

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 14015 - L2 Version 2  
Chandra X-Ray Center

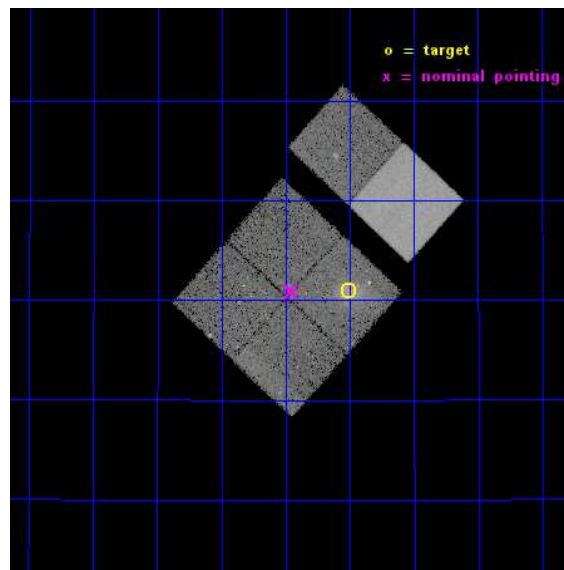
L2 Processing Date : Nov 29 2014

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# 1 Front

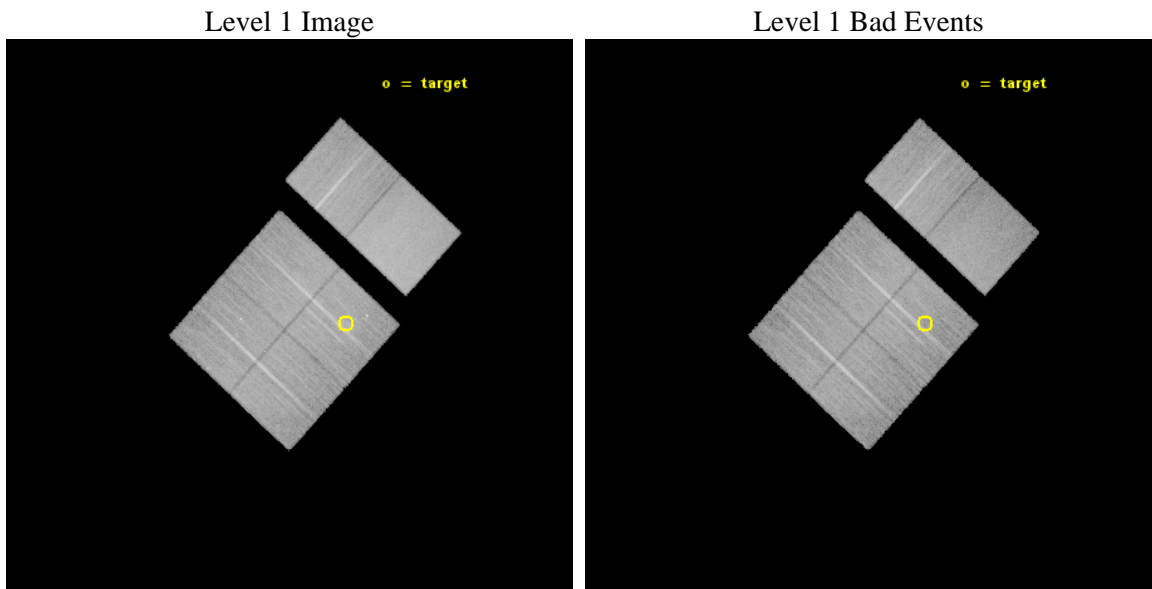
seq_num	801195	Sequence number
obs_id	14015	Observation id
title	Understanding the connection between radio halos and cluster mergers	&#160
observer	Dr Rossella Cassano	Principal investigator
object	Z5699	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	196.501667	Observer's specified target RA [deg]
dec_targ	26.516111	Observer's specified target Dec [deg]
ra_nom	196.61390180958	Nominal RA [deg]
dec_nom	26.51502709629	Nominal Dec [deg]
roll_nom	42.492614377969	Nominal Roll [deg]
revision	2	Processing version of data
ontime	29971.199888408	Sum of GTIs [s]
livetime	29591.686508931	Livetime [s]
ontime0	29971.199888408	Sum of GTIs [s]
ontime1	29971.199888408	Sum of GTIs [s]
ontime2	29971.199888408	Sum of GTIs [s]
ontime3	29971.199888408	Sum of GTIs [s]
ontime6	29971.199888408	Sum of GTIs [s]
ontime7	29971.199888408	Sum of GTIs [s]
l2events	178125	Number of level 2 events



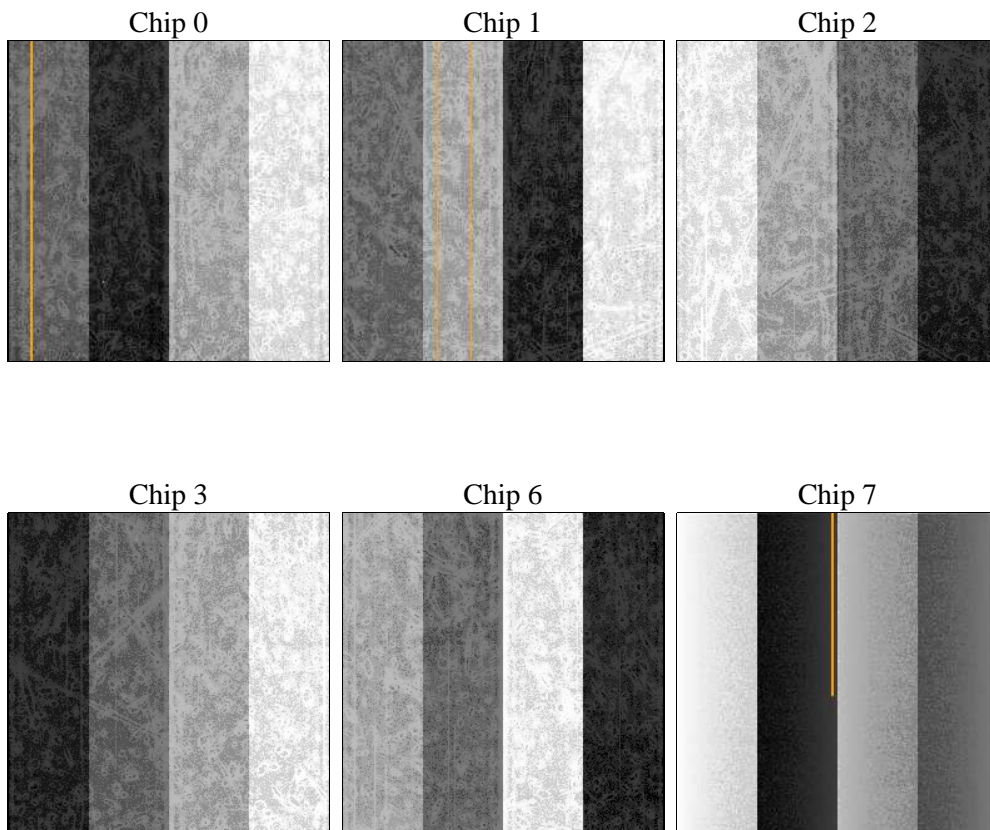
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	29971.199888408	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	29971.199888408	Sum of GTIs [s]
date	2014-11-29T14:36:55	Date and time of file creation	ontime1	29971.199888408	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	29971.199888408	Sum of GTIs [s]
			ontime3	29971.199888408	Sum of GTIs [s]
			ontime6	29971.199888408	Sum of GTIs [s]
			ontime7	29971.199888408	Sum of GTIs [s]
			l1events	987993	Number of level 1 events

