

V&V Reference Report

L2 ASCDS Version : 8.3.3

Observation 65 - L2 Version 4
Chandra X-Ray Center

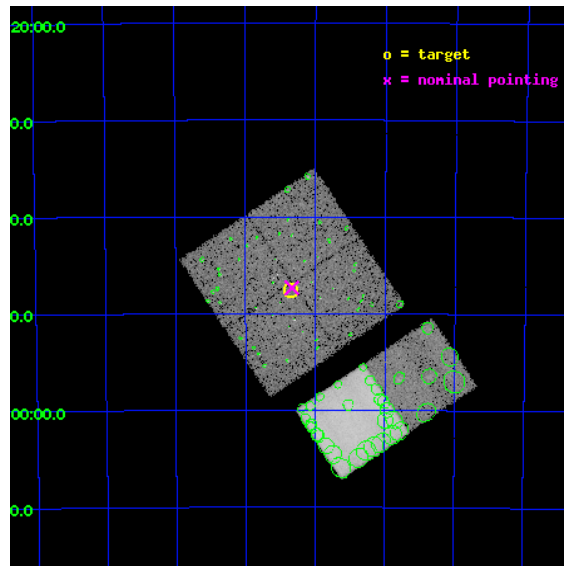
L2 Processing Date : Nov 8 2010

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Point Sources	17
A	Summary	18
A.1	Status	18
A.2	Comments	18

1 Front

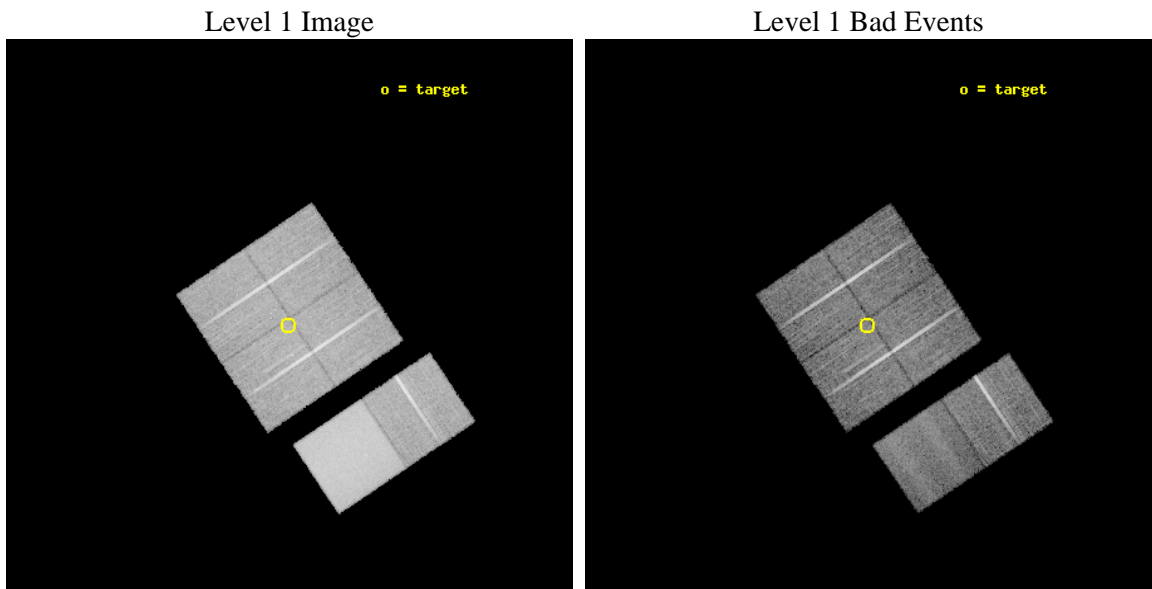
seq_num	290034	Sequence number
obs_id	65	Observation id
title	CALIBRATION OBSERVATION NGC 2516 FOR BORESIGHTING AND PLATE SCALE	
observer	Dr. CXC Calibration	Principal investigator
object	NGC 2516	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	119.59	Observer's specified target RA
dec_targ	-60.7939	Observer's specified target Dec
ra_nom	119.58402397627	Nominal RA
dec_nom	-60.7891306357	Nominal Dec
roll_nom	146.20405862626	Nominal Roll
revision	4	Processing version of data
ontime	10035.200009346	Sum of GTIs [s]
livetime	9908.1282643557	Livetime [s]
ontime0	10035.200009346	Sum of GTIs [s]
ontime1	10035.200009346	Sum of GTIs [s]
ontime2	10035.200009346	Sum of GTIs [s]
ontime3	10035.200009346	Sum of GTIs [s]
ontime6	10035.200009346	Sum of GTIs [s]
ontime7	10035.200009346	Sum of GTIs [s]
l2events	212281	Number of level 2 events



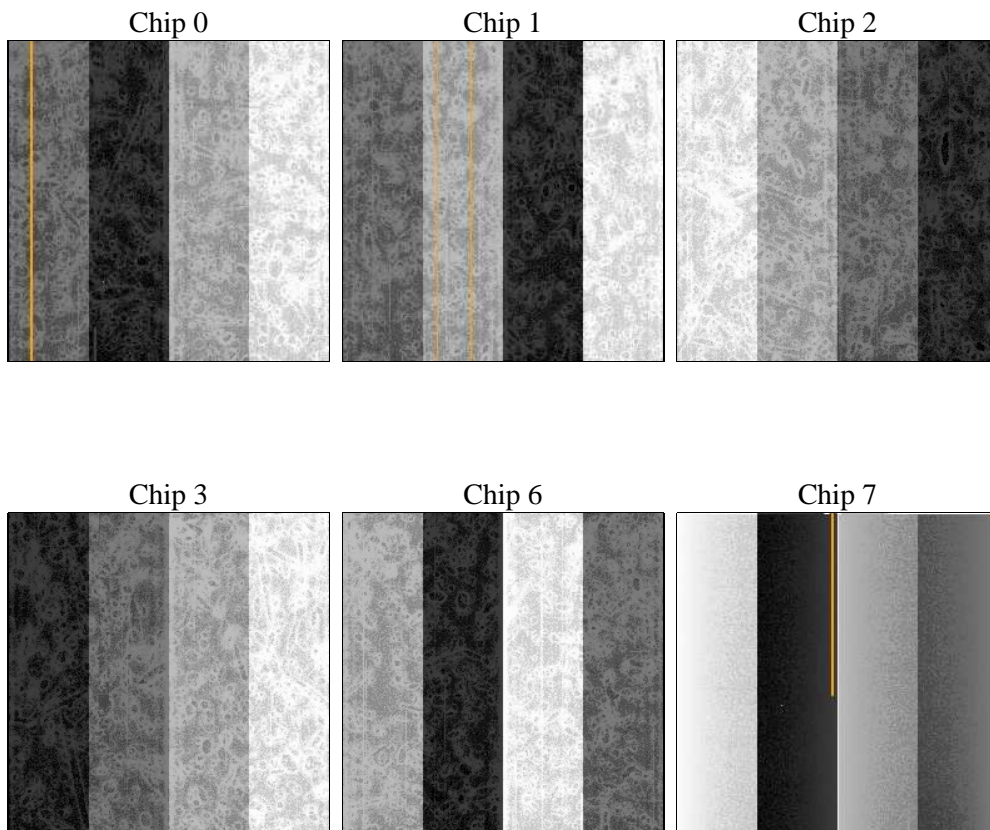
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	11000.000000	Scheduled observation exposure time
ascdsver	8.3.3	ASCDS version number	ontime	10035.200009346	Sum of GTIs [s]
caldsver	4.4.0	 	ontime0	10035.200009346	Sum of GTIs [s]
date	2010-11-08T21:57:41	Date and time of file creation	ontime1	10035.200009346	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	10035.200009346	Sum of GTIs [s]
			ontime3	10035.200009346	Sum of GTIs [s]
			ontime6	10035.200009346	Sum of GTIs [s]
			ontime7	10035.200009346	Sum of GTIs [s]
			l1events	723201	Number of level 1 events

