

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 20800 - L2 Version 2  
Chandra X-Ray Center

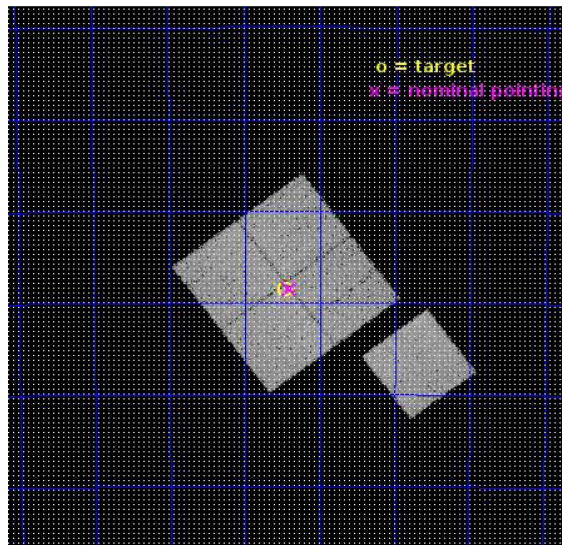
L2 Processing Date : Oct 6 2017

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# 1 Front

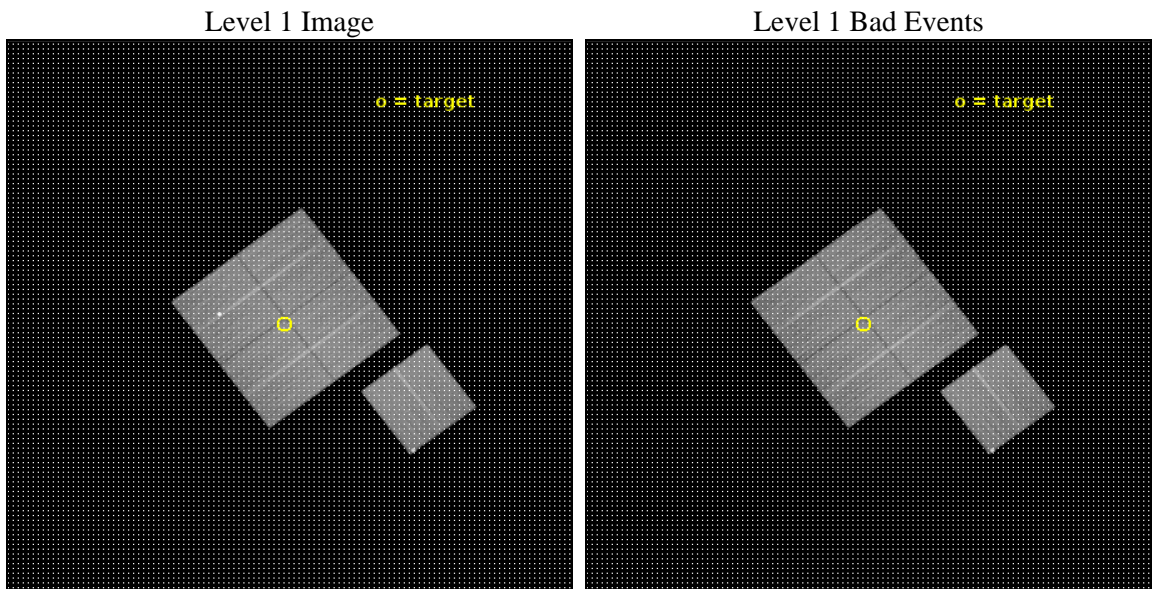
seq_num	201109	Sequence number
obs_id	20800	Observation id
title	An X-ray Census of the Young Stellar Population in a Massive Forming Cluster	Proposal title
observer	Jonathan Tan	Principal investigator
object	G286.21+0.17	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	159.617083	Observer's specified target RA [deg]
dec_targ	-58.309444	Observer's specified target Dec [deg]
ra_nom	159.60081835989	Nominal RA [deg]
dec_nom	-58.30796587189	Nominal Dec [deg]
roll_nom	143.19484656582	Nominal Roll [deg]
revision	2	Processing version of data
ontime	38083.418232679	Sum of GTIs [s]
livetime	37585.830336865	Livetime [s]
ontime0	38080.277222395	Sum of GTIs [s]
ontime1	38089.700293064	Sum of GTIs [s]
ontime2	38089.700293064	Sum of GTIs [s]
ontime3	38083.418232679	Sum of GTIs [s]
ontime6	38089.700293064	Sum of GTIs [s]
l2events	108163	Number of level 2 events



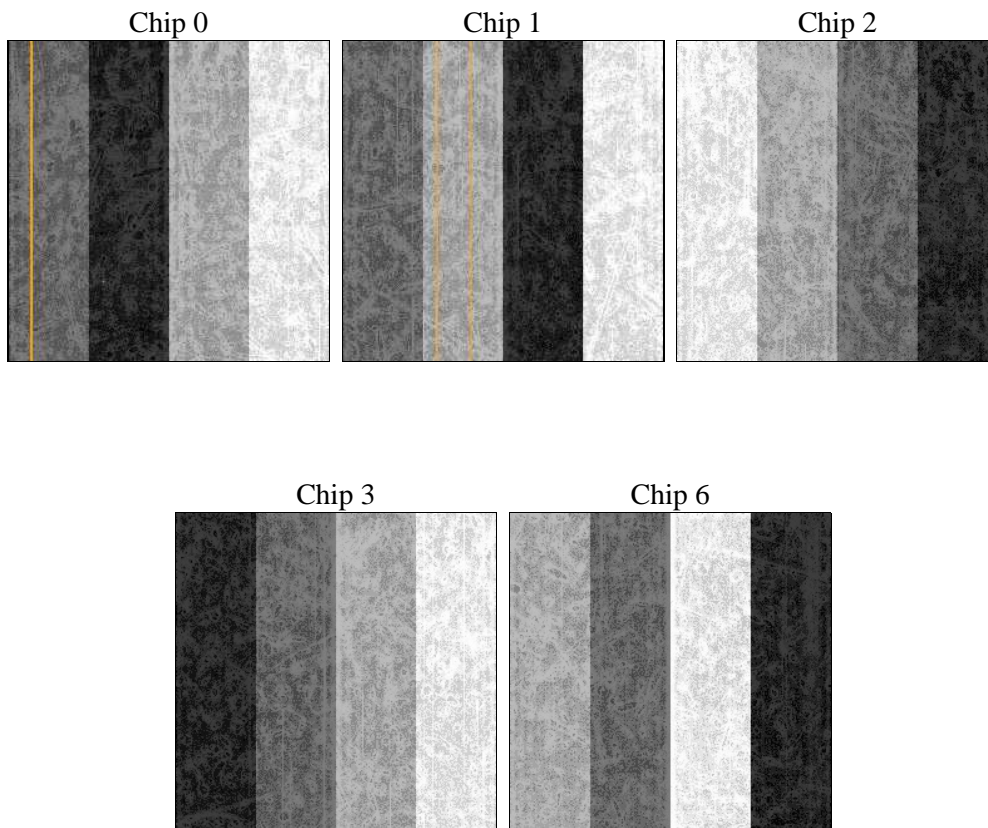
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38018.103000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	38083.418232679	Sum of GTIs [s]
caldbver	4.7.6	&#160	ontime0	38080.277222395	Sum of GTIs [s]
date	2017-10-06T16:49:25	Date and time of file creation	ontime1	38089.700293064	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	38089.700293064	Sum of GTIs [s]
			ontime3	38083.418232679	Sum of GTIs [s]
			ontime6	38089.700293064	Sum of GTIs [s]
			l1events	1177508	Number of level 1 events

