

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 16133 - L2 Version 2  
Chandra X-Ray Center

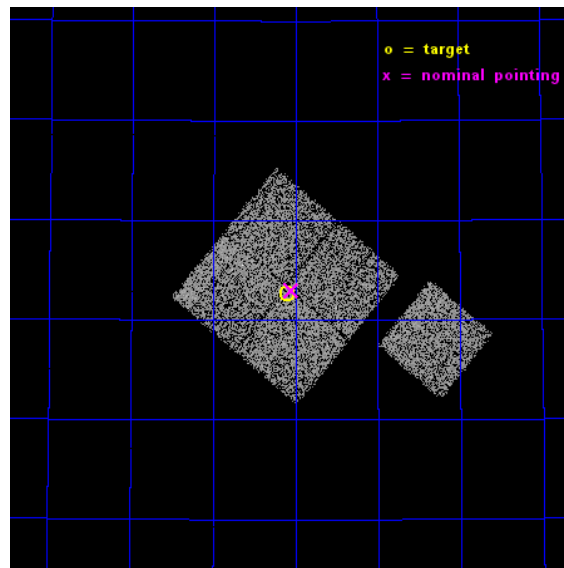
L2 Processing Date : Dec 8 2014

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# 1 Front

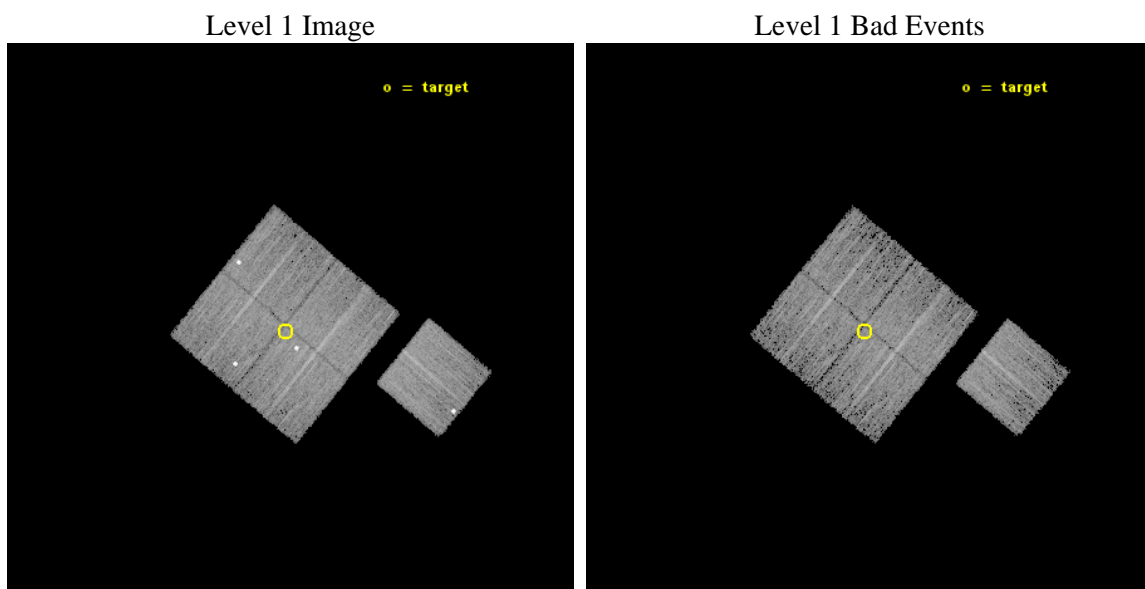
seq_num	801387	Sequence number
obs_id	16133	Observation id
title	TO THE VIRIAL RADIUS OF THE MOST LUMINOUS LOCAL GALAXY GROUP: UGC03957	Proposal title
observer	Dr. Lorenzo Lovisari	Principal investigator
object	UGC 03957 SOUTH	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	115.524167	Observer's specified target RA [deg]
dec_targ	55.045194	Observer's specified target Dec [deg]
ra_nom	115.51235426276	Nominal RA [deg]
dec_nom	55.049578181348	Nominal Dec [deg]
roll_nom	129.65721141337	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10586.50008142	Sum of GTIs [s]
livetime	10448.179664188	Livetime [s]
ontime0	10586.50008142	Sum of GTIs [s]
ontime1	10586.50008142	Sum of GTIs [s]
ontime2	10586.50008142	Sum of GTIs [s]
ontime3	10586.50008142	Sum of GTIs [s]
ontime6	10583.359000623	Sum of GTIs [s]
l2events	25235	Number of level 2 events



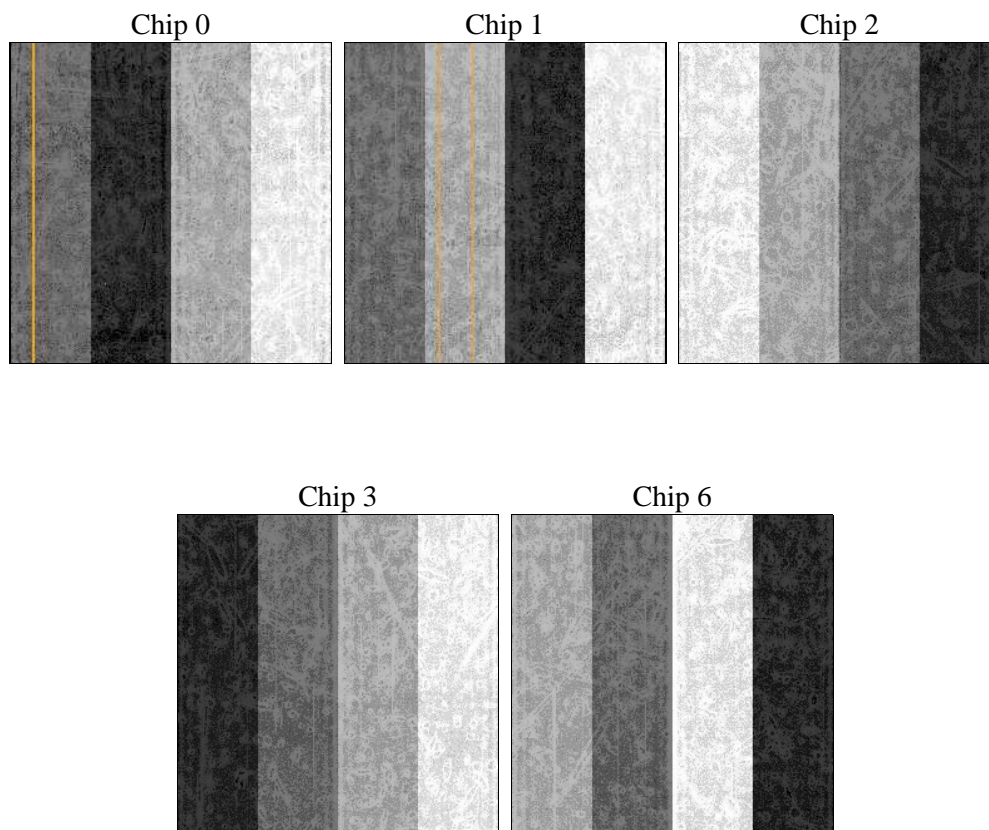
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10500.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	10586.50008142	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10586.50008142	Sum of GTIs [s]
date	2014-12-08T10:04:03	Date and time of file creation	ontime1	10586.50008142	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10586.50008142	Sum of GTIs [s]
			ontime3	10586.50008142	Sum of GTIs [s]
			ontime6	10583.359000623	Sum of GTIs [s]
			l1events	252711	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	47135	49519	50254	50991	54812
rejected events	37964	39710	44209	41905	45360
rejected %	80%	80%	87%	82%	82%

