

# V&V Reference Report

## L2 ASCDS Version : 10.8

Observation 22729 - L2 Version 1  
Chandra X-Ray Center

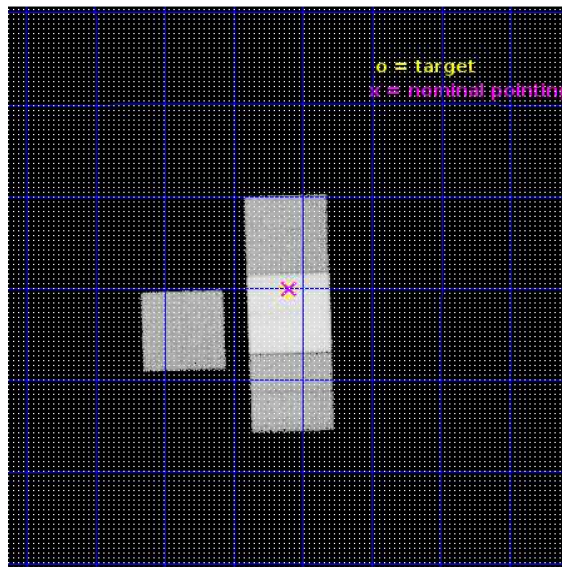
L2 Processing Date : Aug 25 2019

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# 1 Front

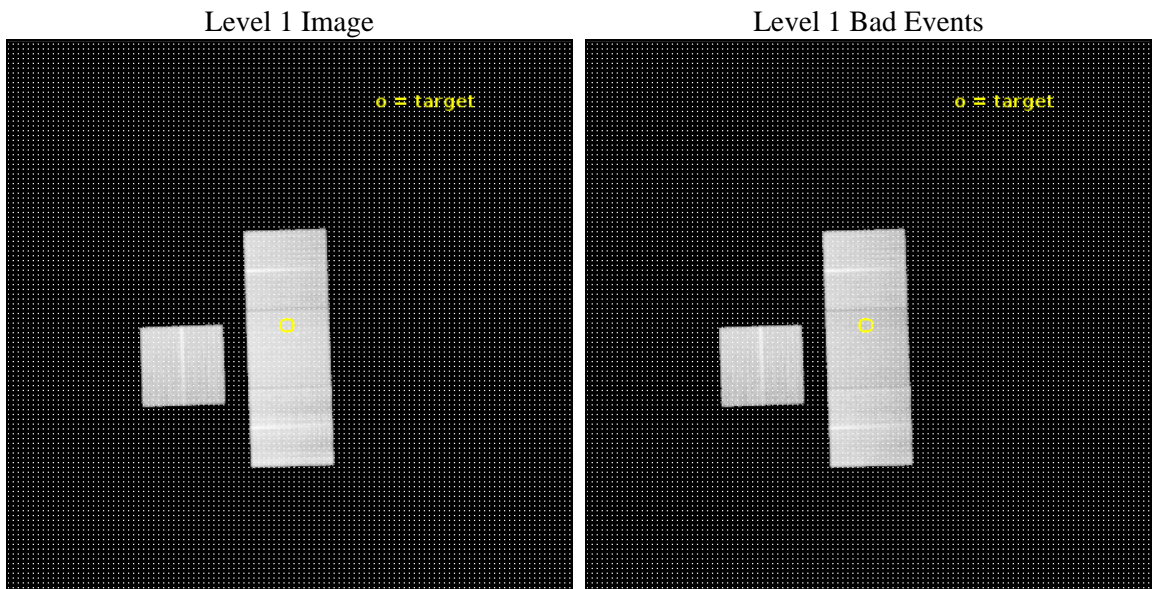
seq_num	703713	Sequence number
obs_id	22729	Observation id
title	X-rays from the brightest radio source at z~6	Proposal title
observer	Eduardo Banados	Principal investigator
object	P352-15	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	352.403333	Observer's specified target RA [deg]
dec_targ	-15.337333	Observer's specified target Dec [deg]
ra_nom	352.3994452006	Nominal RA [deg]
dec_nom	-15.33479624077	Nominal Dec [deg]
roll_nom	88.15558040025	Nominal Roll [deg]
revision	1	Processing version of data
ontime	46066.000354409	Sum of GTIs [s]
livetime	45464.114146483	Livetime [s]
ontime3	46056.577093482	Sum of GTIs [s]
ontime6	46050.295123339	Sum of GTIs [s]
ontime7	46066.000354409	Sum of GTIs [s]
ontime8	46056.577244163	Sum of GTIs [s]
l2events	297147	Number of level 2 events



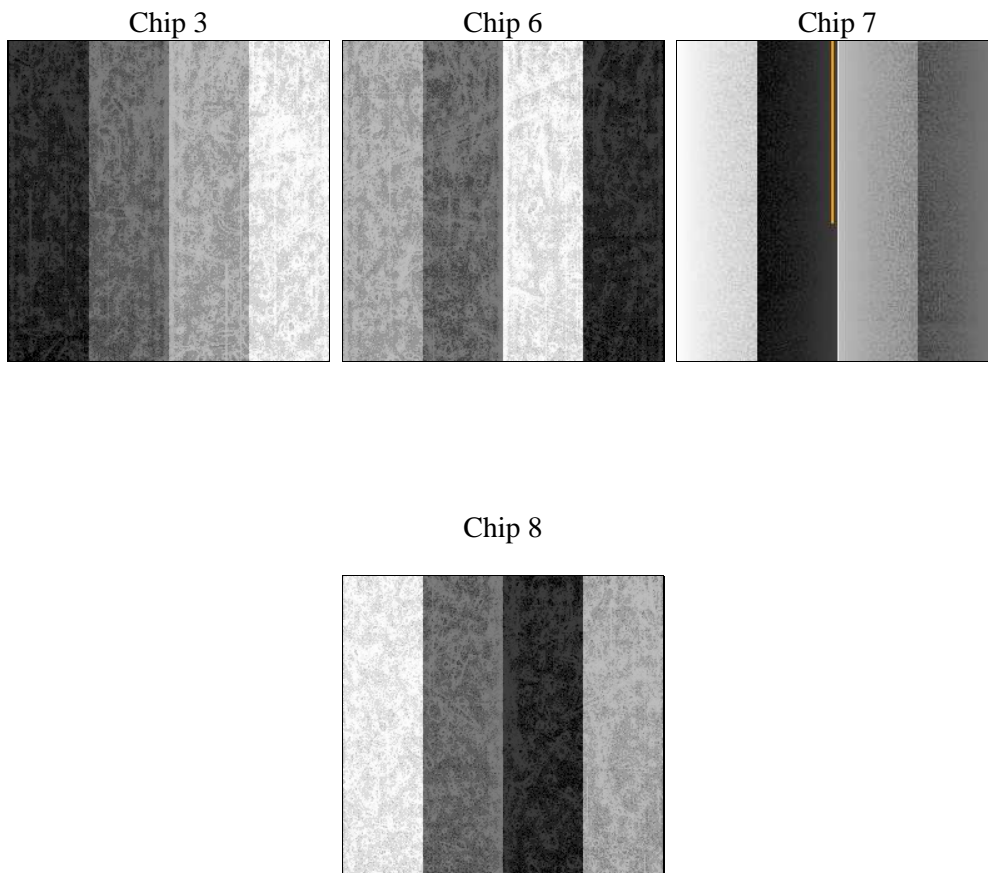
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	46000.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	46066.000354409	Sum of GTIs [s]
caldsver	4.8.3.1	&#160	ontime3	46056.577093482	Sum of GTIs [s]
date	2019-08-25T04:09:52	Date and time of file creation	ontime6	46050.295123339	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	46066.000354409	Sum of GTIs [s]
			ontime8	46056.577244163	Sum of GTIs [s]
			l1events	1647977	Number of level 1 events

