

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15759 - L2 Version 2  
Chandra X-Ray Center

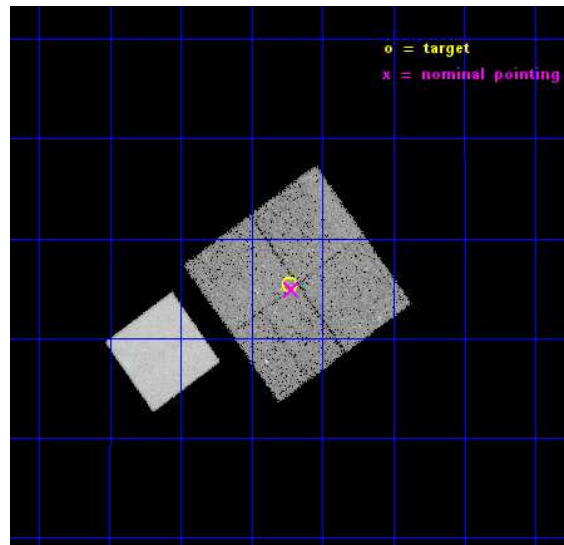
L2 Processing Date : Dec 11 2014

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# 1 Front

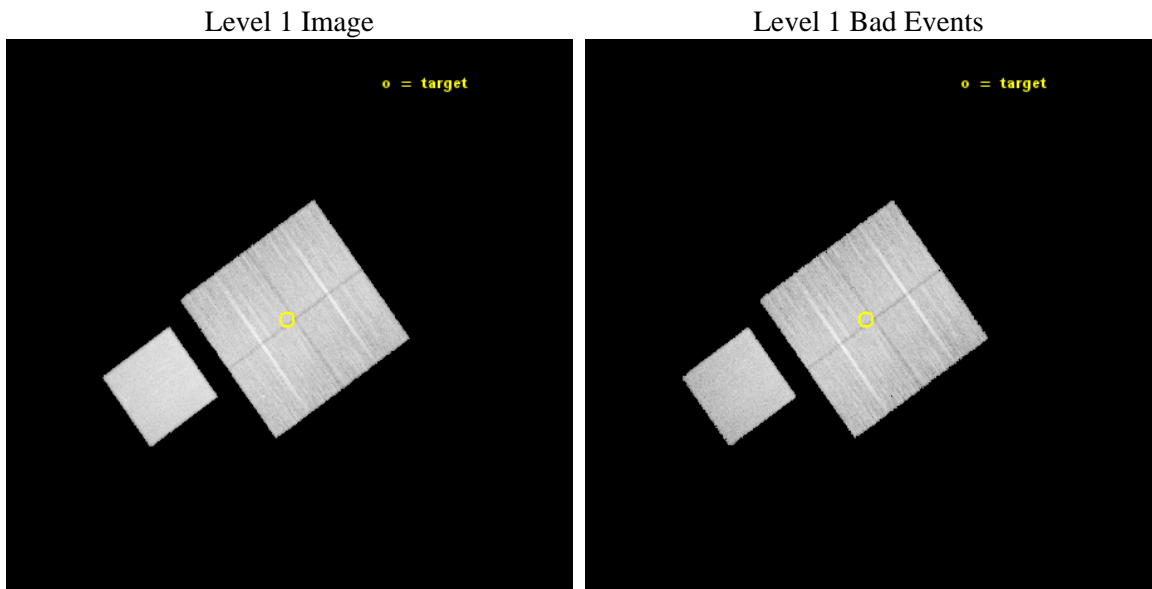
seq_num	401556	Sequence number
obs_id	15759	Observation id
title	Searching for a Metallicity Effect in Field X-ray Binaries	Proposa
observer	Prof. Thomas Maccarone	Principal investigator
object	NGC 4472 Halo-4	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.6825	Observer's specified target RA [deg]
dec_targ	8.089333	Observer's specified target Dec [deg]
ra_nom	187.67992160651	Nominal RA [deg]
dec_nom	8.0816830631787	Nominal Dec [deg]
roll_nom	234.20905706529	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30071.863311768	Sum of GTIs [s]
livetime	29678.952279016	Livetime [s]
ontime0	30074.88125205	Sum of GTIs [s]
ontime1	30071.781281829	Sum of GTIs [s]
ontime2	30074.963332057	Sum of GTIs [s]
ontime3	30071.863311768	Sum of GTIs [s]
ontime7	30075.045412064	Sum of GTIs [s]
l2events	140953	Number of level 2 events



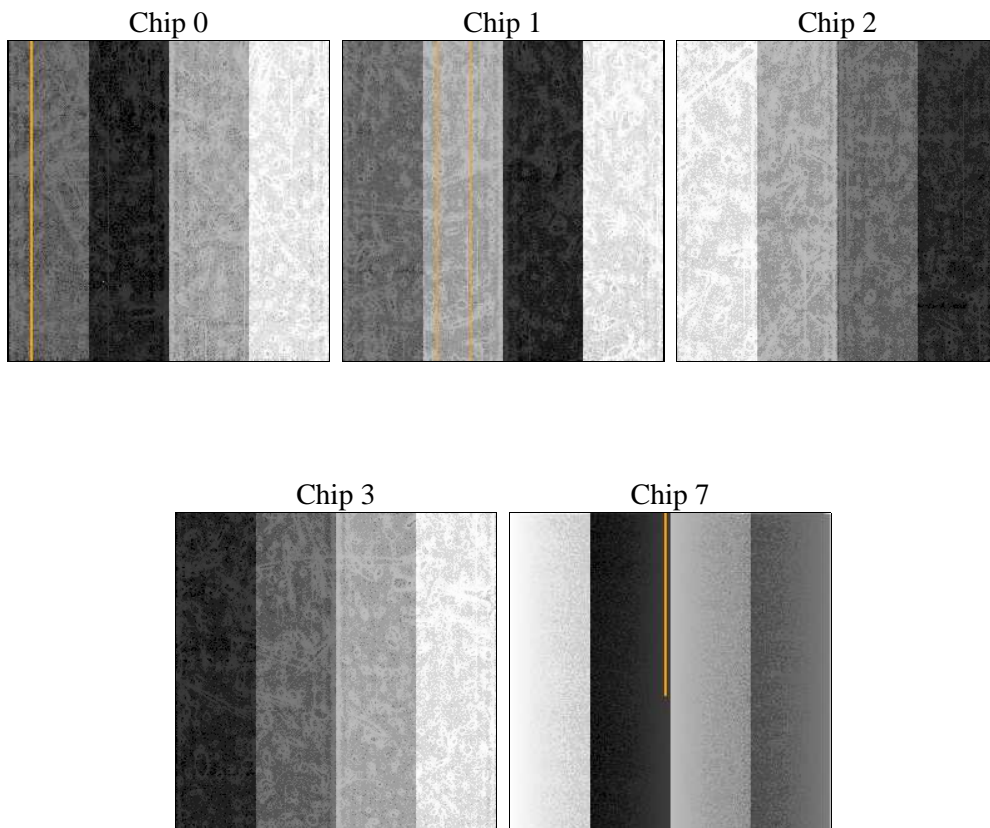
## 2 OBI

### 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	10.3.1	Processing system revision	ontime	30071.863311768	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	30074.88125205	Sum of GTIs [s]
date	2014-12-11T10:32:14	Date and time of file creation	ontime1	30071.781281829	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	30074.963332057	Sum of GTIs [s]
			ontime3	30071.863311768	Sum of GTIs [s]
			ontime7	30075.045412064	Sum of GTIs [s]
			l1events	722706	Number of level 1 events

