

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 20802 - L2 Version 2  
Chandra X-Ray Center

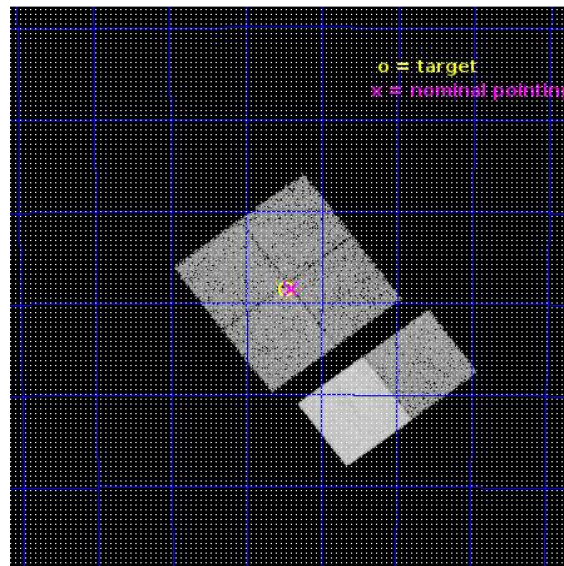
L2 Processing Date : Oct 10 2017

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# 1 Front

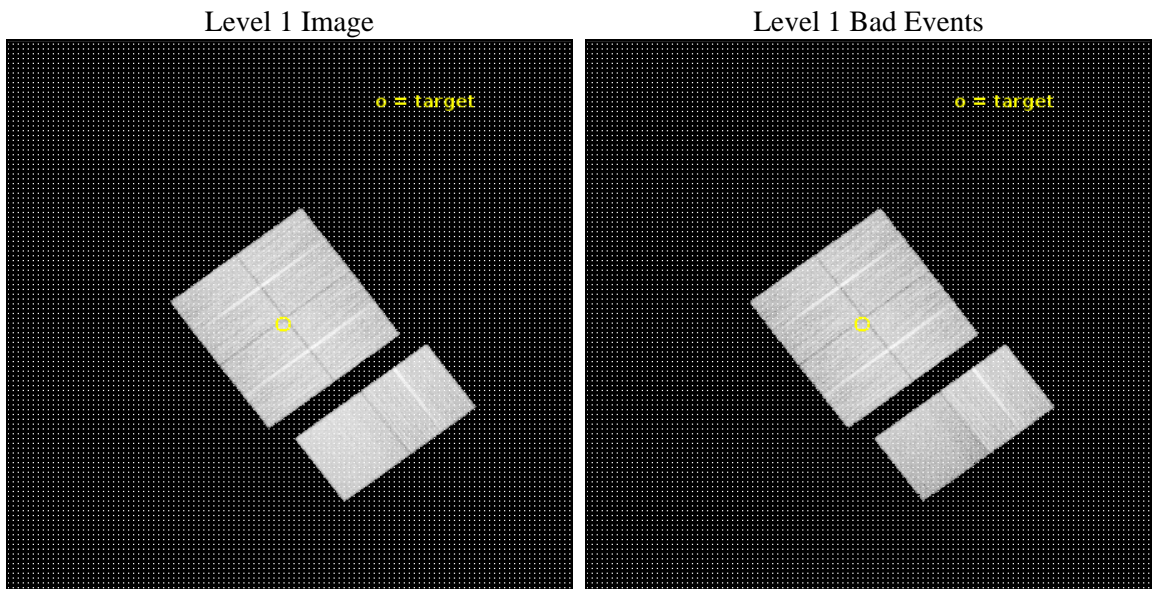
seq_num	201109	Sequence number
obs_id	20802	Observation id
title	An X-ray Census of the Young Stellar Population in a Massive Forming Cluster	Proposal title
observer	Jonathan Tan	Principal investigator
object	G286.21+0.17	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	159.617083	Observer's specified target RA [deg]
dec_targ	-58.309444	Observer's specified target Dec [deg]
ra_nom	159.60009096447	Nominal RA [deg]
dec_nom	-58.307894315166	Nominal Dec [deg]
roll_nom	143.19422619026	Nominal Roll [deg]
revision	2	Processing version of data
ontime	24662.400367498	Sum of GTIs [s]
livetime	24350.11020413	Livetime [s]
ontime0	24662.400367498	Sum of GTIs [s]
ontime1	24655.918436289	Sum of GTIs [s]
ontime2	24662.400367498	Sum of GTIs [s]
ontime3	24662.400367498	Sum of GTIs [s]
ontime6	24662.400367498	Sum of GTIs [s]
ontime7	24662.400367498	Sum of GTIs [s]
l2events	147141	Number of level 2 events



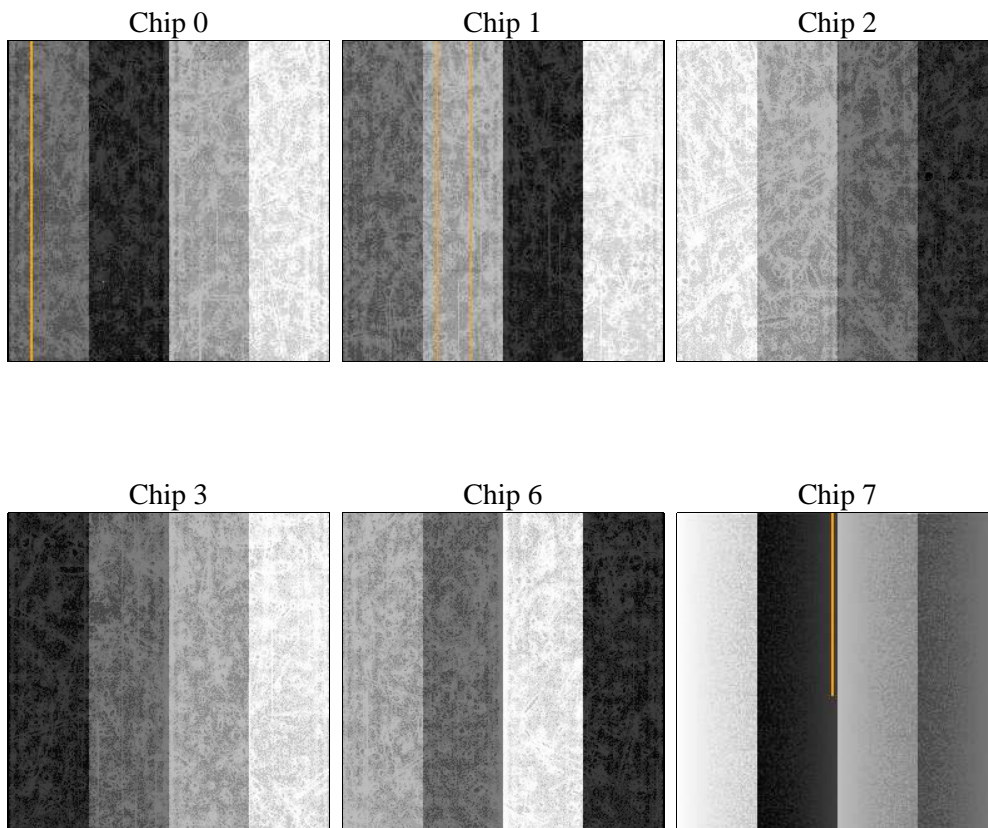
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24705.662000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	24662.400367498	Sum of GTIs [s]
caldbver	4.7.6	&#160	ontime0	24662.400367498	Sum of GTIs [s]
date	2017-10-10T16:24:11	Date and time of file creation	ontime1	24655.918436289	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	24662.400367498	Sum of GTIs [s]
			ontime3	24662.400367498	Sum of GTIs [s]
			ontime6	24662.400367498	Sum of GTIs [s]
			ontime7	24662.400367498	Sum of GTIs [s]
			l1events	913307	Number of level 1 events