### 2.1.4 Events

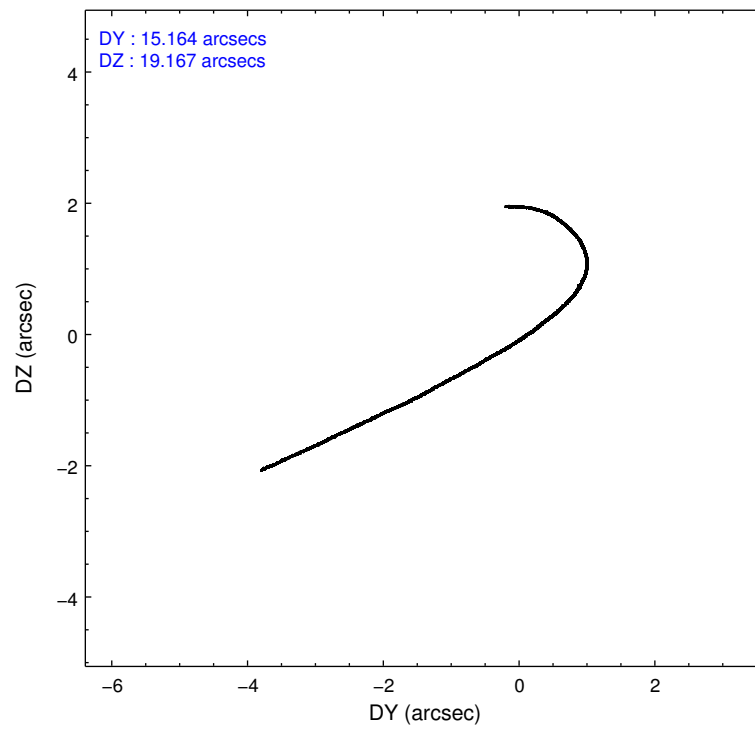
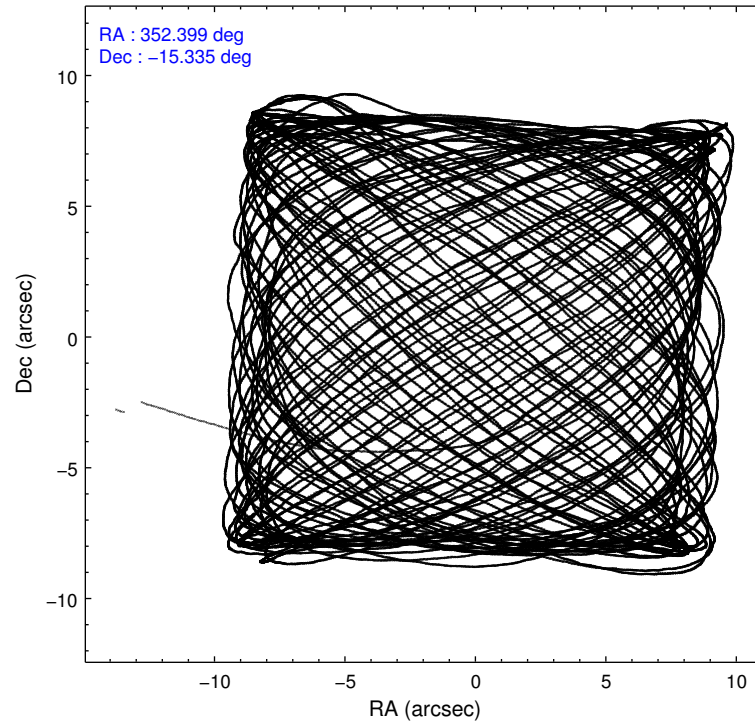
	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	344966	377452	460567	464992
rejected events	308899	337611	264182	341336
rejected %	89%	89%	57%	73%

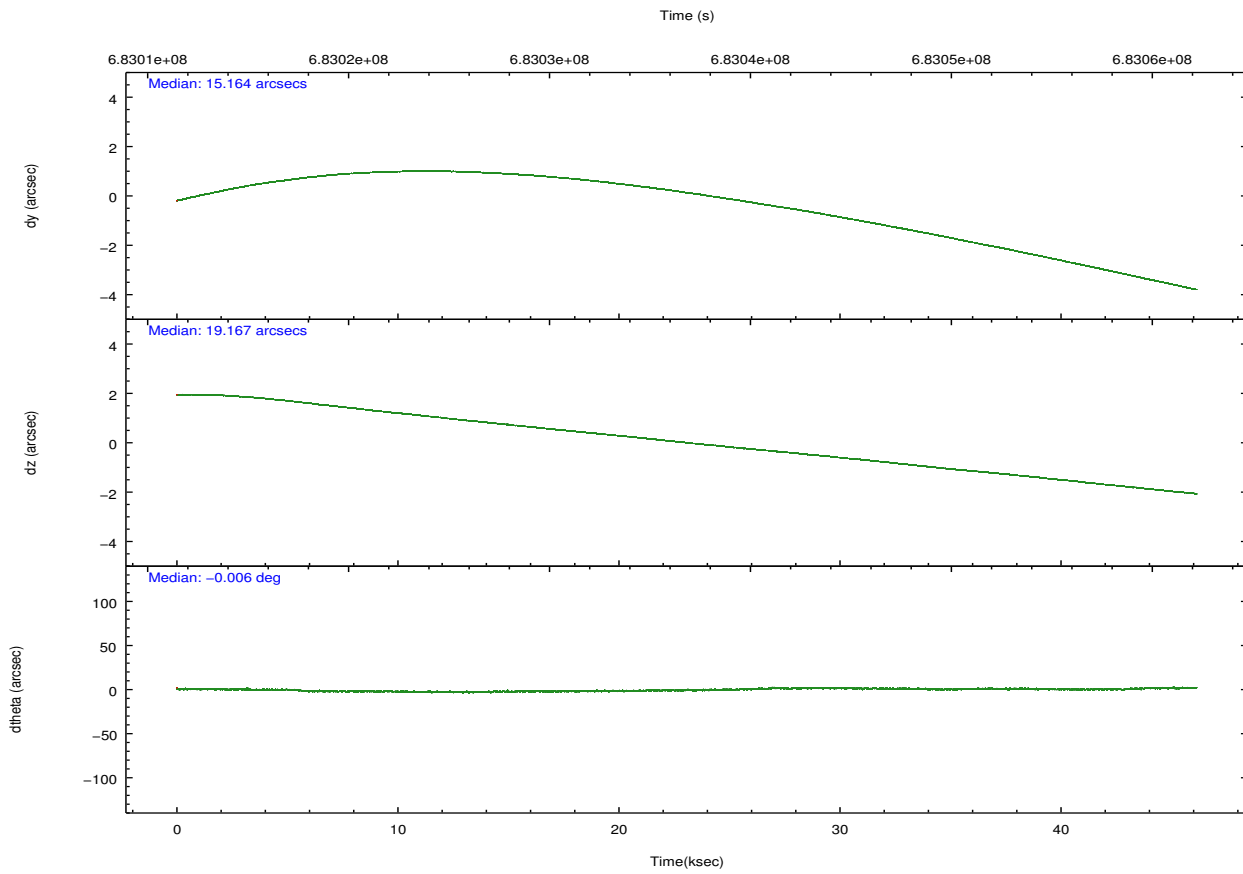
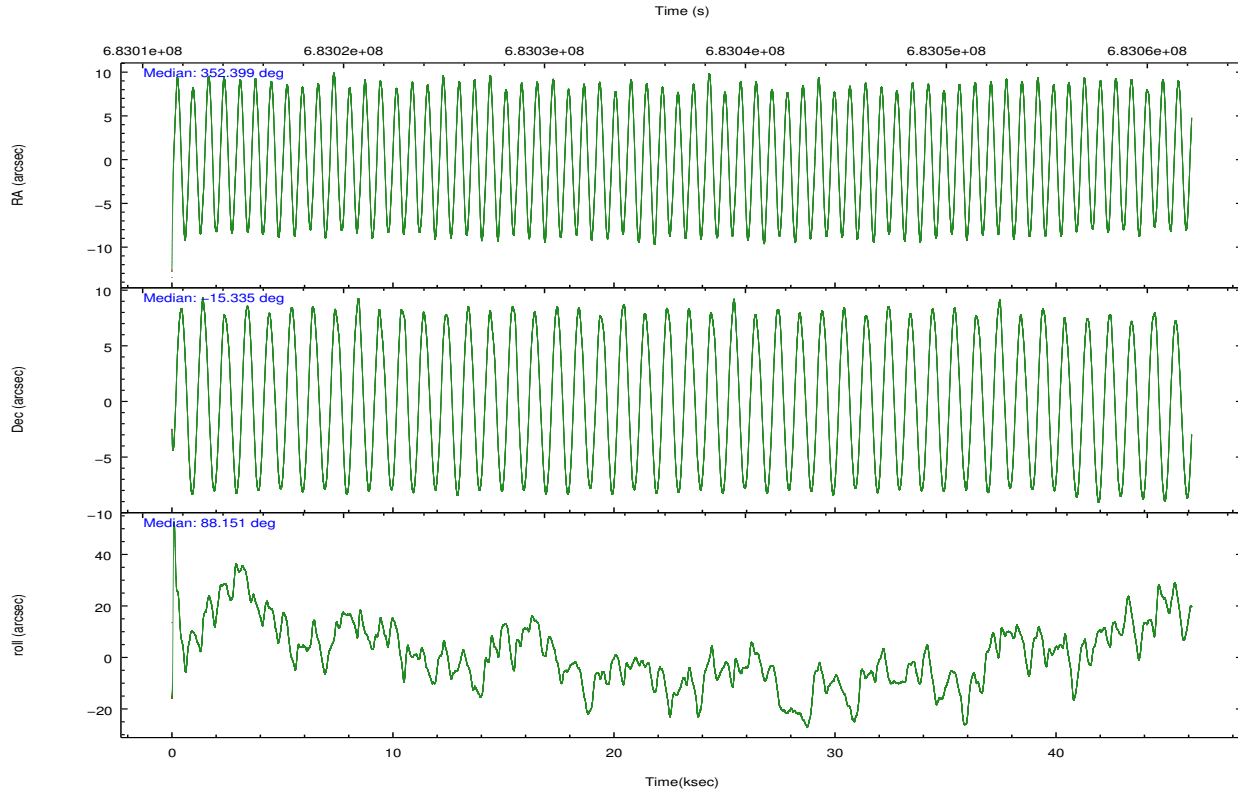
	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	12528	12167	16114	34350
	3%	3%	3%	7%
grade 1 events	173	171	702	370
	0%	0%	0%	0%
grade 2 events	8041	10358	41720	30083
	2%	2%	9%	6%
grade 3 events	3783	3576	14922	12865
	1%	0%	3%	2%
grade 4 events	3752	3557	14843	12091
	1%	0%	3%	2%
grade 5 events	15869	15854	44711	24569
	4%	4%	9%	5%
grade 6 events	7971	10190	108811	34306
	2%	2%	23%	7%
grade 7 events	292849	321579	218744	316358
	84%	85%	47%	68%

