

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9770 - L2 Version 2  
Chandra X-Ray Center

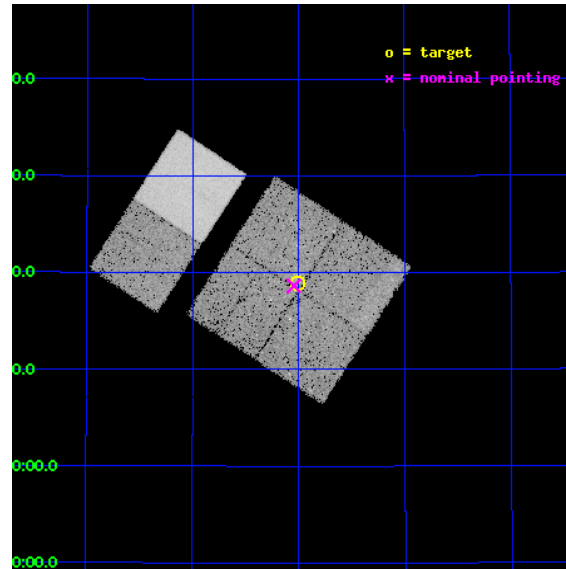
L2 Processing Date : May 5 2012

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# 1 Front

seq_num	200454	Sequence number
obs_id	9770	Observation id
title	The high-mass star forming region DR21	Proposal title
observer	Dr. Francesco Damiani	Principal investigator
object	DR 21	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	309.752917	Observer's specified target RA [deg]
dec_targ	42.315778	Observer's specified target Dec [deg]
ra_nom	309.76138002146	Nominal RA [deg]
dec_nom	42.310612941436	Nominal Dec [deg]
roll_nom	303.18298896112	Nominal Roll [deg]
revision	2	Processing version of data
ontime	19398.358947396	Sum of GTIs [s]
livetime	19152.725246115	Livetime [s]
ontime0	19401.599927783	Sum of GTIs [s]
ontime1	19401.599927783	Sum of GTIs [s]
ontime2	19401.599927783	Sum of GTIs [s]
ontime3	19398.358947396	Sum of GTIs [s]
ontime6	19401.599927783	Sum of GTIs [s]
ontime7	19401.599927783	Sum of GTIs [s]
l2events	148156	Number of level 2 events

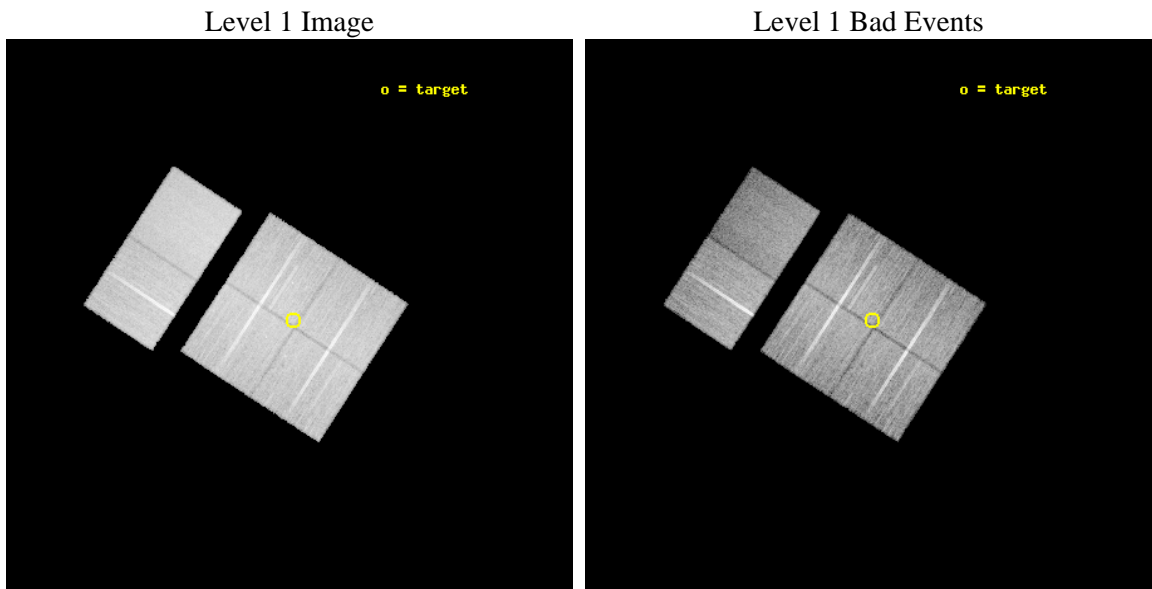




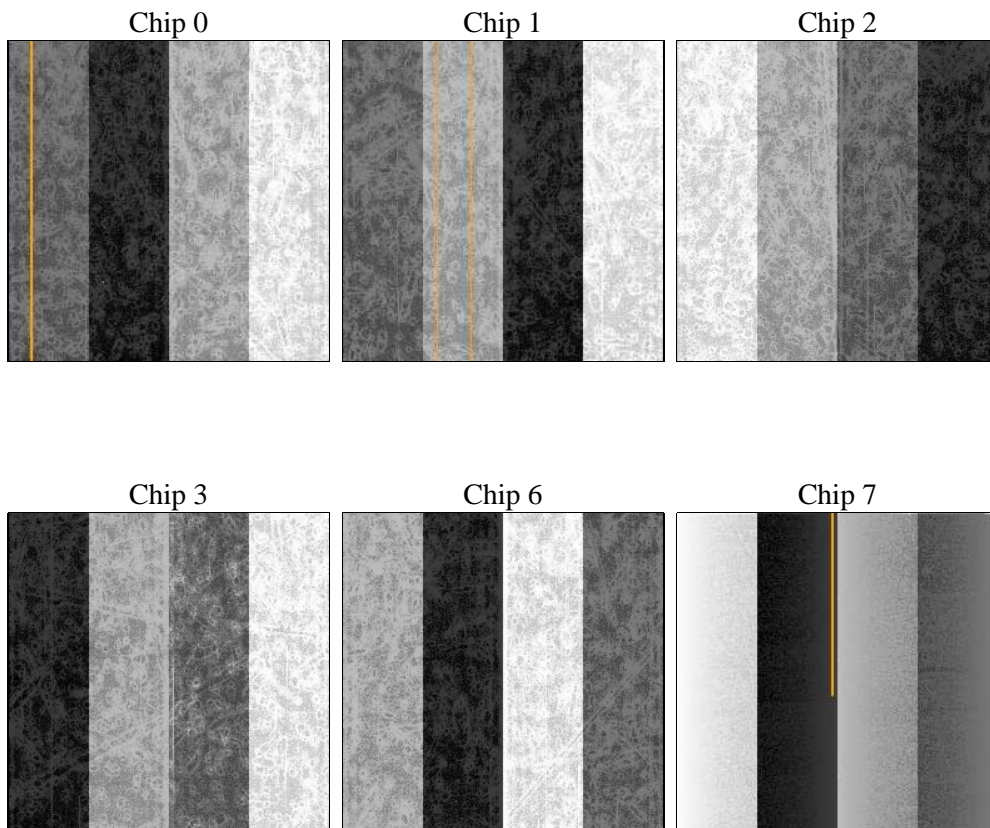
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19361.400000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	19398.358947396	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	19401.599927783	Sum of GTIs [s]
date	2012-05-05T07:14:48	Date and time of file creation	ontime1	19401.599927783	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	19401.599927783	Sum of GTIs [s]
			ontime3	19398.358947396	Sum of GTIs [s]
			ontime6	19401.599927783	Sum of GTIs [s]
			ontime7	19401.599927783	Sum of GTIs [s]
			l1events	960390	Number of level 1 events

