

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13193 - L2 Version 2  
Chandra X-Ray Center

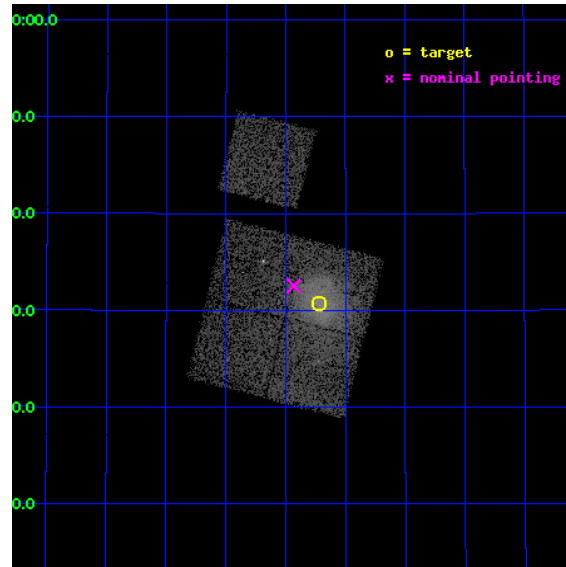
L2 Processing Date : Jul 7 2012

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# 1 Front

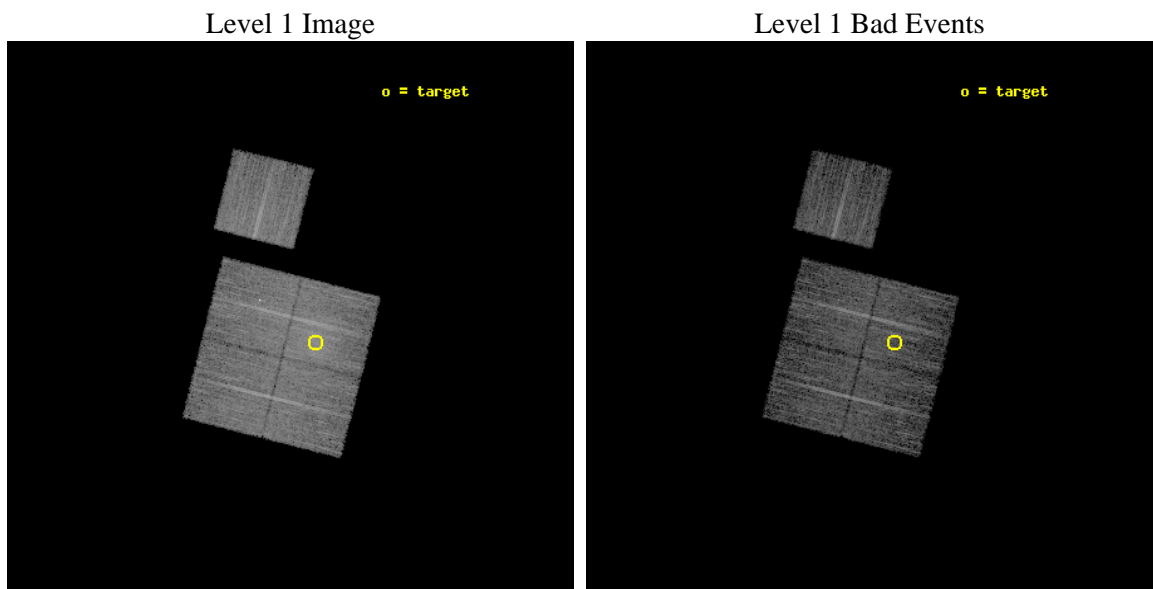
seq_num	801059	Sequence number
obs_id	13193	Observation id
title	Abell 2034: a Merger Near the Plane of the Sky	Proposal title
observer	Dr Paul Nulsen	Principal investigator
object	Abell 2034	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	227.555833	Observer's specified target RA [deg]
dec_targ	33.511944	Observer's specified target Dec [deg]
ra_nom	227.60783463513	Nominal RA [deg]
dec_nom	33.542397257564	Nominal Dec [deg]
roll_nom	14.179943238455	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7773.5083797574	Sum of GTIs [s]
livetime	7671.9417700023	Livetime [s]
ontime0	7773.3852597475	Sum of GTIs [s]
ontime1	7773.4262997508	Sum of GTIs [s]
ontime2	7773.4673397541	Sum of GTIs [s]
ontime3	7773.5083797574	Sum of GTIs [s]
ontime6	7773.3442197442	Sum of GTIs [s]
l2events	39691	Number of level 2 events



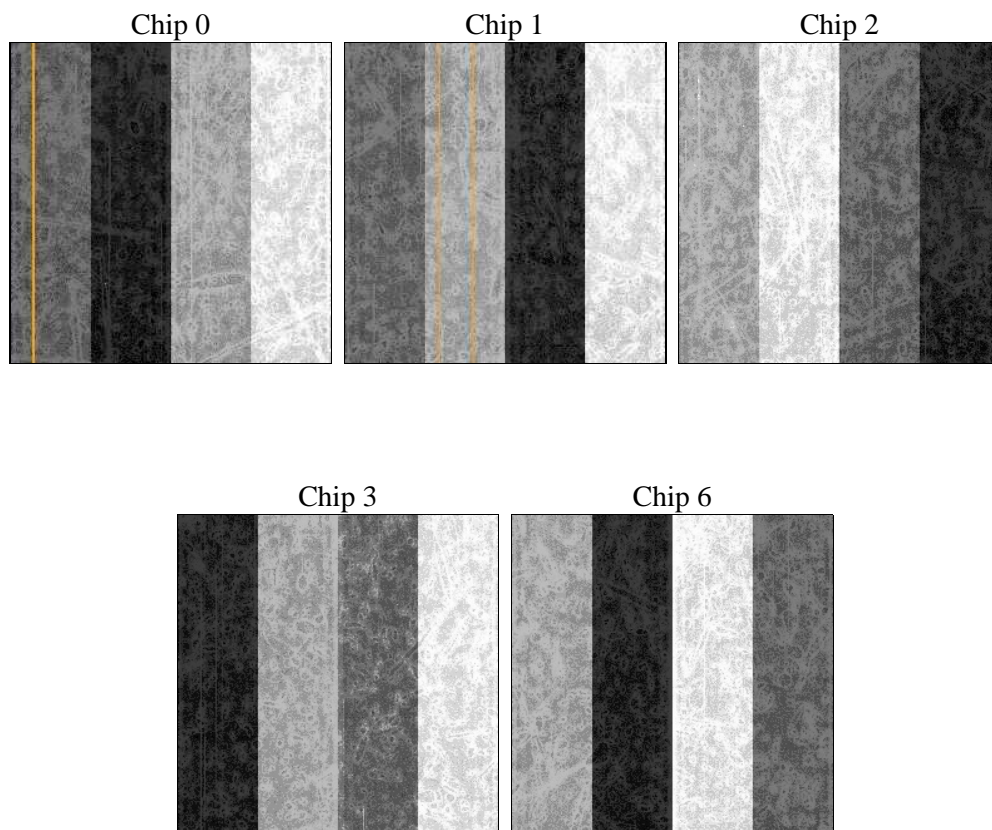
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	7773.5083797574	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime0	7773.3852597475	Sum of GTIs [s]
date	2012-07-07T16:36:50	Date and time of file creation	ontime1	7773.4262997508	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	7773.4673397541	Sum of GTIs [s]
			ontime3	7773.5083797574	Sum of GTIs [s]
			ontime6	7773.3442197442	Sum of GTIs [s]
			l1events	280073	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	51056	53395	57789	63787	54046
rejected events	44589	44768	49614	47833	47975
rejected %	87%	83%	85%	74%	88%