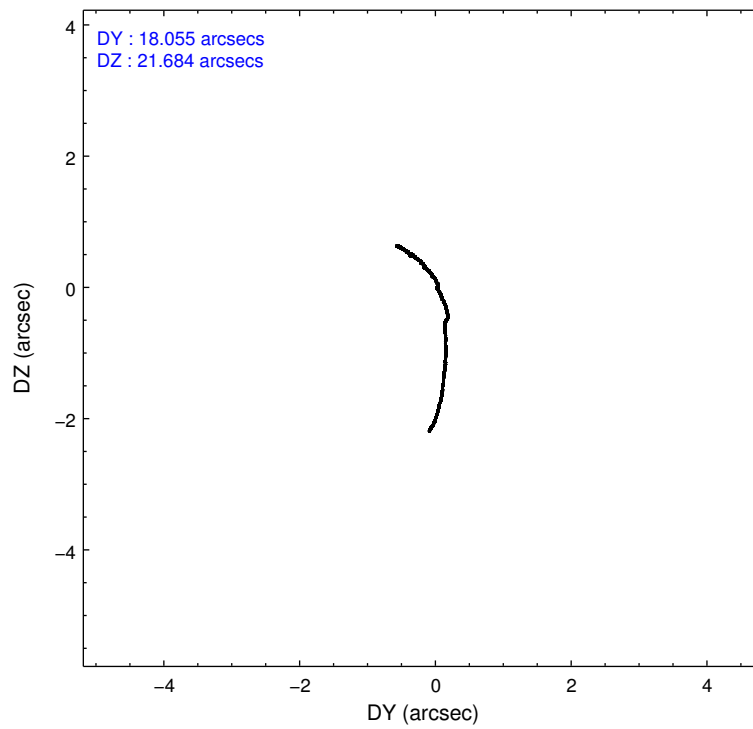
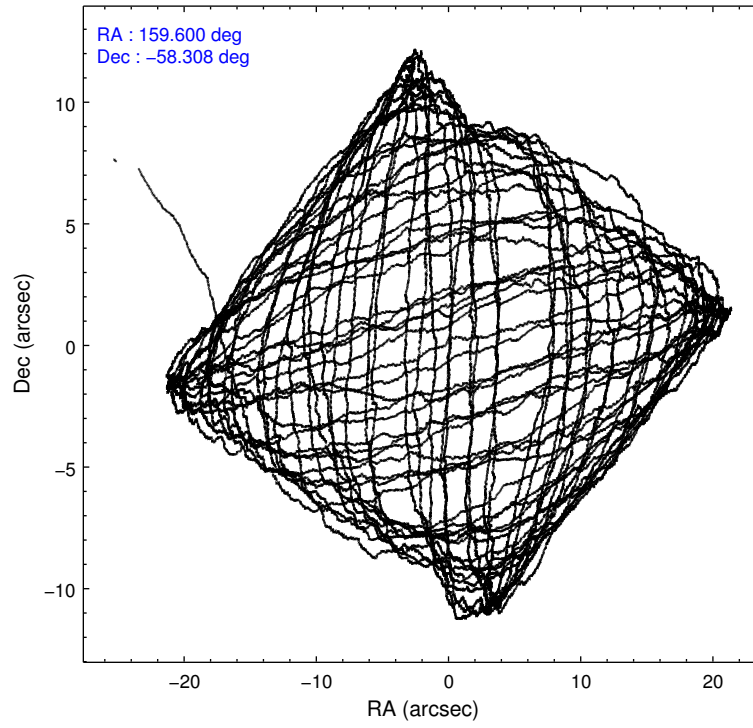
### 2.1.4 Events

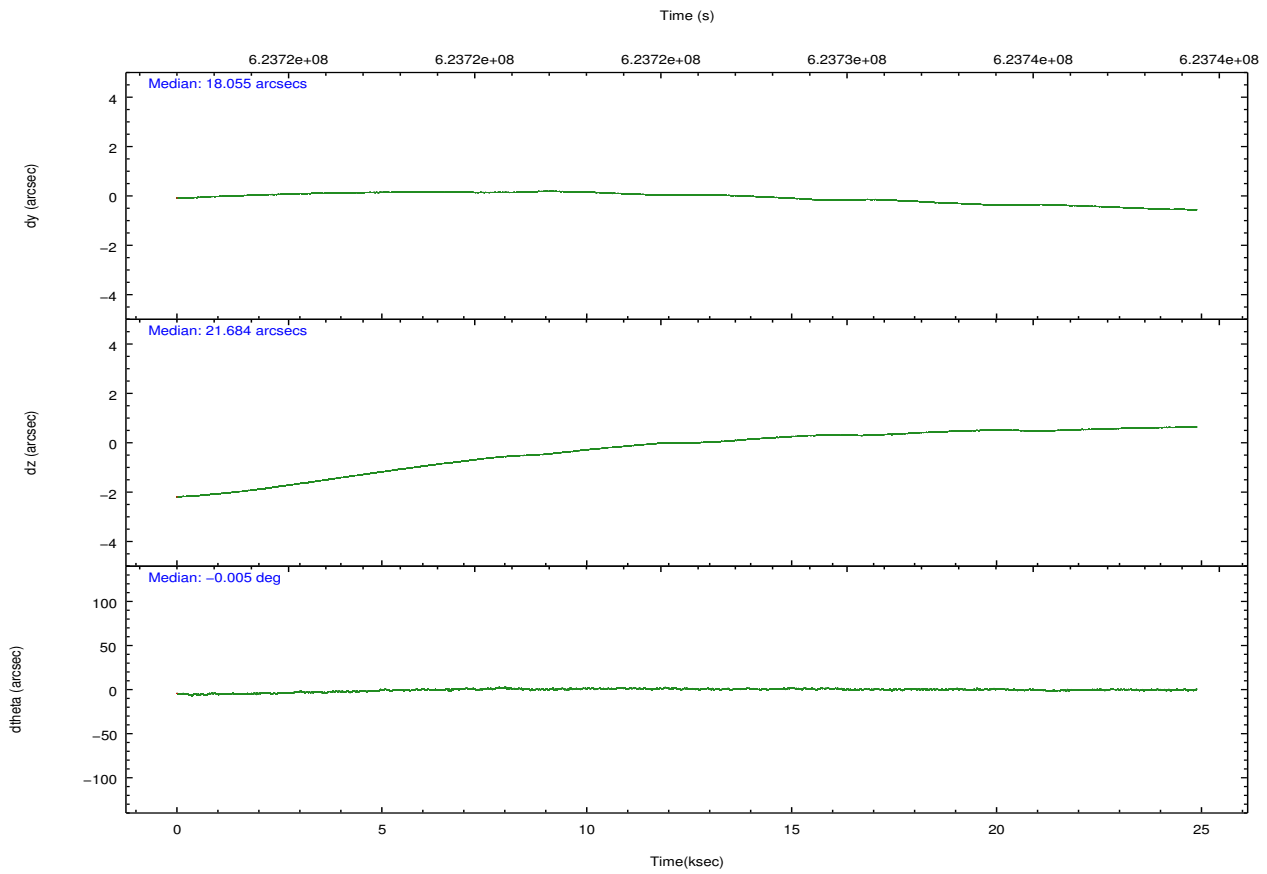
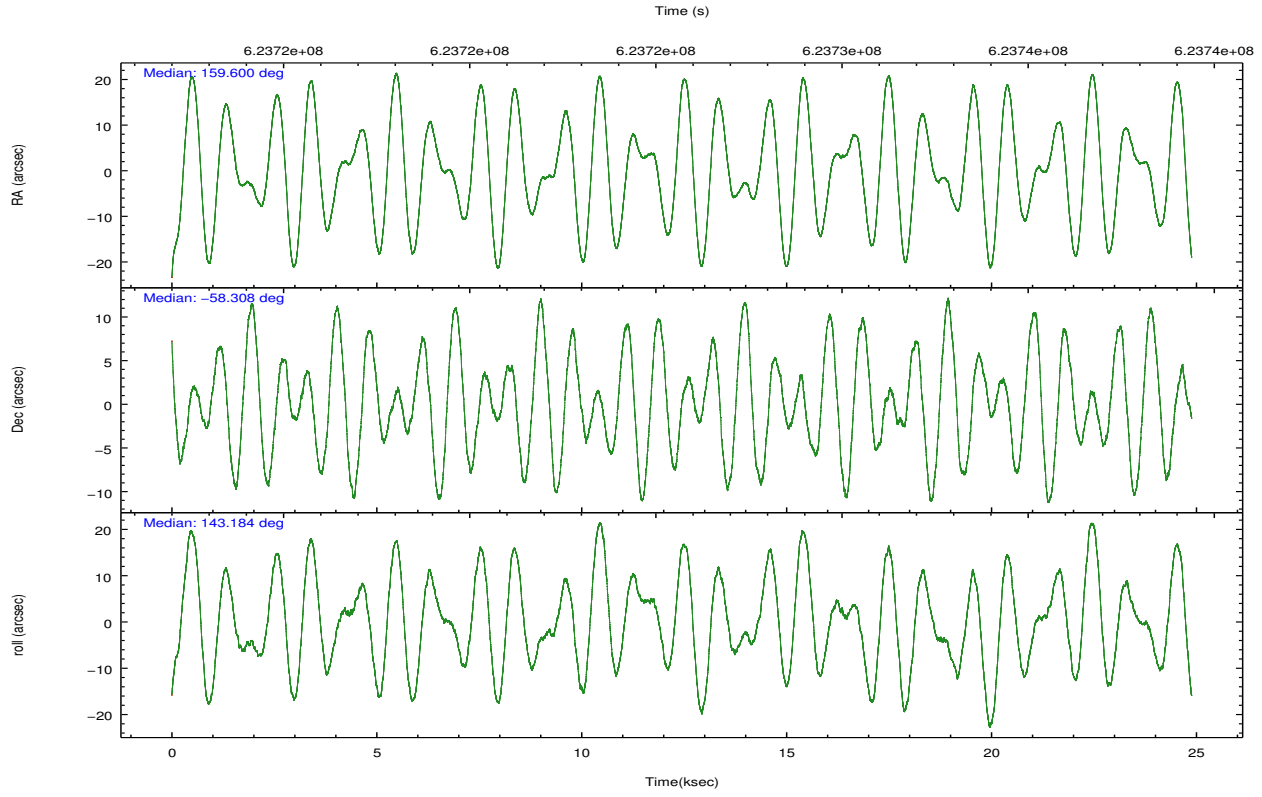
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	141101	139811	154111	153169	156687	168428	grade 0 events	6324	5480	5905	6146	5939	7497
rejected events	124208	122685	138091	137016	139370	88797		4%	3%	3%	4%	3%	4%
rejected %	88%	87%	89%	89%	88%	52%	grade 1 events	85	78	94	79	81	290
								0%	0%	0%	0%	0%	0%
							grade 2 events	4117	4357	3960	3528	4178	17548
								2%	3%	2%	2%	2%	10%
							grade 3 events	1702	1700	1592	1629	1720	6658
								1%	1%	1%	1%	1%	3%
							grade 4 events	1551	1707	1645	1684	1564	6540
								1%	1%	1%	1%	0%	3%
							grade 5 events	5431	5678	4964	6283	6275	17400
								3%	4%	3%	4%	4%	10%
							grade 6 events	3202	3885	2919	3168	3918	41406
								2%	2%	1%	2%	2%	24%
							grade 7 events	118689	116926	133032	130652	133012	71089
								84%	83%	86%	85%	84%	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	159.652270	159.600090964471	CCD I2 on	Y	Y
[deg] Pointing Dec	-58.311056	-58.30789431516609	CCD I3 on	Y	Y
[deg] Pointing Roll	143.029941	143.19422619026	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	623713420.184000	623712361.3029701	CCD S5 on	N	N
Observation start date	2017-10-06T21:42:31	2017-10-06T21:26:01	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	623738125.184000	623739113.80453	On-chip summing requested	N	N
Observation end date	2017-10-07T04:34:16	2017-10-07T04:51:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