### 2.1.4 Events

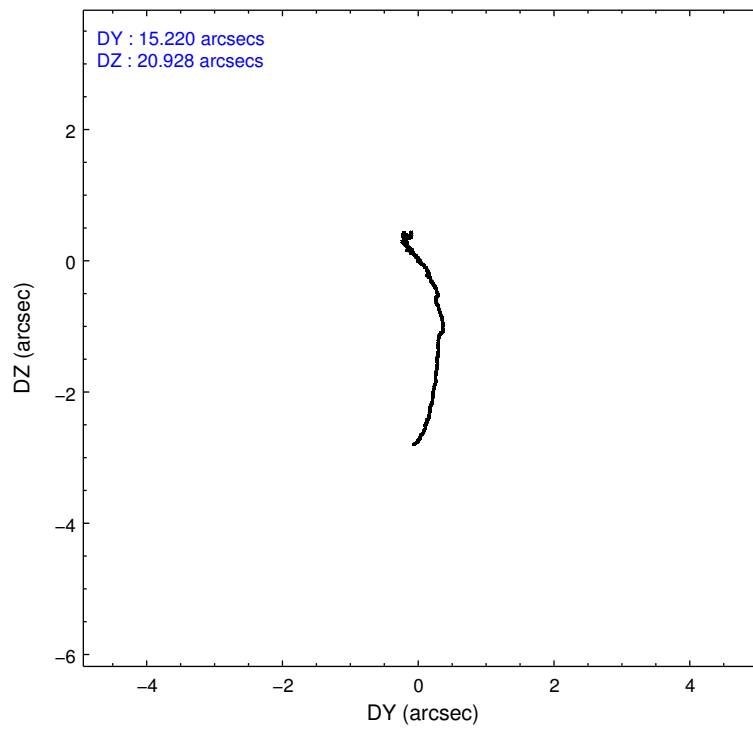
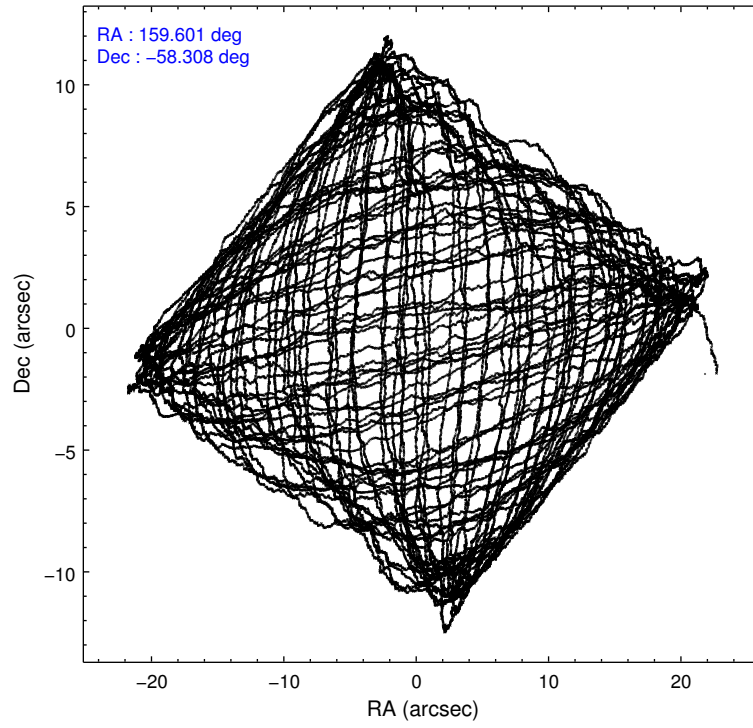
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	218589	243890	244115	232897	238017
rejected events	191897	193674	219170	207505	211868
rejected %	87%	79%	89%	89%	89%

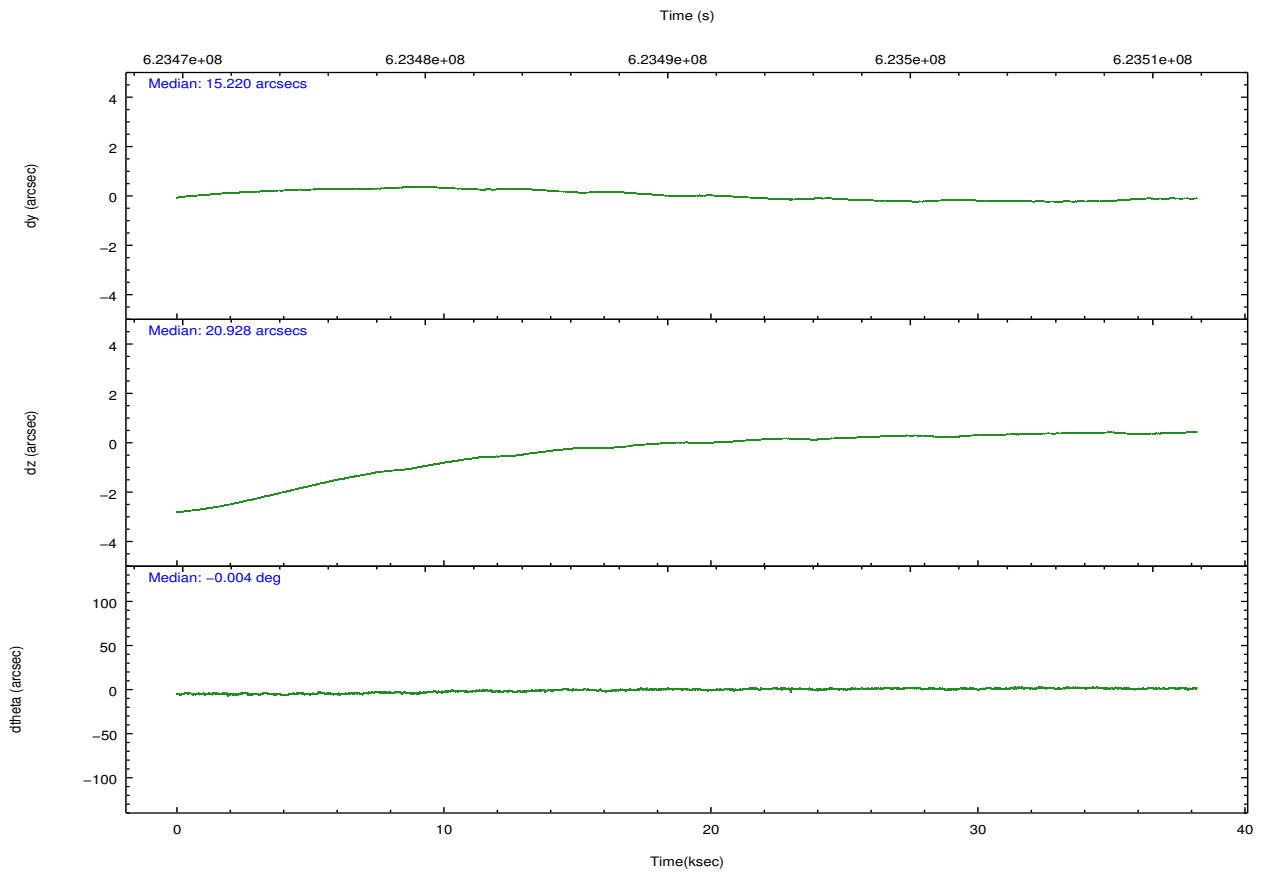
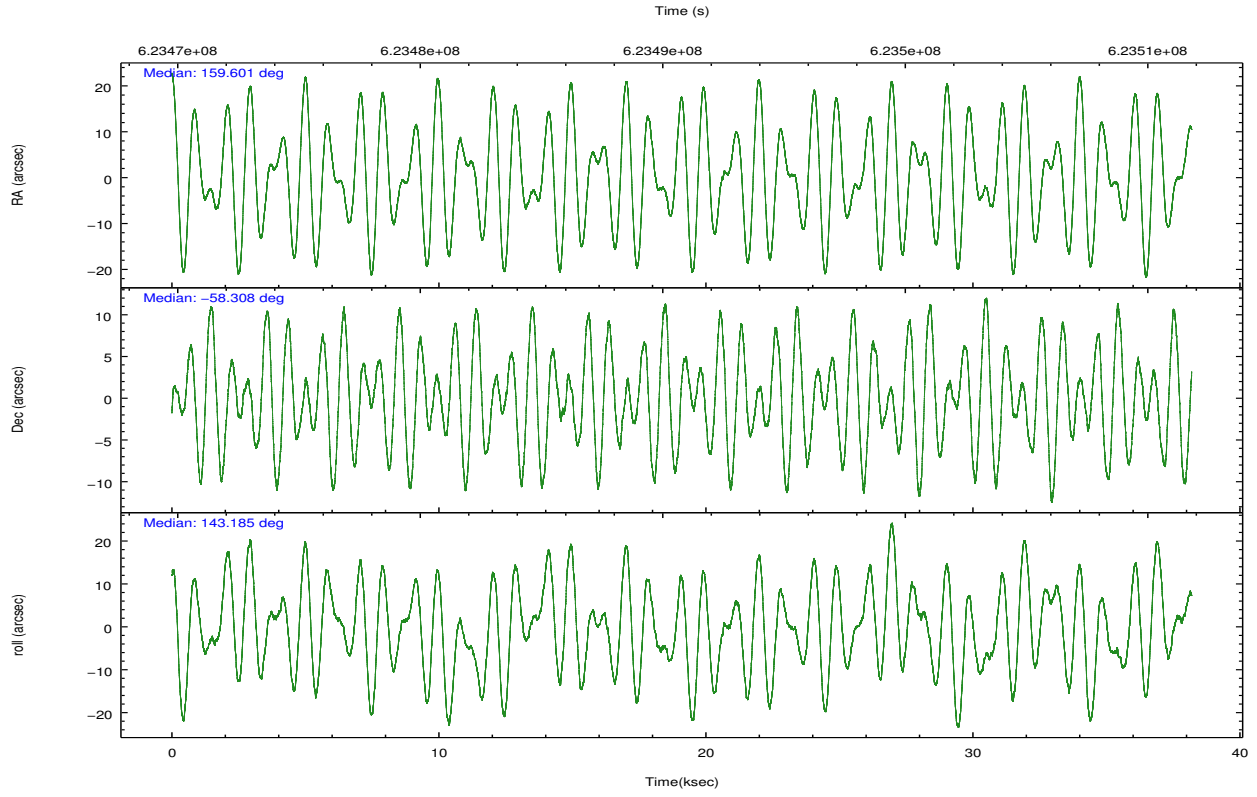
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	9733	32180	9206	9653	9101
	4%	13%	3%	4%	3%
grade 1 events	120	230	128	123	5180
	0%	0%	0%	0%	2%
grade 2 events	6798	6682	6272	5673	6213
	3%	2%	2%	2%	2%
grade 3 events	2612	2672	2315	2566	2548
	1%	1%	0%	1%	1%
grade 4 events	2497	2644	2466	2616	2501
	1%	1%	1%	1%	1%
grade 5 events	8634	9180	7879	9877	9241
	3%	3%	3%	4%	3%
grade 6 events	5053	6041	4690	4886	5788
	2%	2%	1%	2%	2%
grade 7 events	183142	184261	211159	197503	197445
	83%	75%	86%	84%	82%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	159.653001	159.6008183598867	CCD I2 on	Y	Y
[deg] Pointing Dec	-58.311123	-58.30796587188985	CCD I3 on	Y	Y
[deg] Pointing Roll	143.030556	143.1948465658242	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	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	623471861.184000	623470802.61382	CCD S5 on	N	N
Observation start date	2017-10-04T02:36:32	2017-10-04T02:20:02	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	623509880.184000	623510856.54117	On-chip summing requested	N	N
Observation end date	2017-10-04T13:10:11	2017-10-04T13:27:36	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





