

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3926 - L2 Version 5  
Chandra X-Ray Center

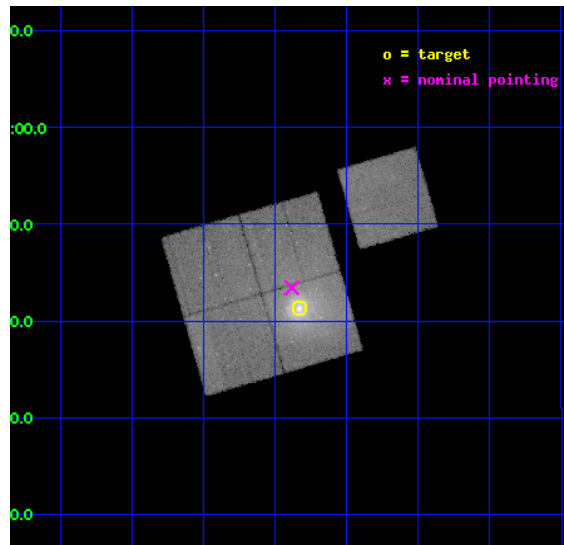
L2 Processing Date : Jan 9 2013

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# 1 Front

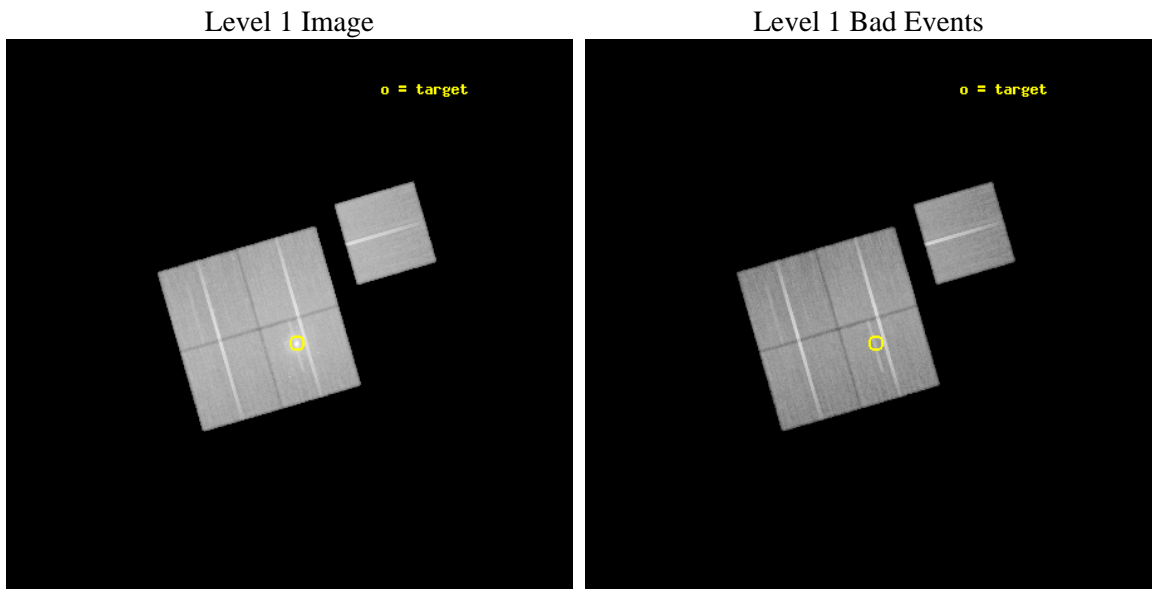
seq_num	600300	Sequence number
obs_id	3926	Observation id
title	EXPLORING THE COOLING FLOW RIDDLE: THE NATURE AND EFFECT OF NUCLEAR OUTBURSTS IN THE ELLIPTICAL GALAXY NGC4636	Proposal title
observer	Dr. Christine Jones	Principal investigator
object	NGC4636	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	190.708333	Observer's specified target RA [deg]
dec_targ	2.688056	Observer's specified target Dec [deg]
ra_nom	190.72066390956	Nominal RA [deg]
dec_nom	2.7236158135865	Nominal Dec [deg]
roll_nom	73.834106233398	Nominal Roll [deg]
revision	5	Processing version of data
ontime	75688.999905705	Sum of GTIs [s]
livetime	74700.067400506	Livetime [s]
ontime0	75695.158696353	Sum of GTIs [s]
ontime1	75692.058766127	Sum of GTIs [s]
ontime2	75679.535845309	Sum of GTIs [s]
ontime3	75688.999905705	Sum of GTIs [s]
ontime6	75695.117646426	Sum of GTIs [s]
l2events	307565	Number of level 2 events