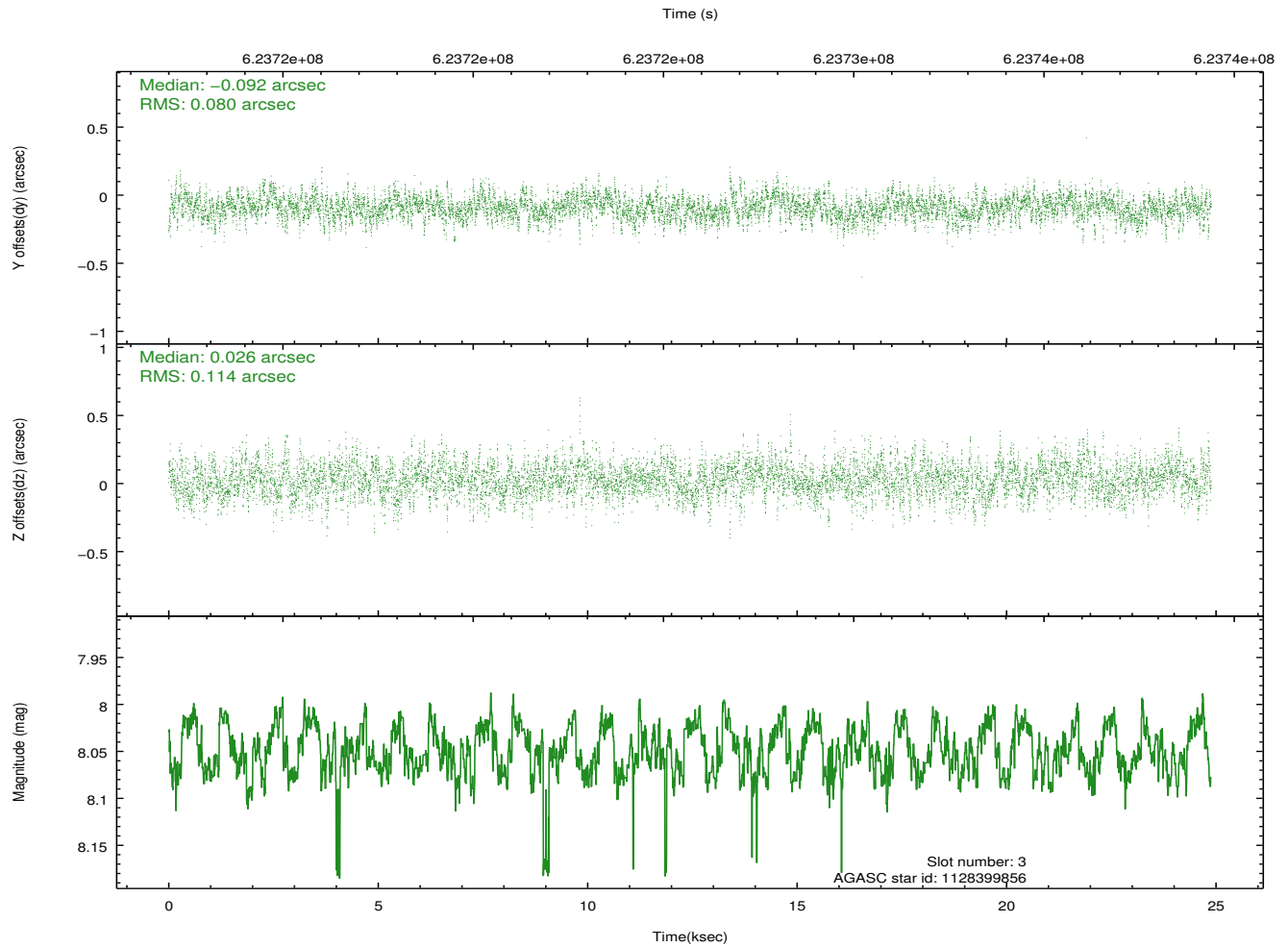
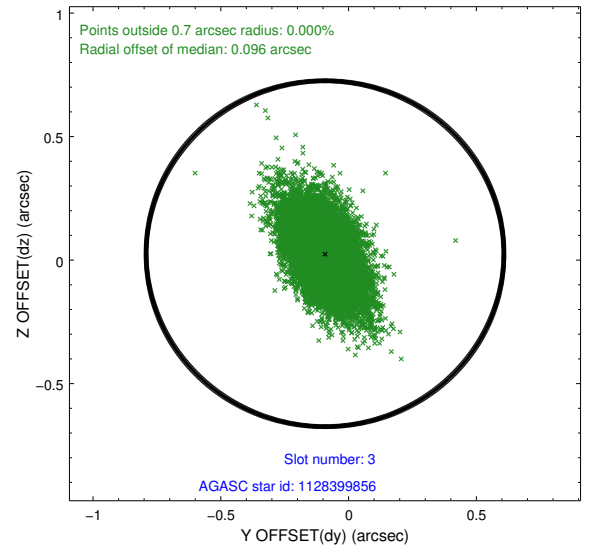
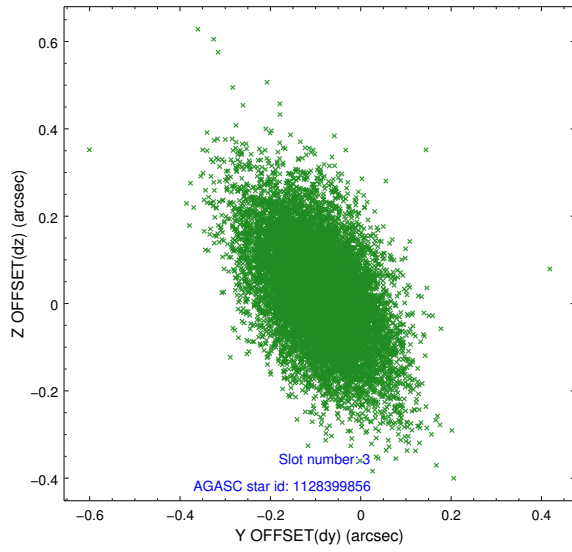
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.23	6070	0.075	-0.048	0.032	0.044	0.000000	0.000000	921.52	-845.15
1	FID		ACIS-I-5	7.22	6067	-0.365	0.032	0.020	0.027	0.000000	0.000000	-1827.06	1052.21
2	FID		ACIS-I-6	7.24	6069	0.194	0.092	0.034	0.043	0.000000	0.000000	386.93	1697.03
3	GUIDE	used	1128399856	8.05	12138	-0.092	0.026	0.141	0.253	159.643120	-57.562425	1635.40	-2142.08
4	GUIDE	used	1130105176	6.51	12139	0.012	0.195	0.135	0.237	160.221059	-57.935597	-57.78	-1729.73
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	used	1128940640	8.33	12135	0.024	-0.158	0.149	0.260	159.517239	-59.074495	-1453.75	2345.98
7	GUIDE	used	1128927824	8.92	12130	0.057	-0.059	0.159	0.289	159.654739	-59.125305	-1766.94	2339.34

