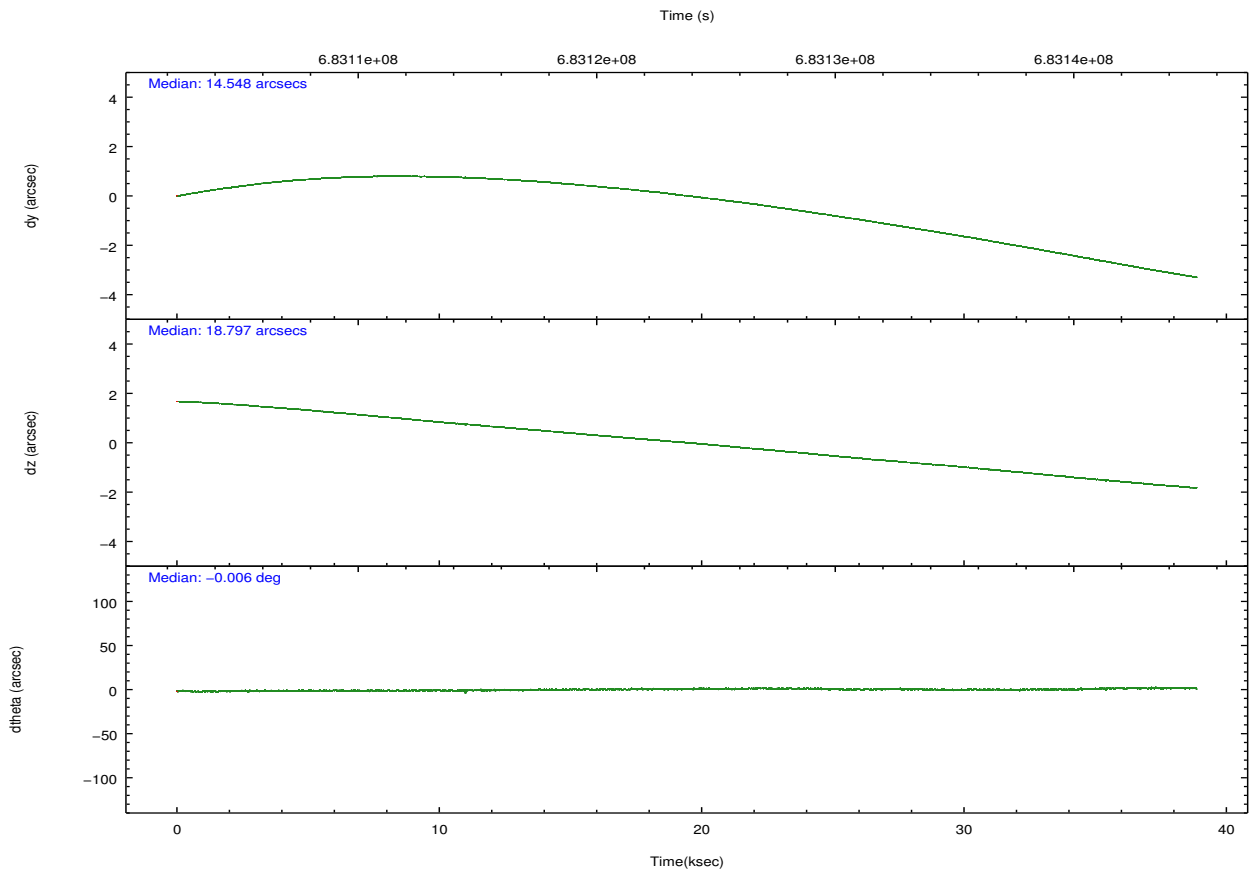
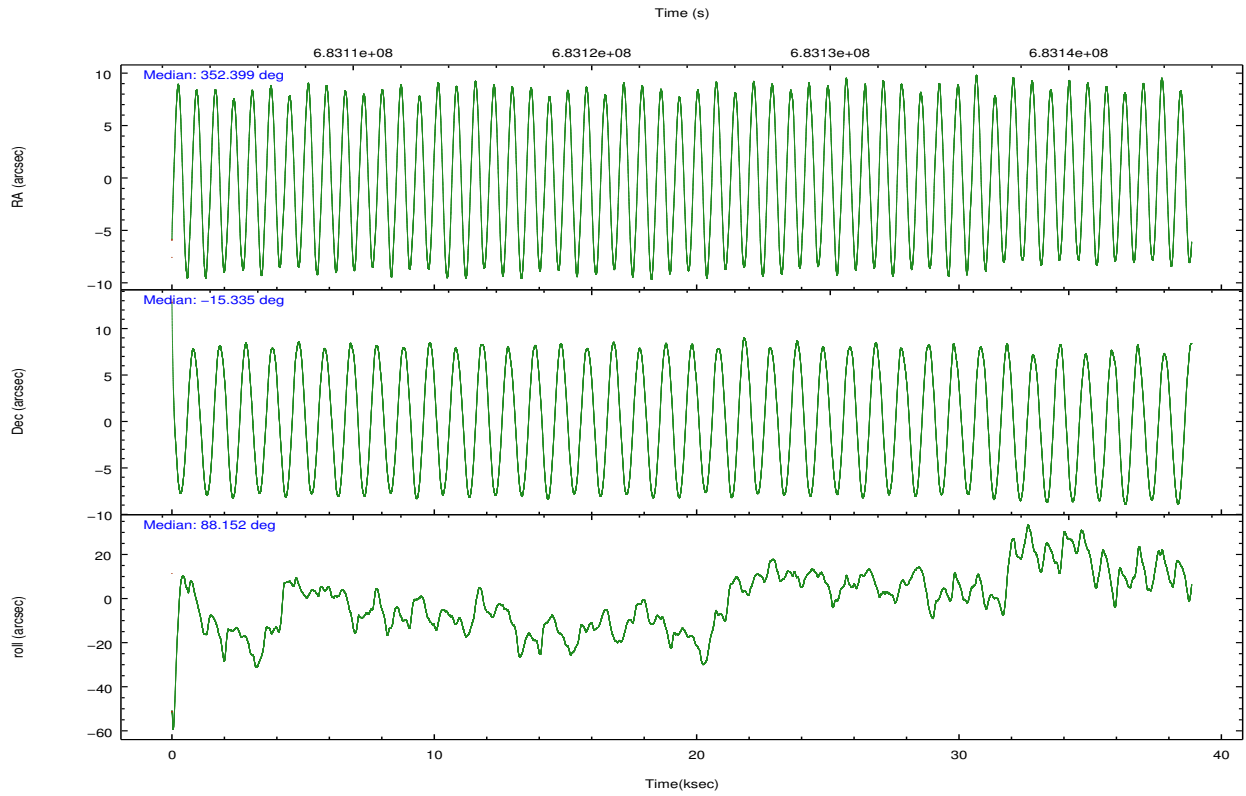
	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	10528	10222	13644	29294
	3%	3%	3%	7%
grade 1 events	152	148	584	319
	0%	0%	0%	0%
grade 2 events	6728	8924	35771	25903
	2%	2%	9%	6%
grade 3 events	3183	3143	12867	10948
	1%	0%	3%	2%
grade 4 events	3138	3065	12758	10349
	1%	0%	3%	2%
grade 5 events	13506	13242	37925	21031
	4%	4%	9%	5%
grade 6 events	6833	8568	92804	29426
	2%	2%	23%	7%
grade 7 events	245044	268635	184183	269815
	84%	85%	47%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-3678	ACIS-3678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	352.413209	352.3994470986939	CCD I2 on	O1	N
[deg] Pointing Dec	-15.358820	-15.33479749147804	CCD I3 on	Y	Y
[deg] Pointing Roll	88.002612	88.1555903445133	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	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)	683104545.184000	683103052.77257	CCD S5 on	N	N
Observation start date	2019-08-25T07:14:36	2019-08-25T06:50:52	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	683143228.184000	683144560.15007	On-chip summing requested	N	N
Observation end date	2019-08-25T17:59:19	2019-08-25T18:22:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