## 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	352.399445200596	CCD I2 on	O1	N
[deg] Pointing Dec	-15.358820	-15.33479624076955	CCD I3 on	Y	Y
[deg] Pointing Roll	88.002612	88.15558040025022	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)	683013899.184000	683012598.05463	CCD S5 on	N	N
Observation start date	2019-08-24T06:03:50	2019-08-24T05:43:18	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	683059899.184000	683060958.58254	On-chip summing requested	N	N
Observation end date	2019-08-24T18:50:30	2019-08-24T19:09:18	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





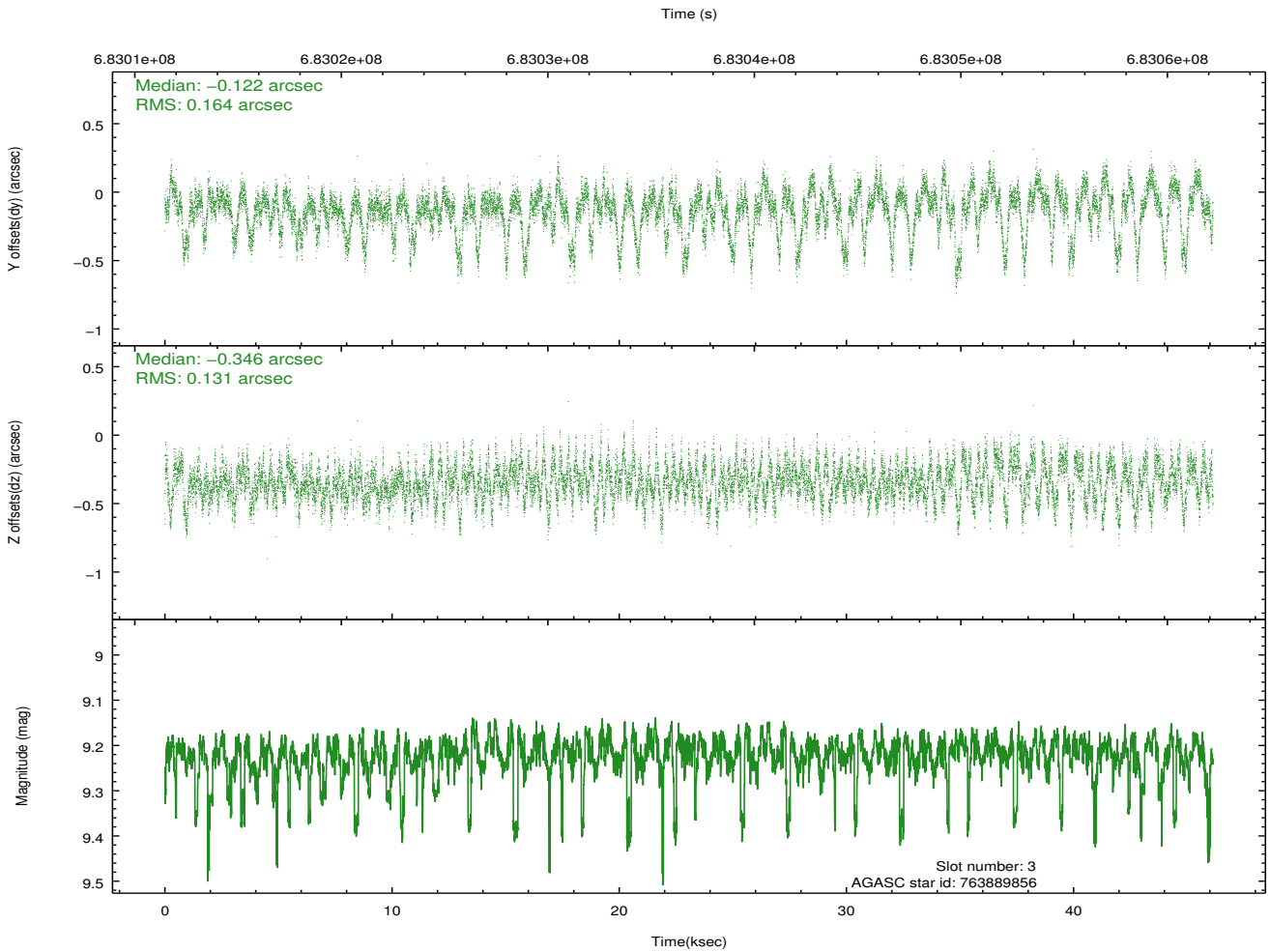
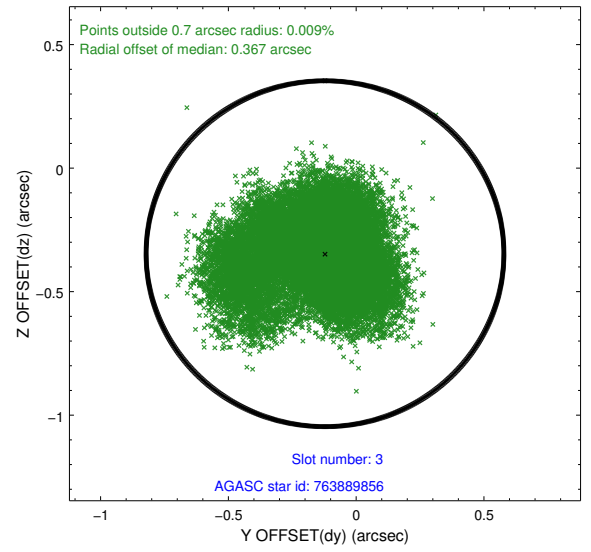
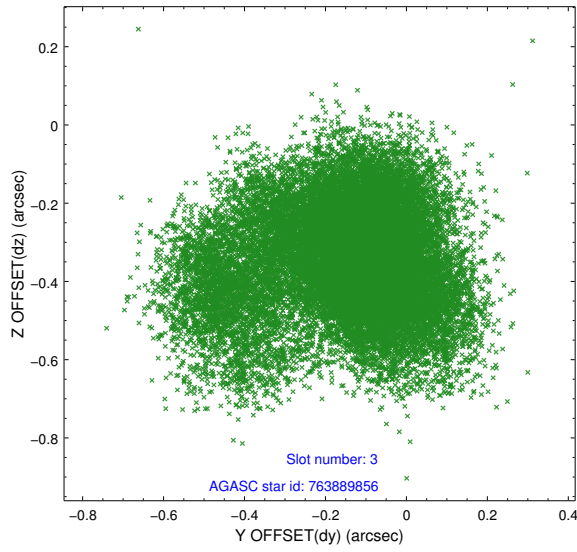
### Slot Statistics

