

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12181 - L2 Version 4  
Chandra X-Ray Center

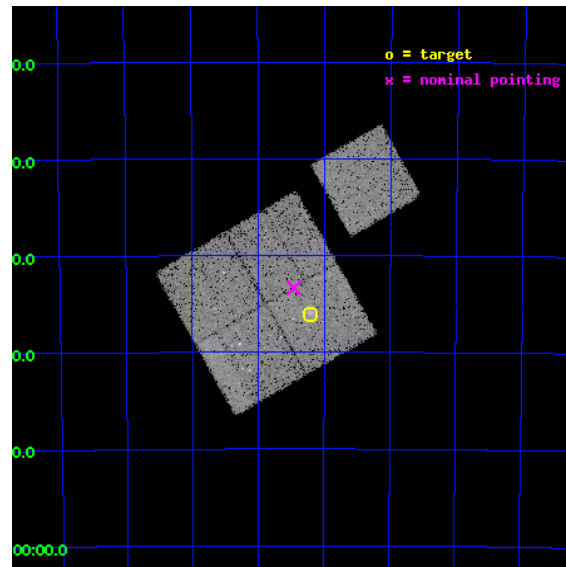
L2 Processing Date : Jul 2 2012

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# 1 Front

seq_num	800947	Sequence number
obs_id	12181	Observation id
title	Chandra Observations of a Sample of High Redshift SZE Selected Galaxy Clusters	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	SPT-CL 0324-6236	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	51.0525	Observer's specified target RA [deg]
dec_targ	-62.602111	Observer's specified target Dec [deg]
ra_nom	51.11473820635	Nominal RA [deg]
dec_nom	-62.555888801079	Nominal Dec [deg]
roll_nom	60.263919179306	Nominal Roll [deg]
revision	4	Processing version of data
ontime	19778.000152111	Sum of GTIs [s]
livetime	19519.586019772	Livetime [s]
ontime0	19768.577190578	Sum of GTIs [s]
ontime1	19778.000152111	Sum of GTIs [s]
ontime2	19771.718180895	Sum of GTIs [s]
ontime3	19778.000152111	Sum of GTIs [s]
ontime6	19774.859181762	Sum of GTIs [s]
l2events	69896	Number of level 2 events

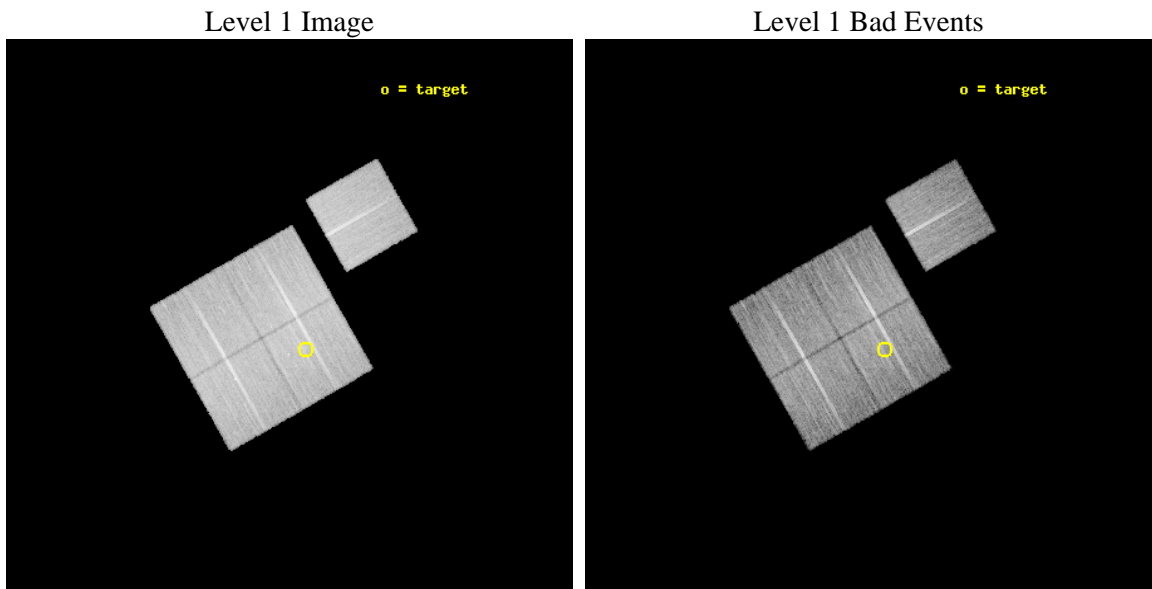




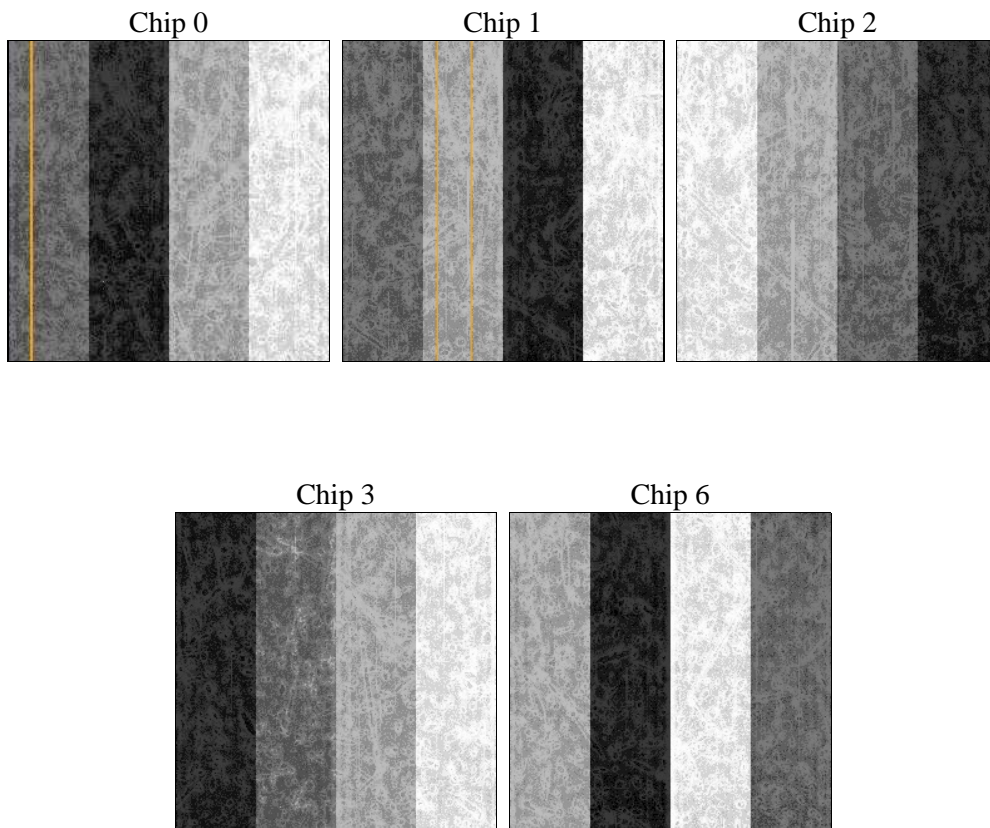
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	19778.000152111	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime0	19768.577190578	Sum of GTIs [s]
date	2012-07-02T22:03:33	Date and time of file creation	ontime1	19778.000152111	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	19771.718180895	Sum of GTIs [s]
			ontime3	19778.000152111	Sum of GTIs [s]
			ontime6	19774.859181762	Sum of GTIs [s]
			l1events	727678	Number of level 1 events

