

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3307 - L2 Version 5  
Chandra X-Ray Center

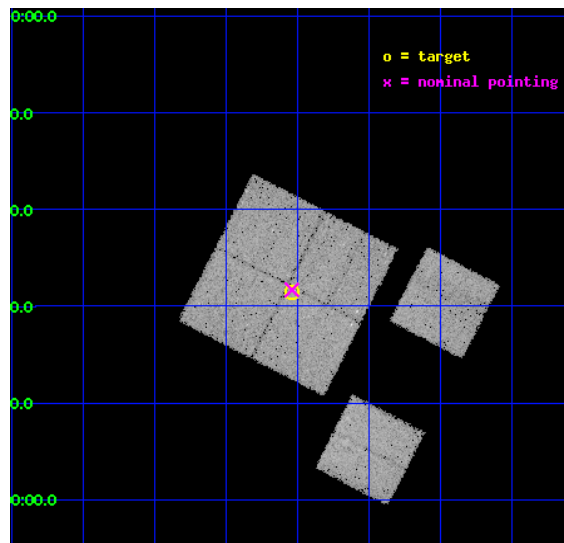
L2 Processing Date : Oct 11 2012

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# 1 Front

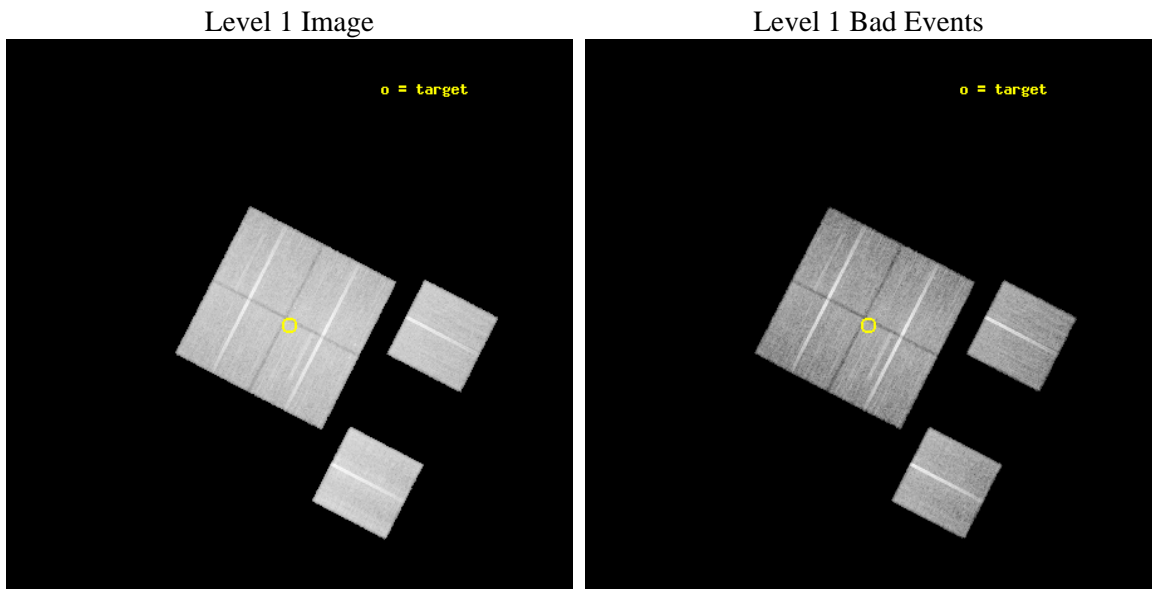
seq_num	900146	Sequence number
obs_id	3307	Observation id
title	A COMBINED CHANDRA/XMM ATTACK ON THE ASTROPHYSICS OF THE HARD X-RAY BACKGROUND.	Proposal title
observer	Prof. Ian McHardy	Principal investigator
object	XMM 1HR - FIELD 2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	26.259904	Observer's specified target RA [deg]
dec_targ	-4.643114	Observer's specified target Dec [deg]
ra_nom	26.259575344584	Nominal RA [deg]
dec_nom	-4.6384603393014	Nominal Dec [deg]
roll_nom	117.20864731019	Nominal Roll [deg]
revision	5	Processing version of data
ontime	30124.758927494	Sum of GTIs [s]
livetime	29743.301091002	Livetime [s]
ontime0	30127.999887764	Sum of GTIs [s]
ontime1	30127.999887764	Sum of GTIs [s]
ontime2	30121.518037021	Sum of GTIs [s]
ontime3	30124.758927494	Sum of GTIs [s]
ontime6	30127.999887764	Sum of GTIs [s]
ontime8	30127.999887764	Sum of GTIs [s]
l2events	121004	Number of level 2 events



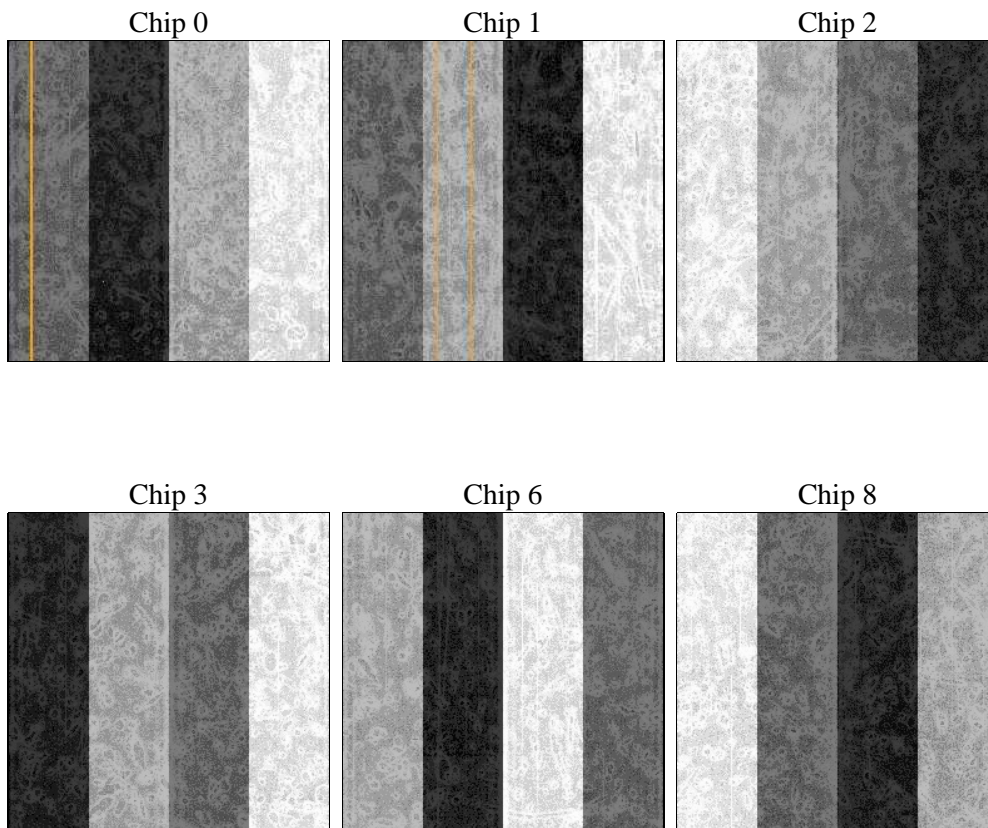
## 2 OBI

### 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	8.4.5	Processing system revision	ontime	30124.758927494	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime0	30127.999887764	Sum of GTIs [s]
date	2012-10-11T00:58:41	Date and time of file creation	ontime1	30127.999887764	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	30121.518037021	Sum of GTIs [s]
			ontime3	30124.758927494	Sum of GTIs [s]
			ontime6	30127.999887764	Sum of GTIs [s]
			ontime8	30127.999887764	Sum of GTIs [s]
			l1events	1237657	Number of level 1 events