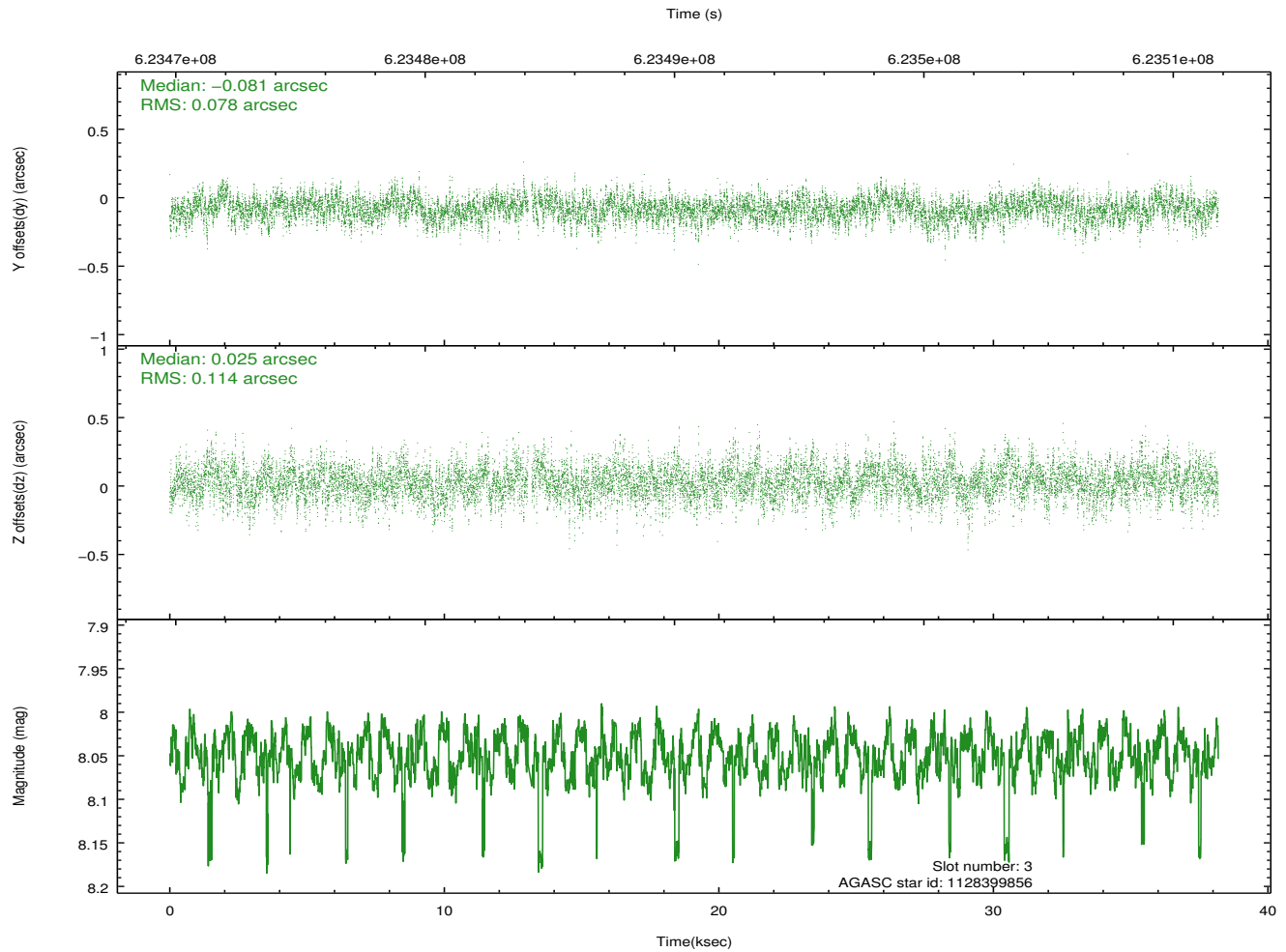
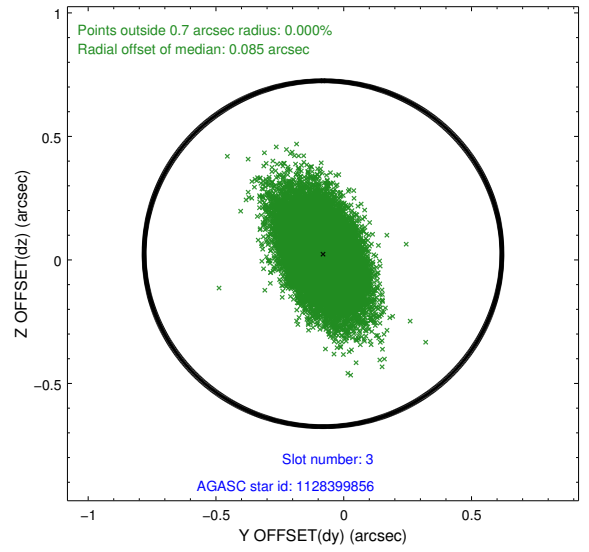
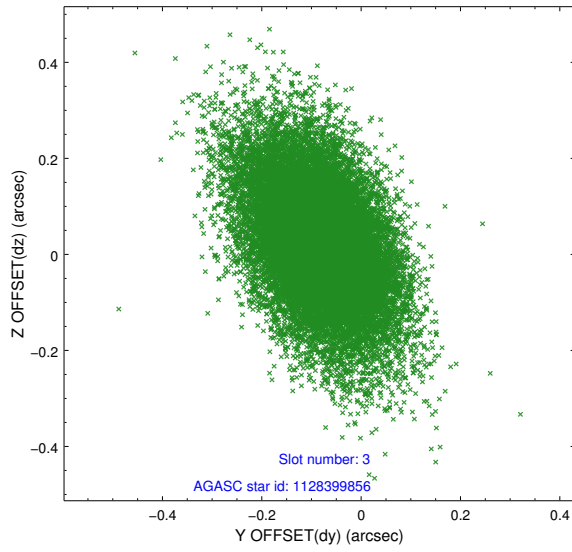
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.19	9316	0.081	-0.059	0.014	0.051	0.000000	0.000000	924.32	-844.27
1	FID		ACIS-I-5	7.20	9316	-0.357	0.038	0.011	0.017	0.000000	0.000000	-1824.29	1053.17
2	FID		ACIS-I-6	7.21	9316	0.183	0.089	0.018	0.045	0.000000	0.000000	389.83	1697.85
3	GUIDE	used	1128399856	8.05	18557	-0.081	0.025	0.140	0.251	159.643120	-57.562425	1636.63	-2141.43
4	GUIDE	used	1130105176	6.51	18632	0.016	0.156	0.130	0.231	160.221059	-57.935597	-56.59	-1729.07
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	18619	0.010	-0.143	0.147	0.252	159.517239	-59.074495	-1452.52	2346.69
7	GUIDE	used	1128927824	8.90	18609	0.059	-0.036	0.165	0.296	159.654739	-59.125305	-1765.66	2339.92