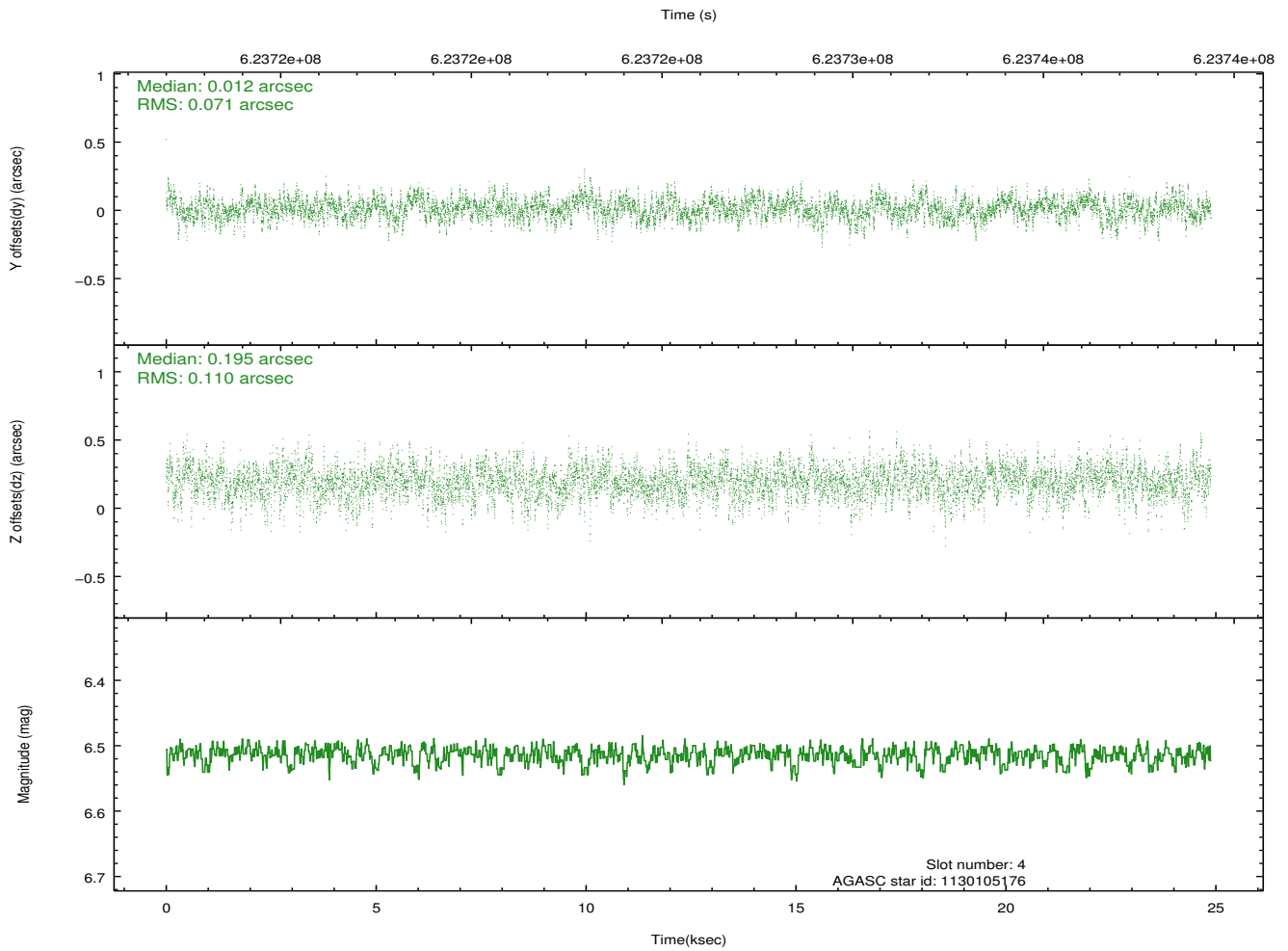
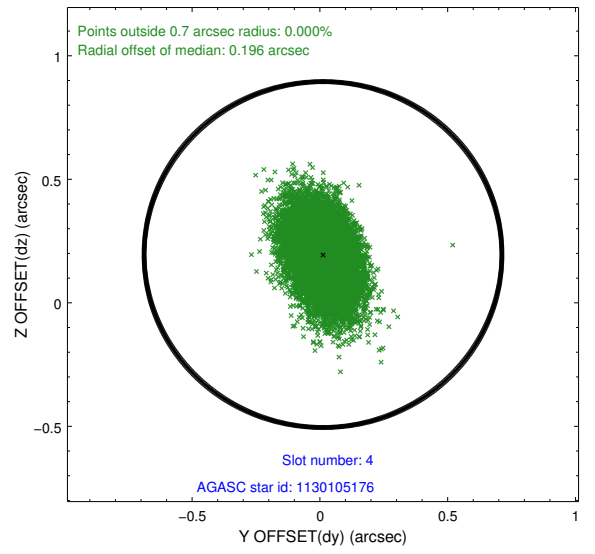
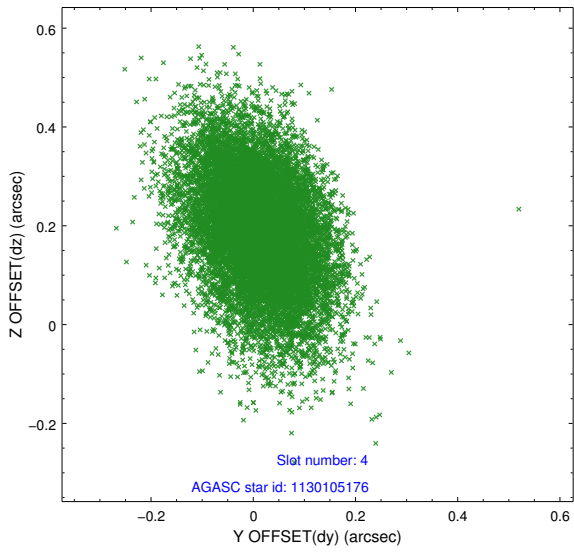
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## 2.4 Star Slots