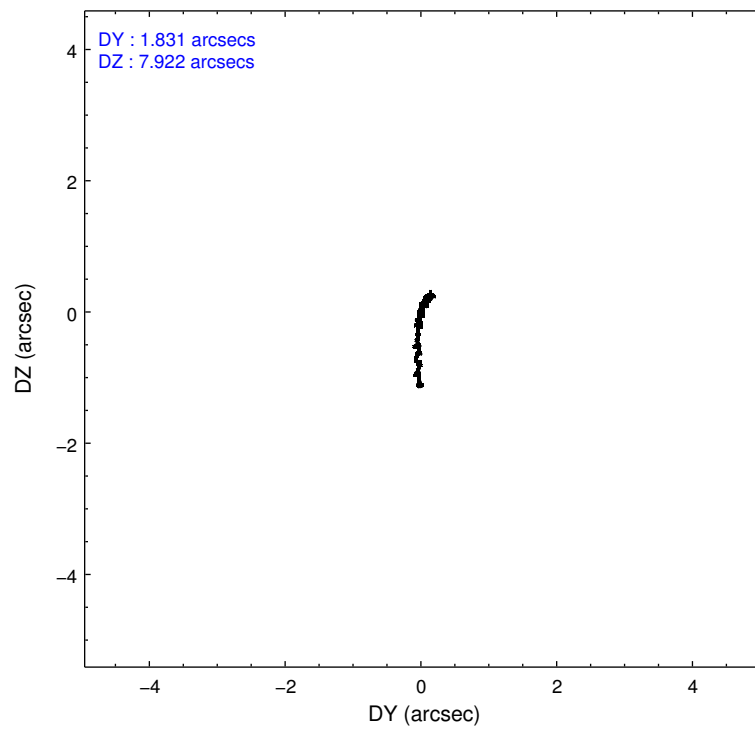
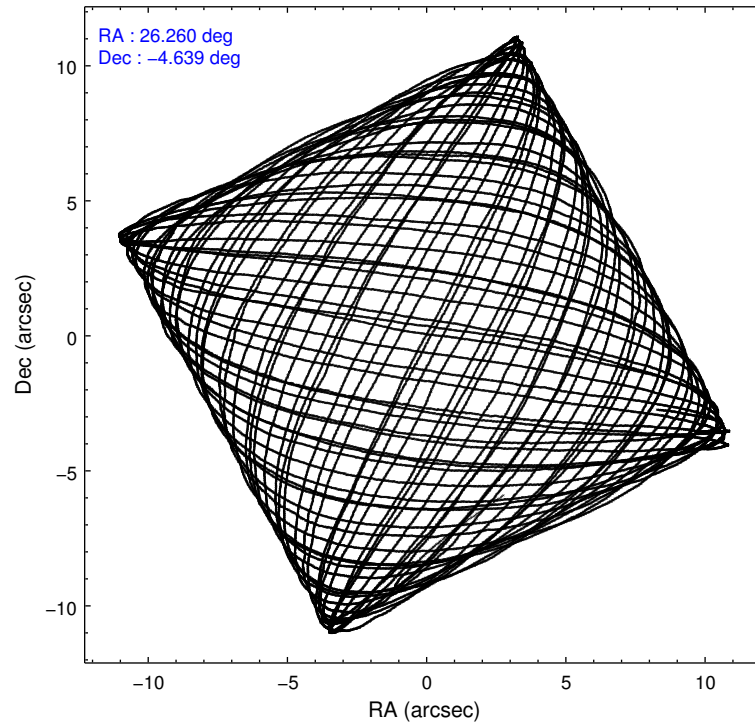
### 2.1.4 Events

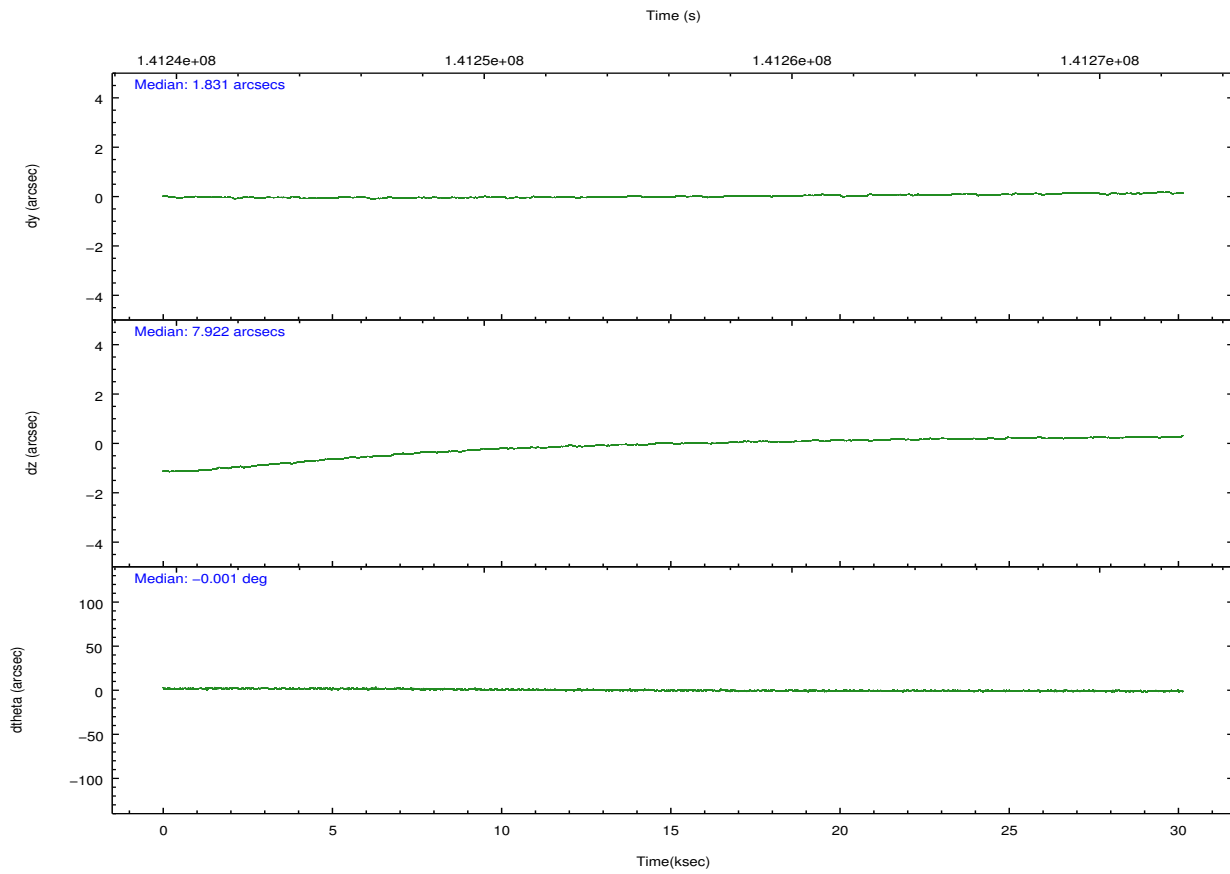
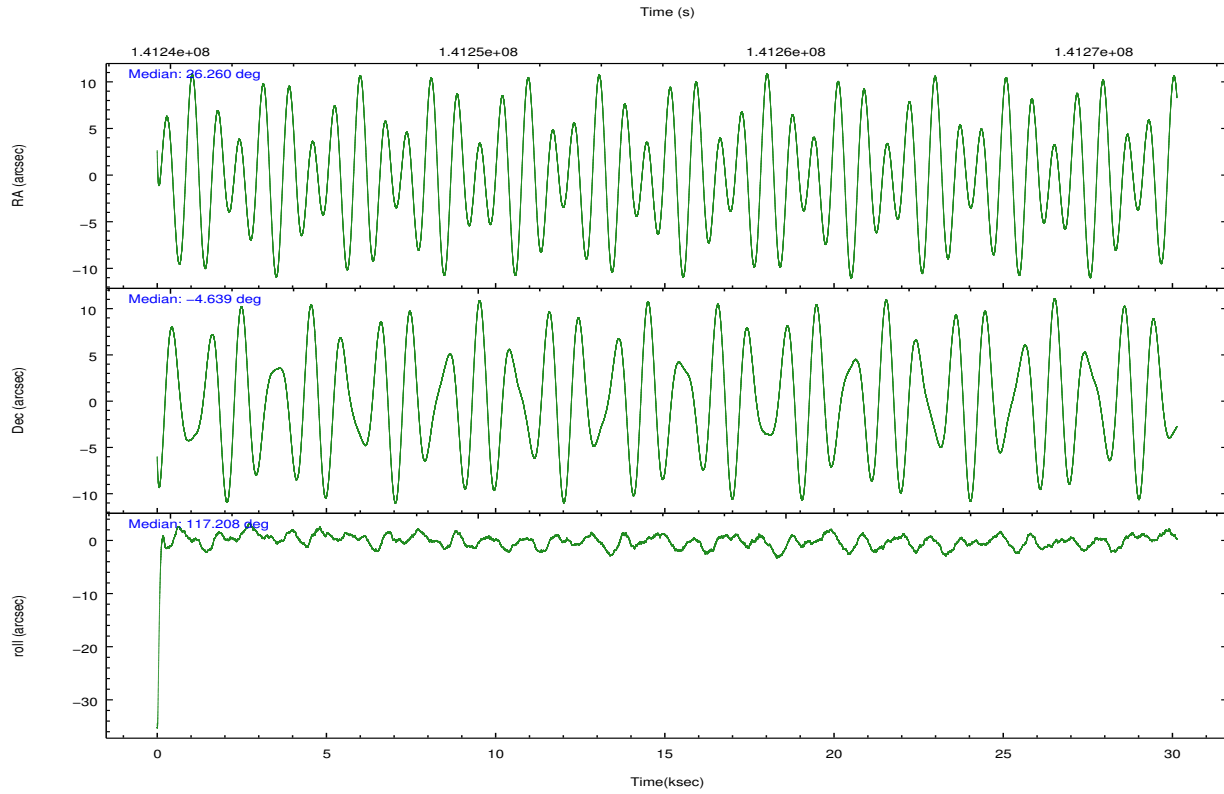
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 8		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 8
level 1 events	185686	184284	201870	203315	201377	261125	grade 0 events	9750	9500	10149	9731	8622	15826
rejected events	162449	160610	178537	180488	179277	209884		5%	5%	5%	4%	4%	6%
rejected %	87%	87%	88%	88%	89%	80%	grade 1 events	82	112	81	105	85	155
								0%	0%	0%	0%	0%	0%
							grade 2 events	5041	4995	4987	4725	4525	11715
								2%	2%	2%	2%	2%	4%
							grade 3 events	2307	2475	2213	2214	2244	5562
								1%	1%	1%	1%	1%	2%
							grade 4 events	2131	2434	2159	2242	2273	5224
								1%	1%	1%	1%	1%	2%
							grade 5 events	7615	8073	7098	8175	8476	11384
								4%	4%	3%	4%	4%	4%
							grade 6 events	4264	4553	4084	4176	4693	13512
								2%	2%	2%	2%	2%	5%
							grade 7 events	154496	152142	171099	171947	170459	197747
								83%	82%	84%	84%	84%	75%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012368	ACIS-012368	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	26.282719	26.25957534458377	Subarray requested	NONE	NONE
[deg] Pointing Dec	-4.653223	-4.638460339301445	Alternating exposures requested	N	N
[deg] Pointing Roll	117.001853	117.2086473101864	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	141241205.184000	141239996.9707			
Observation start date	2002-06-23T17:39:01	2002-06-23T17:19:56			
[s] Observation end time (MET)	141271205.184000	141271862.6845			
Observation end date	2002-06-24T01:59:01	2002-06-24T02:11:02			
Read mode	TIMED	TIMED			