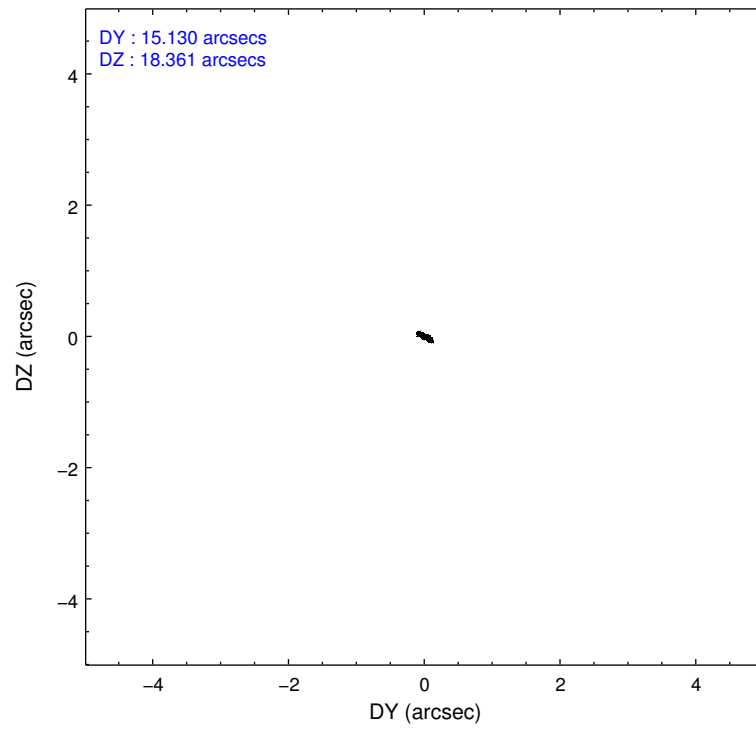
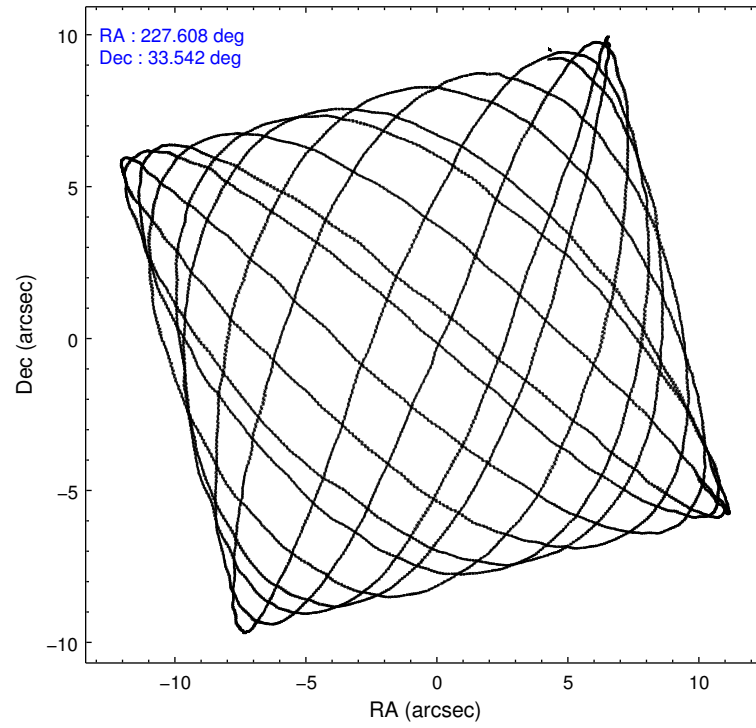
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2404	3946	3912	10372	2070
	4%	7%	6%	16%	3%
grade 1 events	22	40	88	96	30
	0%	0%	0%	0%	0%
grade 2 events	1536	1770	1707	2251	1409
	3%	3%	2%	3%	2%
grade 3 events	679	730	706	984	619
	1%	1%	1%	1%	1%
grade 4 events	645	776	694	890	648
	1%	1%	1%	1%	1%
grade 5 events	2313	2384	2281	2689	2416
	4%	4%	3%	4%	4%
grade 6 events	1204	1410	1158	1463	1326
	2%	2%	2%	2%	2%
grade 7 events	42253	42339	47243	45042	45528
	82%	79%	81%	70%	84%