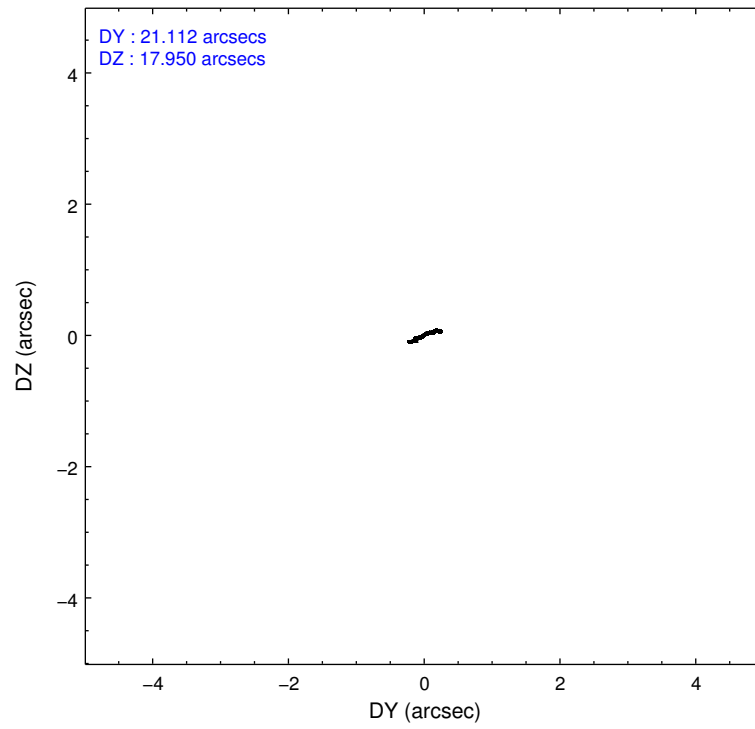
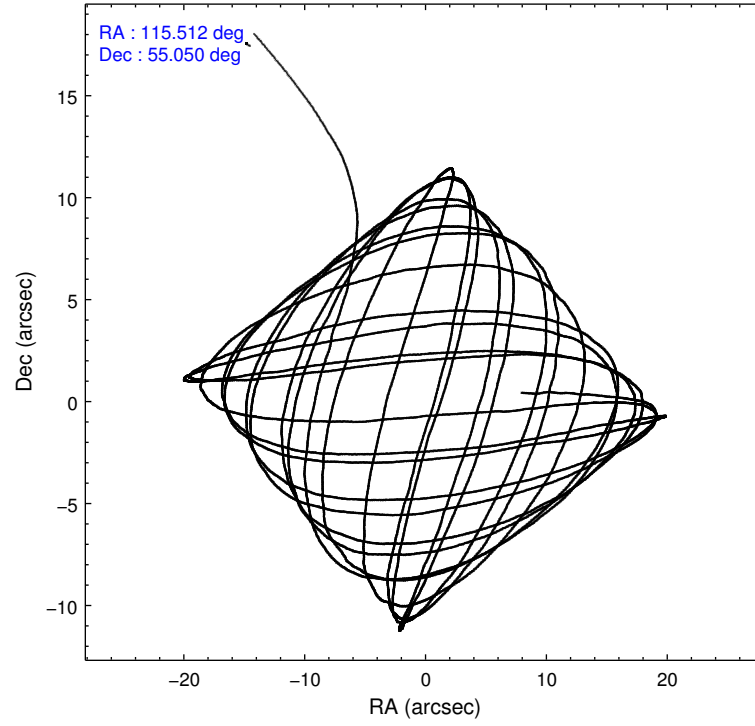
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5288	5599	2204	5360	2225
	11%	11%	4%	10%	4%
grade 1 events	48	41	30	44	37
	0%	0%	0%	0%	0%
grade 2 events	1496	1542	1481	1340	4665
	3%	3%	2%	2%	8%
grade 3 events	612	619	618	564	631
	1%	1%	1%	1%	1%
grade 4 events	550	651	653	614	590
	1%	1%	1%	1%	1%
grade 5 events	2298	2436	2008	2723	2620
	4%	4%	3%	5%	4%
grade 6 events	1232	1403	1095	1211	1346
	2%	2%	2%	2%	2%
grade 7 events	35611	37228	42165	39135	42698
	75%	75%	83%	76%	77%

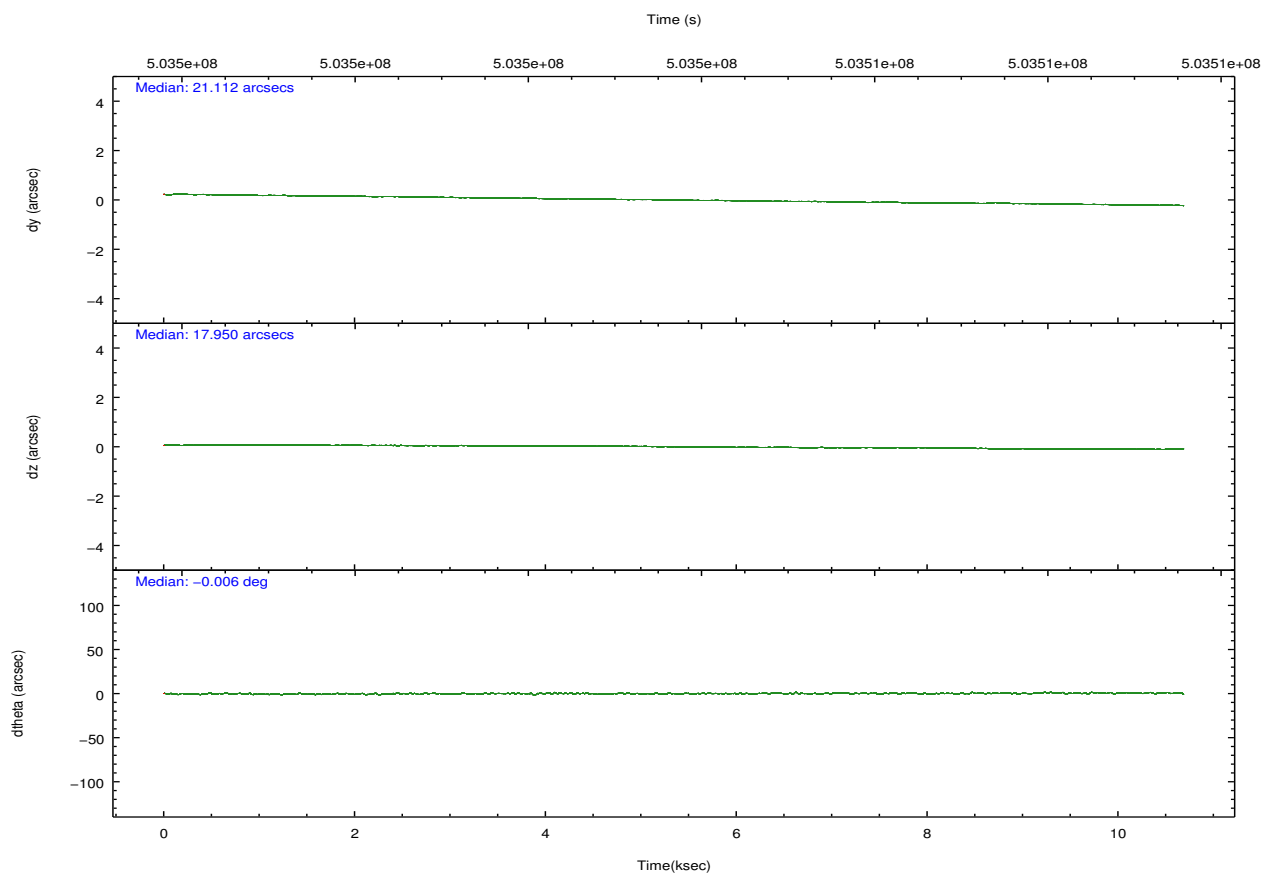
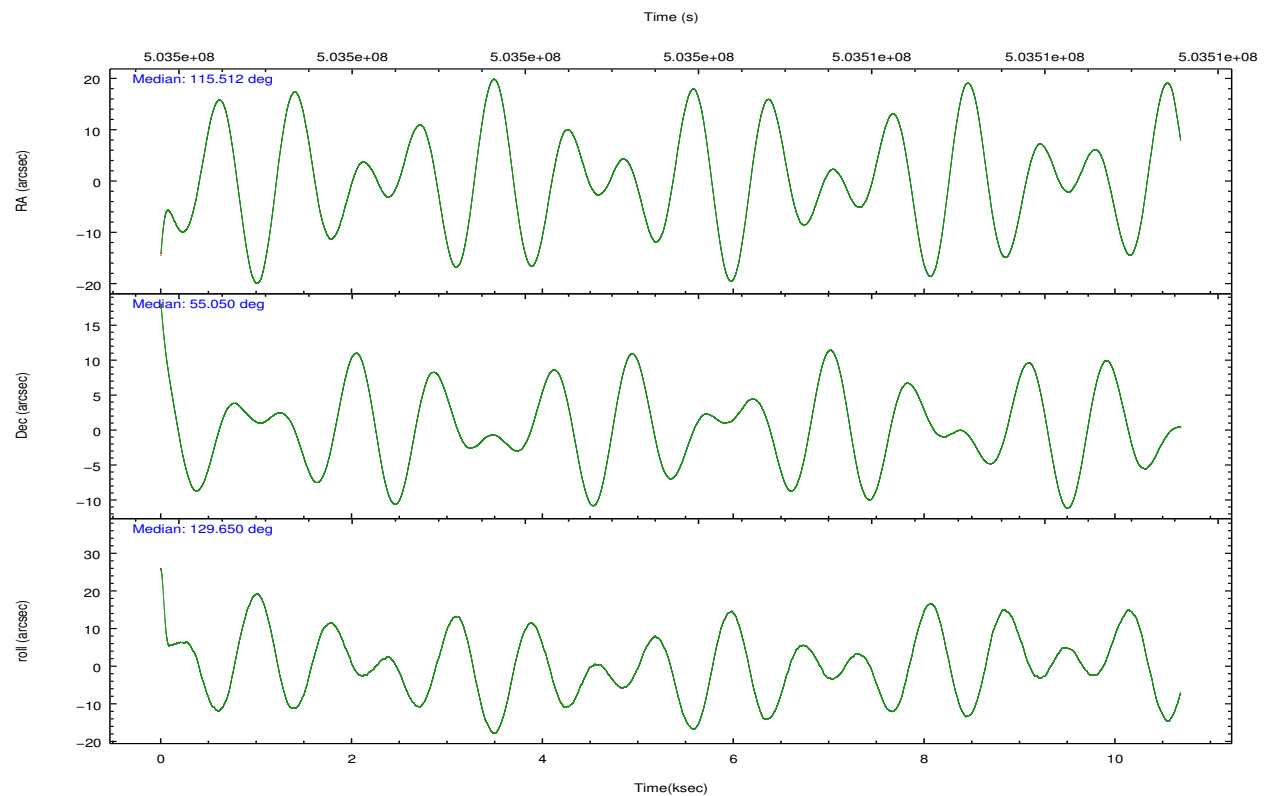