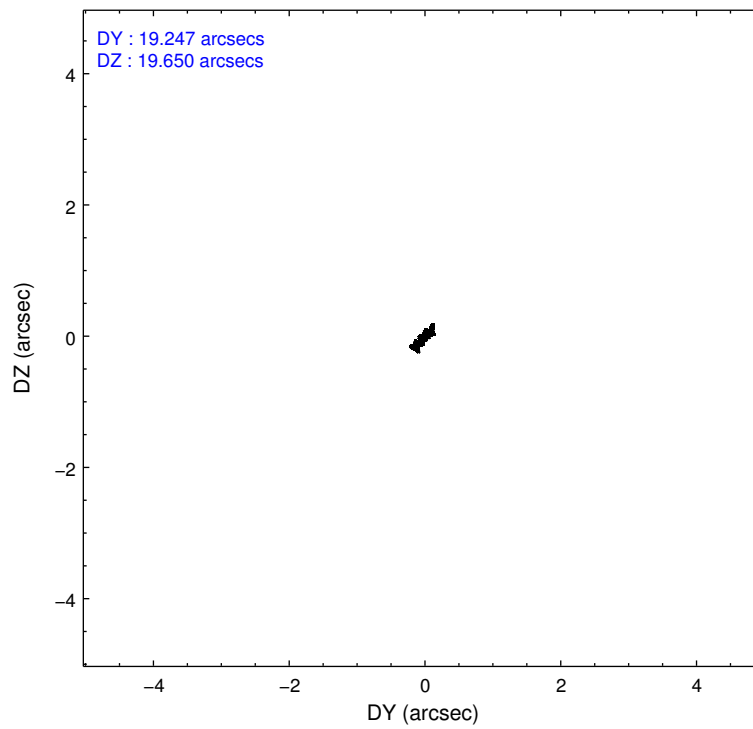
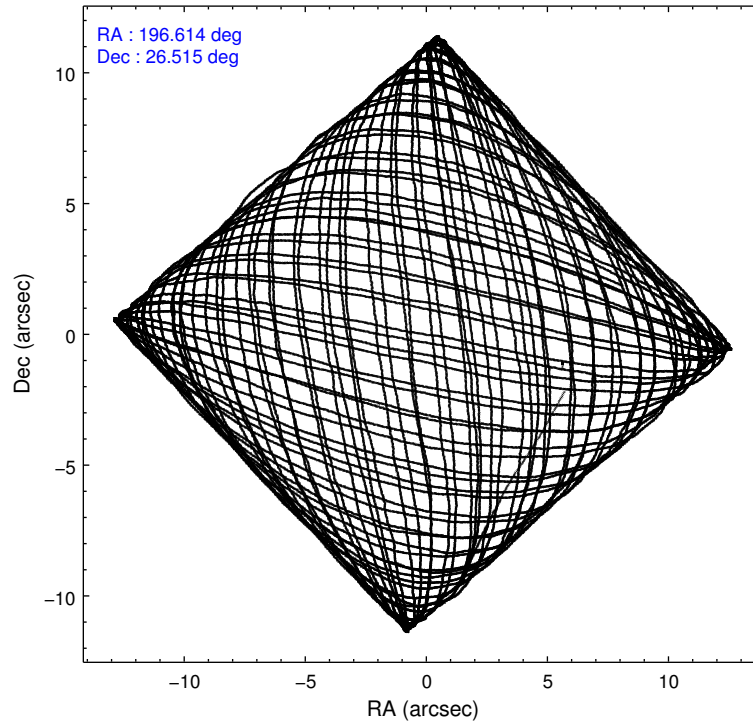
### 2.1.4 Events

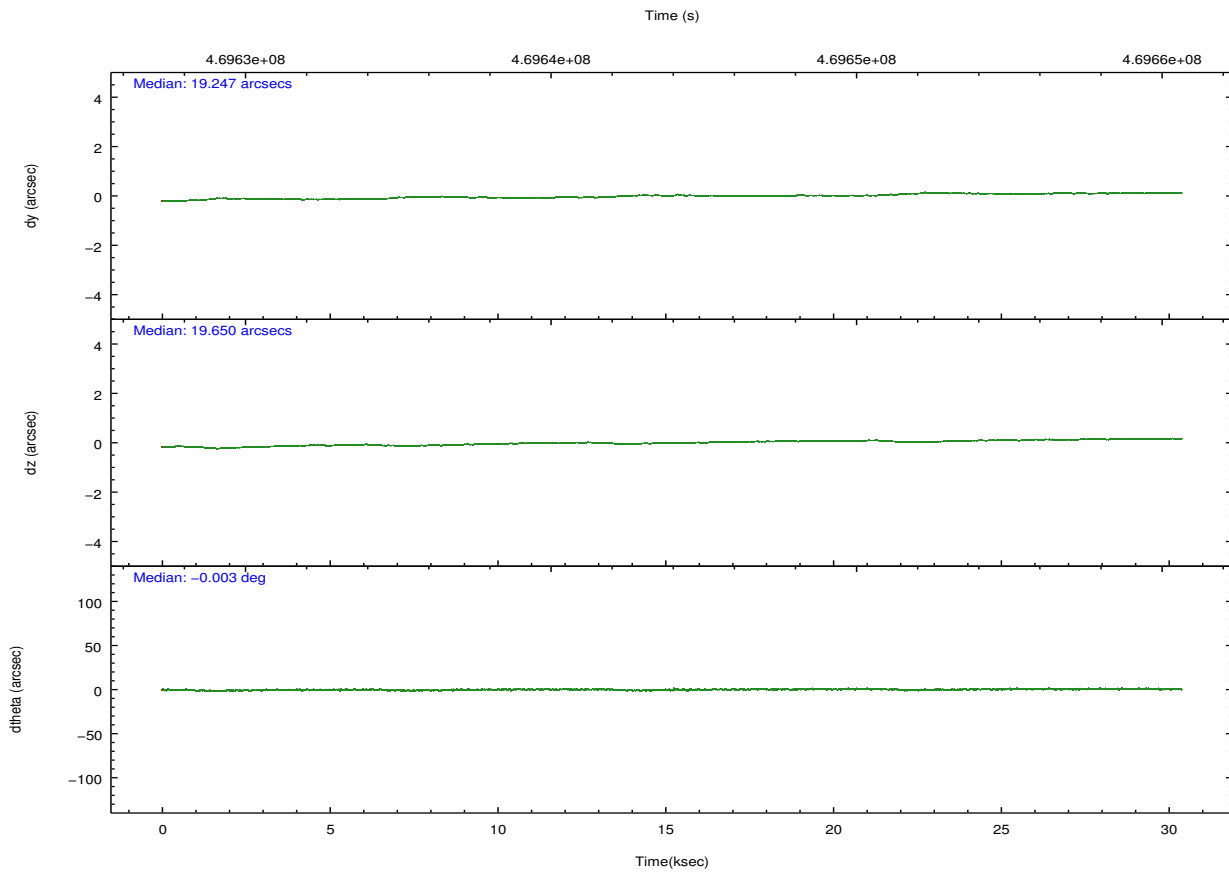
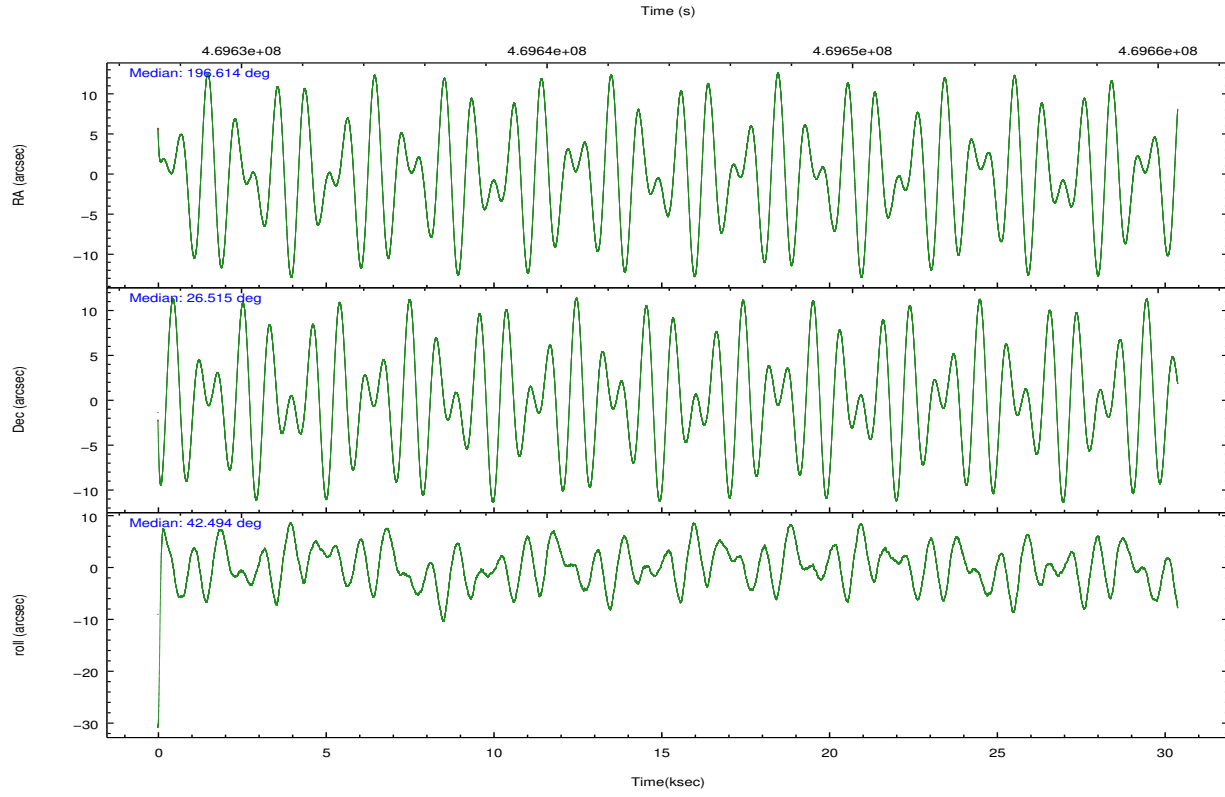
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	145763	147330	157668	160876	164204	212152	grade 0 events	7511	7179	6388	12386	6410	8436
rejected events	126090	126922	139504	135796	144989	119321		5%	4%	4%	7%	3%	3%
rejected %	86%	86%	88%	84%	88%	56%	grade 1 events	85	81	84	133	90	242
								0%	0%	0%	0%	0%	0%
							grade 2 events	4574	4994	4519	4671	4424	18974
								3%	3%	2%	2%	2%	8%
							grade 3 events	1985	1956	1795	2123	1998	8086
								1%	1%	1%	1%	1%	3%
							grade 4 events	1788	1966	1920	2041	2012	8017
								1%	1%	1%	1%	1%	3%
							grade 5 events	7161	7831	6866	8264	8299	22391
								4%	5%	4%	5%	5%	10%
							grade 6 events	3820	4316	3544	3862	4374	49325
								2%	2%	2%	2%	2%	23%
							grade 7 events	118839	119007	132552	127396	136597	96681
								81%	80%	84%	79%	83%	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	196.604776	196.6139018095791	CCD I2 on	Y	Y
[deg] Pointing Dec	26.488769	26.51502709628977	CCD I3 on	Y	Y
[deg] Pointing Roll	42.288015	42.4926143779694	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	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	469629140.184000	469628073.289	CCD S5 on	N	N
Observation start date	2012-11-18T12:31:13	2012-11-18T12:14:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	469659140.184000	469659840.6032	On-chip summing requested	N	N
Observation end date	2012-11-18T20:51:13	2012-11-18T21:04:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