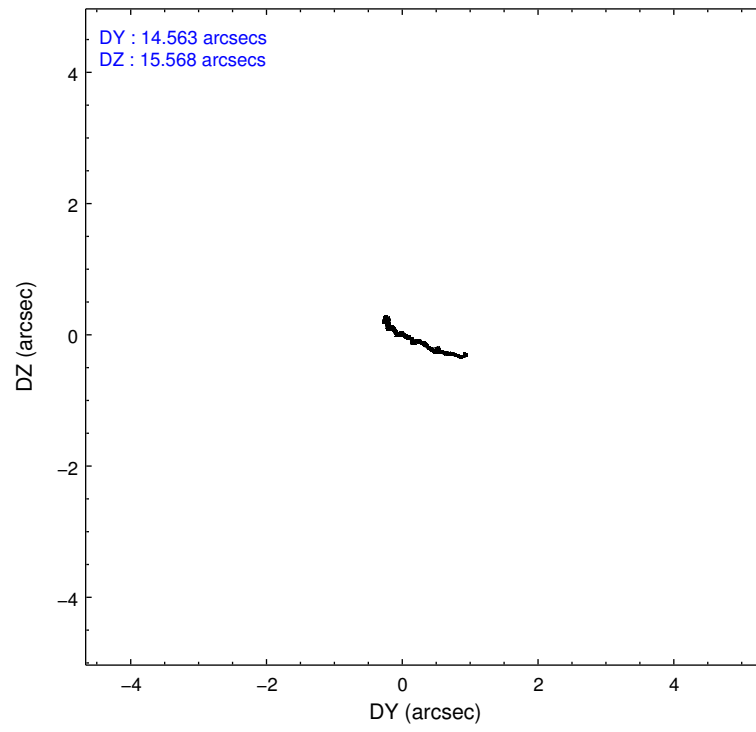
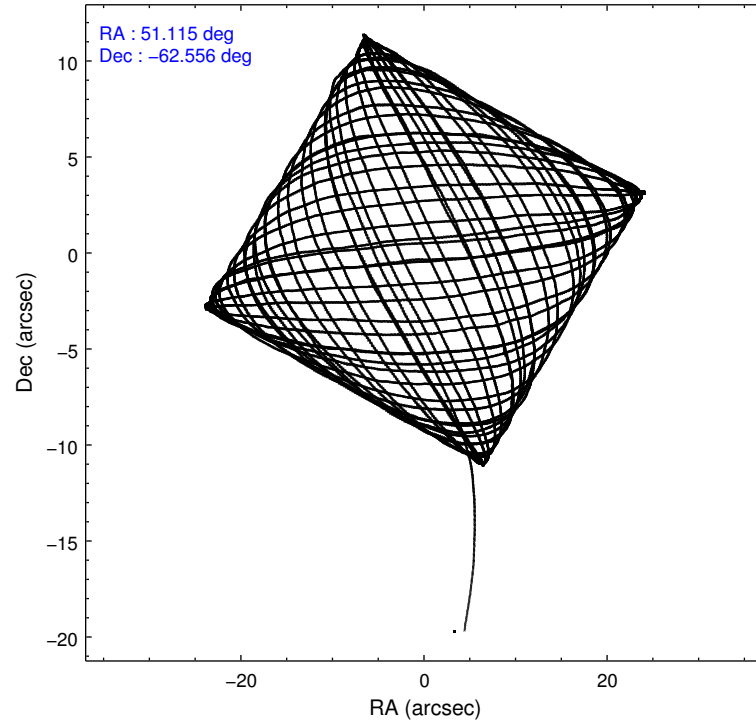
### 2.1.4 Events

