

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15300 - L2 Version 2  
Chandra X-Ray Center

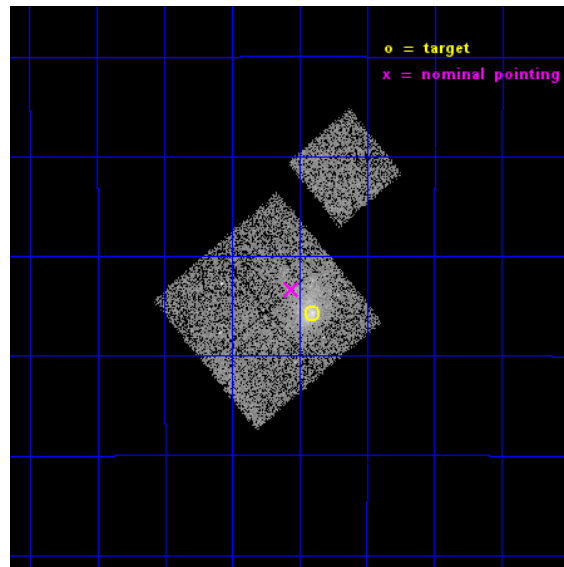
L2 Processing Date : Dec 1 2014

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# 1 Front

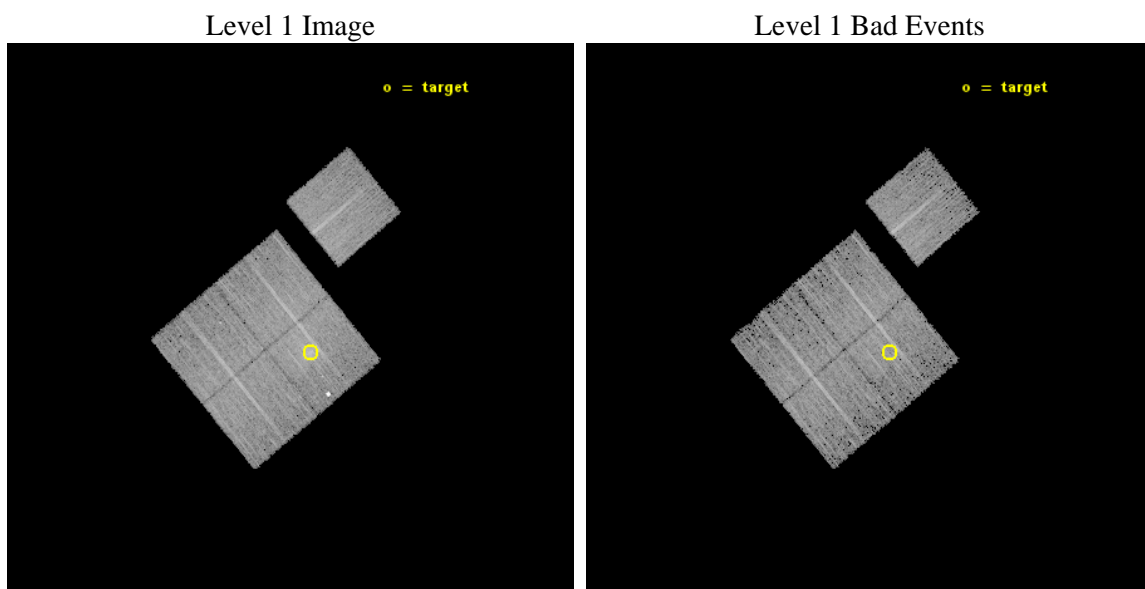
seq_num	801333	Sequence number
obs_id	15300	Observation id
title	Planck Clusters (Type B)	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	G278.60+39.17	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	172.97625	Observer's specified target RA [deg]
dec_targ	-19.929778	Observer's specified target Dec [deg]
ra_nom	173.01485528971	Nominal RA [deg]
dec_nom	-19.889258118862	Nominal Dec [deg]
roll_nom	50.214175734231	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10081.086291552	Sum of GTIs [s]
livetime	9949.3694775647	Livetime [s]
ontime0	10080.963171542	Sum of GTIs [s]
ontime1	10081.004211545	Sum of GTIs [s]
ontime2	10081.045251548	Sum of GTIs [s]
ontime3	10081.086291552	Sum of GTIs [s]
ontime6	10080.922131538	Sum of GTIs [s]
l2events	33376	Number of level 2 events



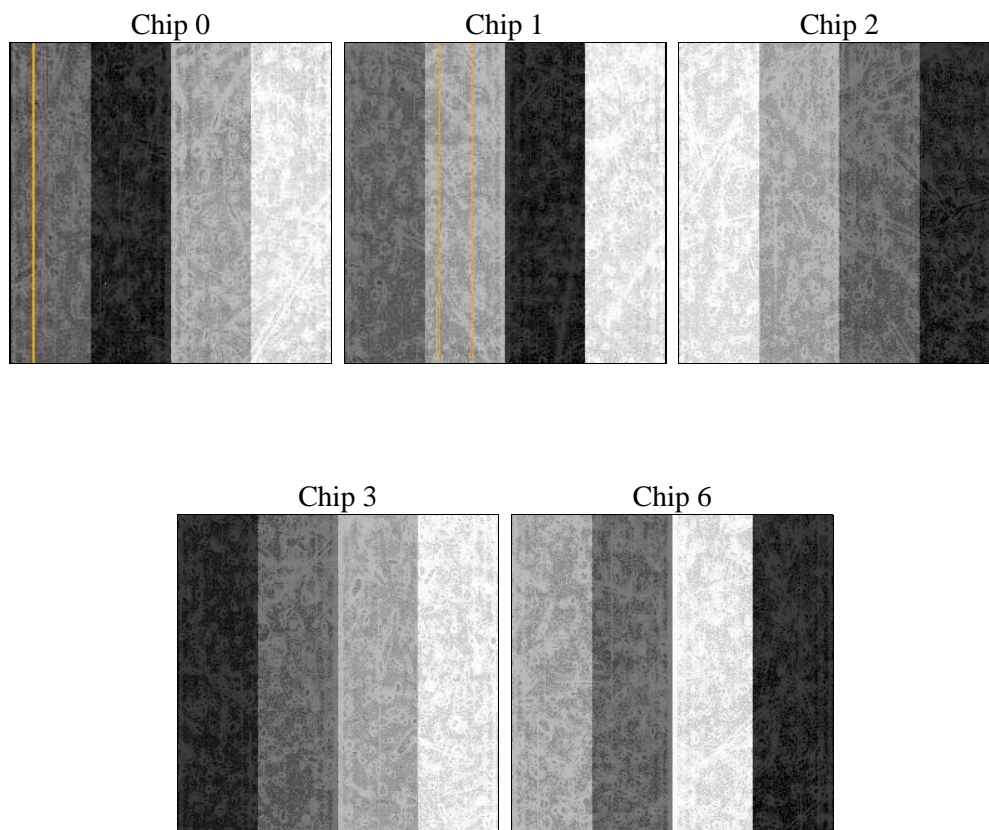
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10081.086291552	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10080.963171542	Sum of GTIs [s]
date	2014-12-01T07:00:29	Date and time of file creation	ontime1	10081.004211545	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10081.045251548	Sum of GTIs [s]
			ontime3	10081.086291552	Sum of GTIs [s]
			ontime6	10080.922131538	Sum of GTIs [s]
			l1events	273242	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	49920	53017	55855	60549	53901
rejected events	43227	45670	49185	46053	47504
rejected %	86%	86%	88%	76%	88%