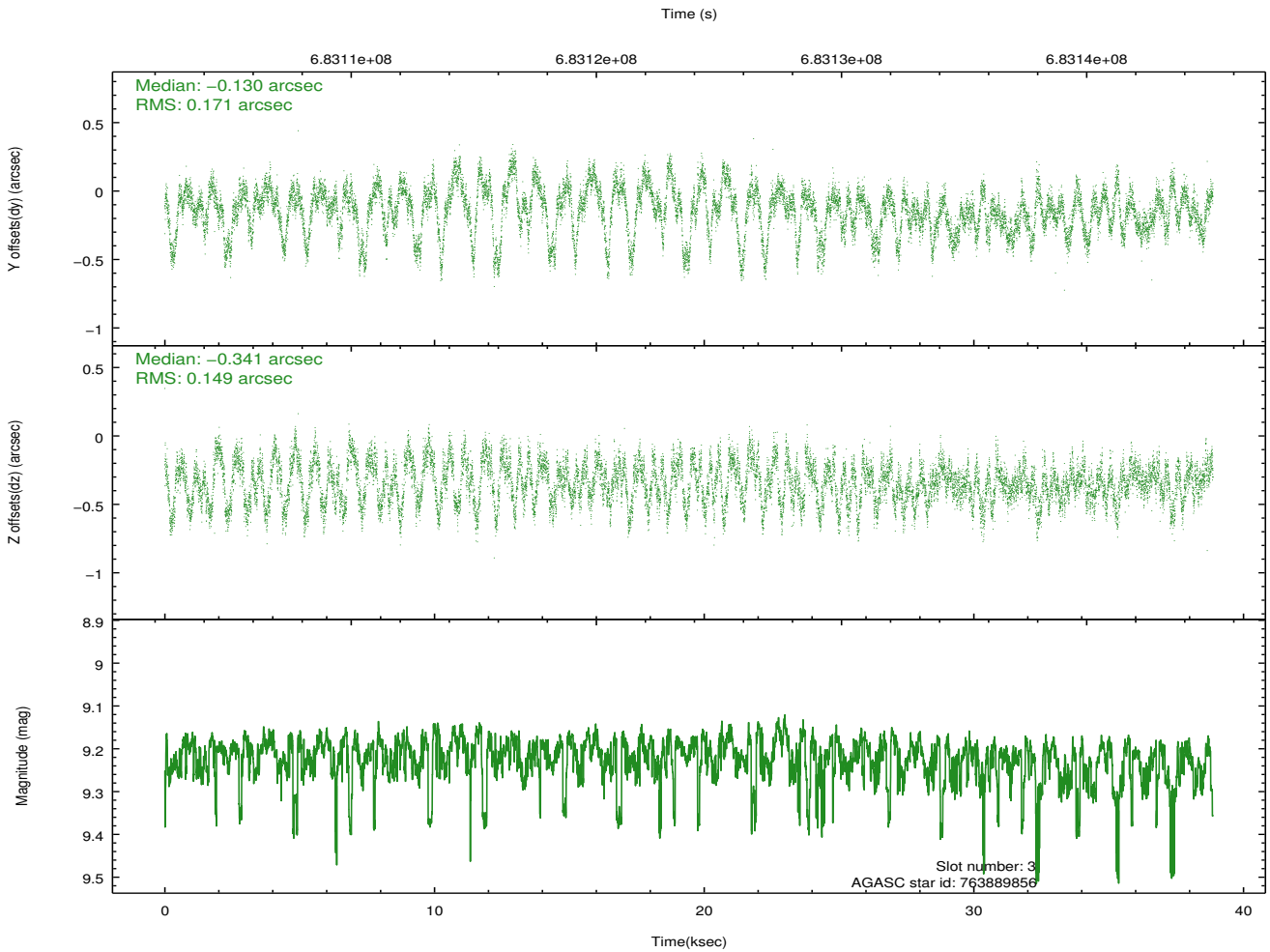
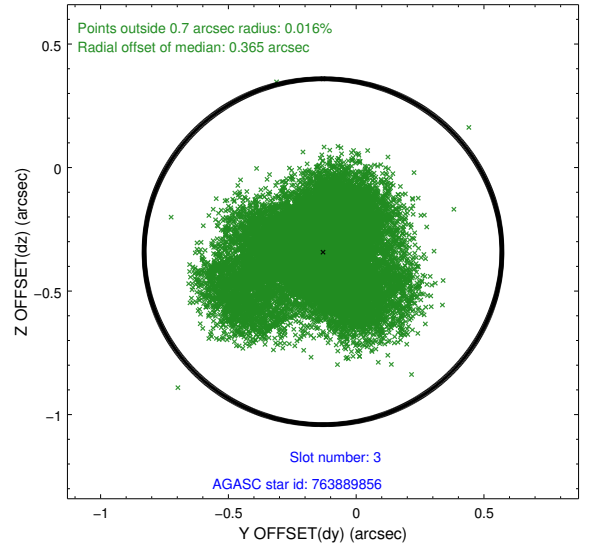
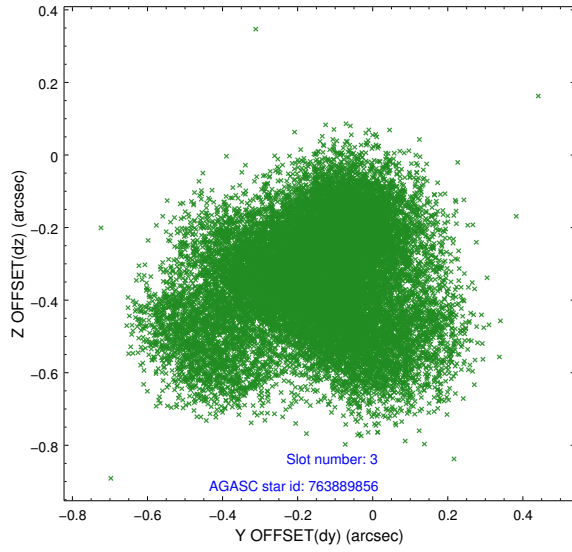
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.07	9478	1.000	-0.286	-0.209	0.054	0.072	0.000000	0.000000	-767.20	-1740
1	FID		ACIS-S-4	7.18	9480	1.000	0.776	0.196	0.032	0.118	0.000000	0.000000	2147.04	168
2	FID		ACIS-S-5	7.14	9481	1.000	-0.512	0.029	0.046	0.061	0.000000	0.000000	-1820.31	161
3	GUIDE	used	763889856	9.22	18933	1.000	-0.130	-0.341	0.243	0.400	351.806840	-14.828602	1830.22	2175
4	GUIDE	used	764808424	8.67	18942	1.000	0.039	0.039	0.215	0.353	352.864993	-14.696878	2433.76	-1489
5	GUIDE	used	839255272	9.52	18782	1.000	0.055	0.362	0.255	0.388	352.744944	-15.268463	363.78	-1139
6	GUIDE	used	839262008	9.82	18924	1.000	0.073	-0.100	0.317	0.514	352.188892	-15.237406	408.30	793
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

