

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 16031 - L2 Version 2  
Chandra X-Ray Center

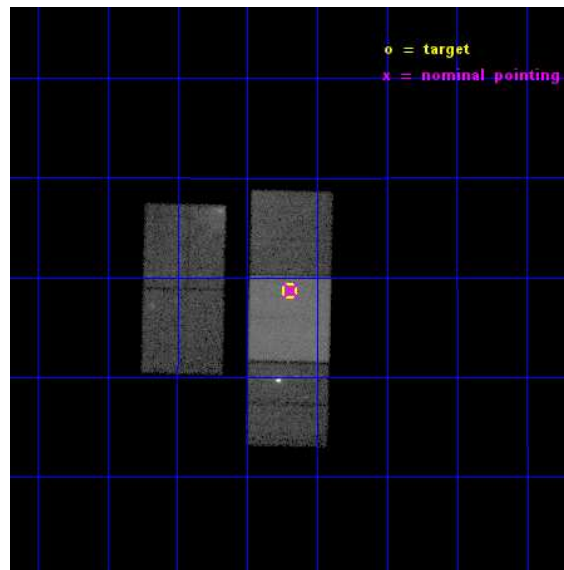
L2 Processing Date : Feb 24 2015

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# 1 Front

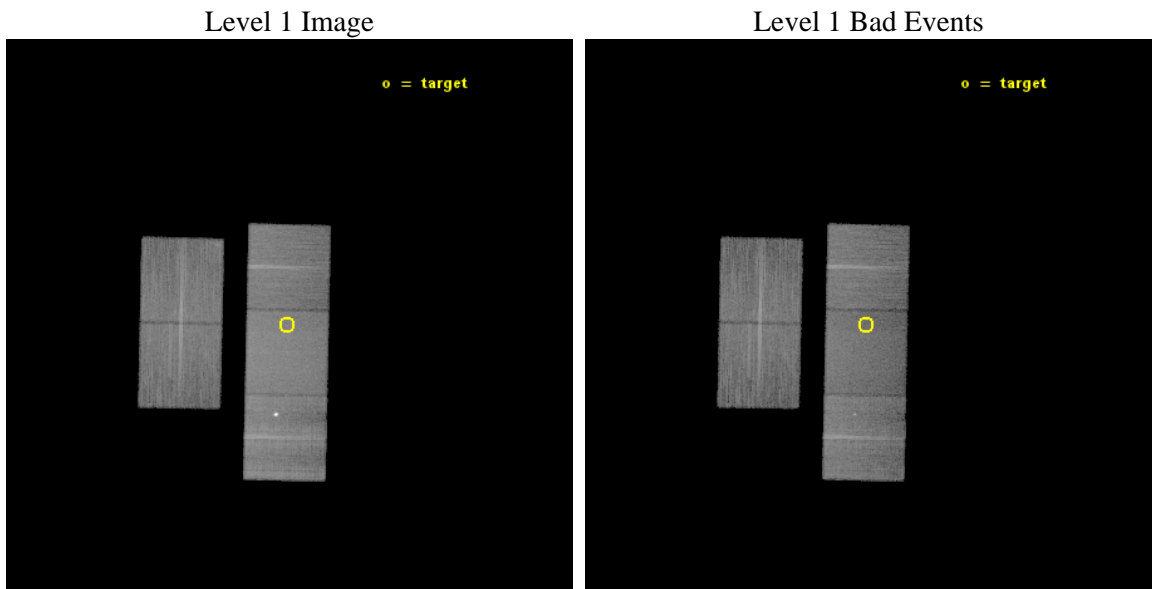
seq_num	601119	Sequence number
obs_id	16031	Observation id
title	TESTING THE UNIVERSALITY OF THE STELLAR IMF USING CHANDRA	Proposal
observer	Bret Lehmer	Principal investigator
object	NGC 4387	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.42375	Observer's specified target RA [deg]
dec_targ	12.810361	Observer's specified target Dec [deg]
ra_nom	186.42105343586	Nominal RA [deg]
dec_nom	12.81202833587	Nominal Dec [deg]
roll_nom	91.268135878223	Nominal Roll [deg]
revision	2	Processing version of data
ontime	34050.400261998	Sum of GTIs [s]
livetime	33605.506715035	Livetime [s]
ontime2	34050.400261998	Sum of GTIs [s]
ontime3	34044.11816144	Sum of GTIs [s]
ontime6	34050.400261998	Sum of GTIs [s]
ontime7	34050.400261998	Sum of GTIs [s]
ontime8	34047.259211659	Sum of GTIs [s]
l2events	216300	Number of level 2 events



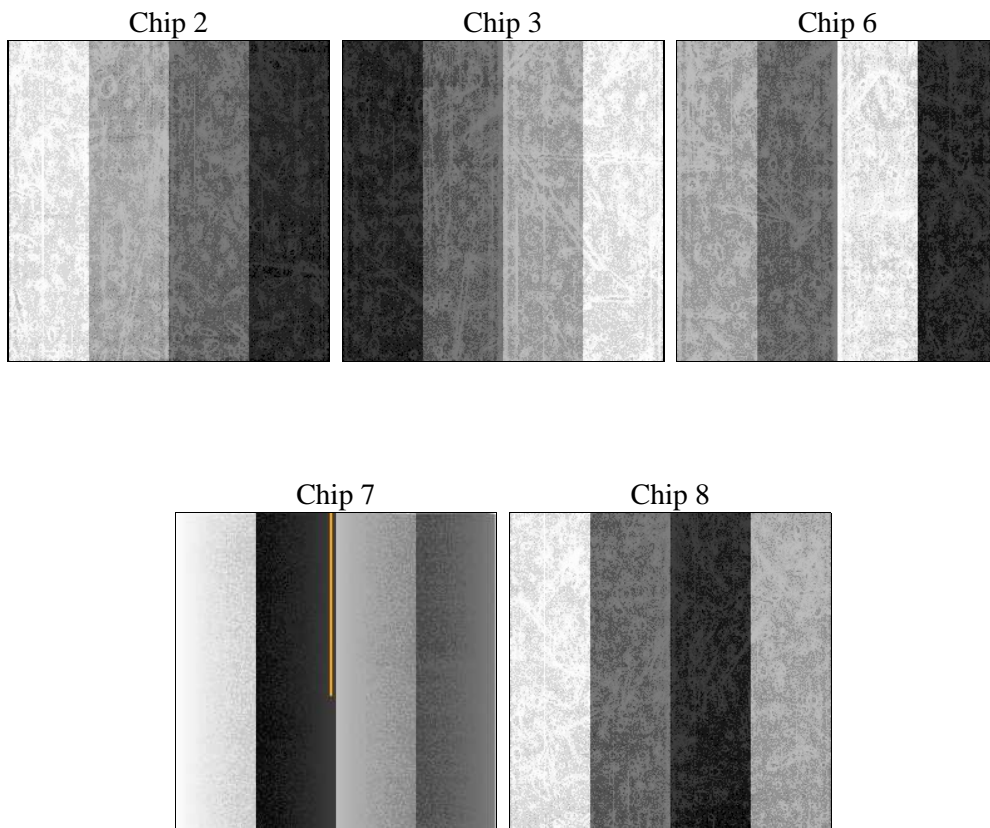
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	34000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	34050.400261998	Sum of GTIs [s]
caldbver	4.6.7	&#160	ontime2	34050.400261998	Sum of GTIs [s]
date	2015-02-25T00:17:02	Date and time of file creation	ontime3	34044.11816144	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	34050.400261998	Sum of GTIs [s]
			ontime7	34050.400261998	Sum of GTIs [s]
			ontime8	34047.259211659	Sum of GTIs [s]
			l1events	1001692	Number of level 1 events