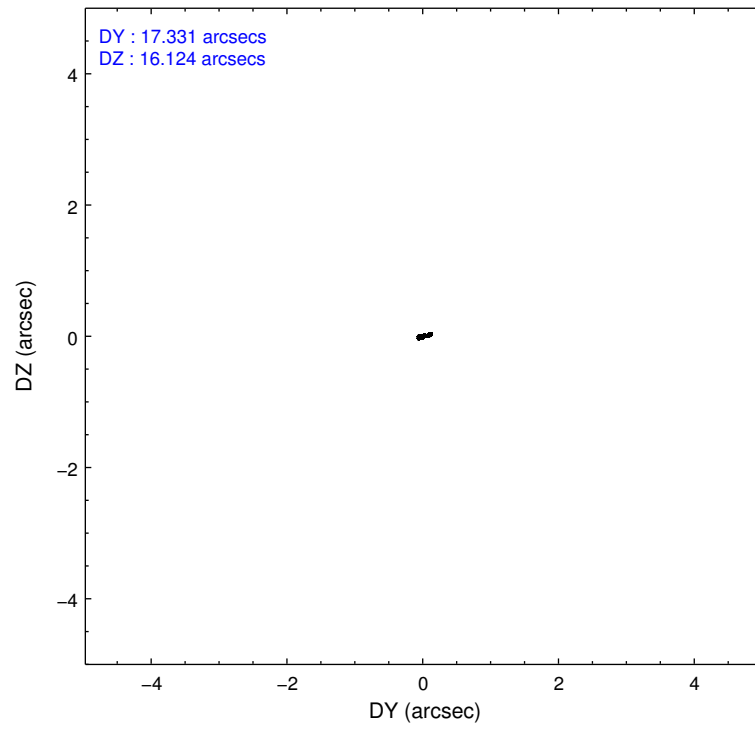
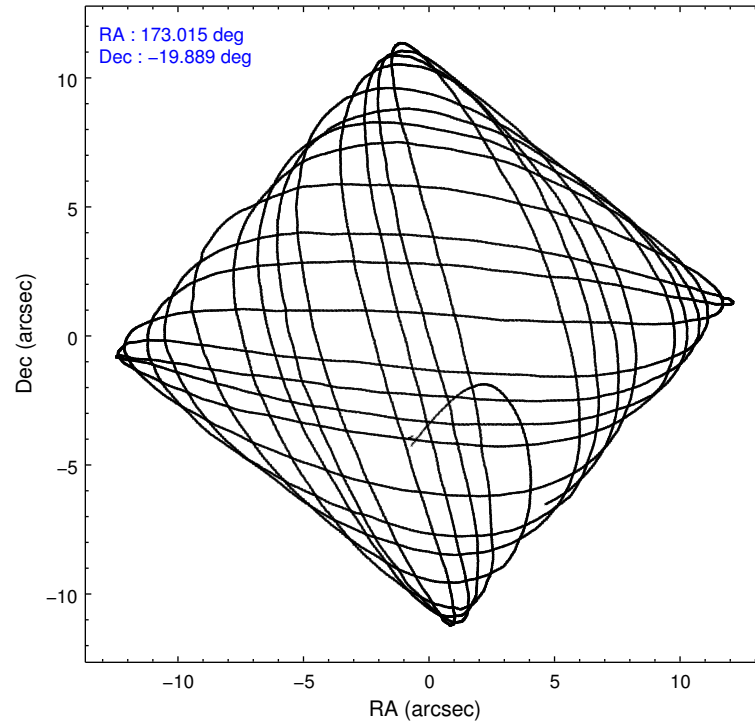
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2435	2584	2686	6423	2158
	4%	4%	4%	10%	4%
grade 1 events	25	30	24	47	32
	0%	0%	0%	0%	0%
grade 2 events	1642	1740	1581	4978	1418
	3%	3%	2%	8%	2%
grade 3 events	662	766	638	798	678
	1%	1%	1%	1%	1%
grade 4 events	619	745	638	837	682
	1%	1%	1%	1%	1%
grade 5 events	2616	2662	2265	2949	2787
	5%	5%	4%	4%	5%
grade 6 events	1338	1516	1134	1466	1468
	2%	2%	2%	2%	2%
grade 7 events	40583	42974	46889	43051	44678
	81%	81%	83%	71%	82%

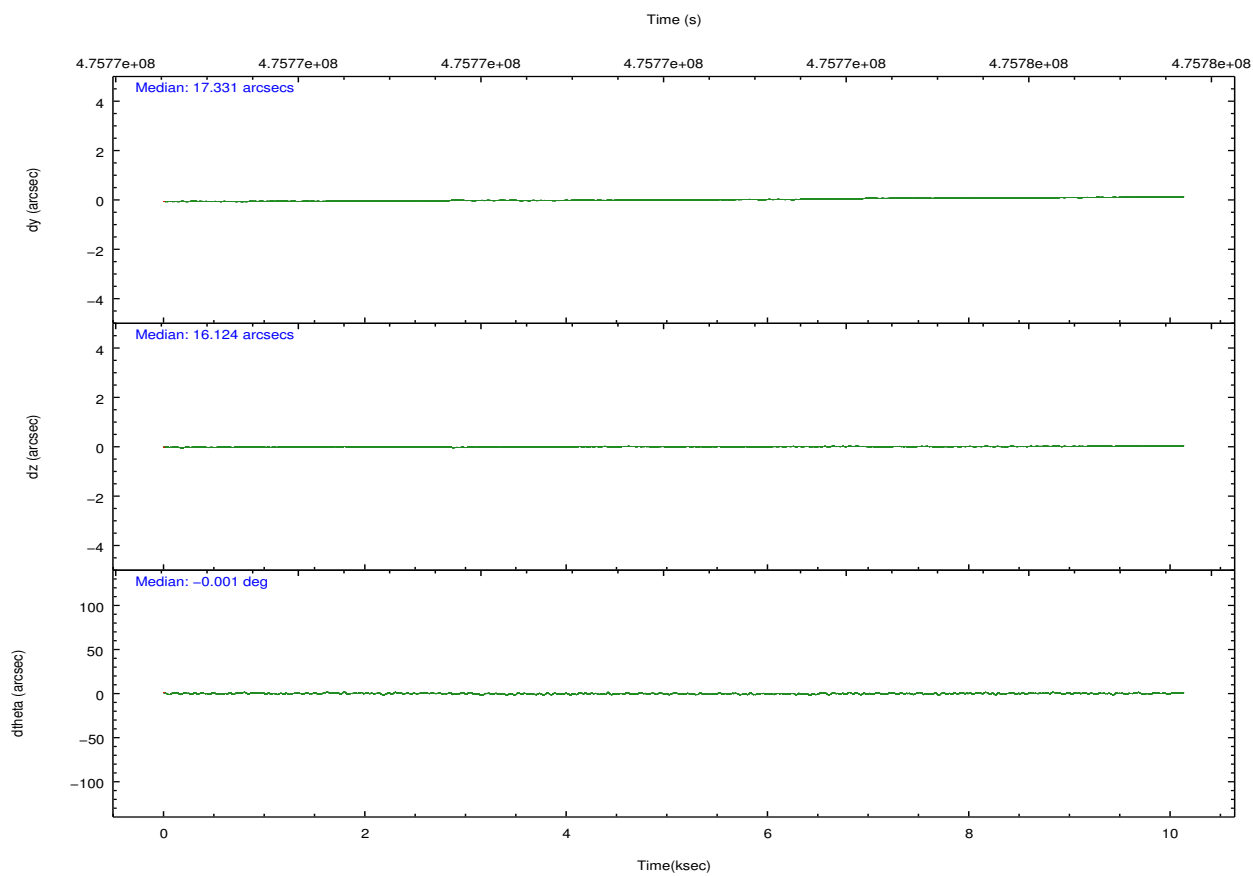
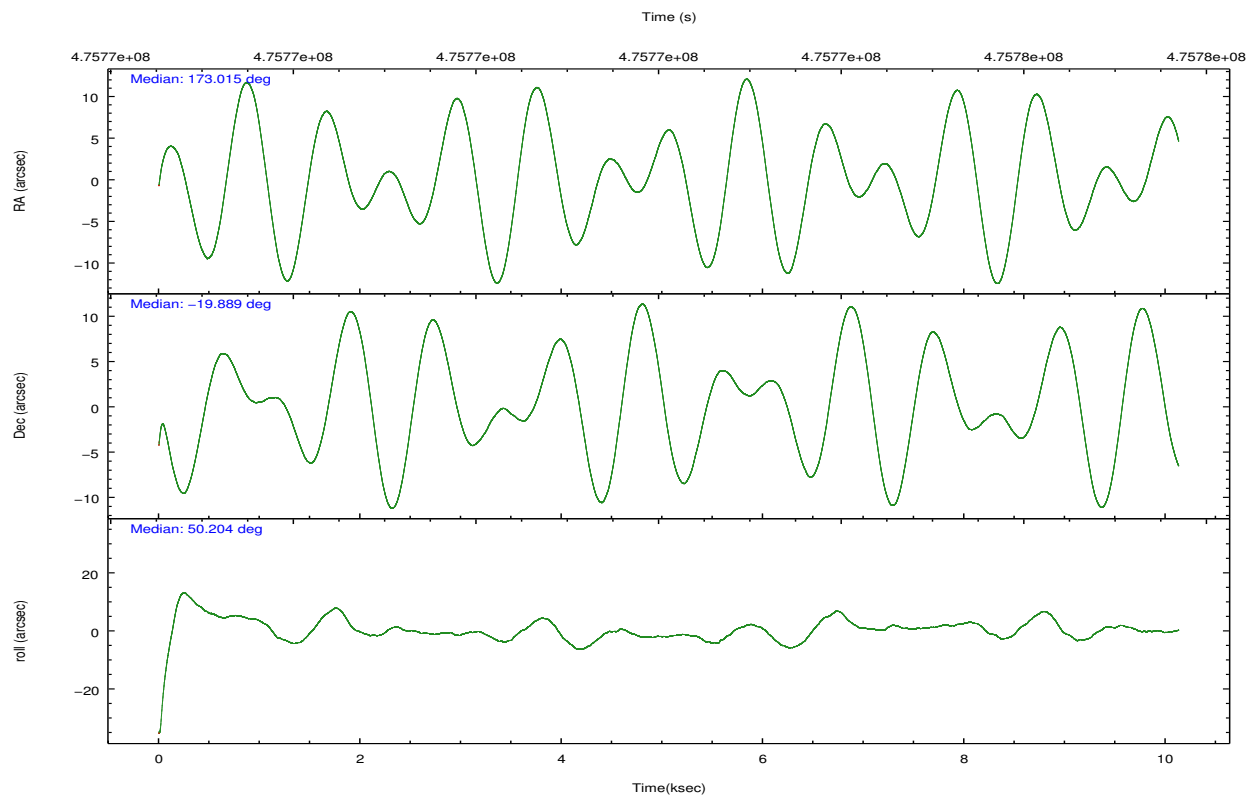