### 2.1.4 Events

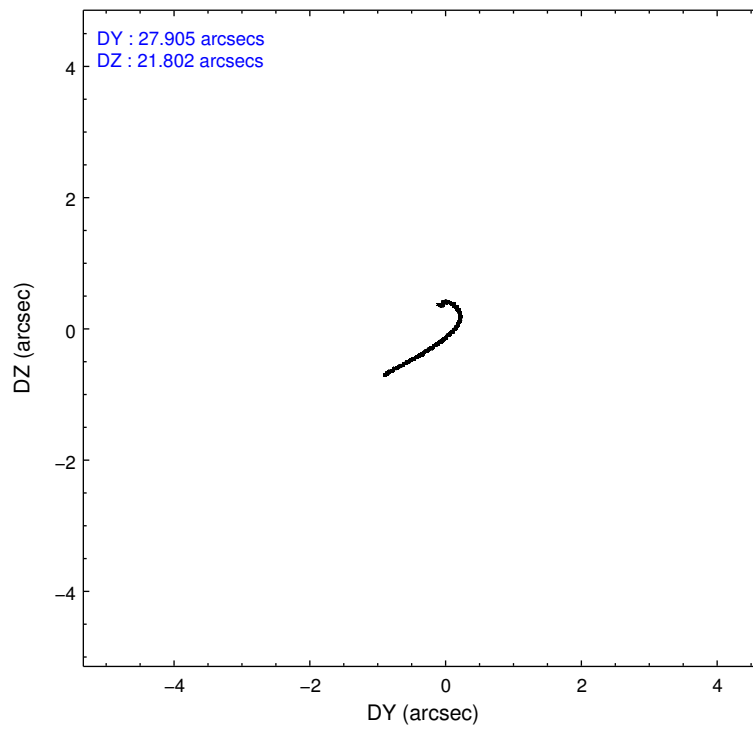
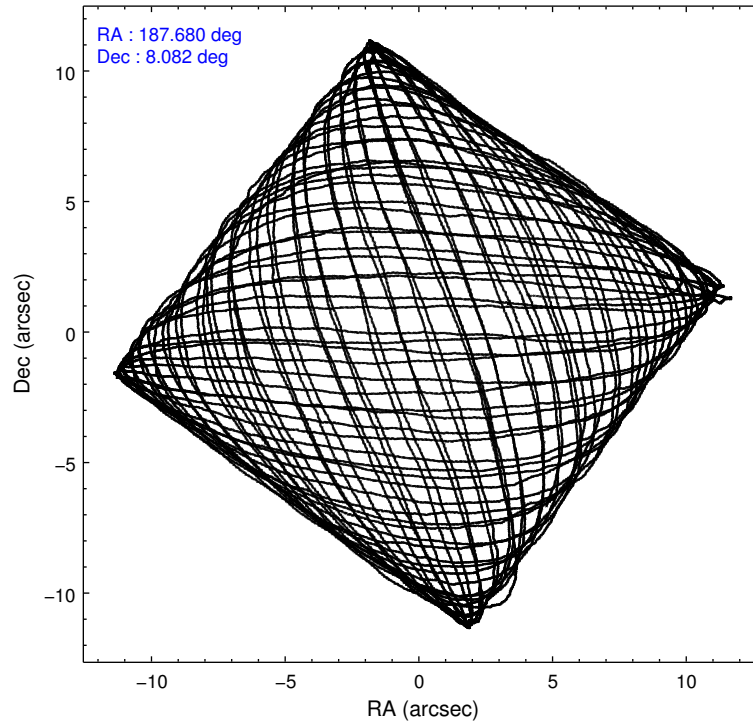
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	127350	130779	138095	133107	193375
rejected events	109098	112271	121156	116318	110027
rejected %	85%	85%	87%	87%	56%

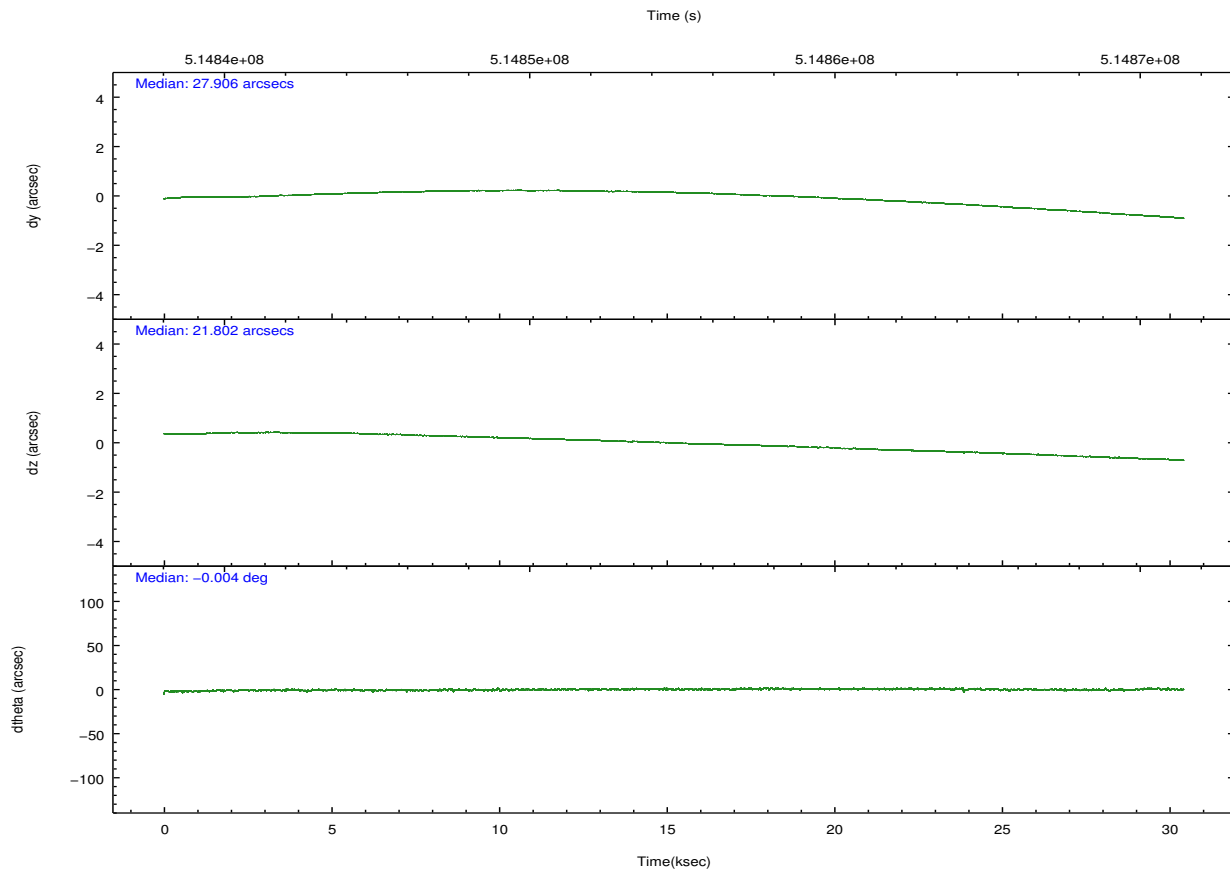
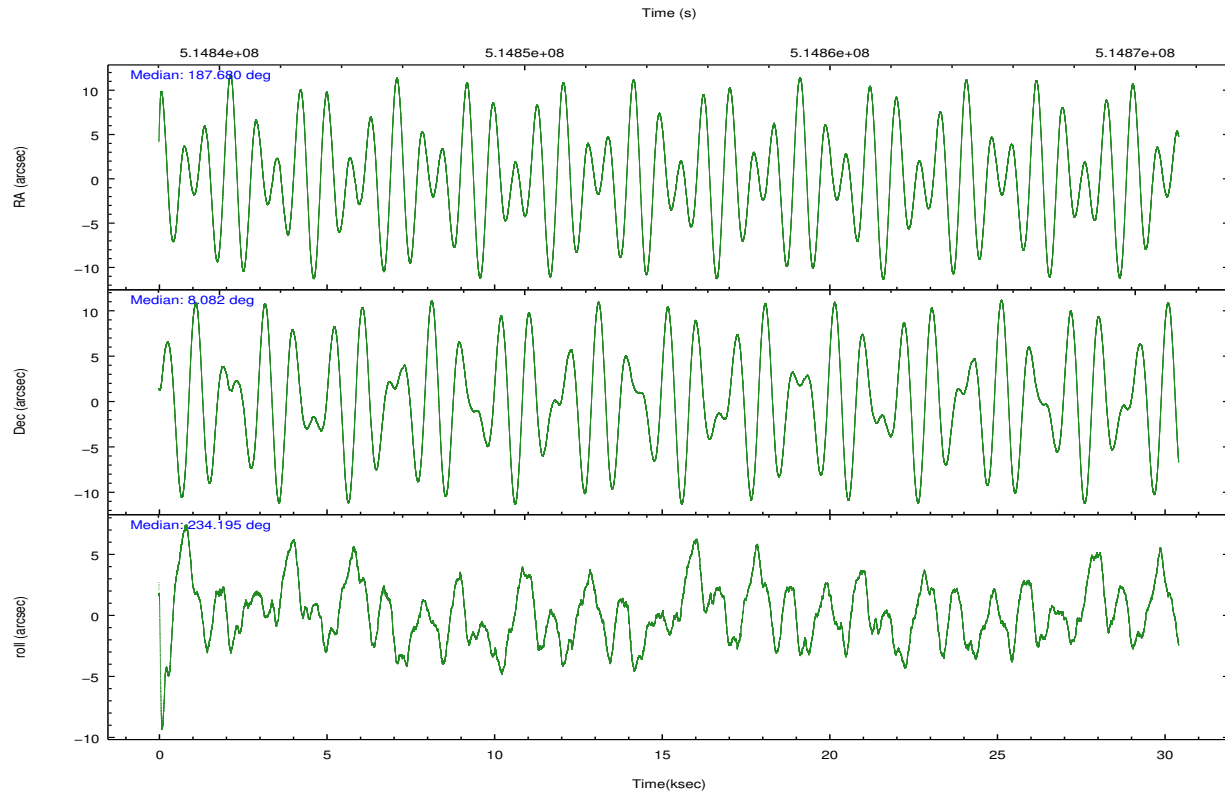
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	7182	6625	6467	6228	7484
	5%	5%	4%	4%	3%
grade 1 events	70	72	80	89	235
	0%	0%	0%	0%	0%
grade 2 events	4233	4448	4051	3697	17036
	3%	3%	2%	2%	8%
grade 3 events	1780	1773	1582	1635	6977
	1%	1%	1%	1%	3%
grade 4 events	1607	1743	1618	1789	6900
	1%	1%	1%	1%	3%
grade 5 events	6662	7111	6301	7558	19685
	5%	5%	4%	5%	10%
grade 6 events	3452	3919	3224	3441	44958
	2%	2%	2%	2%	23%
grade 7 events	102364	105088	114772	108670	90100
	80%	80%	83%	81%	46%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	187.682604	187.6799216065096	CCD I2 on	Y	Y
[deg] Pointing Dec	8.109032	8.081683063178689	CCD I3 on	Y	Y
[deg] Pointing Roll	233.999988	234.2090570652909	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	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	514839927.184000	514838814.19008	CCD S5 on	N	N
Observation start date	2014-04-25T19:04:20	2014-04-25T18:46:54	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	514869927.184000	514870060.8043	On-chip summing requested	N	N
Observation end date	2014-04-26T03:24:20	2014-04-26T03:27:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