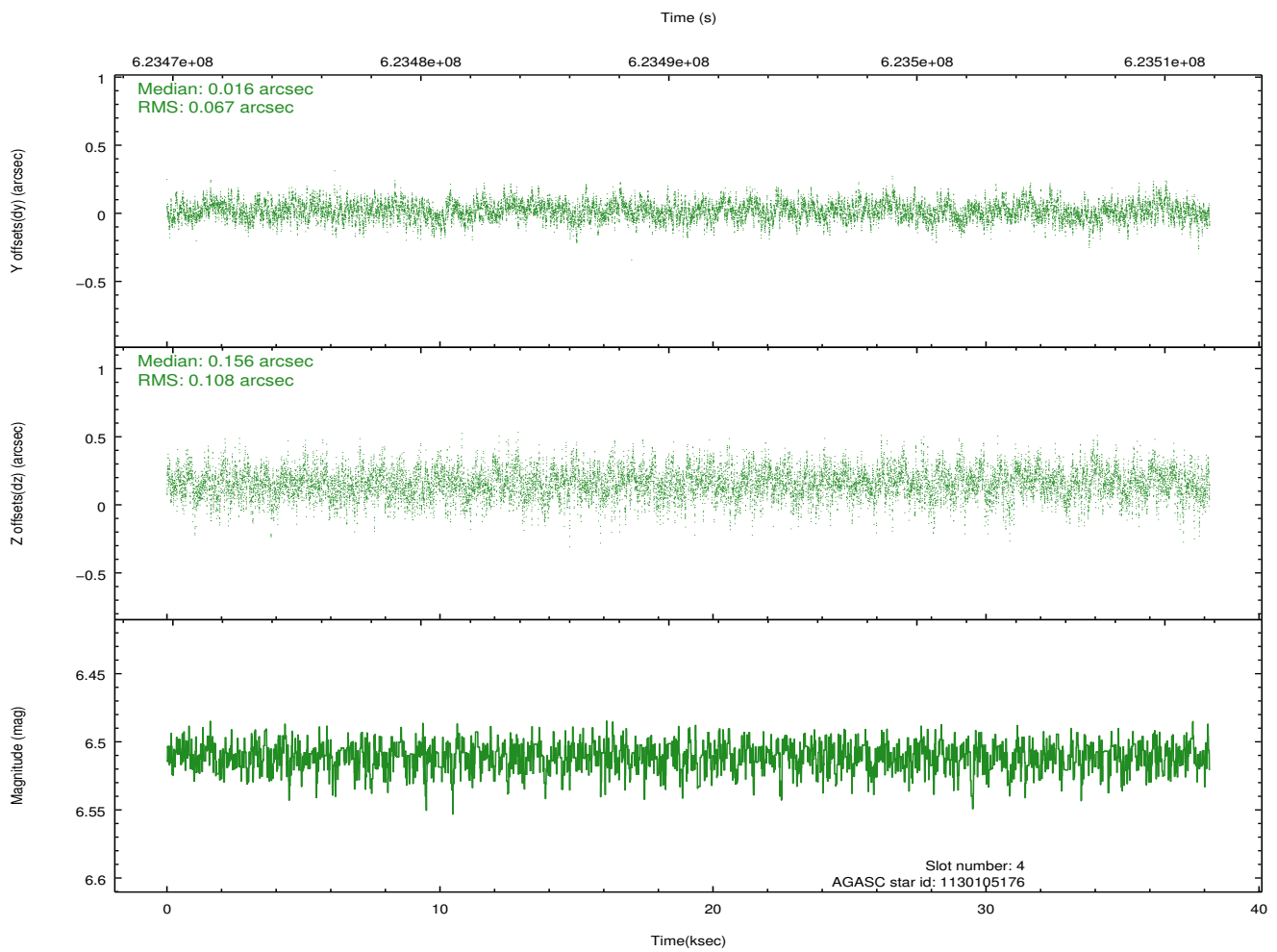
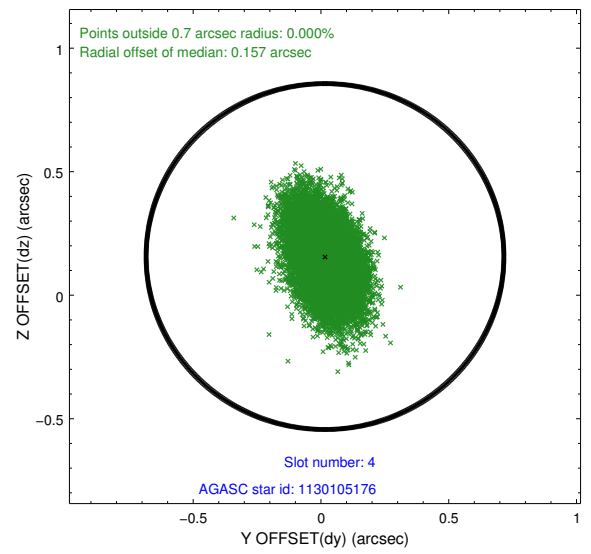
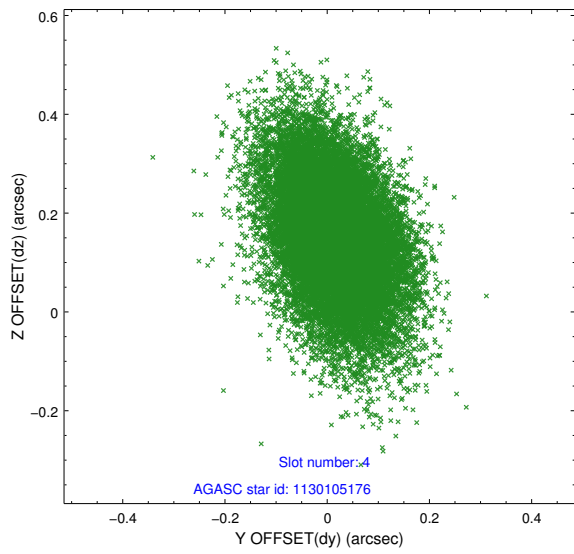
∞