## 2.2 Compared Parameters

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	173.009987	173.0148552897082	CCD I2 on	Y	Y
[deg] Pointing Dec	-19.916350	-19.8892581188617	CCD I3 on	Y	Y
[deg] Pointing Roll	50.003873	50.21417573423128	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	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	475767175.184000	475765876.63216	CCD S5 on	N	N
Observation start date	2013-01-28T13:31:48	2013-01-28T13:11:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	475777175.184000	475778099.24532	On-chip summing requested	N	N
Observation end date	2013-01-28T16:18:28	2013-01-28T16:34:59	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



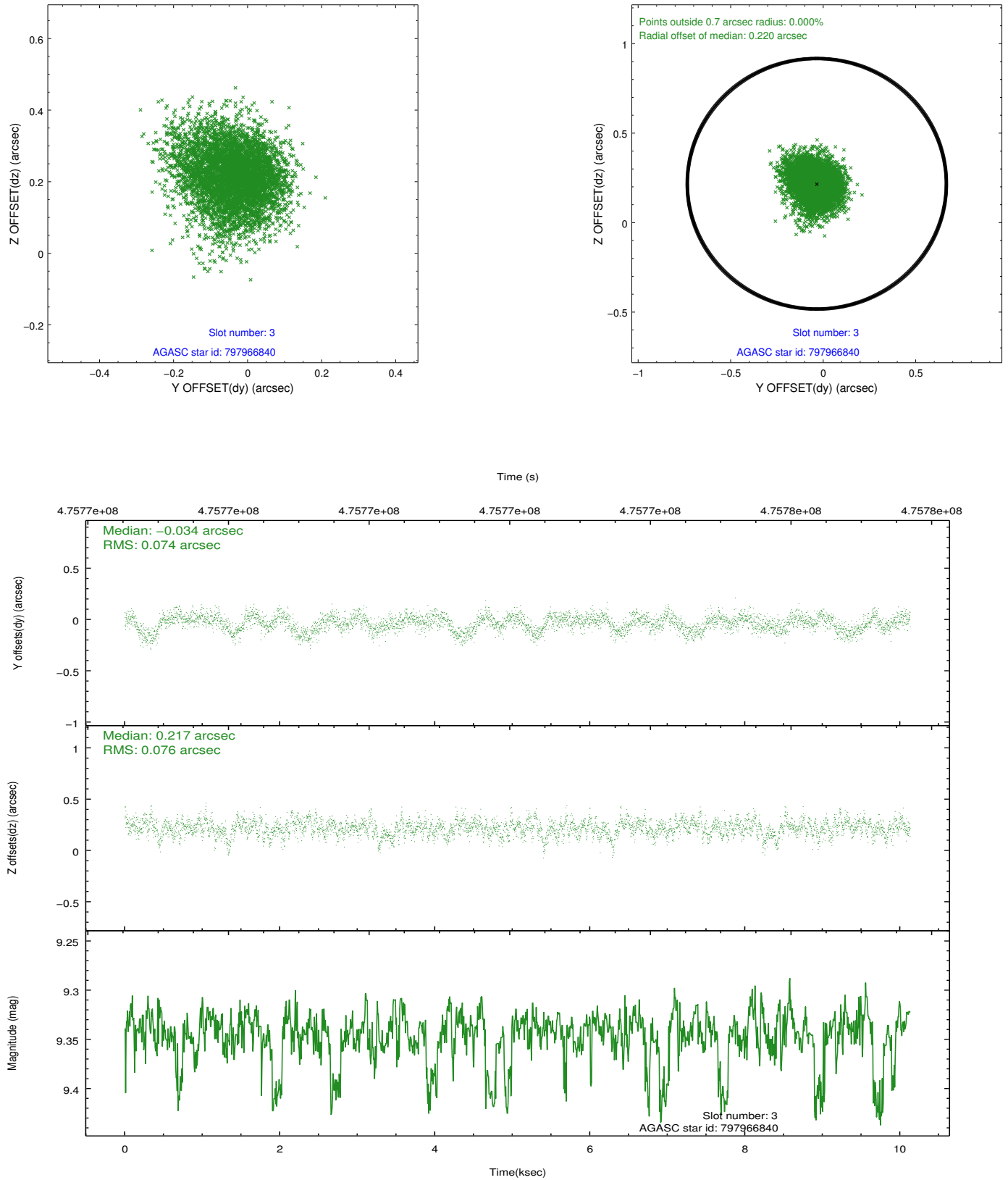


### Slot Statistics

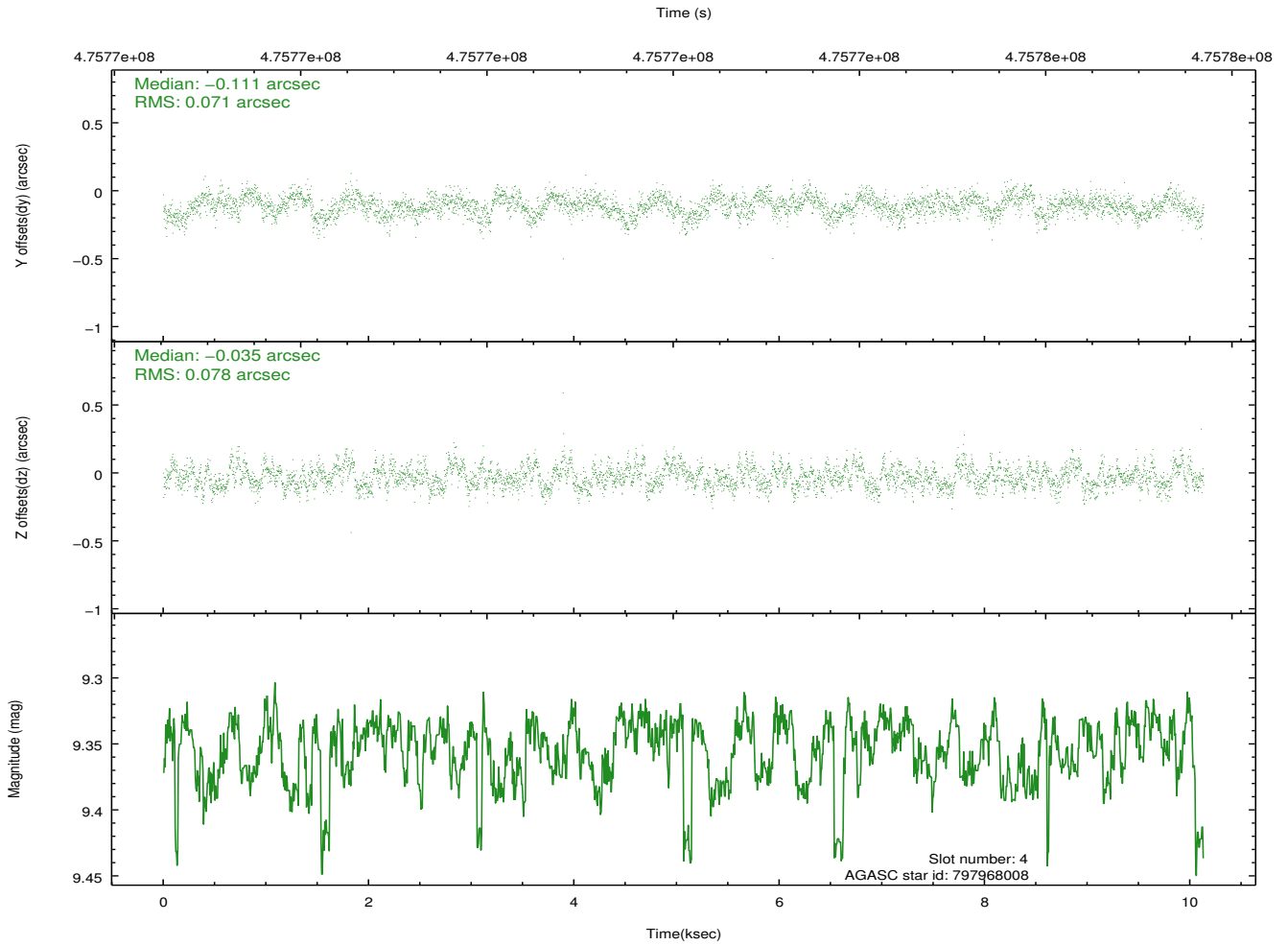
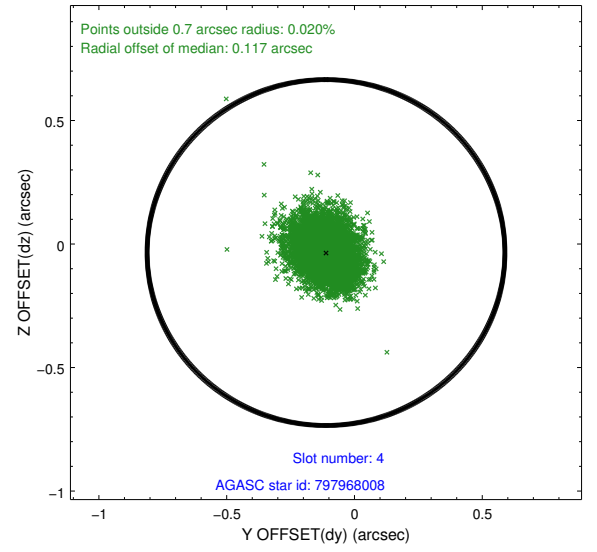
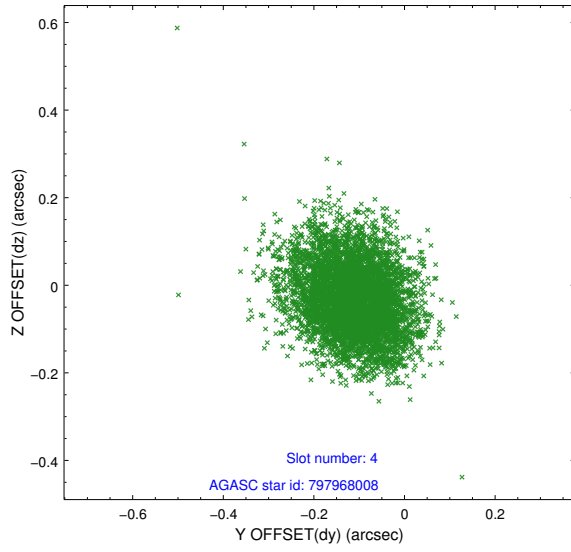
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.14	2472	-0.127	-0.053	0.012	0.018	0.000000	0.000000	-772.81	-1004.20
1	FID		ACIS-I-4	7.08	2471	0.270	0.088	0.007	0.013	0.000000	0.000000	2141.39	901.69
2	FID		ACIS-I-5	7.17	2472	-0.242	0.034	0.010	0.018	0.000000	0.000000	-1825.65	899.15
3	GUIDE	used	797966840	9.34	4921	-0.034	0.217	0.111	0.186	173.090412	-19.914519	180.19	-203.88
4	GUIDE	used	797968008	9.35	4927	-0.111	-0.035	0.110	0.178	173.274298	-19.815834	852.27	-453.38
5	GUIDE	used	797970024	9.04	4938	0.188	-0.120	0.129	0.233	172.716766	-19.832014	-406.03	955.22
6	GUIDE	used	798375016	9.25	4936	0.365	0.132	0.126	0.198	172.536267	-20.217781	-1861.45	527.39
7	GUIDE	used	797972616	9.82	4932	-0.423	-0.194	0.177	0.288	172.815916	-19.124956	1757.13	2337.11