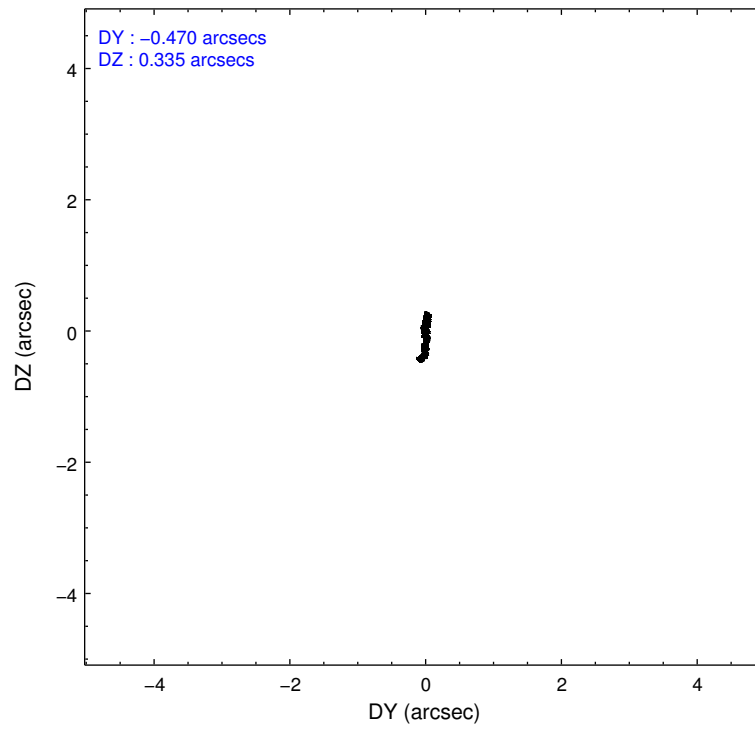
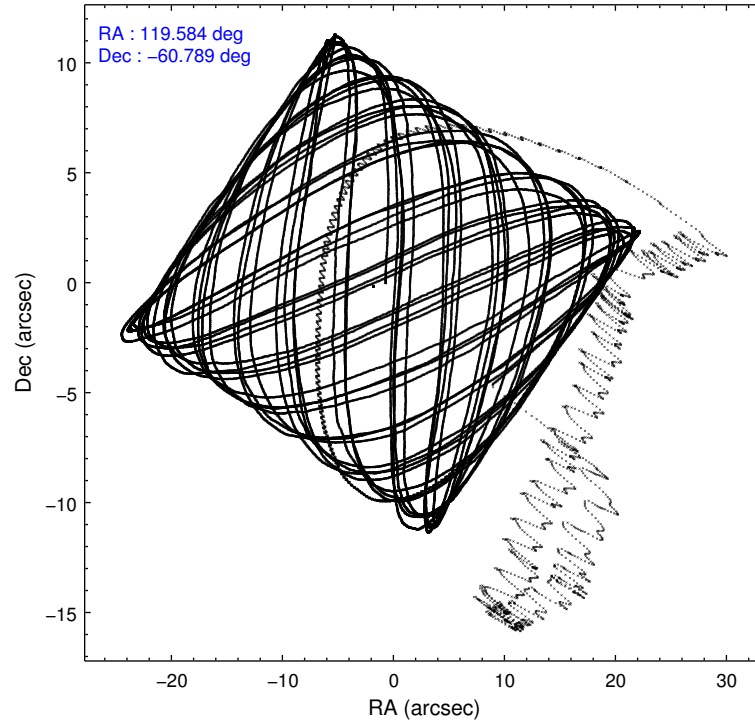
2.1.4 Events

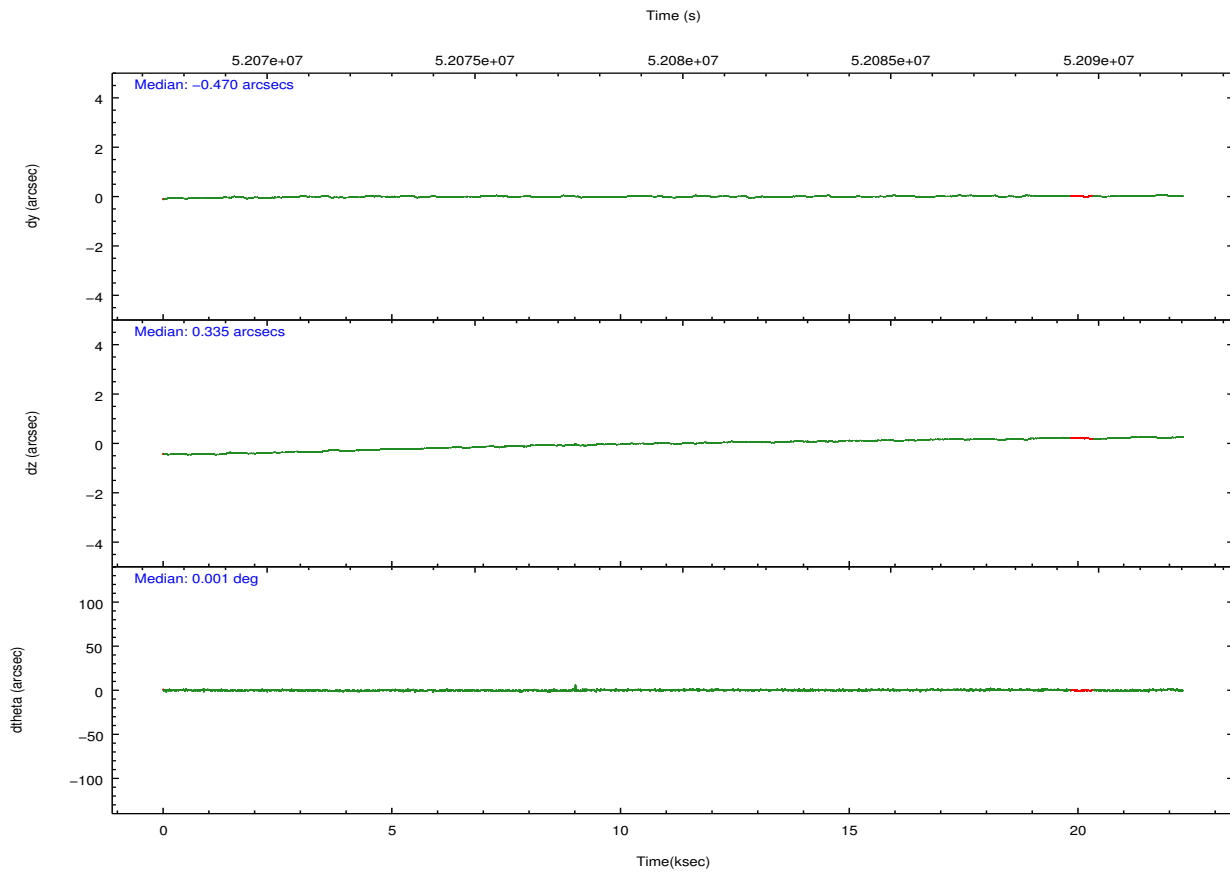
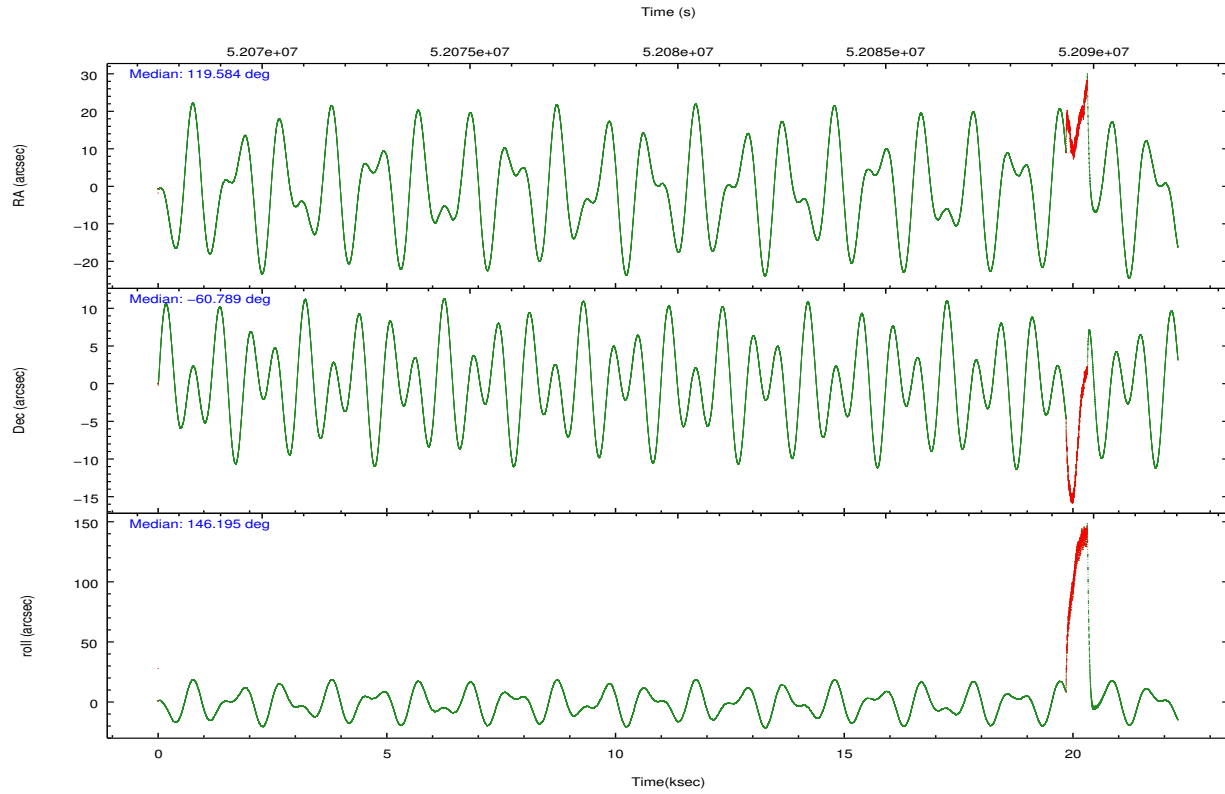
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	97280	97236	101668	102363	103318	221336	grade 0 events	7029	7121	6626	7173	8462	14816
rejected events	83692	83011	88868	88681	86441	72917		7%	7%	6%	7%	8%	6%
rejected %	86%	85%	87%	86%	83%	32%	grade 1 events	39	48	42	50	45	65
								0%	0%	0%	0%	0%	0%
							grade 2 events	2911	2965	2866	3006	4616	22707
								2%	3%	2%	2%	4%	10%
							grade 3 events	976	1074	829	903	861	13031
								1%	1%	0%	0%	0%	5%
							grade 4 events	902	1066	859	843	889	11620
								0%	1%	0%	0%	0%	5%
							grade 5 events	2383	2493	2194	2401	2424	7413
								2%	2%	2%	2%	2%	3%
							grade 6 events	1778	2004	1623	1763	2058	86352
								1%	2%	1%	1%	1%	39%
							grade 7 events	81262	80465	86629	86224	83963	65332
								83%	82%	85%	84%	81%	29%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	119.640793	119.5840239762661	Subarray requested	NONE	NONE
Pointing Dec	-60.791707	-60.7891306357002	Alternating exposures requested	N	N
Pointing Roll	146.044336	146.2040586262627	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	52069099.184000	52068050.045681			
Observation start date	1999-08-26T15:37:15	1999-08-26T15:20:50			
Observation end time	52080099.184000	52091394.421521			
Observation end date	1999-08-26T18:40:35	1999-08-26T21:49:54			
Read mode	TIMED	TIMED			