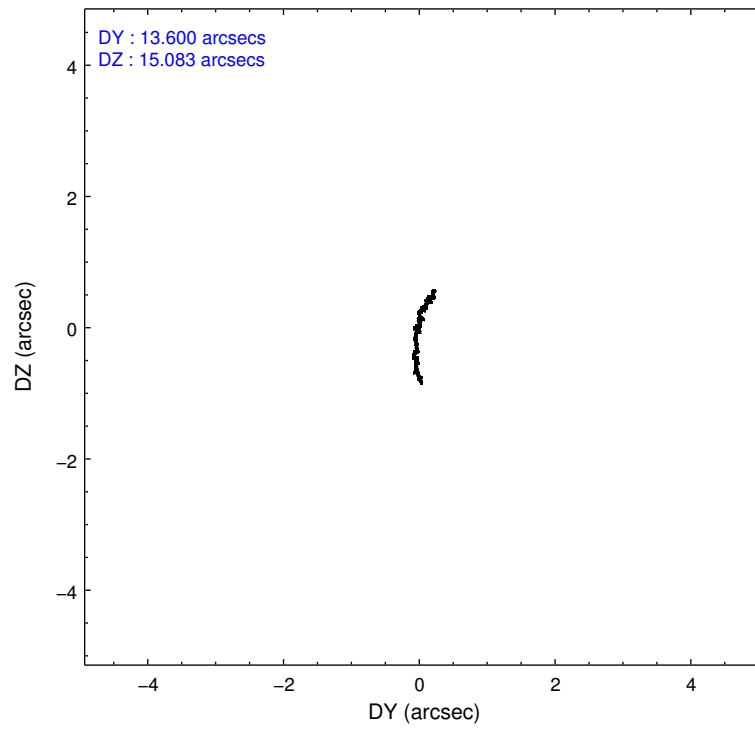
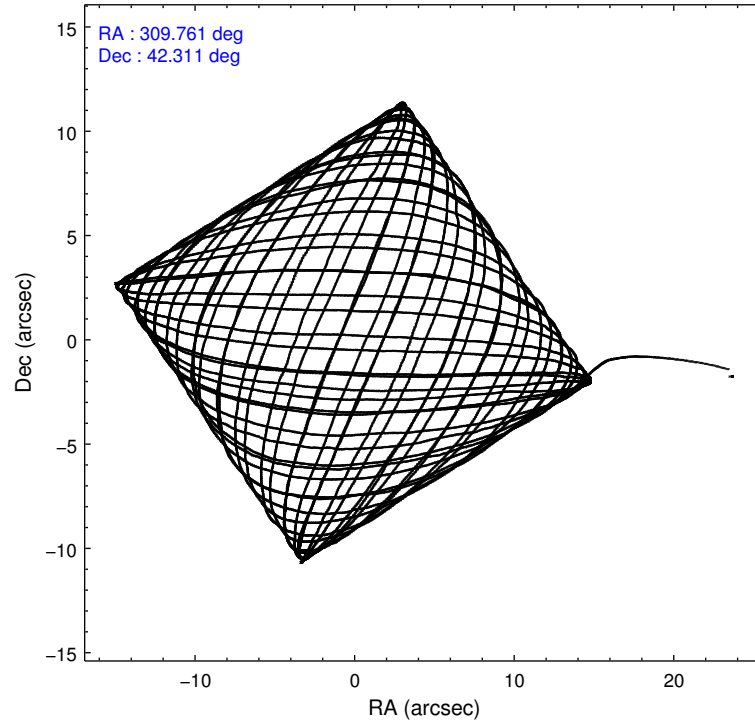
### 2.1.4 Events