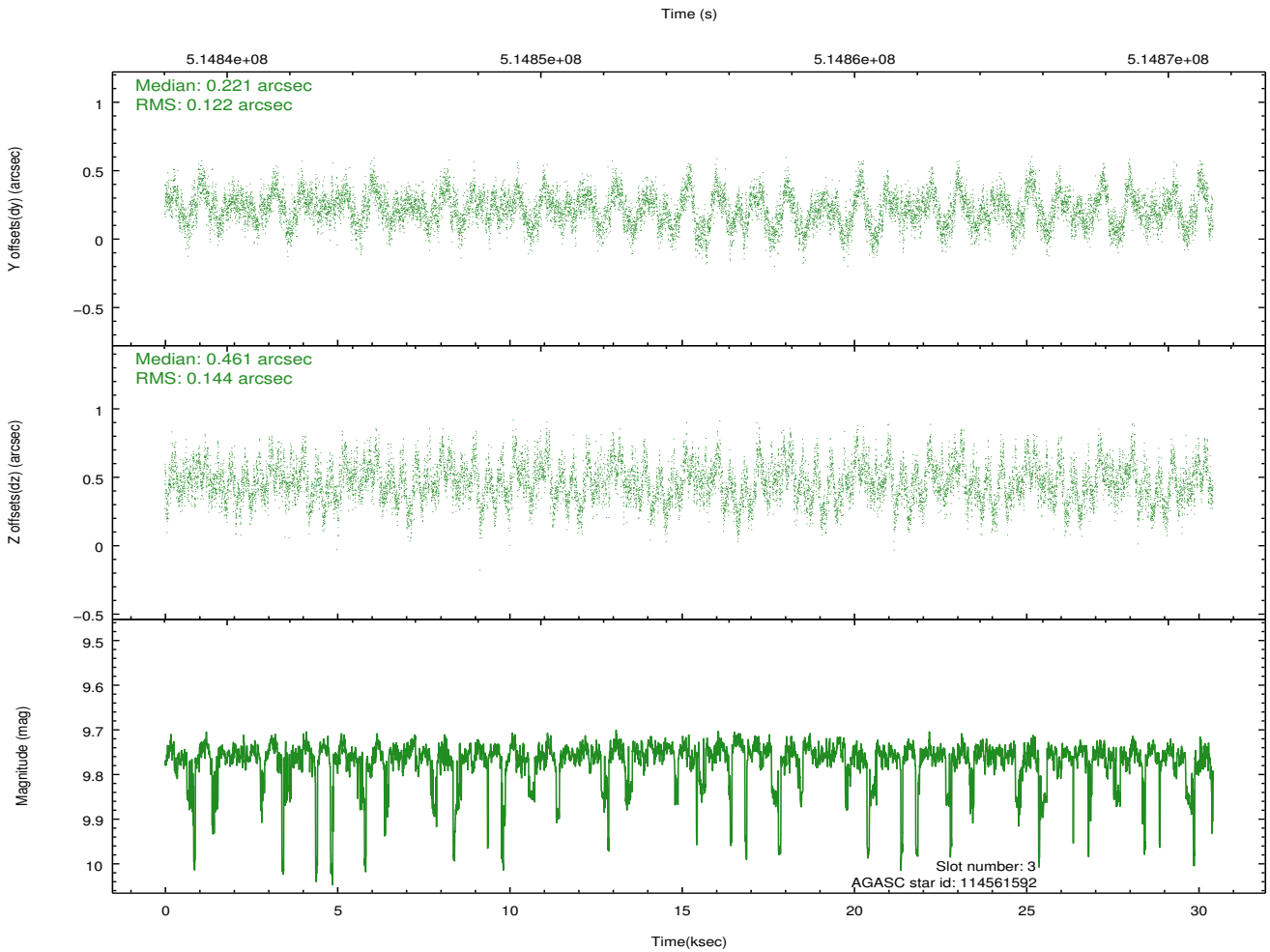
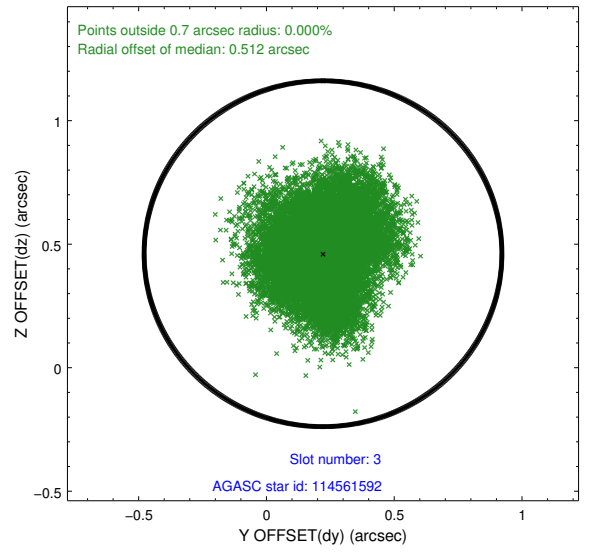
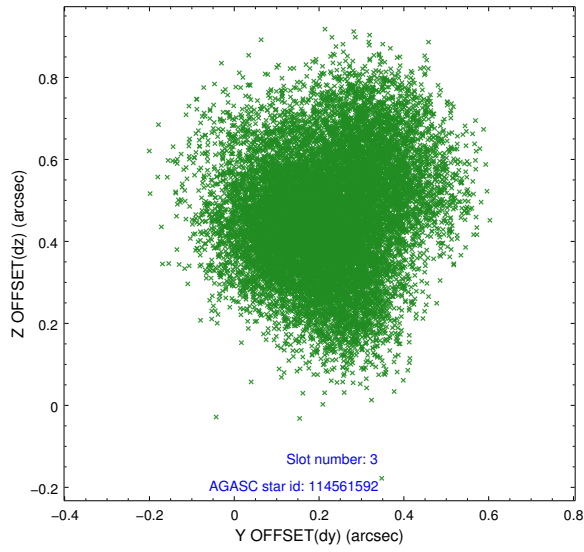
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.11	7420	-0.066	-0.027	0.009	0.015	0.000000	0.000000	911.26	-845.53
1	FID		ACIS-I-4	7.09	7417	0.359	0.075	0.008	0.012	0.000000	0.000000	2131.71	1054.37
2	FID		ACIS-I-5	7.09	7419	-0.392	0.024	0.007	0.013	0.000000	0.000000	-1837.03	1052.14
3	GUIDE	used	114561592	9.76	14489	0.221	0.461	0.206	0.320	187.709505	8.445382	-1035.04	-633.79
4	GUIDE	used	114563056	9.87	14668	-0.042	-0.201	0.205	0.330	188.043188	7.639178	612.41	2034.76
5	GUIDE	used	114563576	7.90	14833	-0.093	-0.067	0.156	0.227	186.867039	8.012388	1989.86	-2149.30
6	GUIDE	used	114563648	9.79	14820	0.065	0.031	0.266	0.399	187.009208	7.938475	1907.43	-1582.53
7	GUIDE	used	114564248	7.44	14839	-0.156	-0.205	0.118	0.181	188.352467	7.946007	-929.64	2275.62