## 2.2 Compared Parameters

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	115.557396	115.5123542627564	CCD I2 on	Y	Y
[deg] Pointing Dec	55.040141	55.04957818134812	CCD I3 on	Y	Y
[deg] Pointing Roll	129.411583	129.6572114133749	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	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	503498525.184000	503497532.45335	CCD S5 on	N	N
Observation start date	2013-12-15T12:40:58	2013-12-15T12:25:32	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	503509025.184000	503510142.00404	On-chip summing requested	N	N
Observation end date	2013-12-15T15:35:58	2013-12-15T15:55:42	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



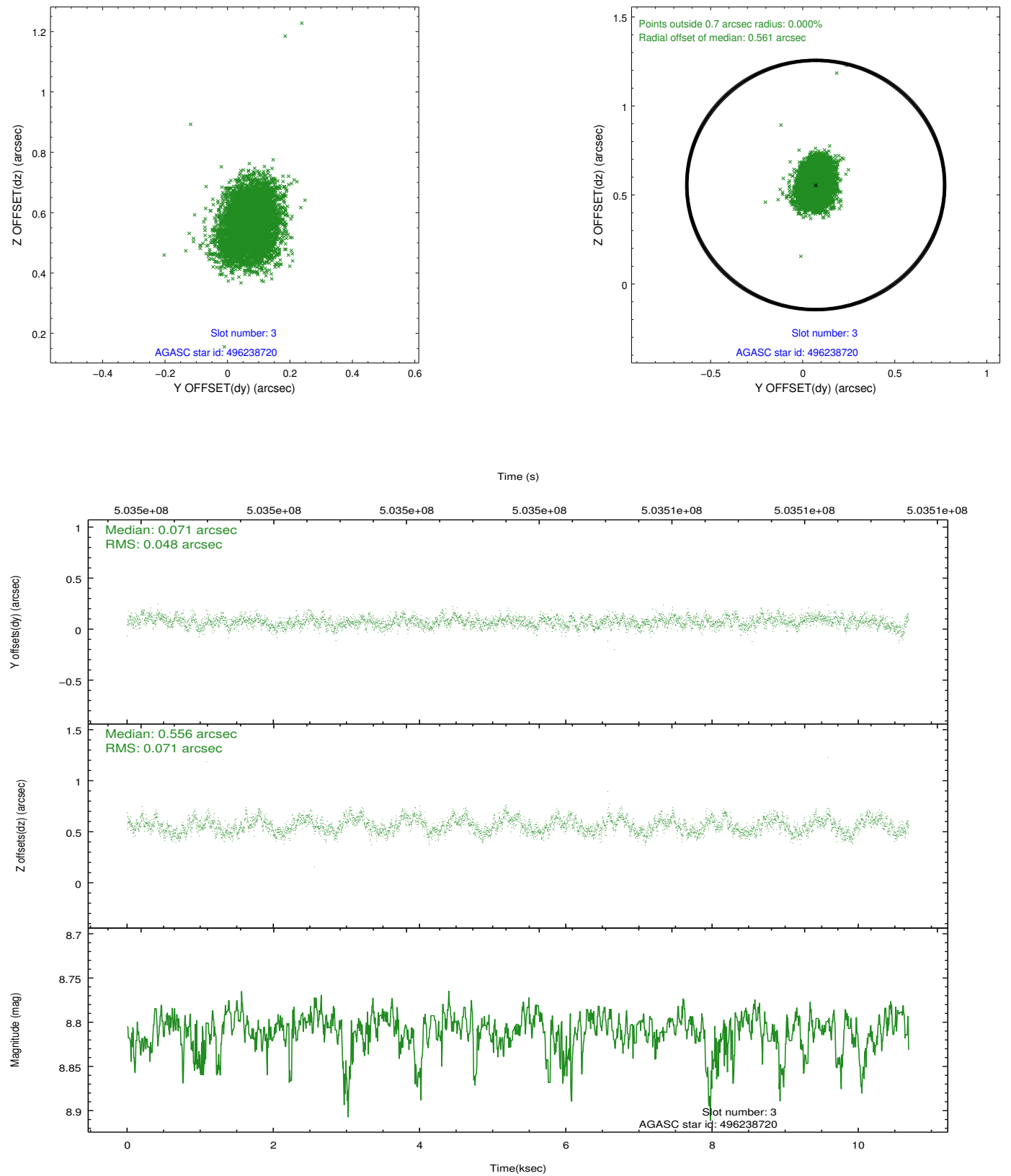


### Slot Statistics

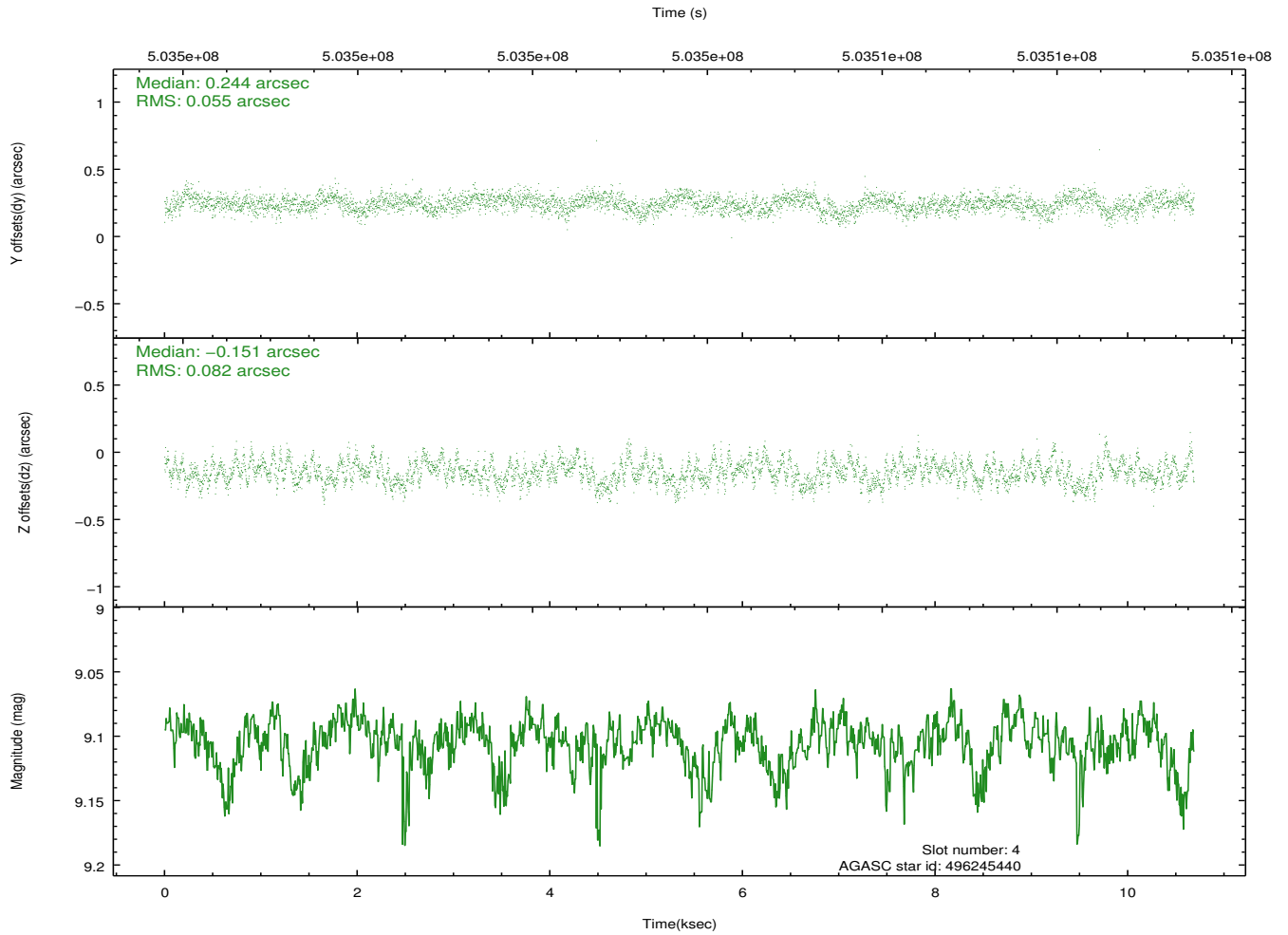
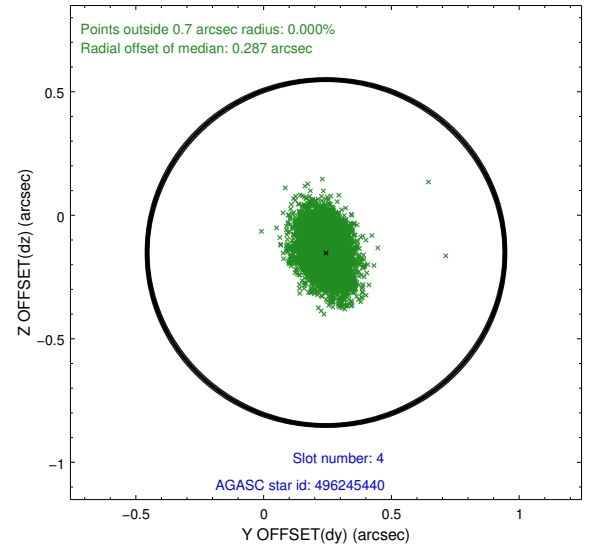
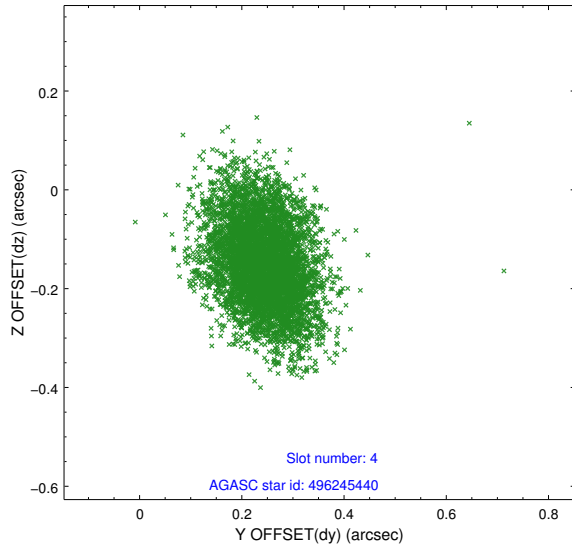
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.13	2607	0.074	-0.021	0.006	0.011	0.000000	0.000000	918.31	-841.58
1	FID		ACIS-I-2	7.03	2606	-0.018	-0.070	0.009	0.017	0.000000	0.000000	-775.60	-848.43
2	FID		ACIS-I-5	7.12	2607	-0.148	0.163	0.008	0.015	0.000000	0.000000	-1830.53	1055.65
3	GUIDE	used	496238720	8.81	5213	0.071	0.556	0.091	0.146	116.664456	54.885859	-1869.99	-1429.23
4	GUIDE	used	496245440	9.10	5207	0.244	-0.151	0.104	0.172	115.554690	54.650690	-1079.70	895.07
5	GUIDE	used	496249344	9.54	5178	0.223	-0.220	0.145	0.227	115.871368	54.782091	-1130.32	85.09
6	GUIDE	used	496249752	8.12	5211	-0.734	-0.065	0.085	0.138	114.583542	55.205517	1740.06	1159.42
7	GUIDE	used	496250824	8.64	5210	0.191	-0.121	0.077	0.131	115.730882	54.605486	-1437.75	714.08