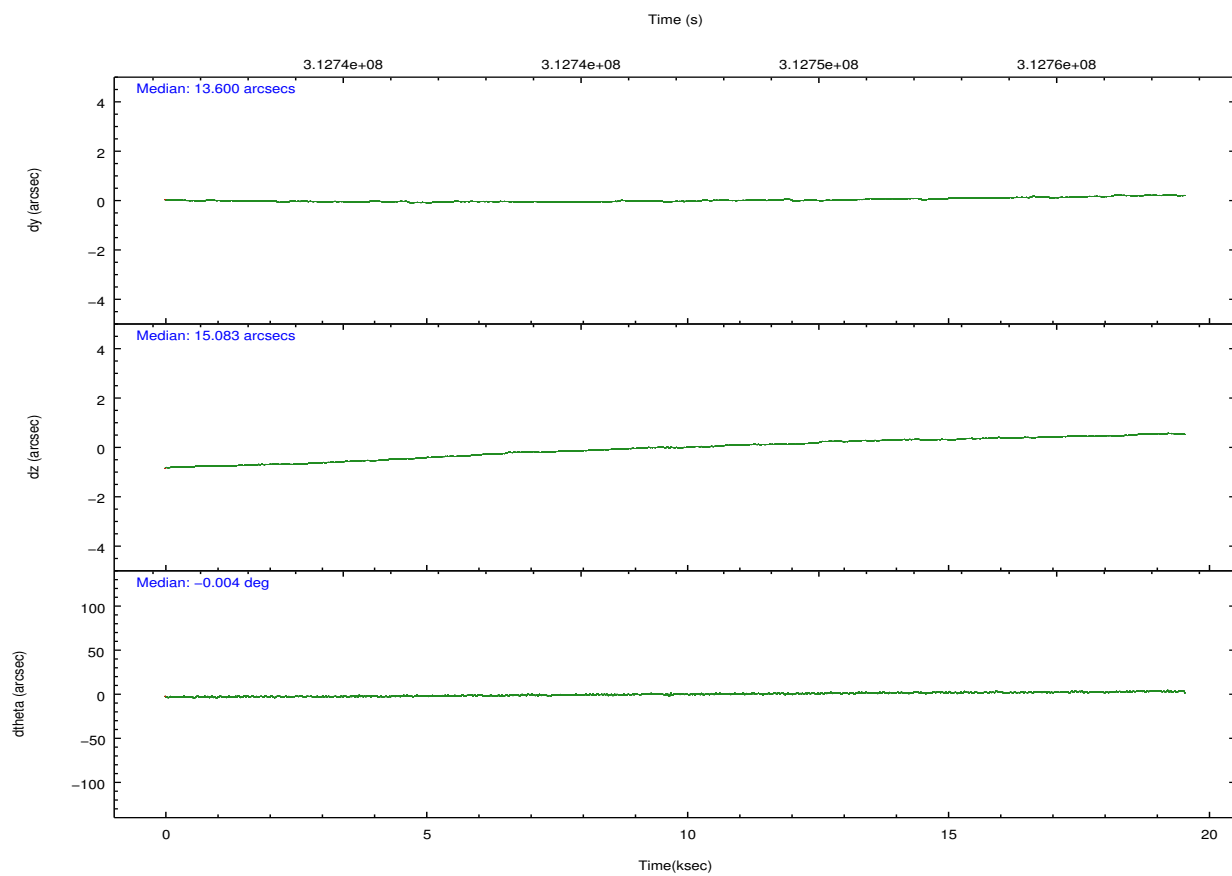
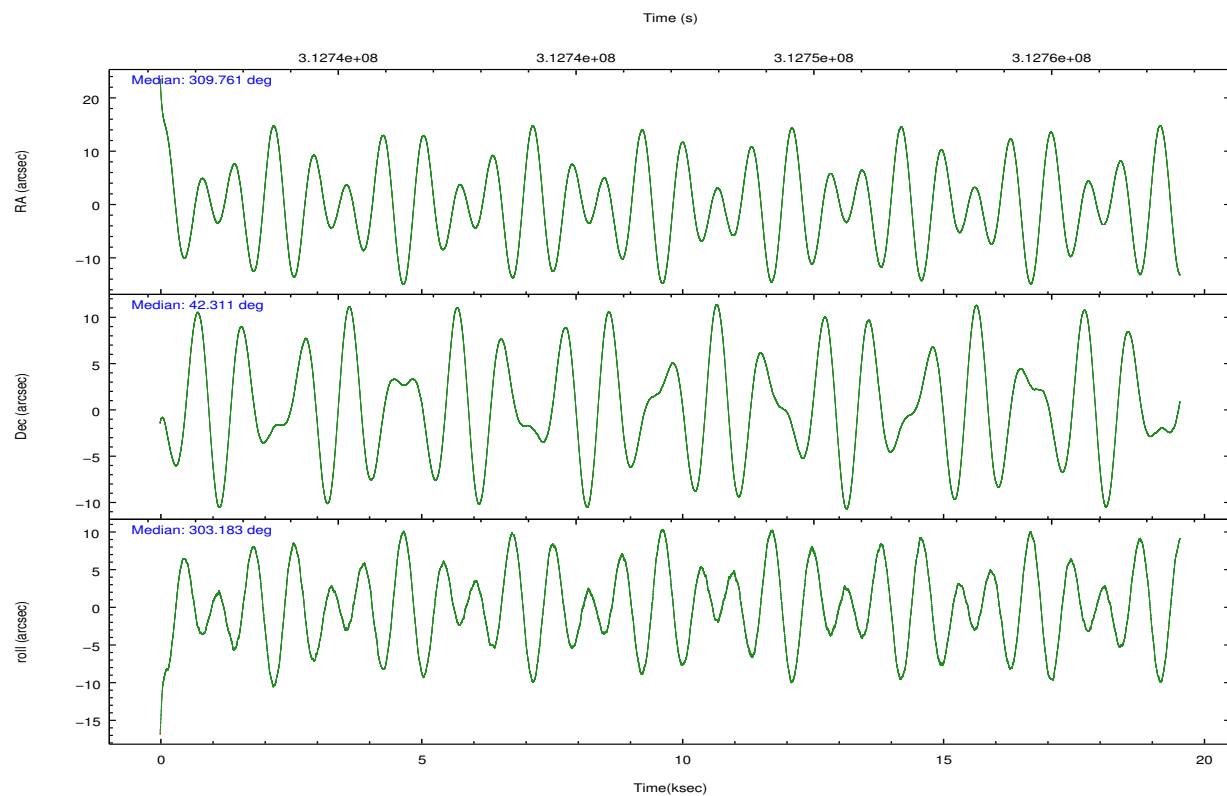
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	148578	147147	166084	157047	166339	175195	grade 0 events	6641	7215	6442	6668	5781	7020
rejected events	131538	128598	149741	140326	149693	96157		4%	4%	3%	4%	3%	4%
rejected %	88%	87%	90%	89%	89%	54%	grade 1 events	92	66	90	101	91	240
								0%	0%	0%	0%	0%	0%
							grade 2 events	3774	4155	3790	3457	3722	15936
								2%	2%	2%	2%	2%	9%
							grade 3 events	1850	1889	1625	1683	1797	7117
								1%	1%	0%	1%	1%	4%
							grade 4 events	1732	1898	1575	1753	1747	6965
								1%	1%	0%	1%	1%	3%
							grade 5 events	5390	5895	5058	6182	6549	18167
								3%	4%	3%	3%	3%	10%
							grade 6 events	3052	3399	2914	3162	3603	42010
								2%	2%	1%	2%	2%	23%
							grade 7 events	126047	122630	144590	134041	143049	77740
								84%	83%	87%	85%	85%	44%

## 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	309.728088	309.7613800214627	CCD I2 on	Y	Y
[deg] Pointing Dec	42.322938	42.31061294143637	CCD I3 on	Y	Y
[deg] Pointing Roll	302.996715	303.1829889611215	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	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	312737384.184000	312736371.91765	CCD S5 on	N	N
Observation start date	2007-11-29T15:28:39	2007-11-29T15:12:51	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	312756745.184000	312756983.13115	On-chip summing requested	N	N
Observation end date	2007-11-29T20:51:20	2007-11-29T20:56:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