## 2.4 Star Slots

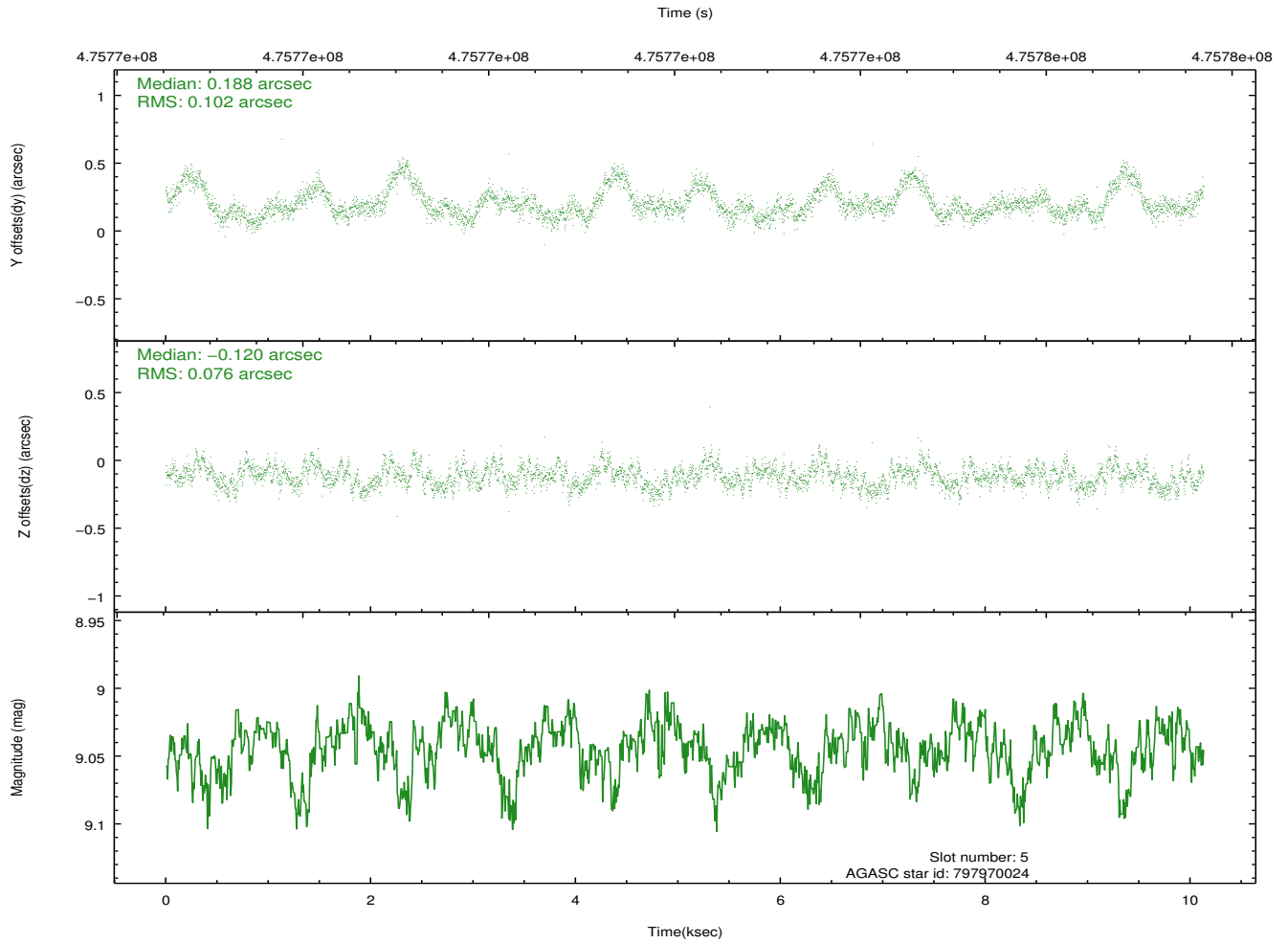
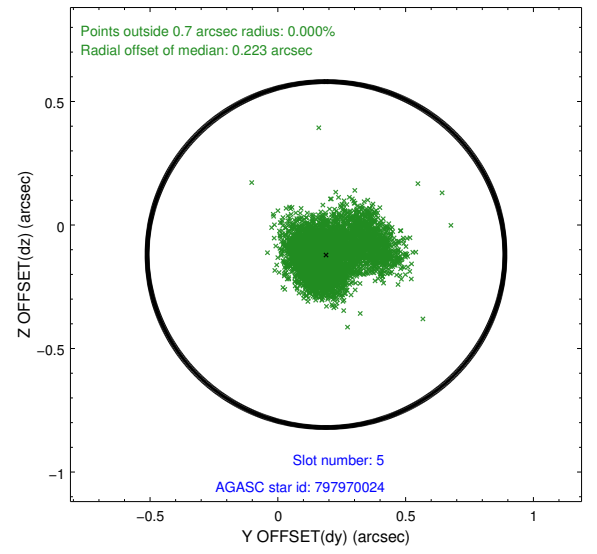
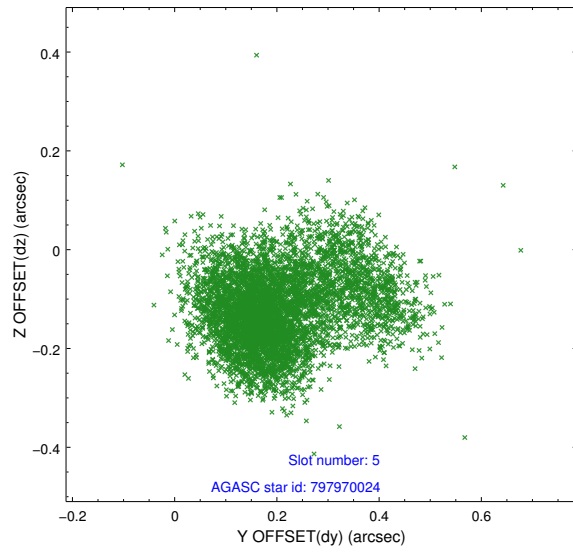
### 2.4.1 Slot 3