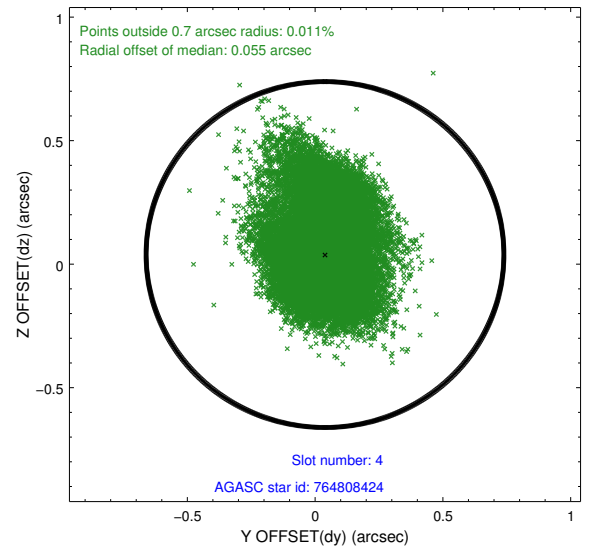
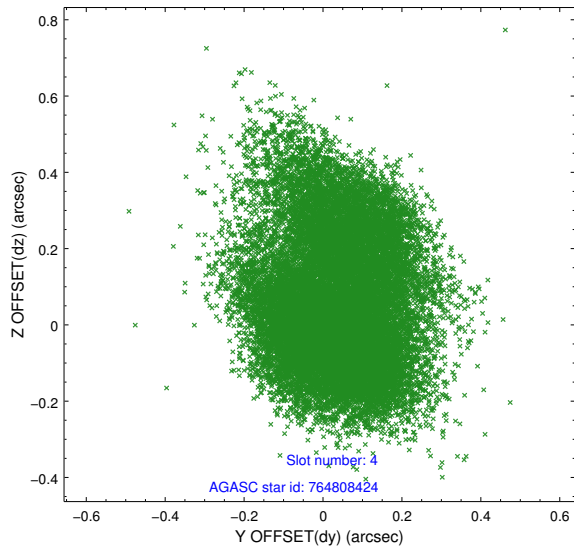
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## 2.4 Star Slots