2.3 Aspect



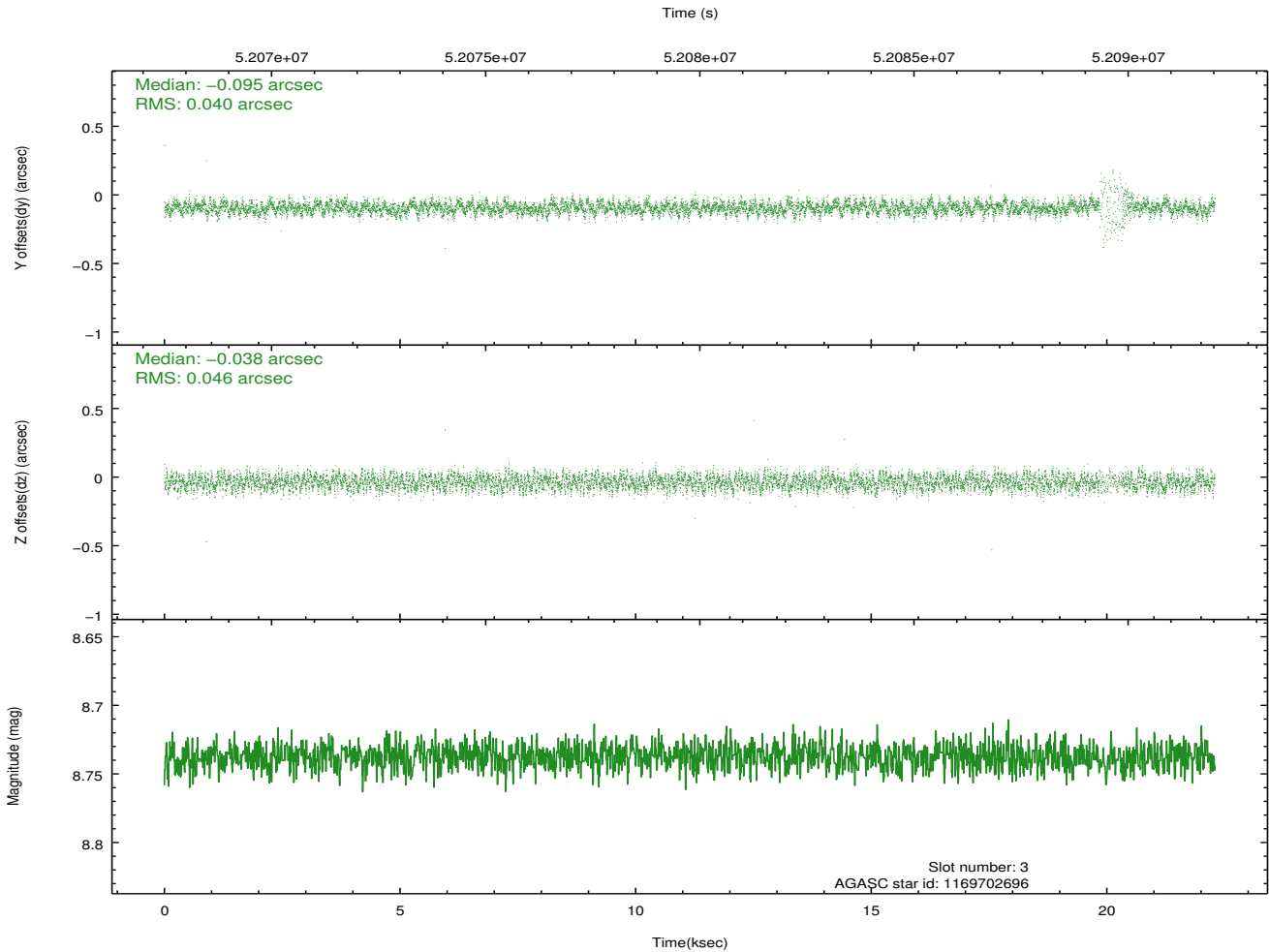
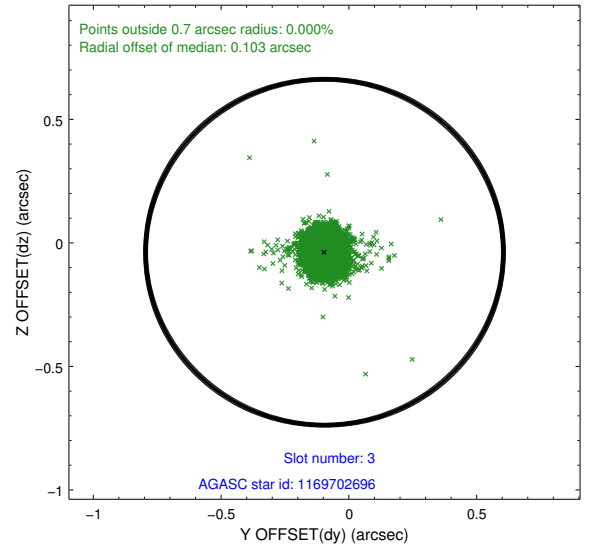
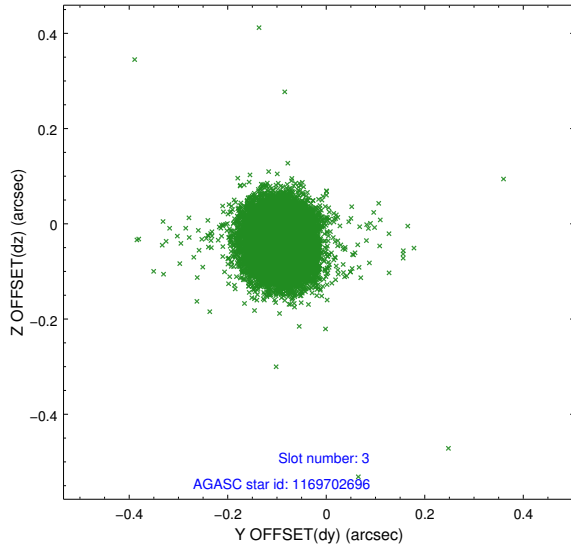