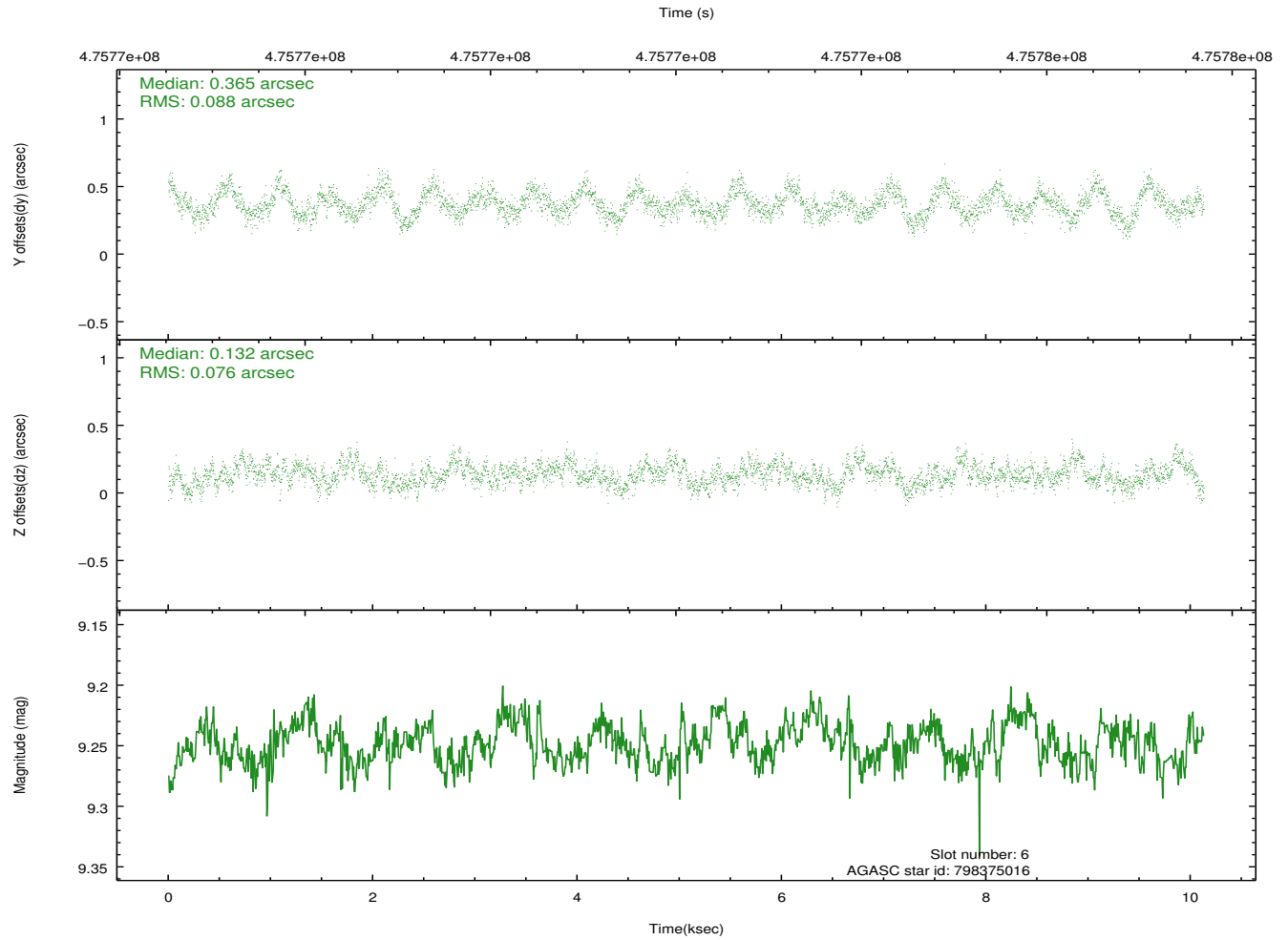
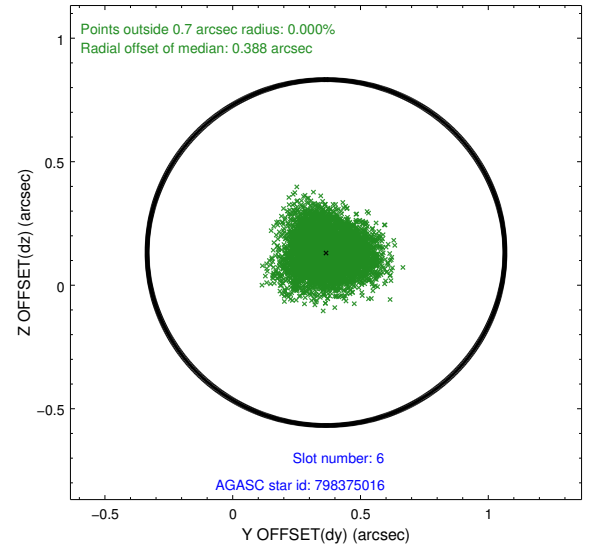
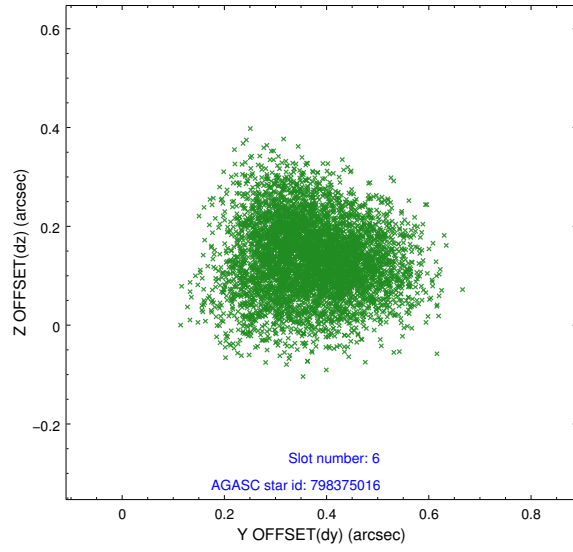