### 2.1.4 Events

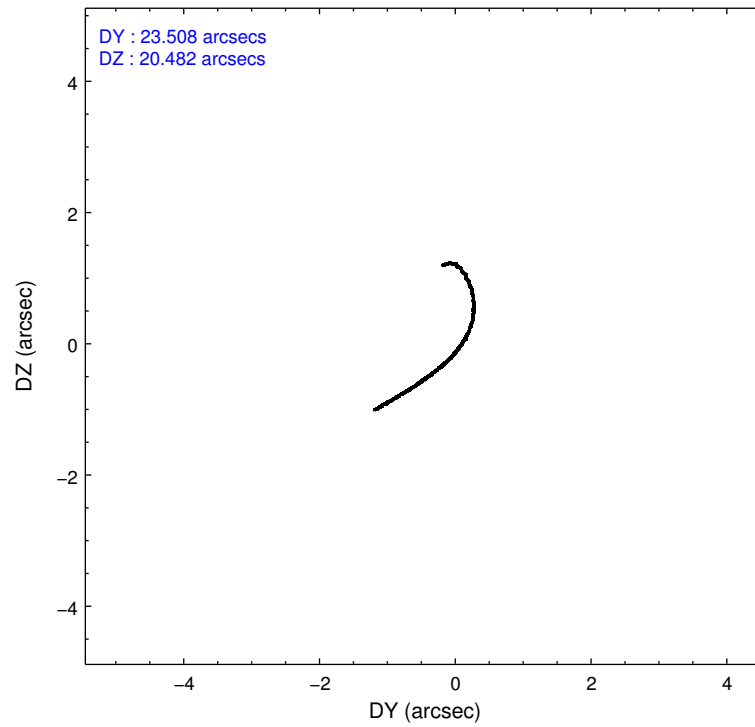
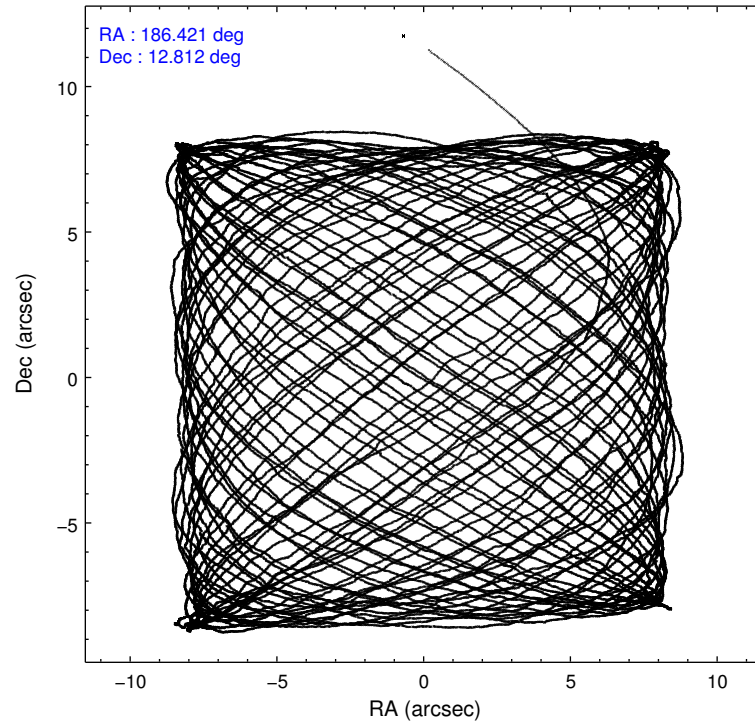
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	176567	166640	182700	234183	241602
rejected events	145331	143147	151082	128013	164787
rejected %	82%	85%	82%	54%	68%

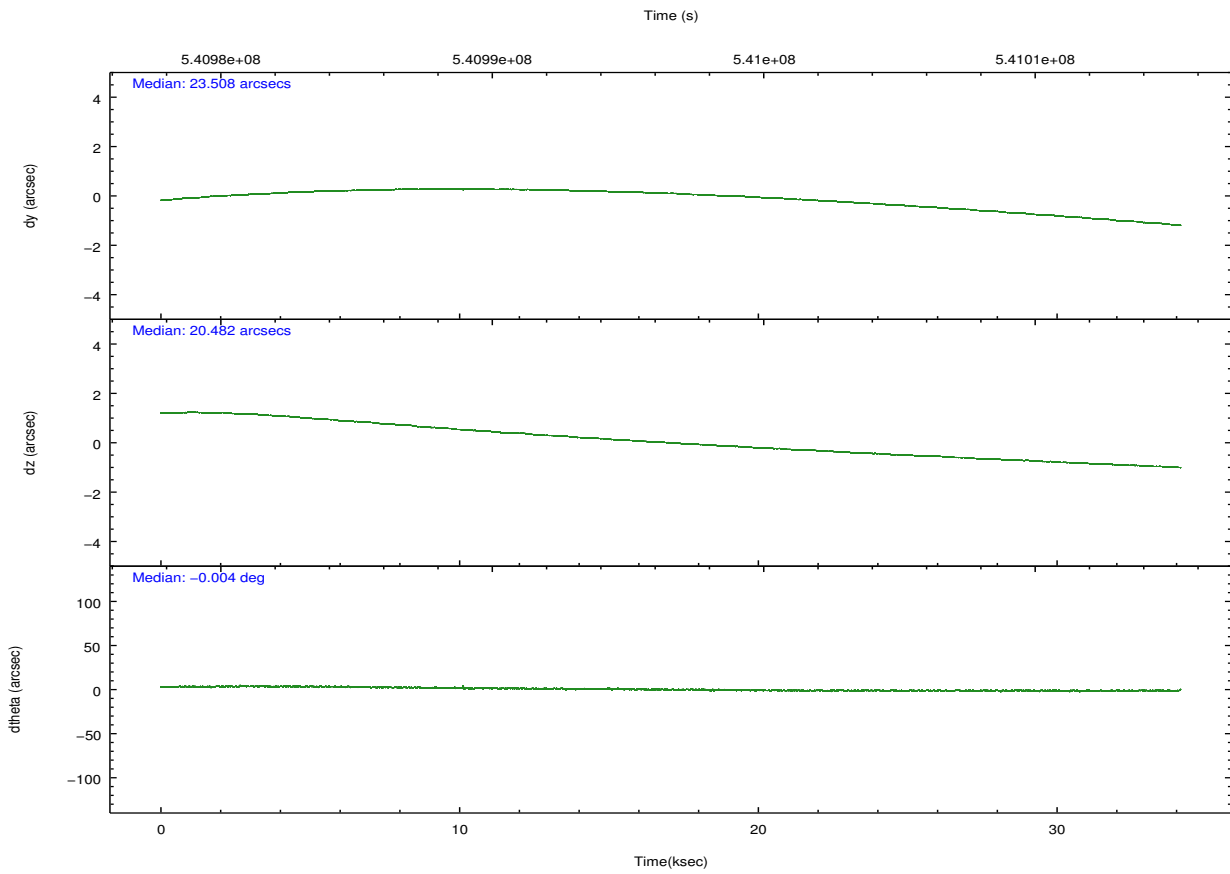
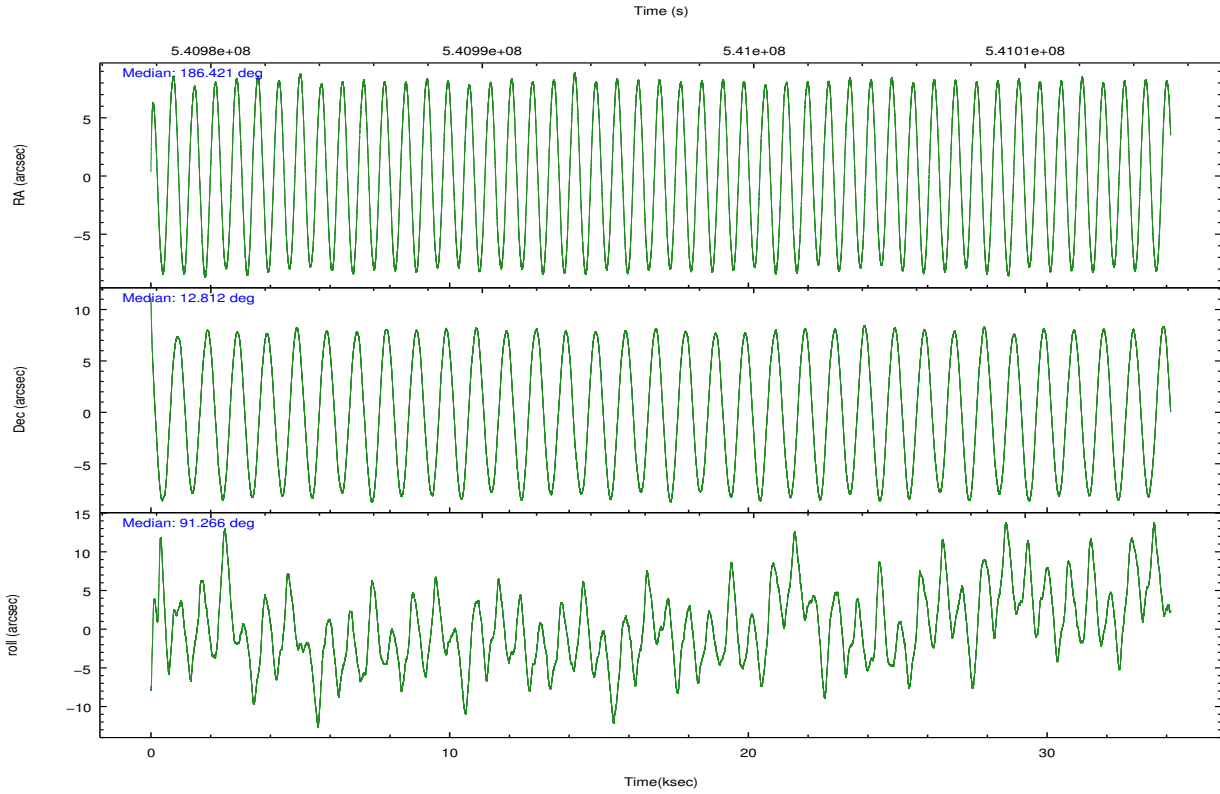
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	17549	10773	16308	10947	27986
	9%	6%	8%	4%	11%
grade 1 events	124	111	122	251	245
	0%	0%	0%	0%	0%
grade 2 events	5616	4495	5764	22680	16684
	3%	2%	3%	9%	6%
grade 3 events	2126	2067	2296	9082	7430
	1%	1%	1%	3%	3%
grade 4 events	2168	2189	2226	8882	7010
	1%	1%	1%	3%	2%
grade 5 events	7025	8586	8753	23286	12857
	3%	5%	4%	9%	5%
grade 6 events	3777	3971	5029	54592	17705
	2%	2%	2%	23%	7%
grade 7 events	138182	134448	142202	104463	151685
	78%	80%	77%	44%	62%