## 2.4 Star Slots

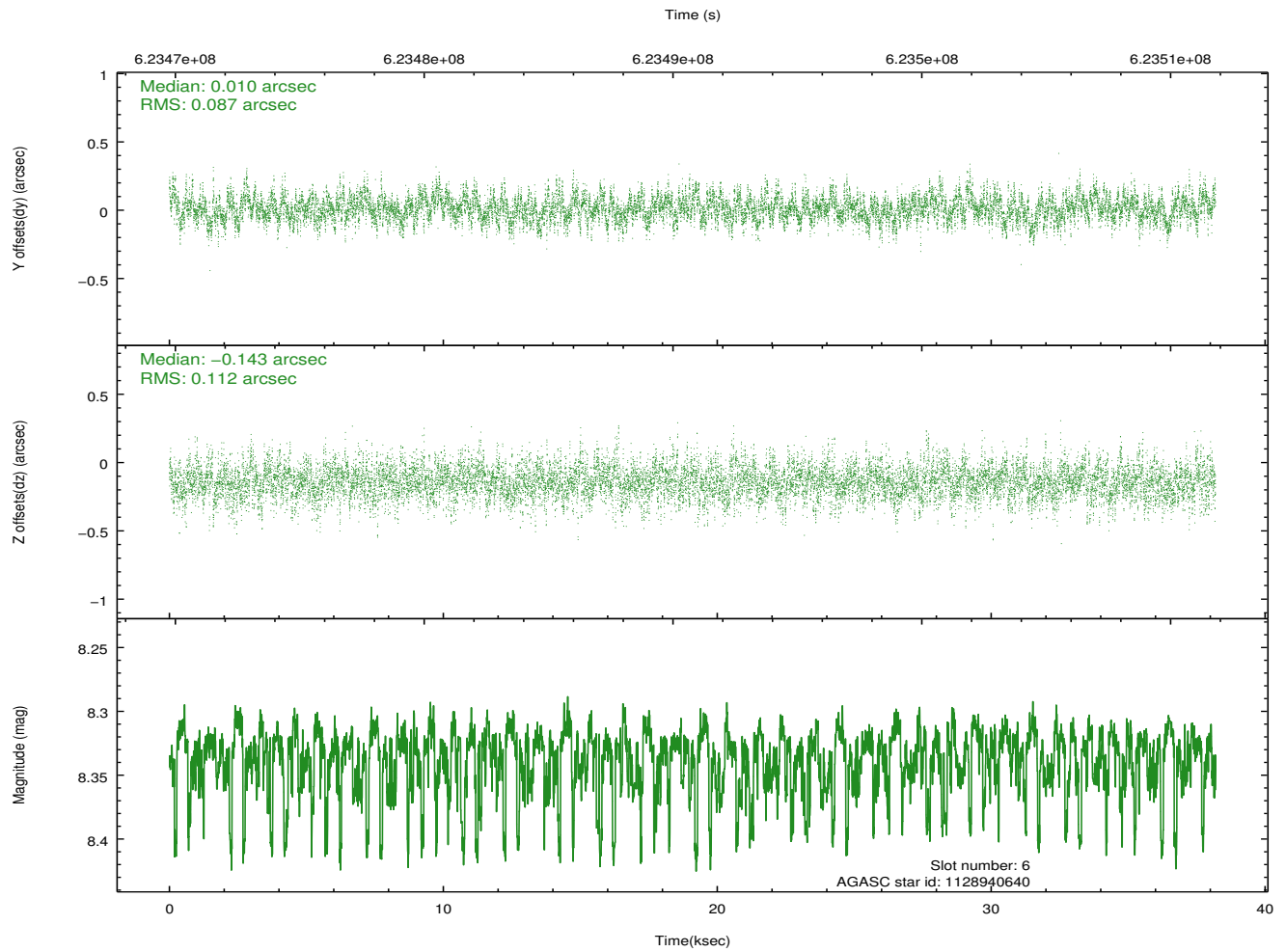
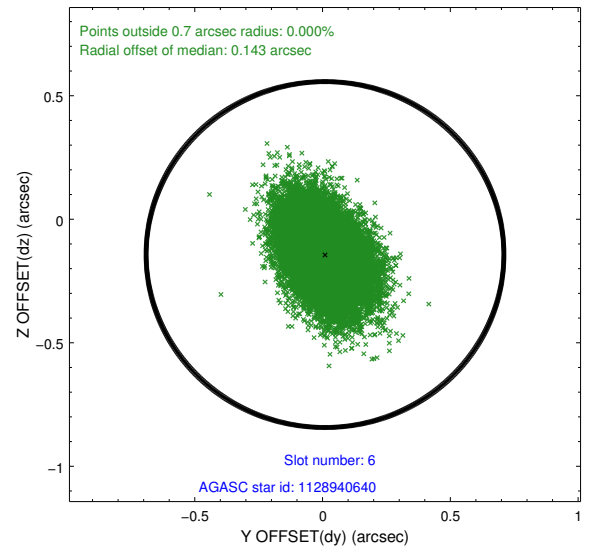
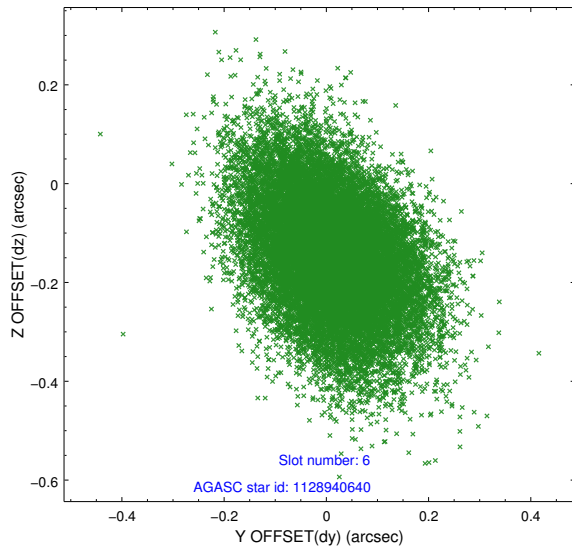
### 2.4.1 Slot 3