## 2.4.2 Slot 4



### 2.4.3 Slot 5

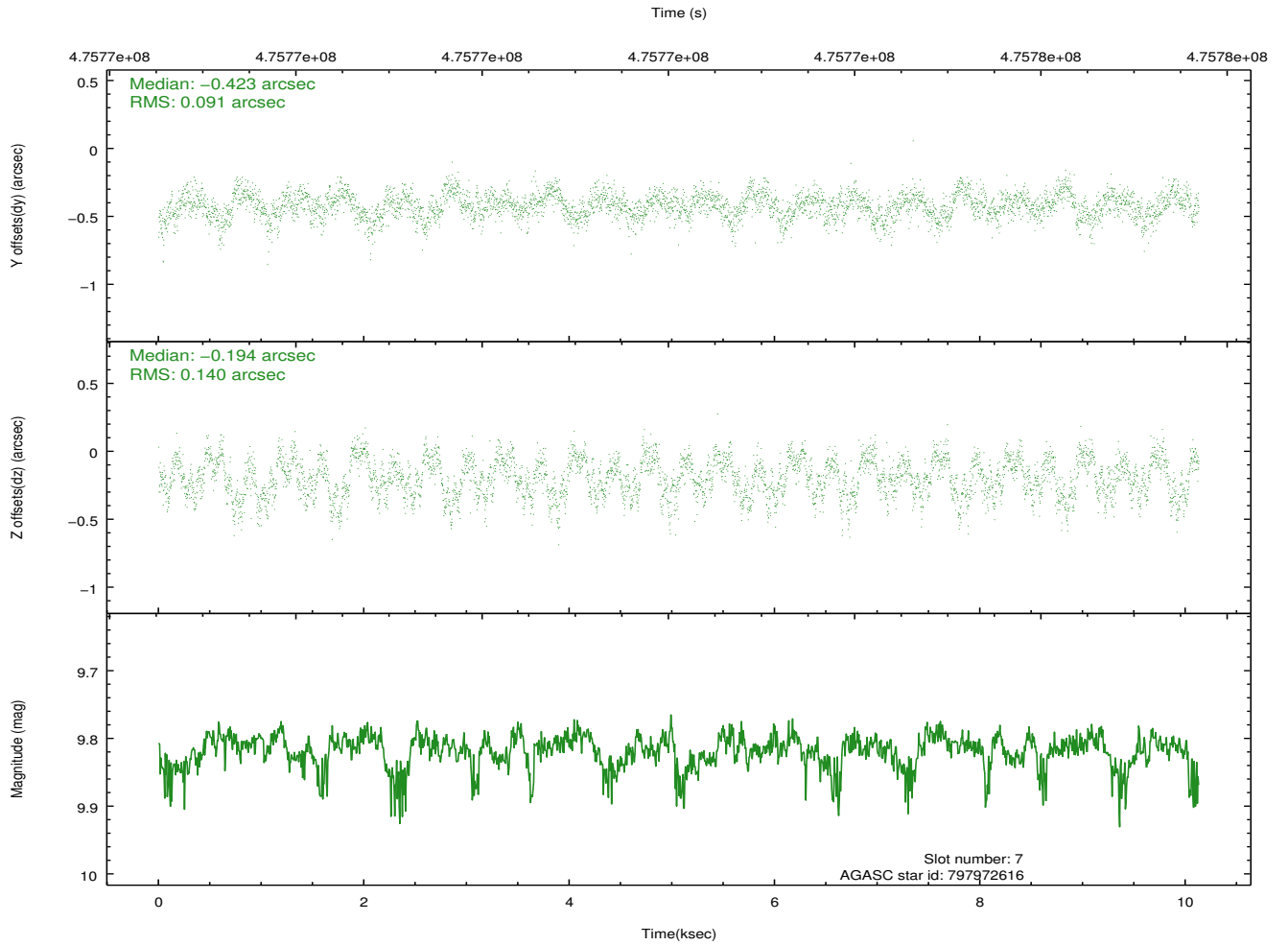
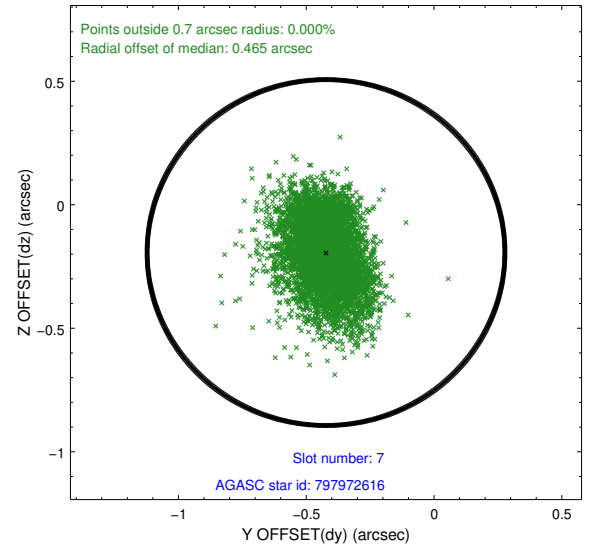
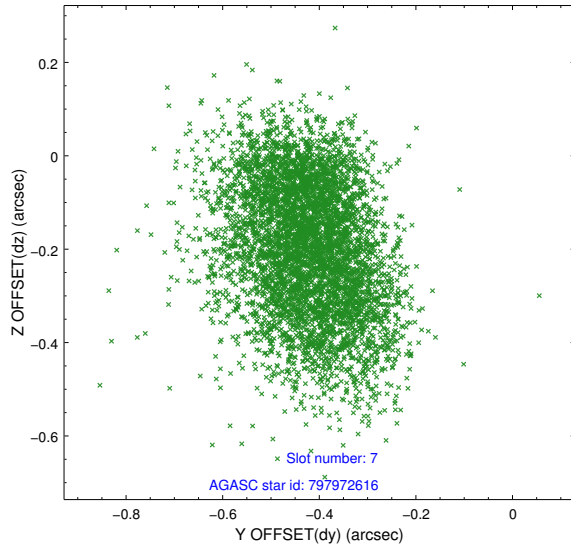