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	7.06	11254	1.000	-0.305	-0.201	0.053	0.092	0.000000	0.000000	-767.82	-1740
1	FID		ACIS-S-4	7.18	11253	1.000	0.759	0.199	0.038	0.097	0.000000	0.000000	2146.43	168
2	FID		ACIS-S-5	7.13	11253	1.000	-0.494	0.014	0.040	0.073	0.000000	0.000000	-1820.96	161
3	GUIDE	used	763889856	9.22	22475	1.000	-0.122	-0.346	0.218	0.387	351.806840	-14.828602	1830.21	2175
4	GUIDE	used	764808424	8.68	22476	1.000	0.029	0.027	0.203	0.322	352.864993	-14.696878	2433.74	-1489
5	GUIDE	used	839255272	9.54	22263	1.000	0.096	0.337	0.270	0.429	352.744944	-15.268463	363.73	-1139
6	GUIDE	used	839262008	9.80	22449	1.000	0.043	-0.061	0.292	0.503	352.188892	-15.237406	408.27	793
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

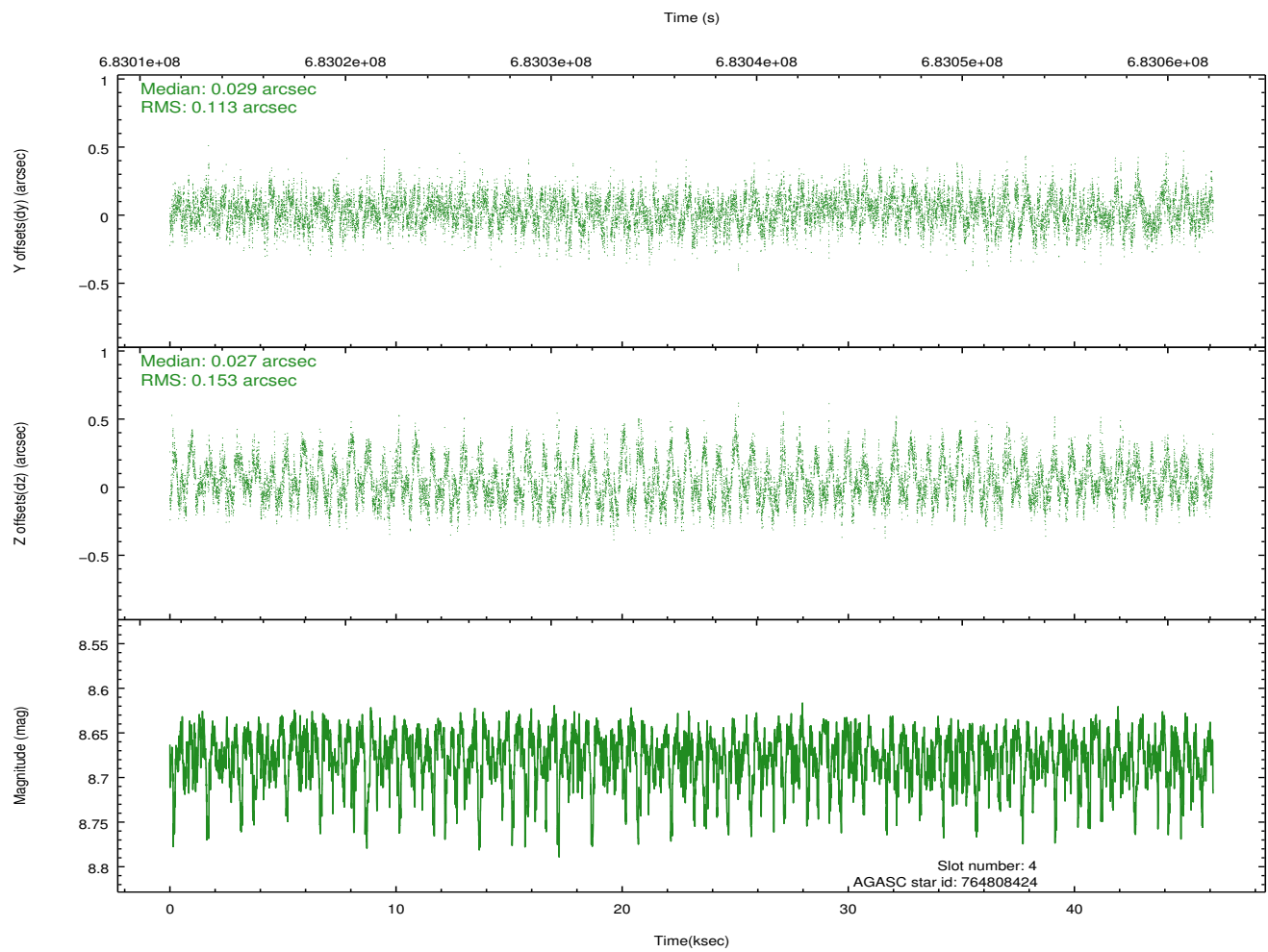
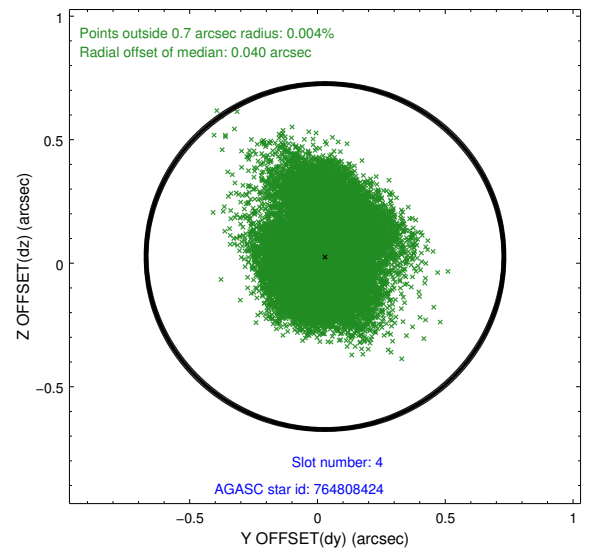
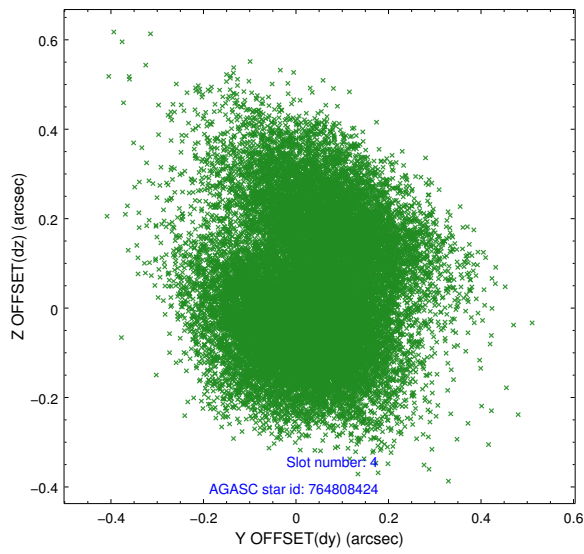
∞