## 2.4 Star Slots

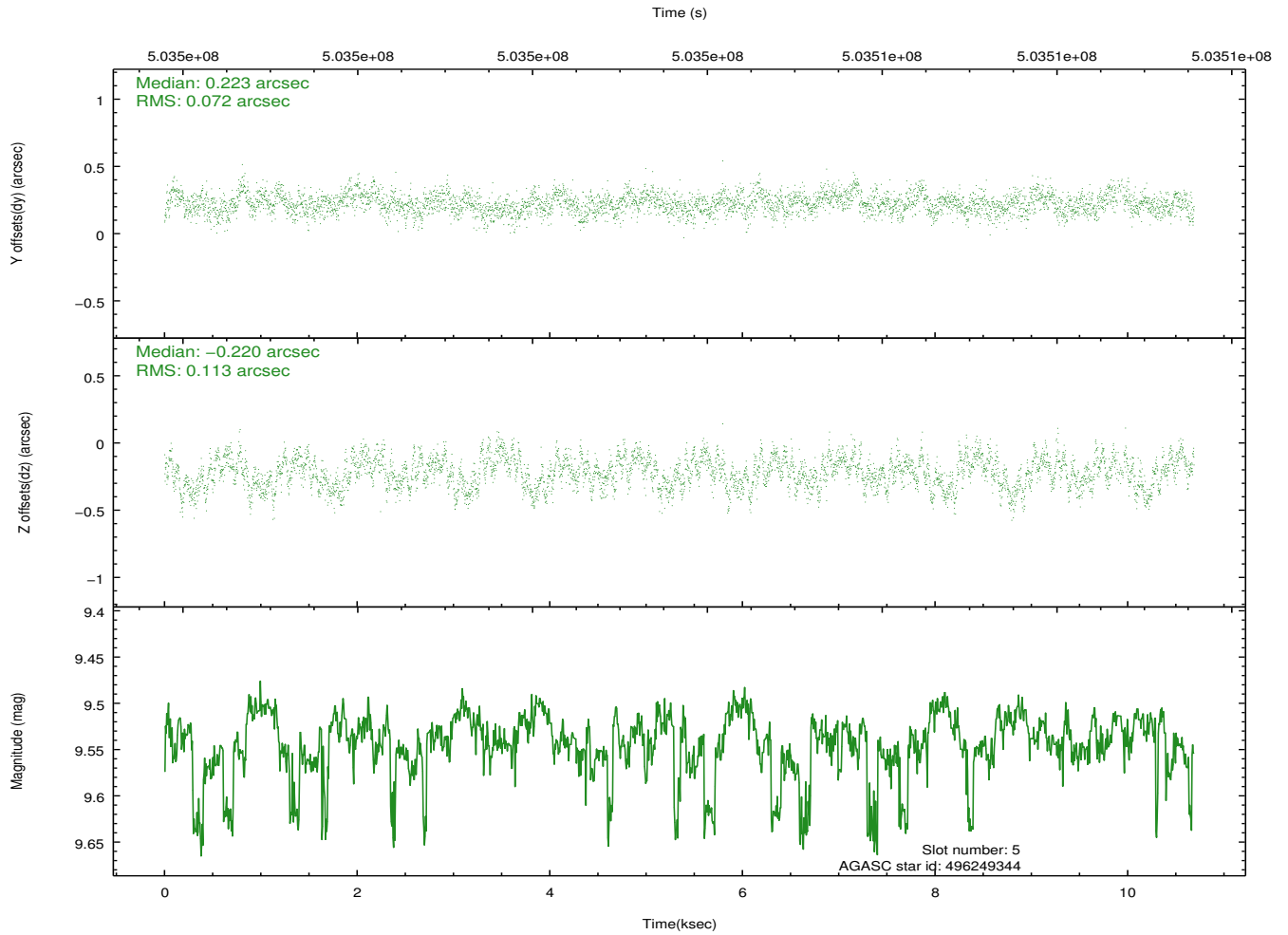
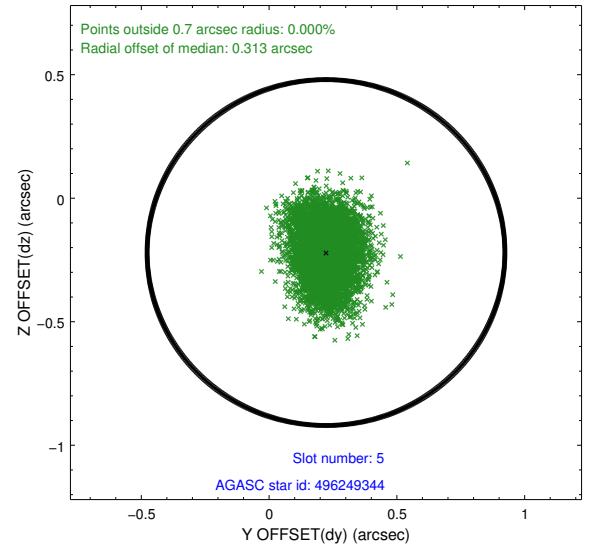
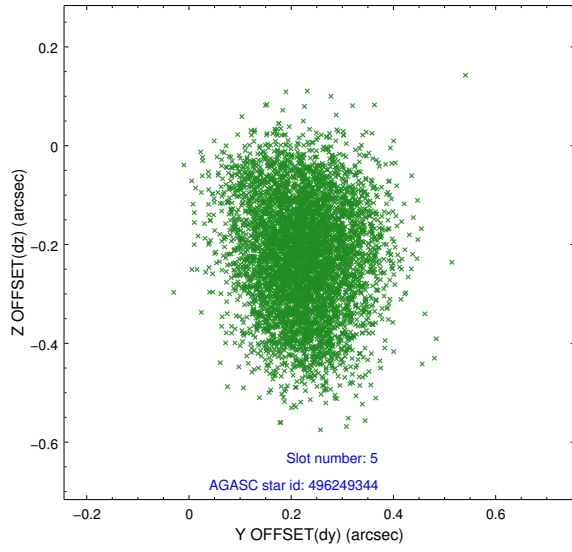
### 2.4.1 Slot 3