## 2.3 Aspect



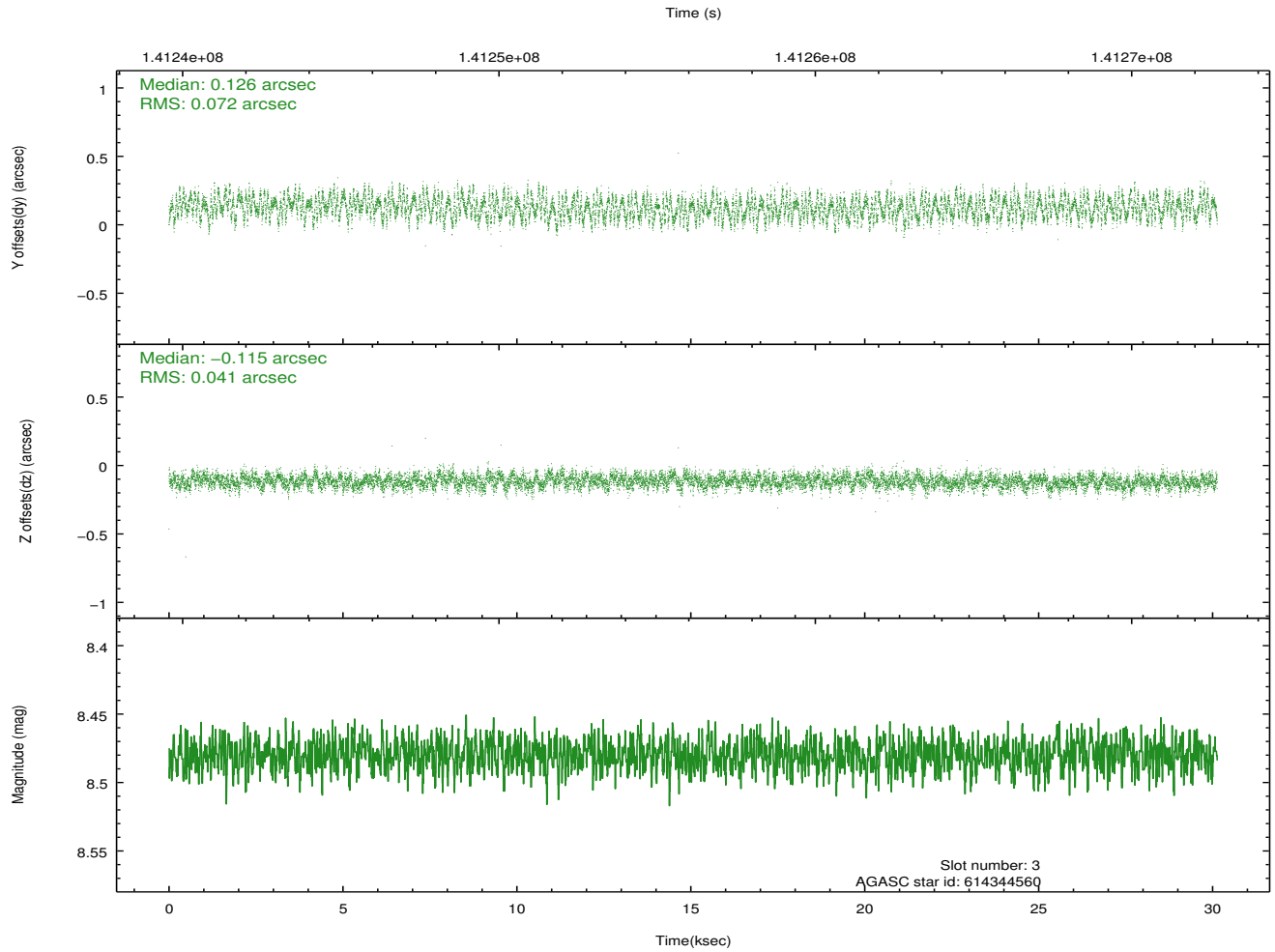
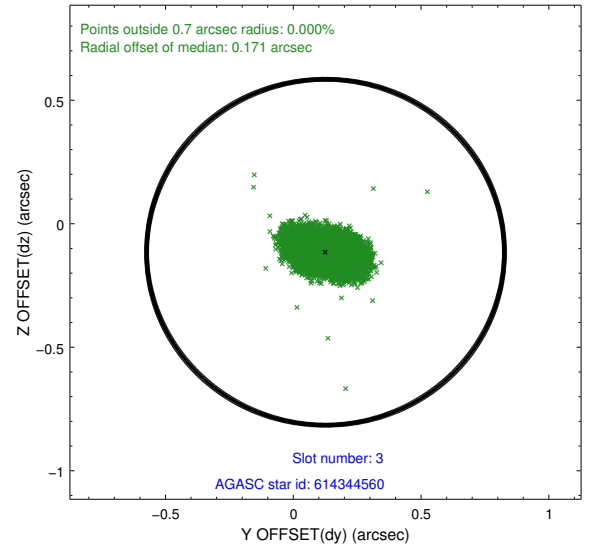
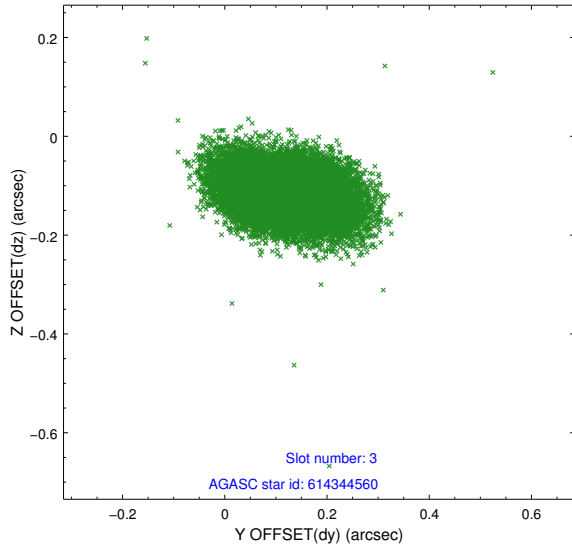