## 2.4.4 Slot 6



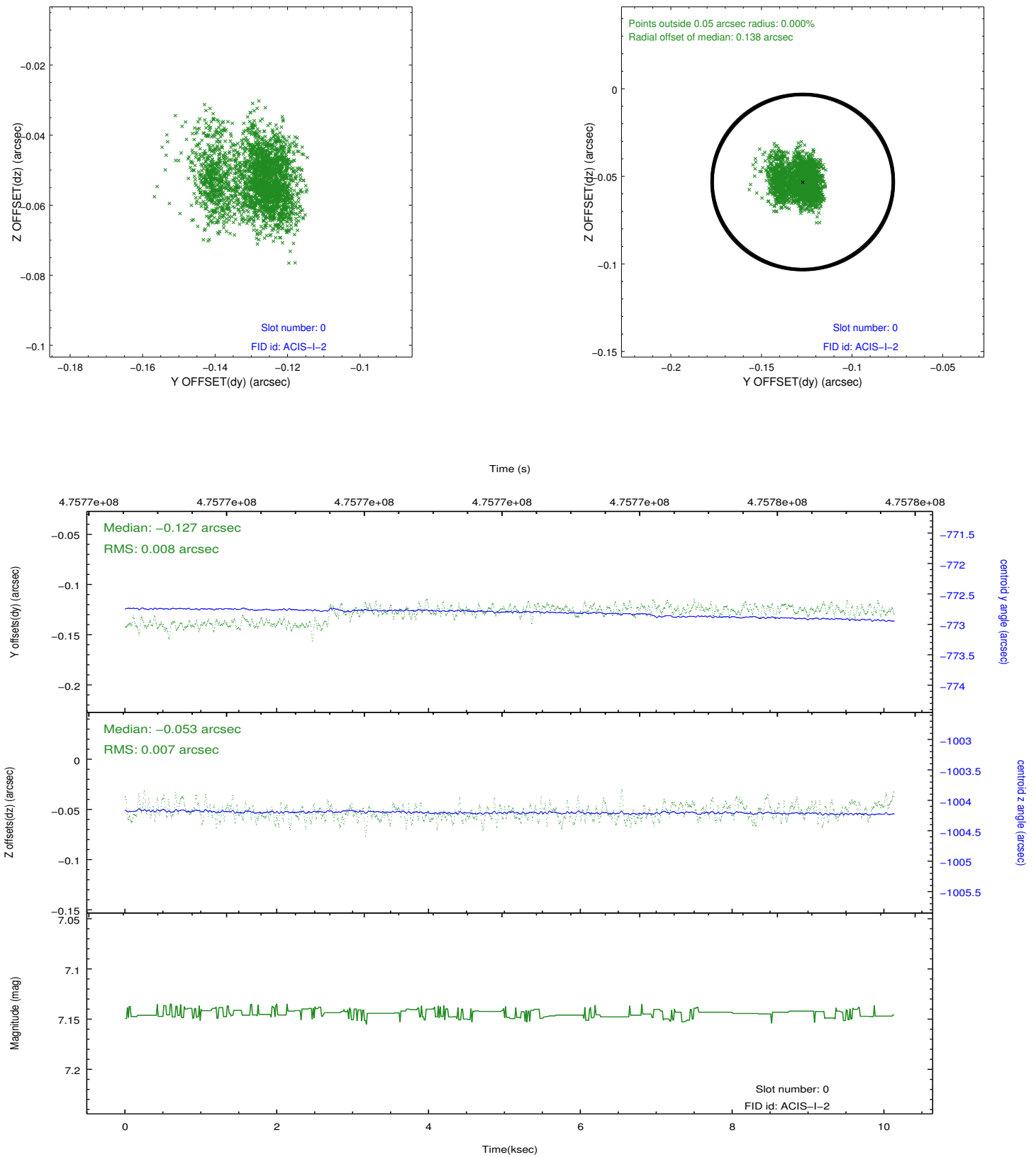


## 2.4.5 Slot 7

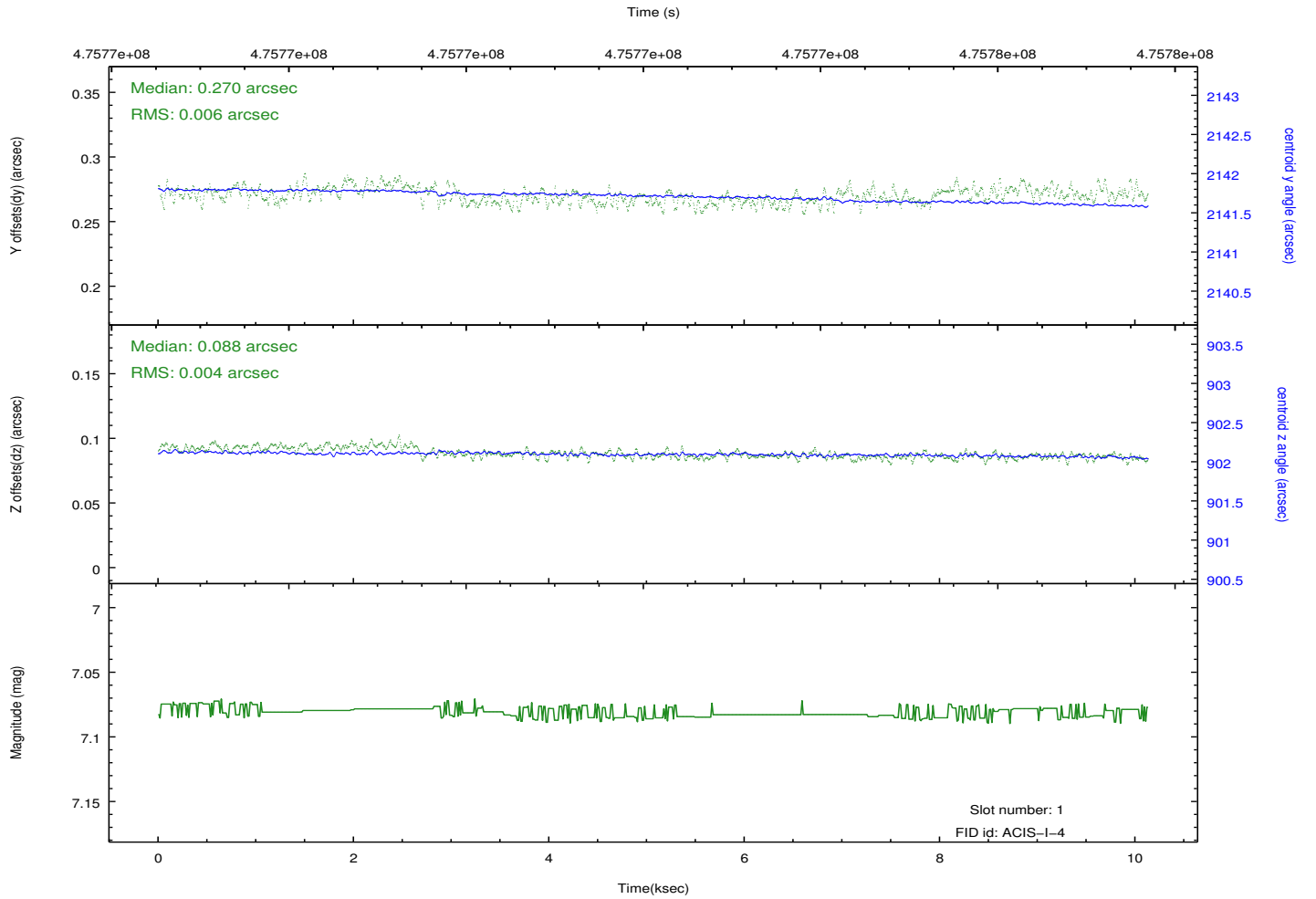
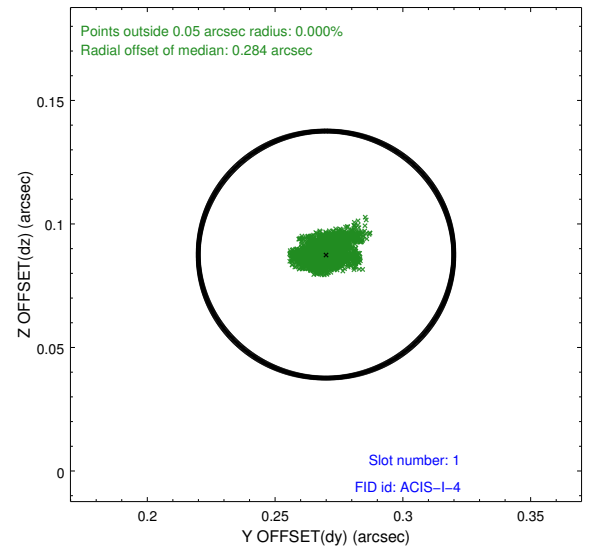
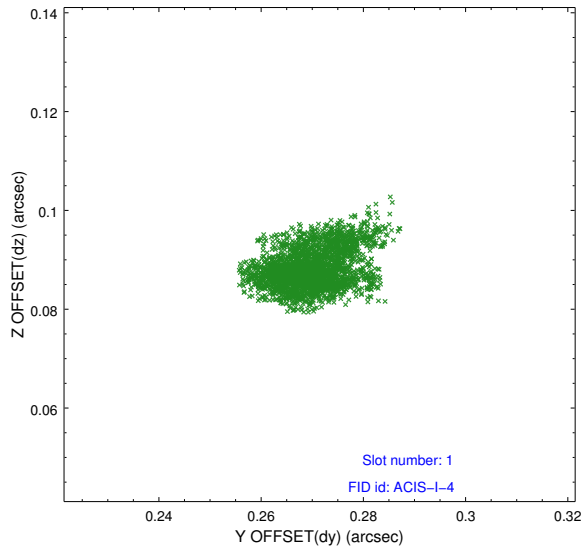