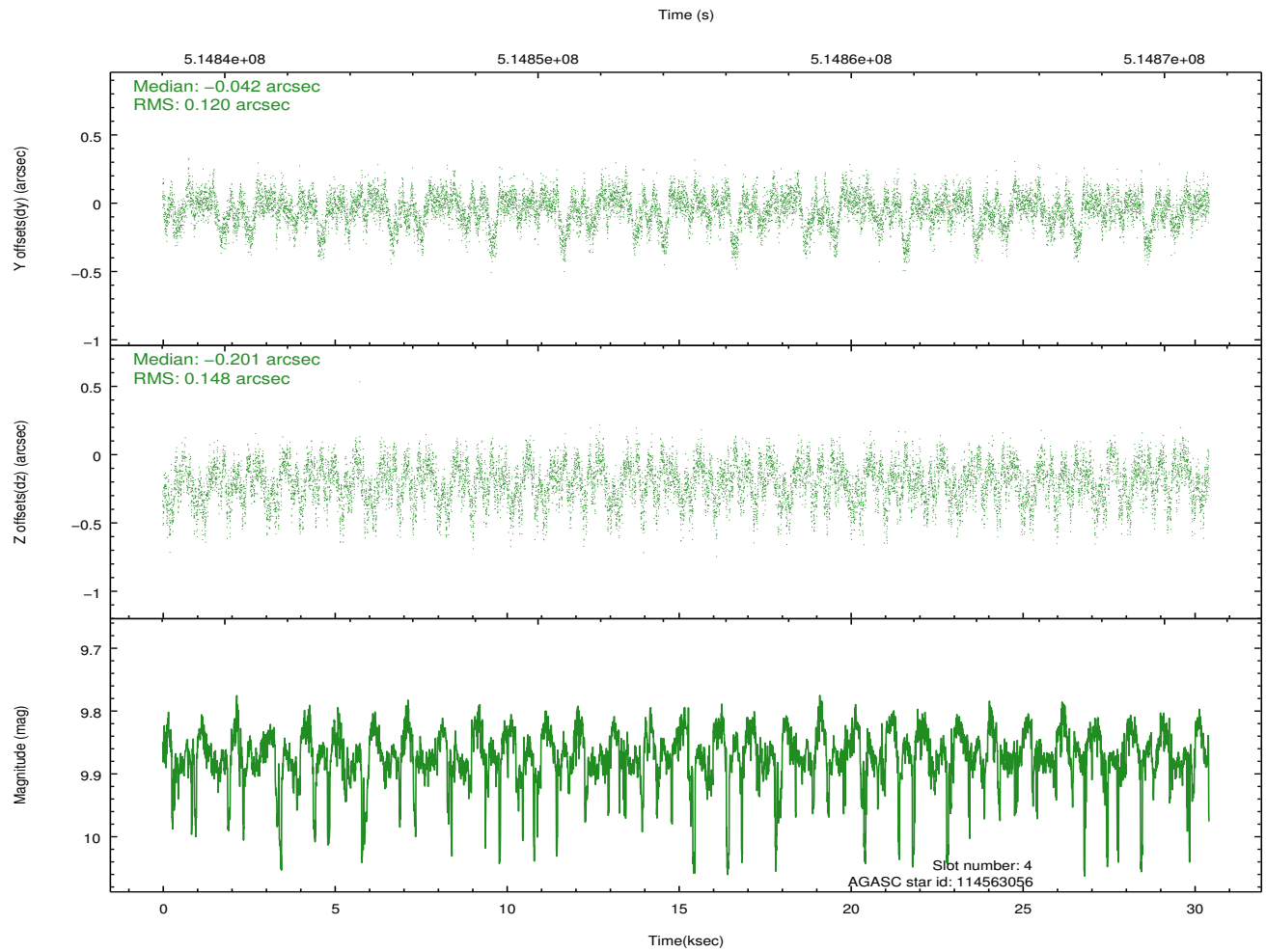
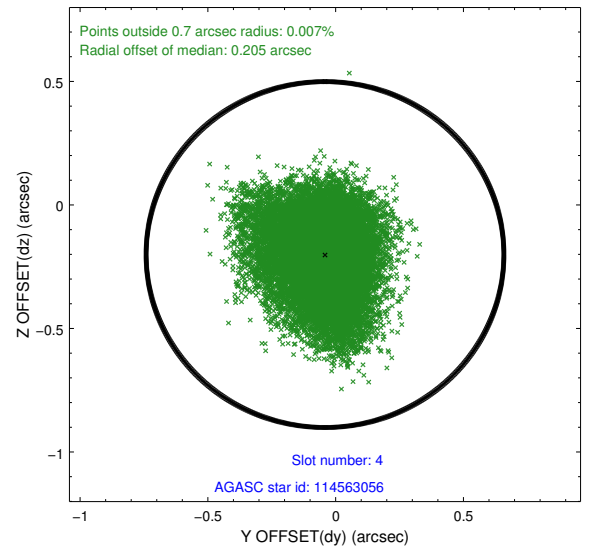
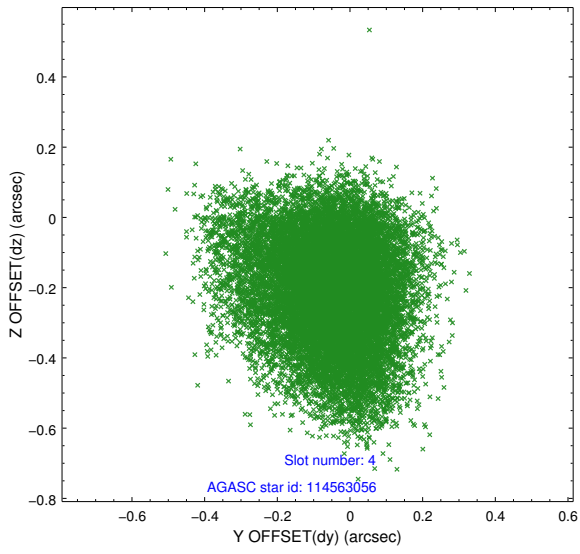
∞