Slot Statistics

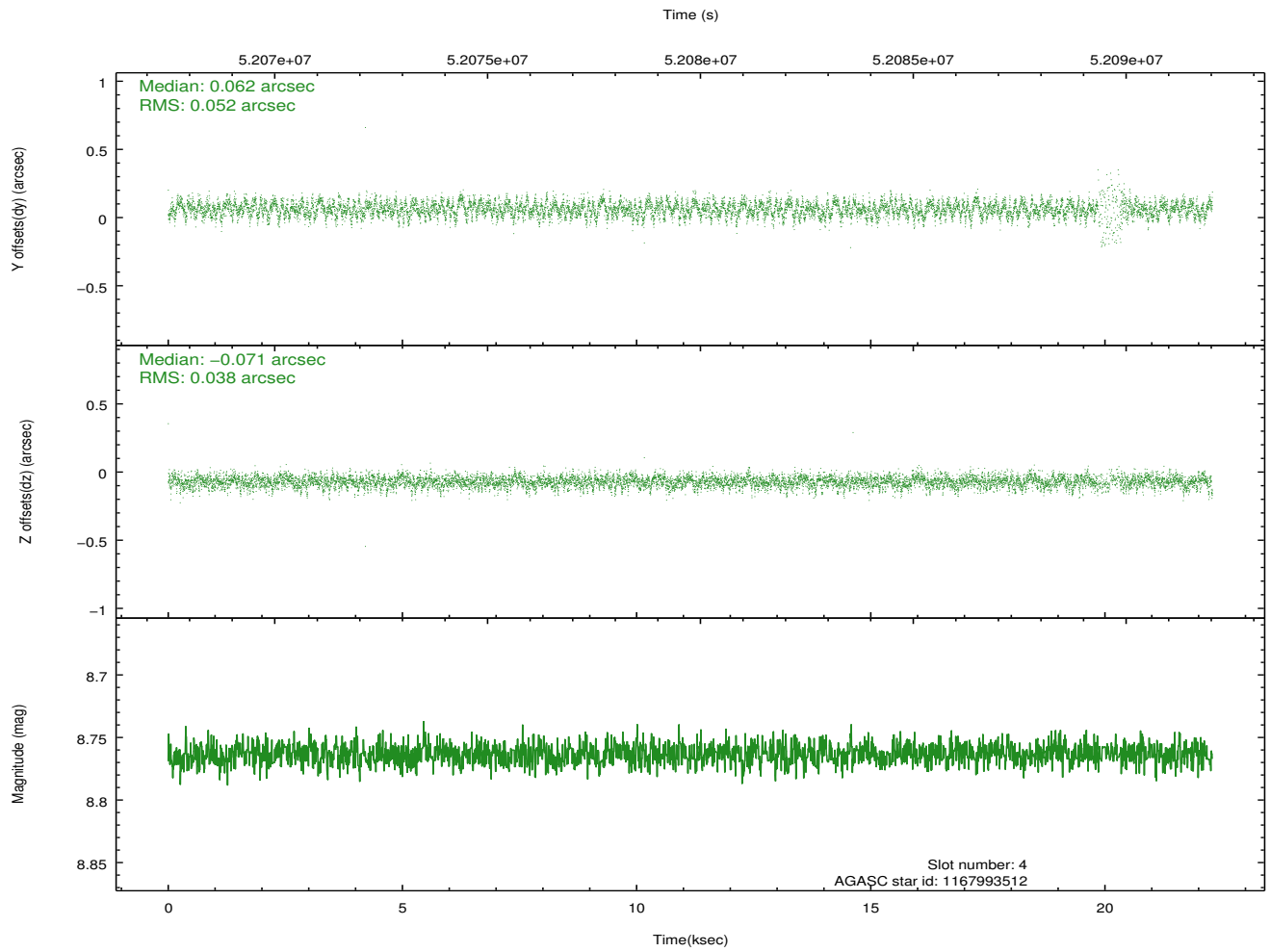
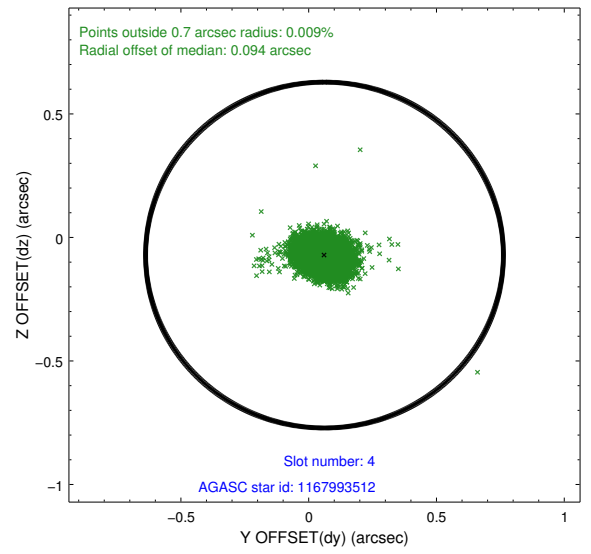
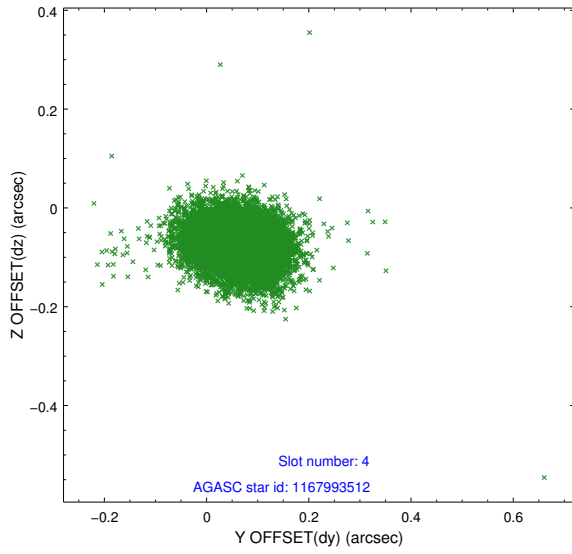
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.21	10875	-0.039	0.050	0.009	0.016	0.000000	0.000000	-753.89	-829.78
1	FID	ACIS-I-4	7.23	10870	0.129	0.017	0.010	0.018	0.000000	0.000000	2160.44	1076.20
2	FID	ACIS-I-5	7.23	10875	-0.191	0.002	0.010	0.017	0.000000	0.000000	-1807.77	1074.25
3	GUIDE	1169702696	8.74	10751	-0.095	-0.038	0.063	0.100	120.944763	-60.544109	-1428.55	-2010.29
4	GUIDE	1167993512	8.76	10760	0.062	-0.071	0.067	0.110	118.780061	-60.545451	1754.23	123.61
5	GUIDE	1167997272	9.29	10759	-0.242	-0.115	0.078	0.125	118.927163	-61.353075	-110.44	2369.31
6	GUIDE	1122633360	9.23	10757	0.164	-0.037	0.096	0.160	119.617986	-59.961517	1704.91	-2456.06
7	GUIDE	1168007992	9.75	10757	0.105	0.262	0.099	0.159	119.985345	-61.468910	-1853.12	1692.00