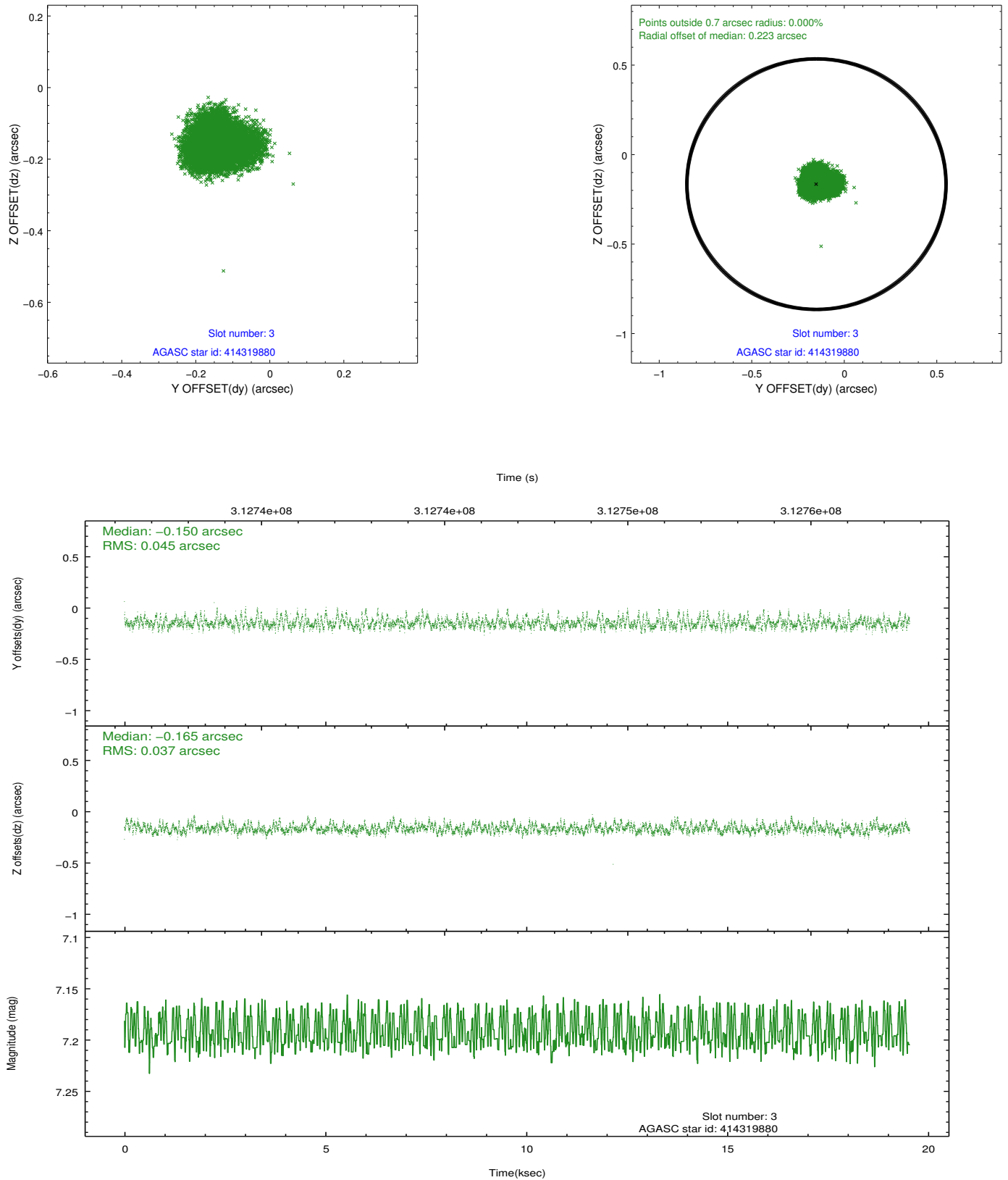


### Slot Statistics

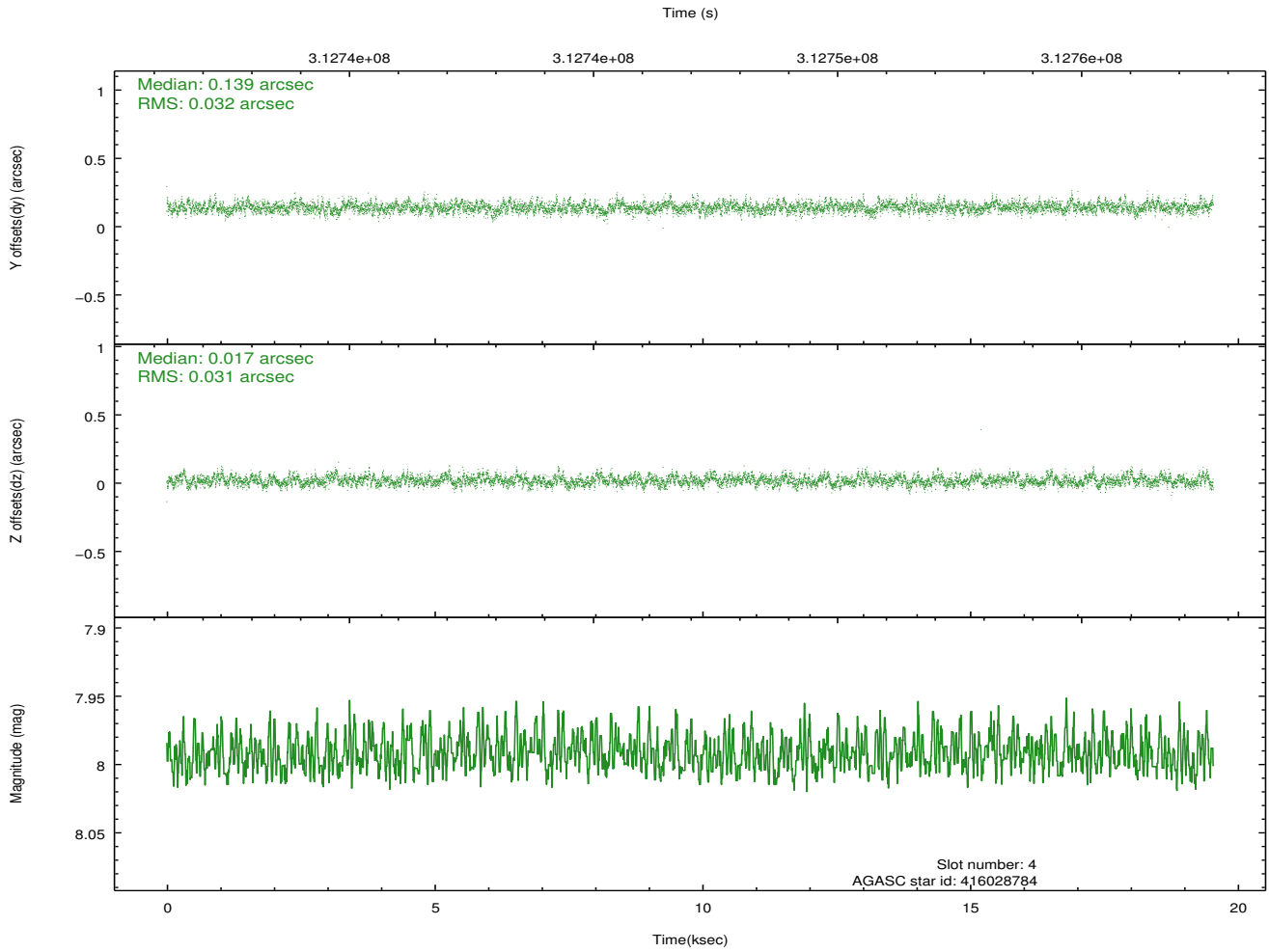
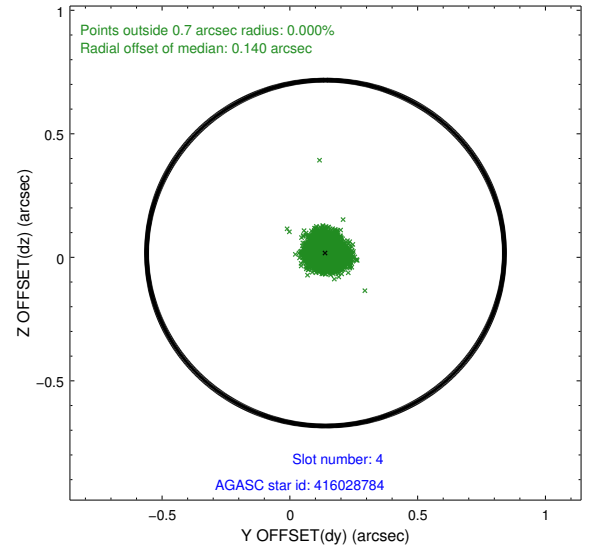
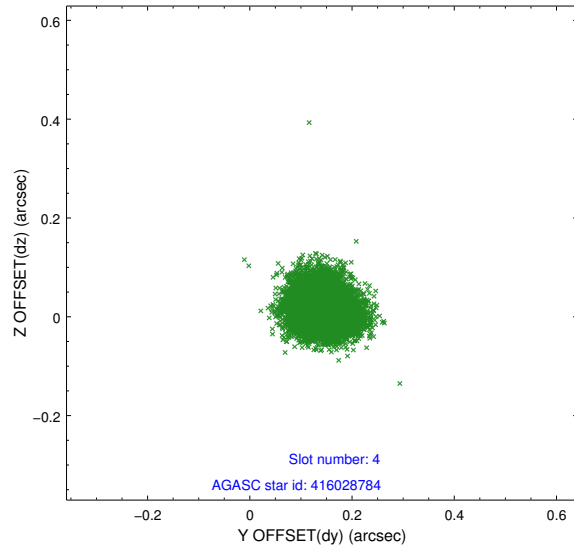
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.23	4767	0.075	-0.010	0.014	0.024	0.000000	0.000000	925.97	-838.61
1	FID	ACIS-I-2	7.14	4767	-0.048	-0.045	0.014	0.028	0.000000	0.000000	-768.13	-845.23
2	FID	ACIS-I-5	7.22	4765	-0.120	0.126	0.015	0.023	0.000000	0.000000	-1822.63	1058.83
3	GUIDE	414319880	7.19	9533	-0.150	-0.165	0.062	0.103	309.495433	42.845641	-1914.31	511.39
4	GUIDE	416028784	7.99	9534	0.139	0.017	0.047	0.076	310.446946	42.008694	1989.09	1001.14
5	GUIDE	414322040	8.08	9532	-0.072	0.139	0.052	0.085	309.251919	42.770338	-2038.99	-176.10
6	GUIDE	416031440	7.69	9533	-0.023	-0.033	0.060	0.096	310.484743	42.524801	475.95	2084.86
7	GUIDE	416029472	8.54	9528	0.099	0.039	0.056	0.093	310.573870	41.936611	2390.66	1148.93