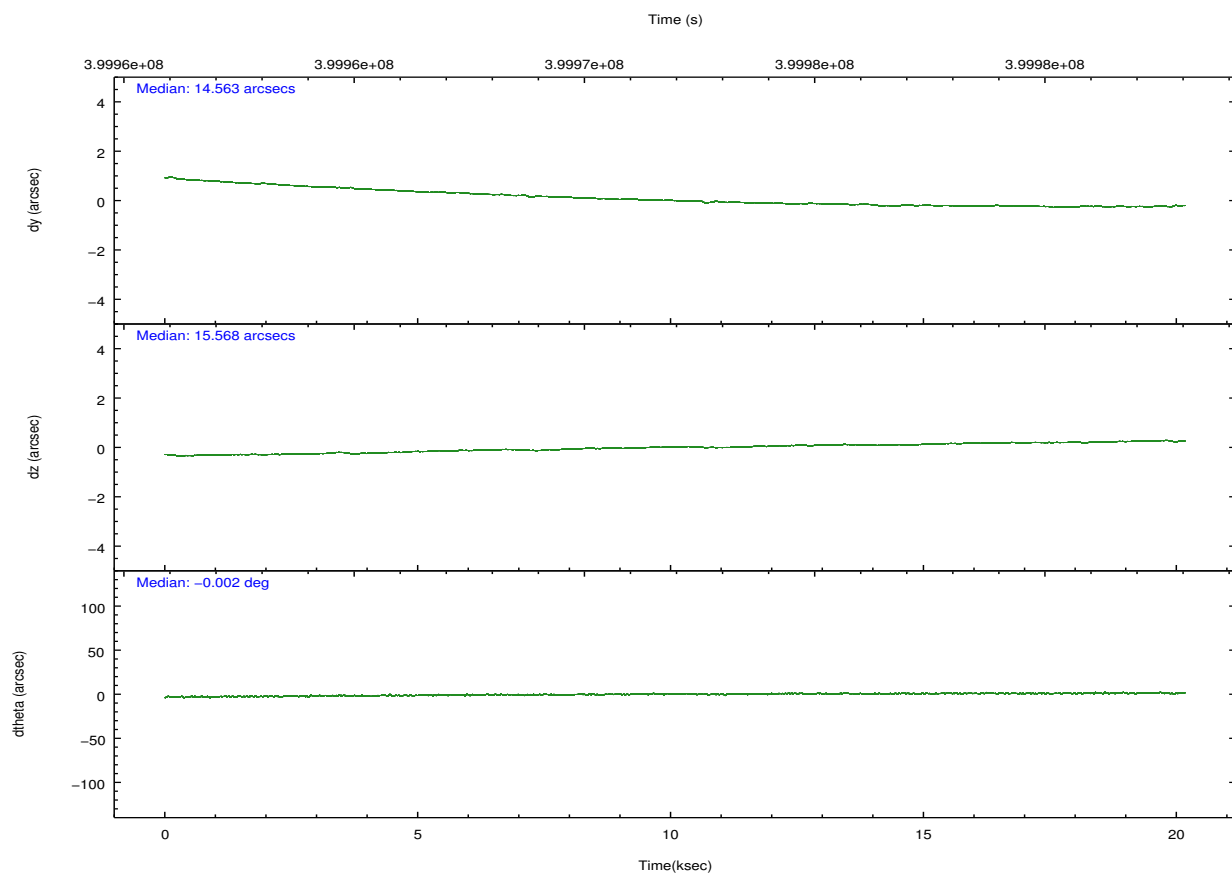
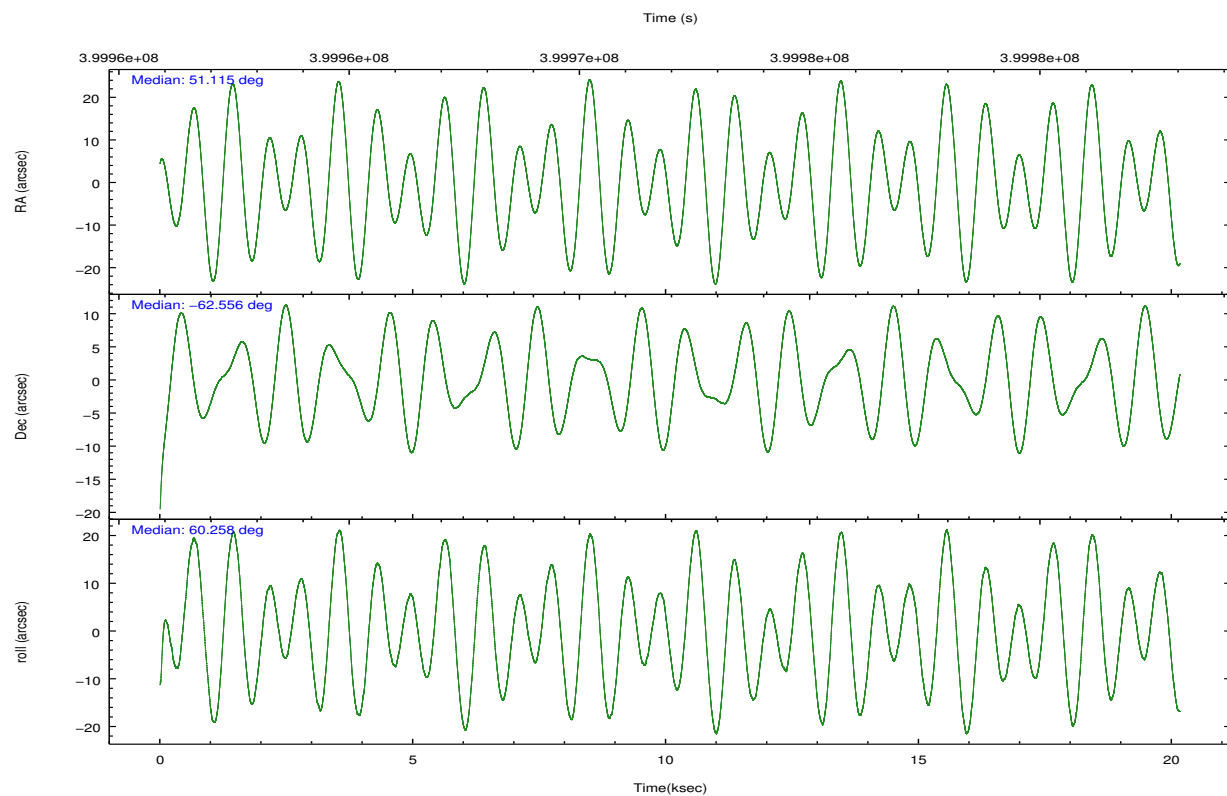
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	138879	140831	152230	147420	148318	grade 0 events	5794	6834	5715	6294	5670
rejected events	122643	122260	136427	130926	132004		4%	4%	3%	4%	3%
rejected %	88%	86%	89%	88%	89%	grade 1 events	72	78	99	96	68
							0%	0%	0%	0%	0%
						grade 2 events	3939	4263	3965	3553	3638
							2%	3%	2%	2%	2%
						grade 3 events	1718	1832	1628	1735	1751
							1%	1%	1%	1%	1%
						grade 4 events	1699	1893	1582	1701	1745
							1%	1%	1%	1%	1%
						grade 5 events	6135	6546	5688	6877	6641
							4%	4%	3%	4%	4%
						grade 6 events	3089	3749	2914	3214	3514
							2%	2%	1%	2%	2%
						grade 7 events	116433	115636	130639	123950	125291
							83%	82%	85%	84%	84%

## 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	51.115257	51.11473820634983	CCD I2 on	Y	Y
[deg] Pointing Dec	-62.583372	-62.55588880107877	CCD I3 on	Y	Y
[deg] Pointing Roll	60.055703	60.26391917930634	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	O1	Y
[mm] SIM translation stage pos	-225.840463	-225.8458576473255	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	399962058.184000	399961062.4067	CCD S5 on	N	N
Observation start date	2010-09-04T04:33:12	2010-09-04T04:17:42	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	399982058.184000	399983224.44533	On-chip summing requested	N	N
Observation end date	2010-09-04T10:06:32	2010-09-04T10:27:04	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