### Slot Statistics

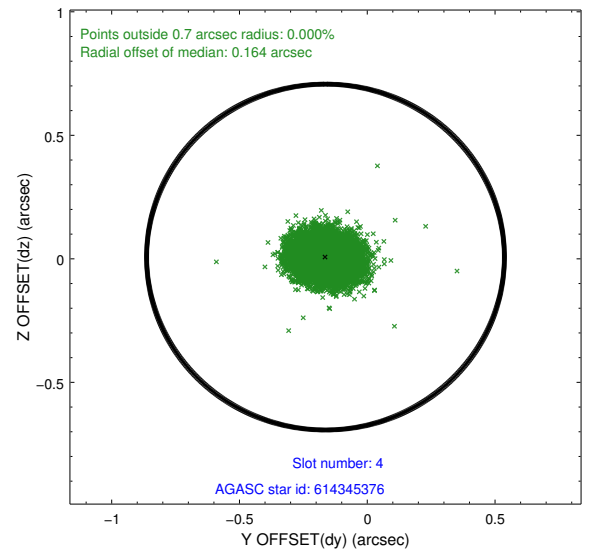
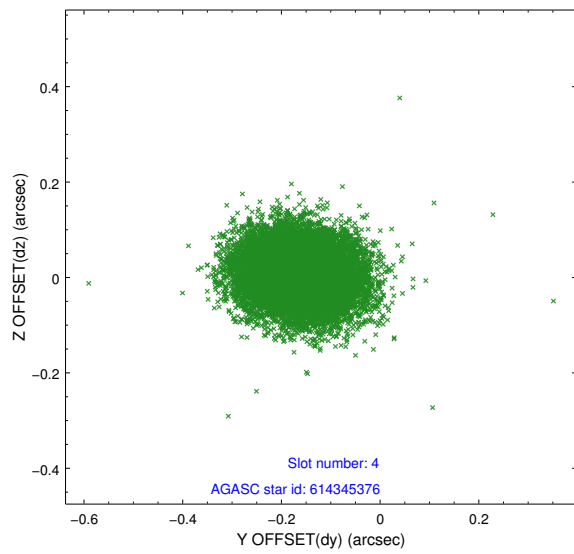
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	7348	-0.018	0.049	0.022	0.033	0.000000	0.000000	937.94	-831.14
1	FID	ACIS-I-5	7.23	7348	-0.041	0.039	0.013	0.021	0.000000	0.000000	-1810.12	1066.34
2	FID	ACIS-I-6	7.26	7348	-0.028	-0.020	0.014	0.023	0.000000	0.000000	403.44	1710.84
3	GUIDE	614344560	8.48	14695	0.126	-0.115	0.088	0.141	25.966640	-5.517685	-2257.95	2423.25
4	GUIDE	614345376	9.29	14695	-0.163	0.007	0.081	0.133	25.702118	-4.344424	1936.58	1353.94
5	GUIDE	614344768	9.61	14695	-0.224	-0.049	0.103	0.164	25.572186	-4.331089	2191.01	1747.85
6	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	614479384	9.40	14695	0.261	0.156	0.098	0.163	26.458684	-5.277867	-2288.77	460.28