## 2.5 FID Slots

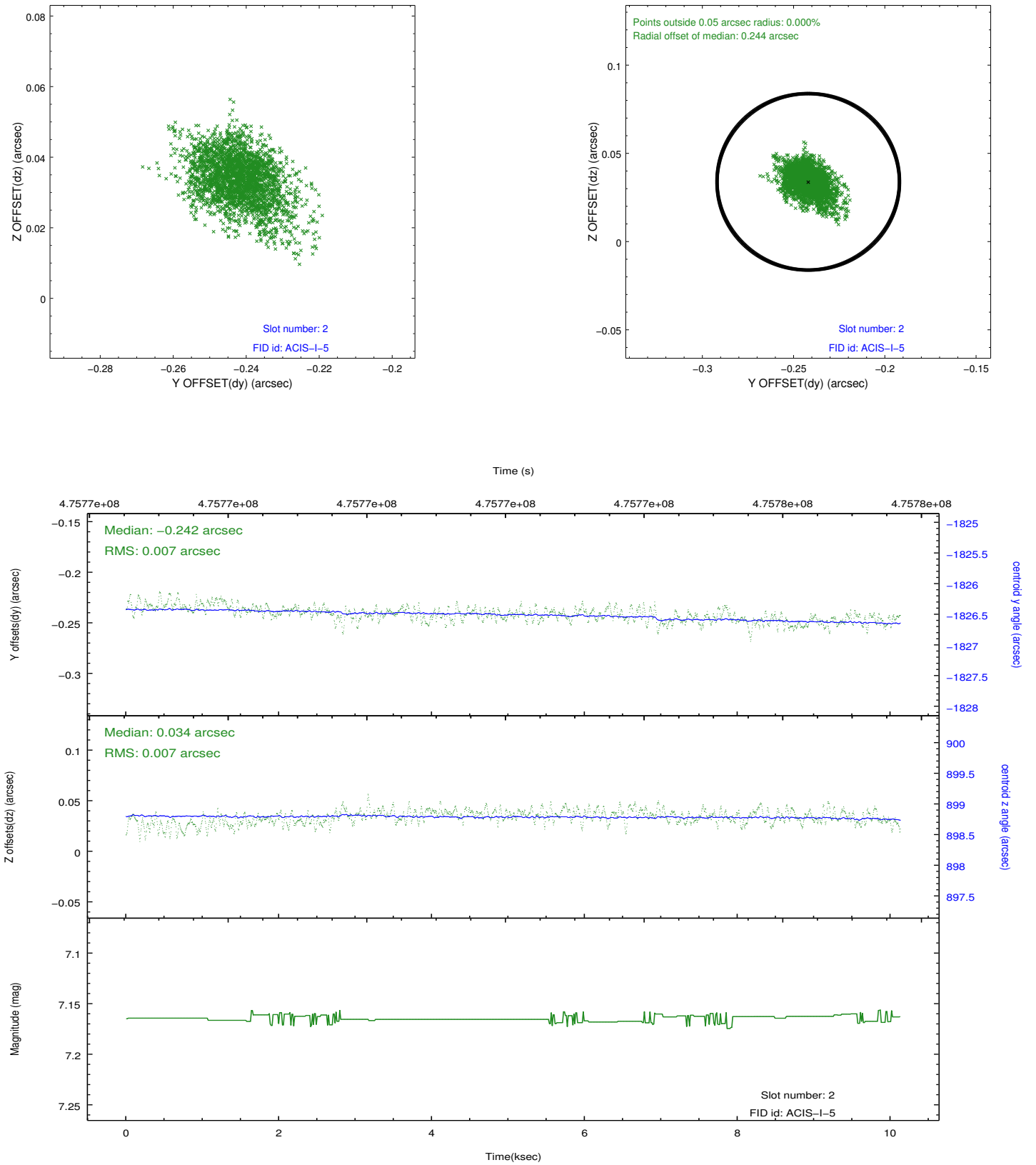
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.081086291552

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.