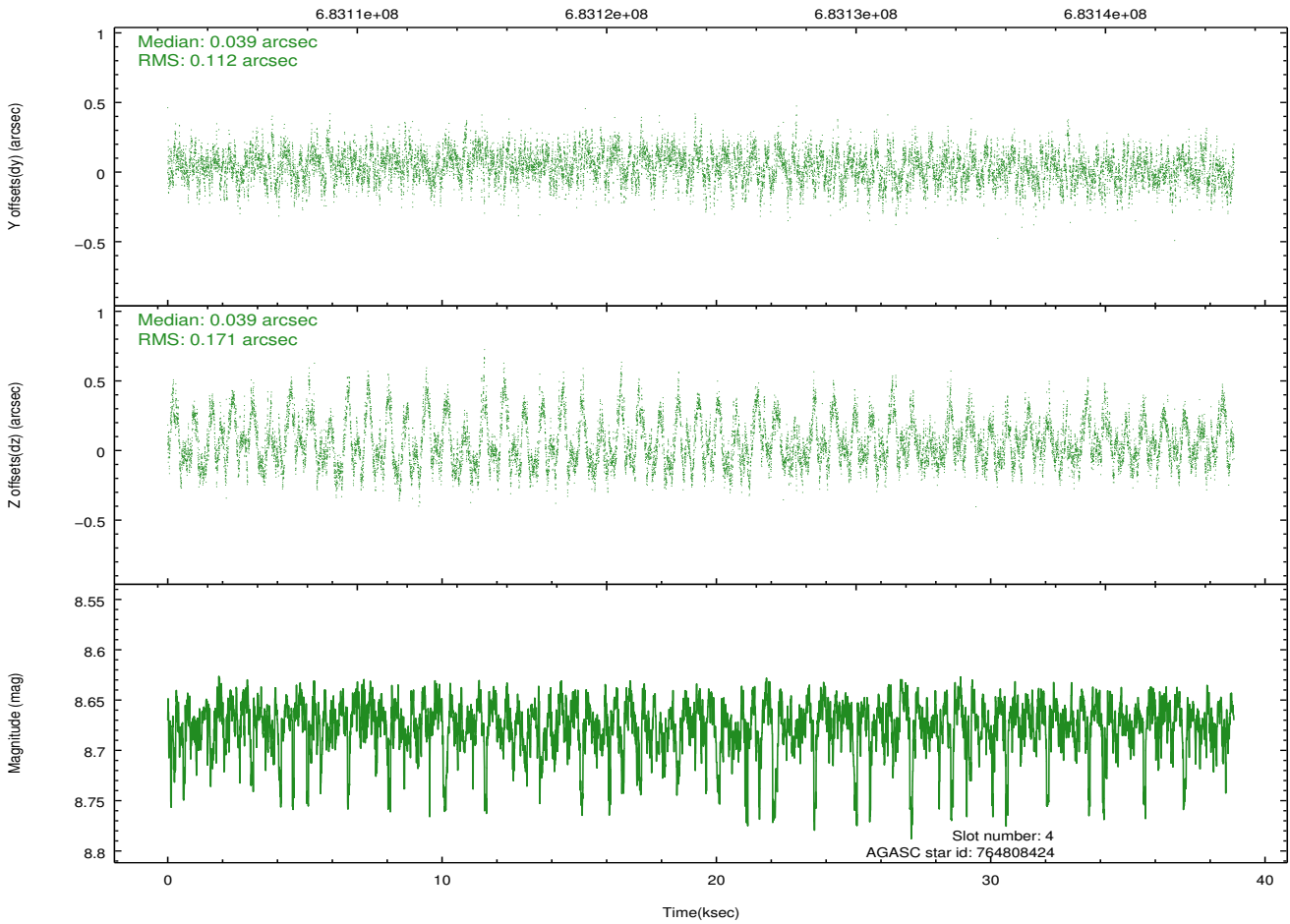
### 2.4.1 Slot 3



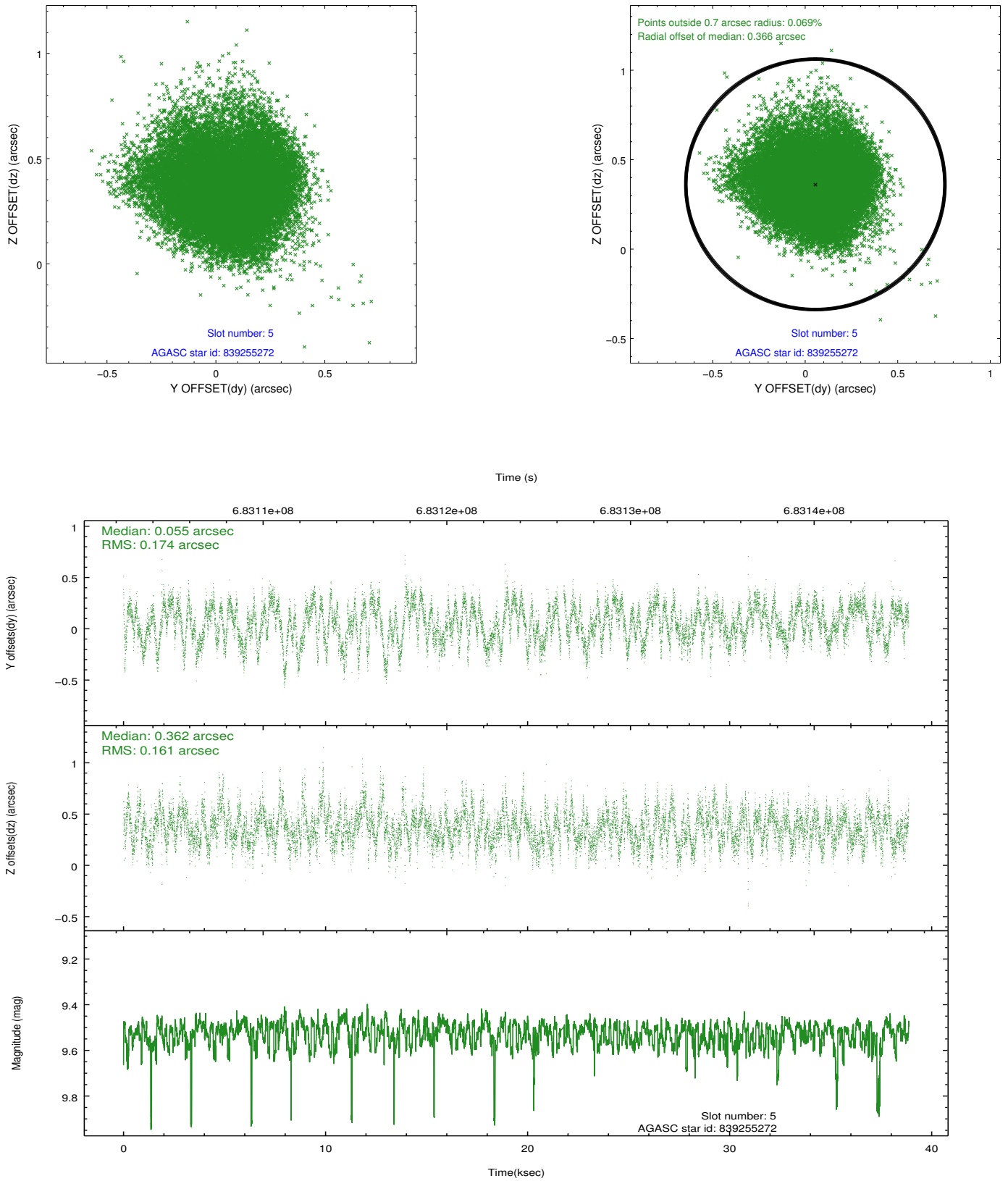