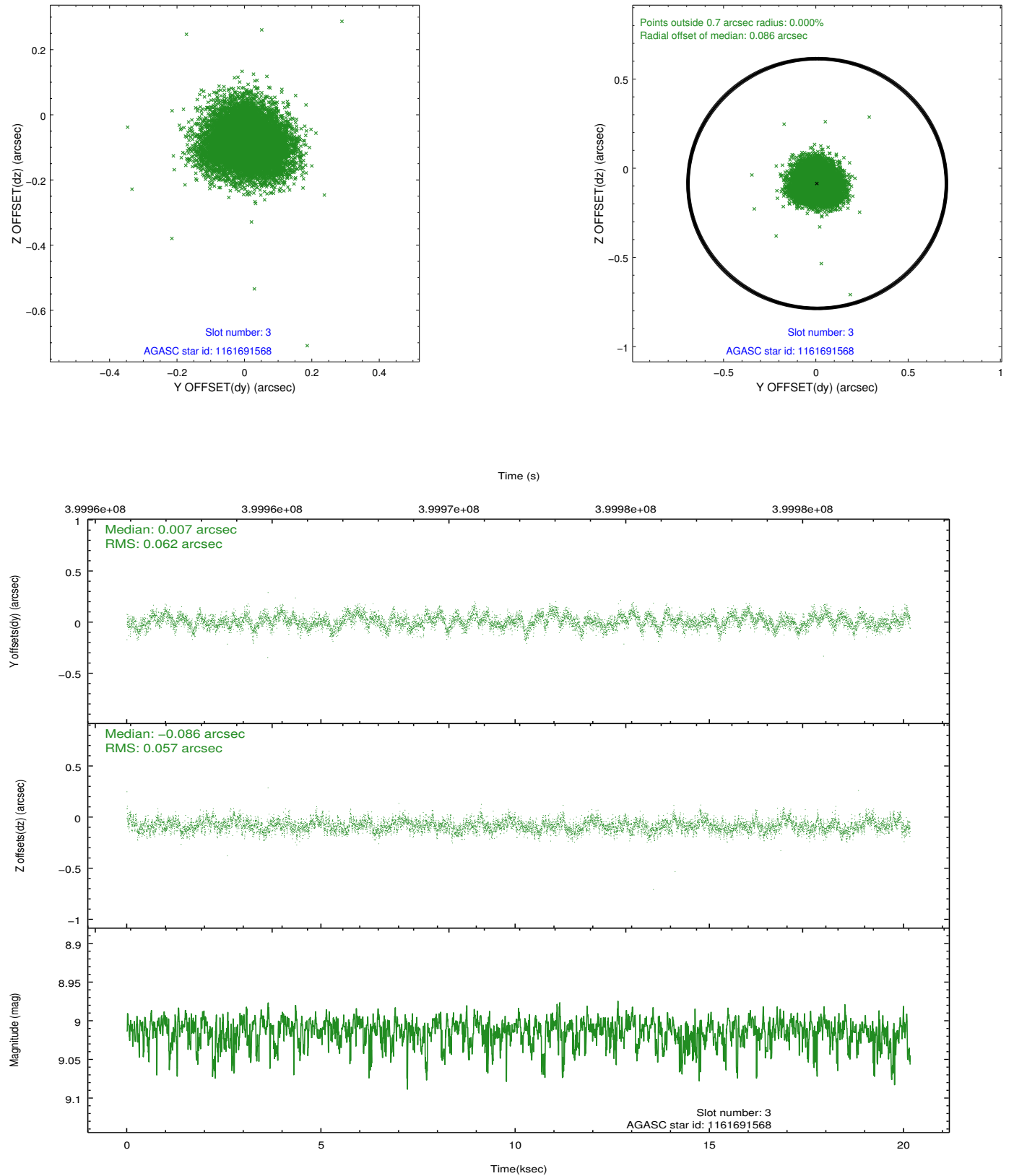


### Slot Statistics

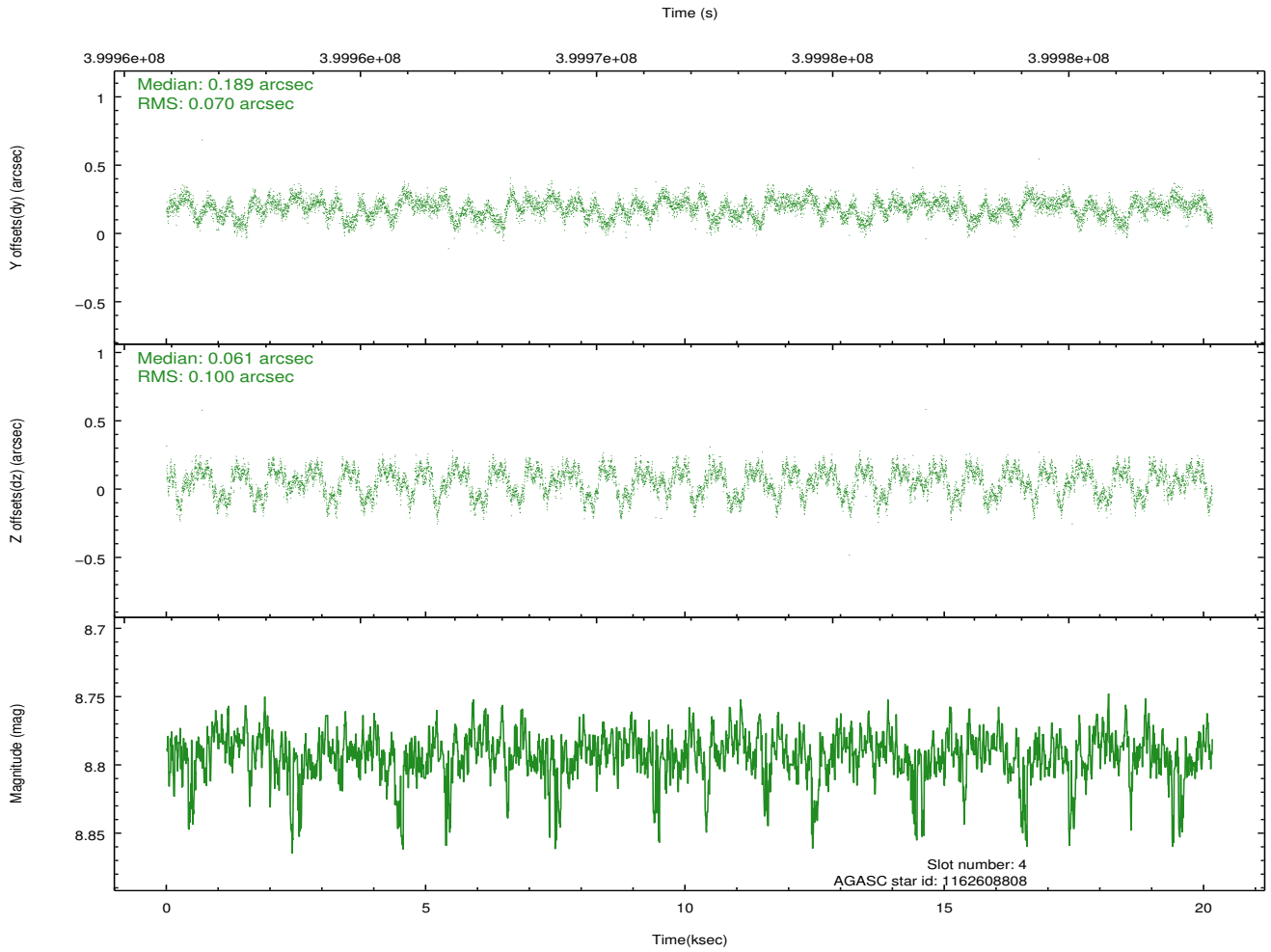
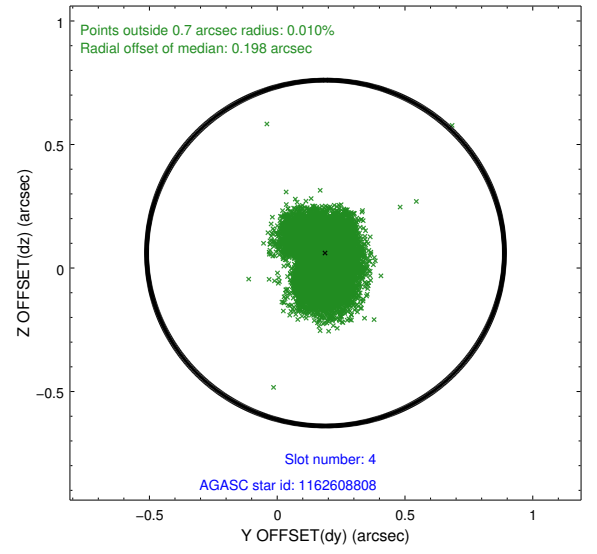
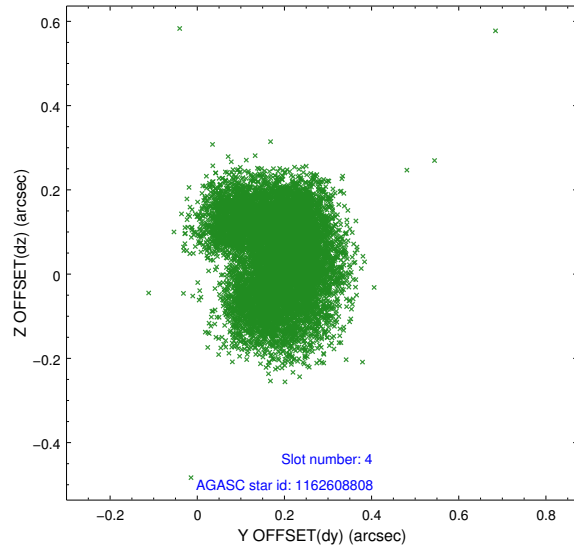
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.06	4918	0.120	-0.085	0.007	0.013	0.000000	0.000000	924.78	-998.27
1	FID	ACIS-I-5	7.04	4917	-0.290	0.095	0.007	0.012	0.000000	0.000000	-1823.65	899.25
2	FID	ACIS-I-6	7.06	4918	0.079	0.060	0.008	0.012	0.000000	0.000000	390.06	1543.95
3	GUIDE	1161691568	9.01	9827	0.007	-0.086	0.089	0.143	50.557270	-62.678745	-760.81	625.60
4	GUIDE	1162608808	8.79	9830	0.189	0.061	0.132	0.204	51.680106	-62.824639	-291.92	-1240.06
5	GUIDE	1162608880	9.30	9825	-0.302	-0.074	0.105	0.167	52.292117	-62.532121	1119.83	-1609.84
6	GUIDE	1162612232	9.74	9813	0.193	0.111	0.135	0.213	51.650651	-63.054382	-1035.87	-1604.91
7	GUIDE	1161298232	9.33	9825	-0.076	0.006	0.112	0.177	51.136434	-61.825313	2383.52	1330.80