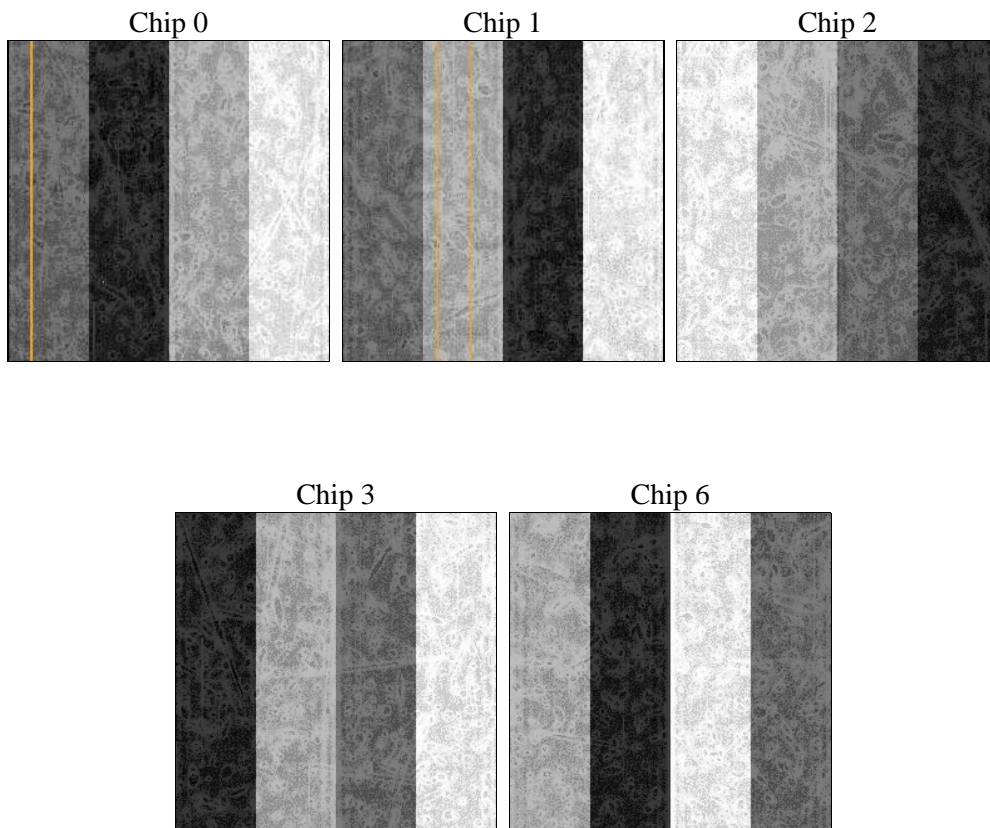
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	75583.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	75688.999905705	Sum of GTIs [s]
caldbver	4.5.5	&#160	ontime0	75695.158696353	Sum of GTIs [s]
date	2013-01-09T01:29:31	Date and time of file creation	ontime1	75692.058766127	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	75679.535845309	Sum of GTIs [s]
			ontime3	75688.999905705	Sum of GTIs [s]
			ontime6	75695.117646426	Sum of GTIs [s]
			l1events	2195573	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	396413	399064	459577	522708	417811
rejected events	347144	345564	401264	383304	368712
rejected %	87%	86%	87%	73%	88%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	21829	23703	30314	103741	21189
	5%	5%	6%	19%	5%
grade 1 events	236	199	249	548	203
	0%	0%	0%	0%	0%
grade 2 events	9941	10180	10726	15146	9301
	2%	2%	2%	2%	2%
grade 3 events	5115	5379	4830	6242	4931
	1%	1%	1%	1%	1%
grade 4 events	4581	5247	4898	6047	4954
	1%	1%	1%	1%	1%
grade 5 events	13975	15067	13438	15945	15471
	3%	3%	2%	3%	3%
grade 6 events	7807	8993	7550	8232	8728
	1%	2%	1%	1%	2%
grade 7 events	332929	330296	387572	366807	353034
	83%	82%	84%	70%	84%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	190.727335	190.7206639095618	Subarray requested	NONE	NONE
[deg] Pointing Dec	2.697073	2.723615813586512	Alternating exposures requested	N	N
[deg] Pointing Roll	73.625105	73.83410623339789	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-225.840463	-225.8433433320239			
[mm] SIM translation stage offset	-7.752	-7.749109670905796			
[s] Observation start time (MET)	161589198.184000	161587748.41489			
Observation start date	2003-02-14T05:52:14	2003-02-14T05:29:08			
[s] Observation end time (MET)	161664781.184000	161664915.54313			
Observation end date	2003-02-15T02:51:57	2003-02-15T02:55:15			
Read mode	TIMED	TIMED			

## 2.3 Aspect

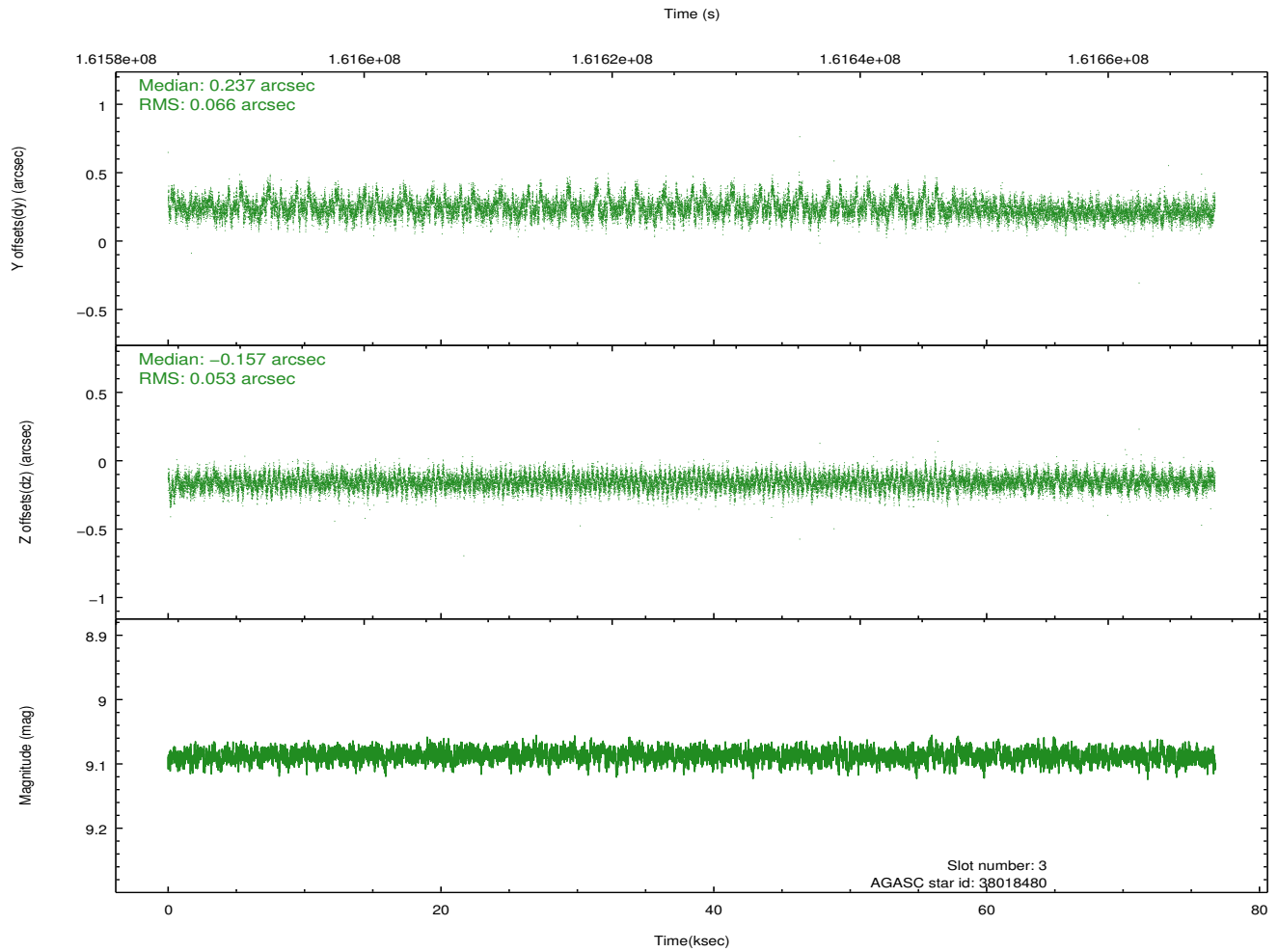
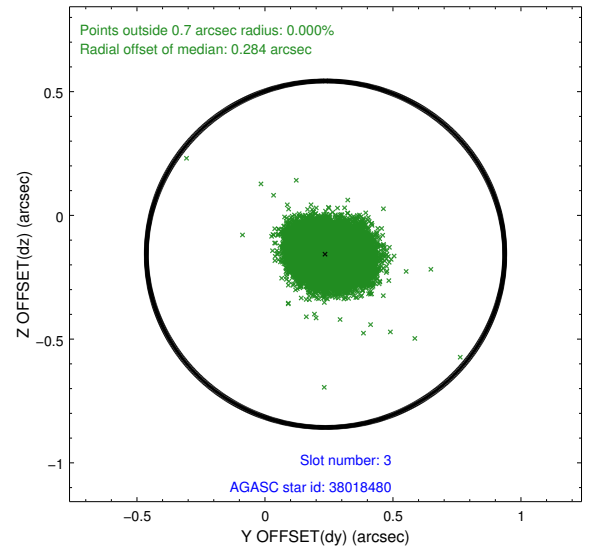
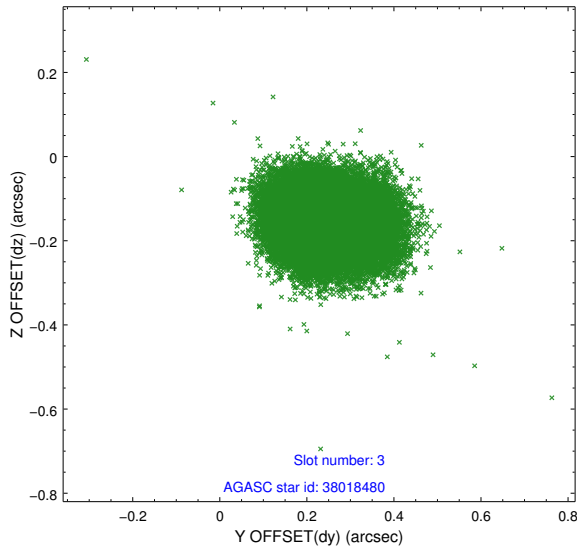