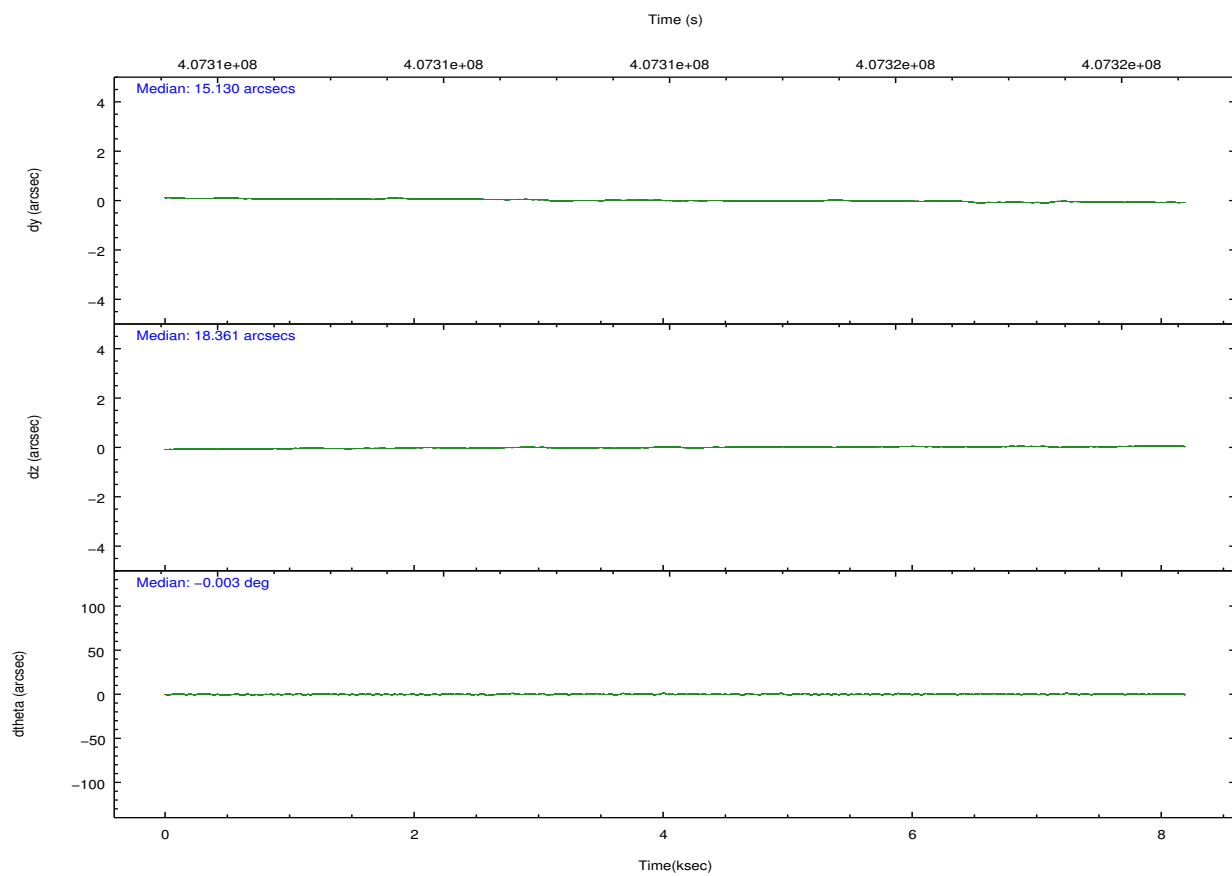
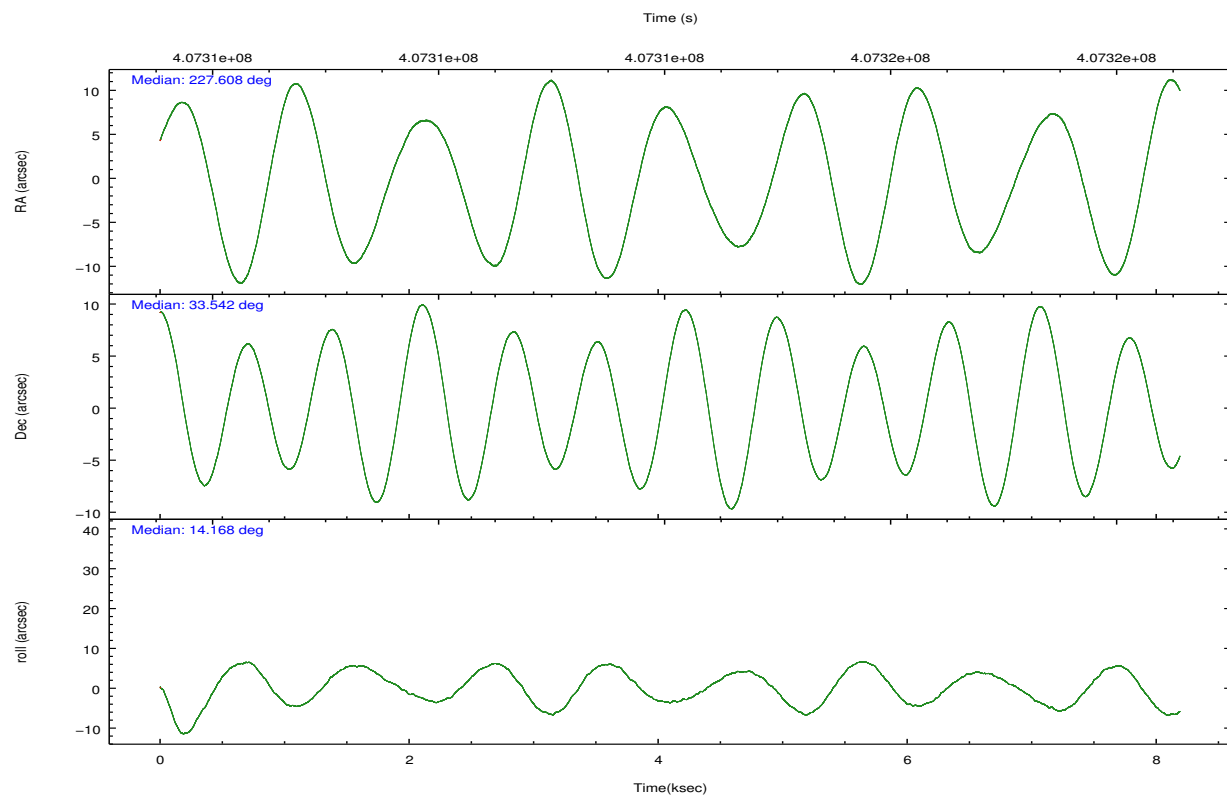


## 2.2 Compared Parameters

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	227.584207	227.6078346351271	CCD I2 on	Y	Y
[deg] Pointing Dec	33.523157	33.54239725756386	CCD I3 on	Y	Y
[deg] Pointing Roll	13.984318	14.1799432384552	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	-225.592463	-225.5818545406617	CCD S3 on	N	N
[mm] SIM translation stage offset	-8	-8.010598462268035	CCD S4 on	N	N
[s] Observation start time (MET)	407310143.184000	407309766.97206	CCD S5 on	N	N
Observation start date	2010-11-28T05:41:17	2010-11-28T05:36:06	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	407318143.184000	407319238.48505	On-chip summing requested	N	N
Observation end date	2010-11-28T07:54:37	2010-11-28T08:13:58	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