## 2.4 Star Slots

### 2.4.1 Slot 3

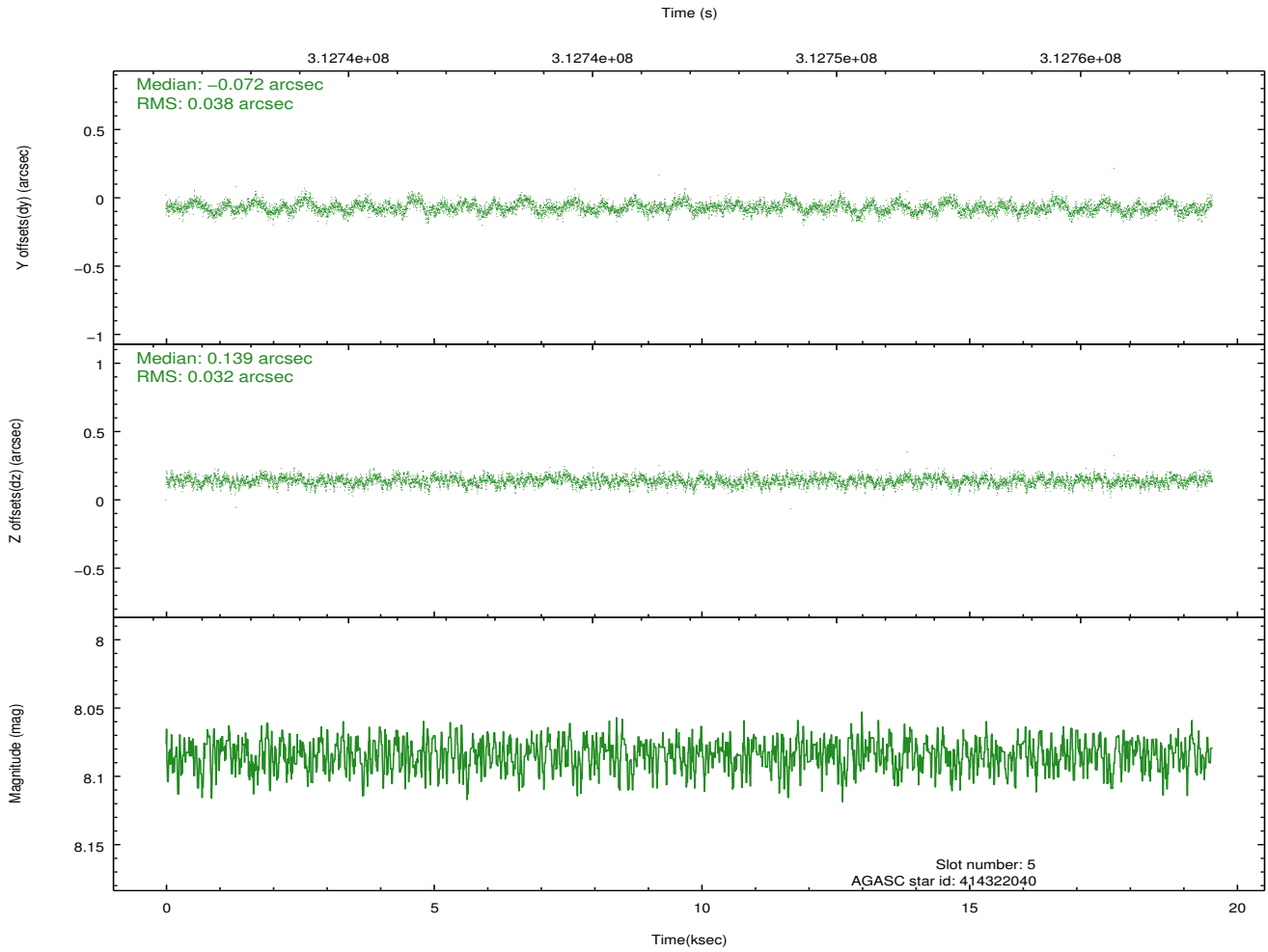
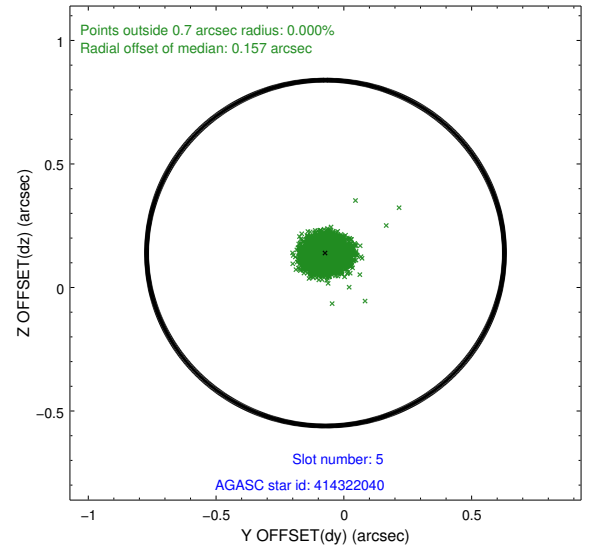
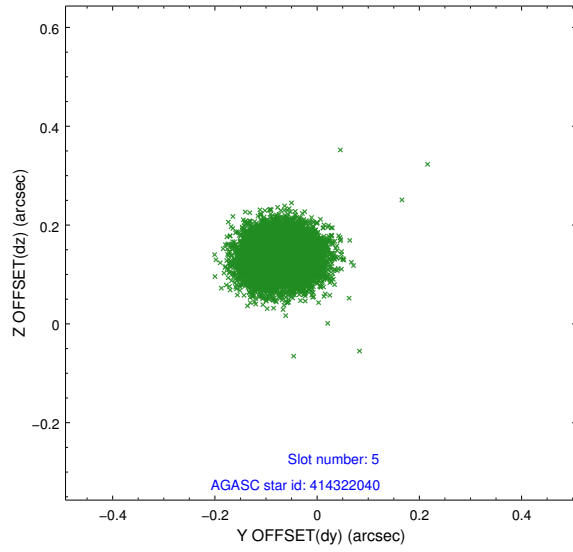