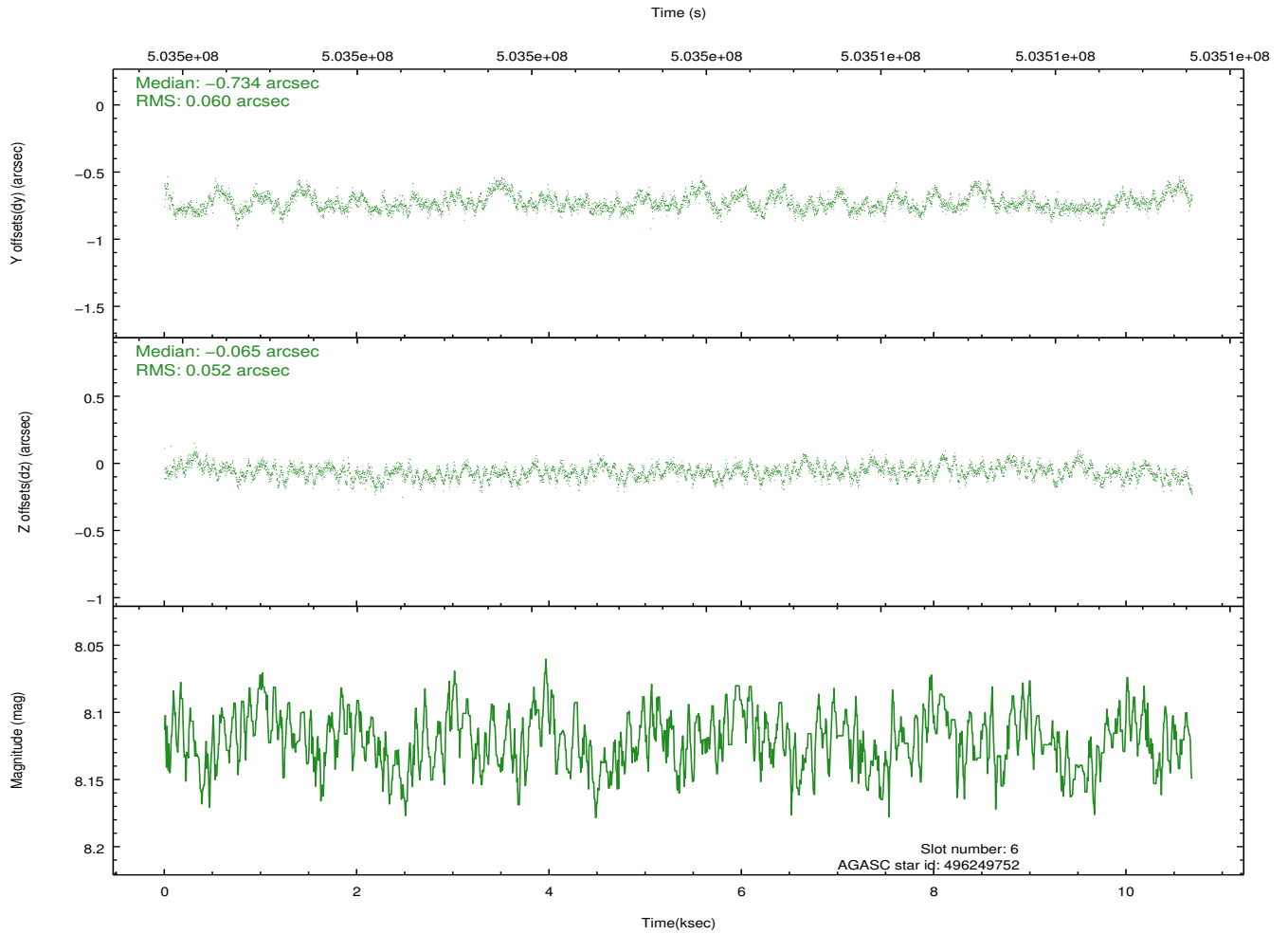
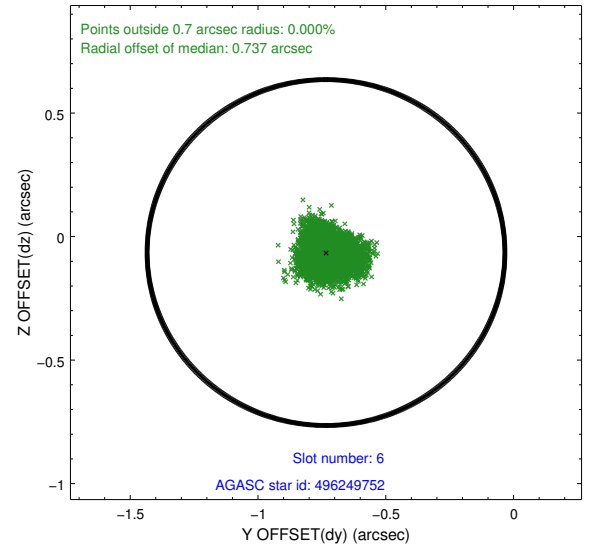
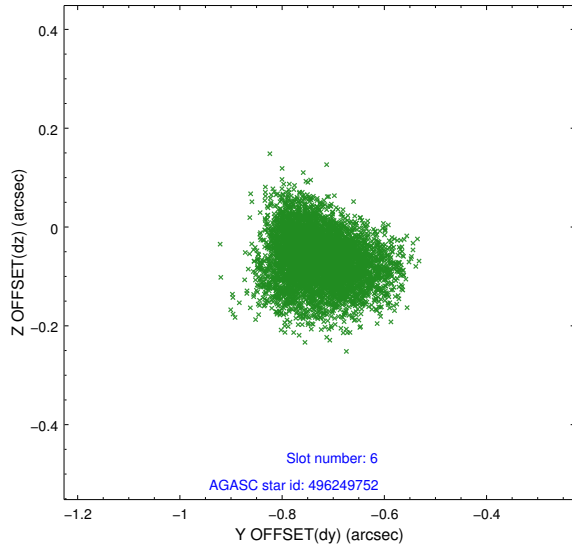