2.4 Star Slots

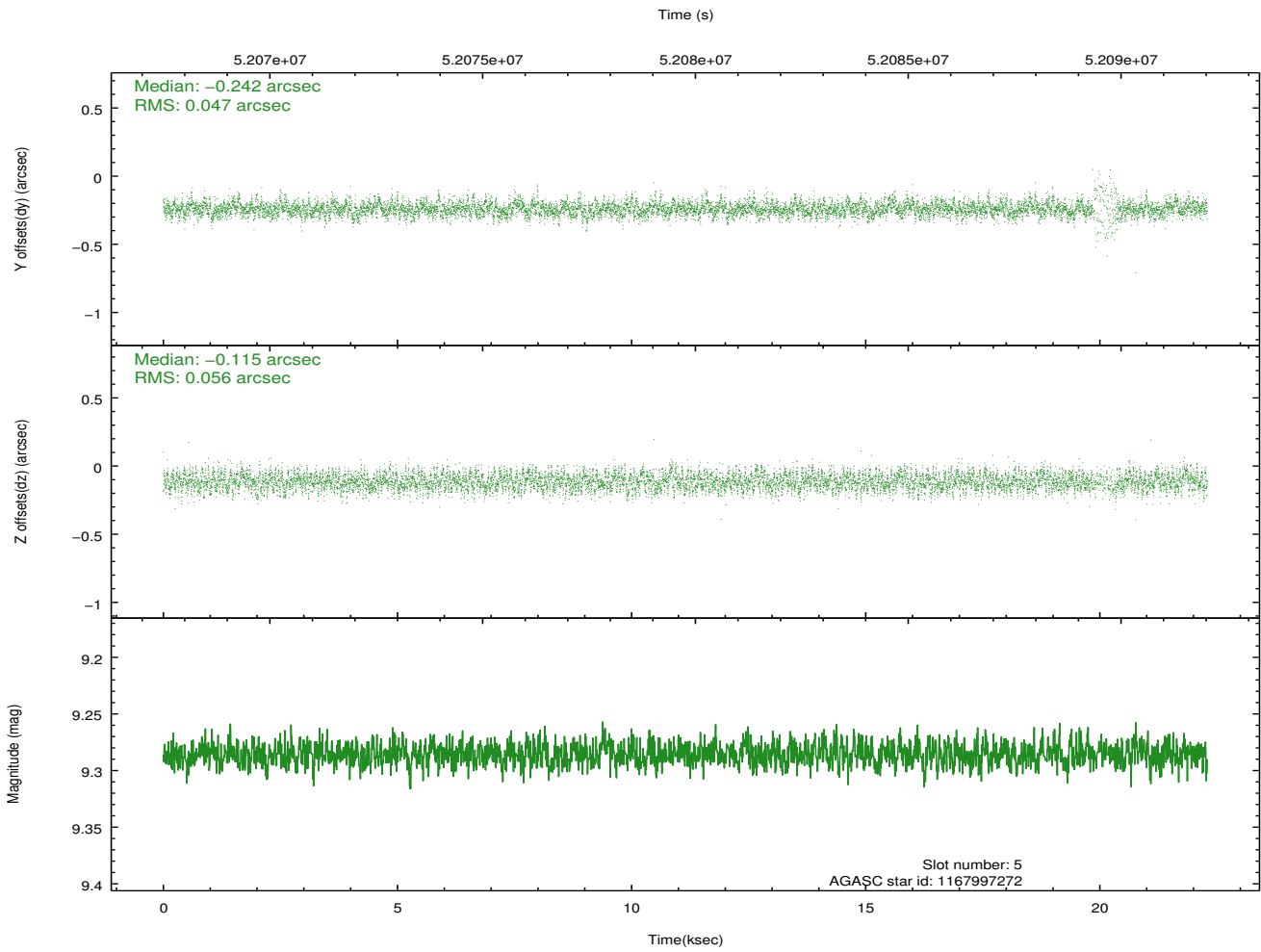
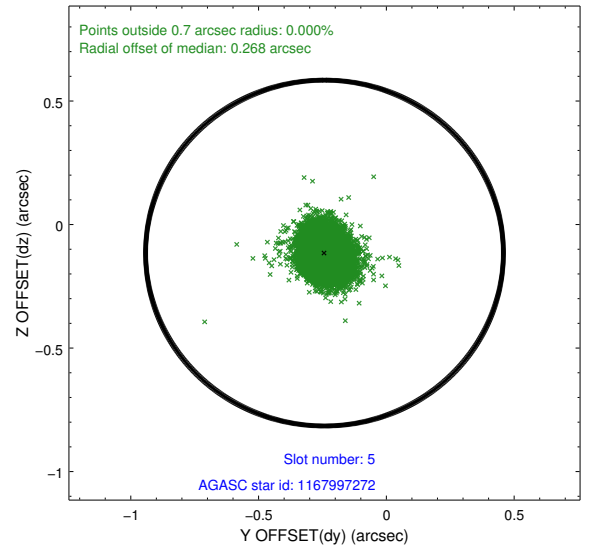
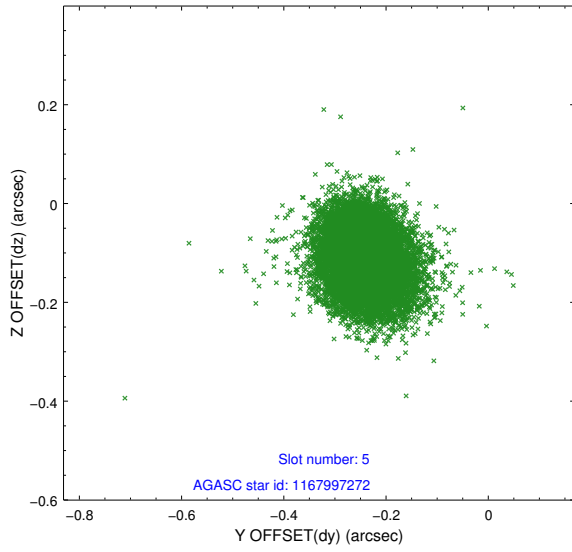
2.4.1 Slot 3



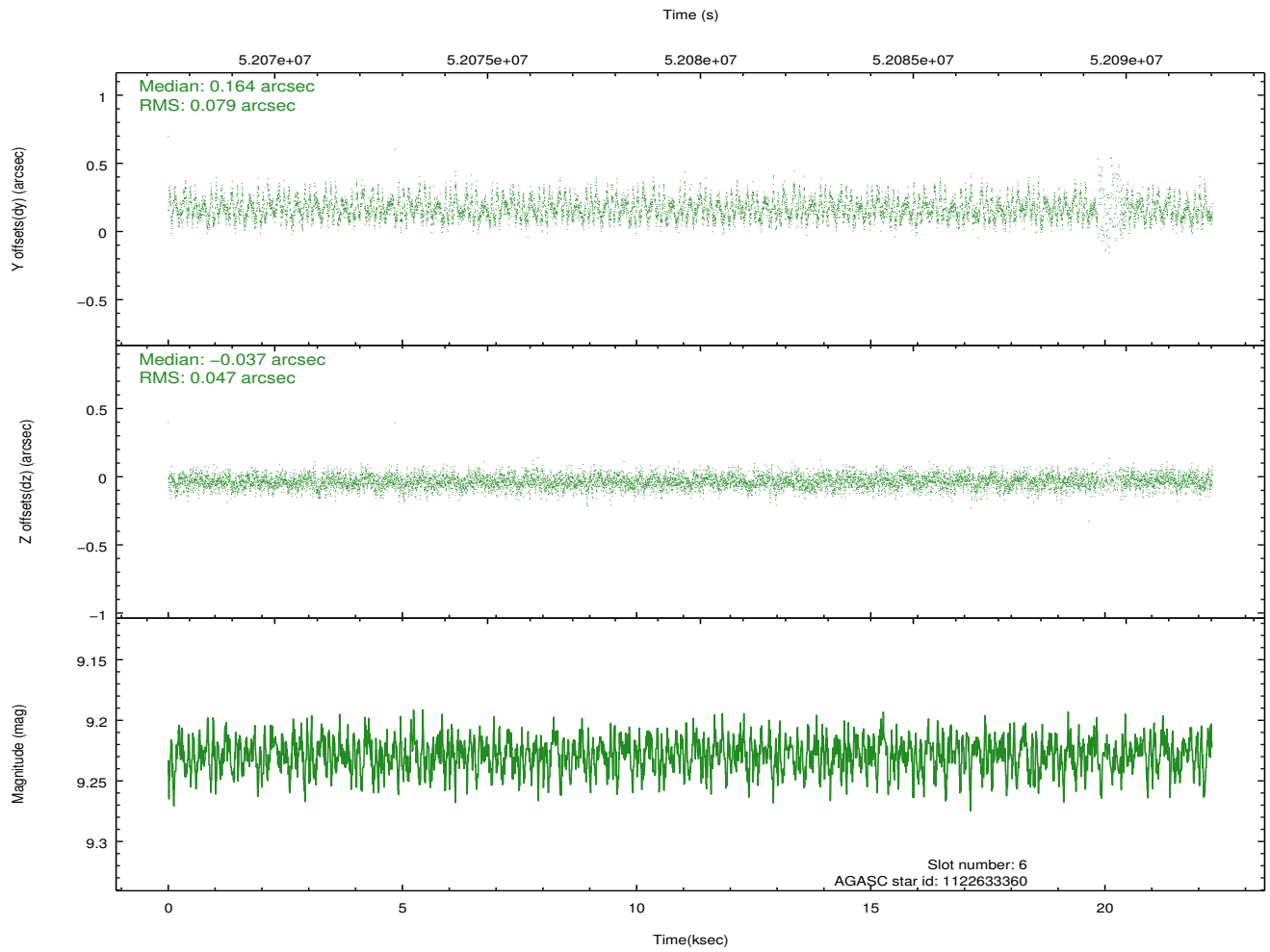
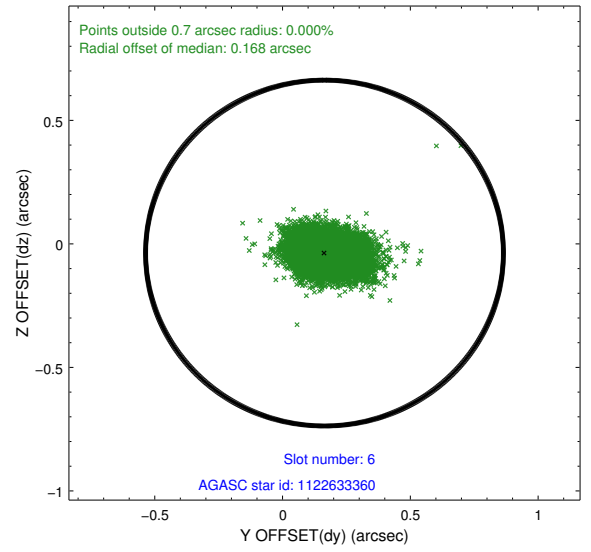
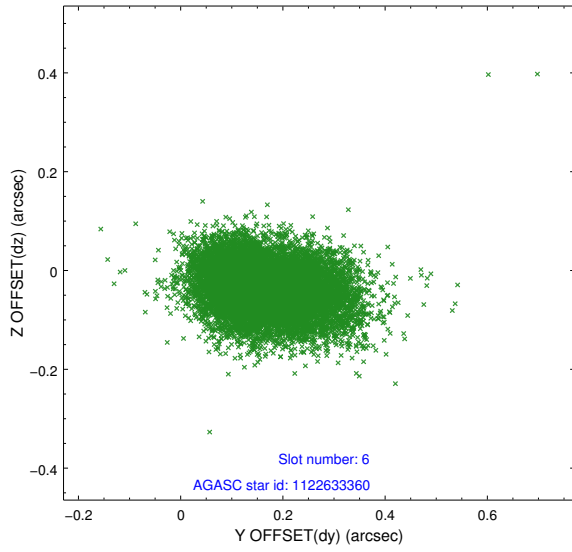
2.4.2 Slot 4