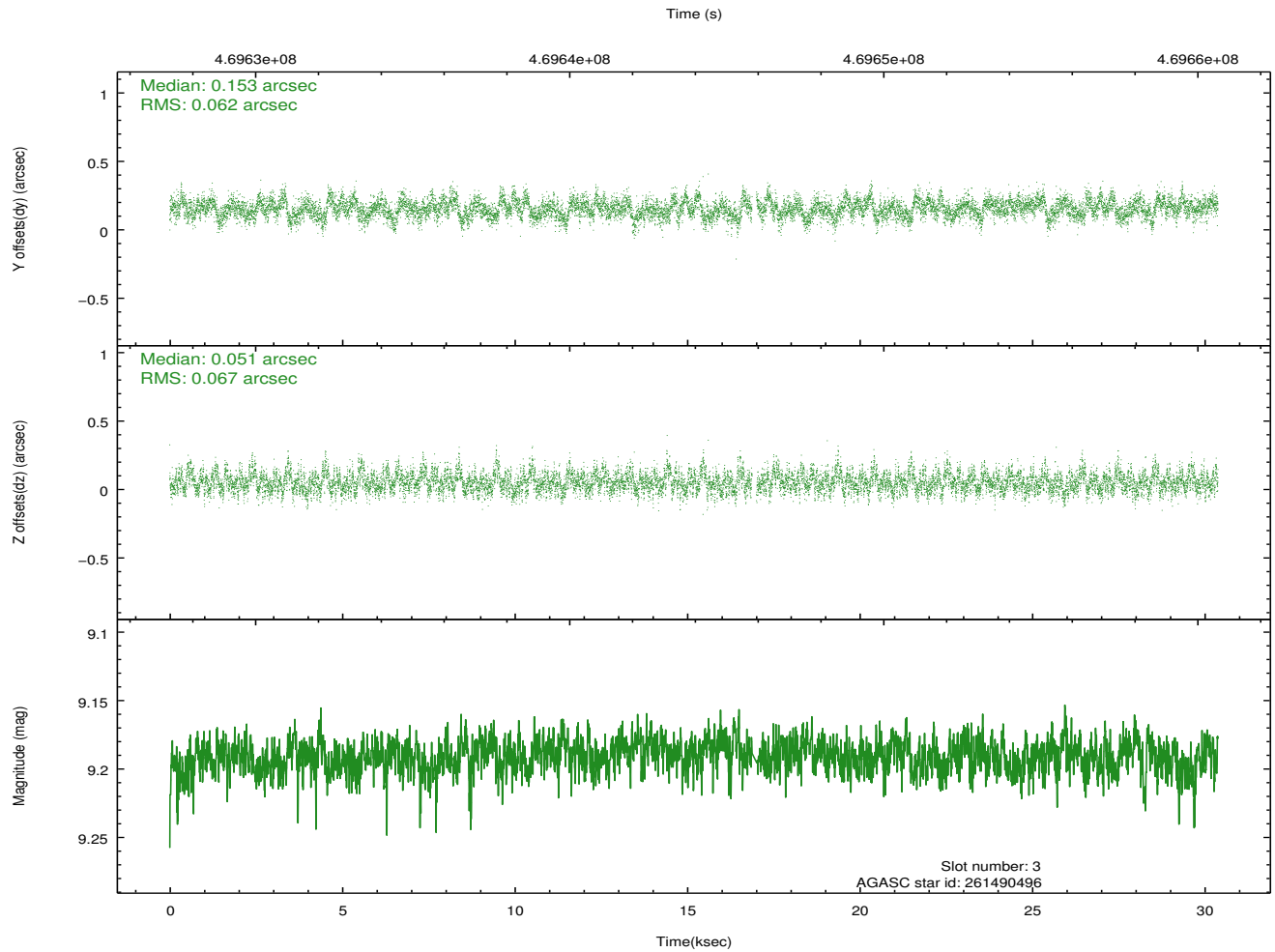
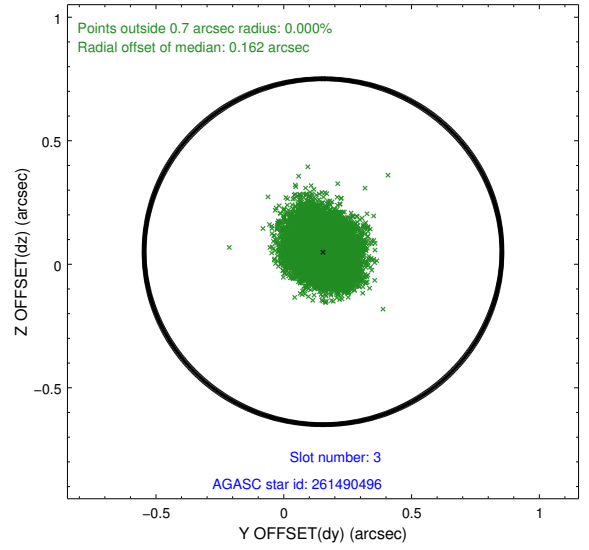
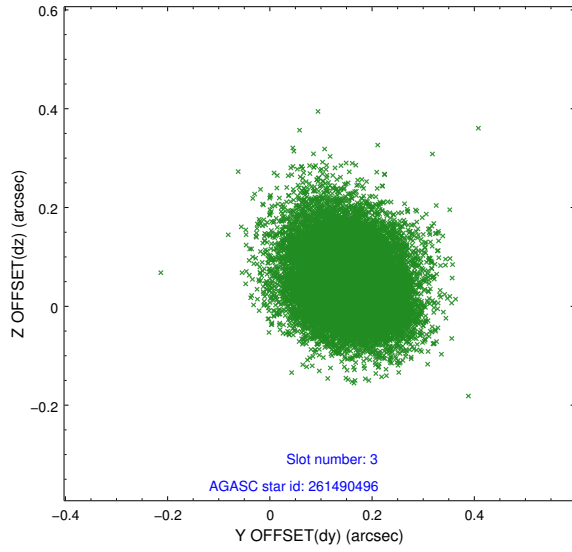
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.05	7412	0.020	0.035	0.009	0.015	0.000000	0.000000	920.14	-843.31
1	FID		ACIS-I-5	7.04	7412	-0.231	0.027	0.006	0.010	0.000000	0.000000	-1828.21	1054.08
2	FID		ACIS-I-6	7.05	7412	0.120	0.009	0.009	0.015	0.000000	0.000000	385.66	1698.68
3	GUIDE	used	261490496	9.19	14750	0.153	0.051	0.097	0.159	196.146959	26.267962	-1626.20	408.63
4	GUIDE	used	261490984	7.44	14822	-0.142	0.088	0.078	0.121	196.420297	26.585696	-204.41	658.39
5	GUIDE	used	261491048	9.21	14813	-0.213	-0.173	0.126	0.199	196.695768	27.200208	1938.27	1699.83
6	GUIDE	used	261628800	7.46	14822	0.008	0.150	0.075	0.119	196.852846	26.523942	676.12	-441.83
7	GUIDE	used	261492456	9.83	14768	0.190	-0.136	0.167	0.296	195.725596	26.391055	-2327.15	1654.99