## 2.4 Star Slots

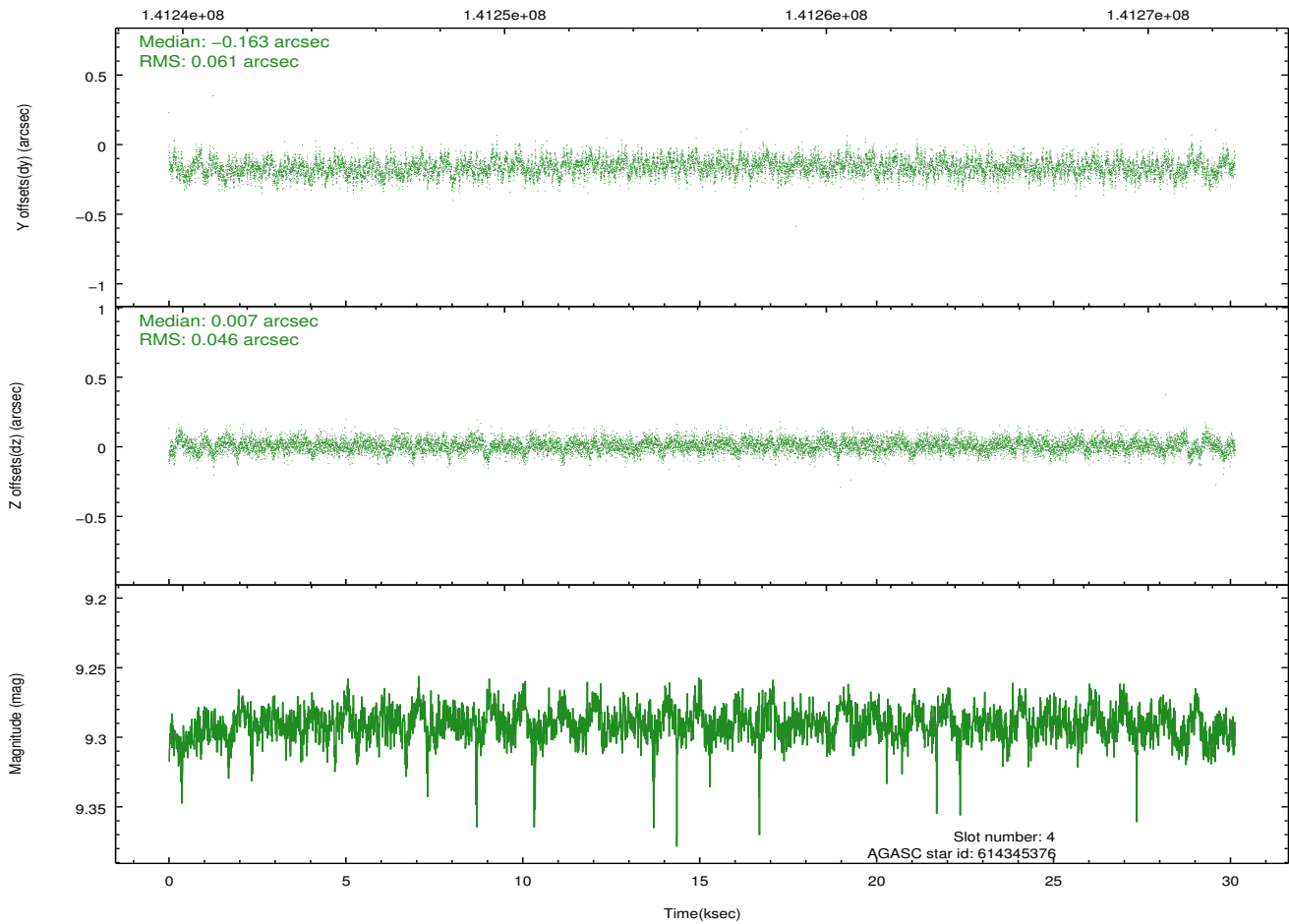
### 2.4.1 Slot 3



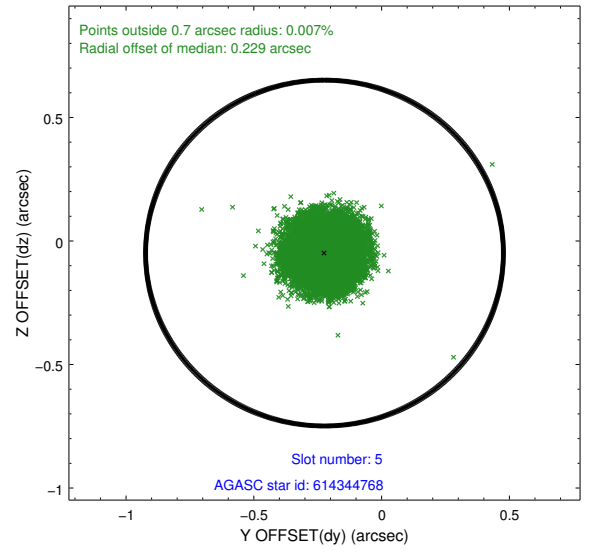
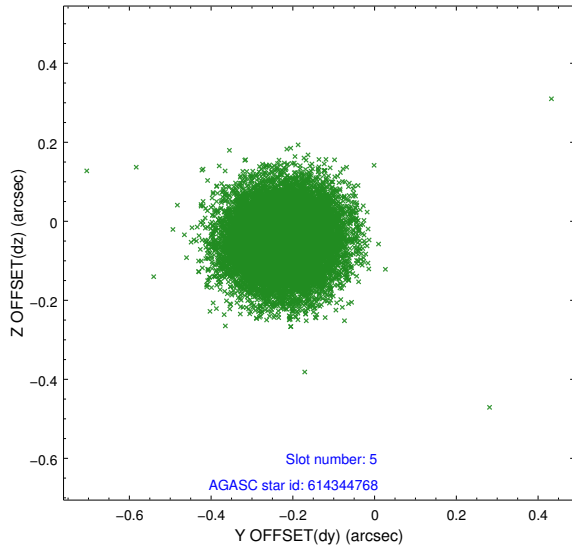
## 2.4.2 Slot 4



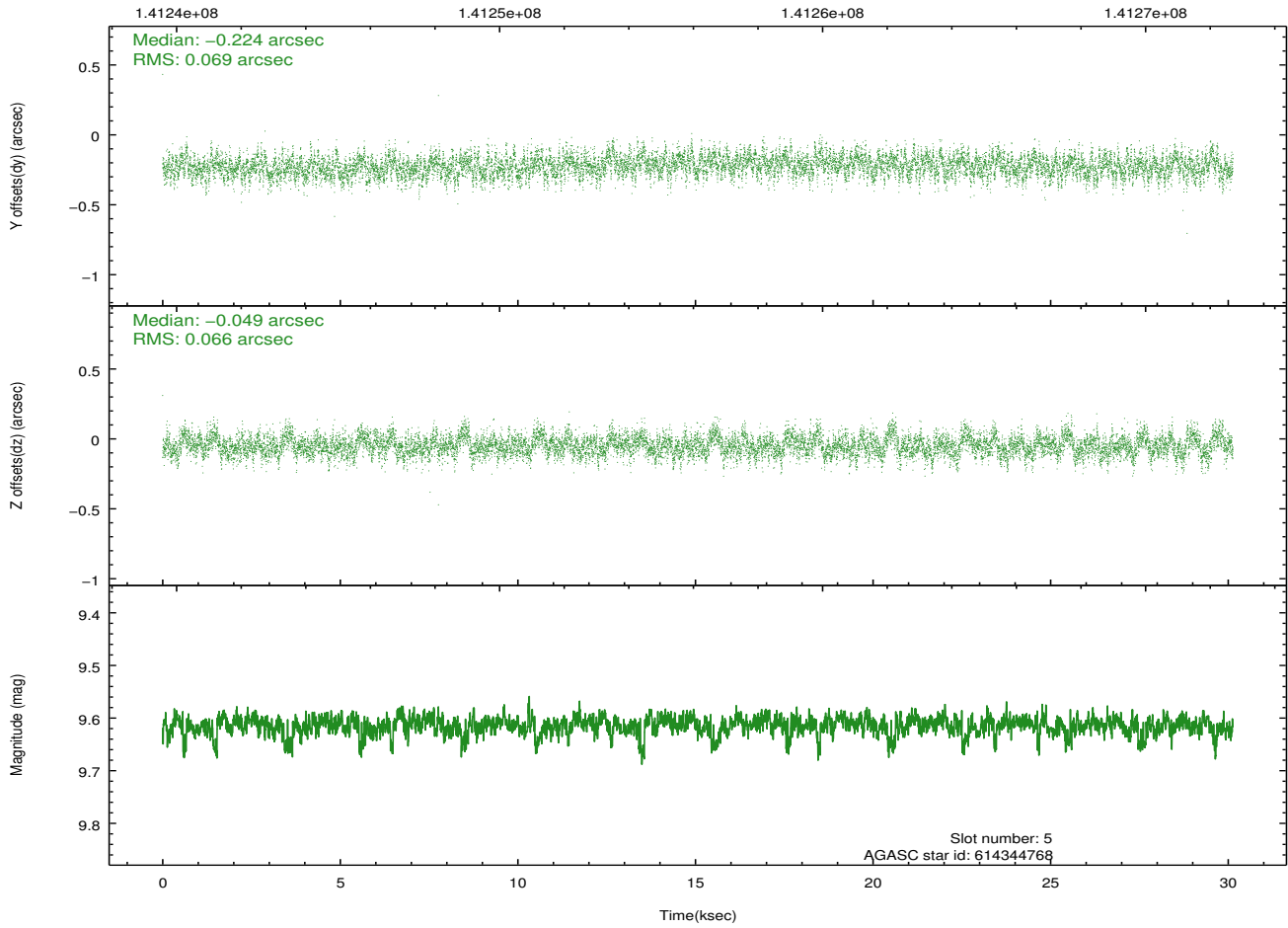
Time (s)



