

# V&V Reference Report

## L2 ASCDS Version : 10.5.4

Observation 18970 - L2 Version 1  
Chandra X-Ray Center

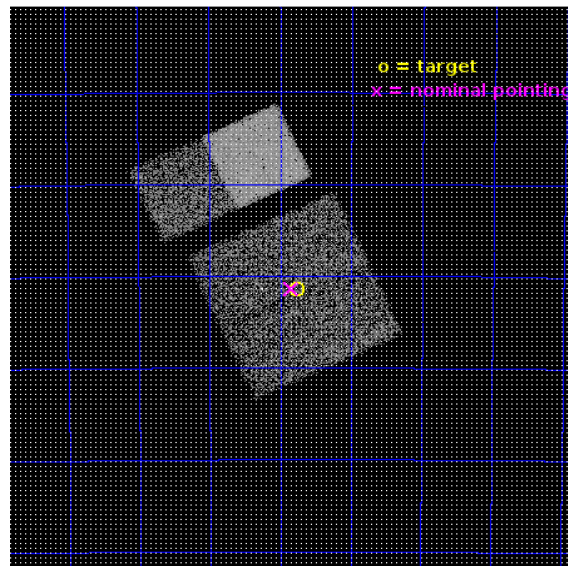
L2 Processing Date : May 26 2017

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

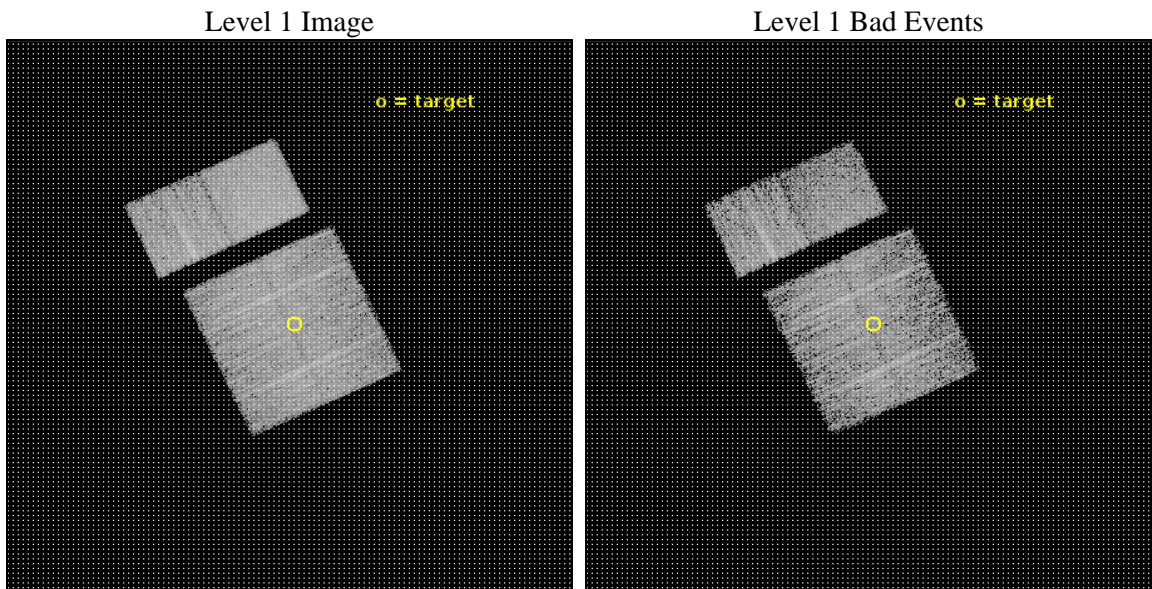
seq_num	401838	Sequence number
obs_id	18970	Observation id
title	The Nature of INTEGRAL Sources in the Galactic Plane	Proposal titl
observer	John Tomsick	Principal investigator
object	IGR J15038-6021	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	225.940833	Observer's specified target RA [deg]
dec_targ	-60.357	Observer's specified target Dec [deg]
ra_nom	225.96079530967	Nominal RA [deg]
dec_nom	-60.356582850307	Nominal Dec [deg]
roll_nom	335.094736398	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4959.2902703285	Sum of GTIs [s]
livetime	4896.4927507995	Livetime [s]
ontime0	4952.6851092577	Sum of GTIs [s]
ontime1	4959.2081903219	Sum of GTIs [s]
ontime2	4959.2492303848	Sum of GTIs [s]
ontime3	4959.2902703285	Sum of GTIs [s]
ontime6	4959.3723503351	Sum of GTIs [s]
ontime7	4959.3313103914	Sum of GTIs [s]
l2events	37263	Number of level 2 events