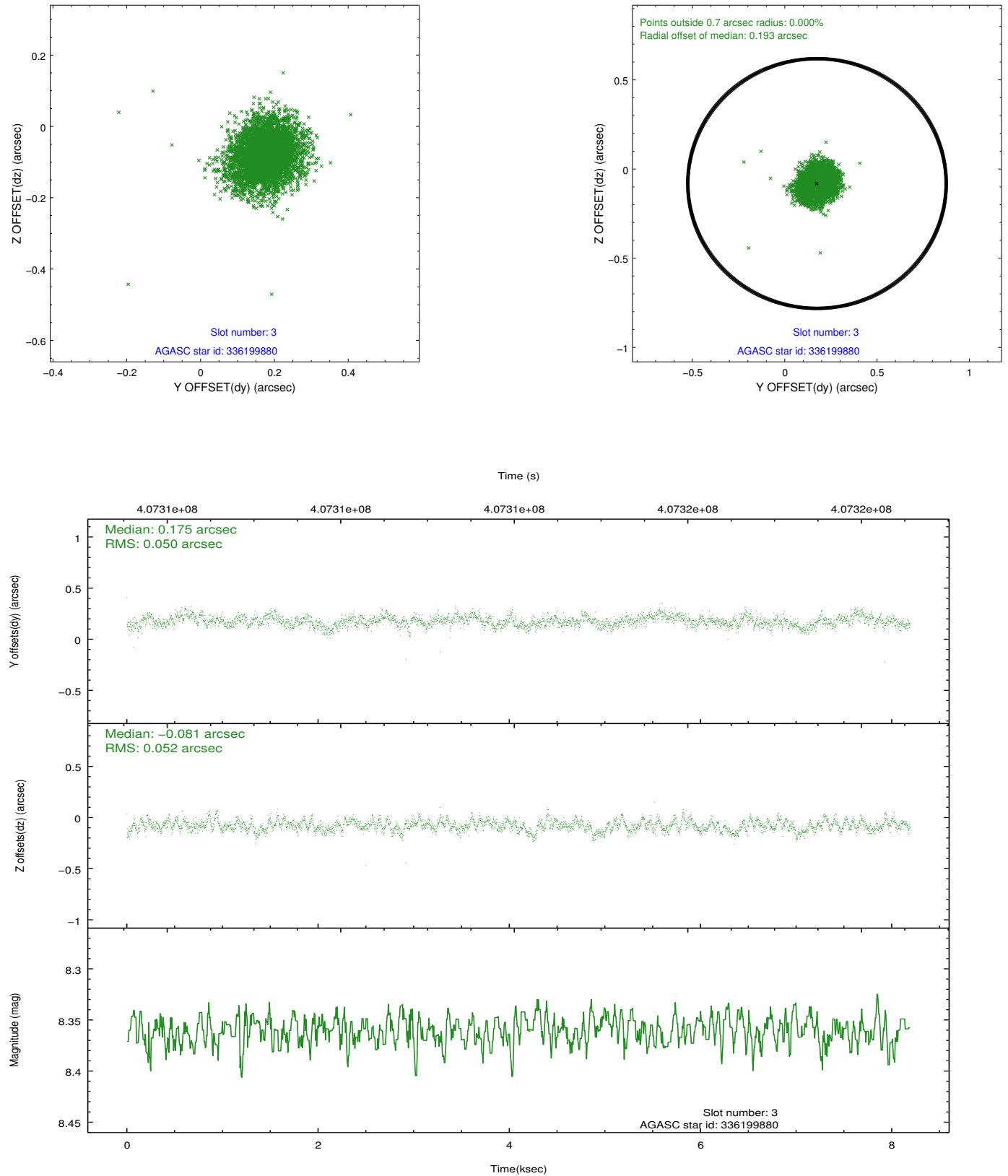


### Slot Statistics

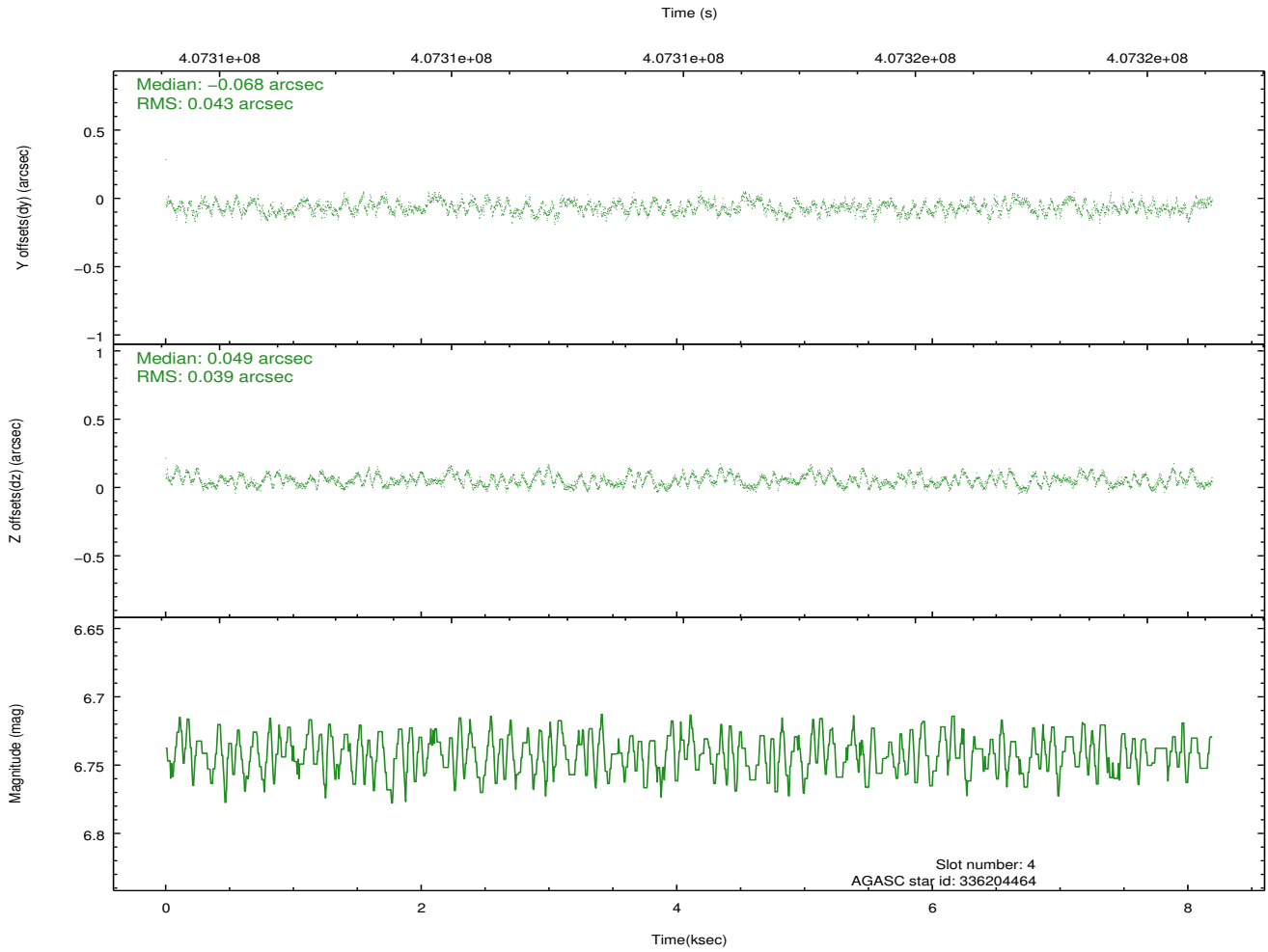
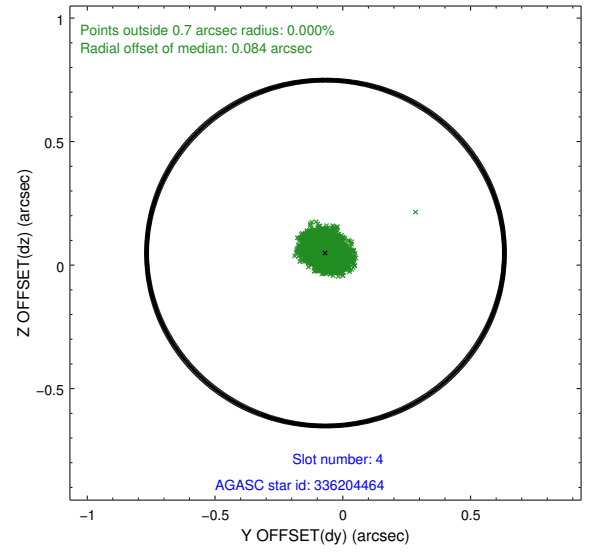
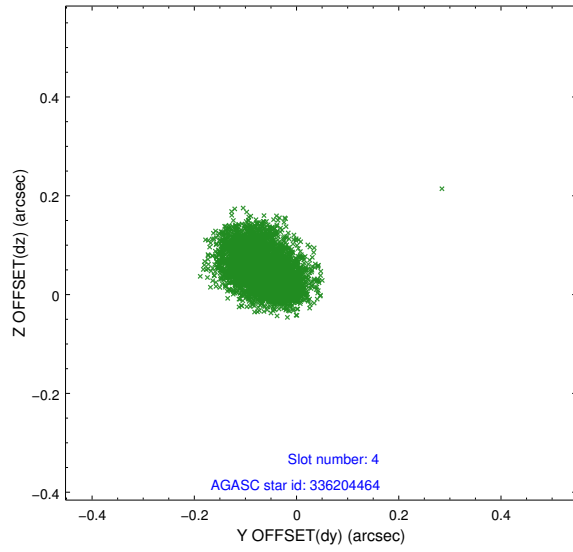
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.00	1998	0.100	-0.057	0.007	0.012	0.000000	0.000000	924.28	-1006.54
1	FID	ACIS-I-5	6.99	1998	-0.263	0.086	0.006	0.011	0.000000	0.000000	-1823.84	890.63
2	FID	ACIS-I-6	7.01	1998	0.072	0.041	0.006	0.011	0.000000	0.000000	389.02	1535.89
3	GUIDE	336199880	8.36	3995	0.175	-0.081	0.075	0.123	227.783989	33.320747	407.78	-851.30
4	GUIDE	336204464	6.74	3996	-0.068	0.049	0.064	0.095	227.662063	33.078883	-158.01	-1608.40
5	GUIDE	336204600	6.97	3996	-0.114	0.199	0.057	0.092	227.238782	33.265363	-1232.93	-647.18
6	GUIDE	336207352	7.56	3996	-0.008	-0.118	0.057	0.094	226.776230	33.965033	-1954.81	2135.39
7	GUIDE	336207928	9.08	3991	0.013	-0.051	0.088	0.143	227.107778	33.476608	-1428.76	186.74