## 2.4 Star Slots

### 2.4.1 Slot 3

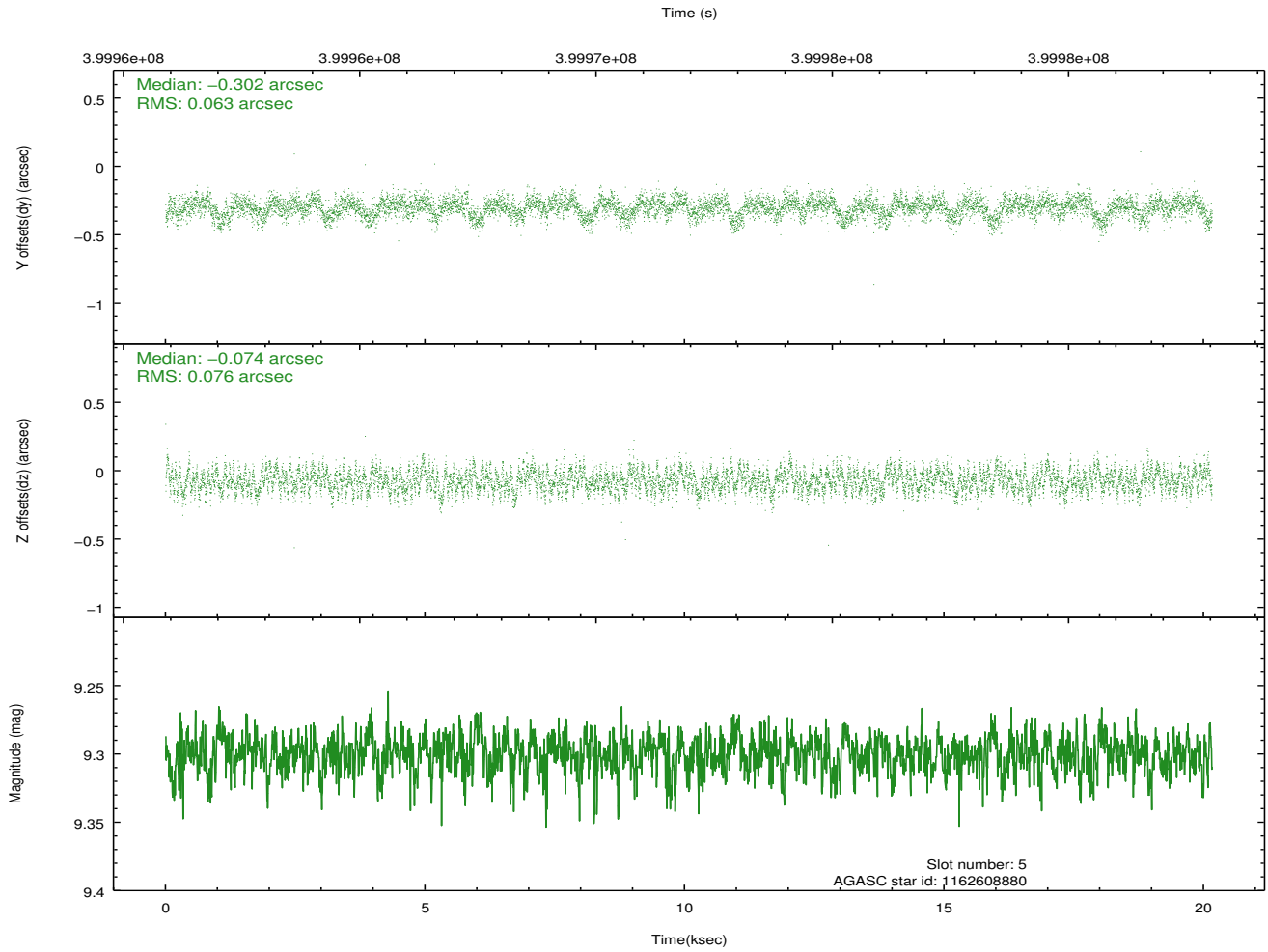
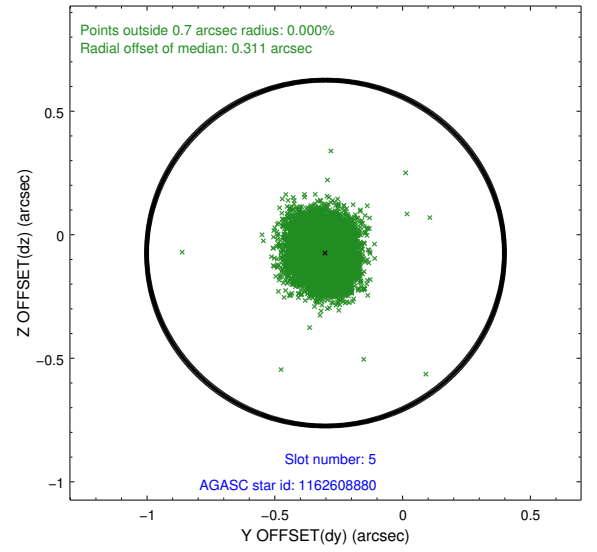
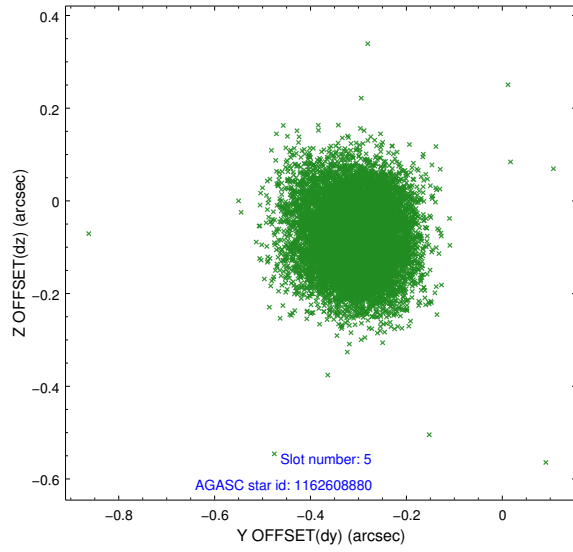