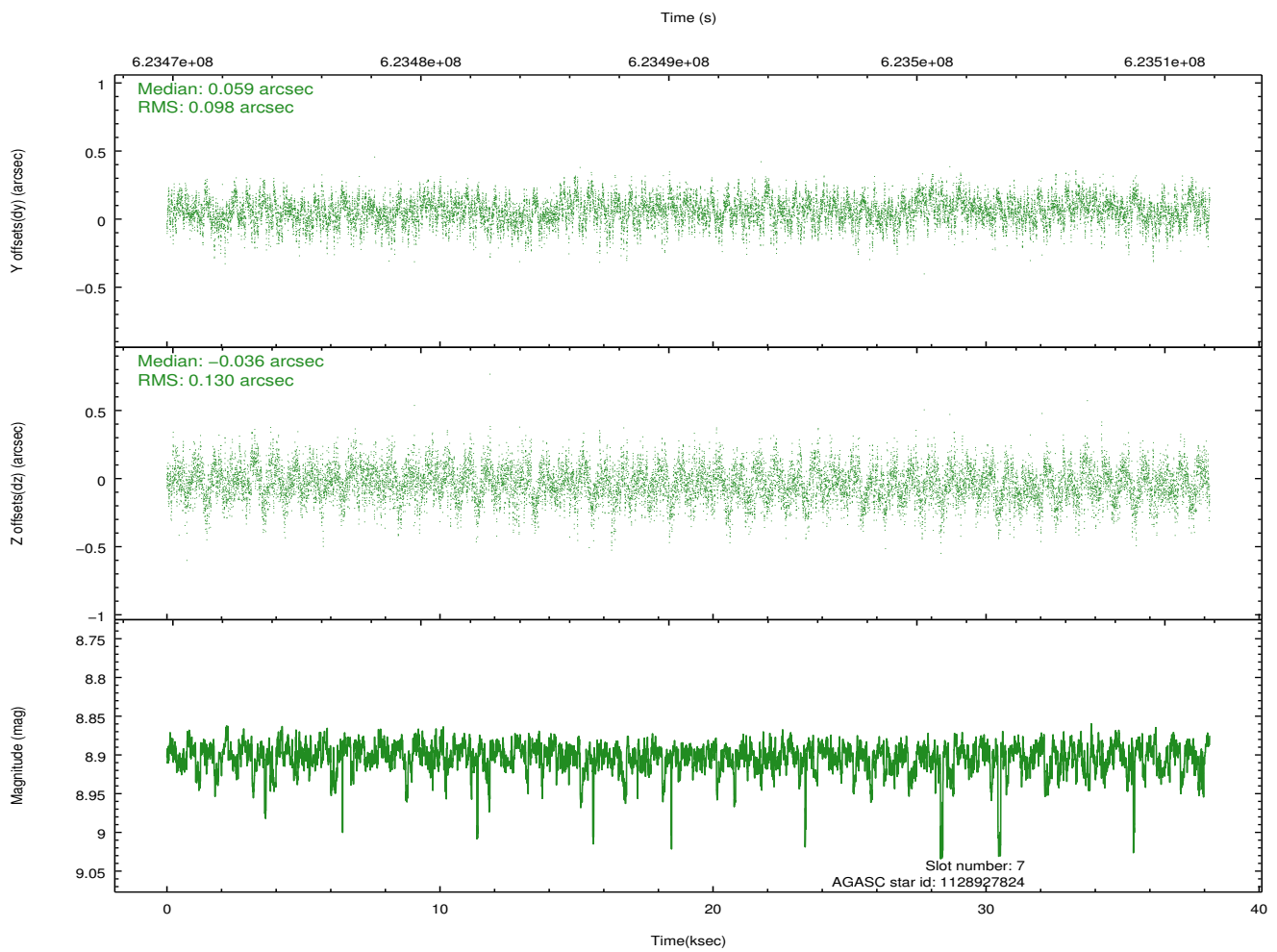
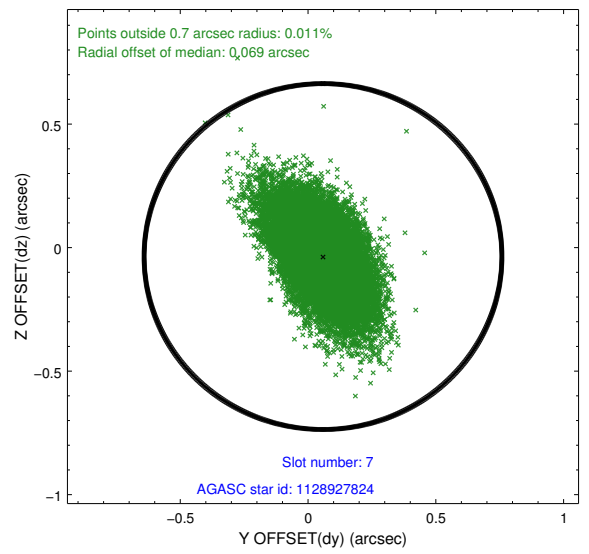
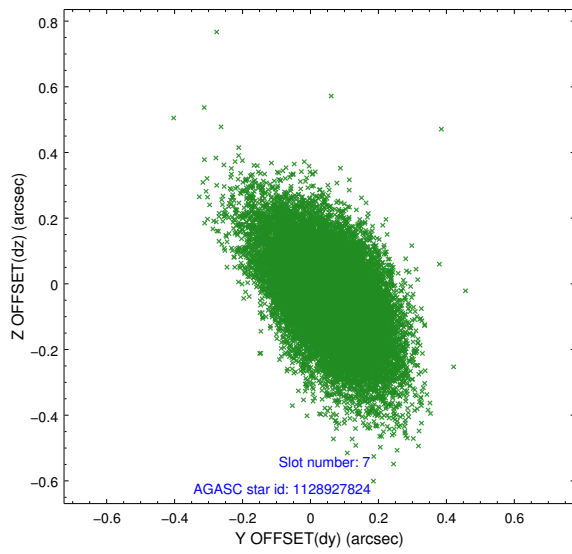
## 2.4.2 Slot 4