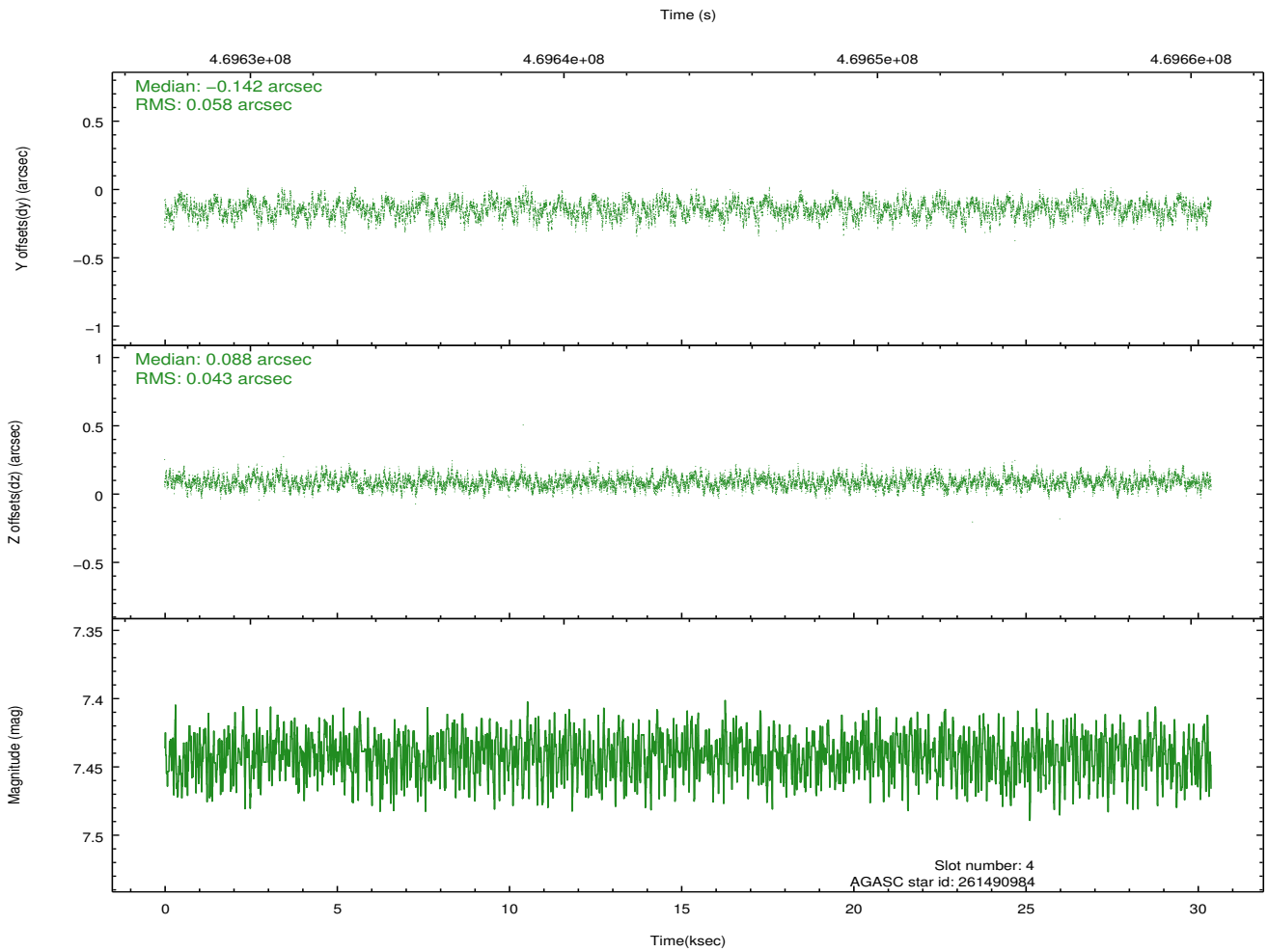
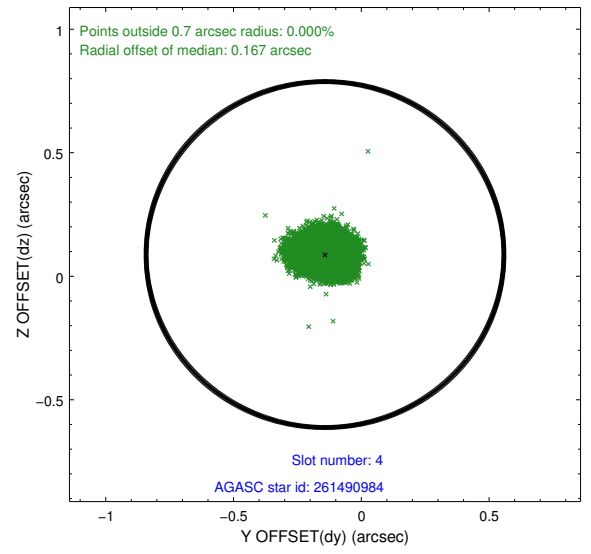
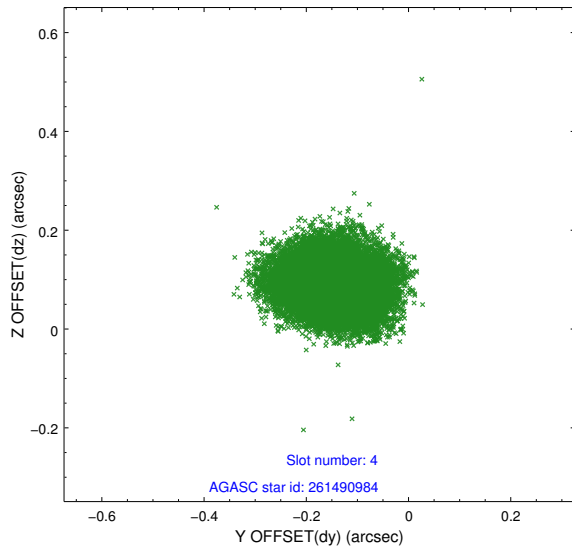
∞

## 2.4 Star Slots

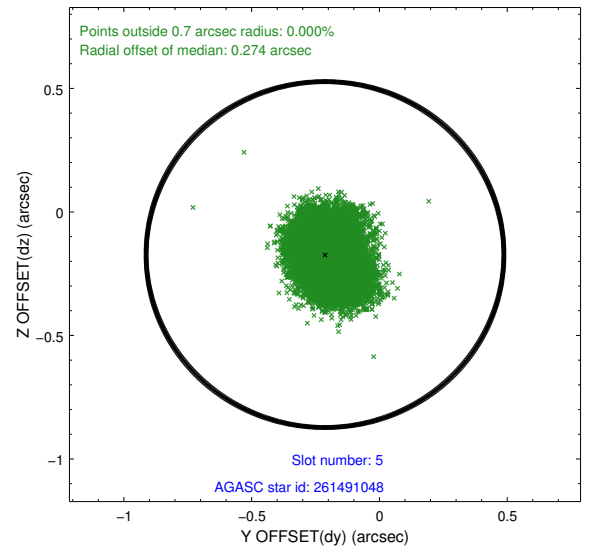
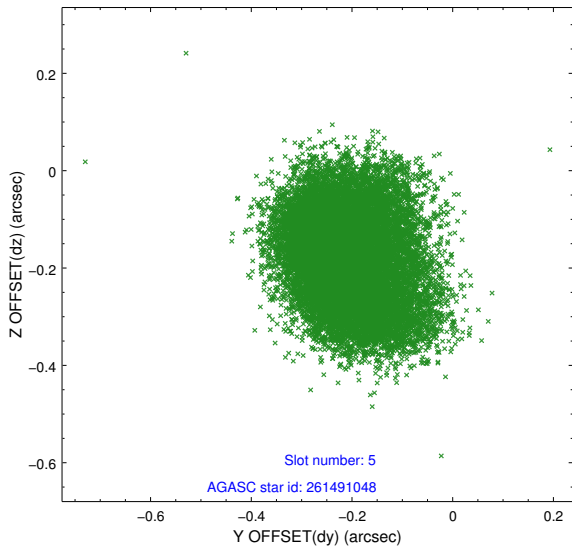
### 2.4.1 Slot 3