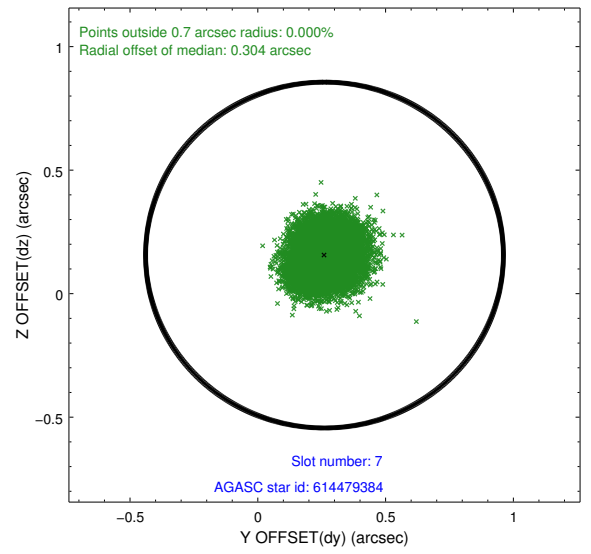
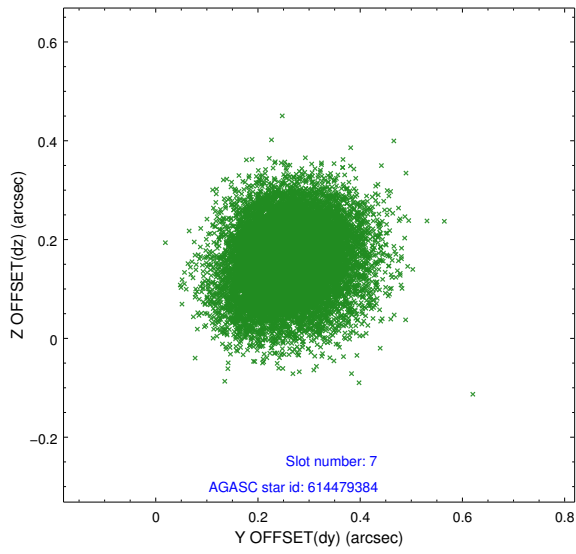
### 2.4.3 Slot 5



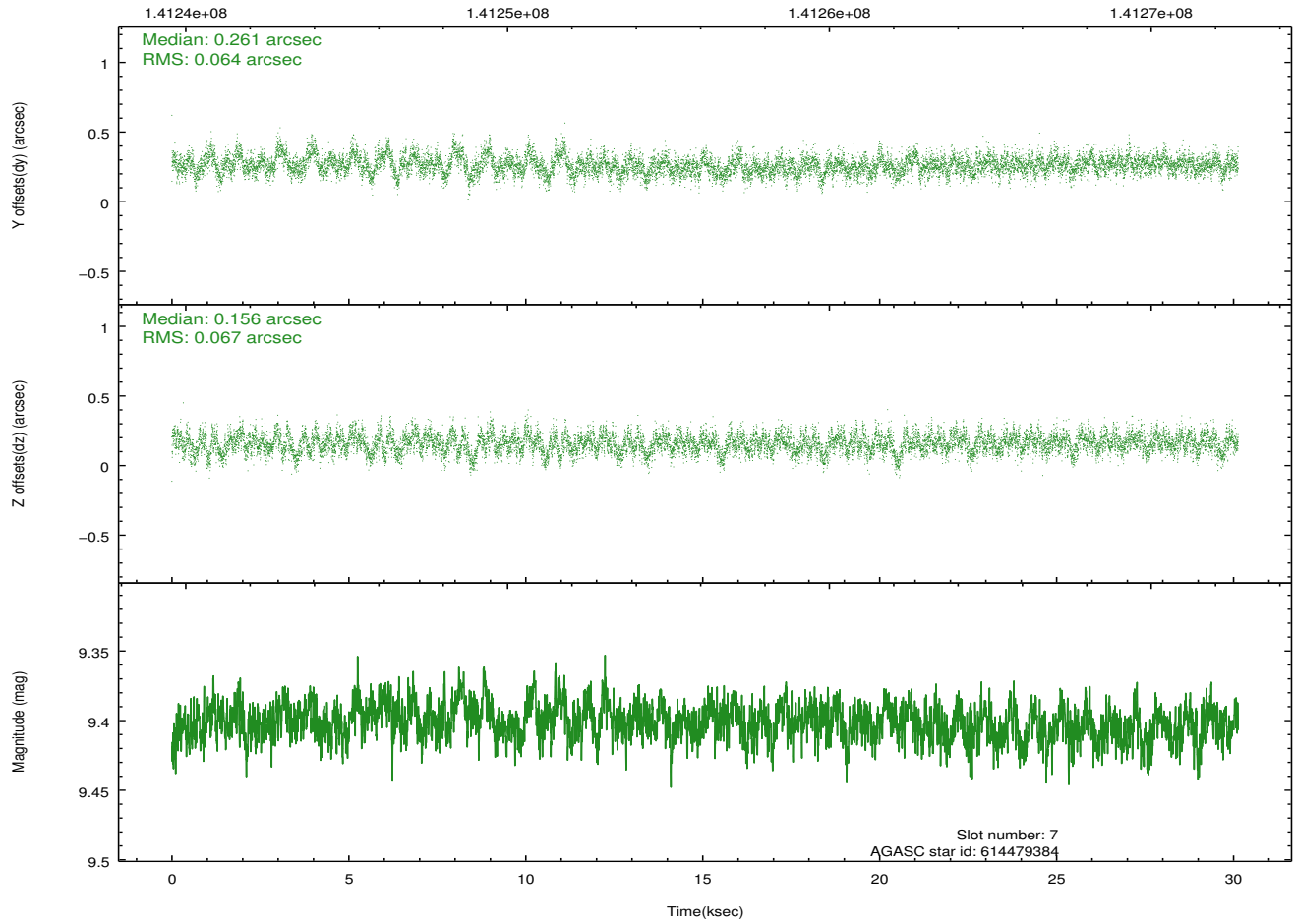
Time (s)