## 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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	186.435982	186.4210534358612	CCD I2 on	O1	Y
[deg] Pointing Dec	12.788756	12.8120283358695	CCD I3 on	O2	Y
[deg] Pointing Roll	91.108203	91.26813587822296	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	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	540979658.184000	540978508.11693	CCD S5 on	N	N
Observation start date	2015-02-22T08:06:31	2015-02-22T07:48:28	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	541013658.184000	541014358.00643	On-chip summing requested	N	N
Observation end date	2015-02-22T17:33:11	2015-02-22T17:45:58	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





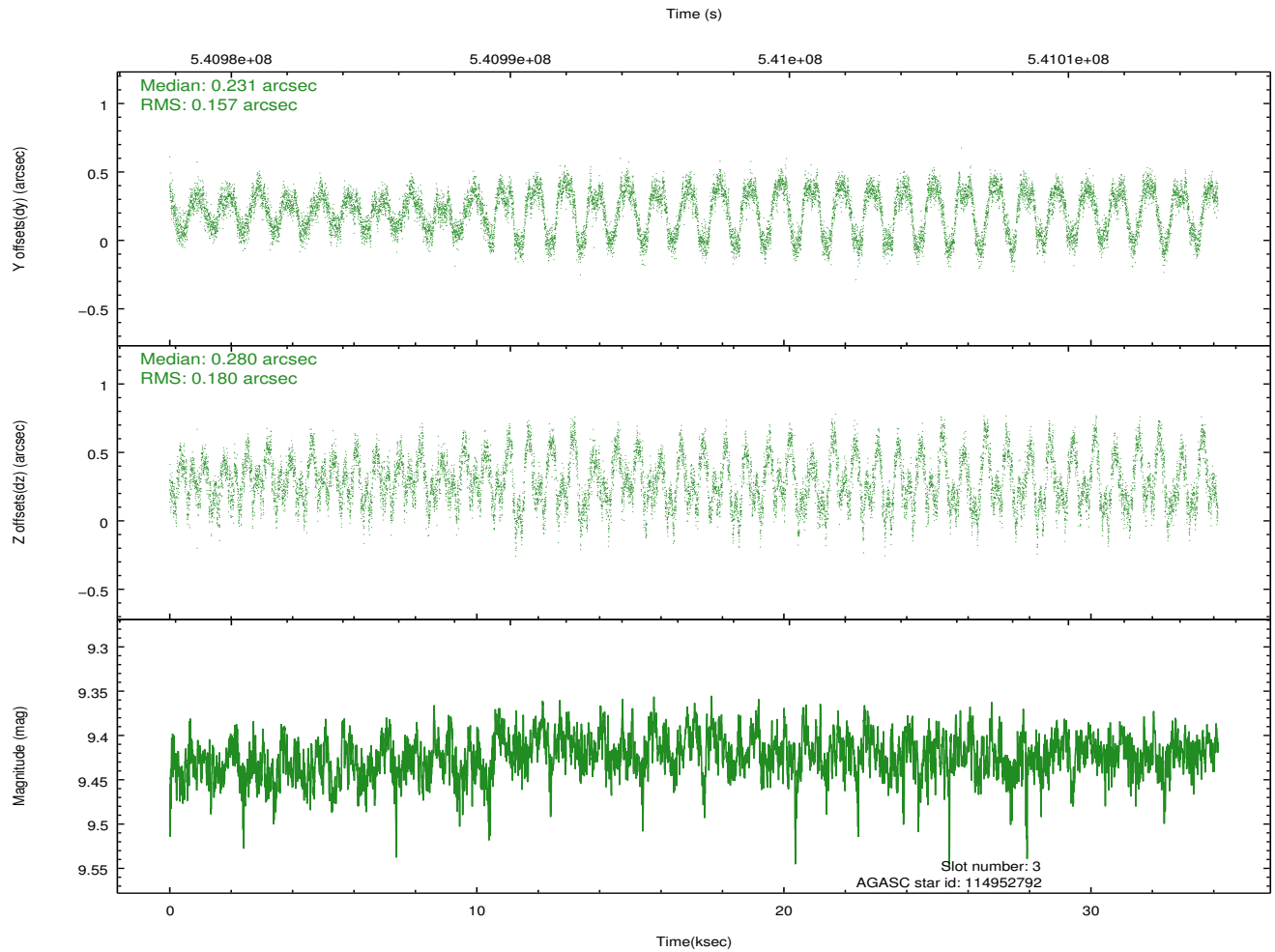
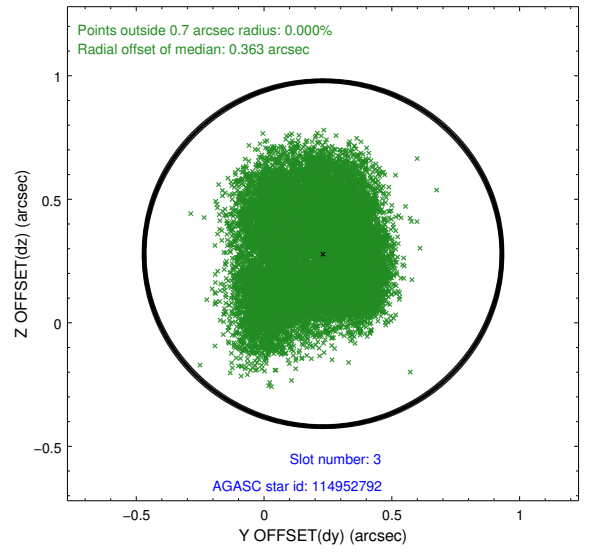
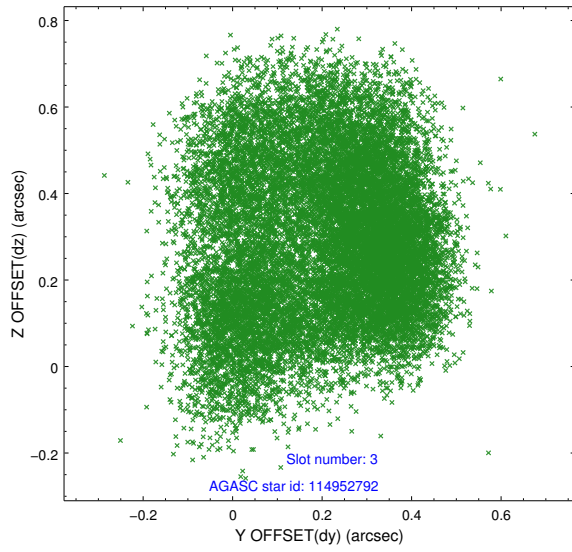
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.04	8327	-0.182	-0.073	0.016	0.027	0.000000	0.000000	-776.73	-1742.16
1	FID		ACIS-S-4	7.14	8327	0.425	0.107	0.016	0.034	0.000000	0.000000	2137.13	166.46
2	FID		ACIS-S-5	7.14	8326	-0.274	-0.025	0.014	0.024	0.000000	0.000000	-1829.61	160.05
3	GUIDE	used	114952792	9.42	16645	0.231	0.280	0.260	0.392	187.070263	12.344747	-1638.61	-2197.62
4	GUIDE	used	114954440	9.16	16648	0.235	0.131	0.142	0.219	186.915066	12.219118	-2081.22	-1647.09
5	GUIDE	used	115347480	9.36	16639	-0.237	-0.229	0.162	0.256	186.668576	13.310410	1862.31	-850.97
6	GUIDE	used	115214648	9.06	16644	-0.206	-0.177	0.164	0.261	185.771147	12.685188	-324.41	2341.82
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

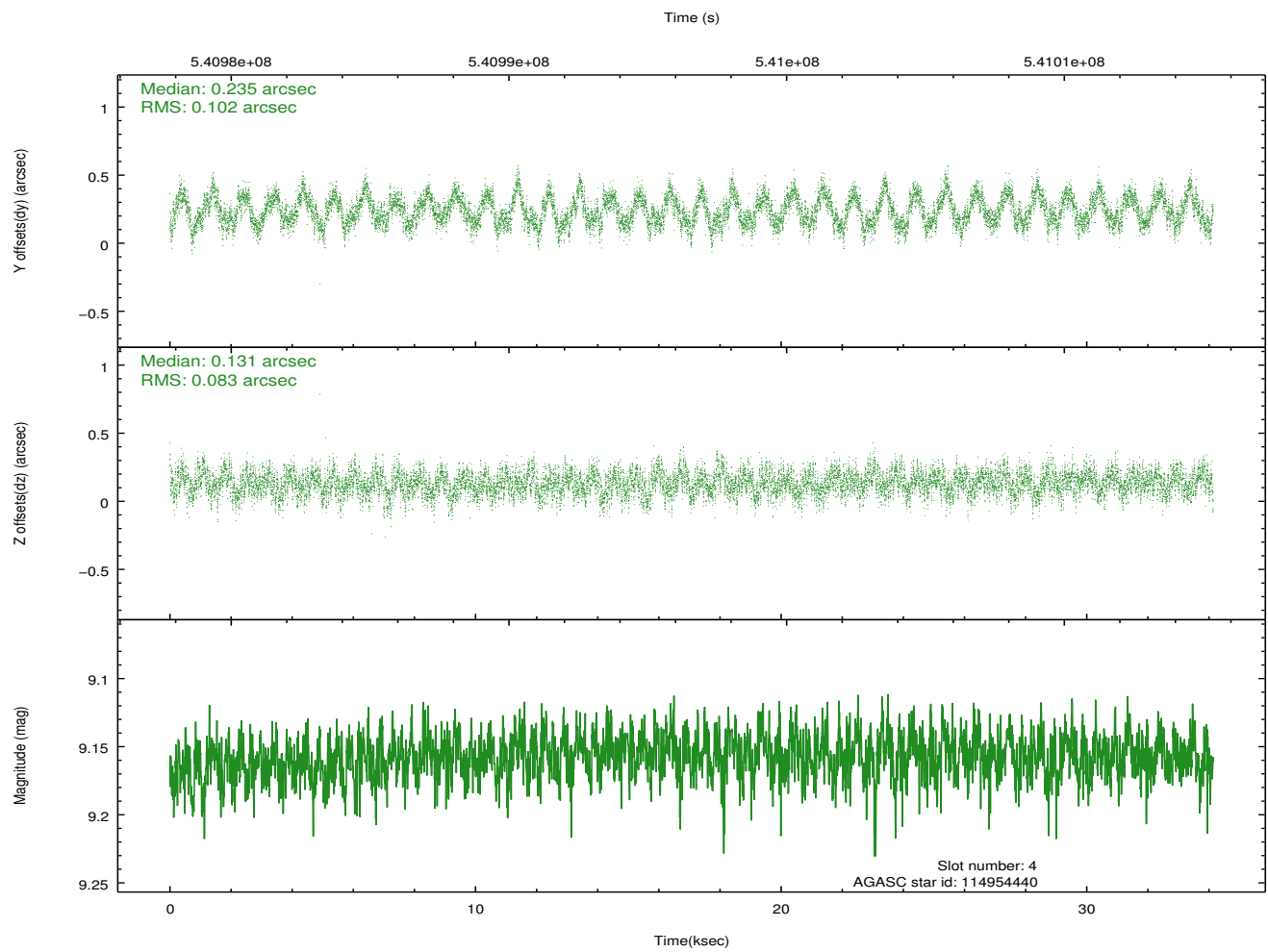
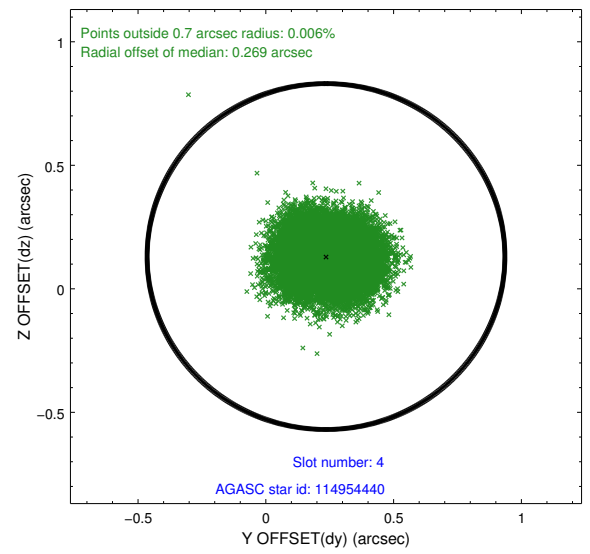
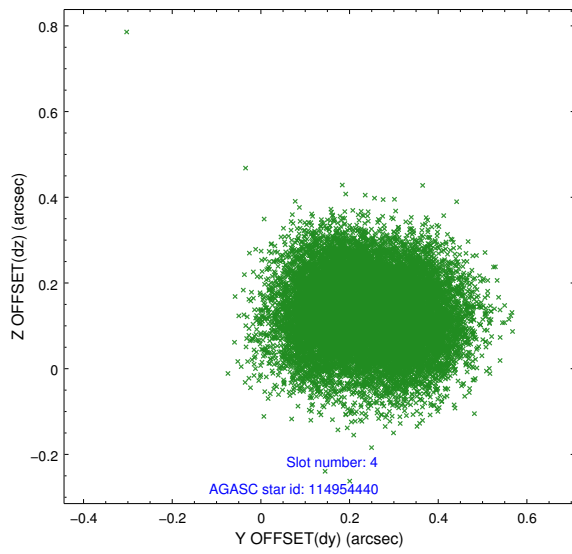
∞