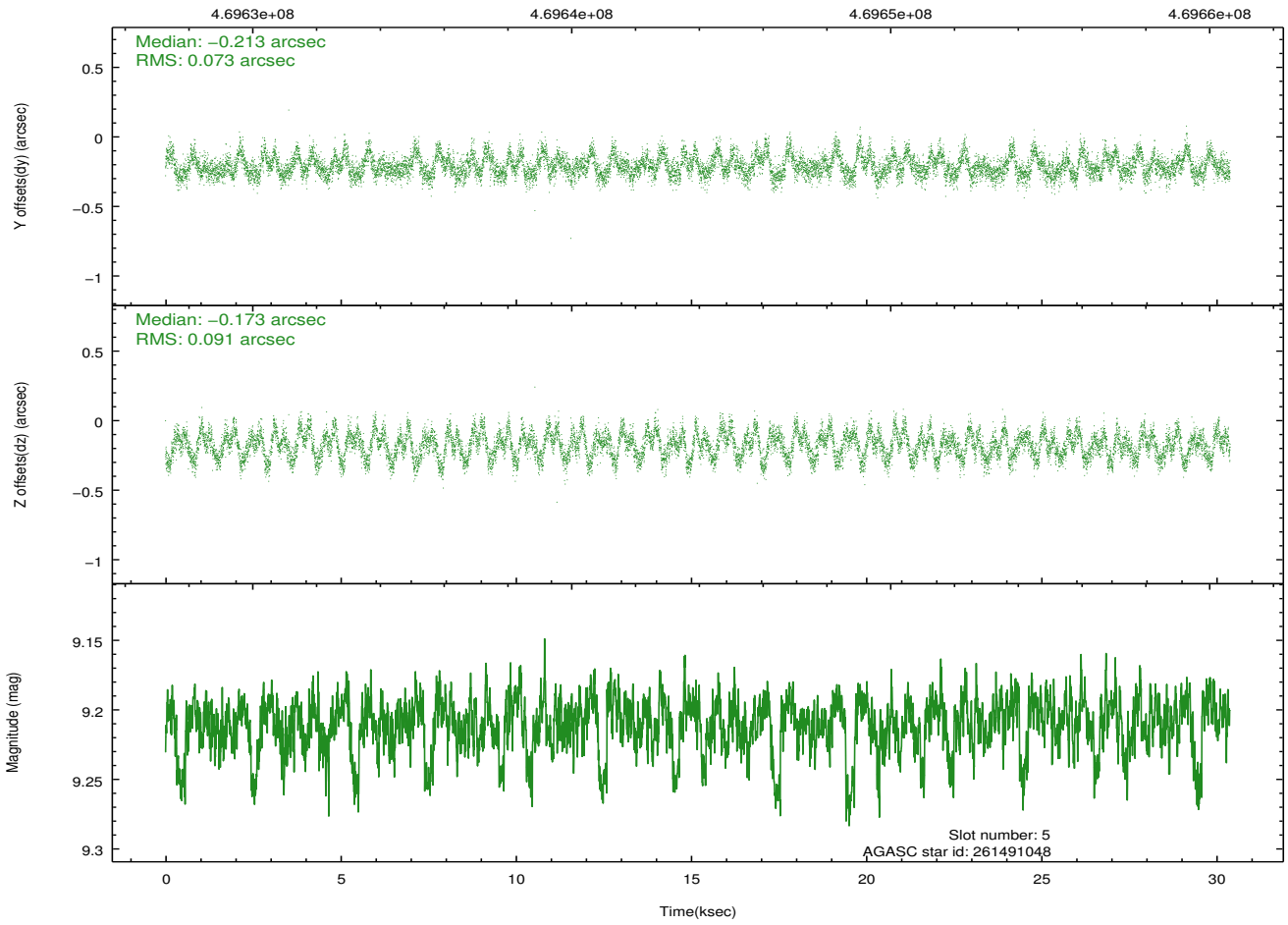
## 2.4.2 Slot 4



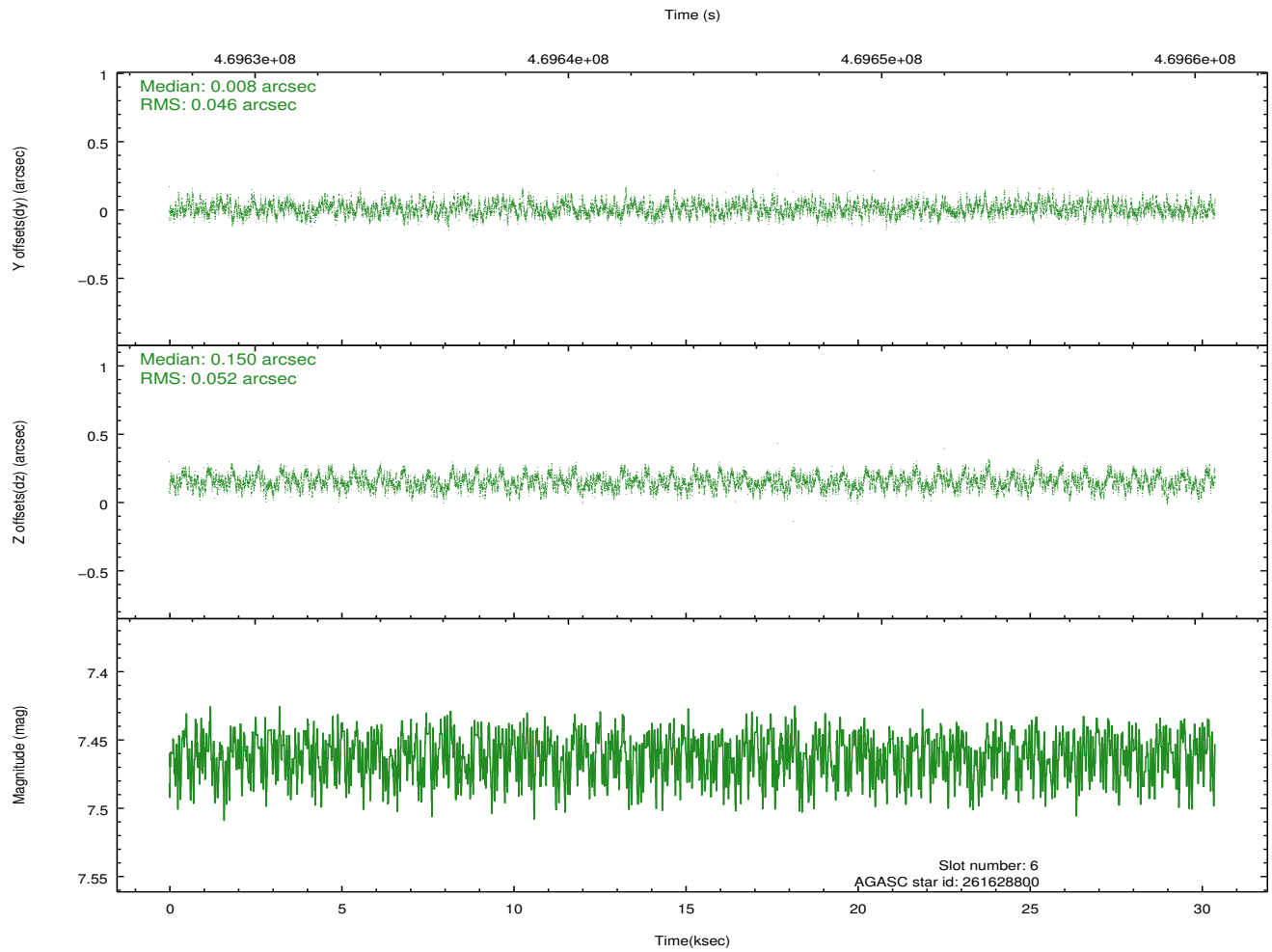
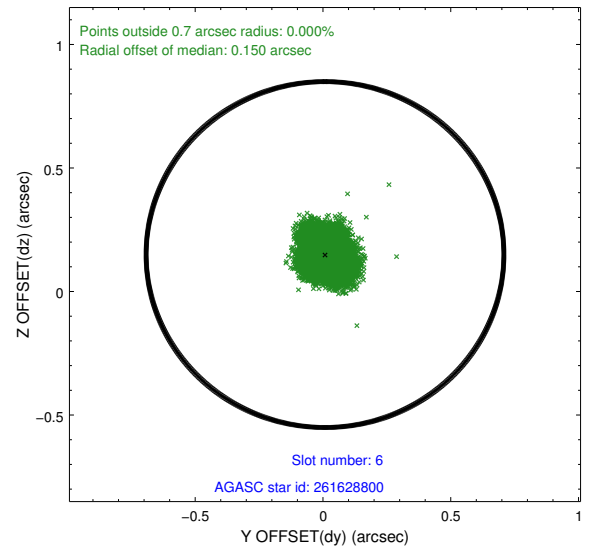
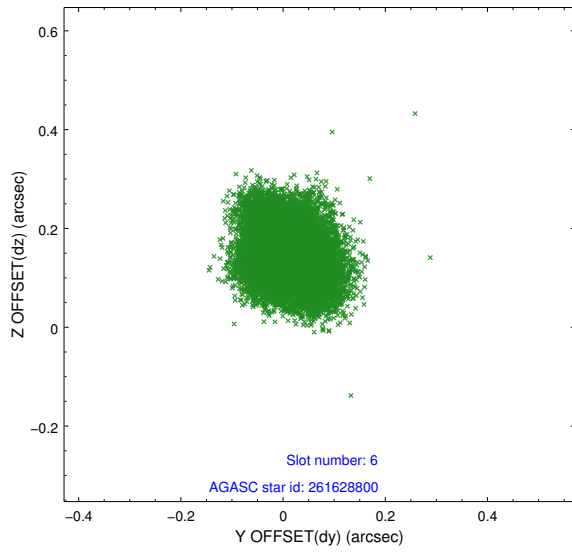
### 2.4.3 Slot 5