## 2.4 Star Slots

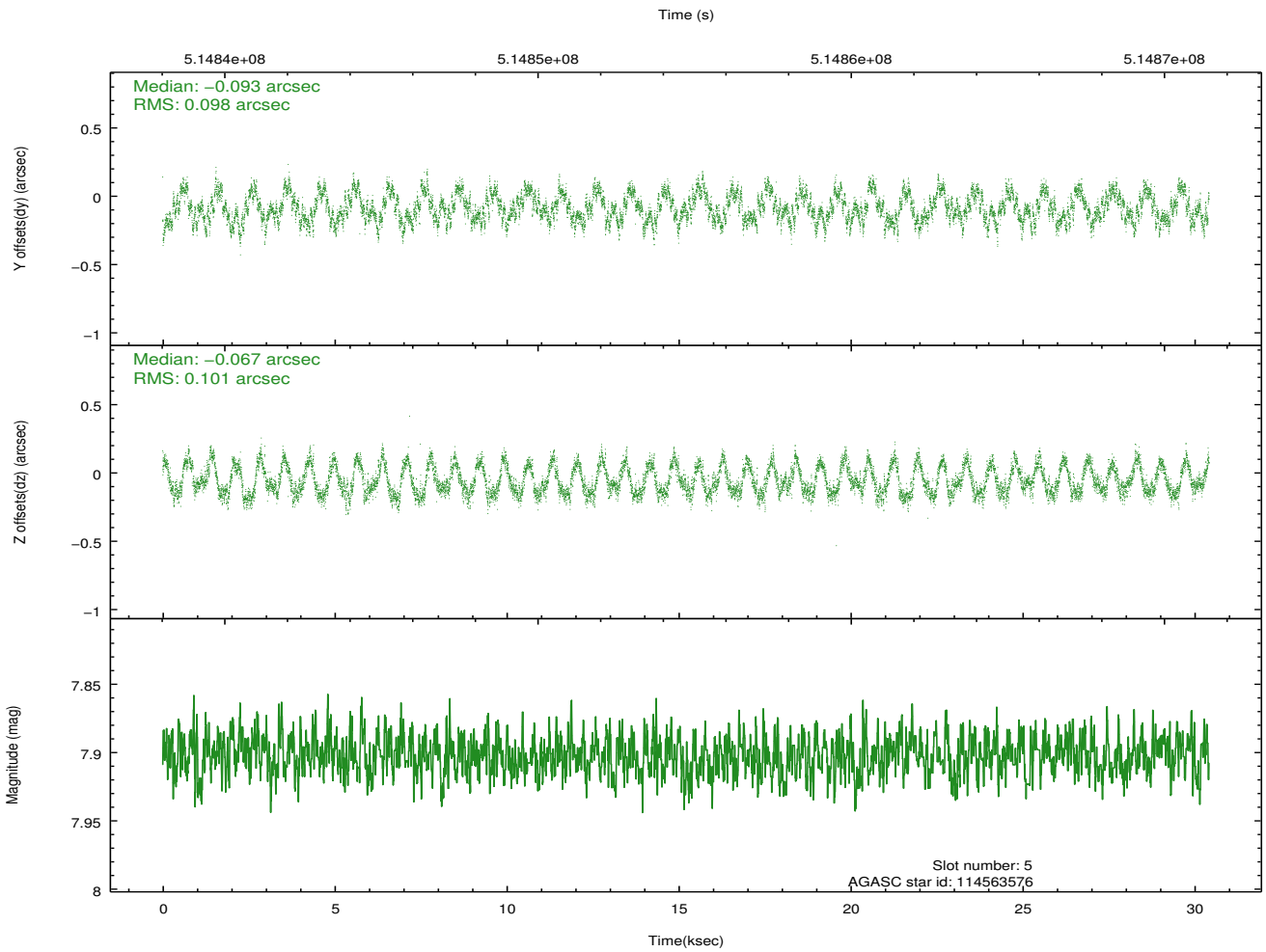
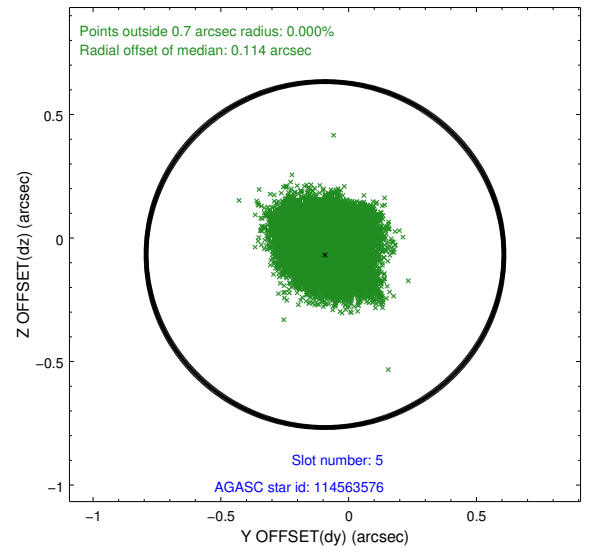
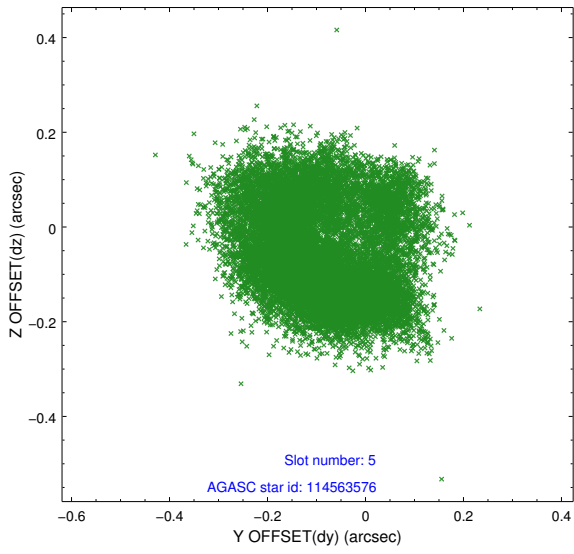
### 2.4.1 Slot 3



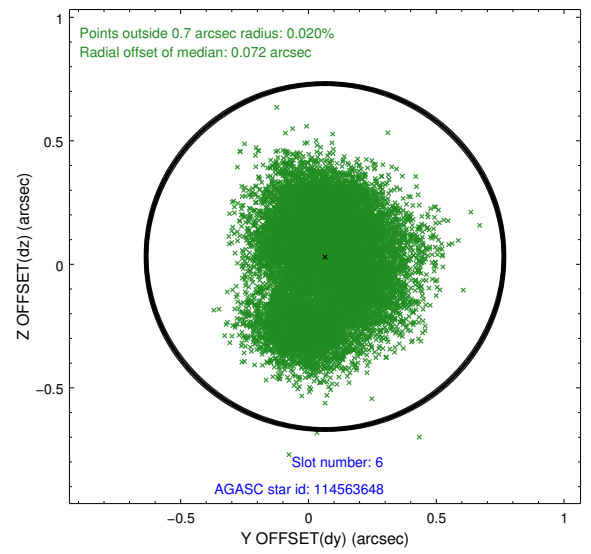
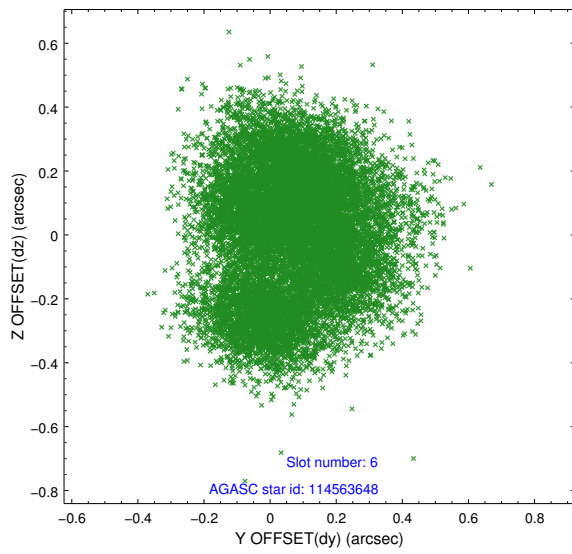
## 2.4.2 Slot 4