## 2.4 Star Slots

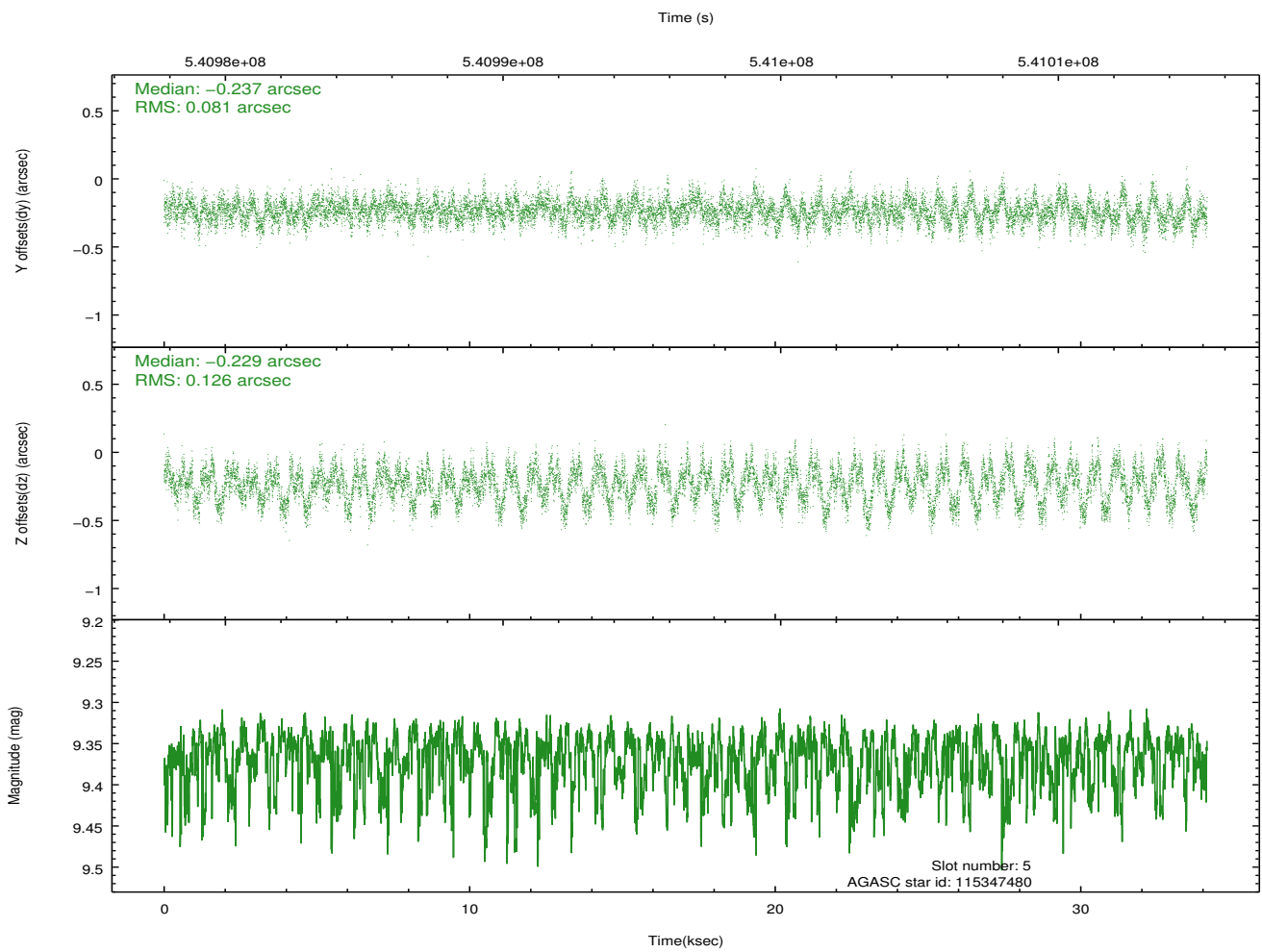
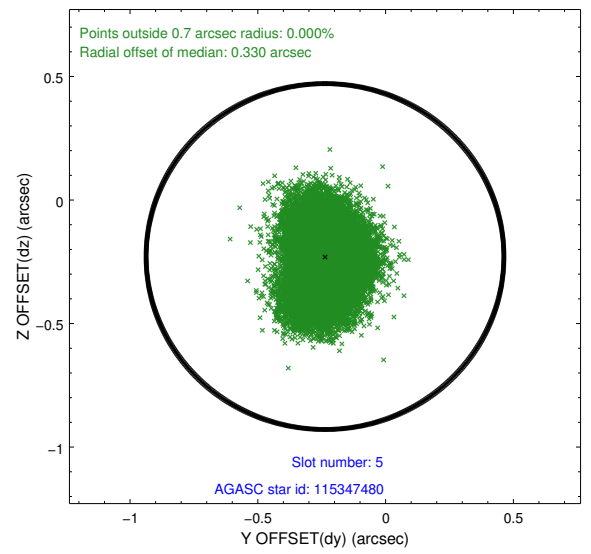
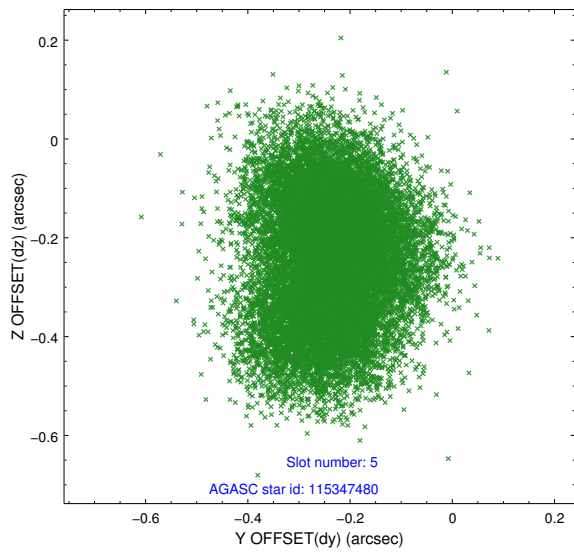
### 2.4.1 Slot 3