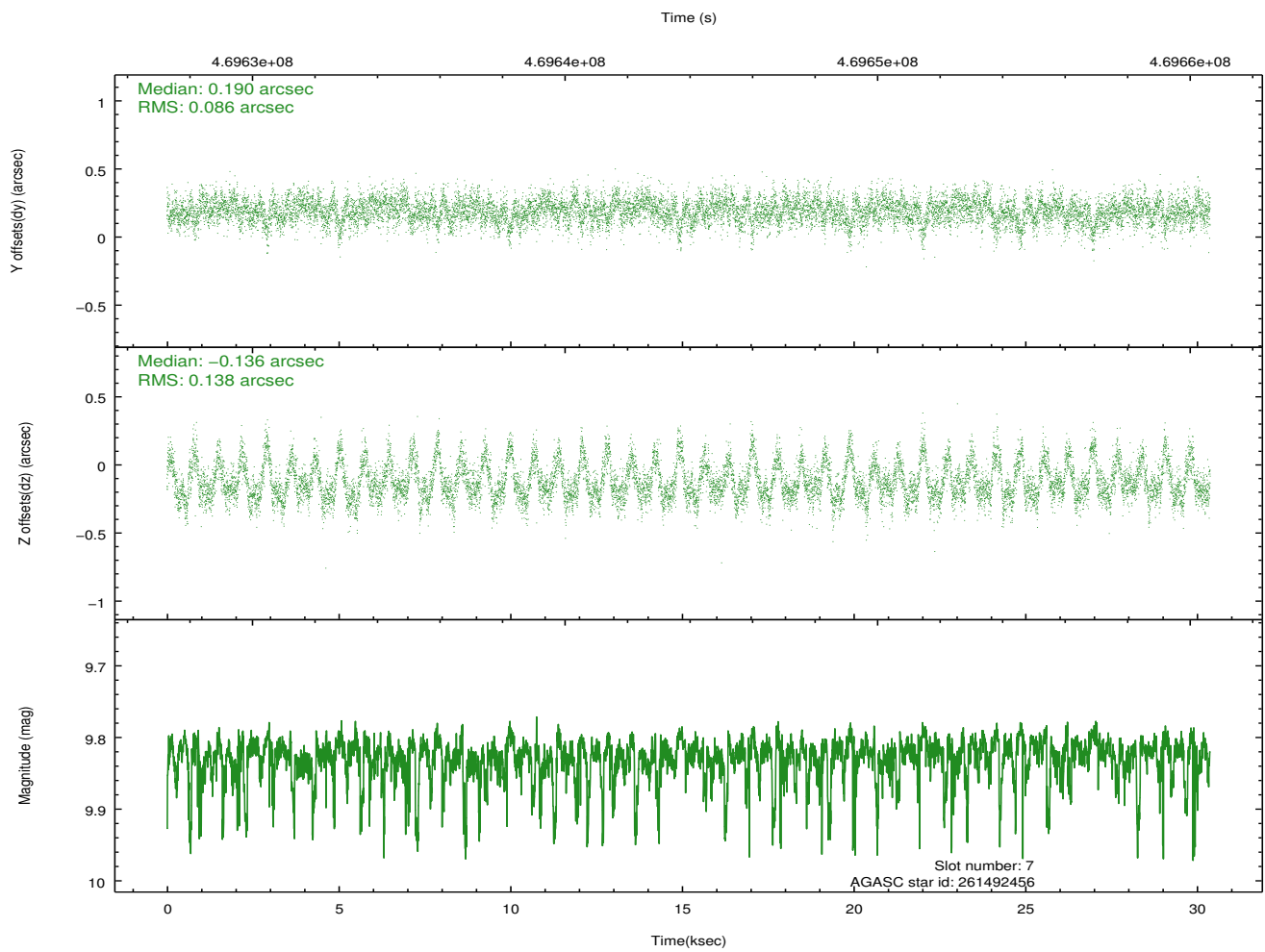
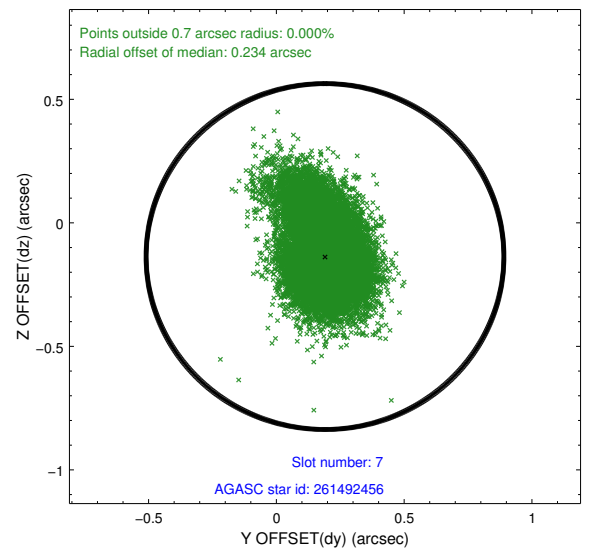
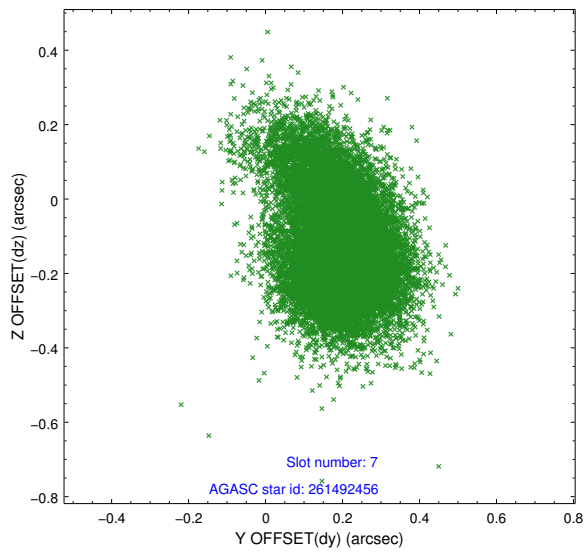
Time (s)