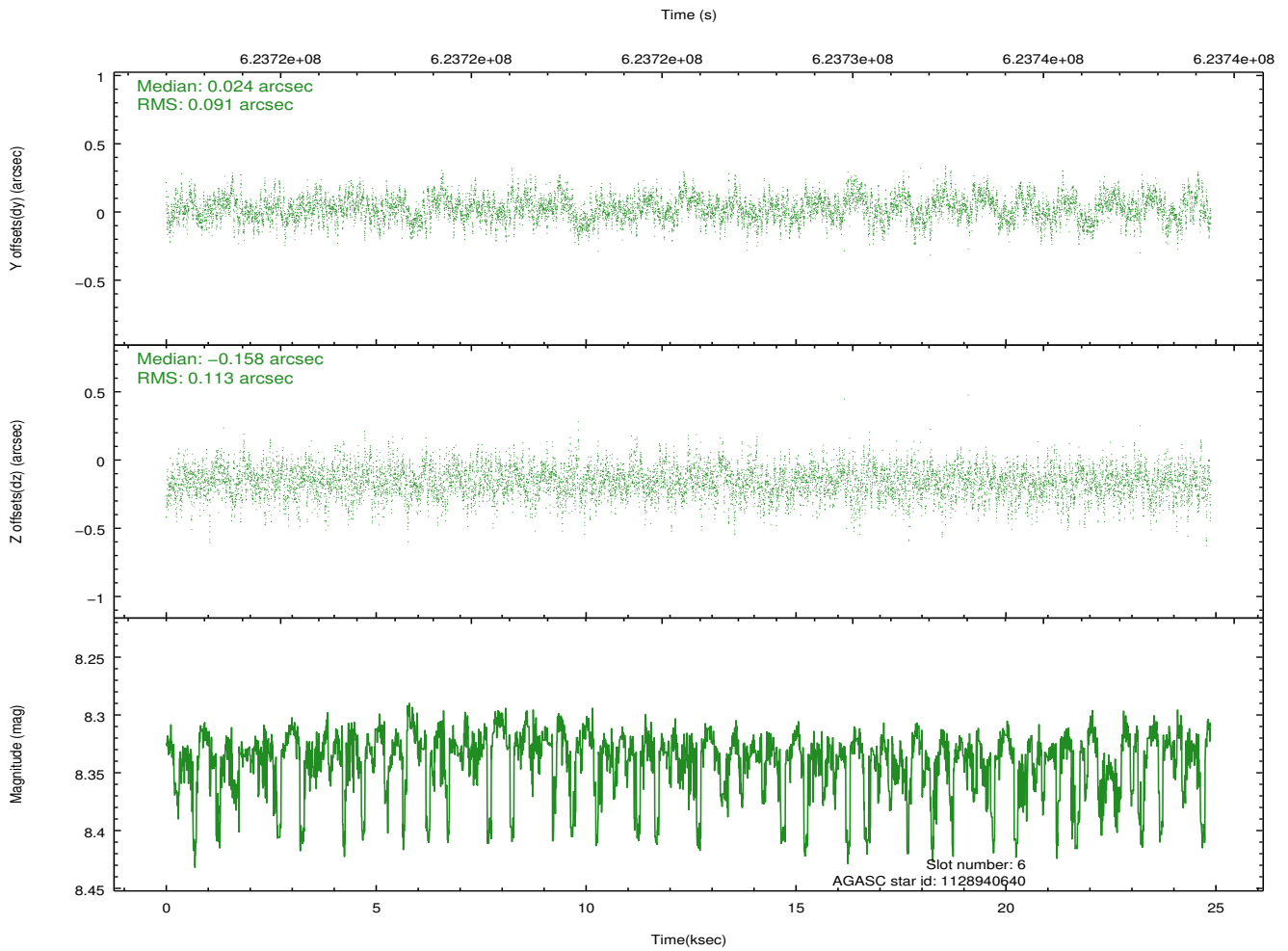
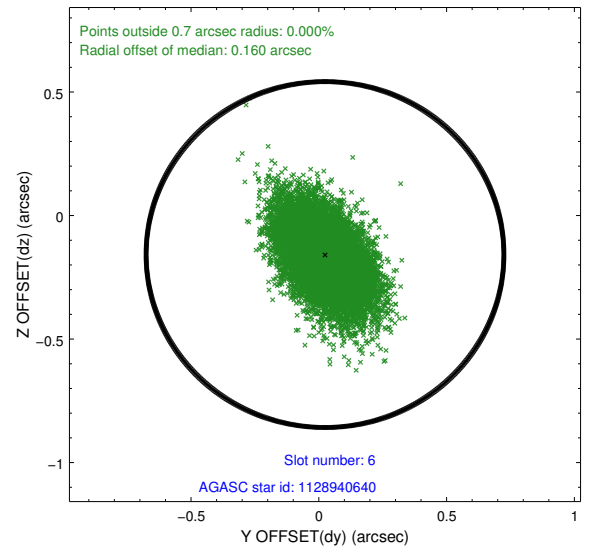
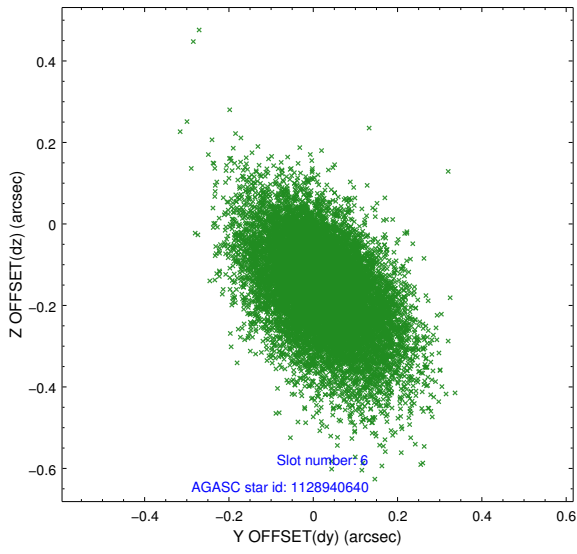
### 2.4.1 Slot 3