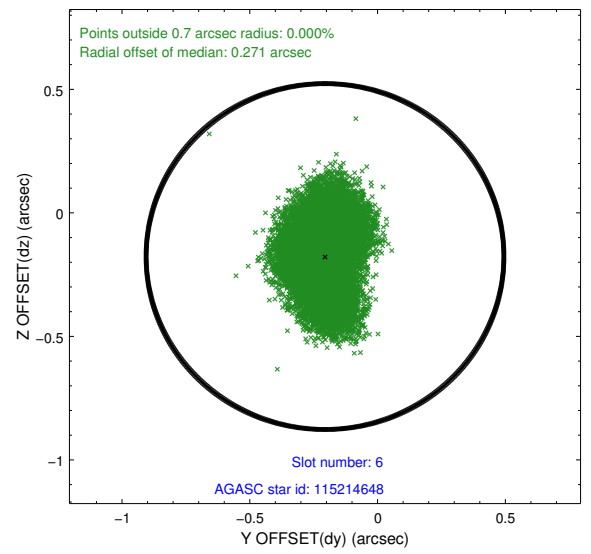
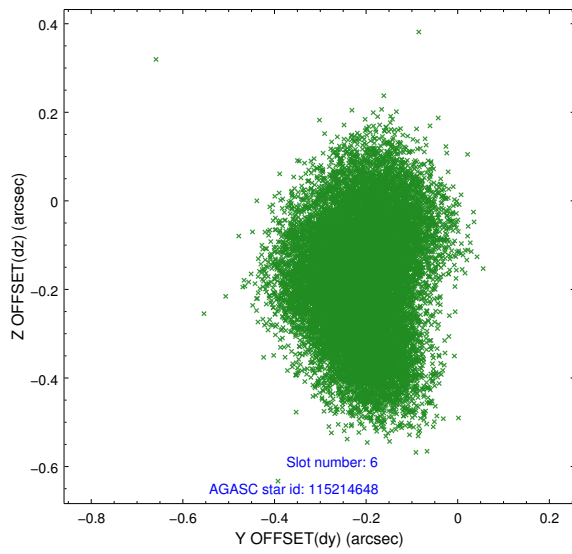
## 2.4.2 Slot 4