## 2.4 Star Slots

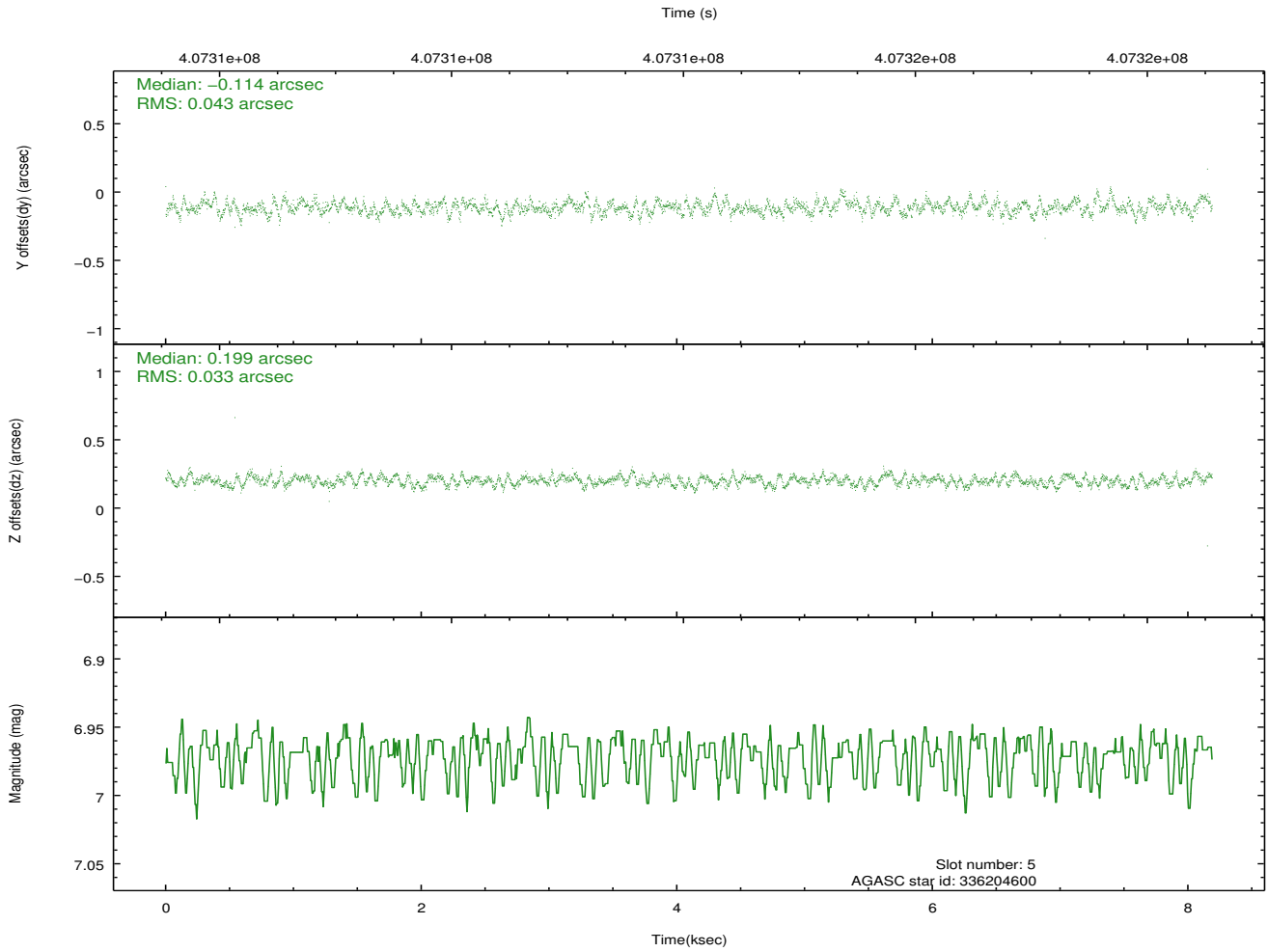
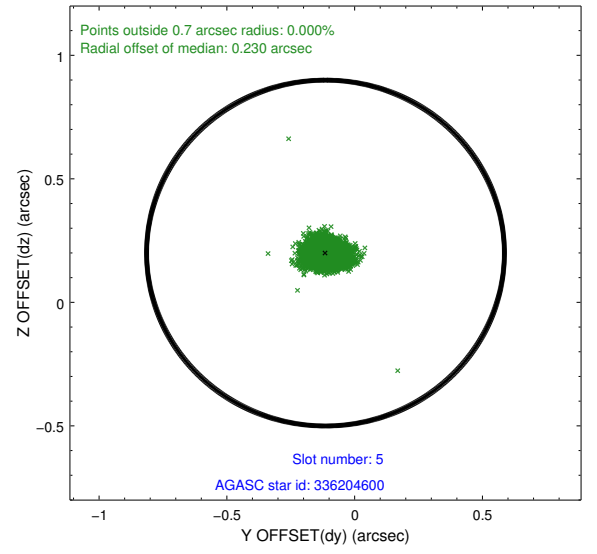
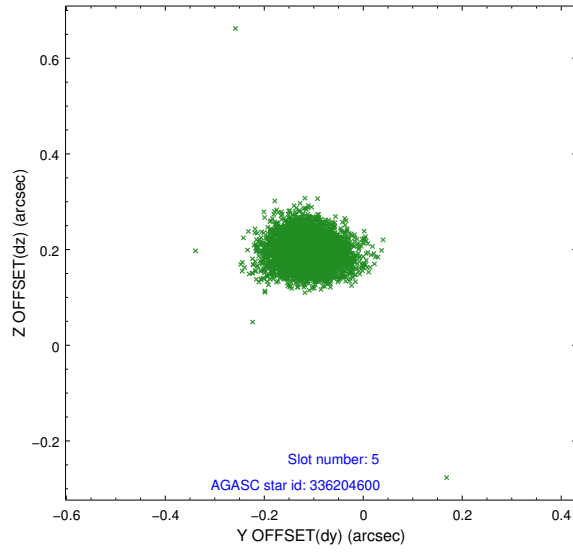
### 2.4.1 Slot 3