## 2.4.2 Slot 4



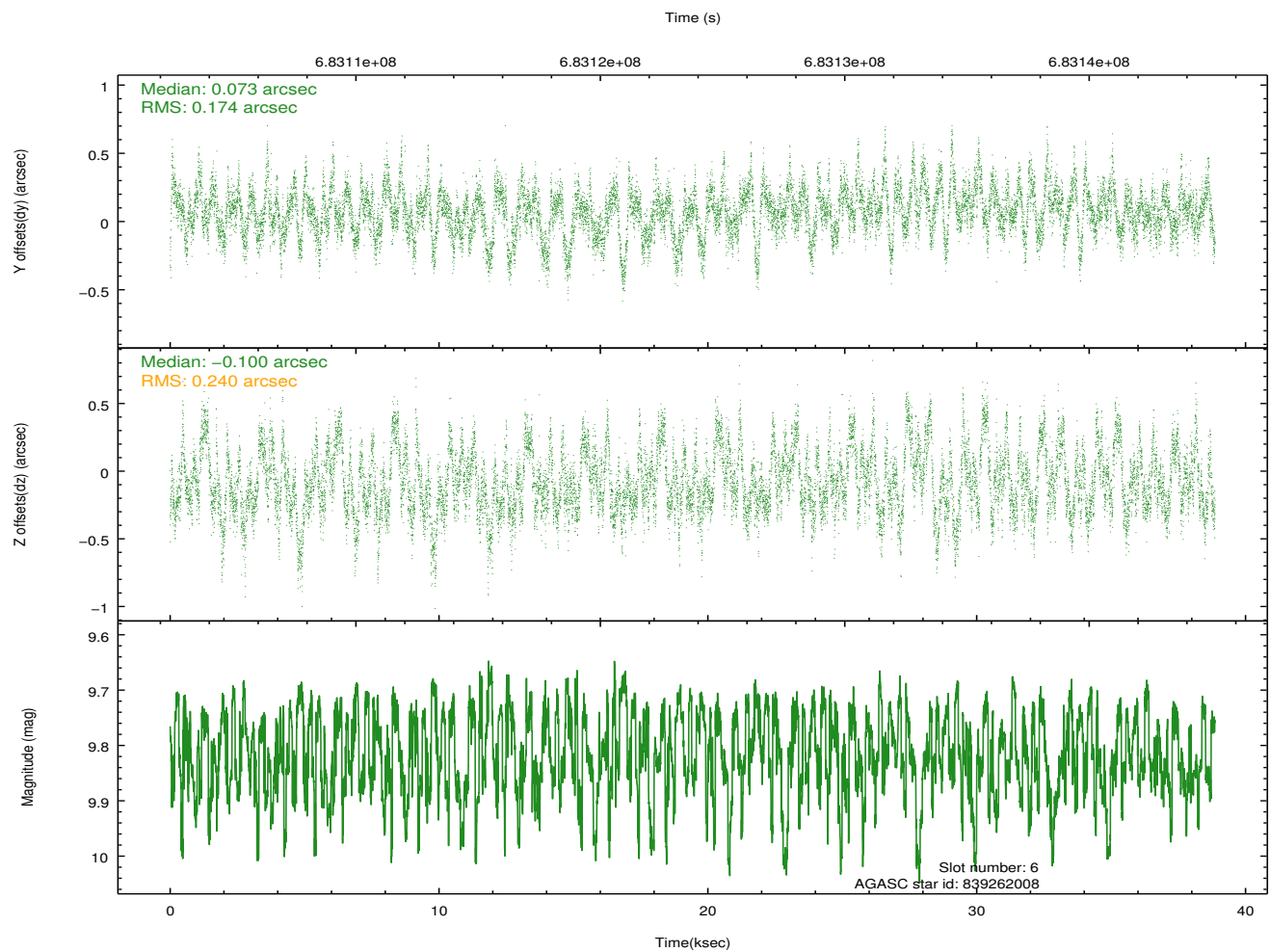
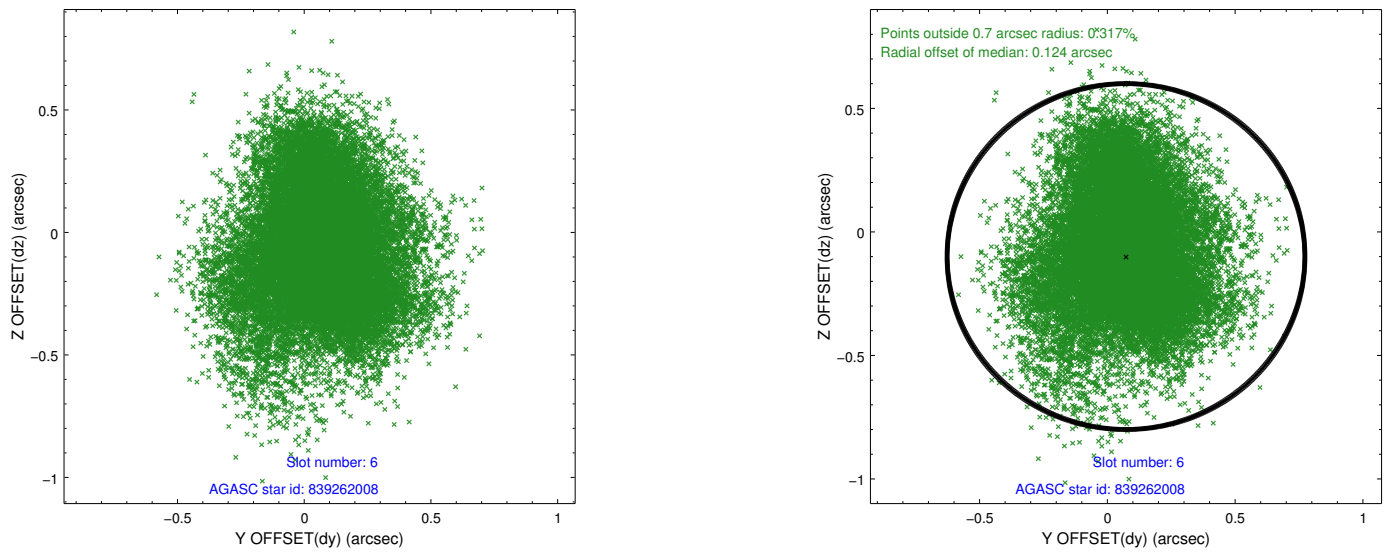
Time (s)