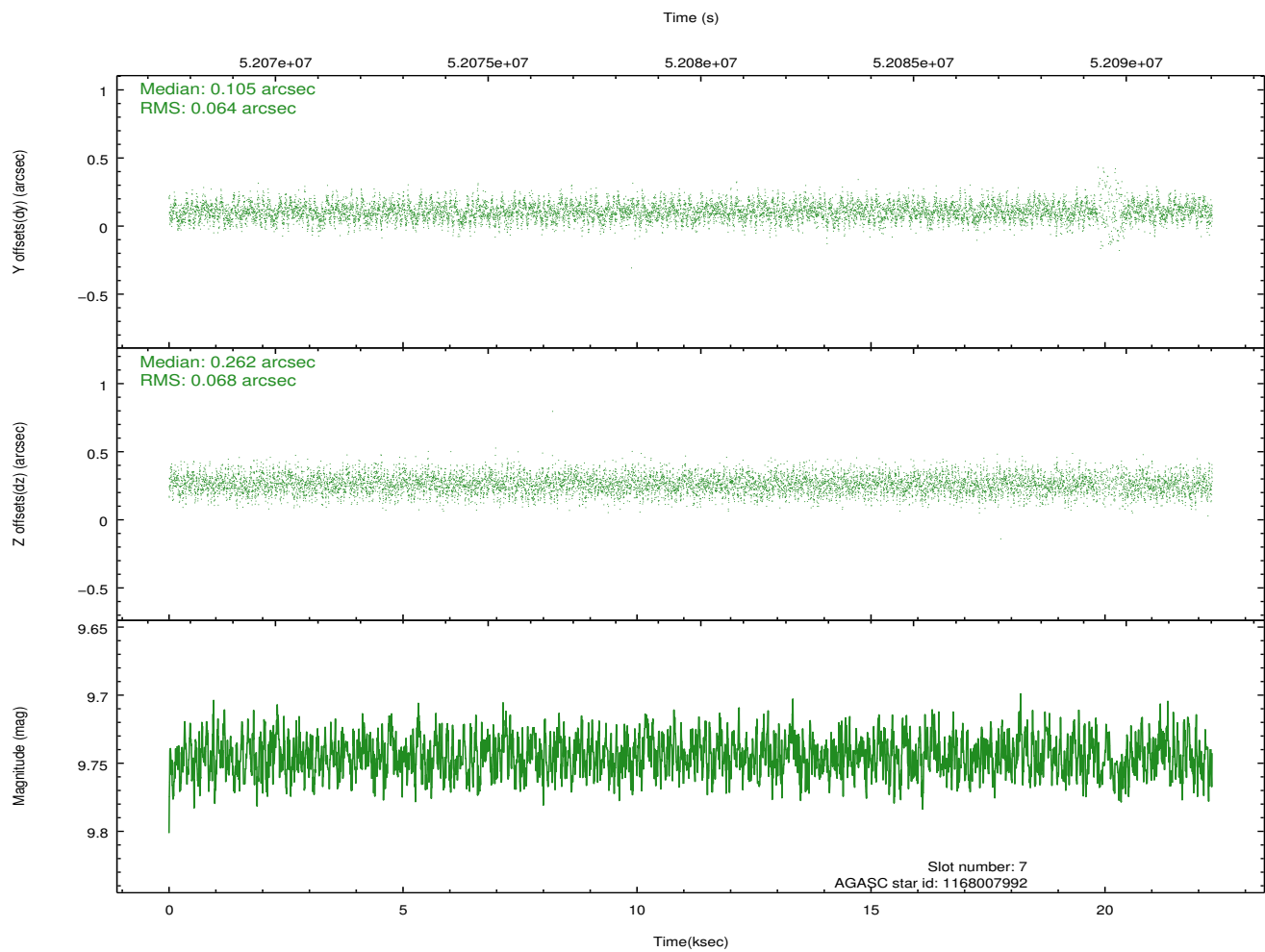
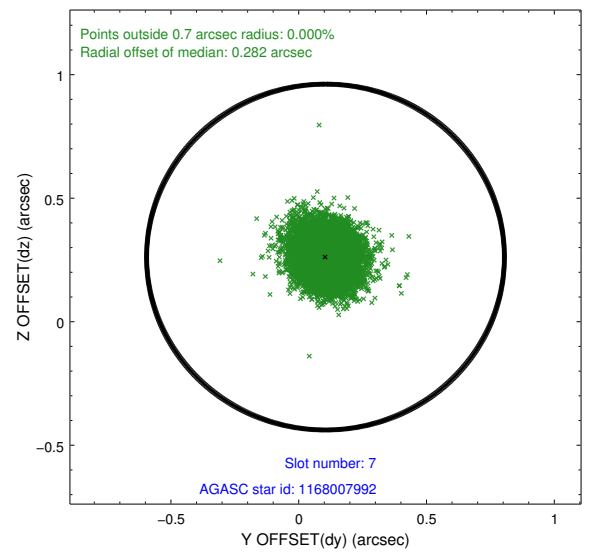
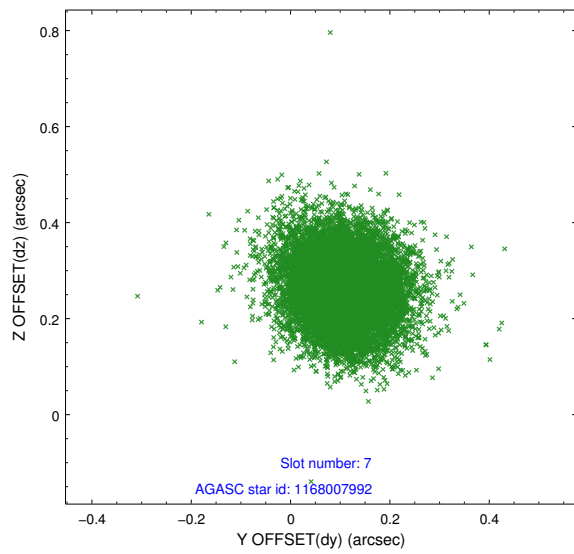
2.4.3 Slot 5