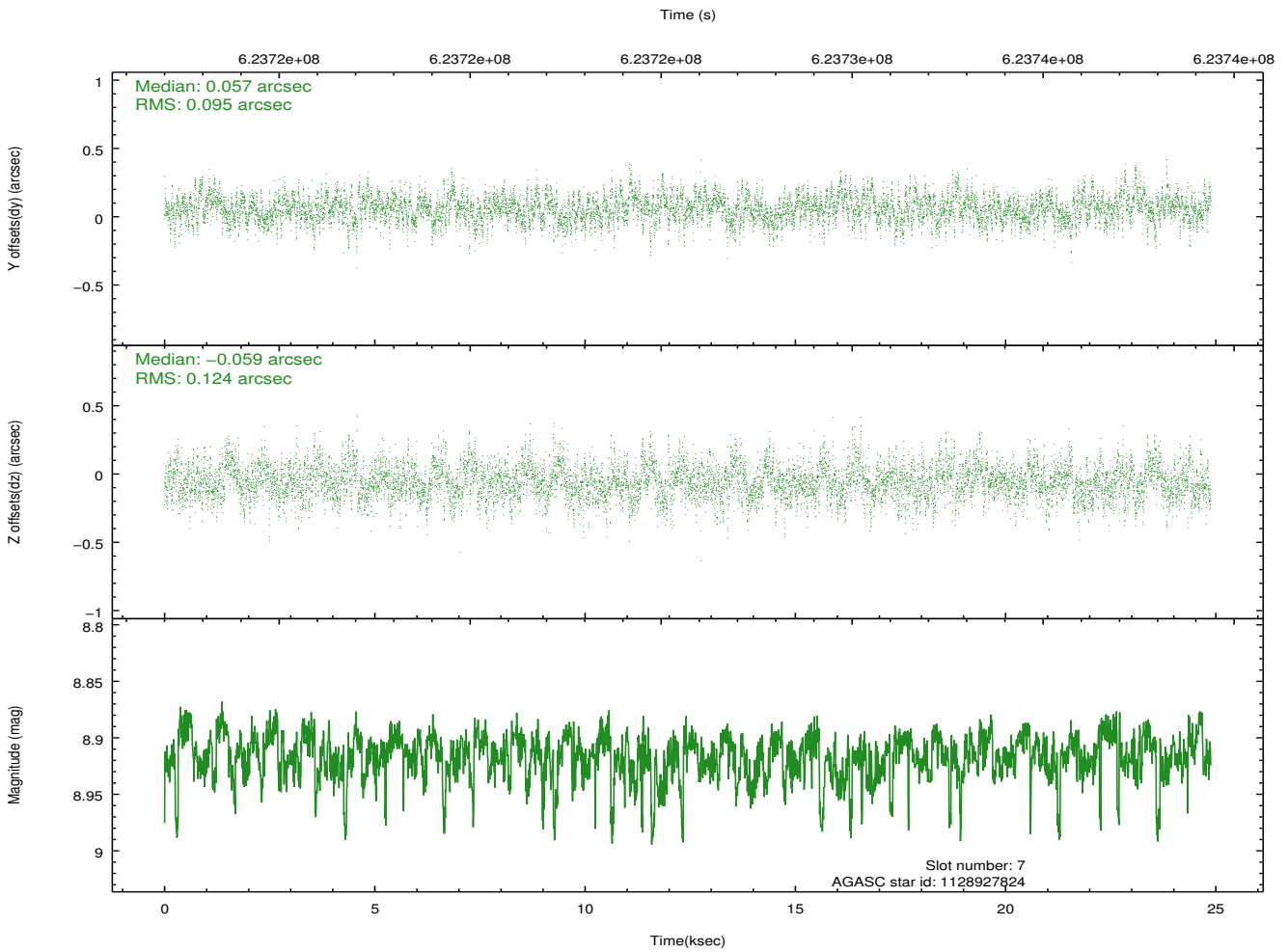
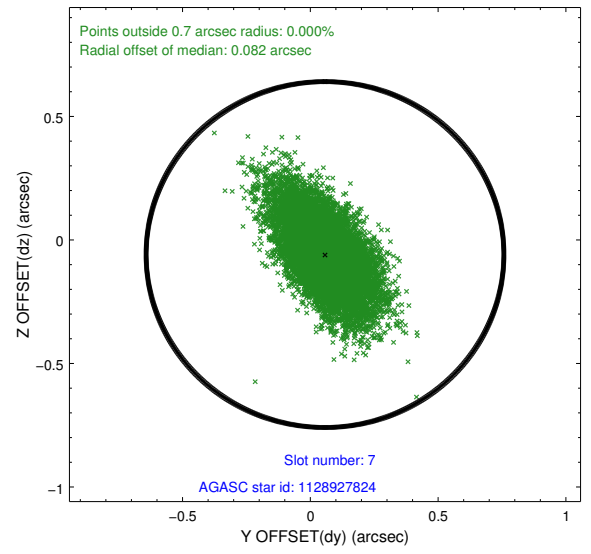
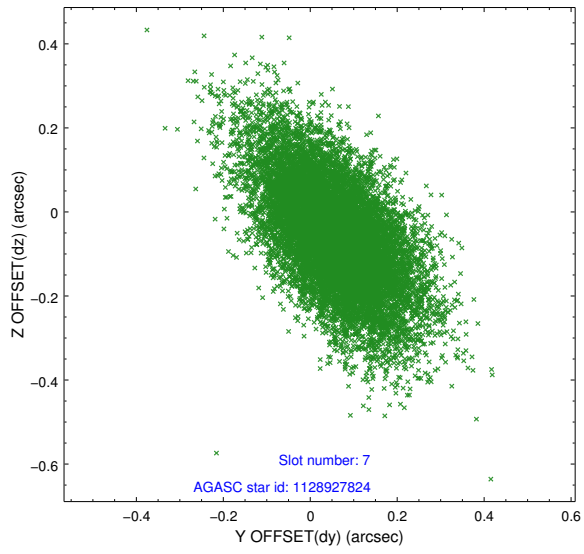
## 2.4.2 Slot 4