## 2.4.2 Slot 4

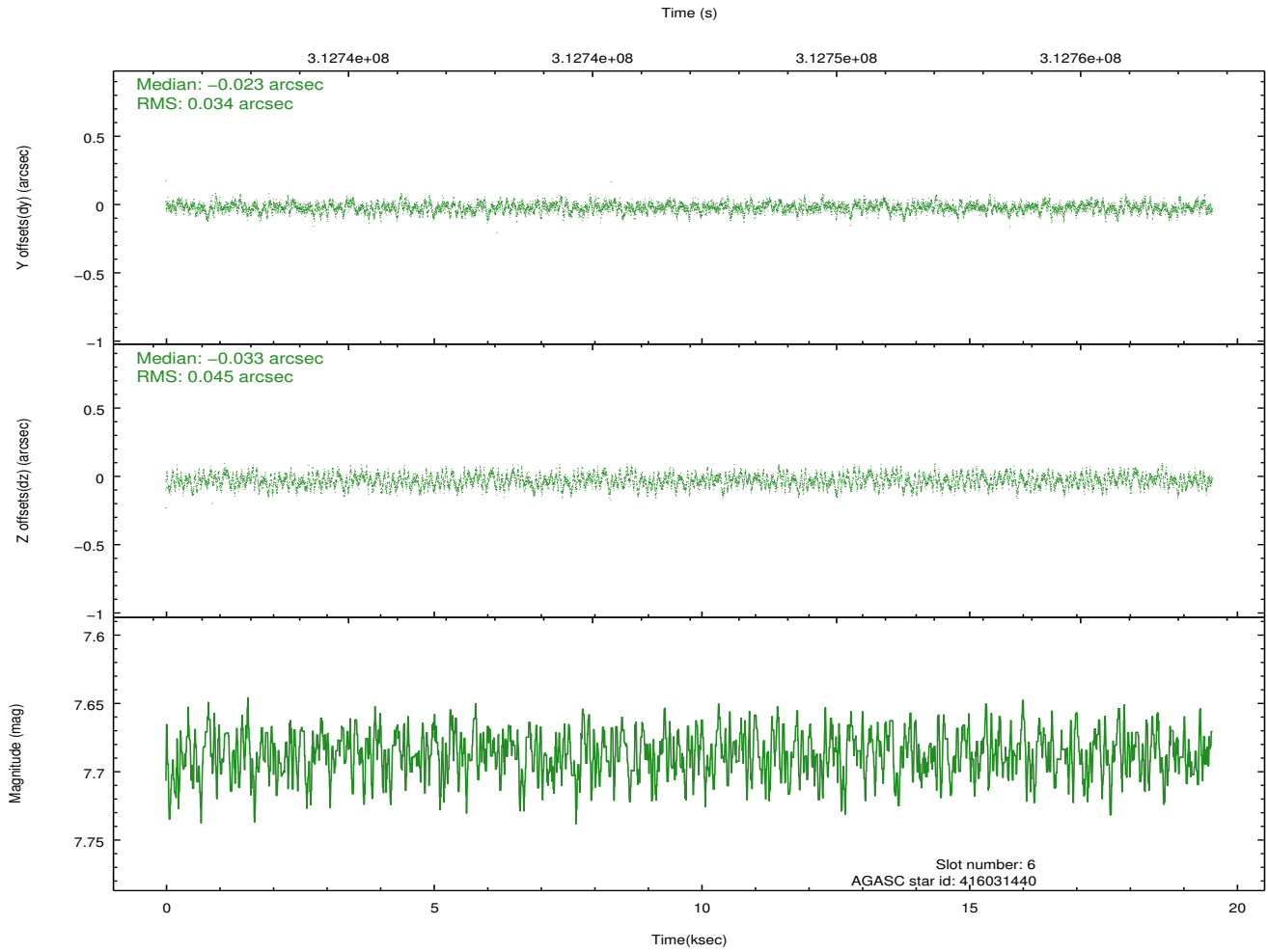
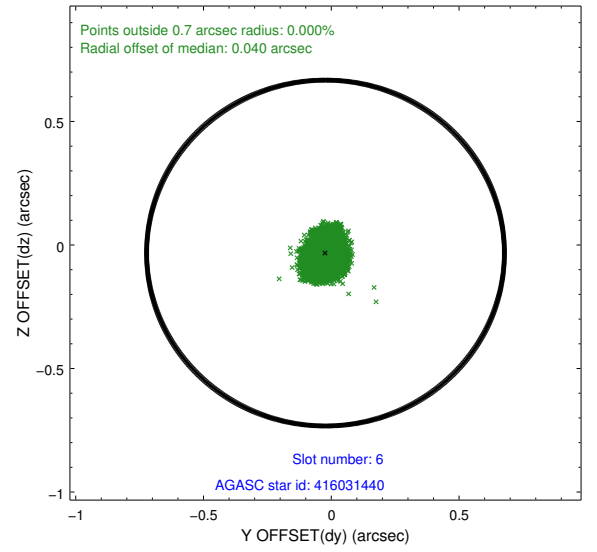
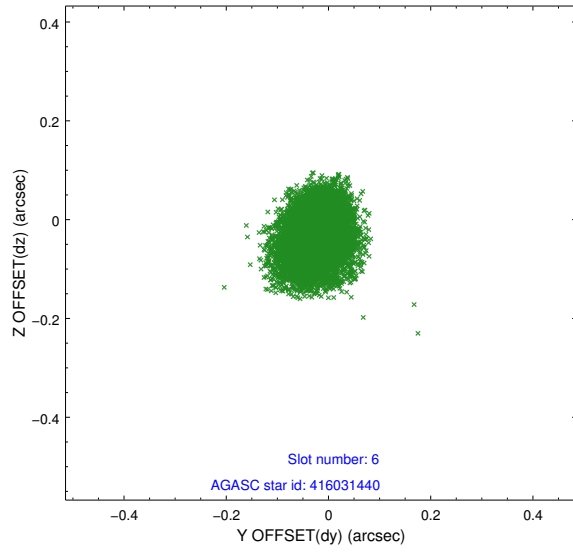