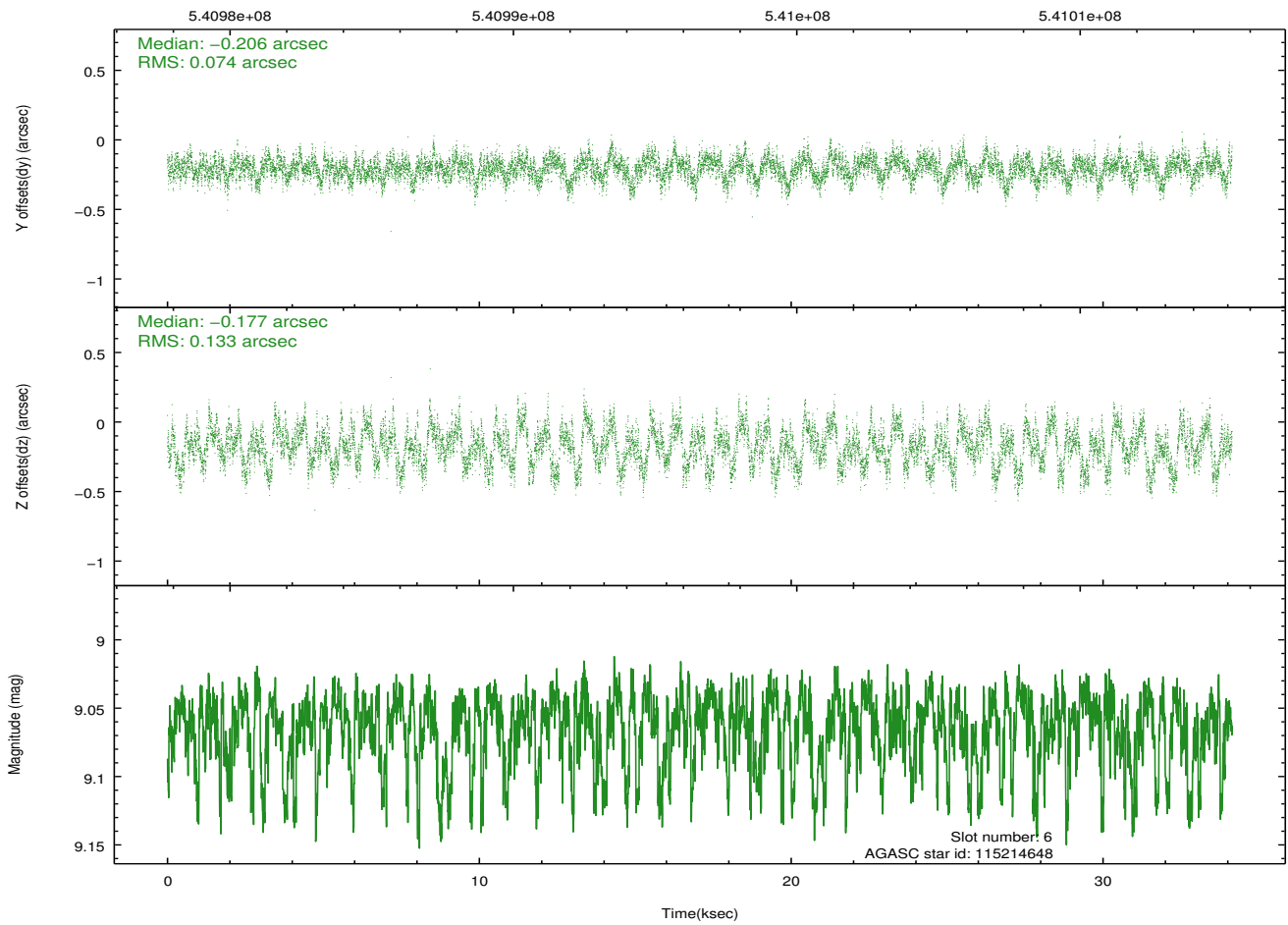
### 2.4.3 Slot 5



## 2.4.4 Slot 6

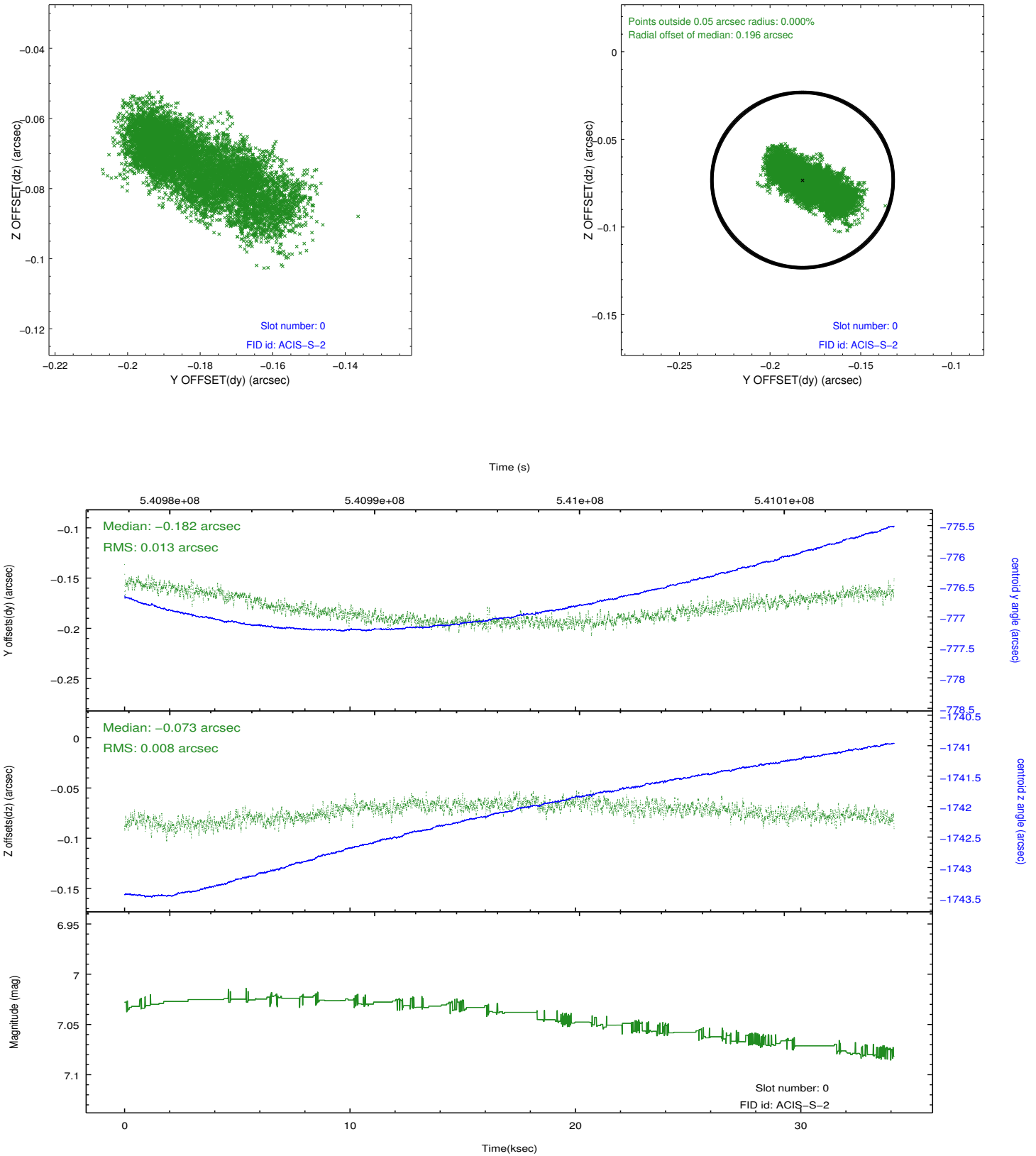


Time (s)