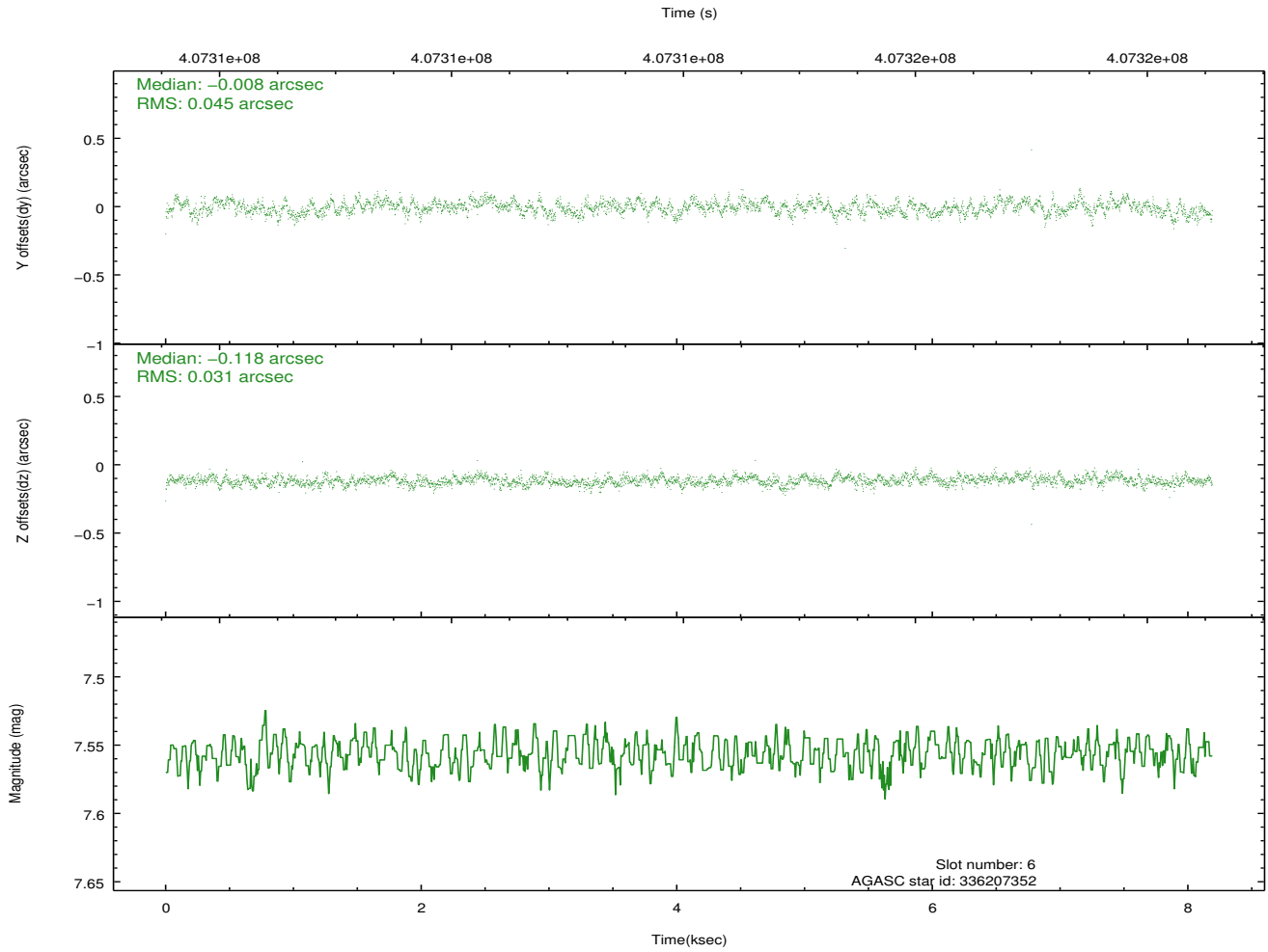
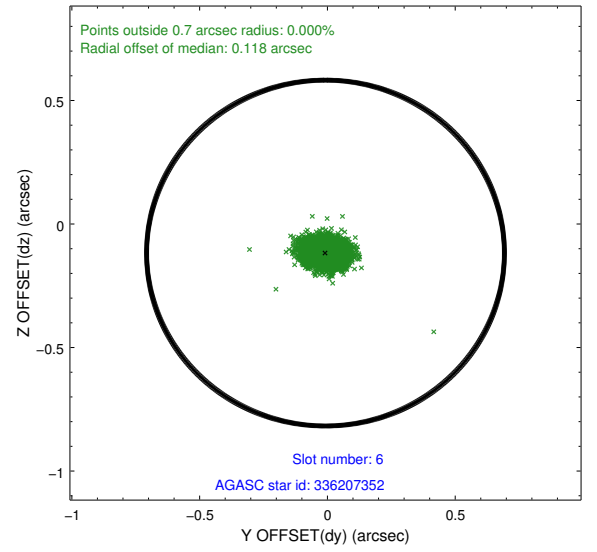
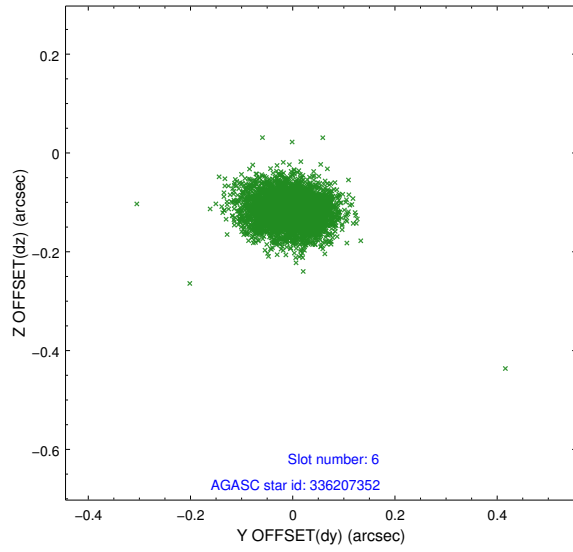
## 2.4.2 Slot 4