2.4.4 Slot 6

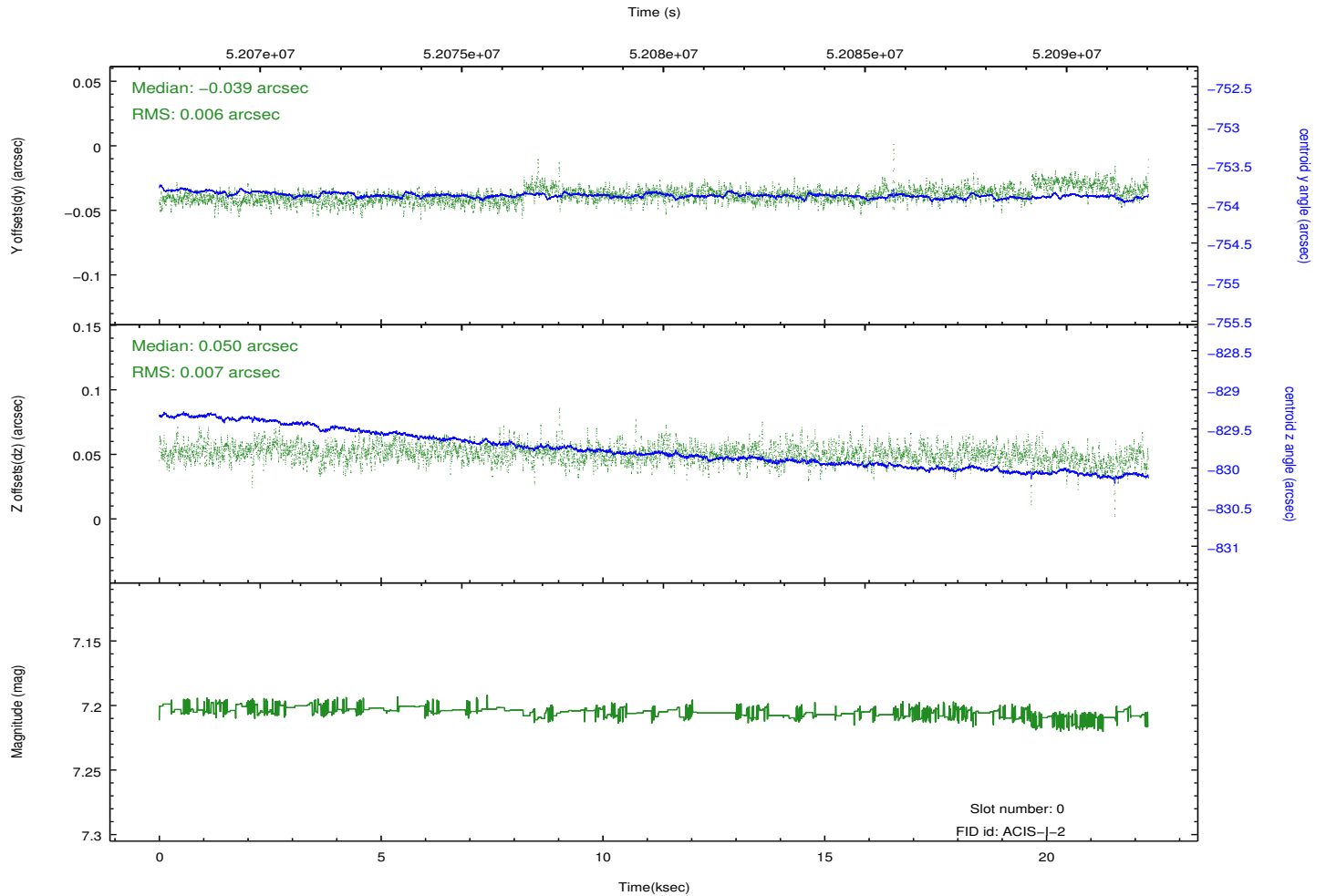
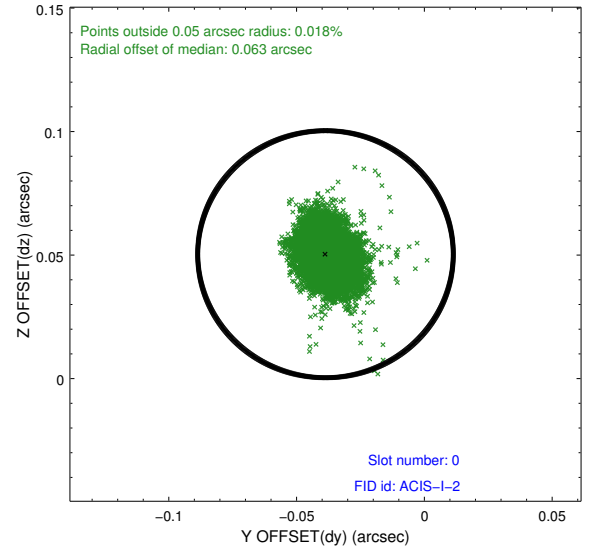
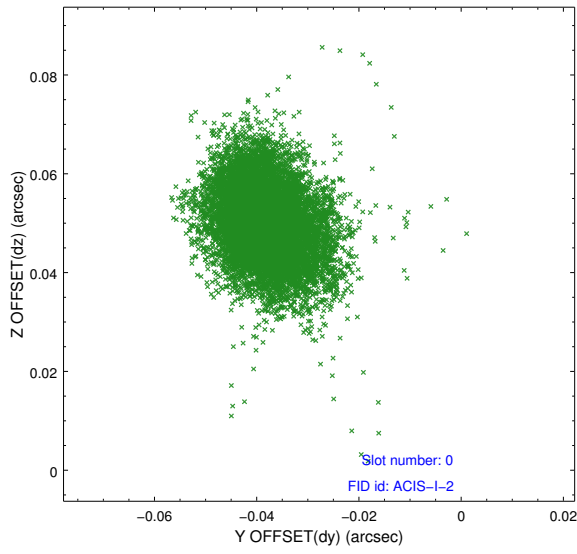


2.4.5 Slot 7

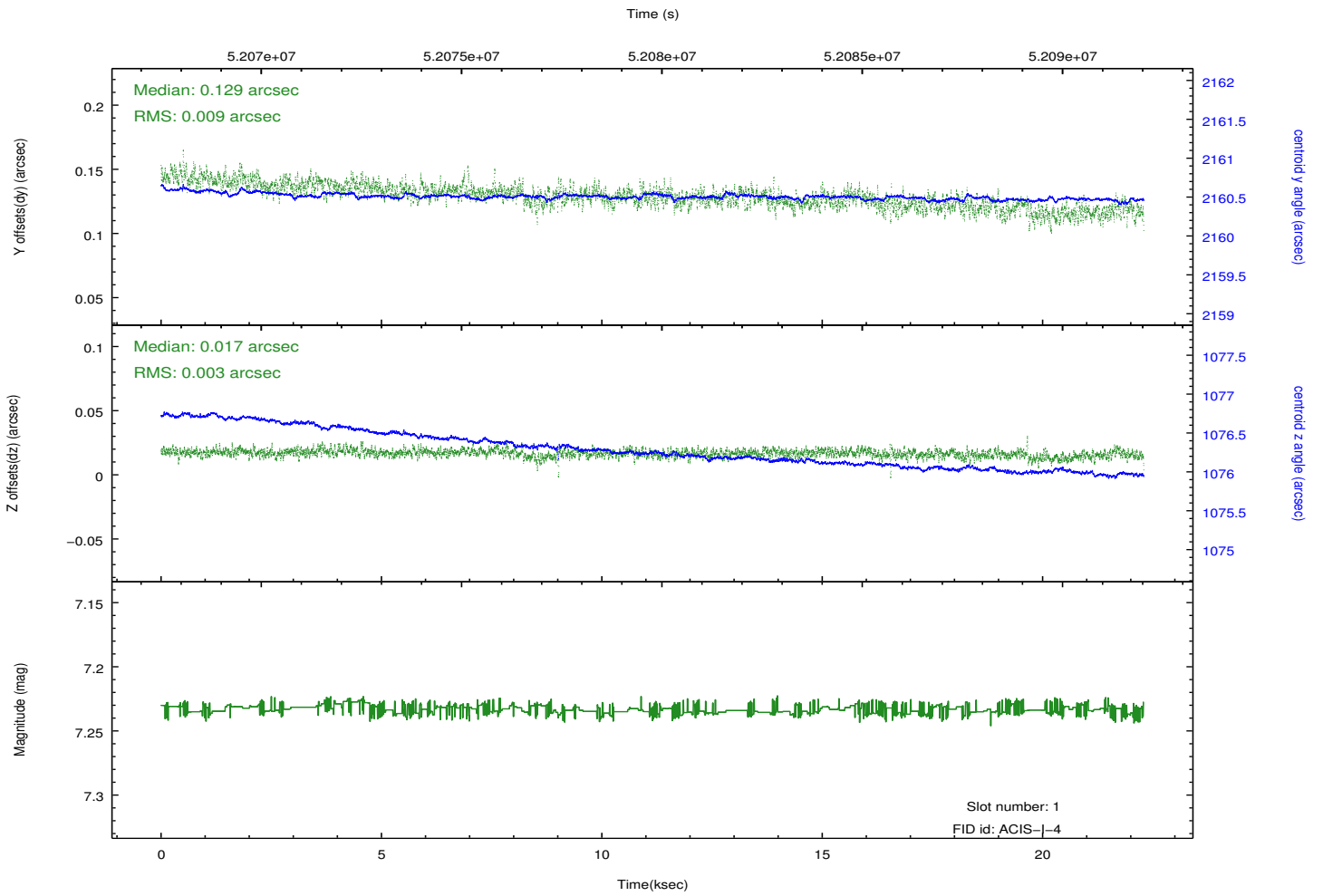
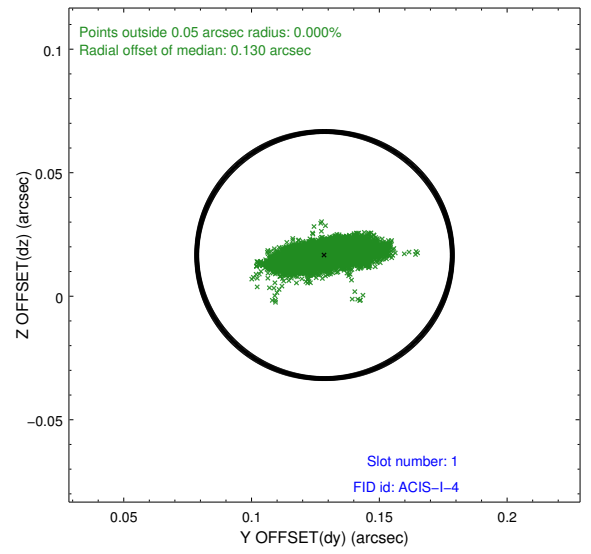
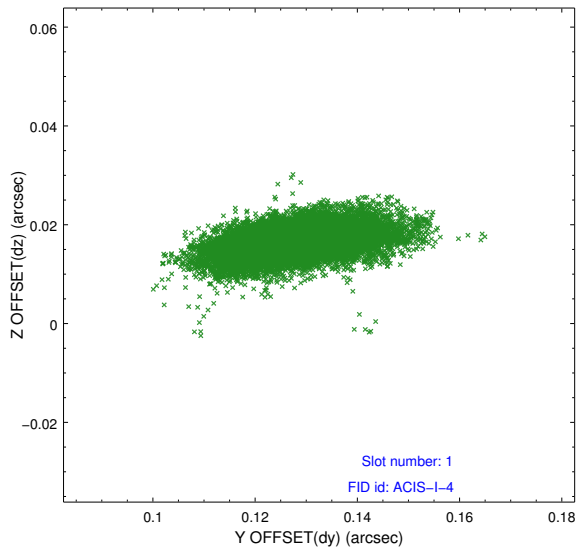