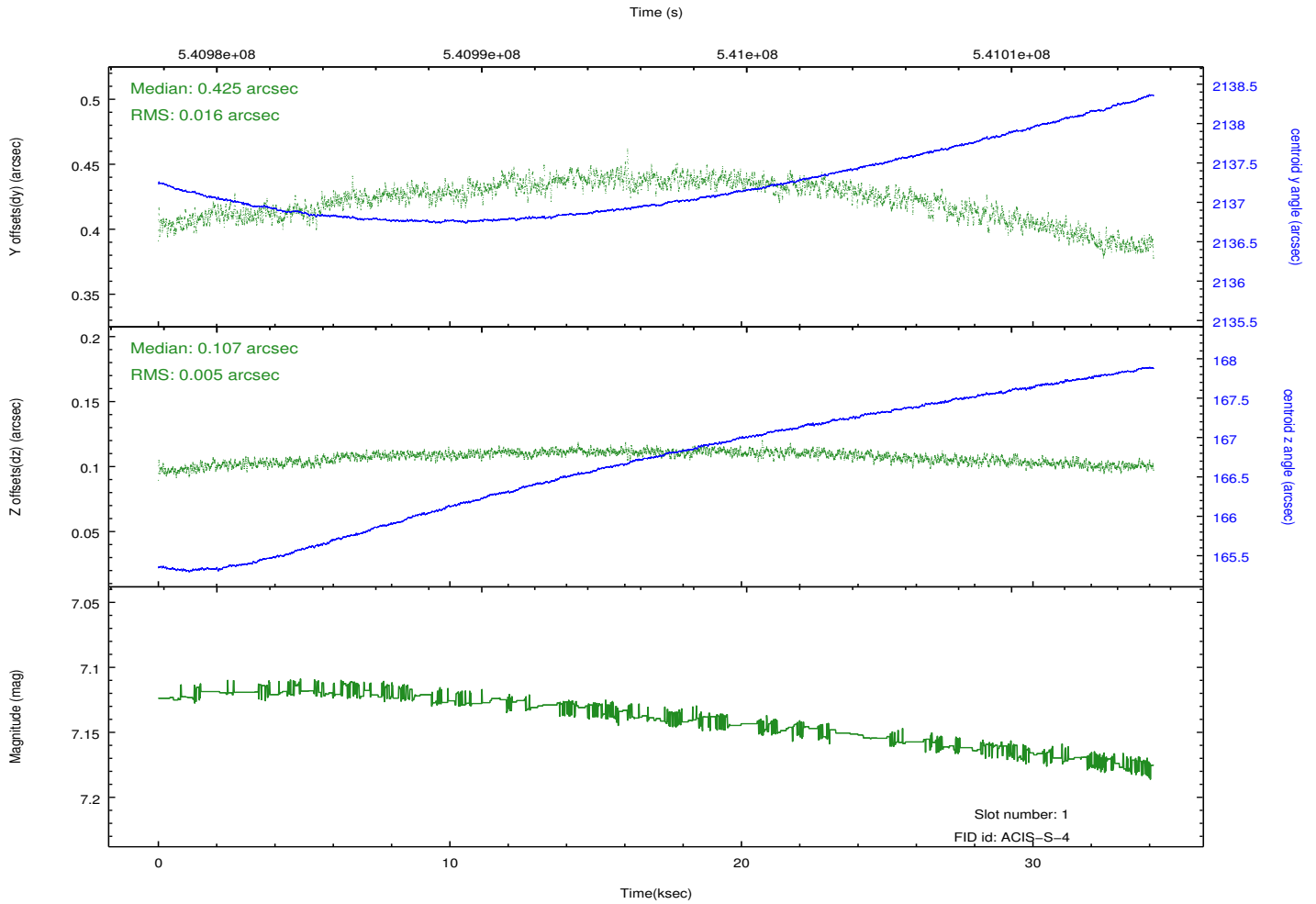
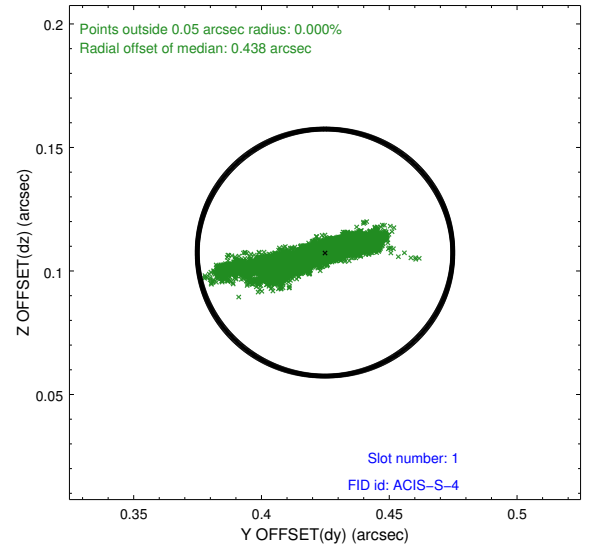
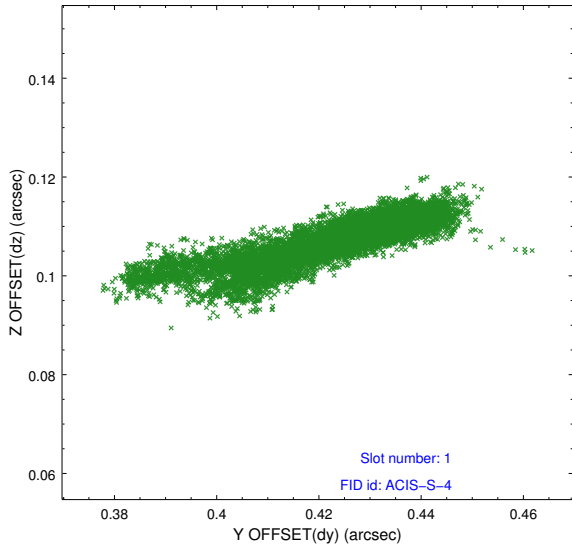