## 2.4.2 Slot 4



### 2.4.3 Slot 5

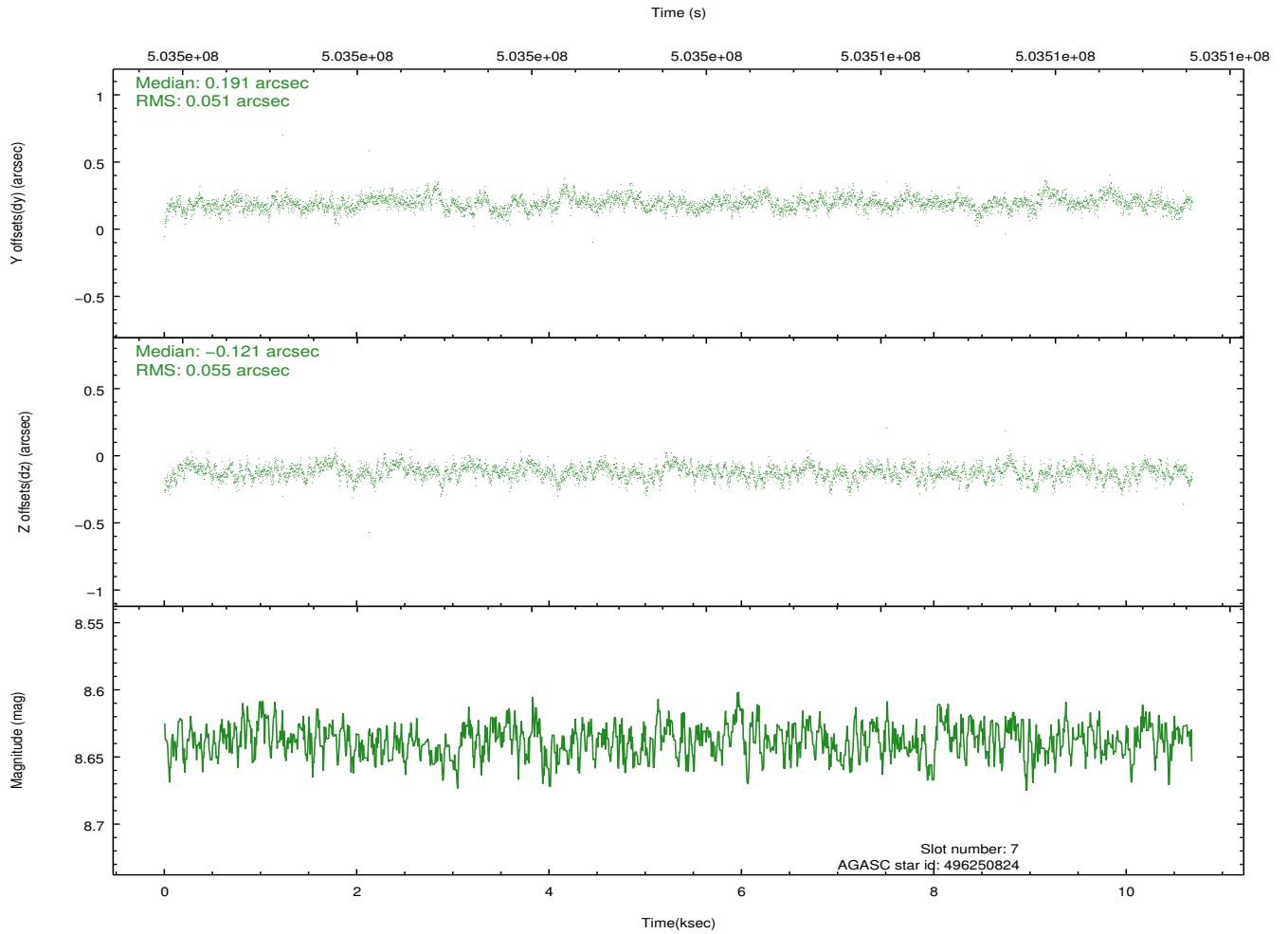
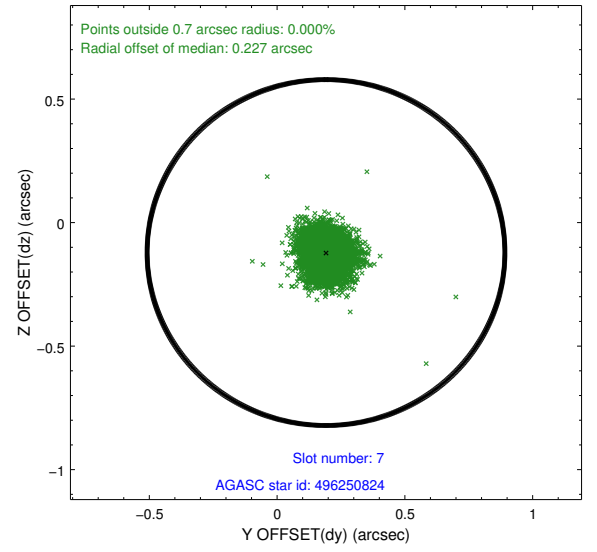
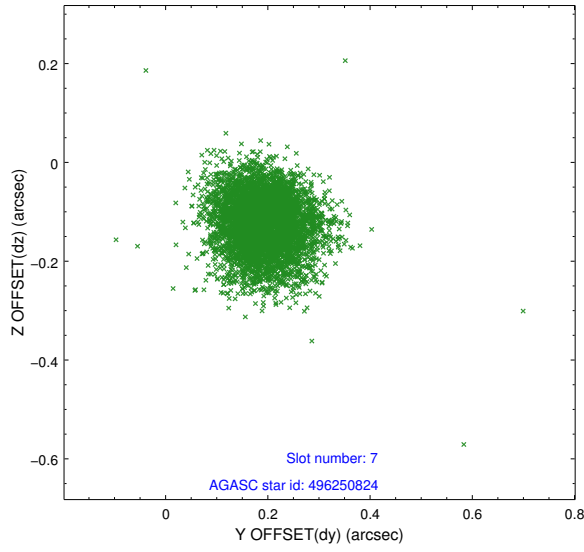