### 2.4.4 Slot 6

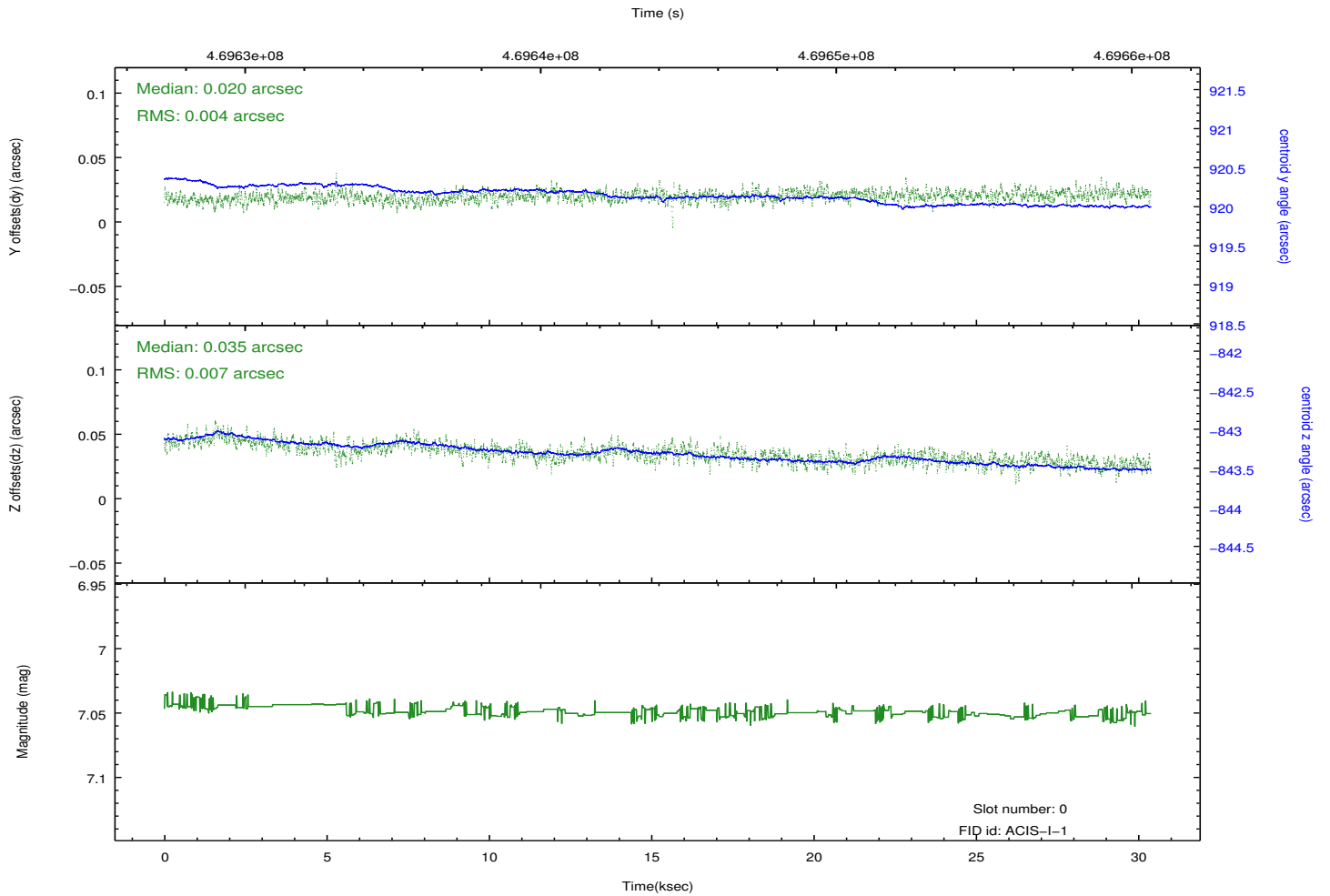
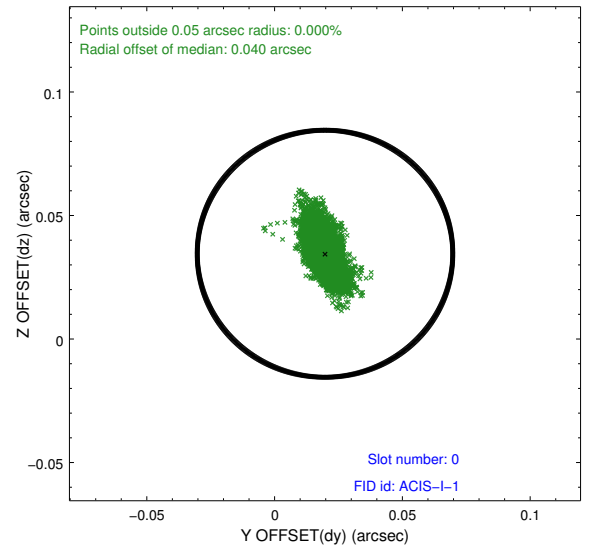
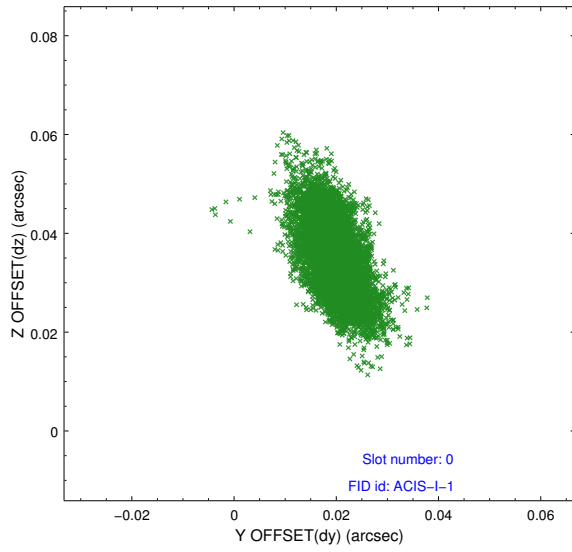


## 2.4.5 Slot 7

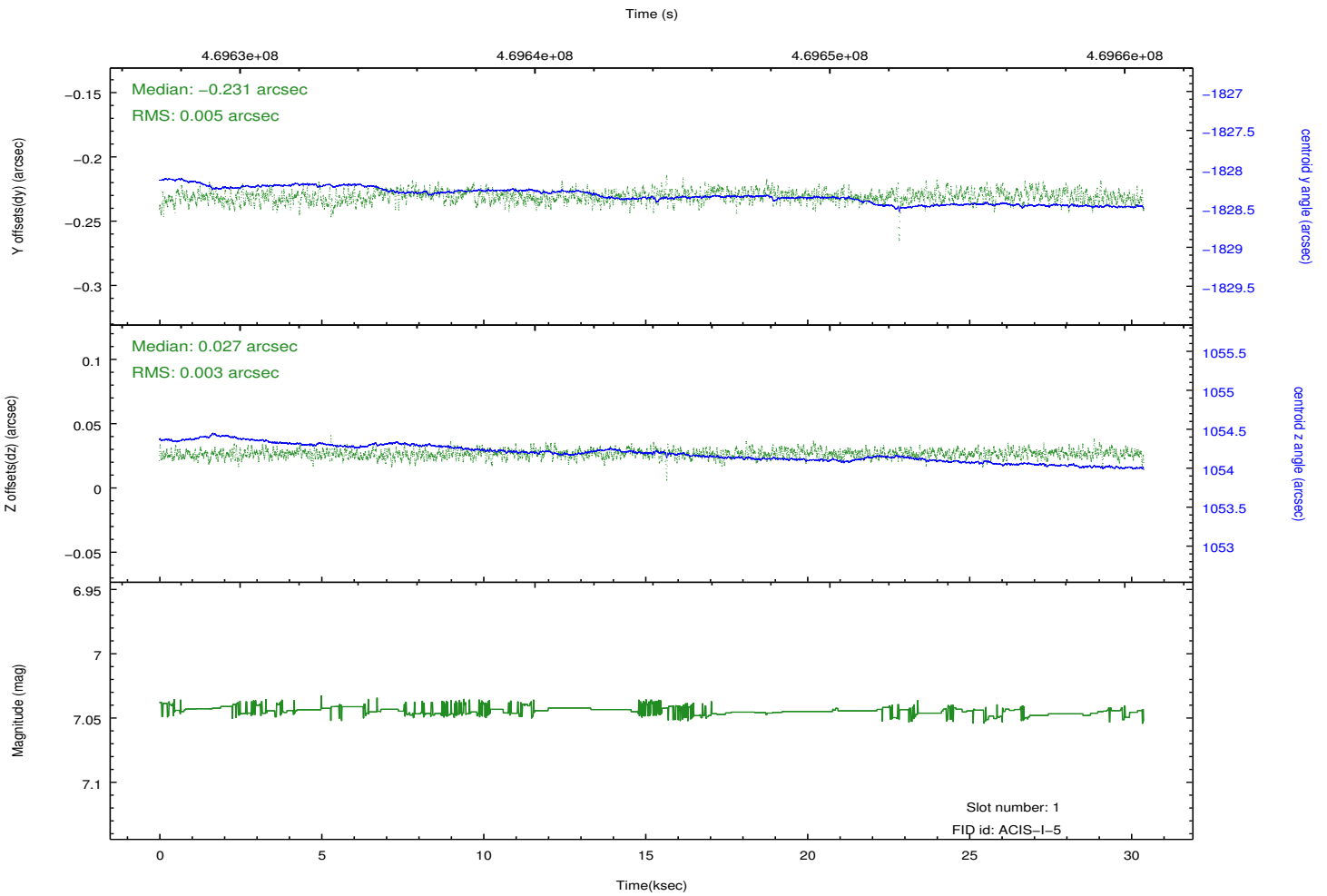
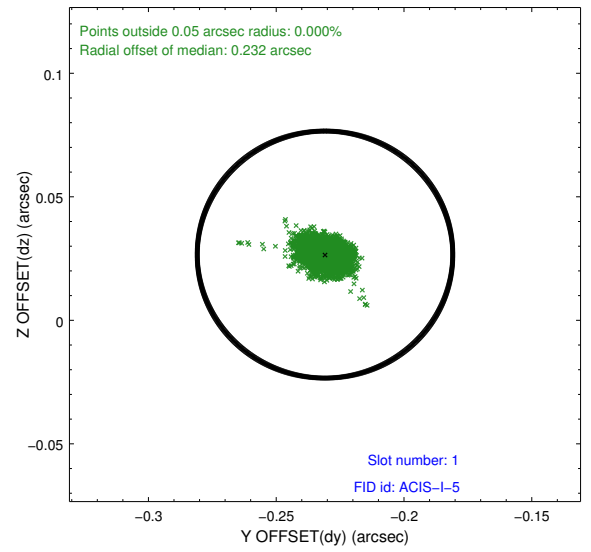
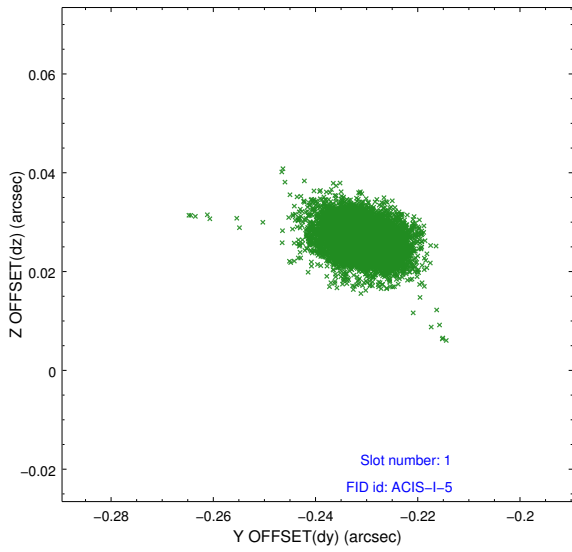