### Slot Statistics

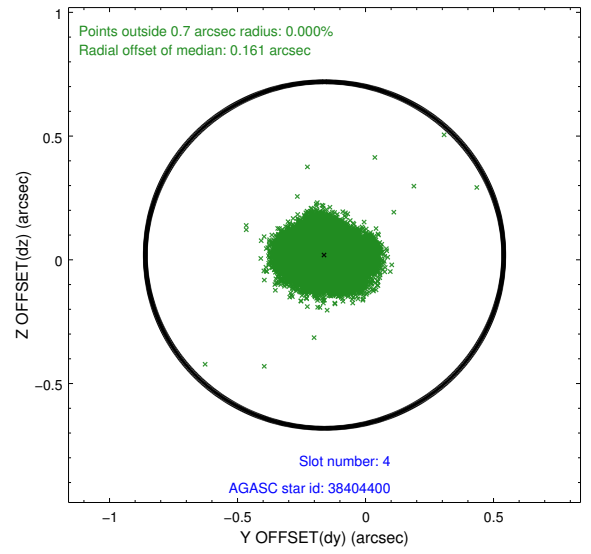
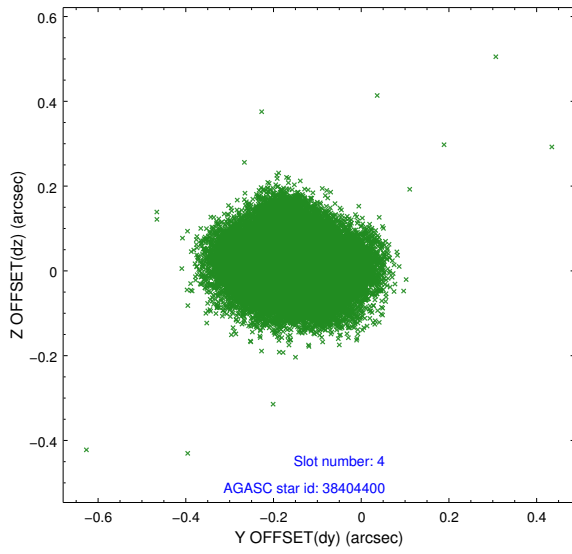
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.23	18720	0.067	-0.038	0.014	0.029	0.000000	0.000000	937.29	-990.11
1	FID	ACIS-I-5	7.22	18720	-0.142	0.089	0.015	0.033	0.000000	0.000000	-1811.05	907.56
2	FID	ACIS-I-6	7.26	18719	-0.014	0.022	0.010	0.015	0.000000	0.000000	402.85	1551.91
3	GUIDE	38018480	9.09	37418	0.237	-0.157	0.088	0.150	190.261944	2.299844	-1843.10	1203.07
4	GUIDE	38404400	8.57	37429	-0.160	0.019	0.097	0.160	190.883800	2.621151	-103.31	-616.64
5	GUIDE	38405600	10.10	37290	0.062	-0.061	0.167	0.288	190.858712	2.900685	836.76	-246.36
6	GUIDE	38407800	10.34	37399	-0.149	0.183	0.222	0.438	191.026784	2.963213	1223.18	-762.39
7	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