## 2.4 Star Slots

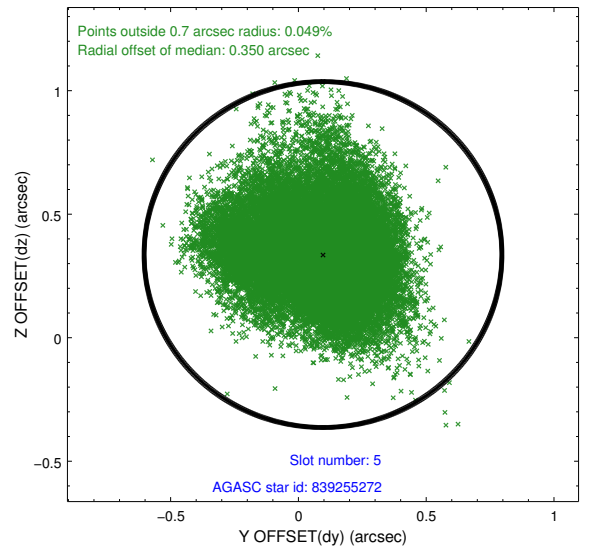
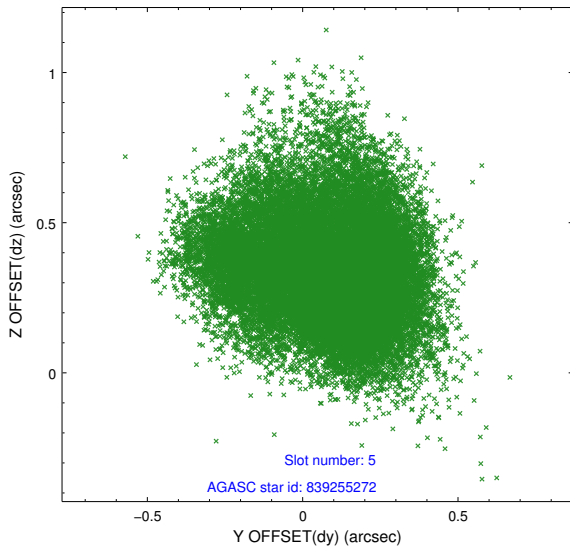
### 2.4.1 Slot 3