## 2.5 FID Slots

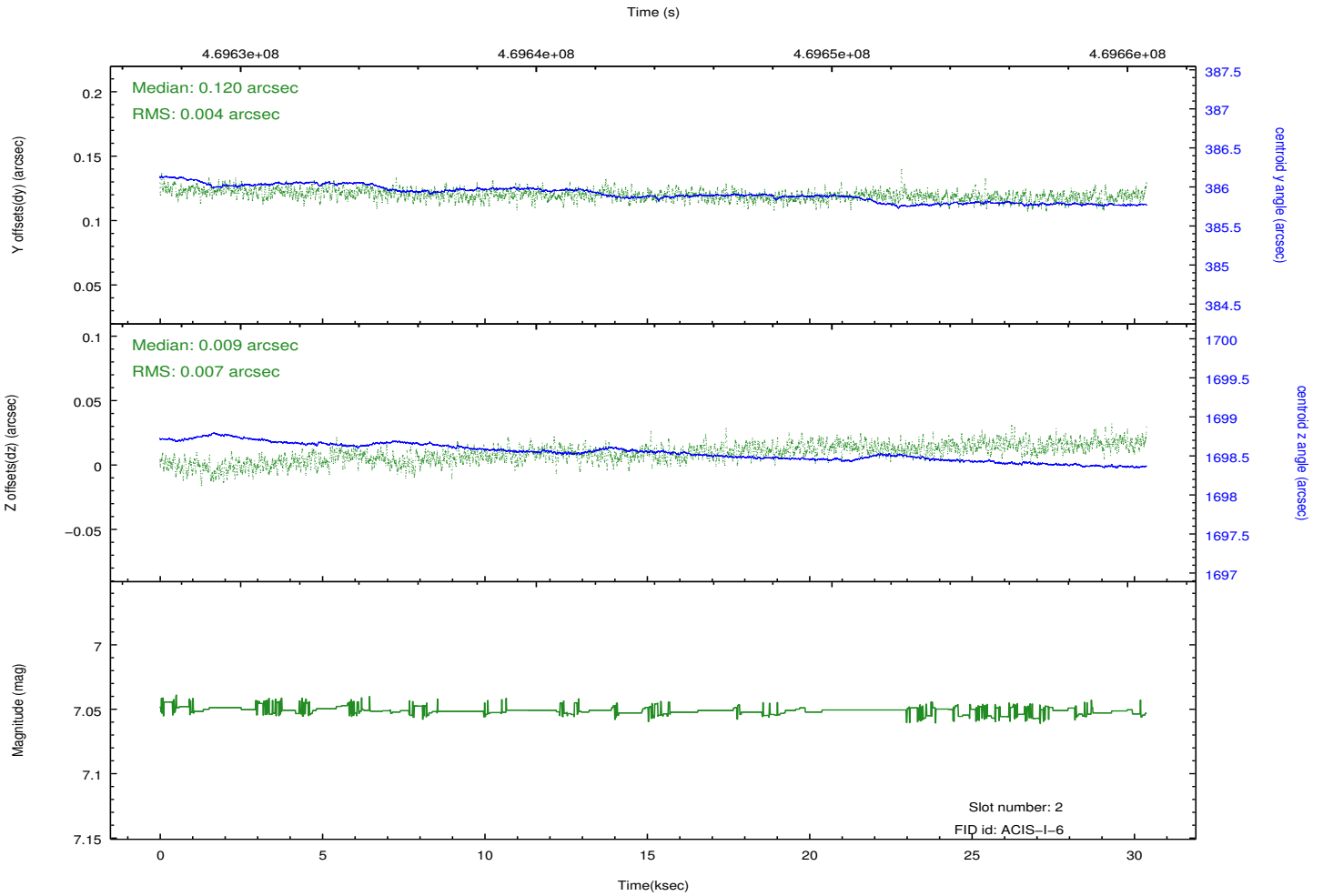
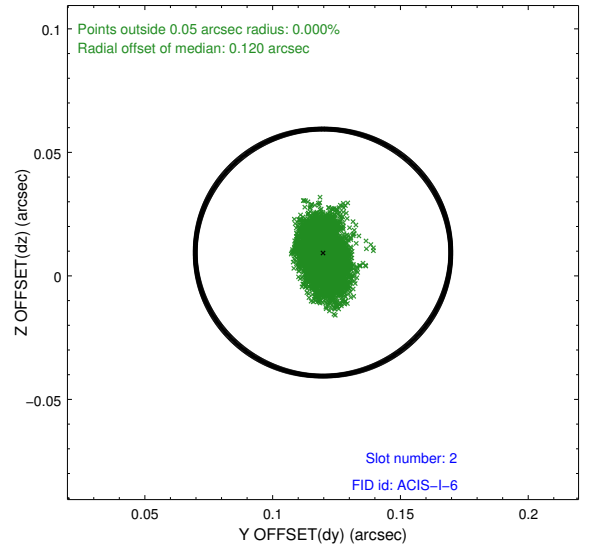
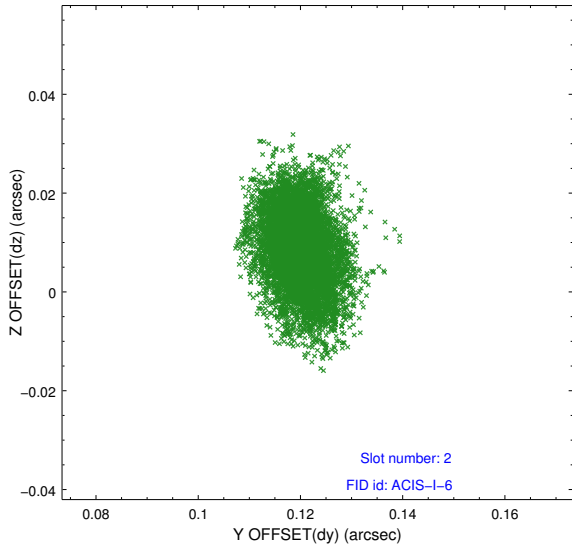
### 2.5.1 Slot 0



## 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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.971199888408

## 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.