## 2.4 Star Slots

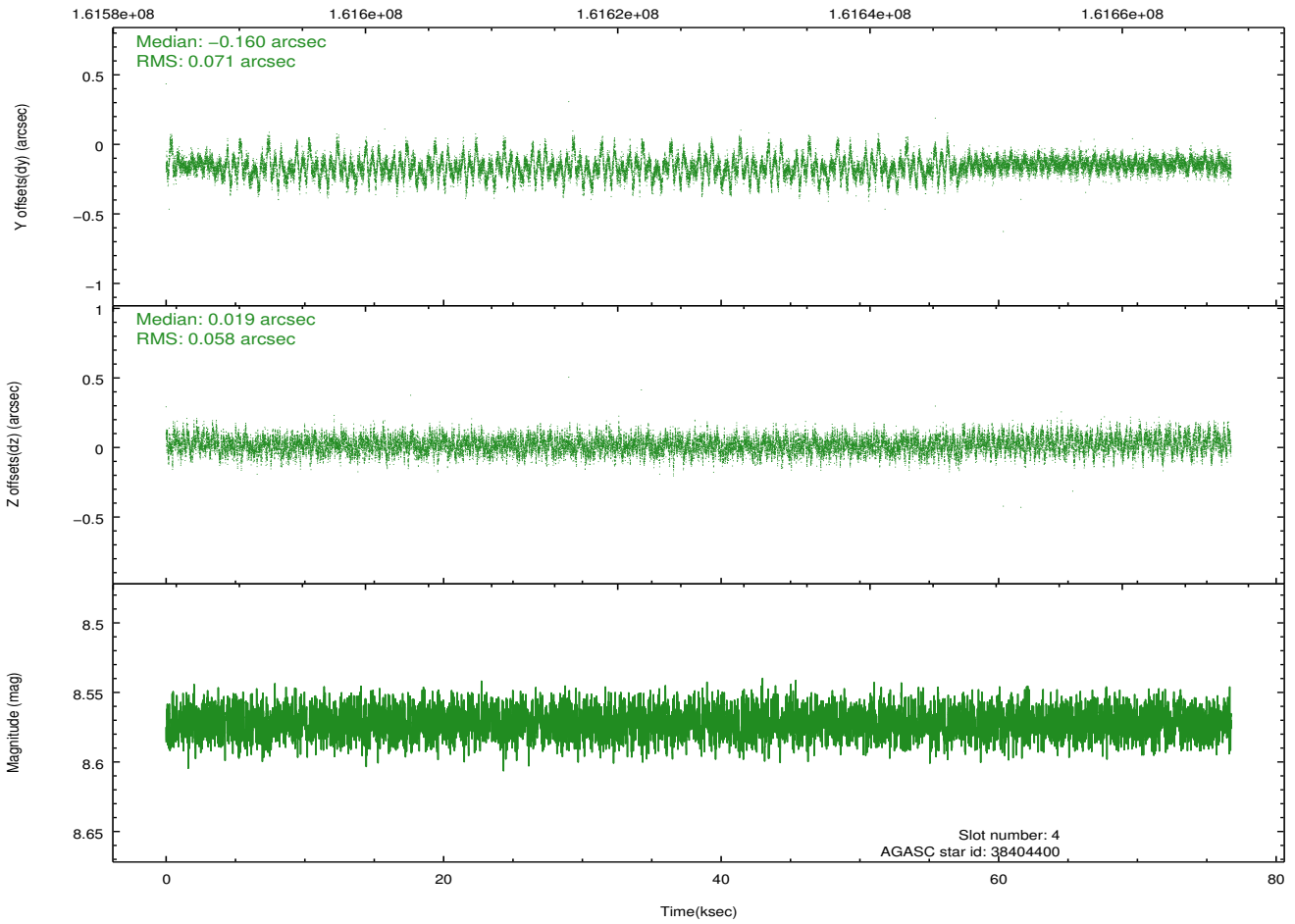
### 2.4.1 Slot 3



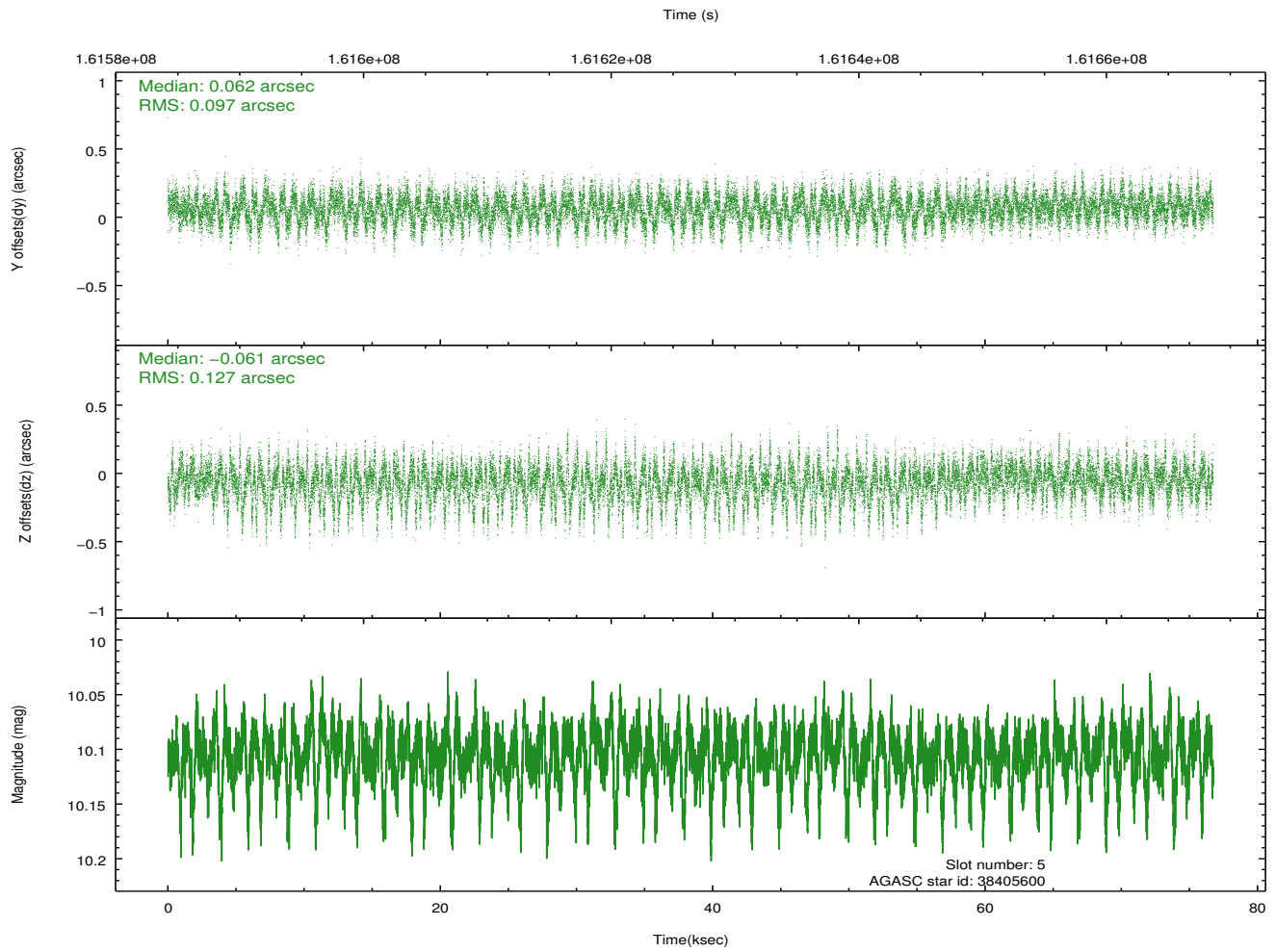
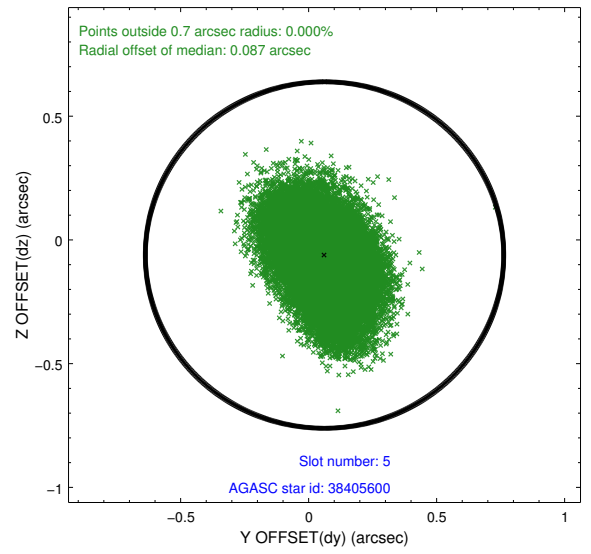
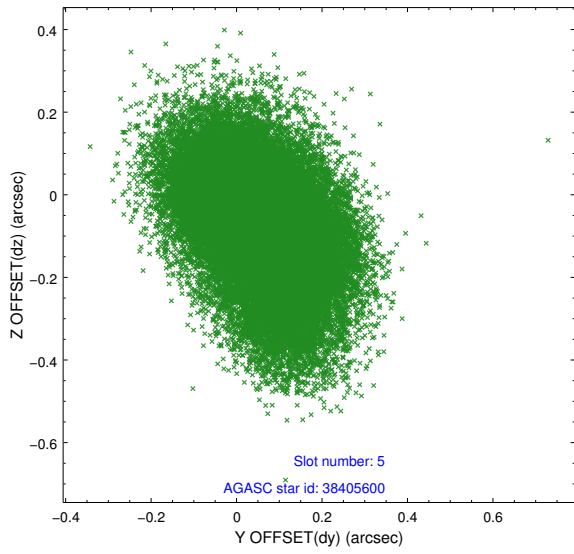
## 2.4.2 Slot 4