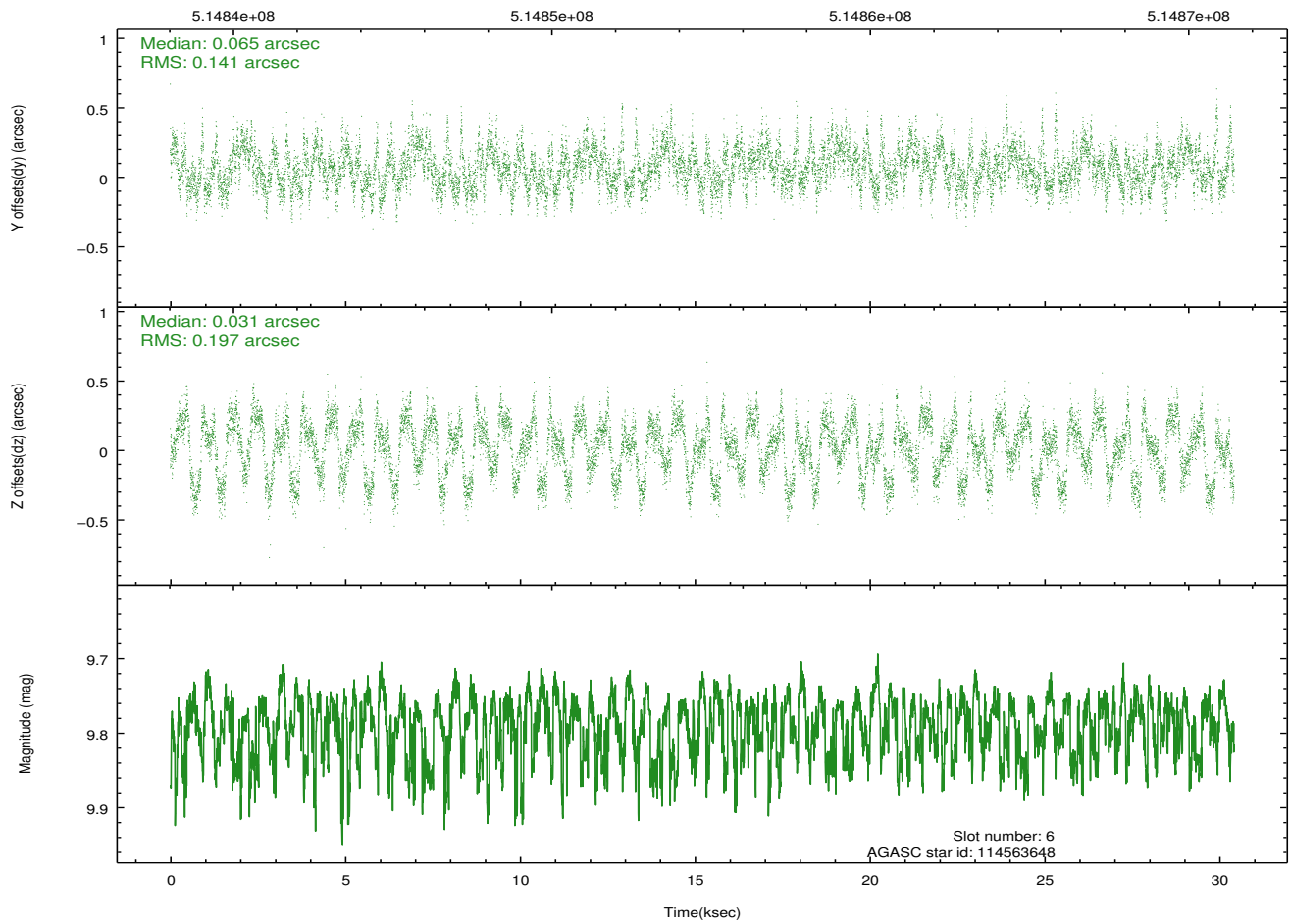
### 2.4.3 Slot 5



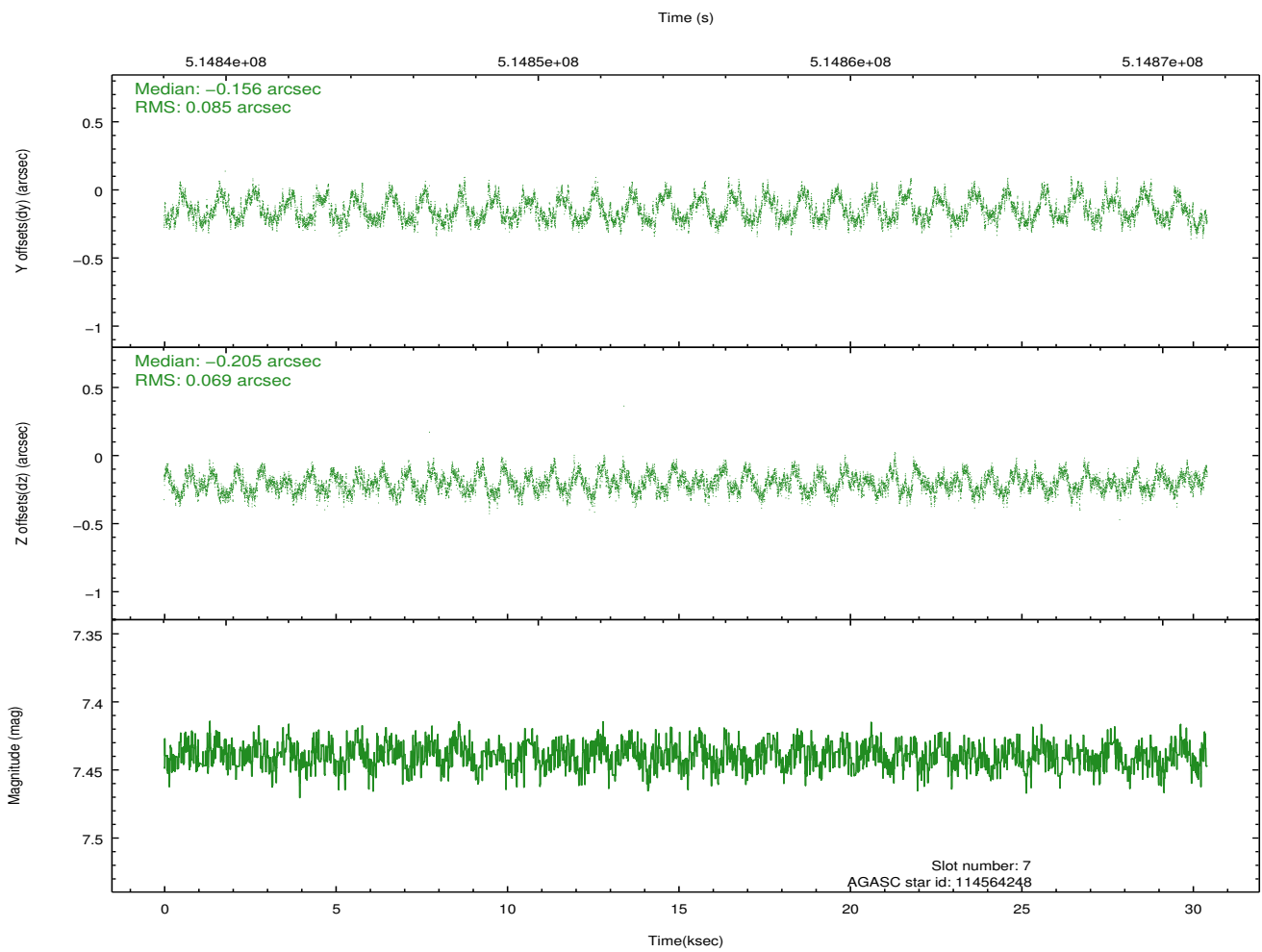
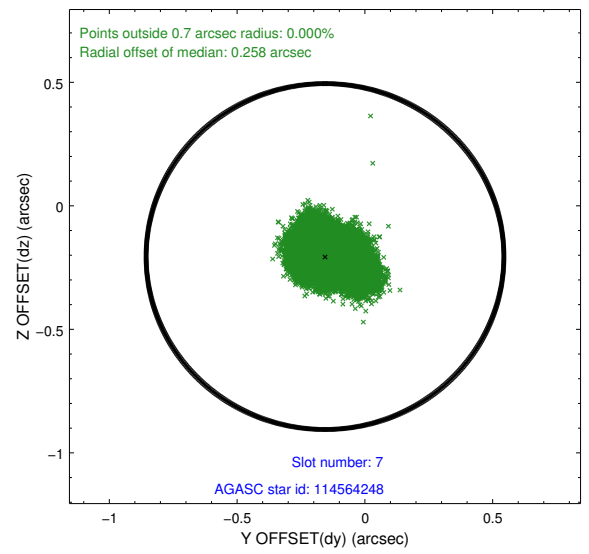
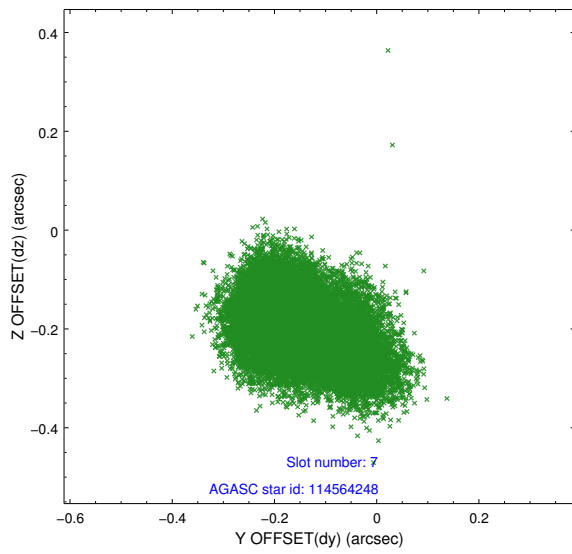
## 2.4.4 Slot 6