### 2.4.3 Slot 6

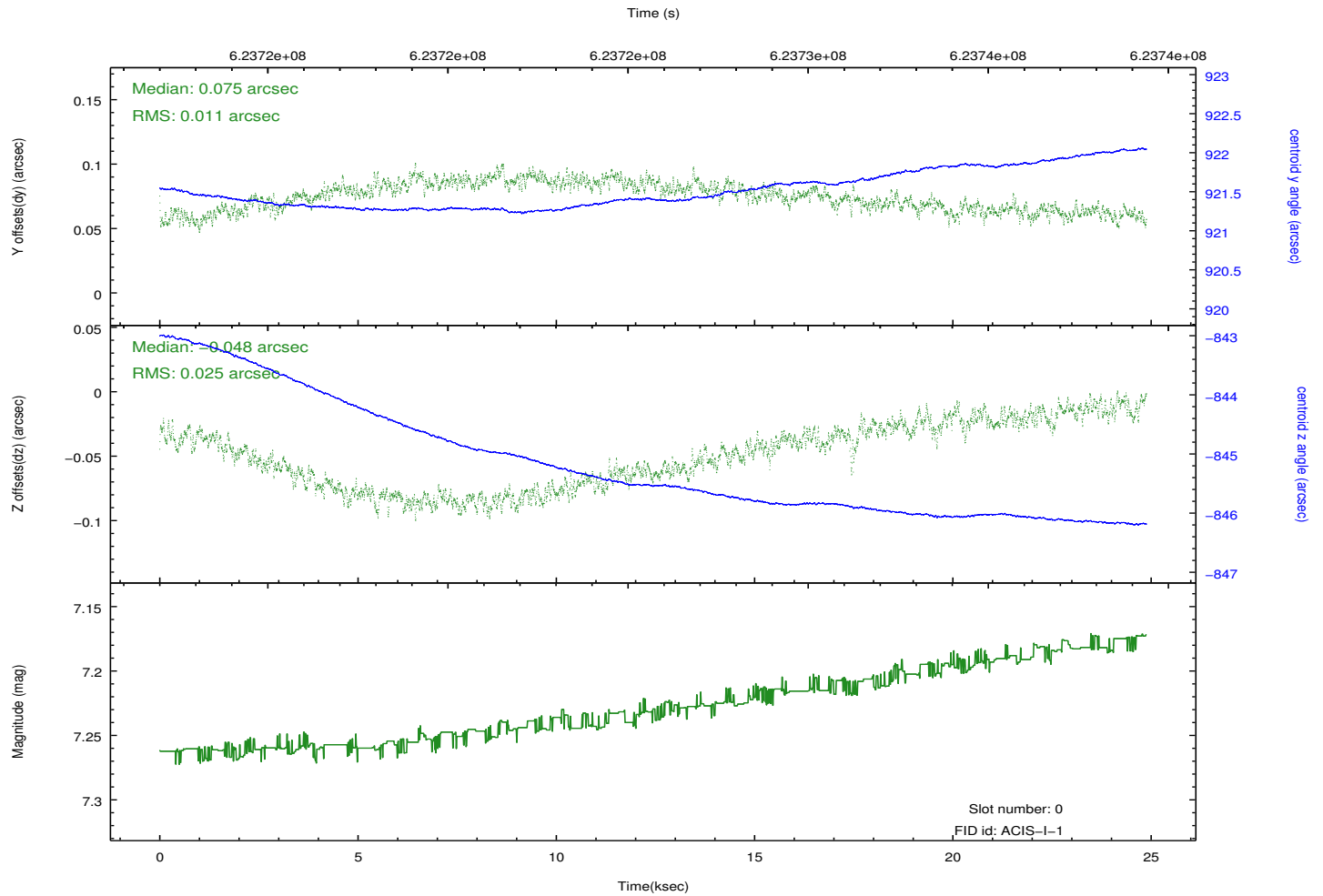
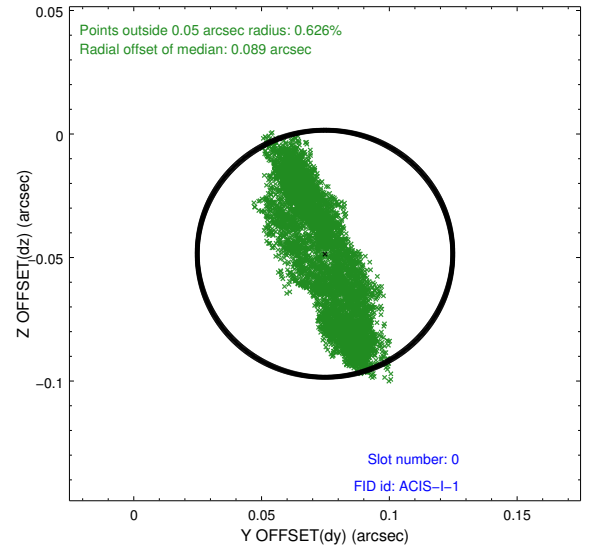
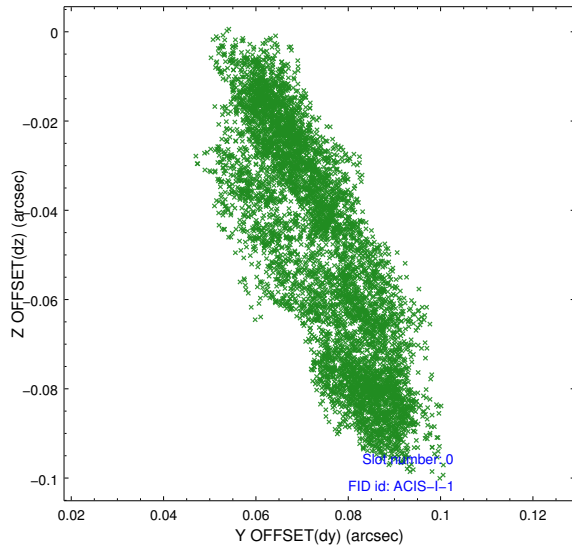


### 2.4.4 Slot 7

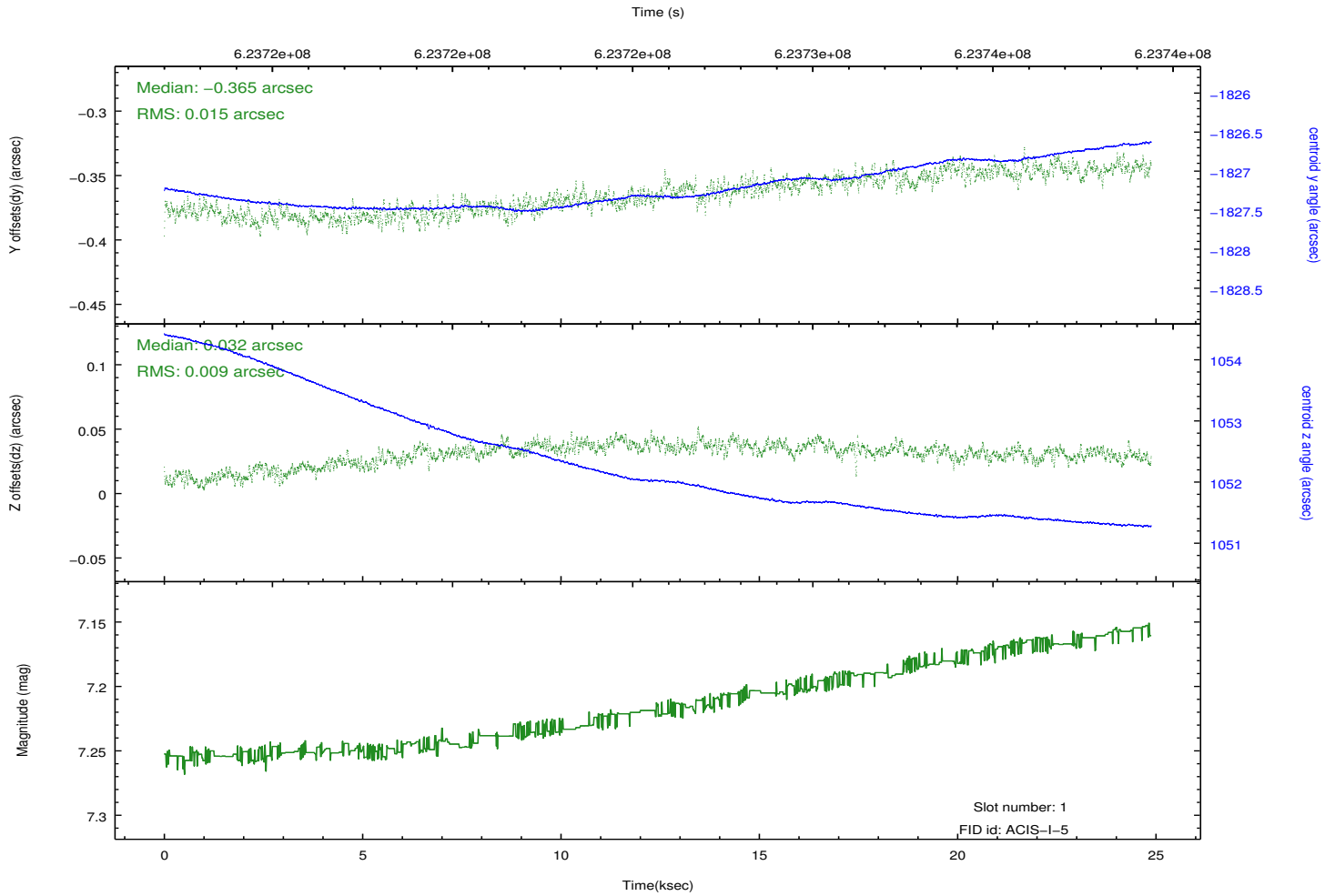
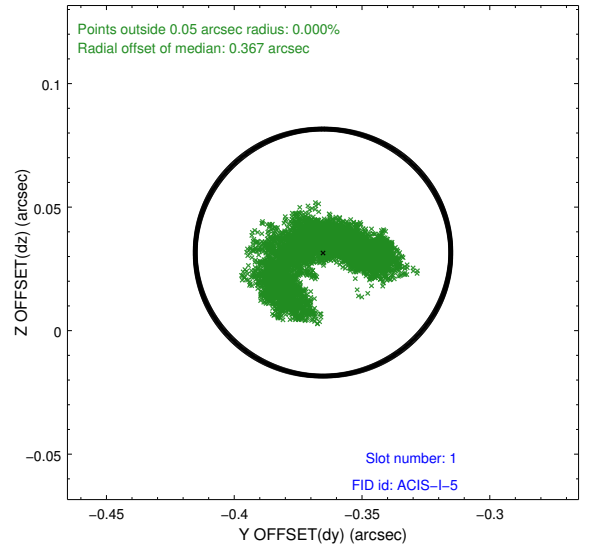
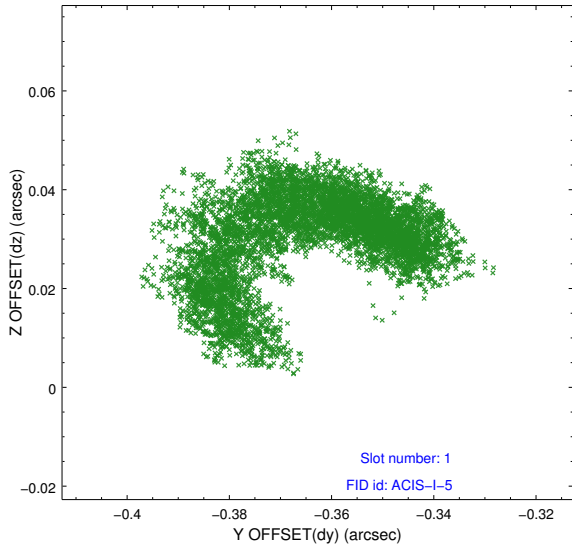