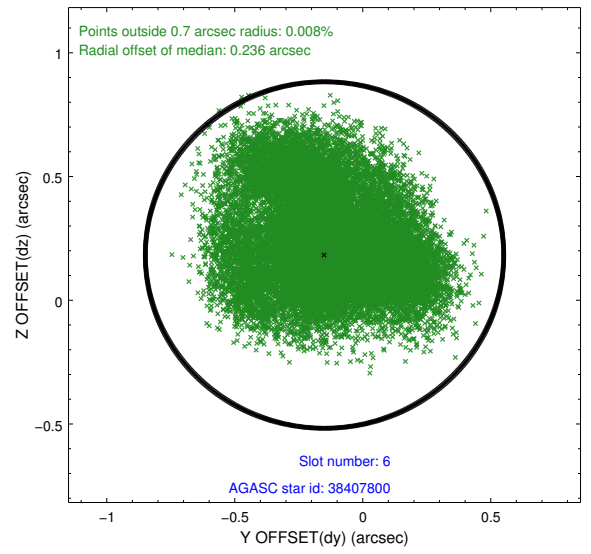
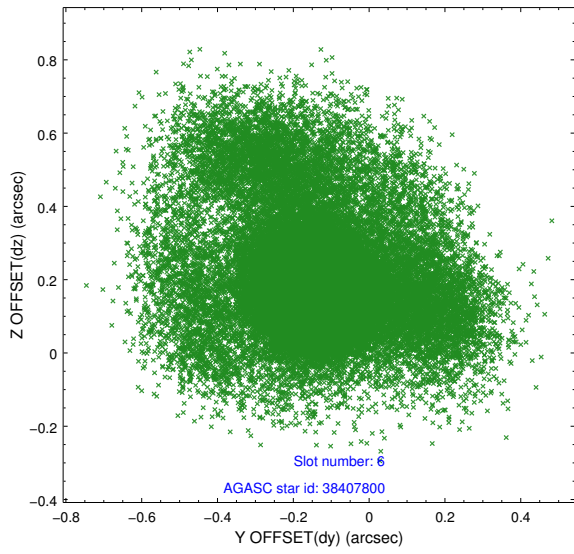
Time (s)