## 2.5 FID Slots

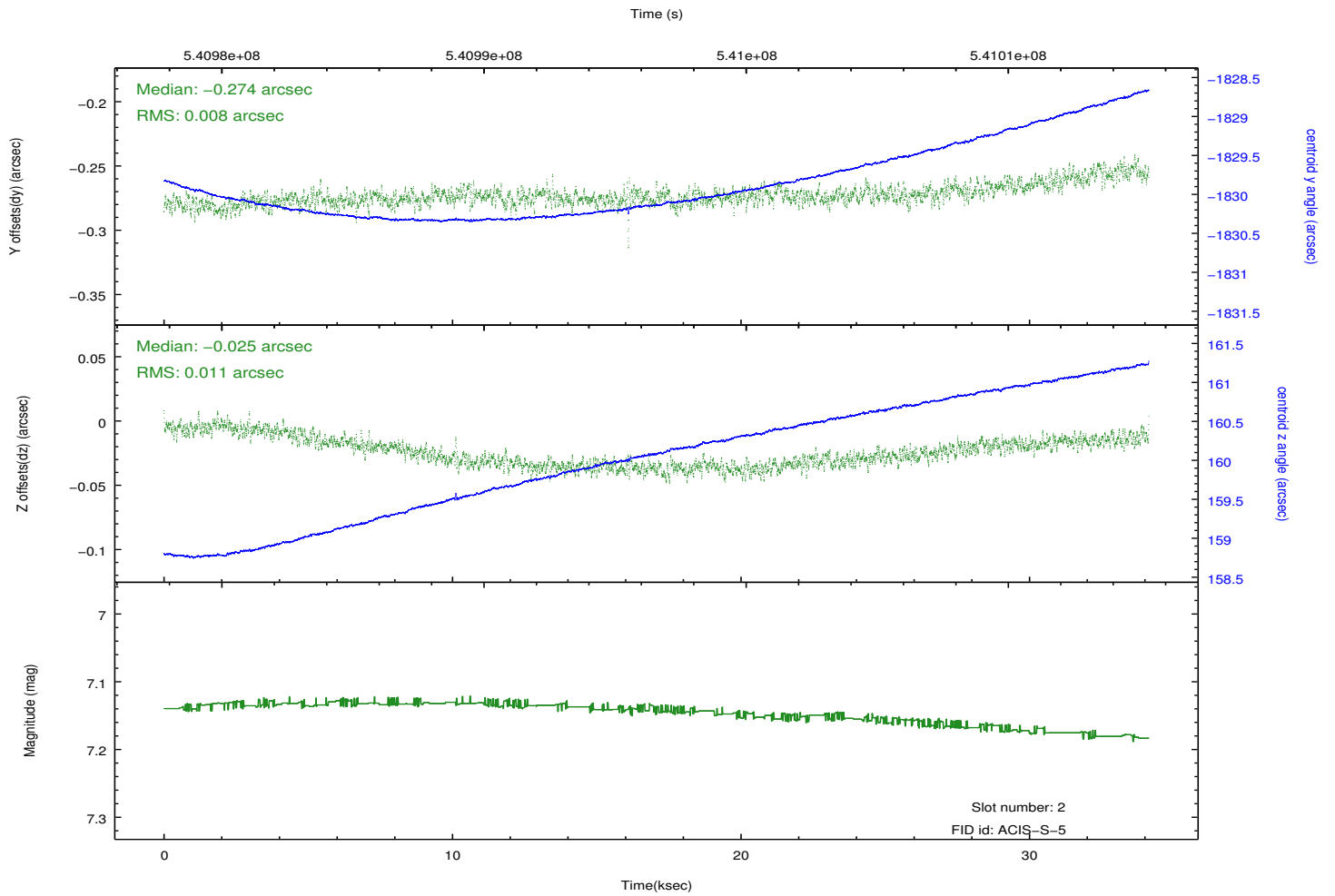
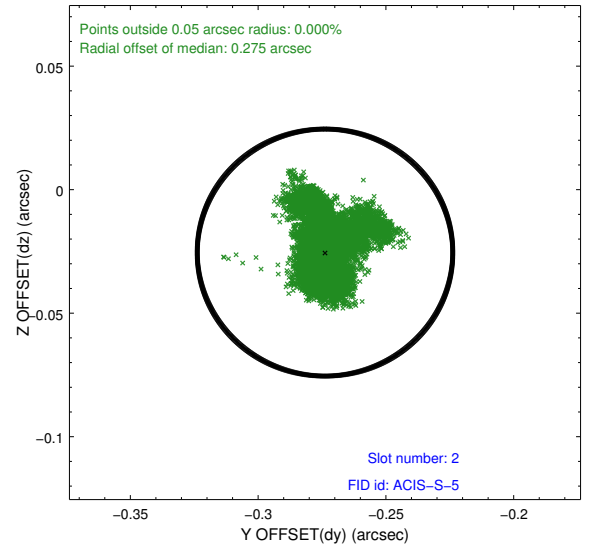
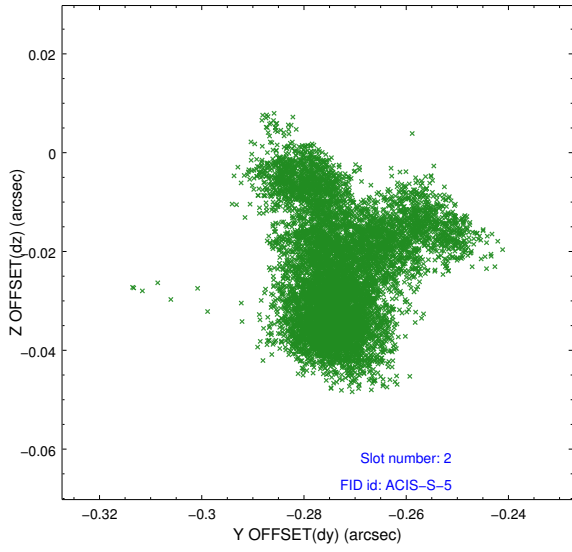
### 2.5.1 Slot 0



## 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)	2015.02.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	34.050400261998

## A.2 Comments

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 star from the solution.