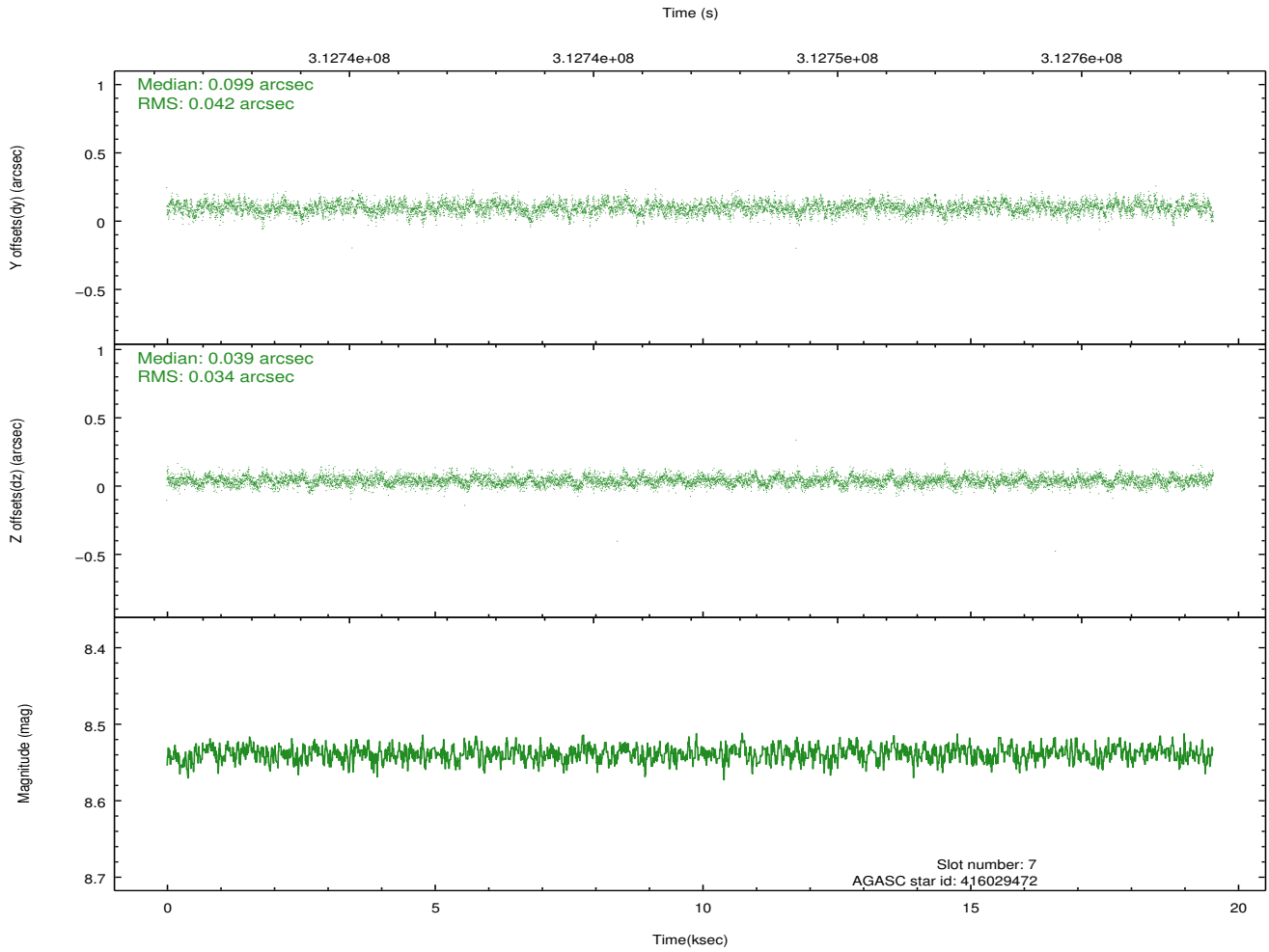
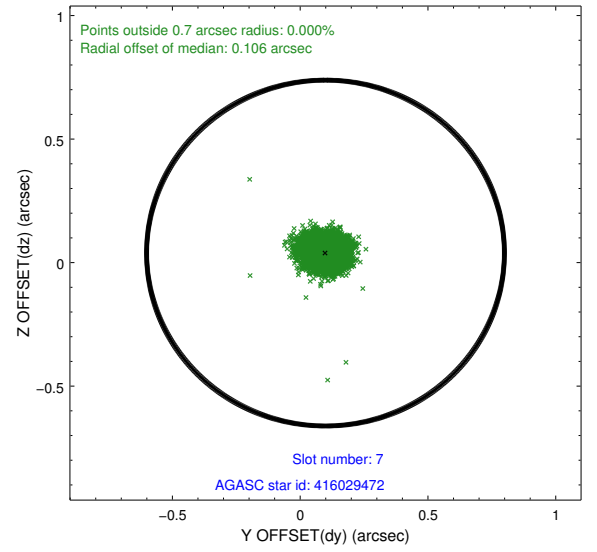
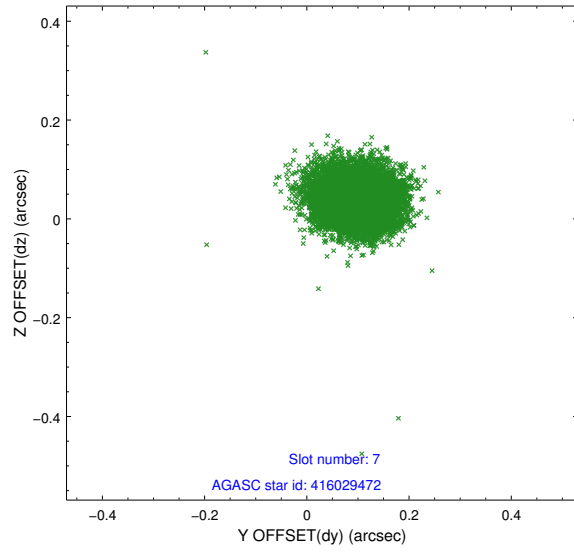
### 2.4.3 Slot 5