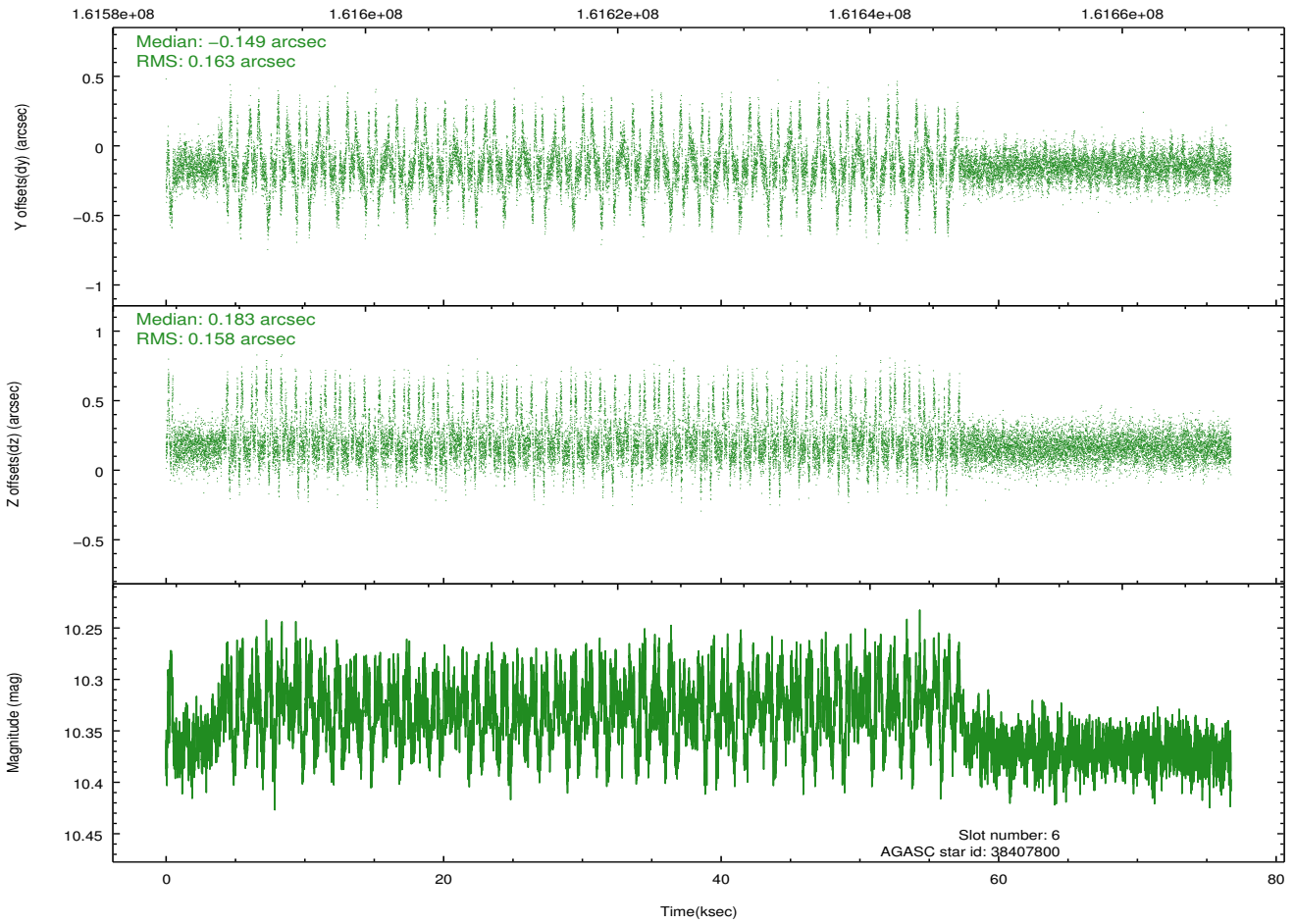
### 2.4.3 Slot 5



## 2.4.4 Slot 6

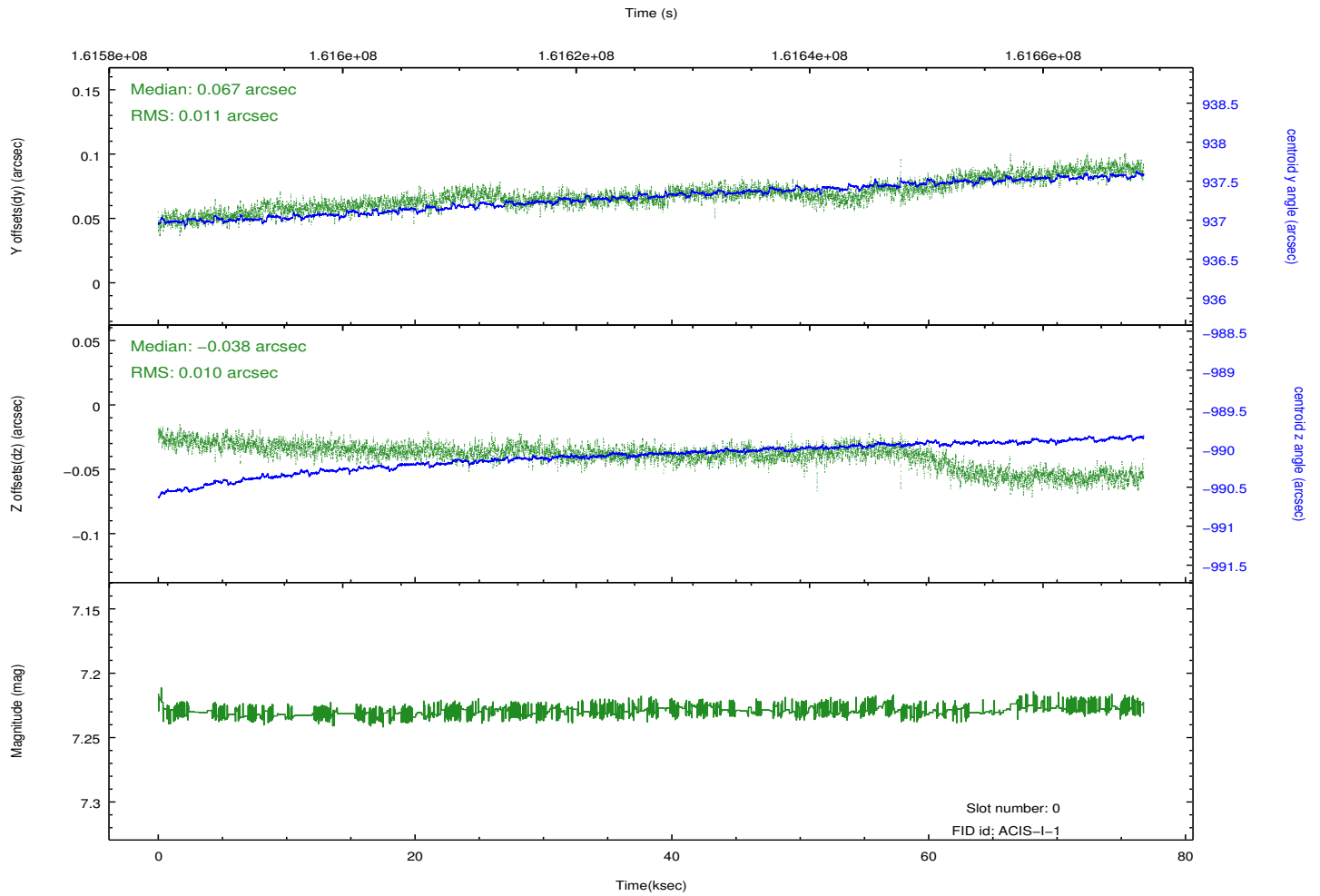
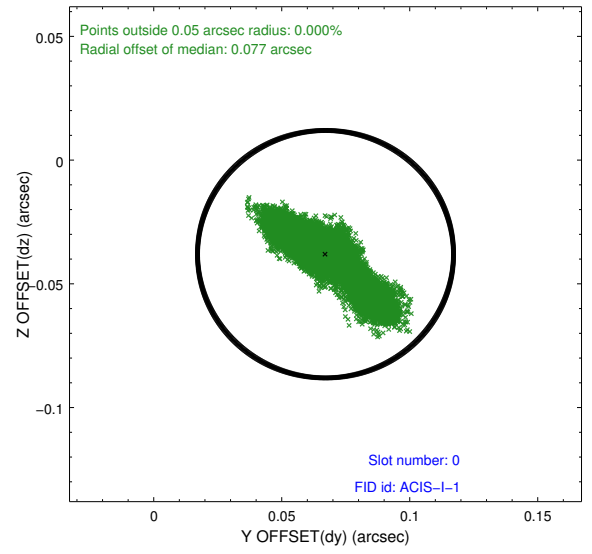
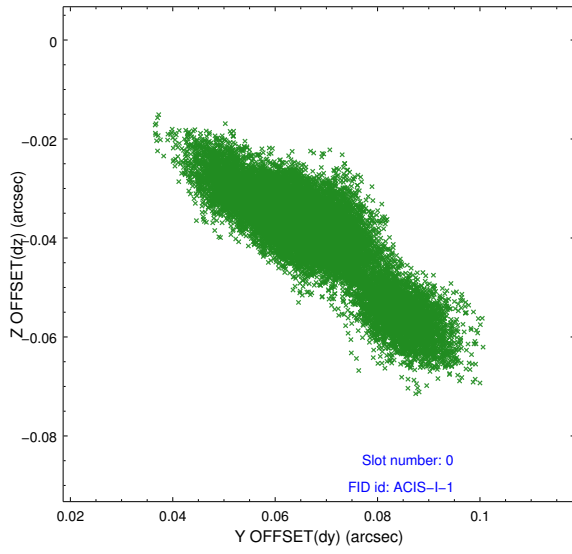