## 2.4.4 Slot 7

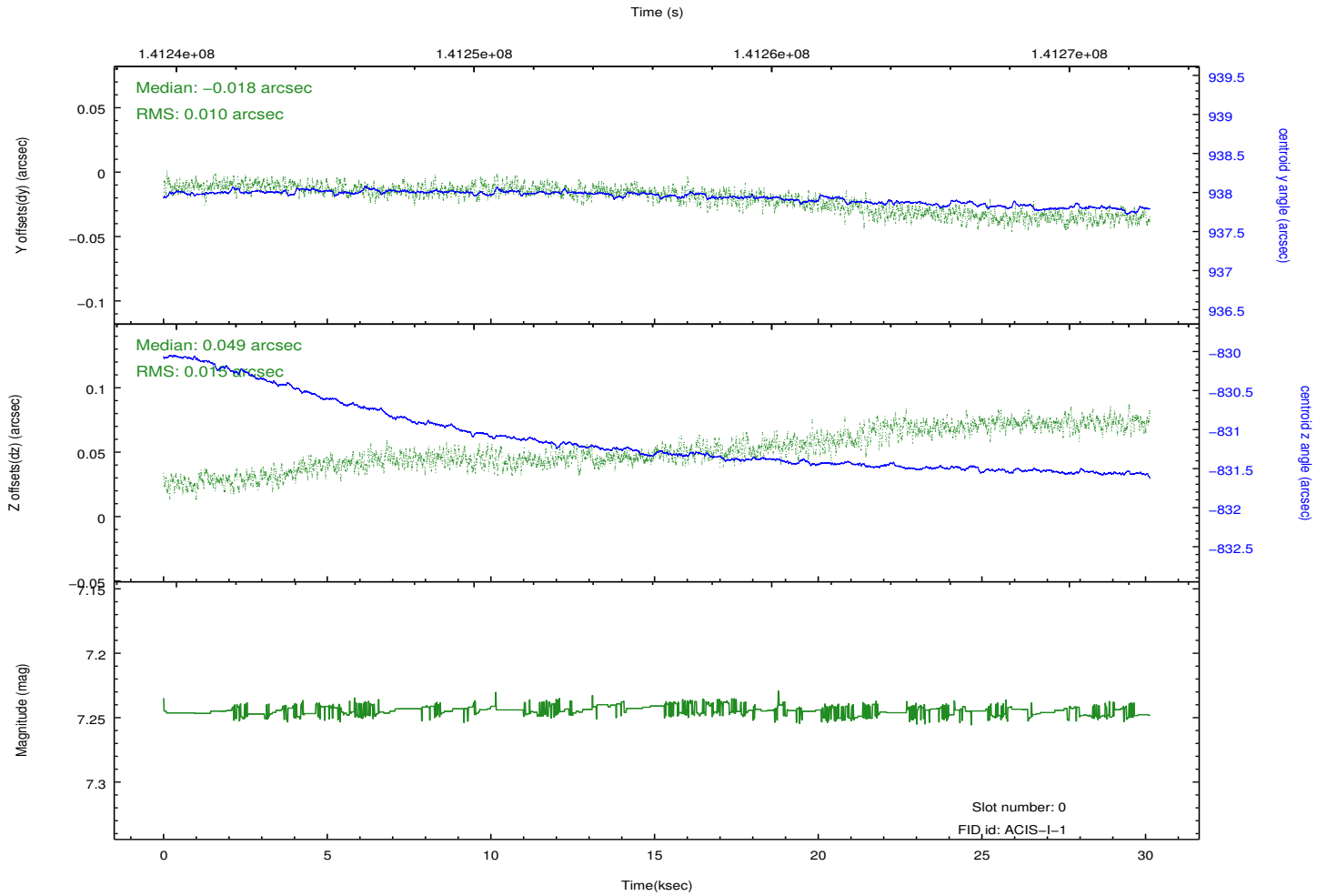
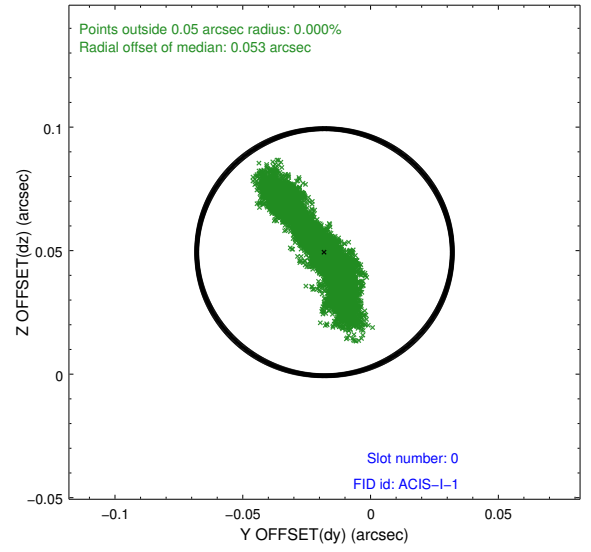
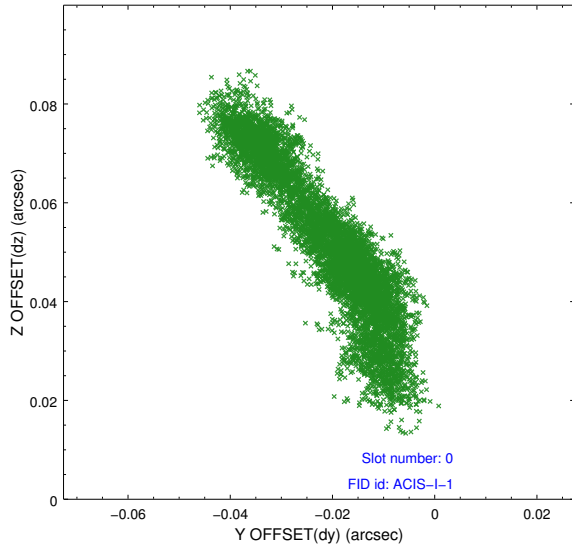


Time (s)

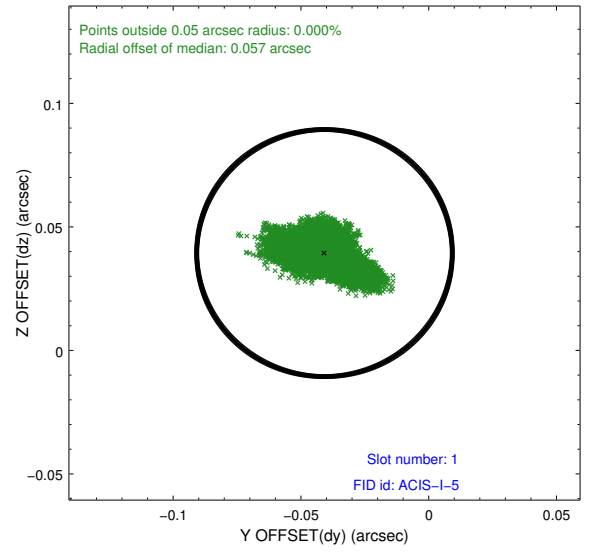
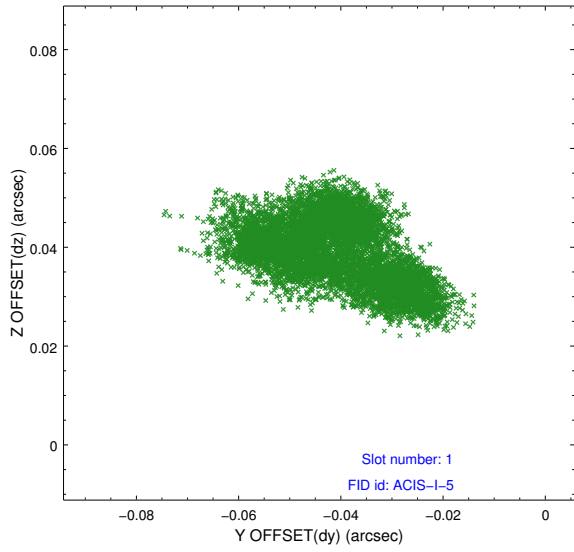