## 2.5 FID Slots

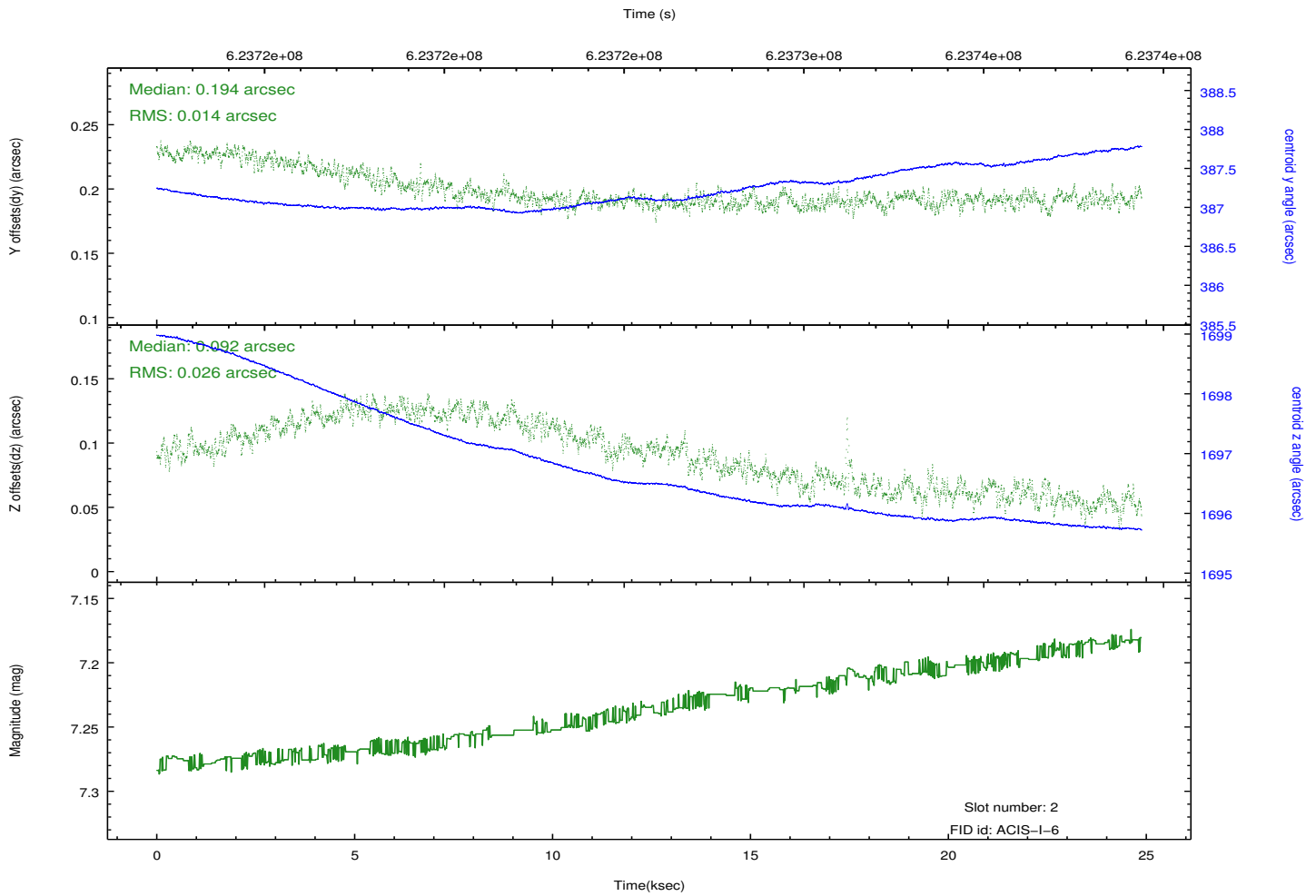
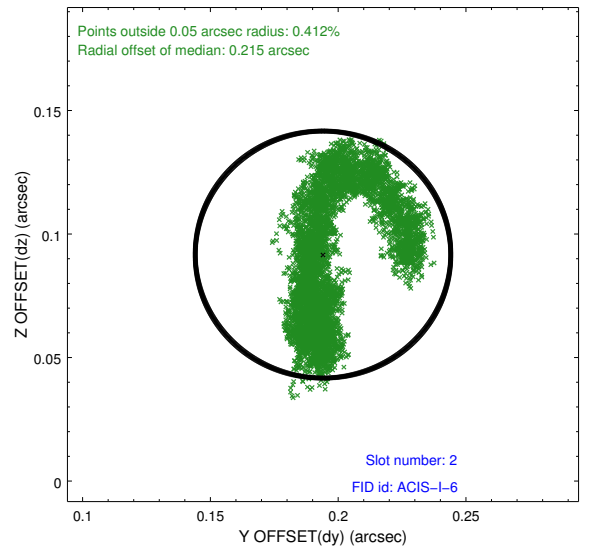
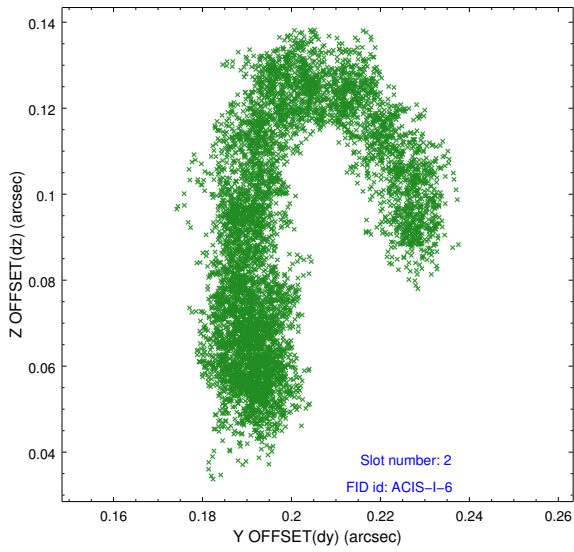
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2017.10.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.662400367498

## A.2 Comments

The guide star in slot 5 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.