Time (s)

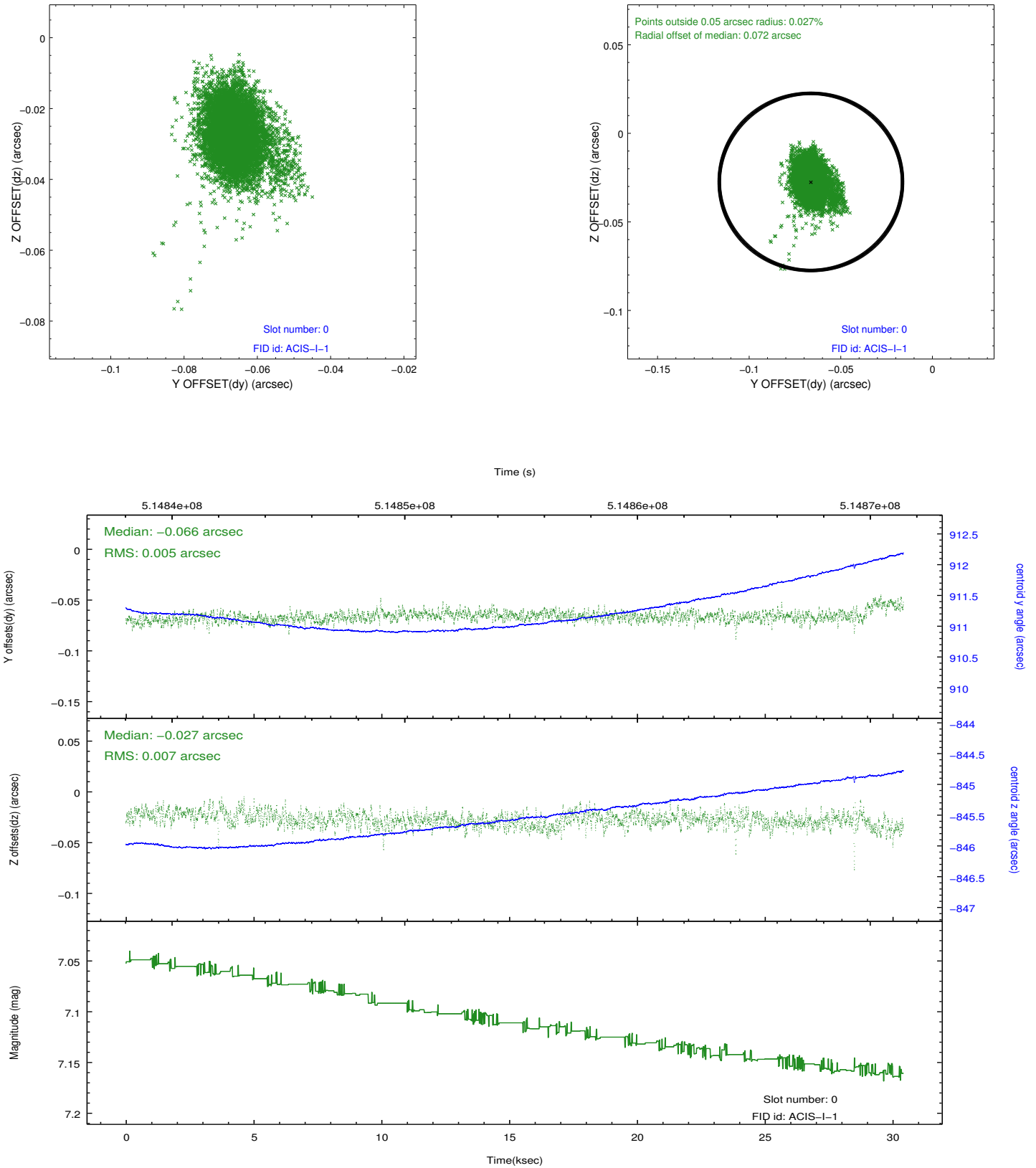


## 2.4.5 Slot 7

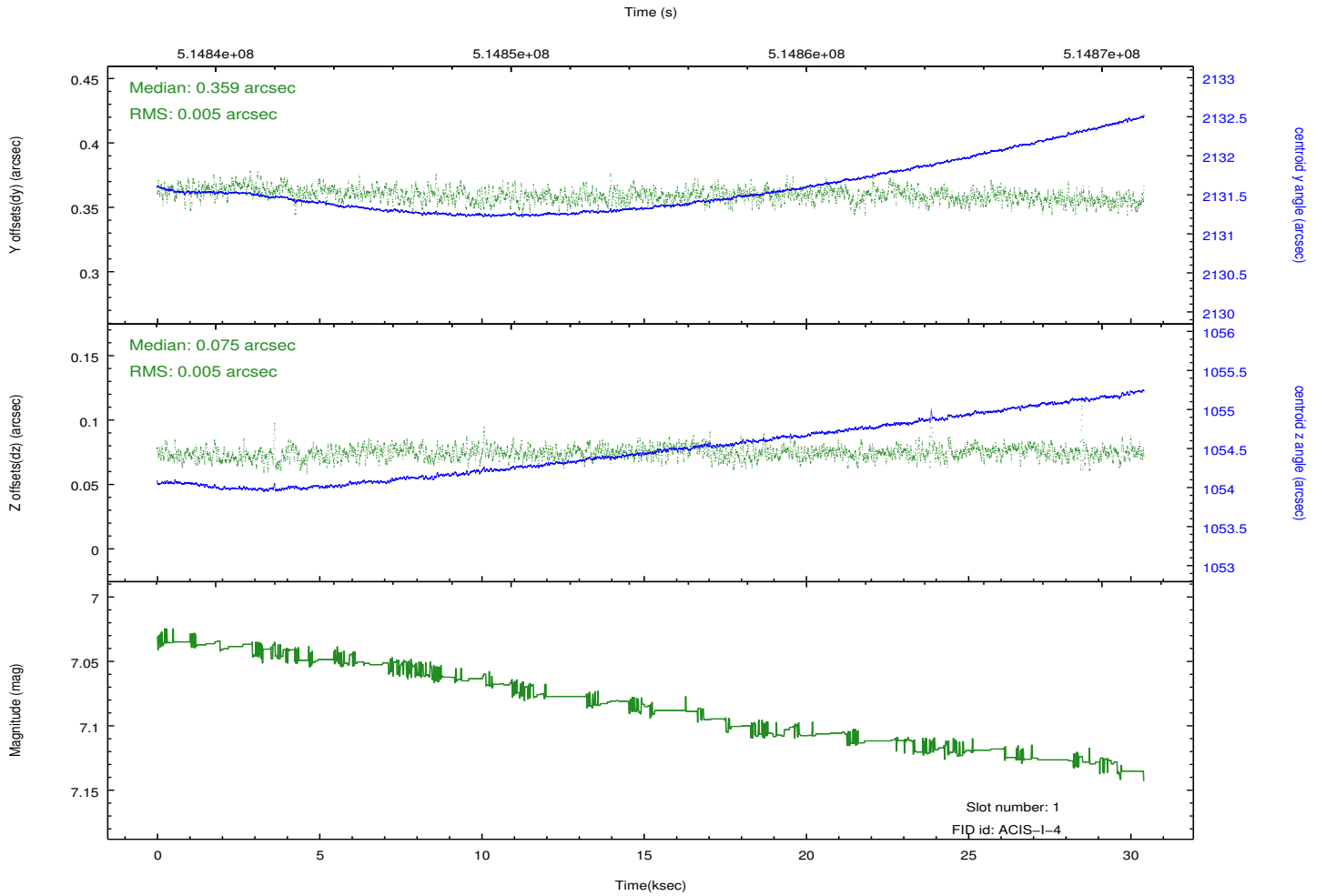
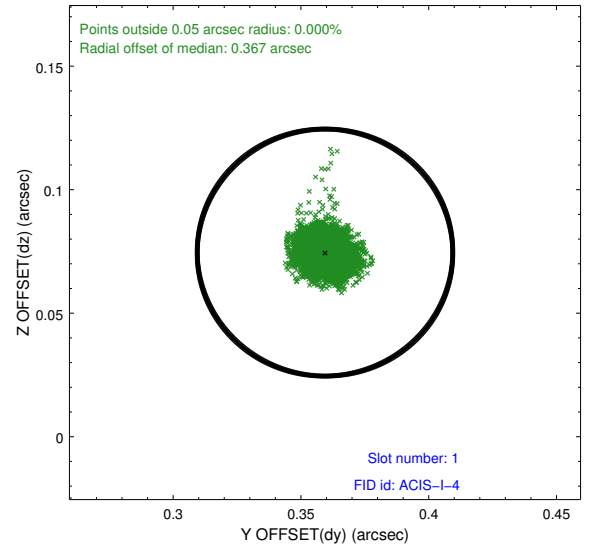
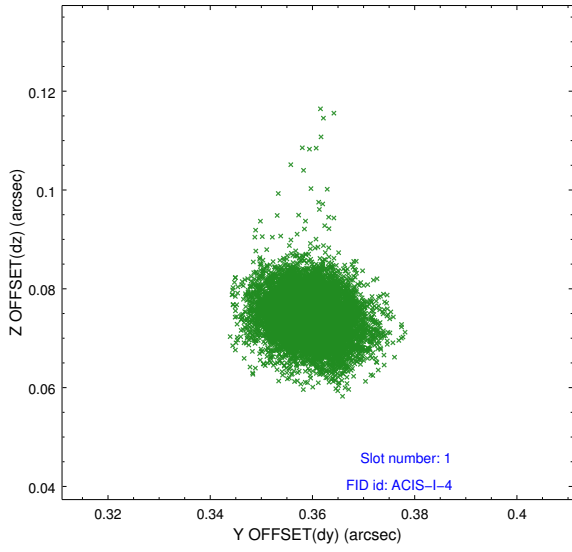