## 2.5 FID Slots

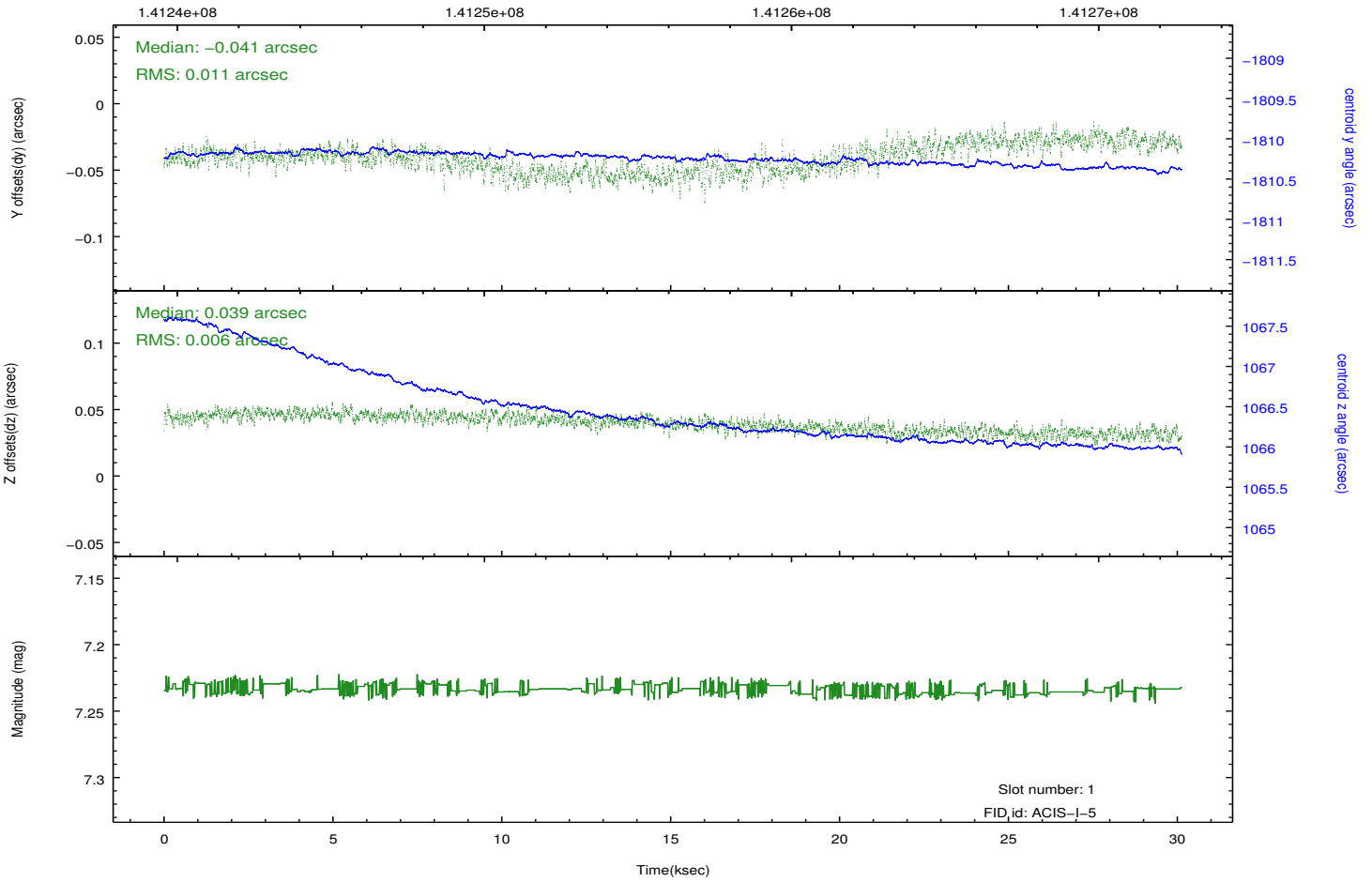
### 2.5.1 Slot 0



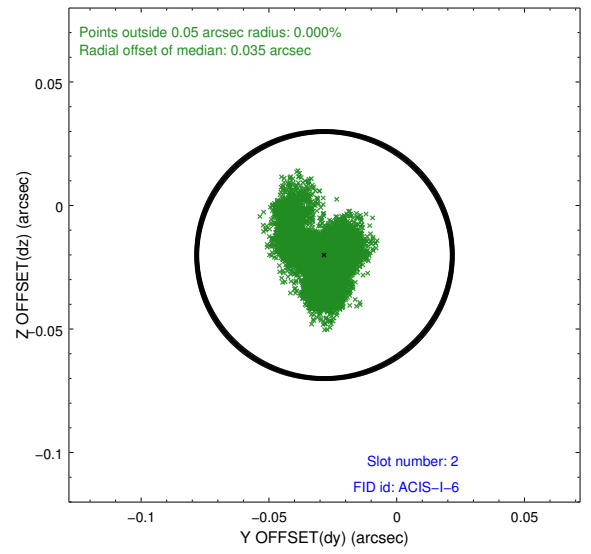
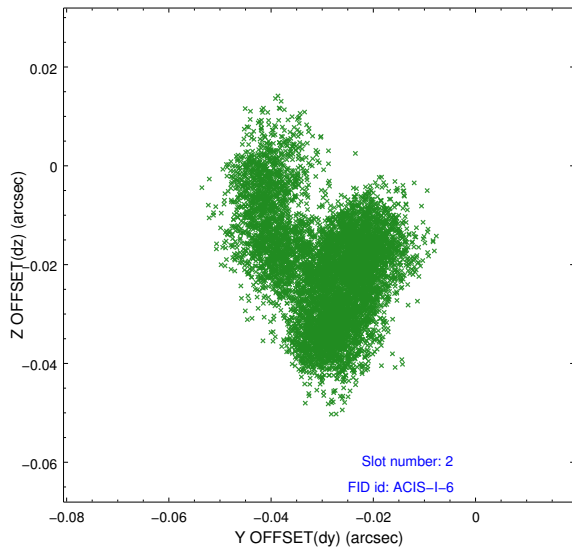
## 2.5.2 Slot 1



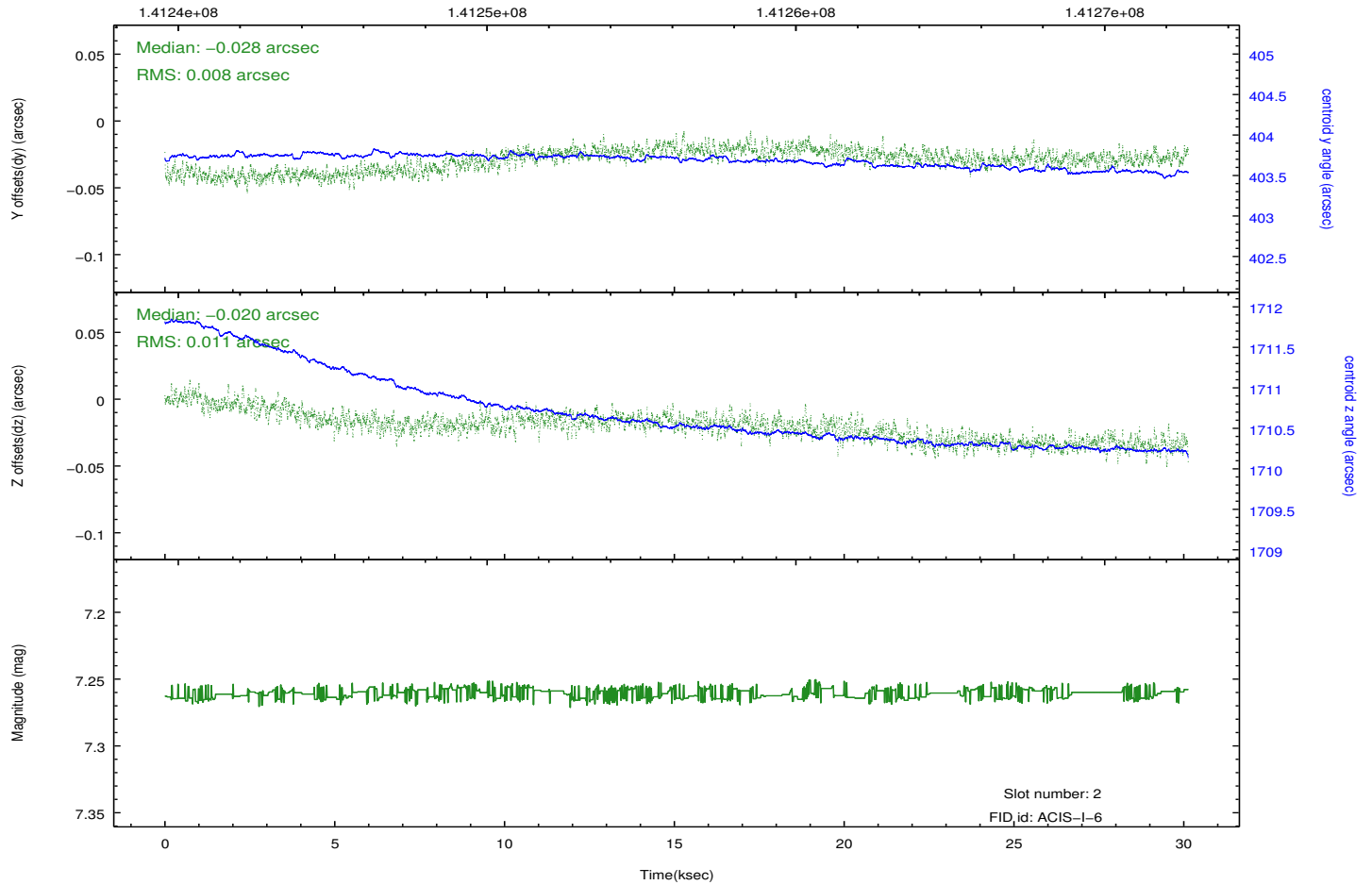
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.10.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.124

## A.2 Comments

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.