## 2.4.2 Slot 4

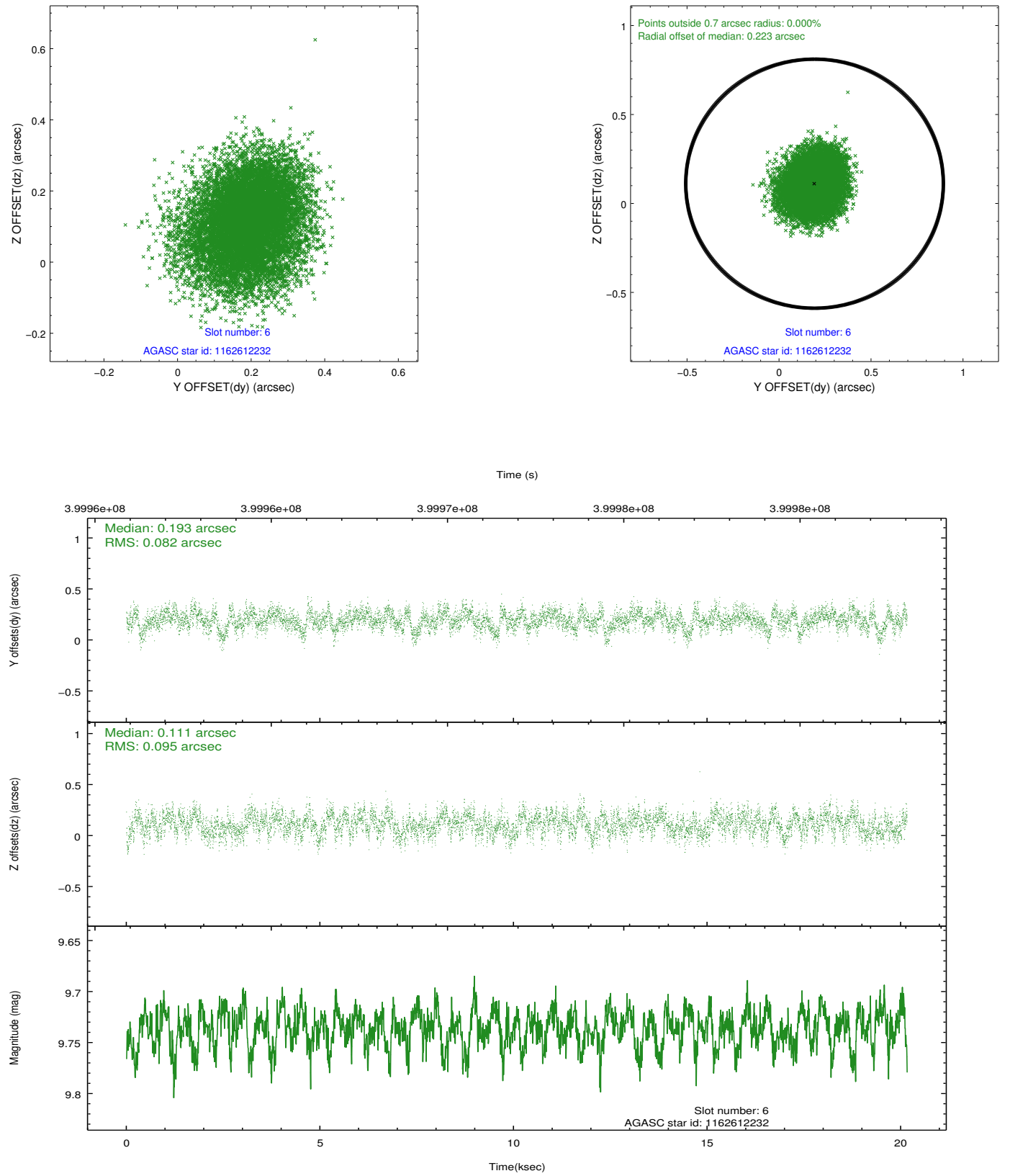




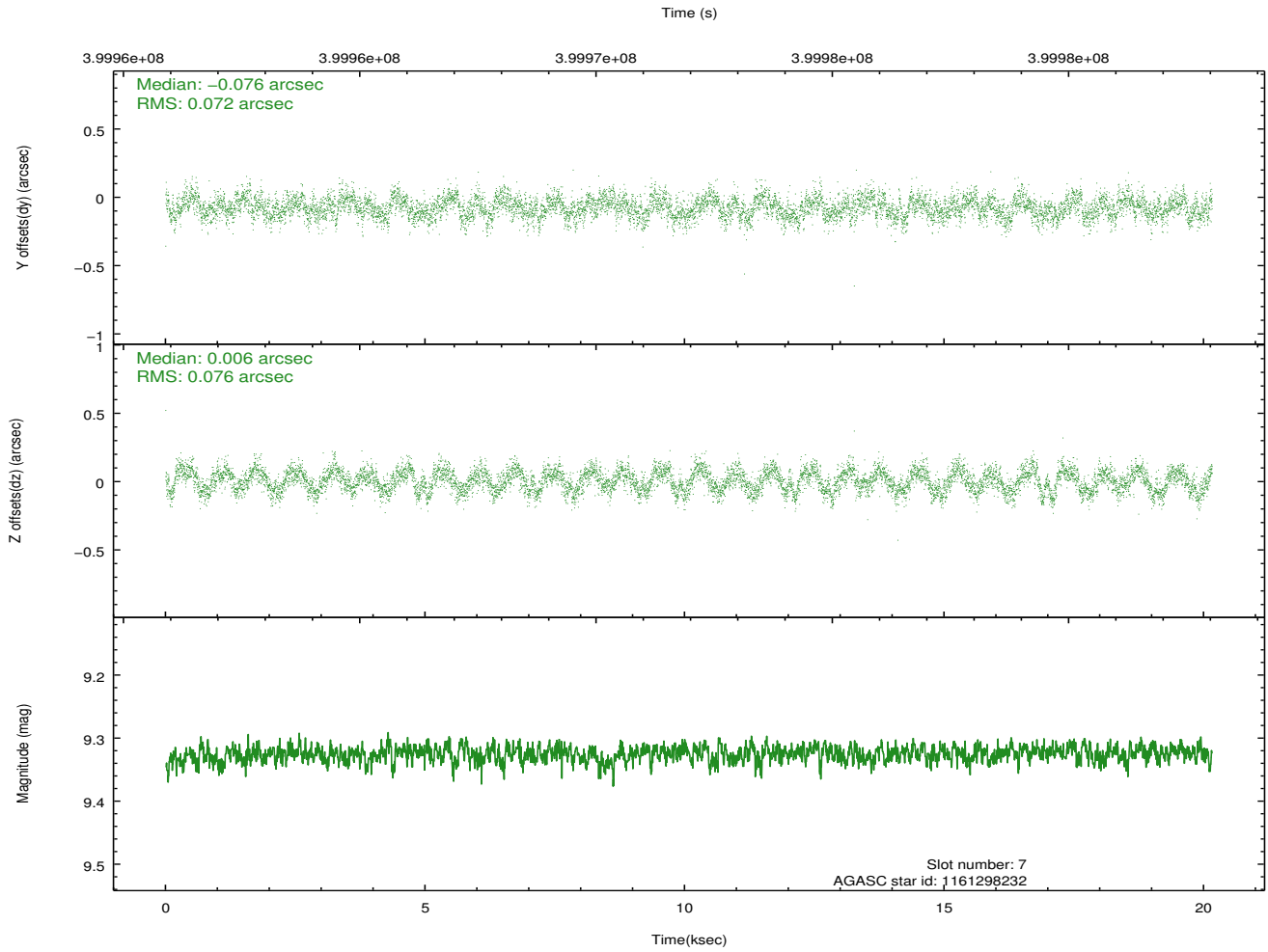
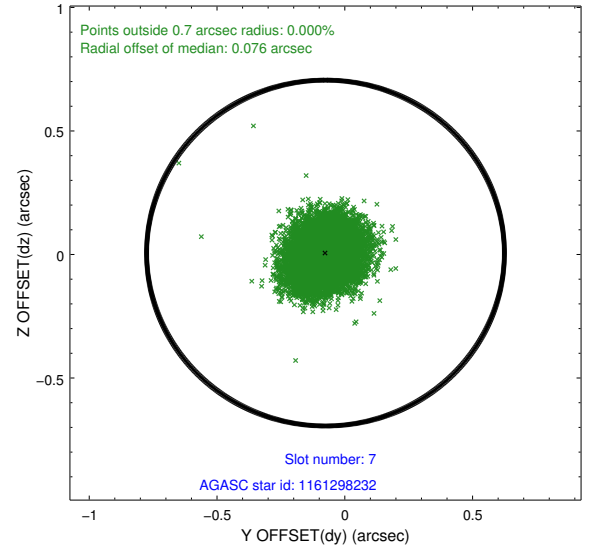
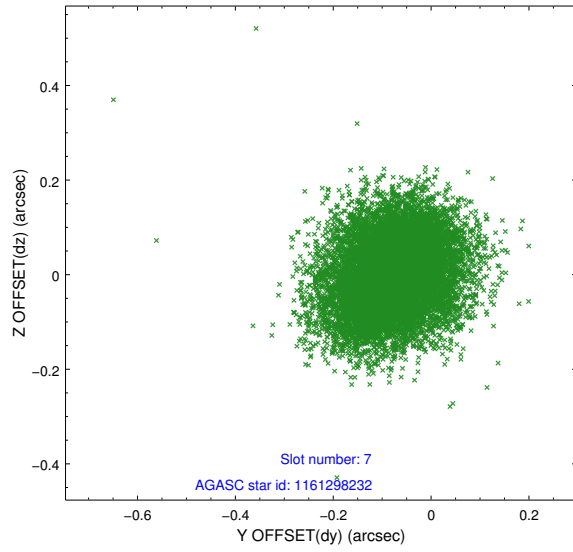
### 2.4.3 Slot 5