### 2.4.3 Slot 6

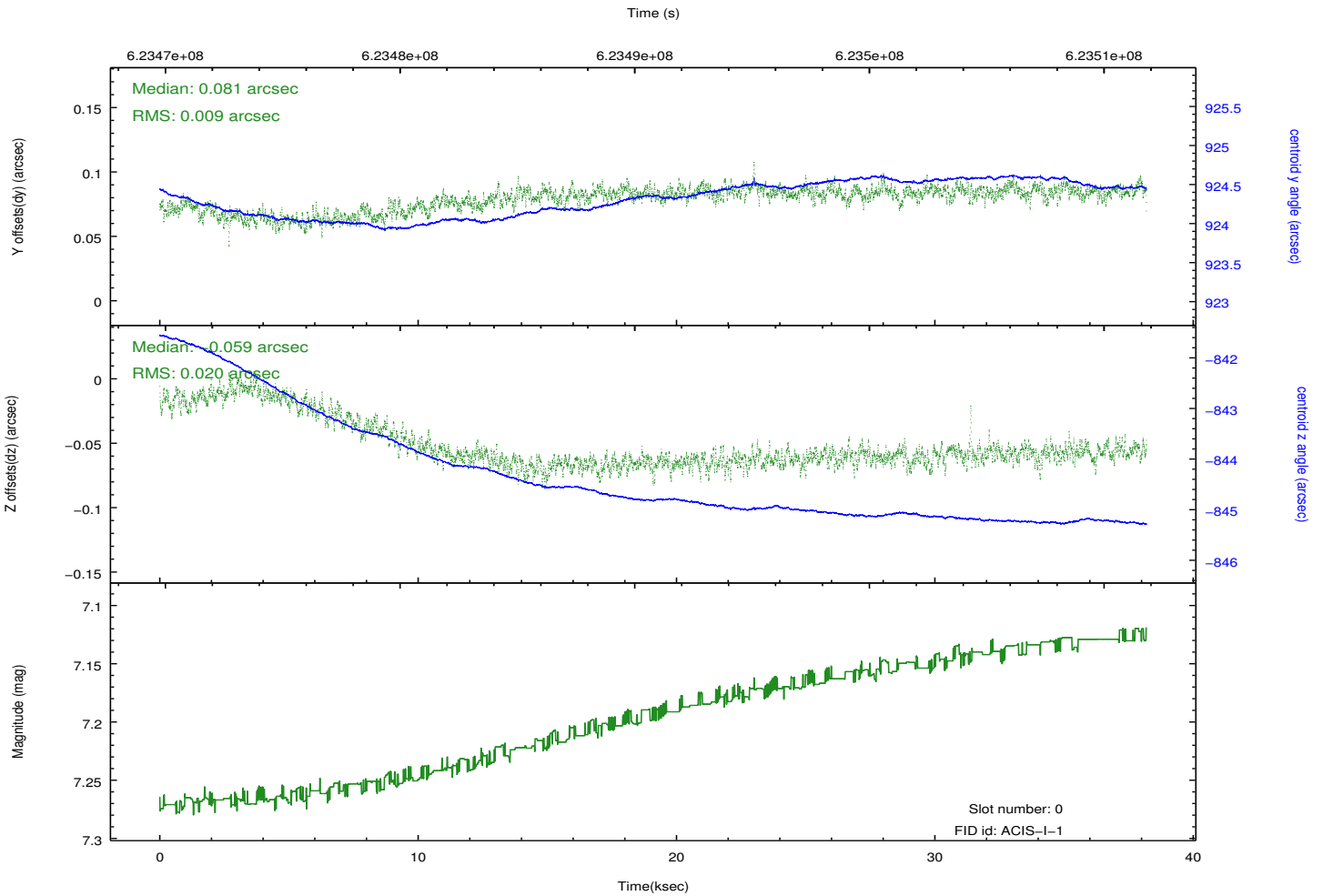
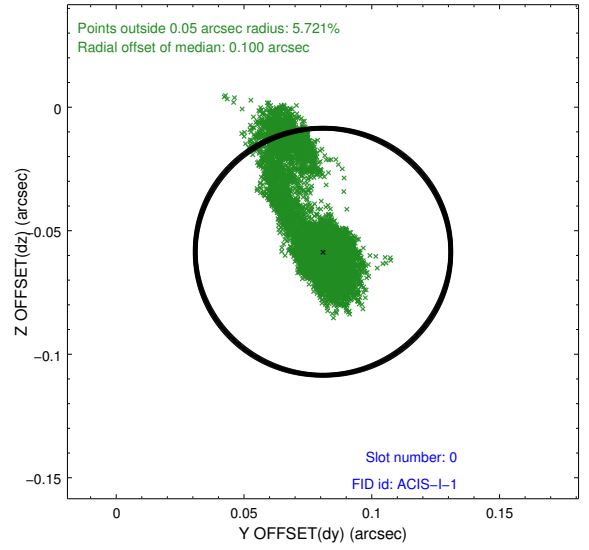
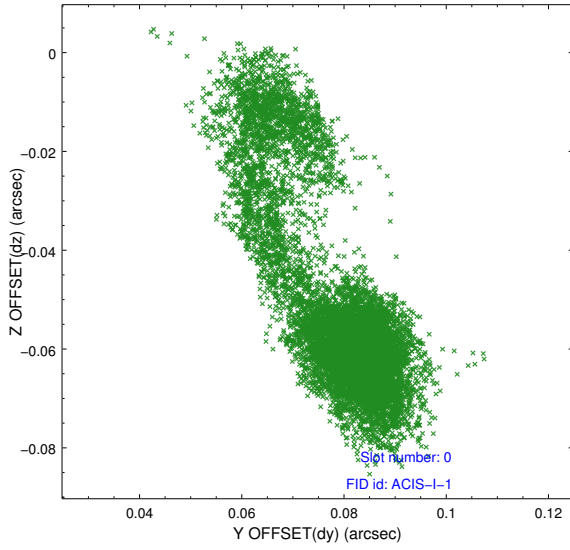


## 2.4.4 Slot 7

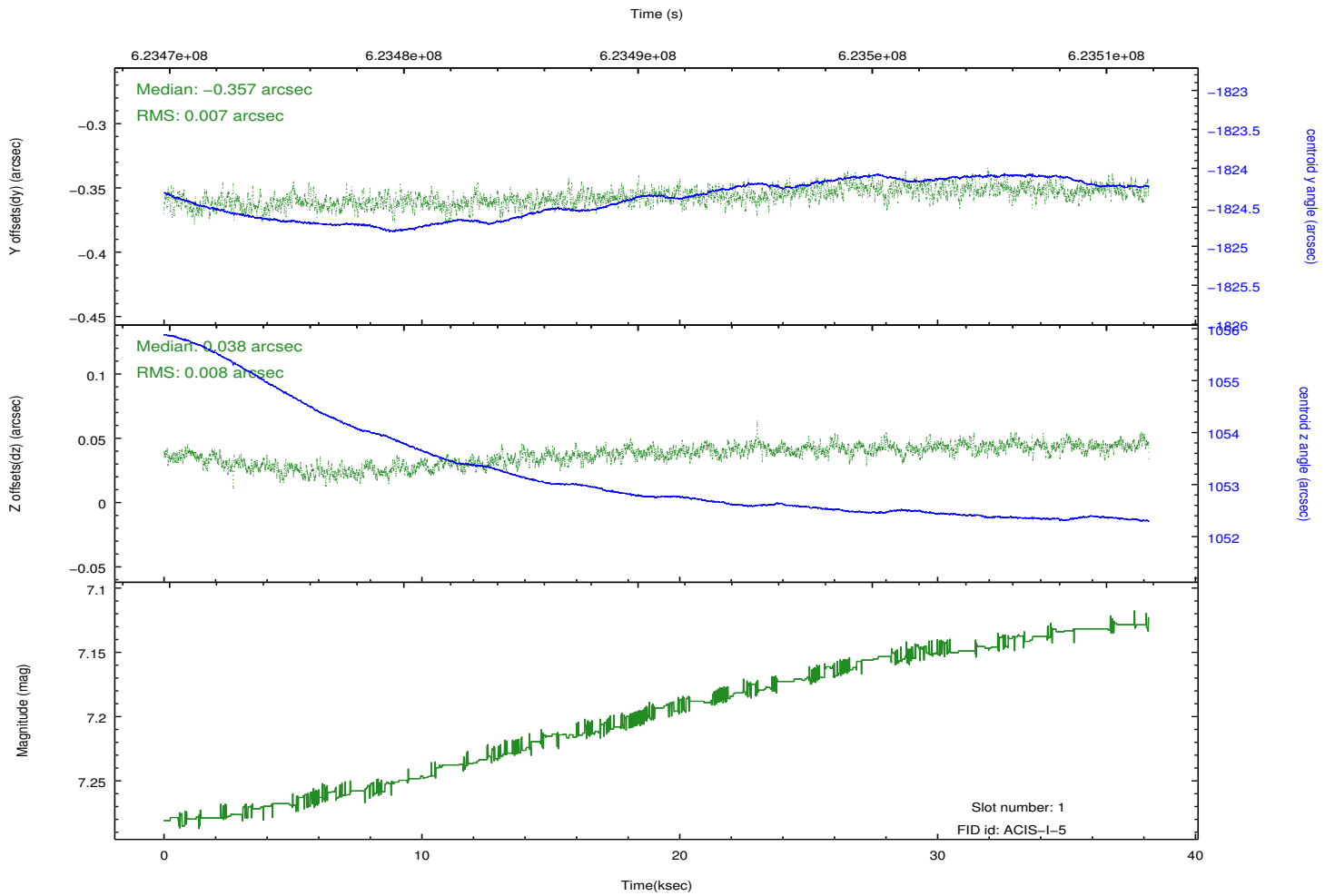
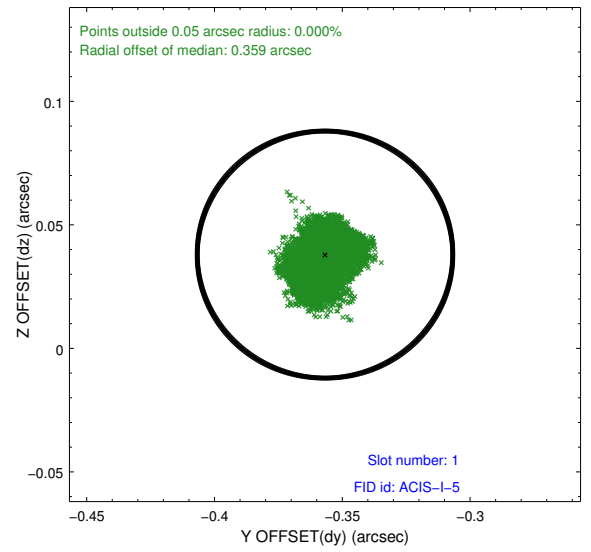
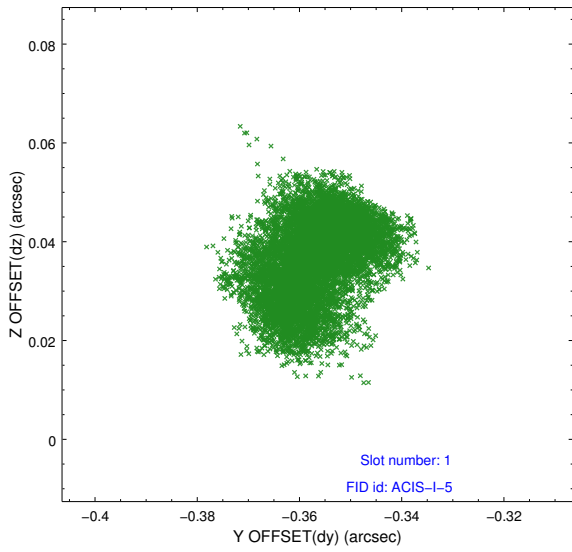