### 2.4.3 Slot 5

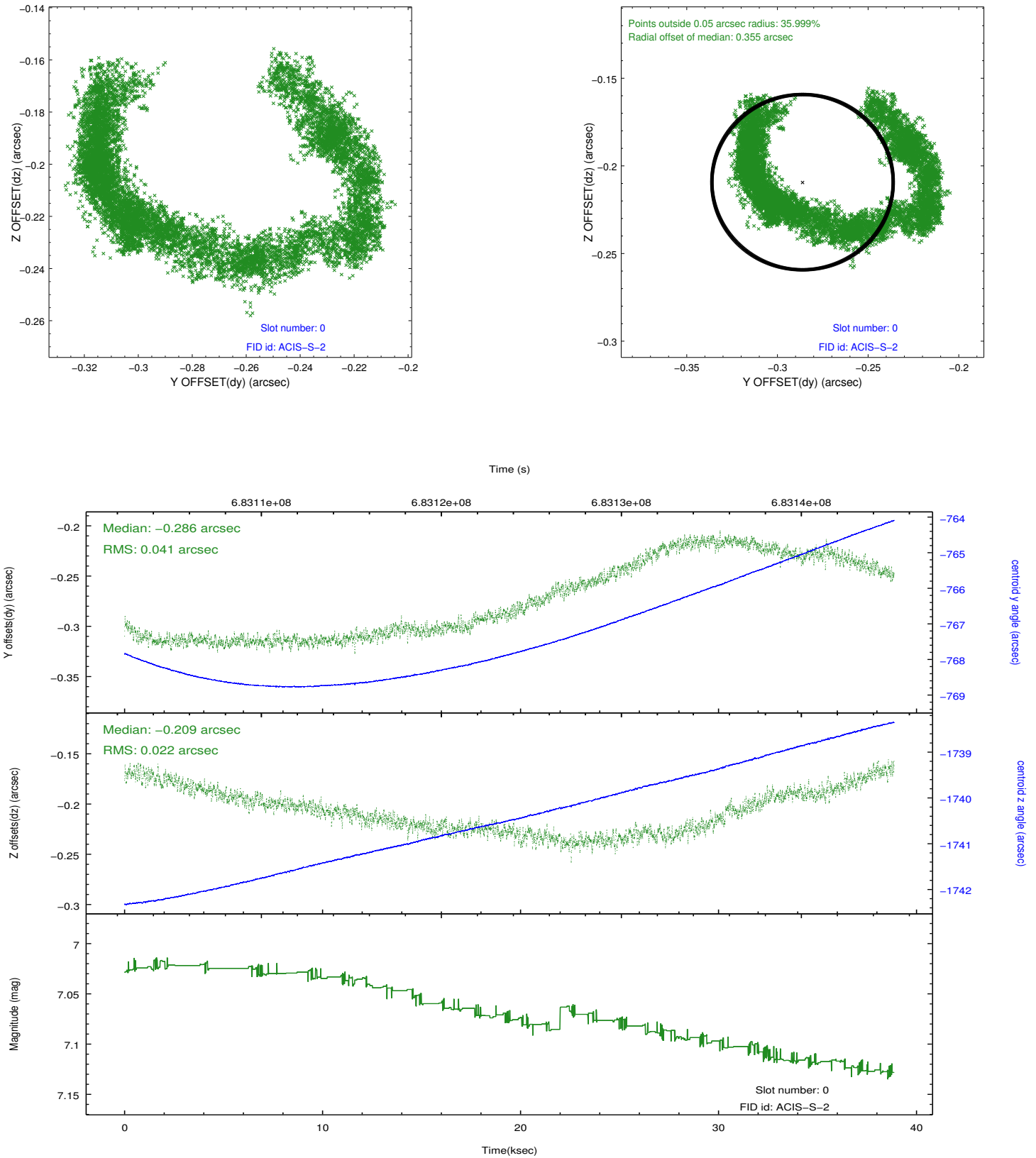


## 2.4.4 Slot 6

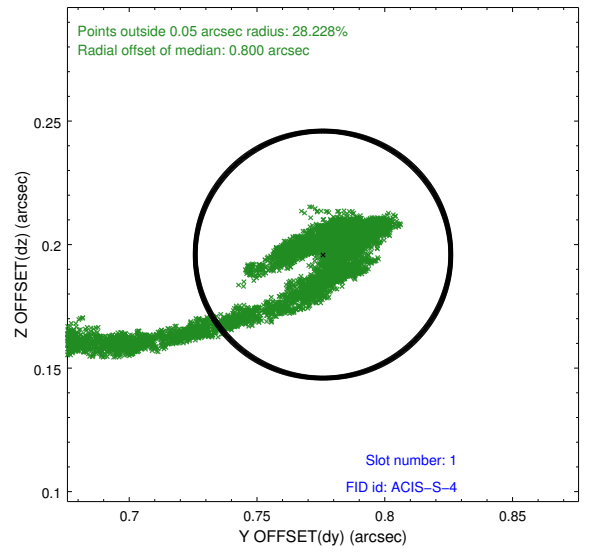
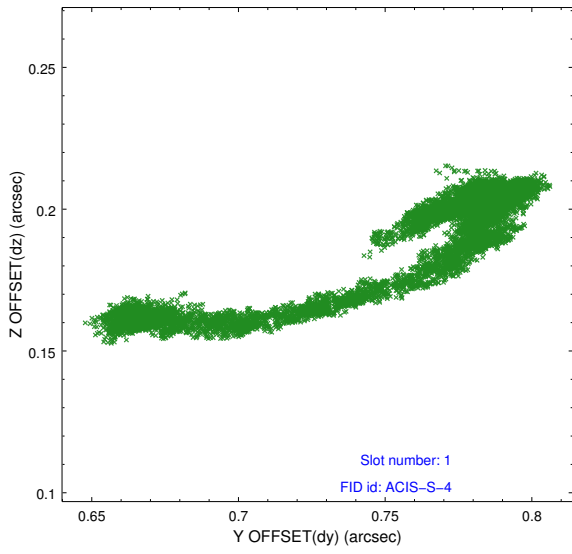