## 2.5 FID Slots

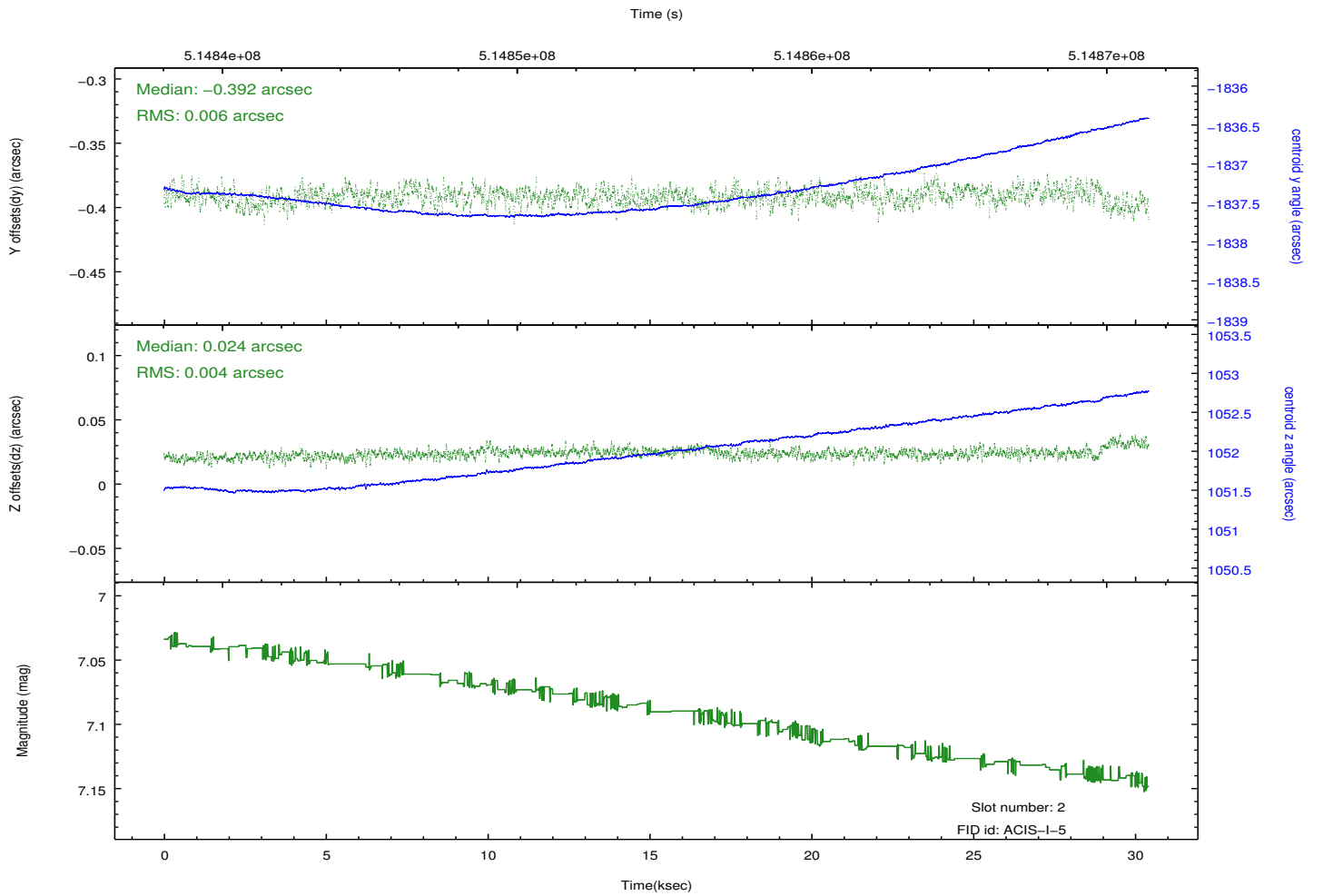
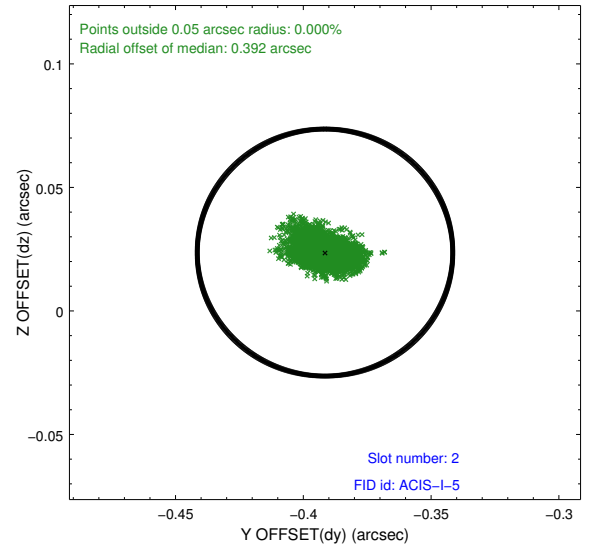
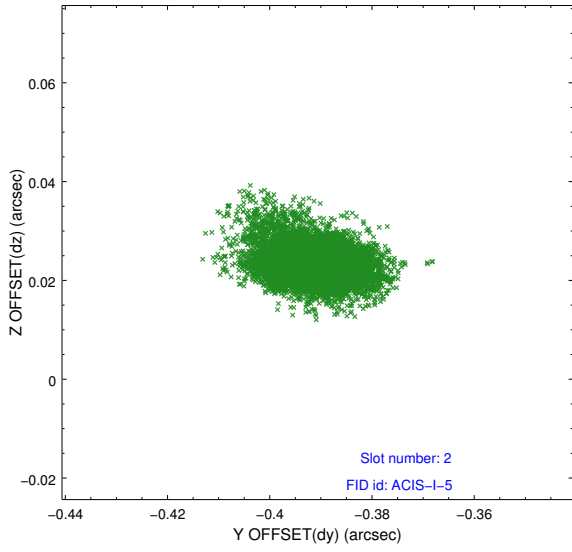
### 2.5.1 Slot 0



## 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)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.071863311768

## 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.