### 2.4.3 Slot 5

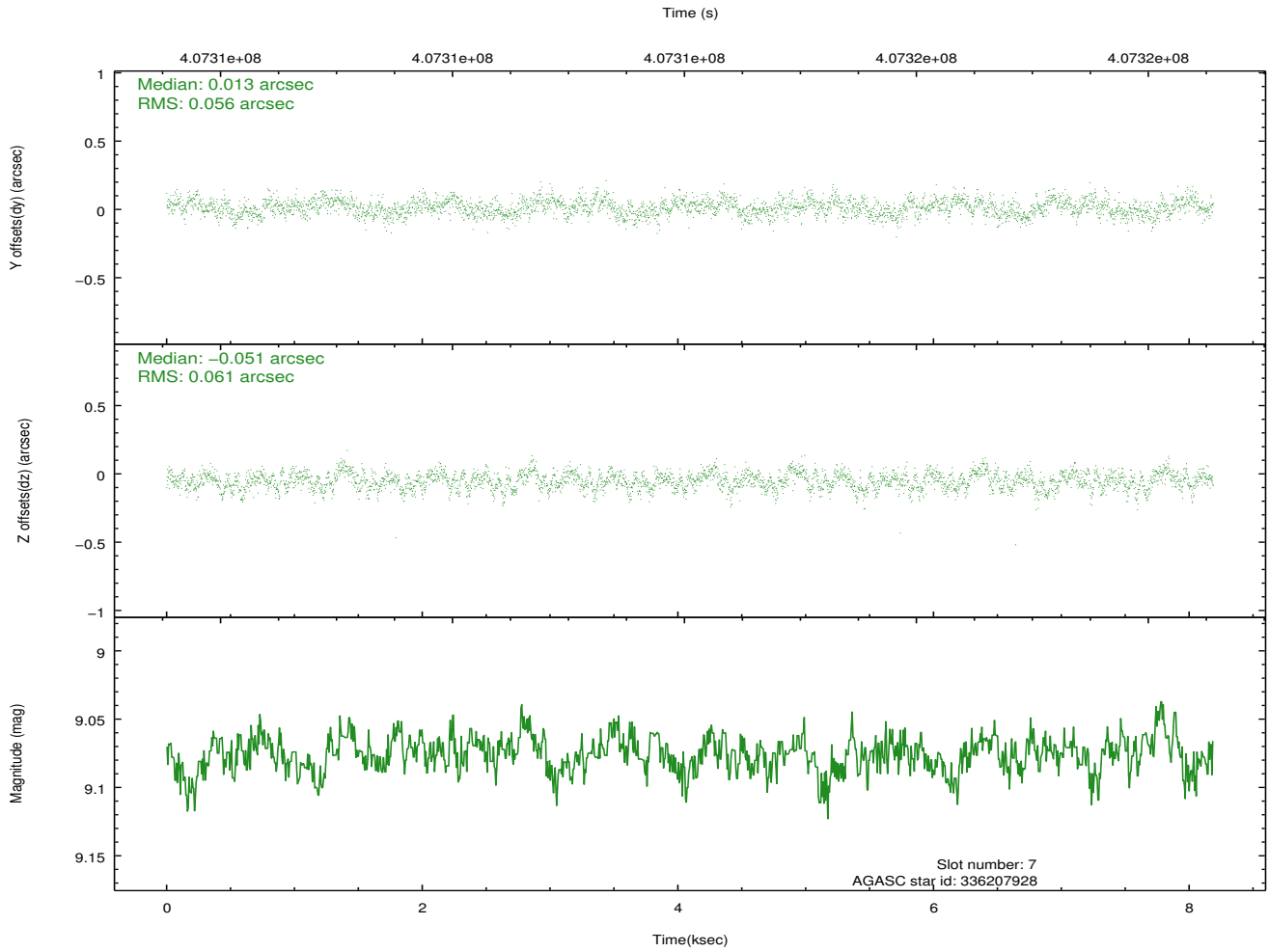
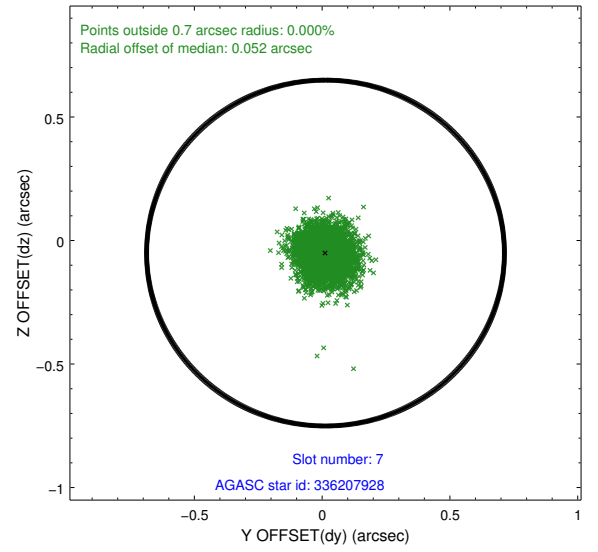
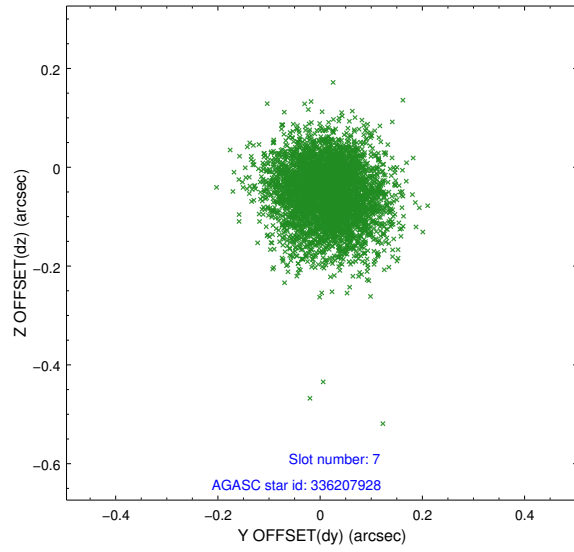