## 2.4.4 Slot 6

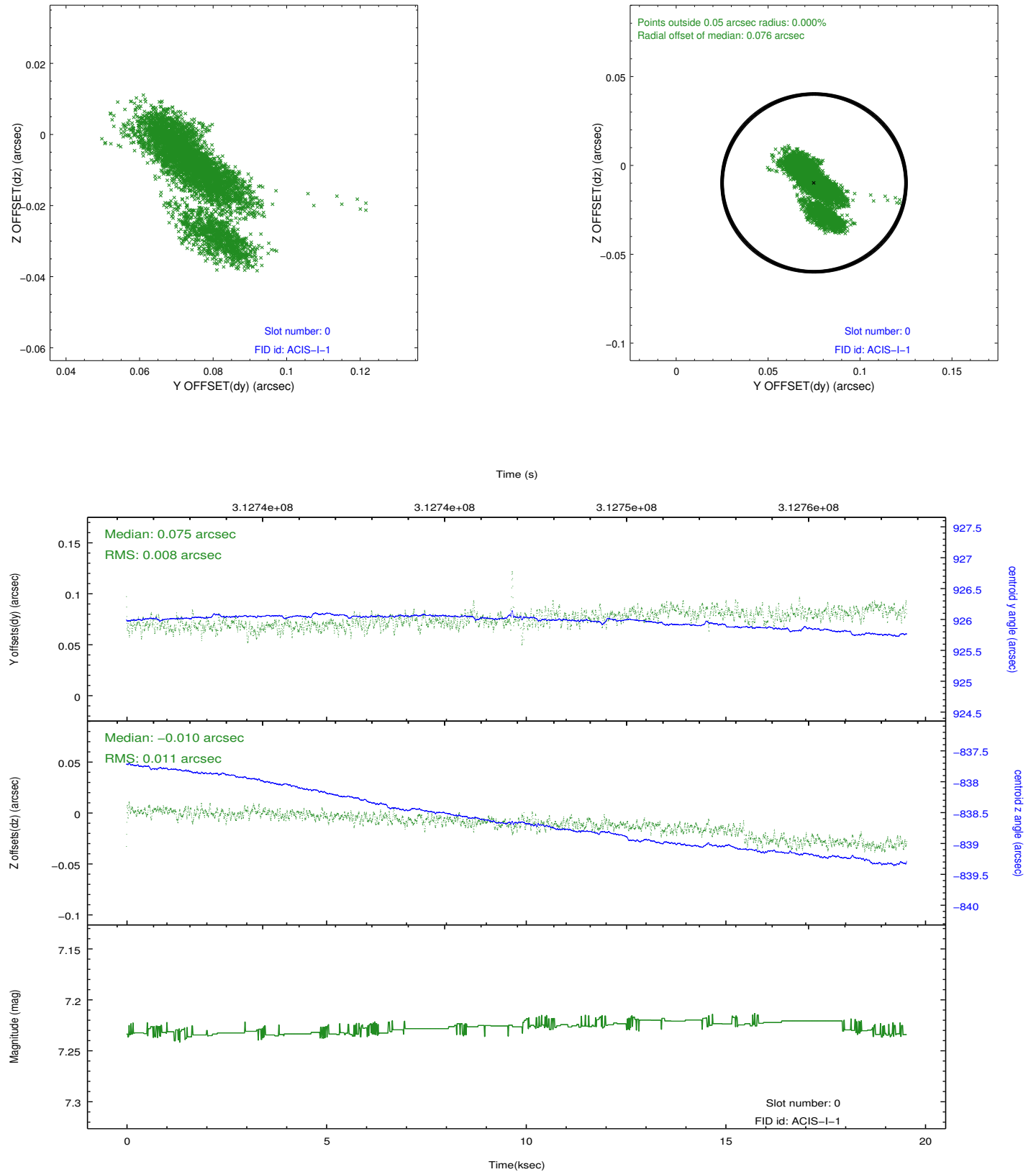


## 2.4.5 Slot 7

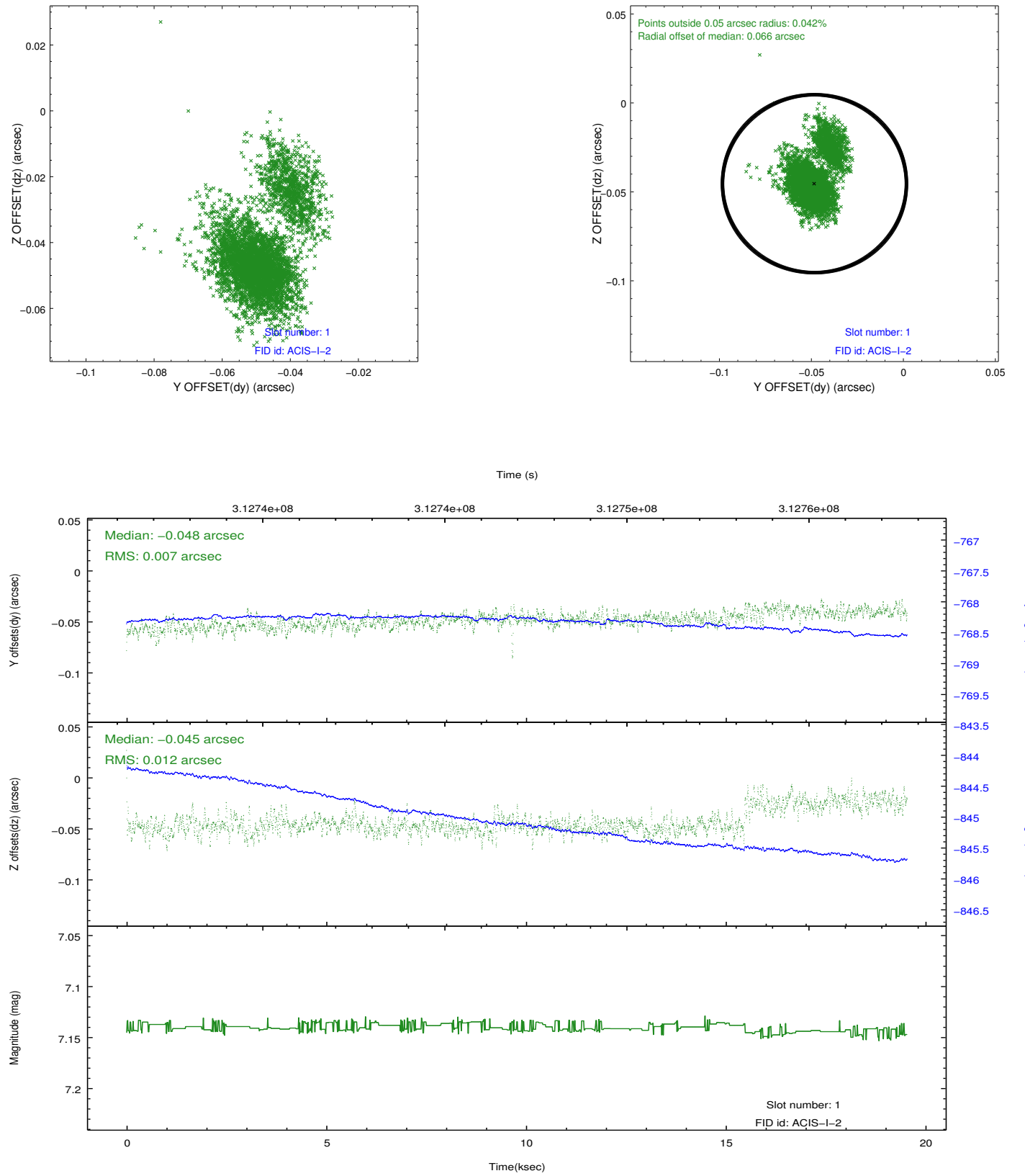


## 2.5 FID Slots

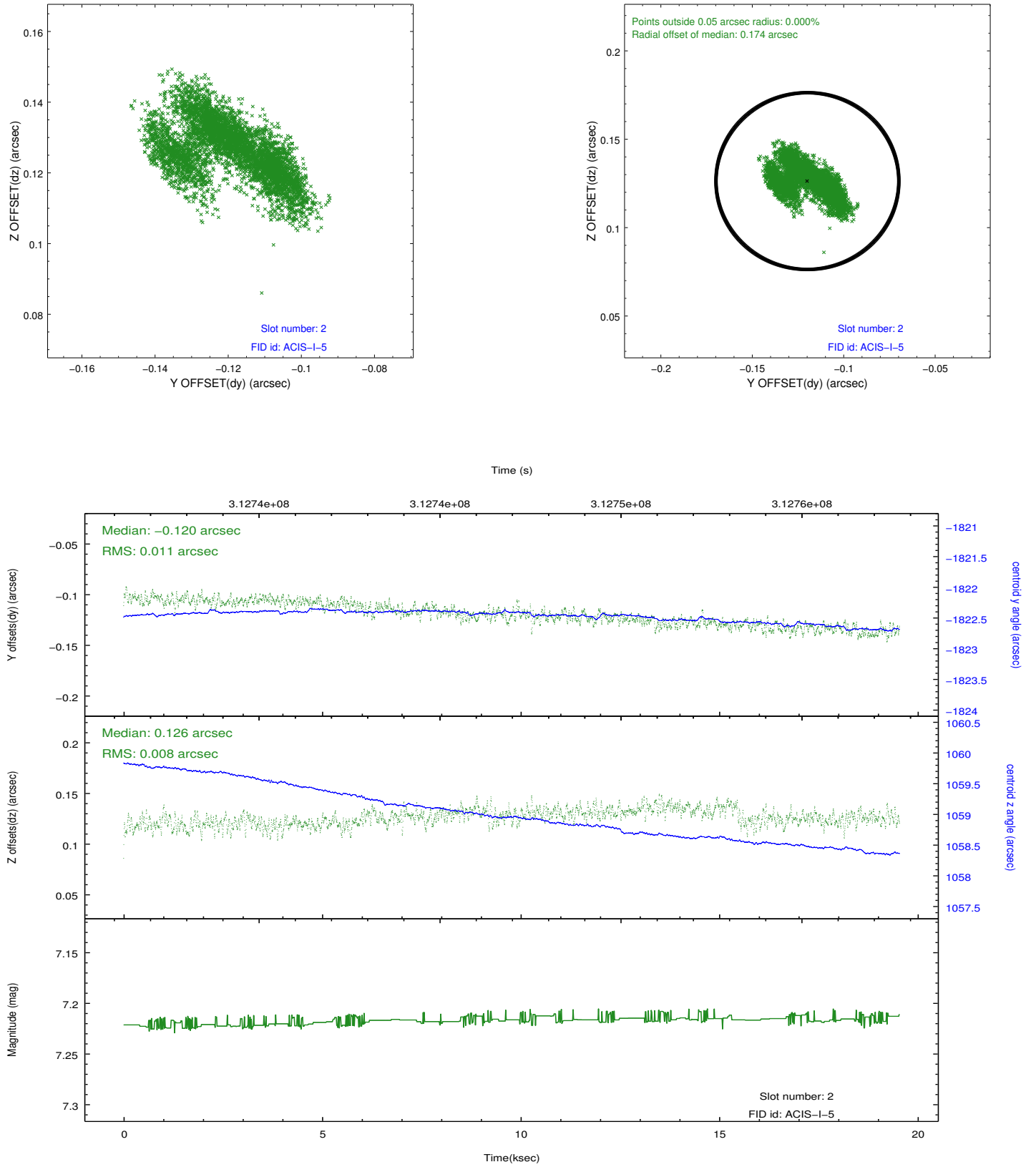
### 2.5.1 Slot 0



## 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)	2012.05.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.3983589

### A.2 Comments