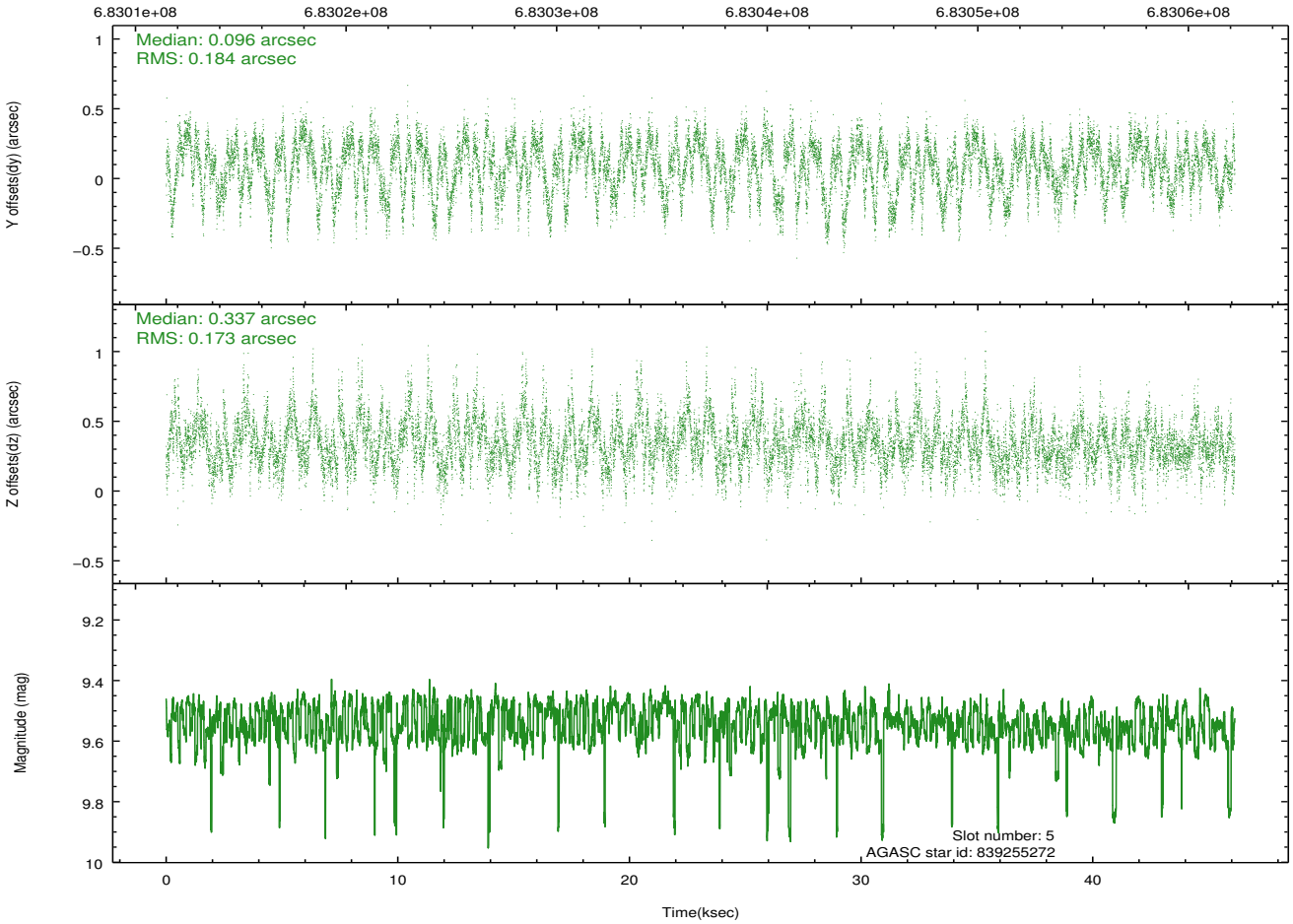
## 2.4.2 Slot 4



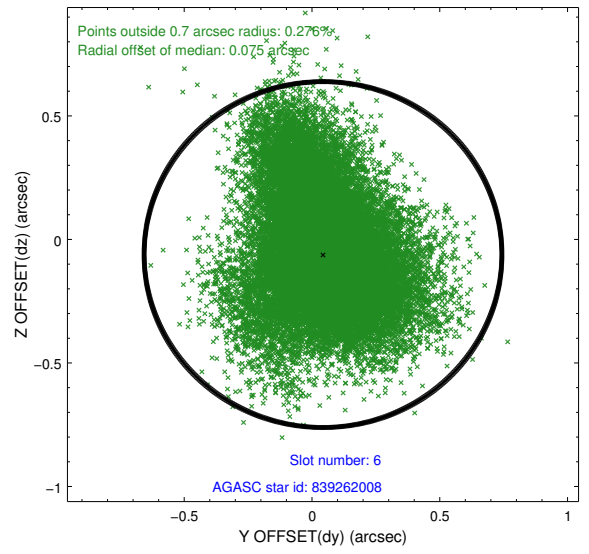
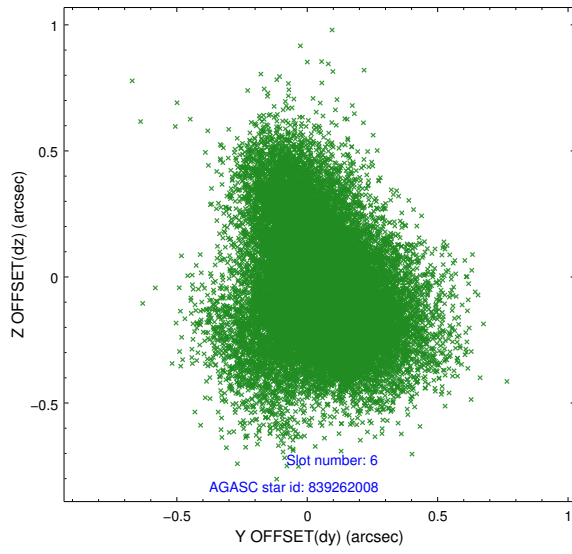
### 2.4.3 Slot 5



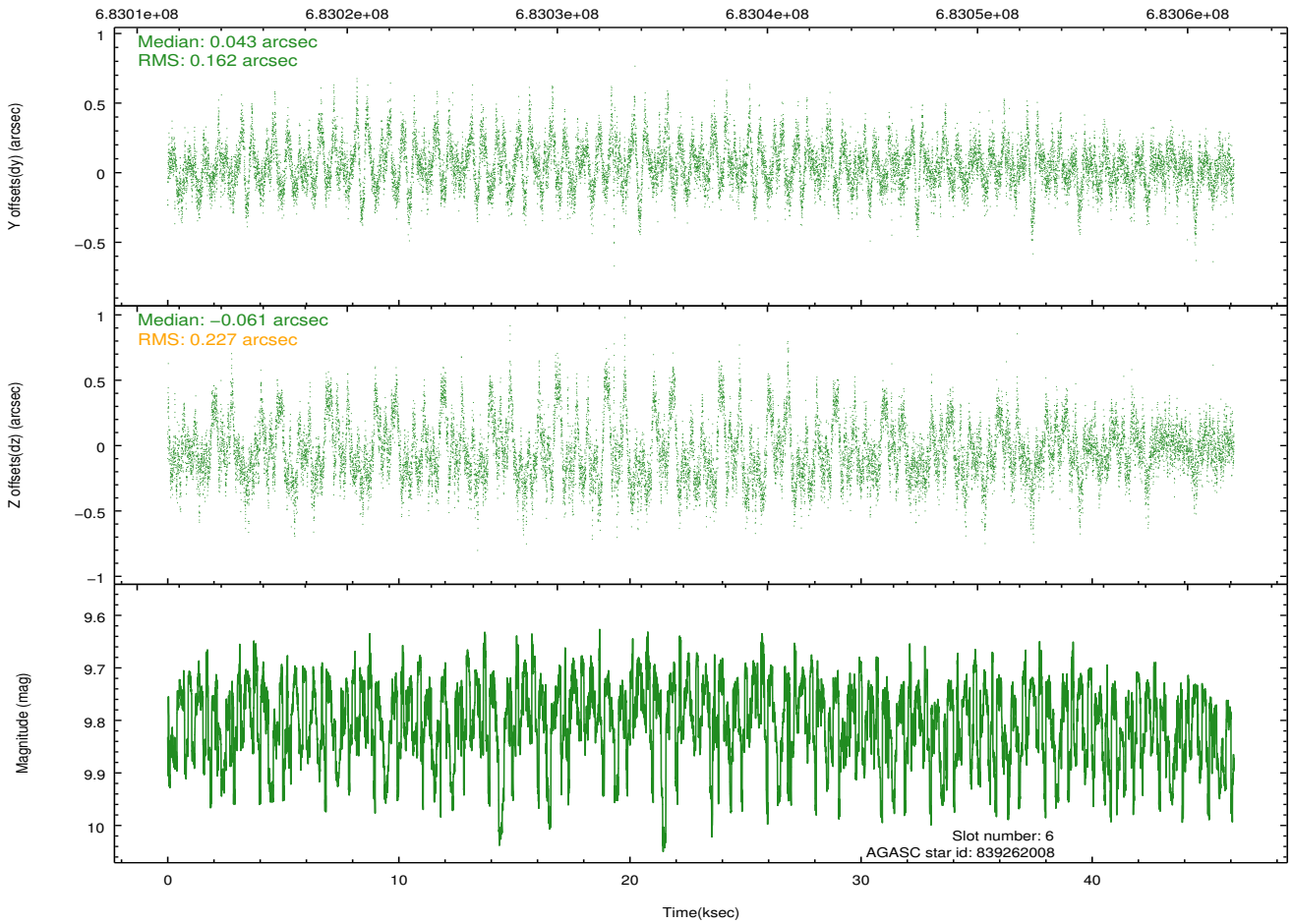
Time (s)