## 2.4.4 Slot 6



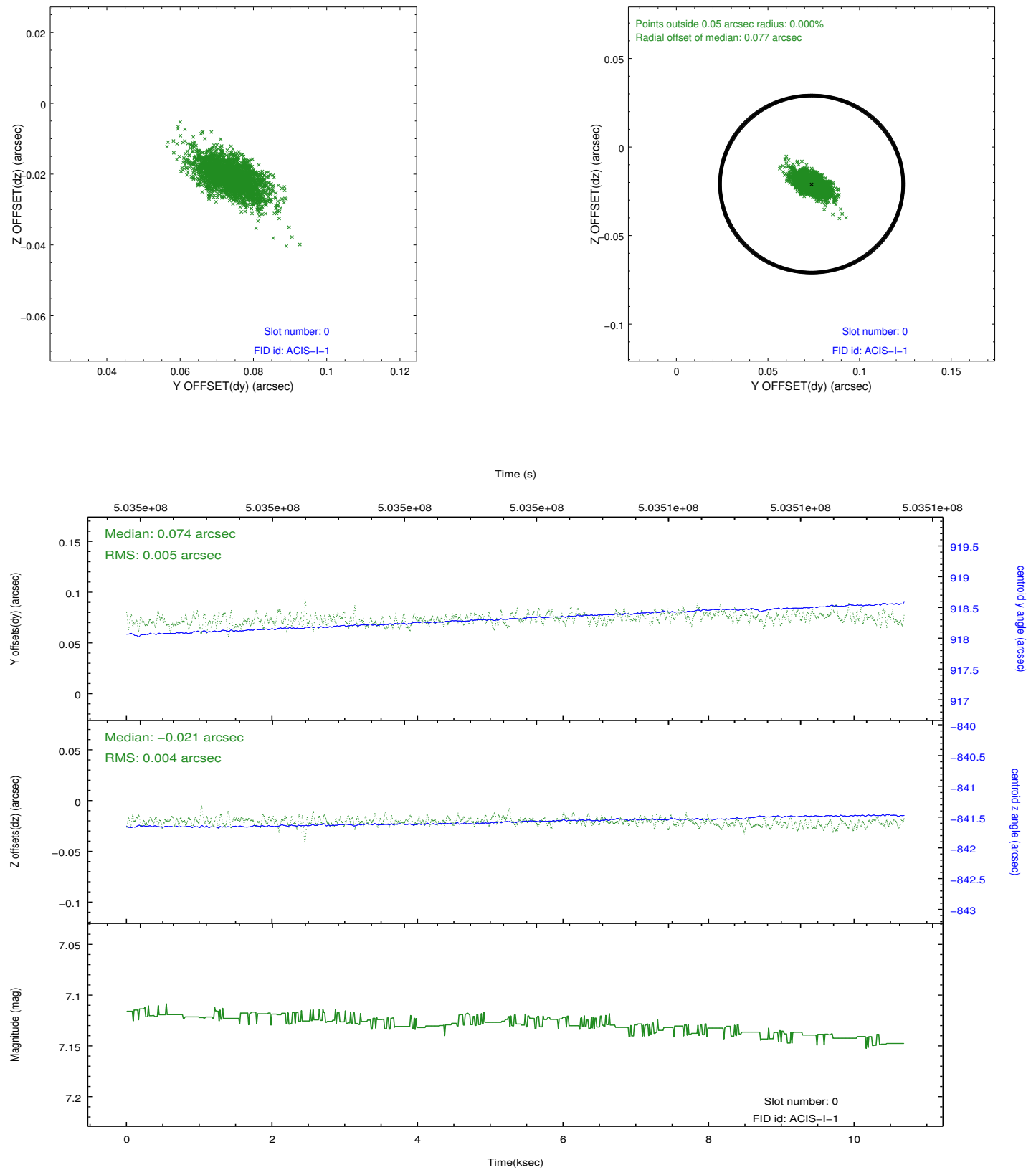


## 2.4.5 Slot 7

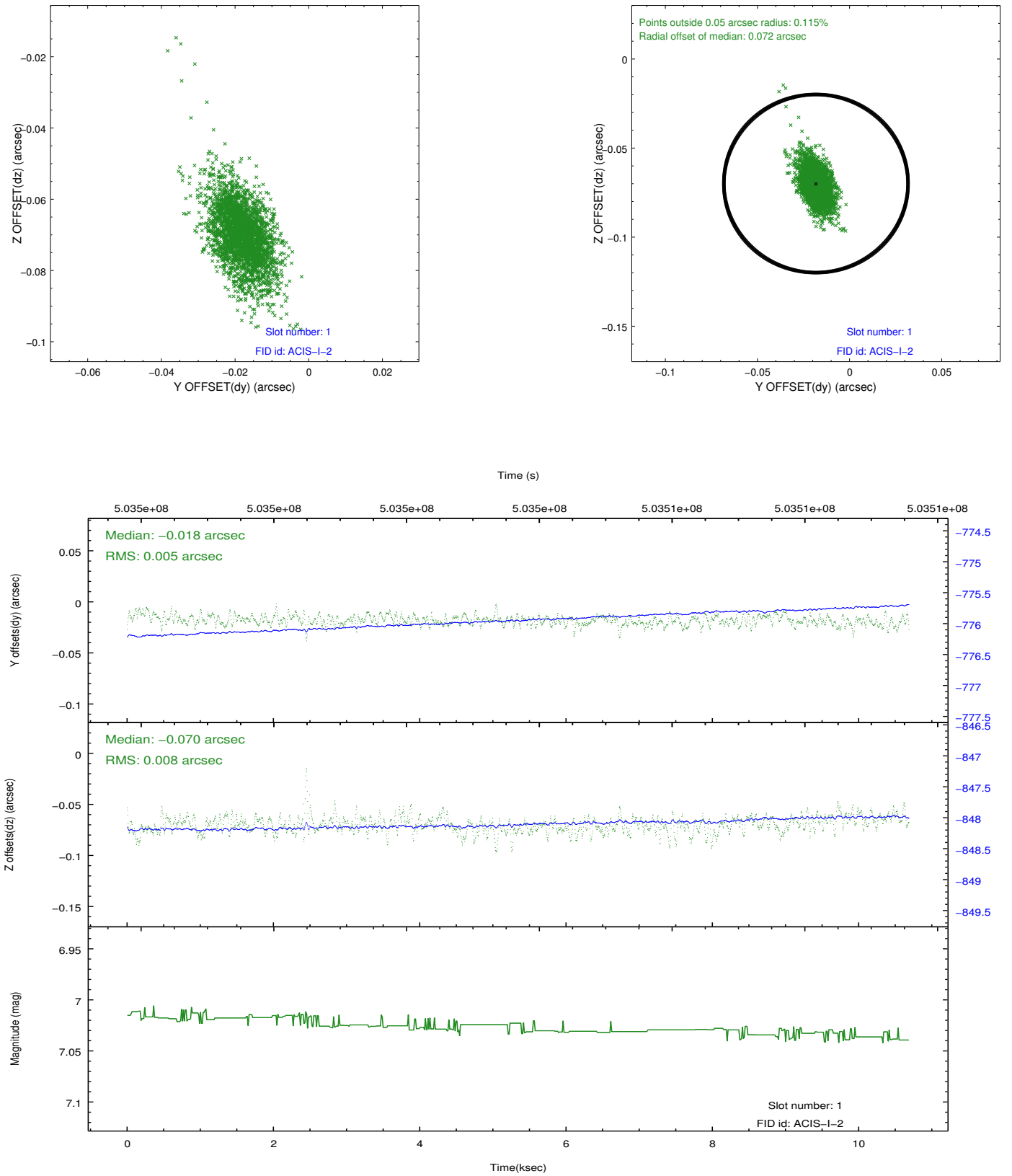


## 2.5 FID Slots

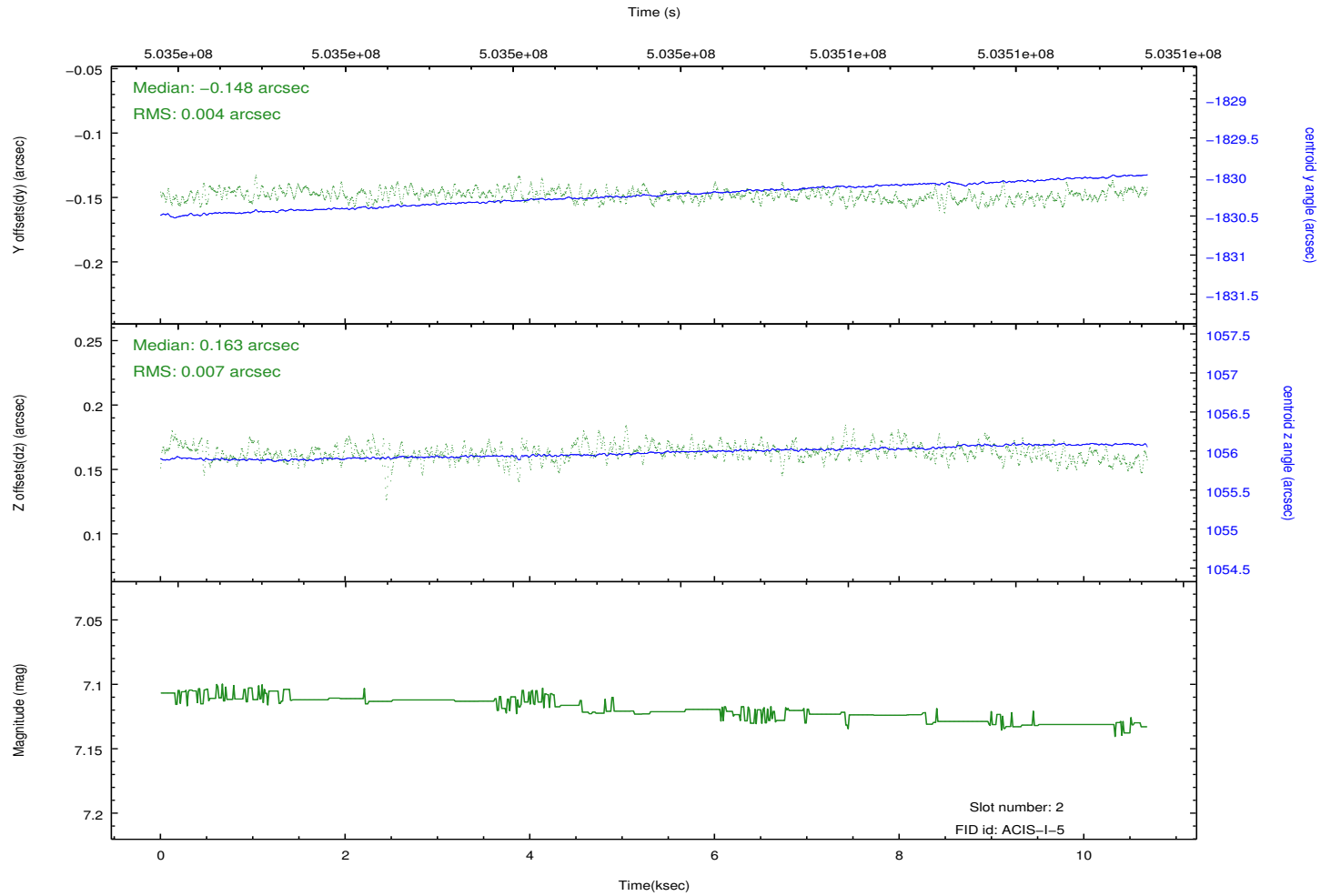
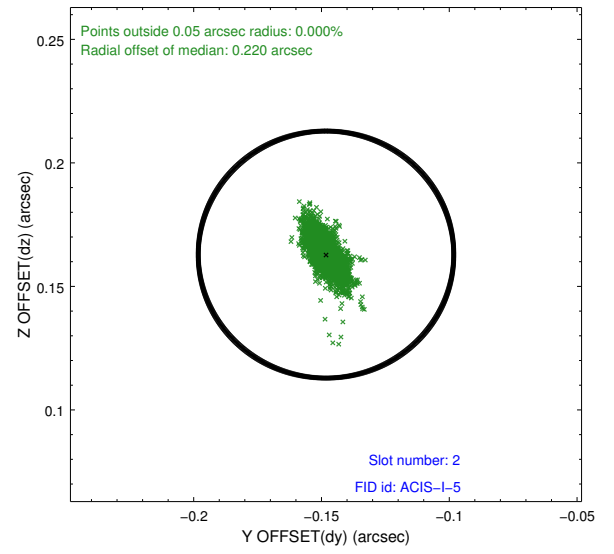
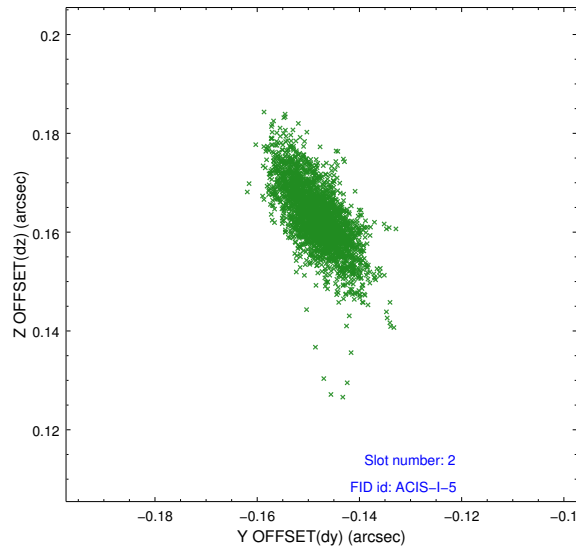
### 2.5.1 Slot 0



## 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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.58650008142

## 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.