2.5 FID Slots

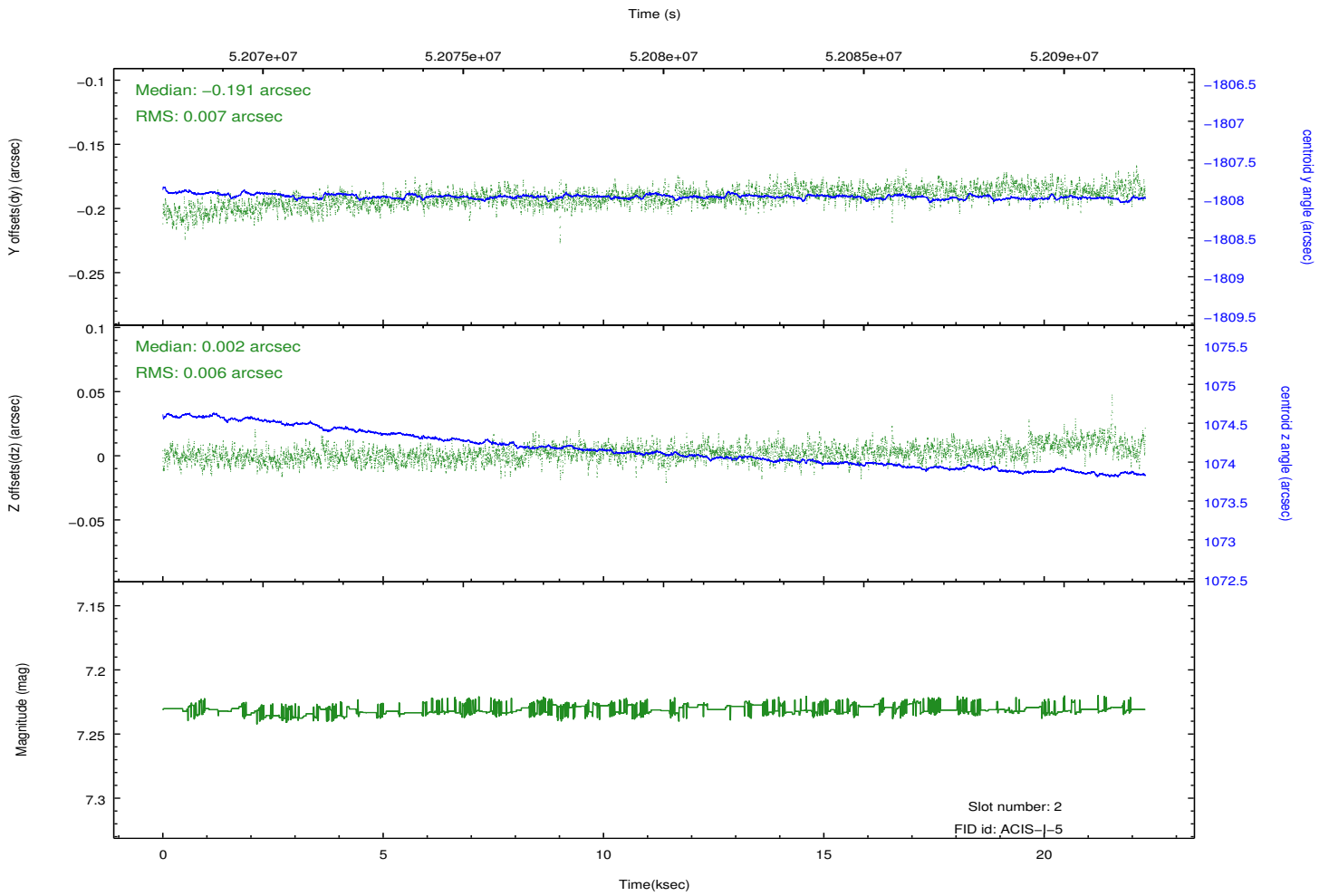
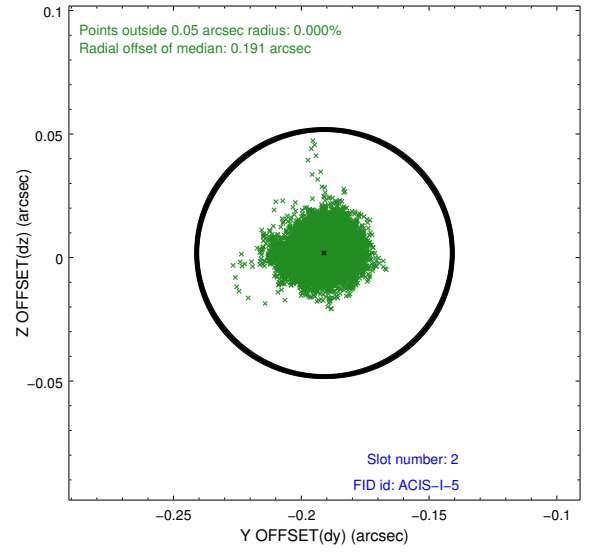
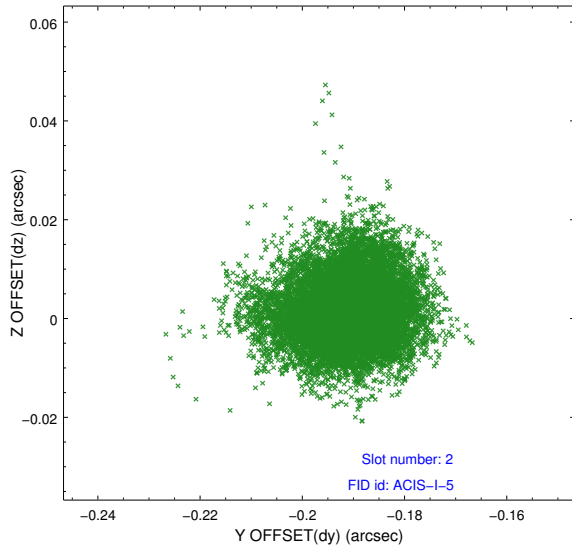
2.5.1 Slot 0



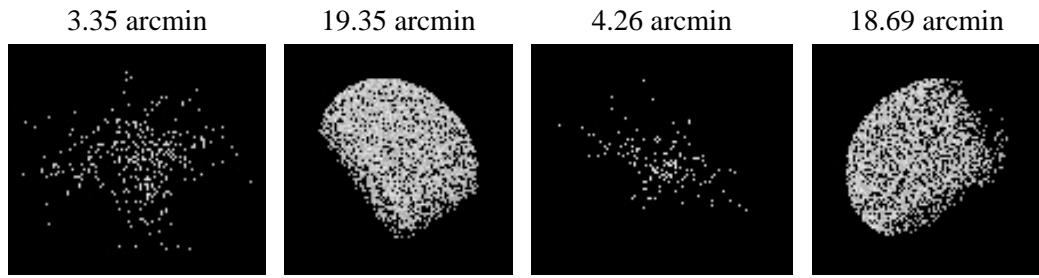
2.5.2 Slot 1



2.5.3 Slot 2



3 Point Sources



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2010.11.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.035

A.2 Comments

ACIS boresight and plate scale series.

===

The bias map for CCD_ID = 3 suffers from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data

were previously bias-corrected by one of the affected bias pixels may have

an apparent energy shift. While the change in energy is expected to be small

(~20 eV), it depends on many parameters that have not yet been fully explored

for this bias anomaly. The bias map for CCD_ID=3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:

(119.64234,-60.92203), (119.64766,-60.91818), (119.47375,-60.86150), (119.46842,-60.86534)

===

The focal plane temperature is approximately -100 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.