## 2.5 FID Slots

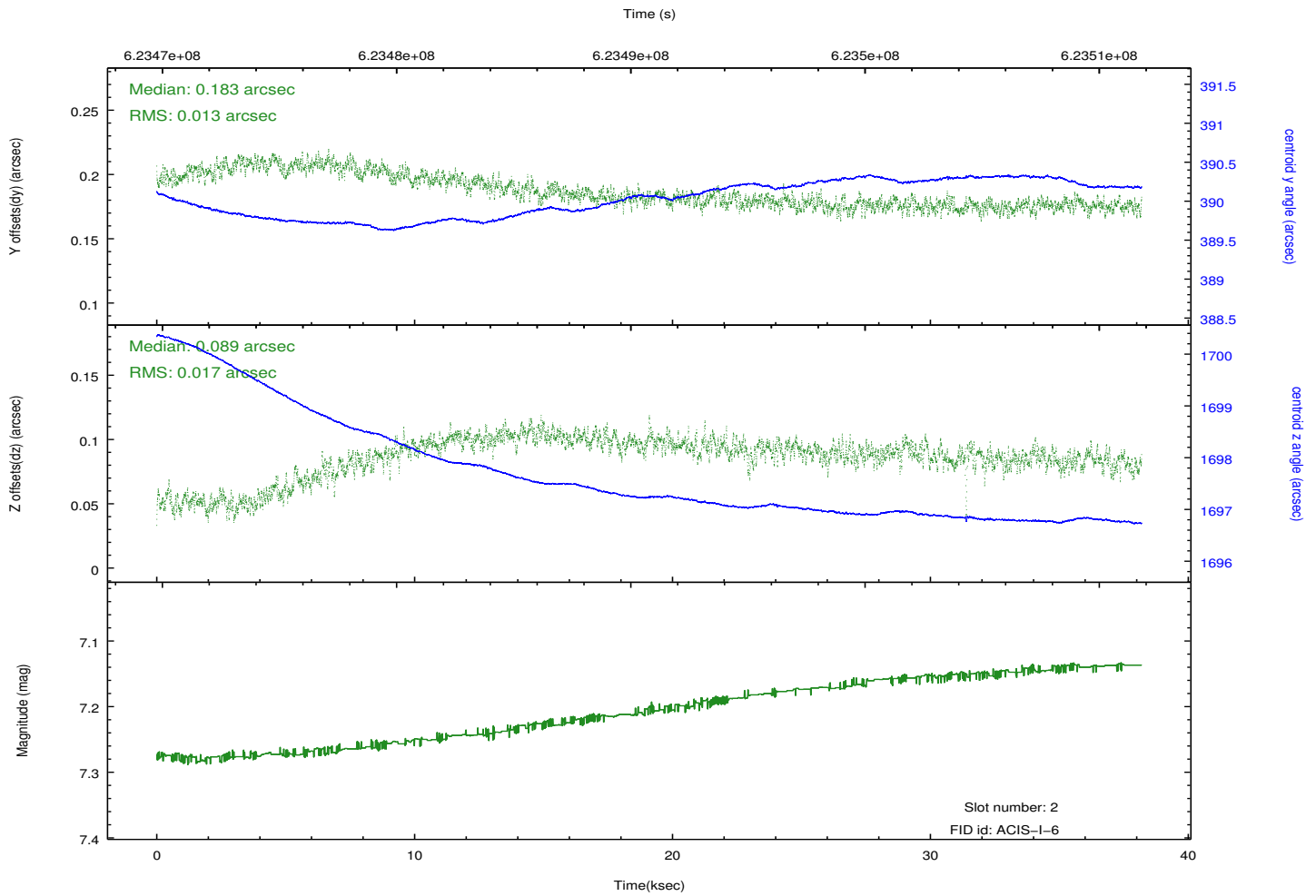
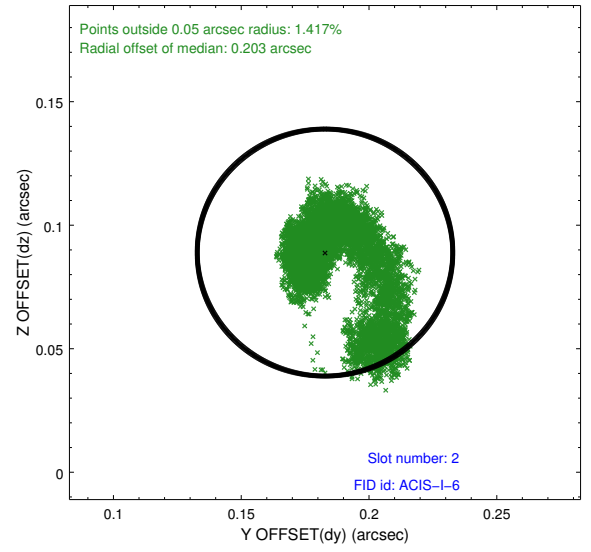
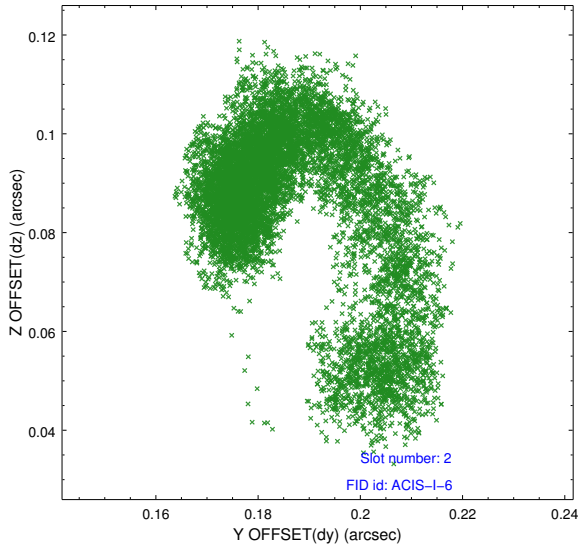
### 2.5.1 Slot 0



## 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)	2017.10.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.083418232679

## A.2 Comments

One optional chip was dropped.

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.