## 2.4.4 Slot 6

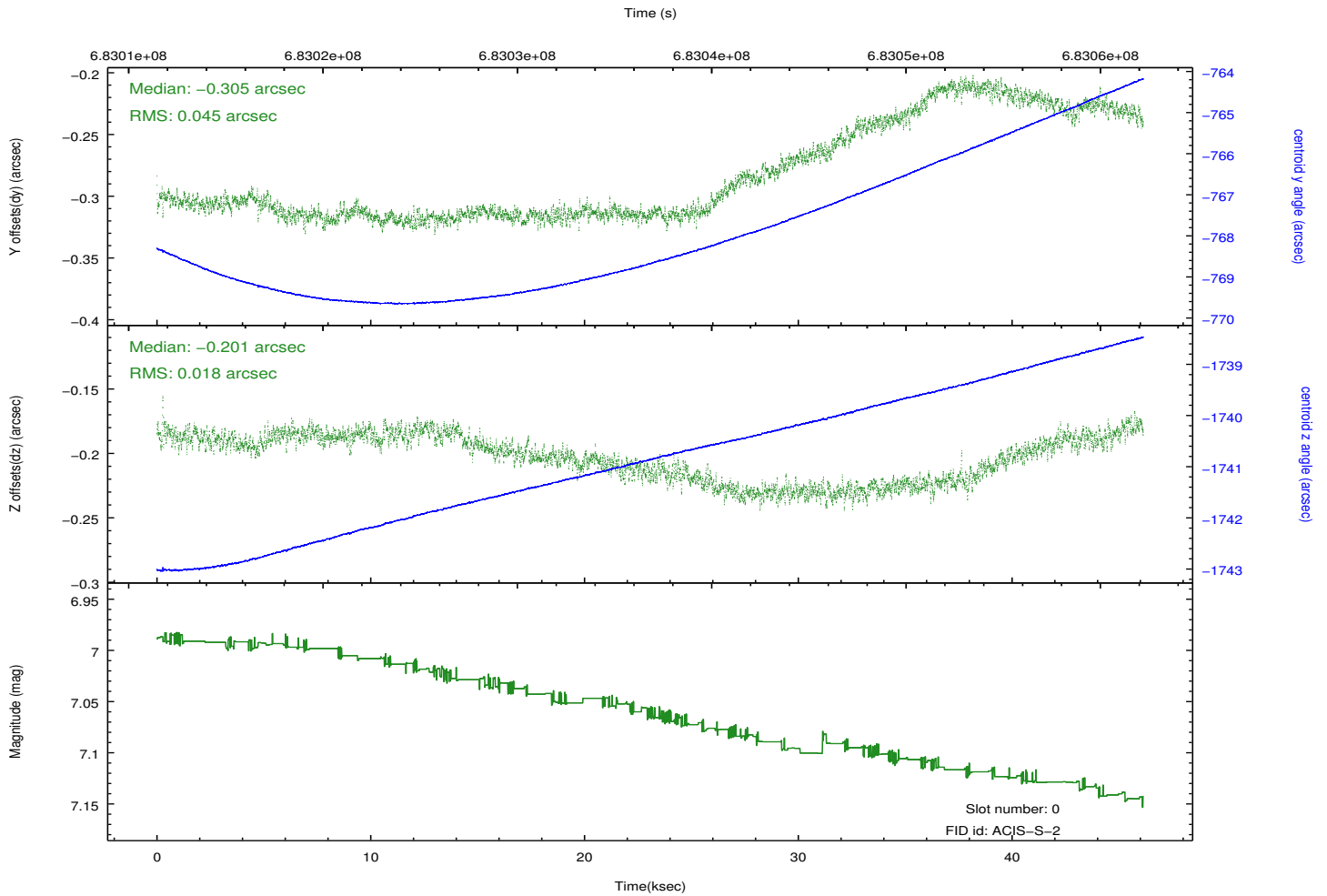
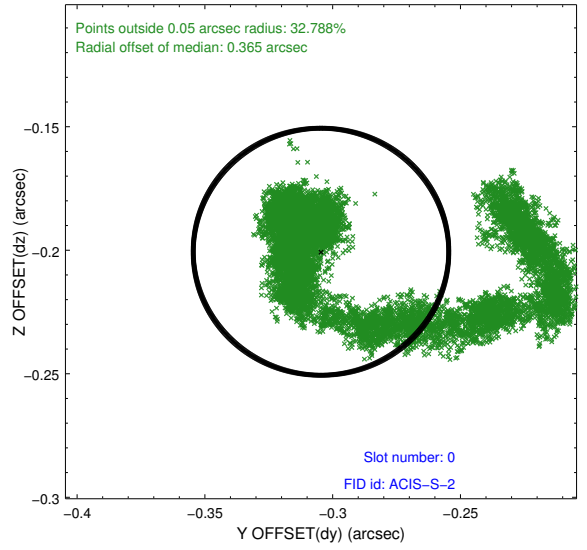
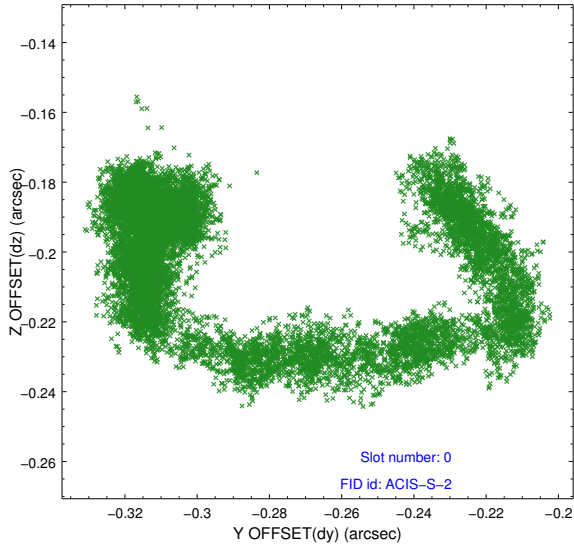


Time (s)

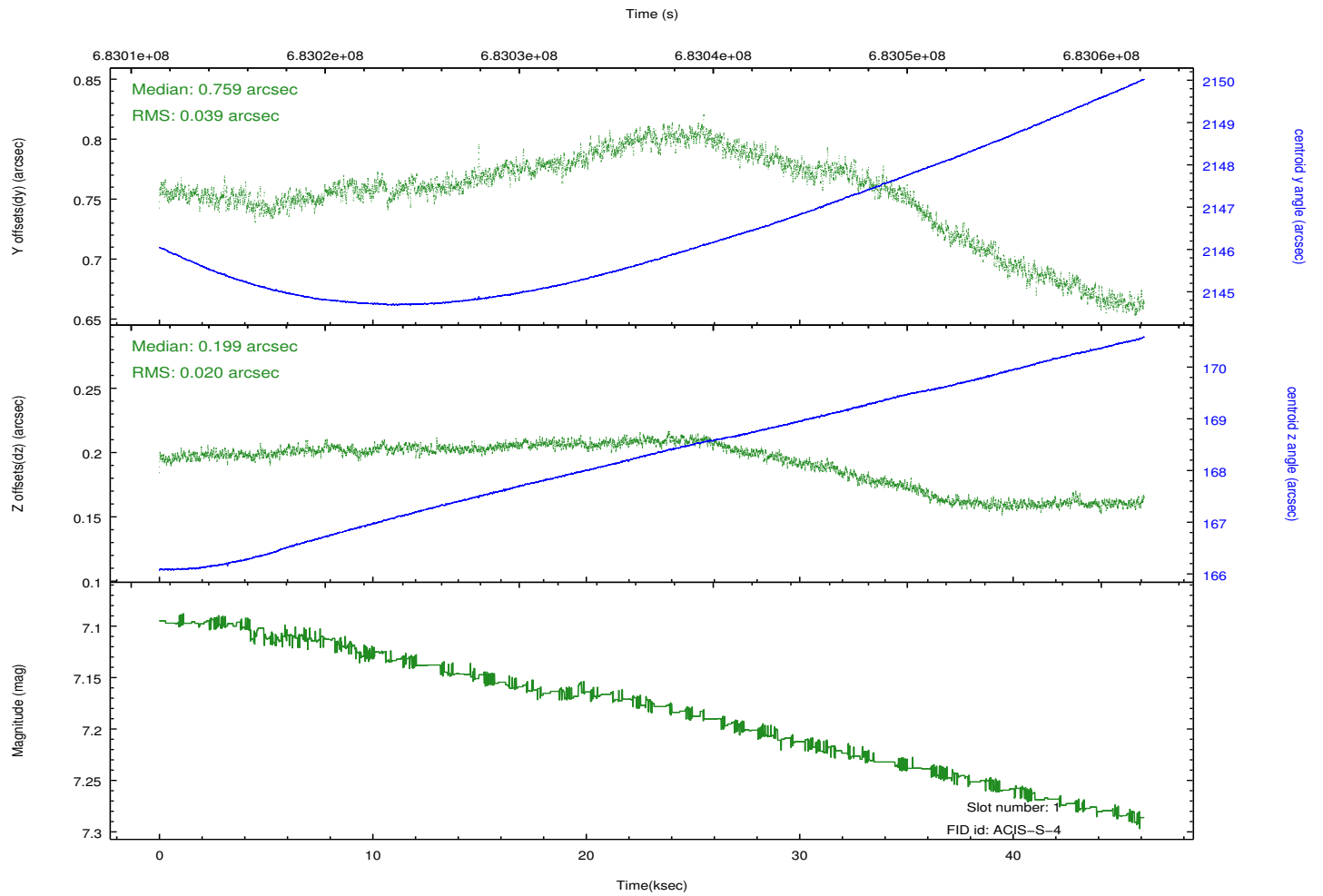
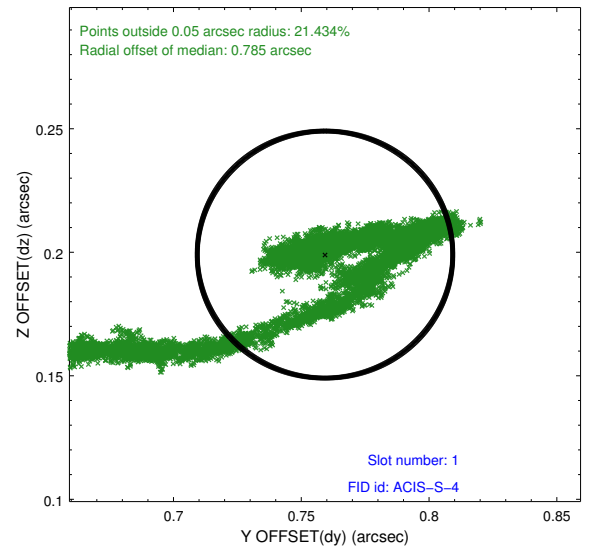
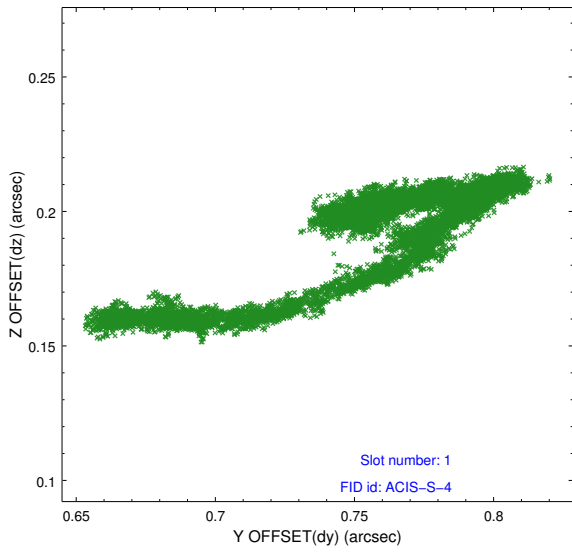