## 2.5 FID Slots

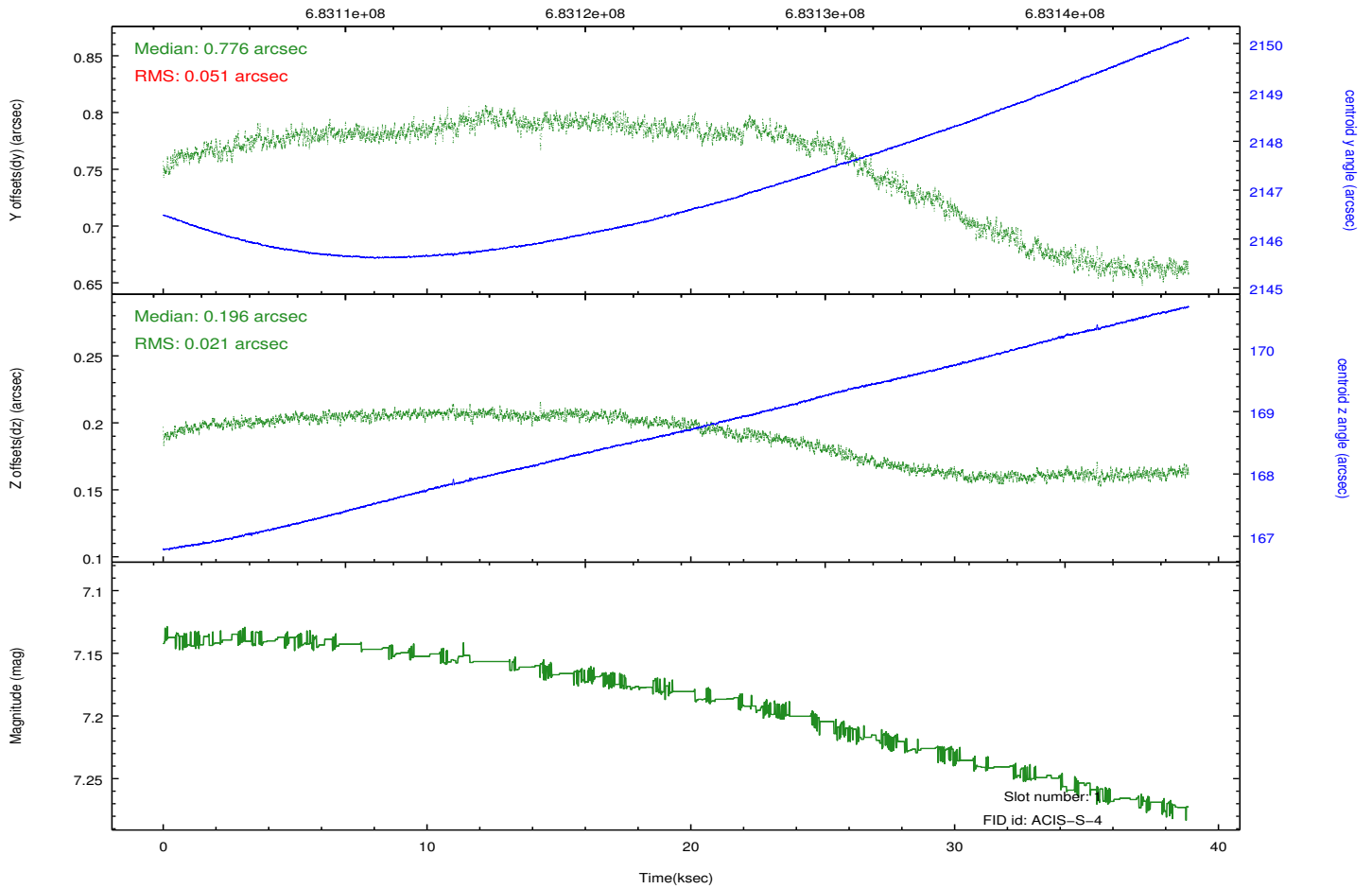
### 2.5.1 Slot 0



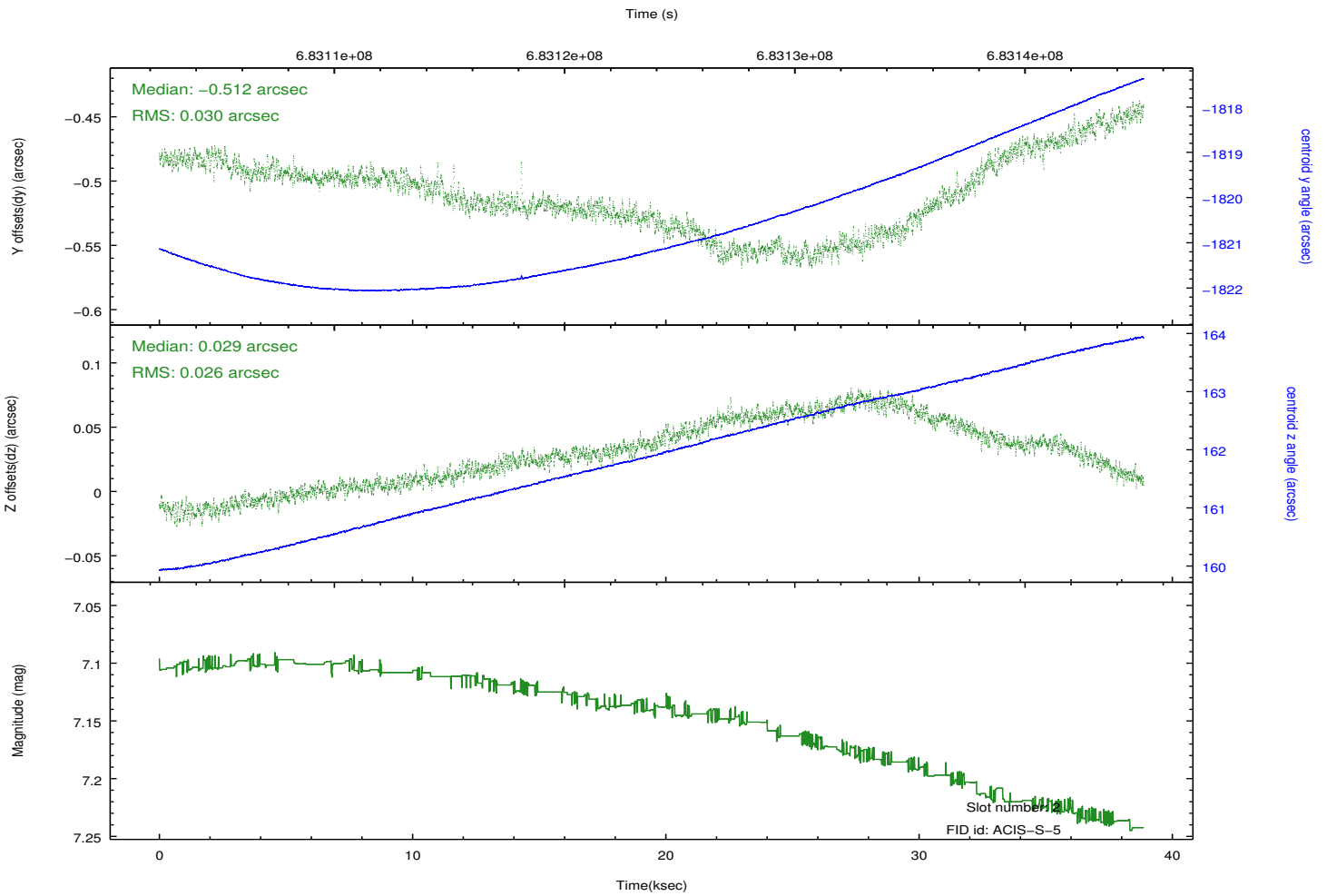
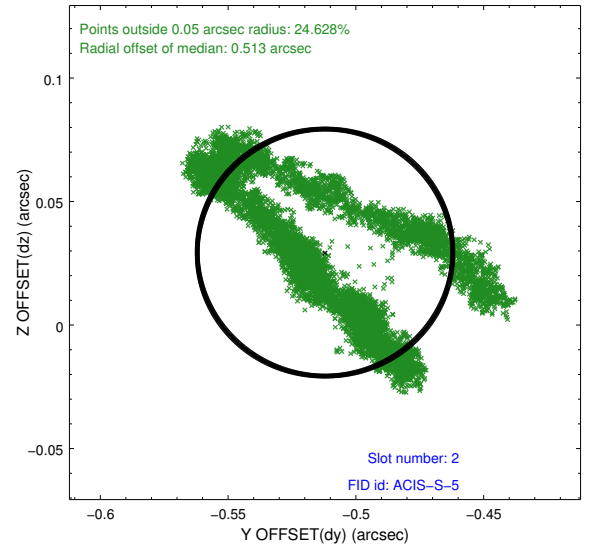
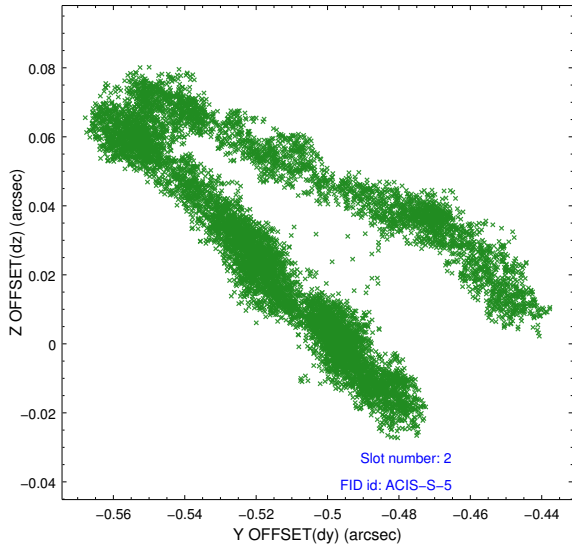
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.08.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.750000298142

## A.2 Comments

One optional chip was dropped.

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.