Time (s)

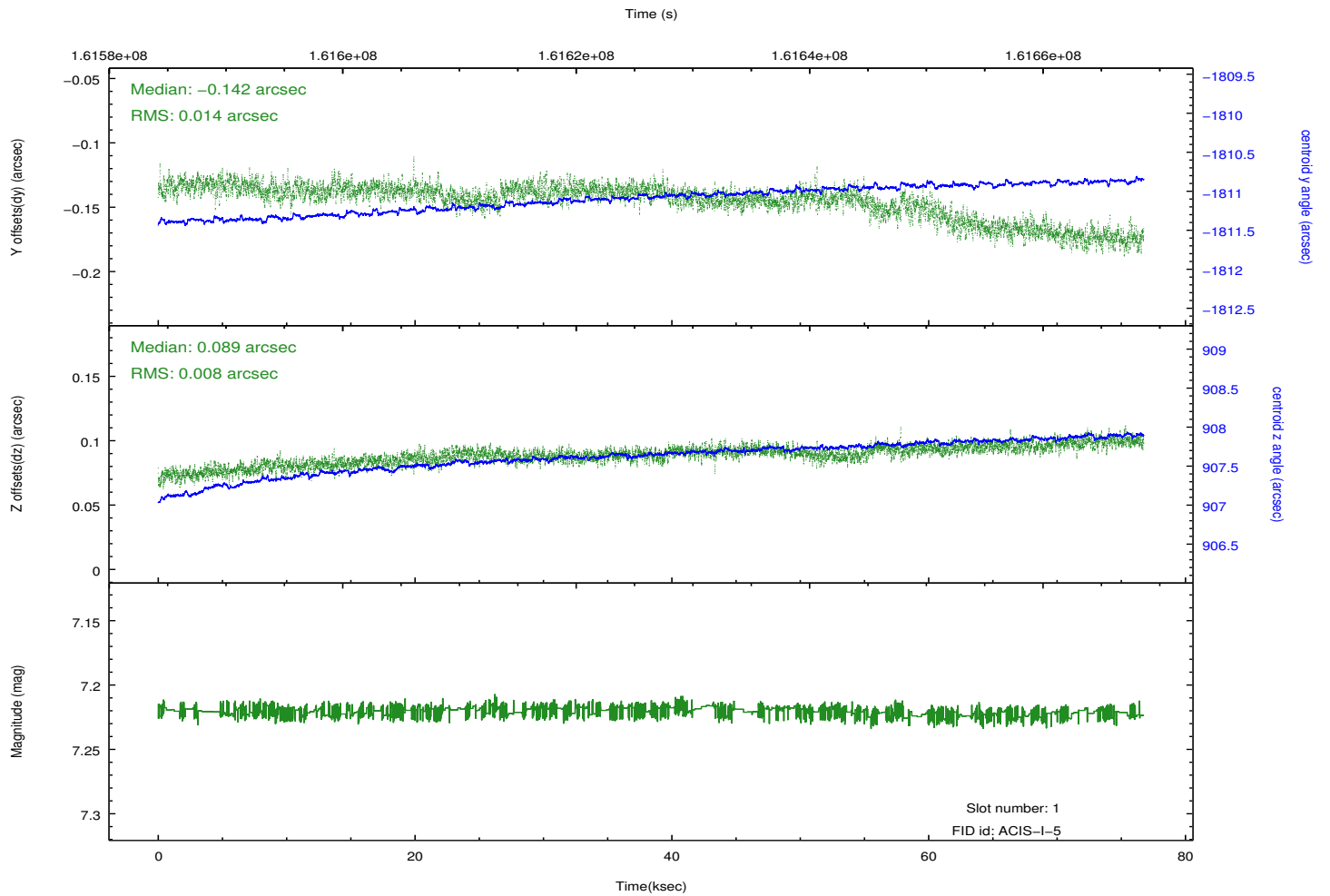
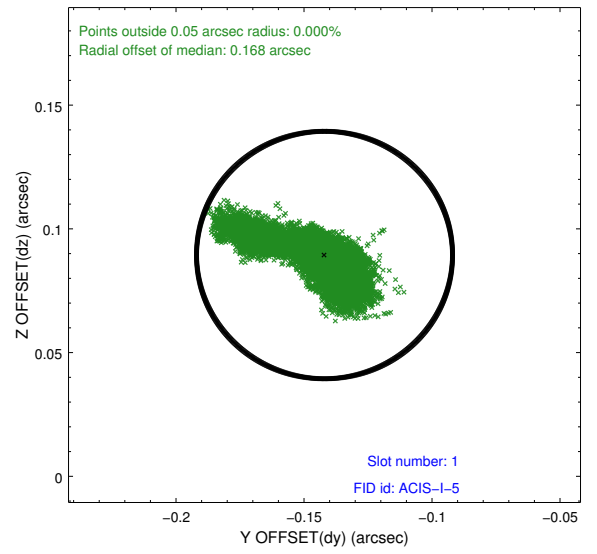
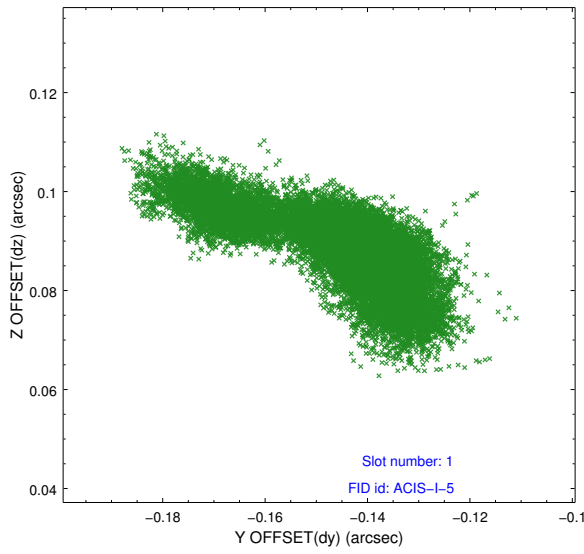