## 2.5 FID Slots

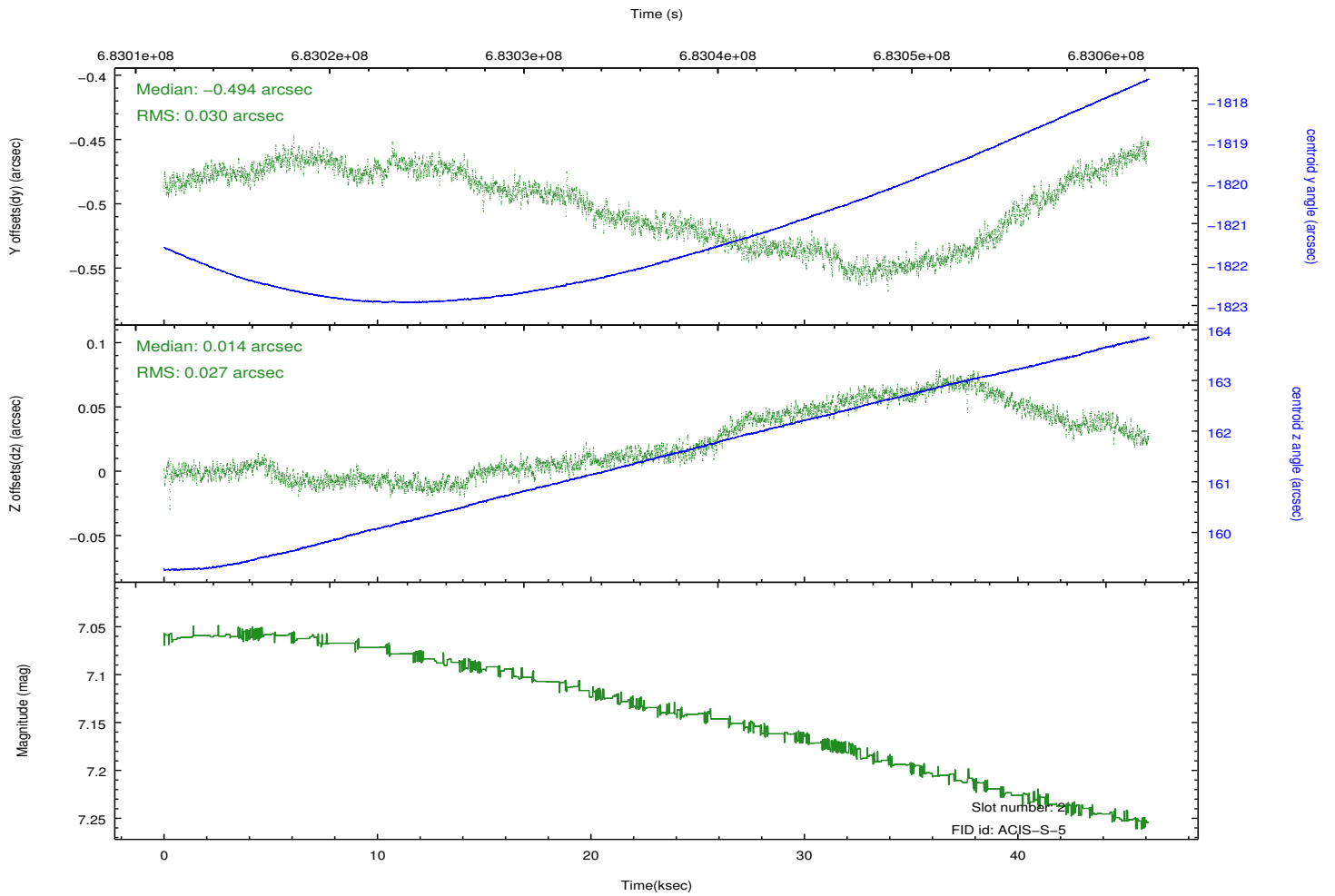
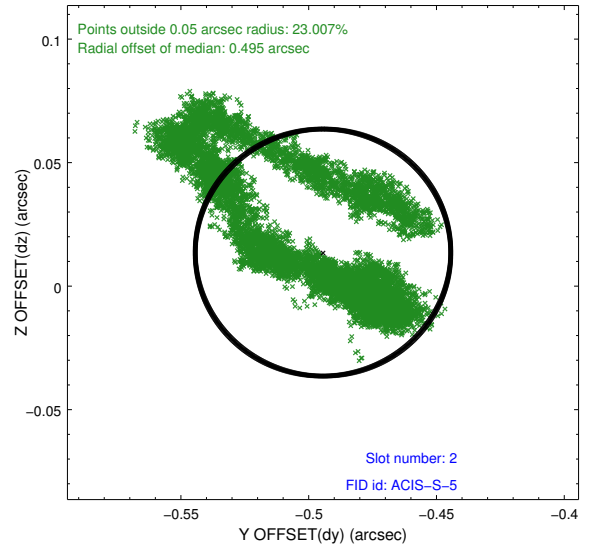
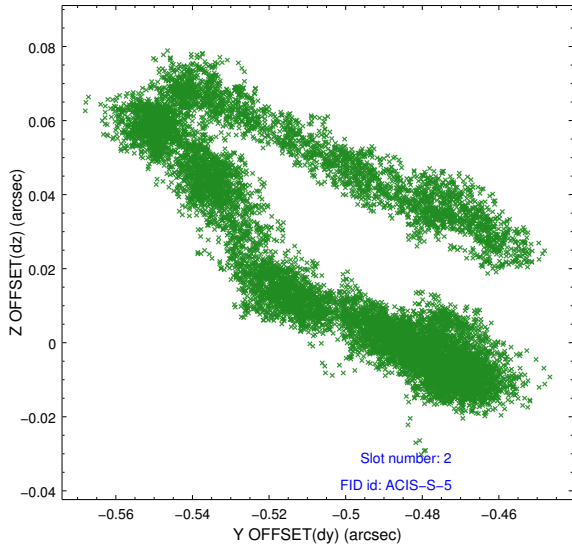
### 2.5.1 Slot 0



## 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)	2019.08.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.066000354409

## 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 slot from the solution.