## 2.4.4 Slot 6



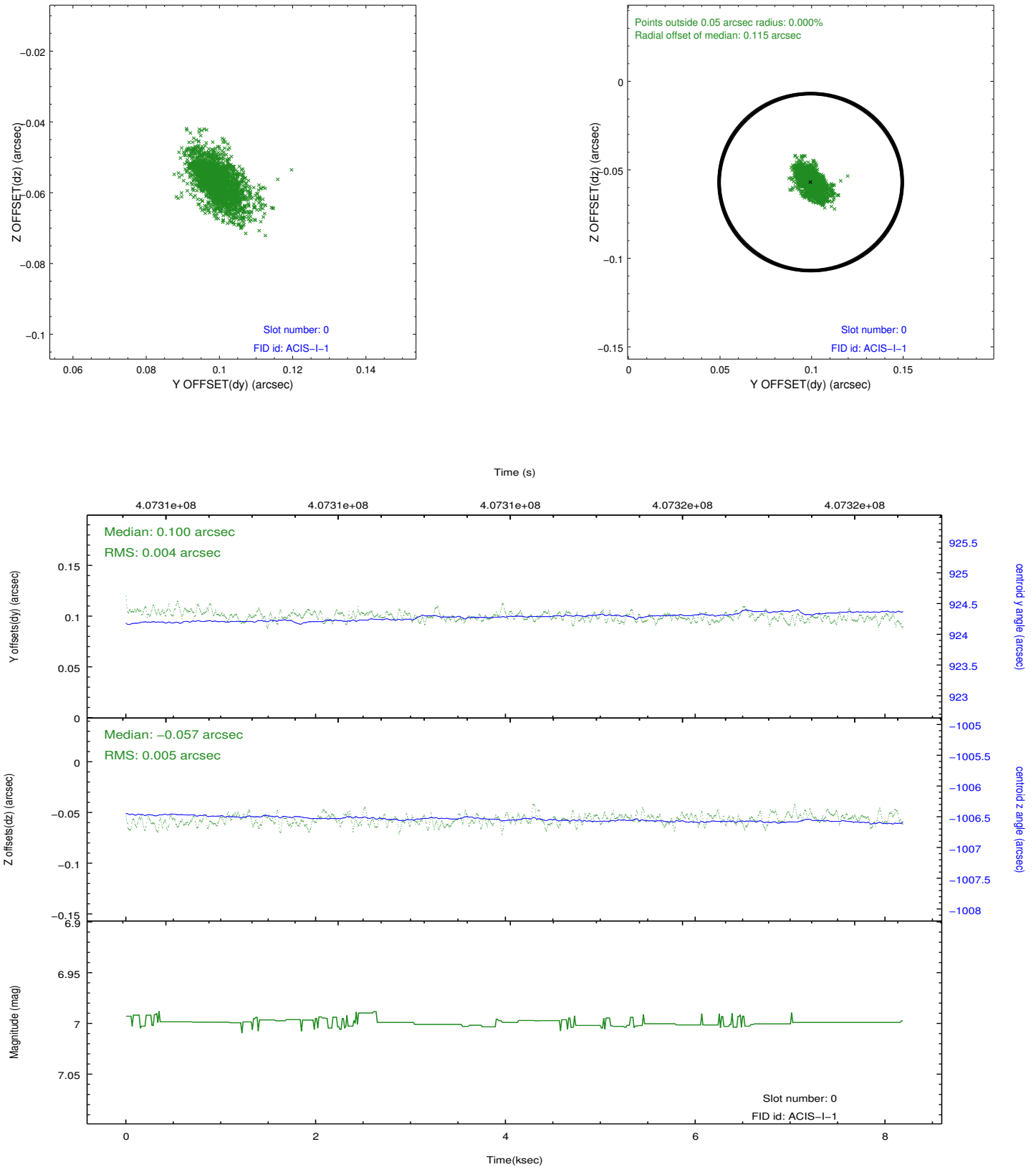


## 2.4.5 Slot 7

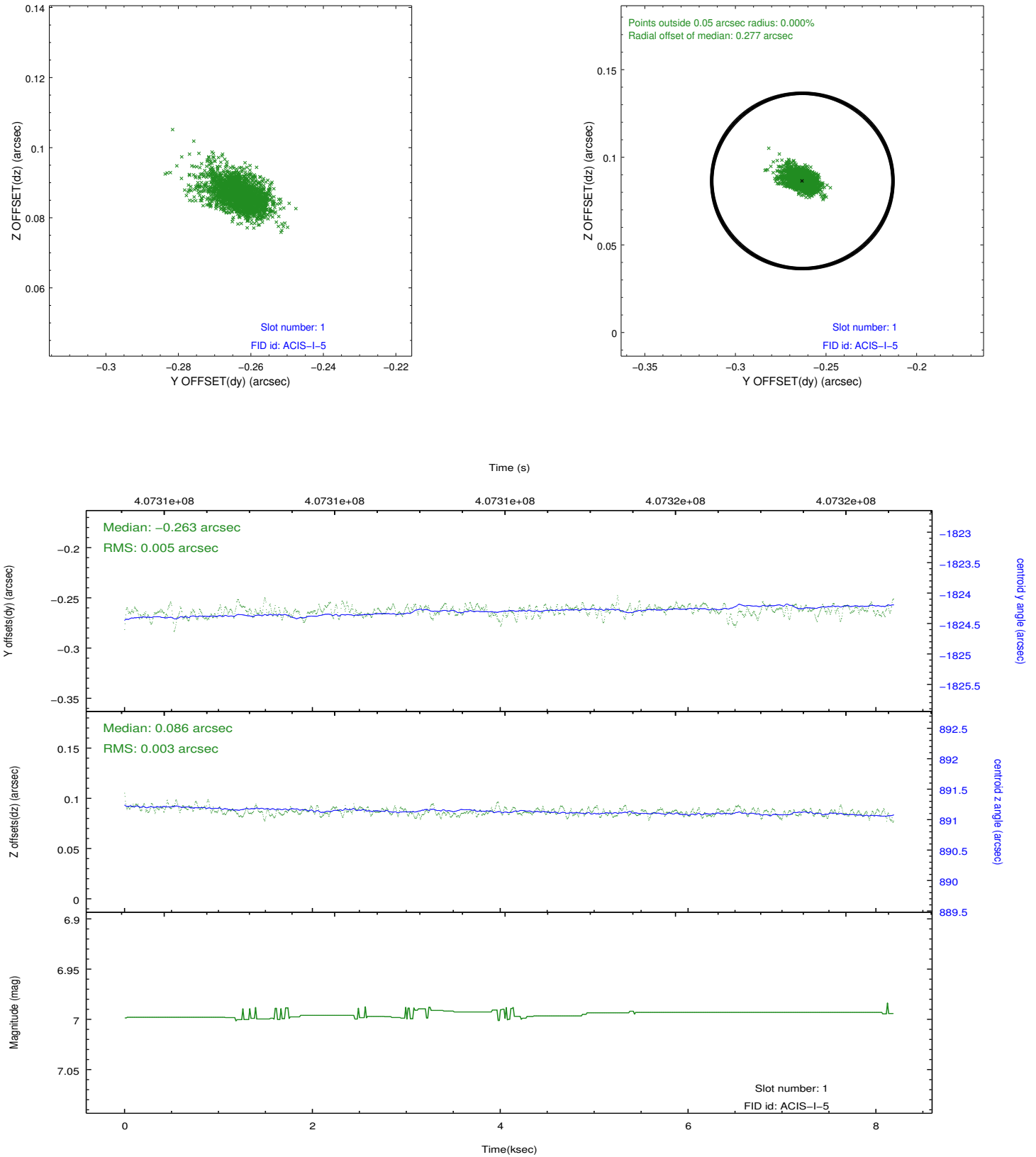


## 2.5 FID Slots

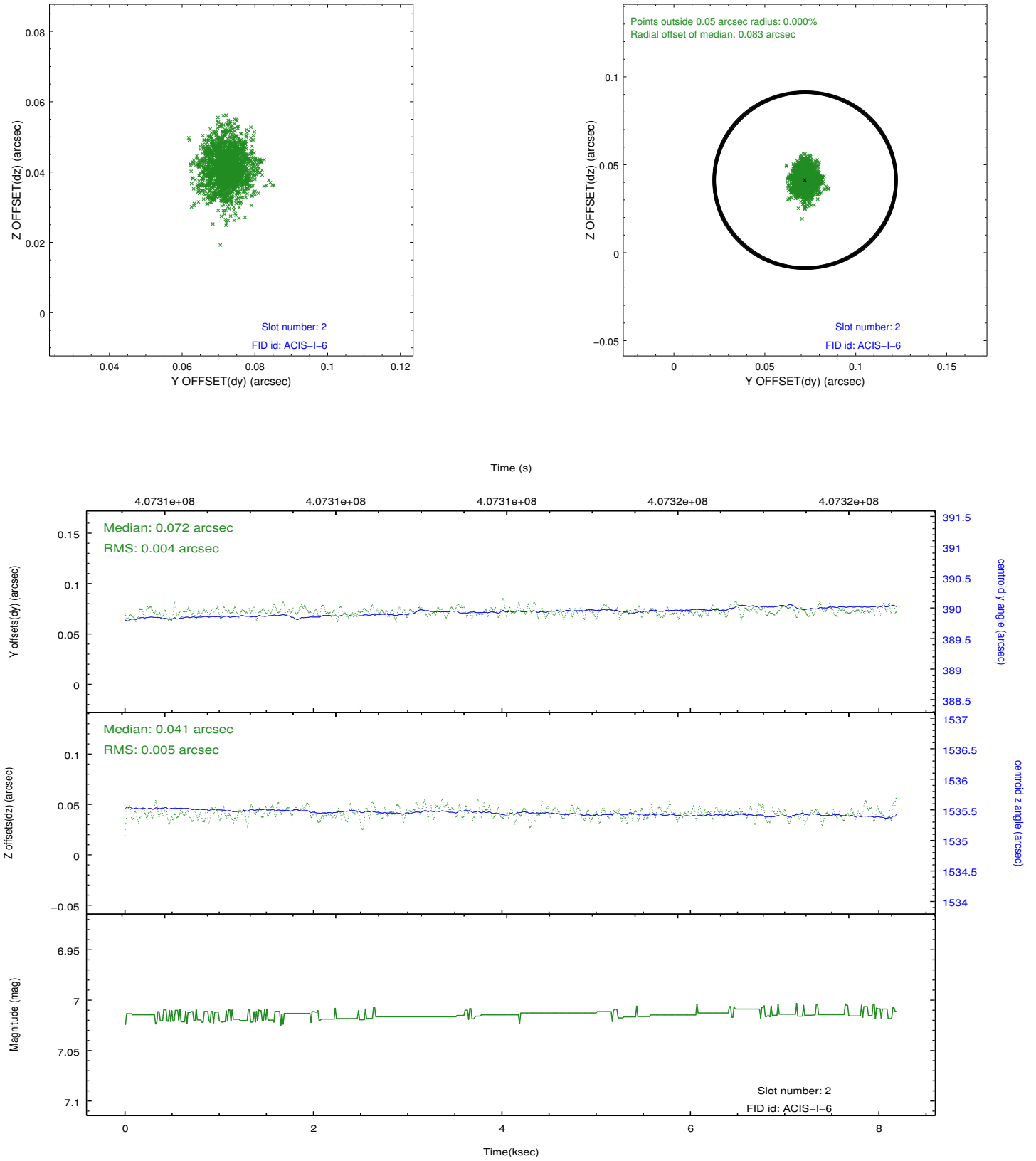
### 2.5.1 Slot 0



## 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)	2012.07.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.7735083810687

### A.2 Comments