## 2.5 FID Slots

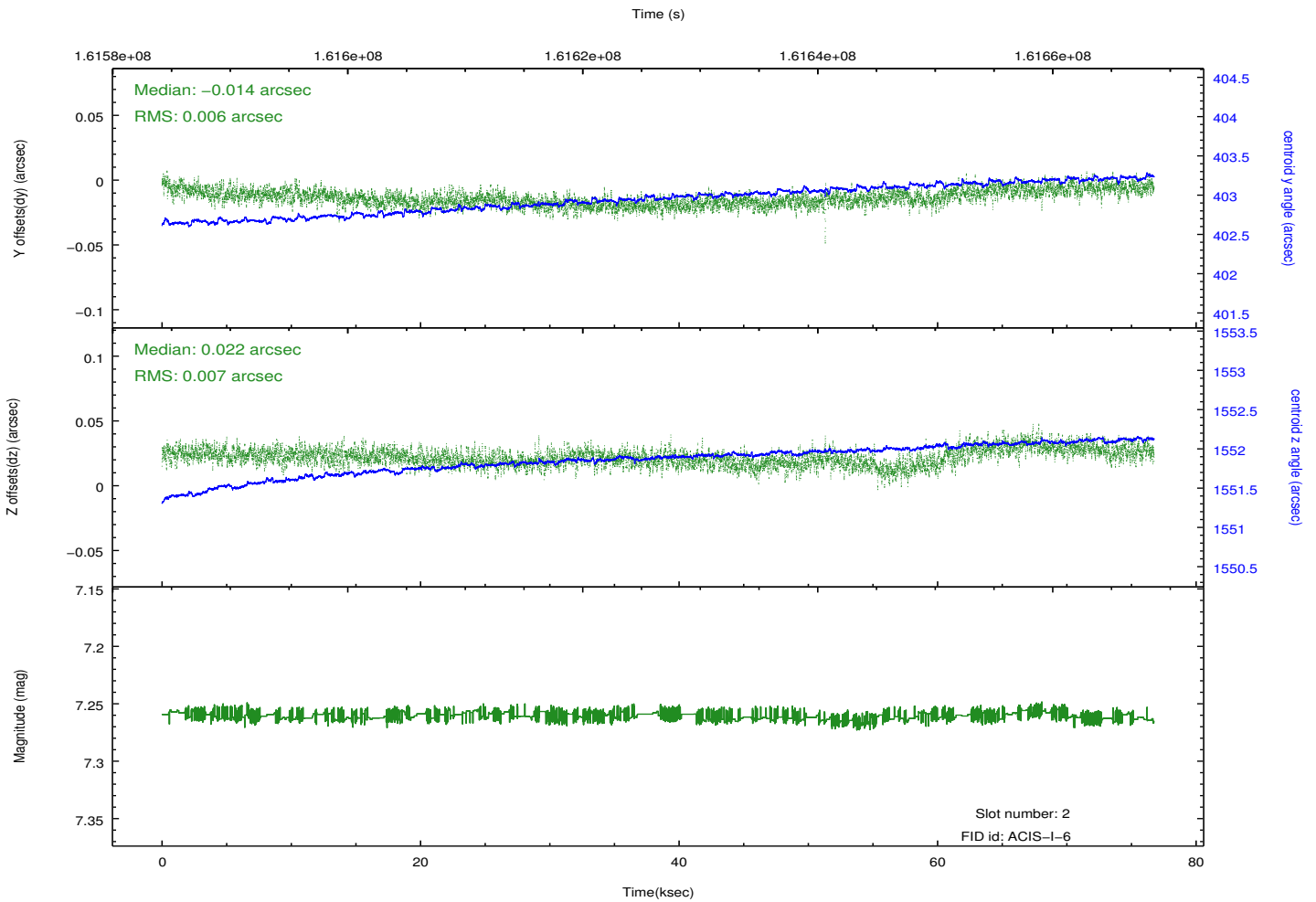
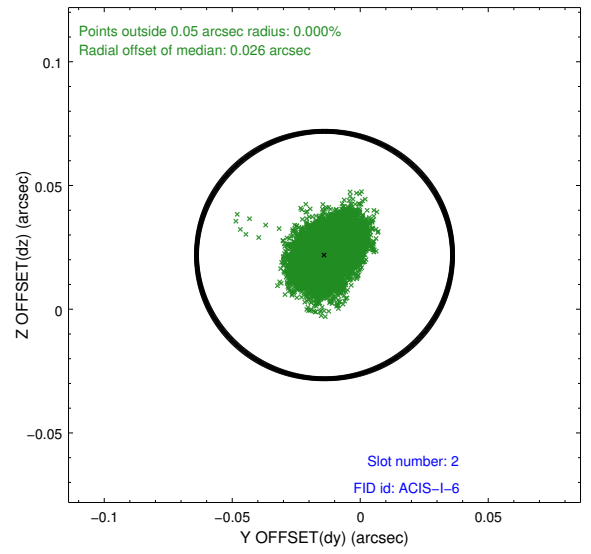
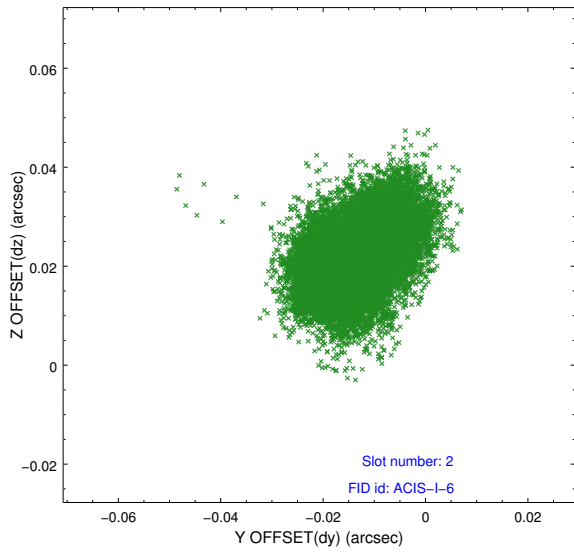
### 2.5.1 Slot 0



## 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)	2013.01.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	75.686

## A.2 Comments

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.