## 2.4.4 Slot 6

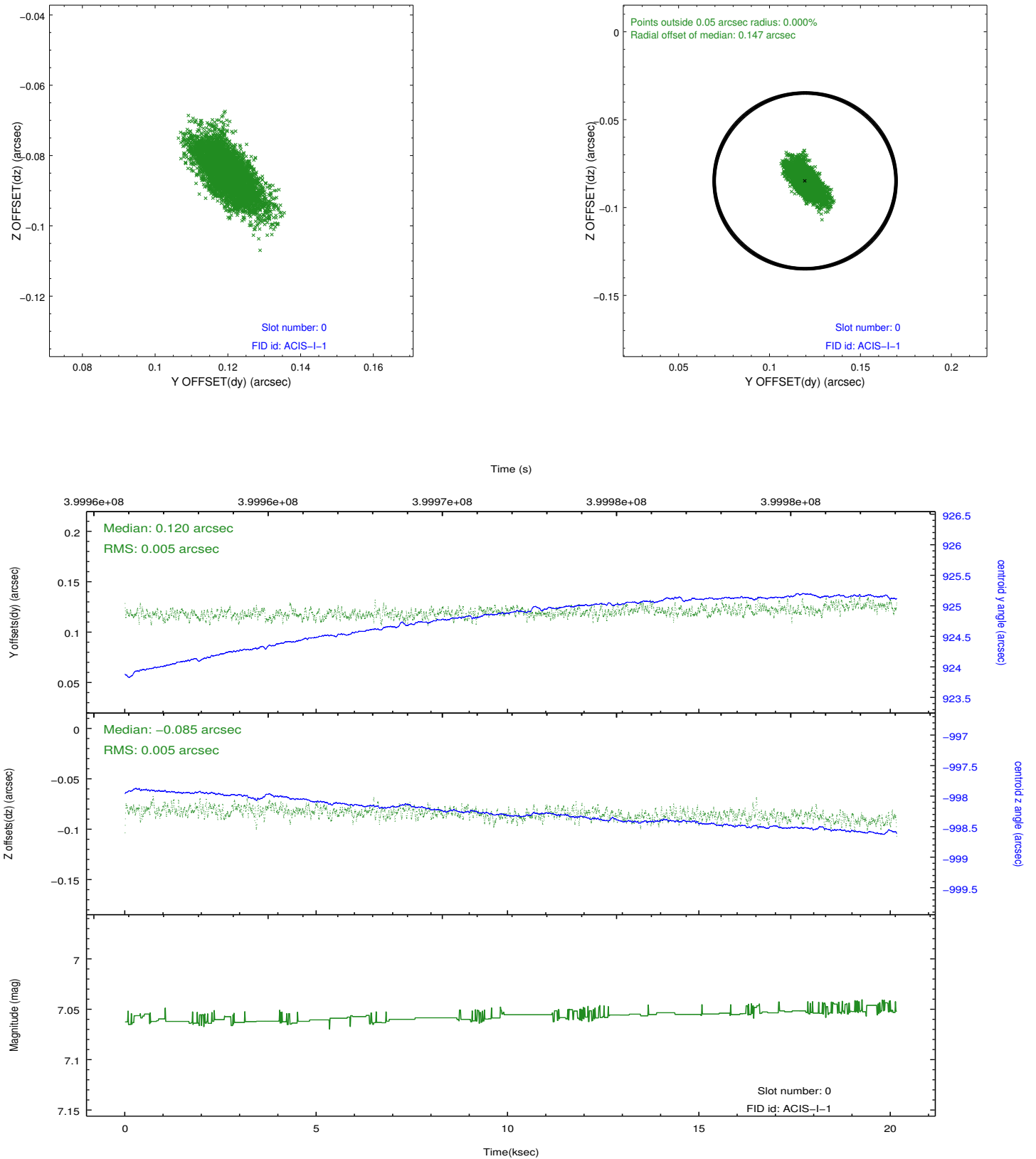


## 2.4.5 Slot 7

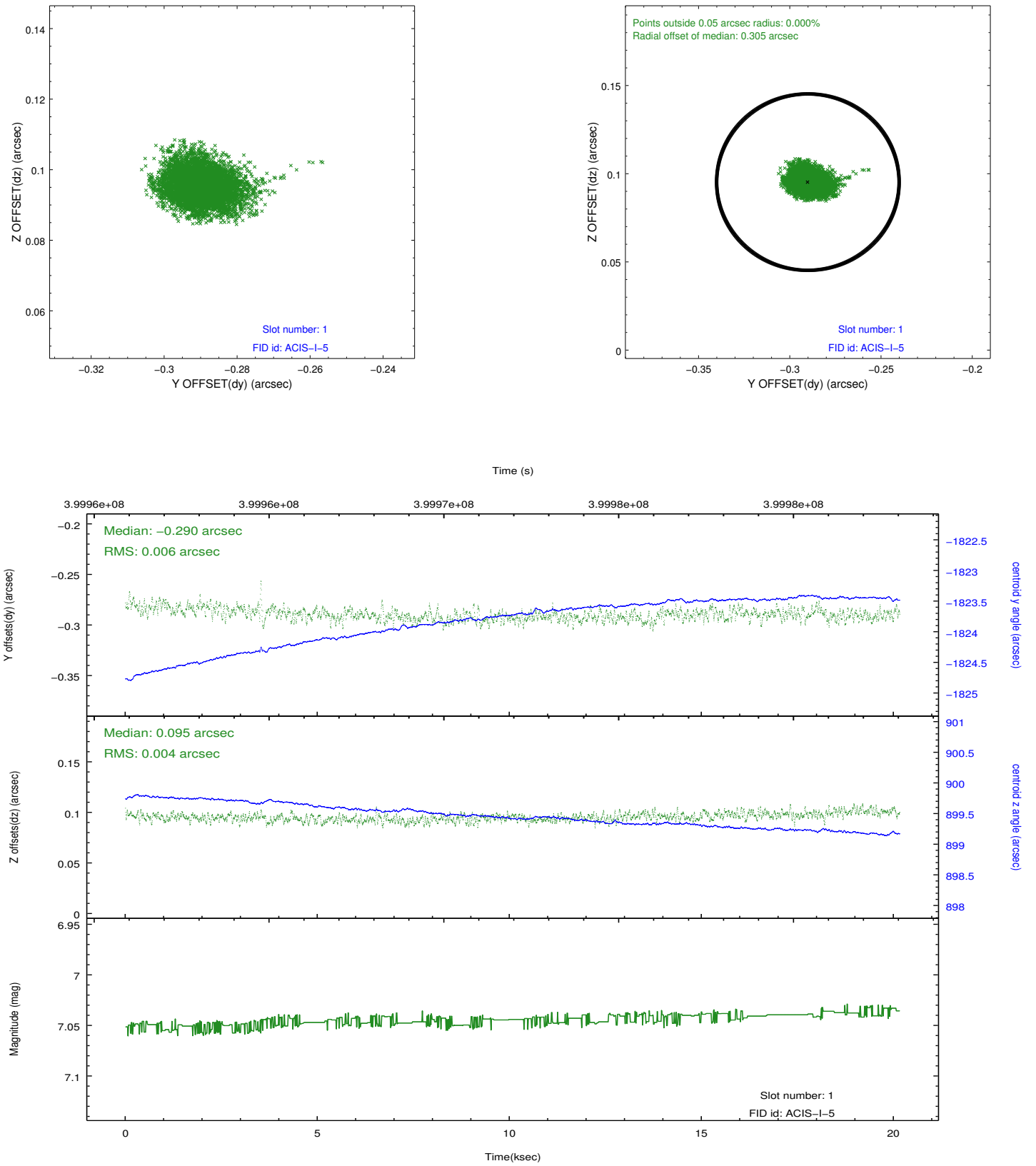


## 2.5 FID Slots

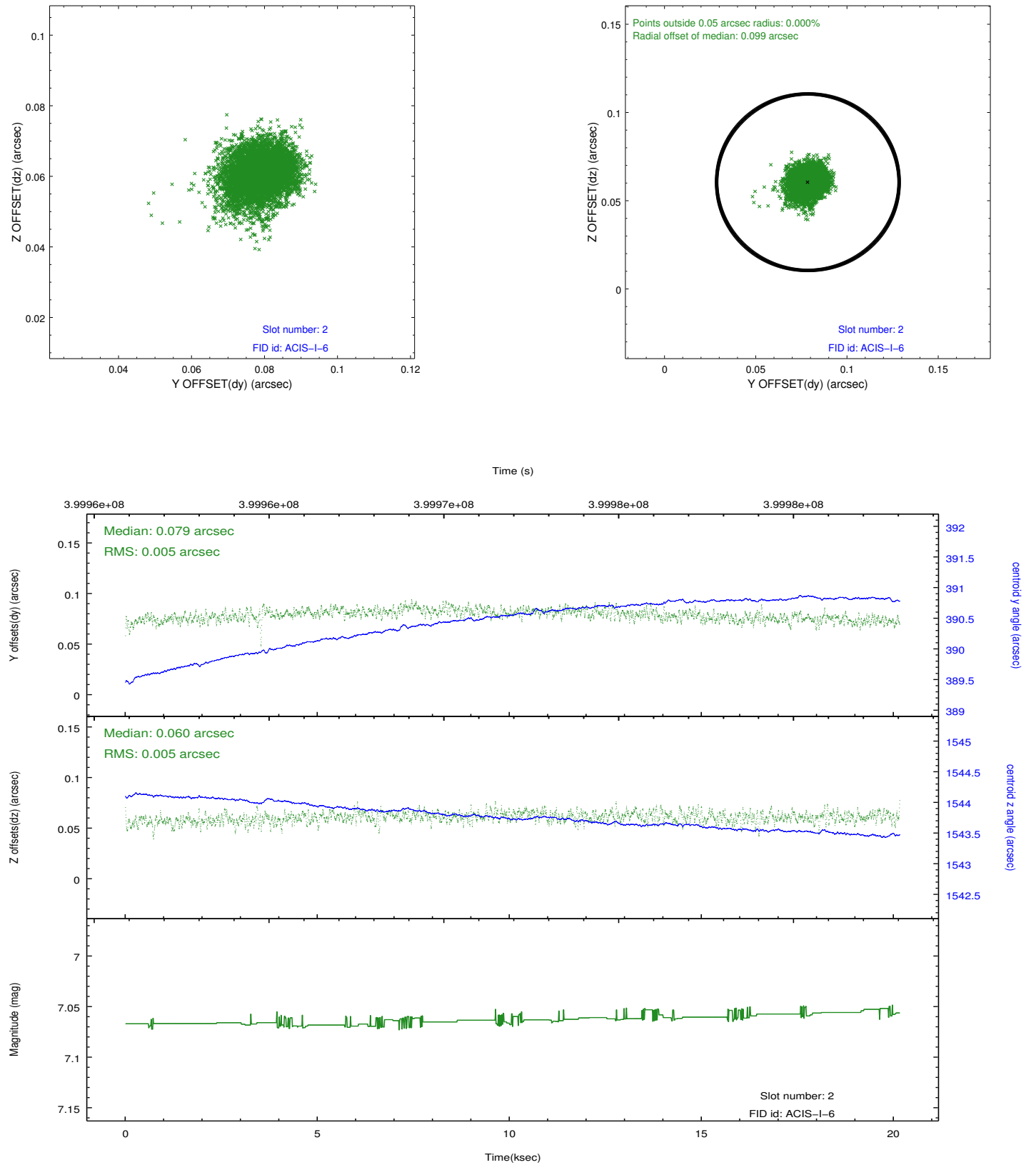
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.07.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.778000152111

## A.2 Comments

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 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:  
(51.15379, -62.64003), (51.17082, -62.64447), (51.22553, -62.60028), (51.20383, -62.59964)