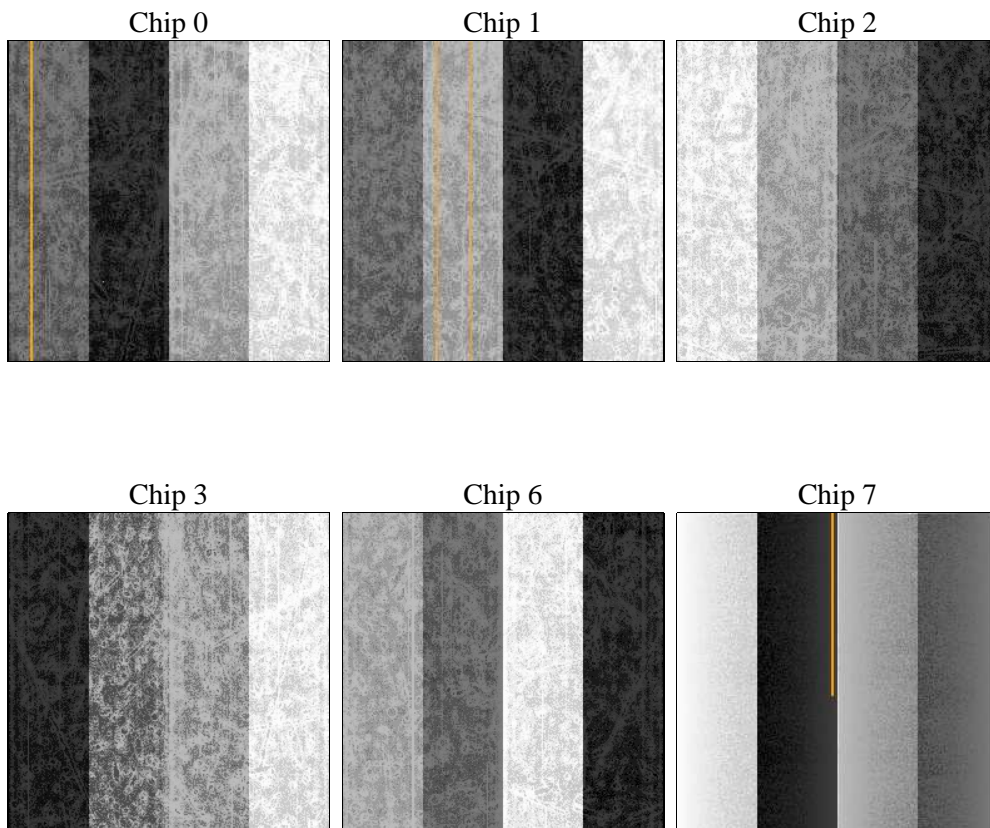
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.4	Processing system revision	ontime	4959.2902703285	Sum of GTIs [s]
caldsver	4.7.4	&#160	ontime0	4952.6851092577	Sum of GTIs [s]
date	2017-05-26T22:42:25	Date and time of file creation	ontime1	4959.2081903219	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	4959.2492303848	Sum of GTIs [s]
			ontime3	4959.2902703285	Sum of GTIs [s]
			ontime6	4959.3723503351	Sum of GTIs [s]
			ontime7	4959.3313103914	Sum of GTIs [s]
			l1events	214423	Number of level 1 events

### 2.1.4 Events

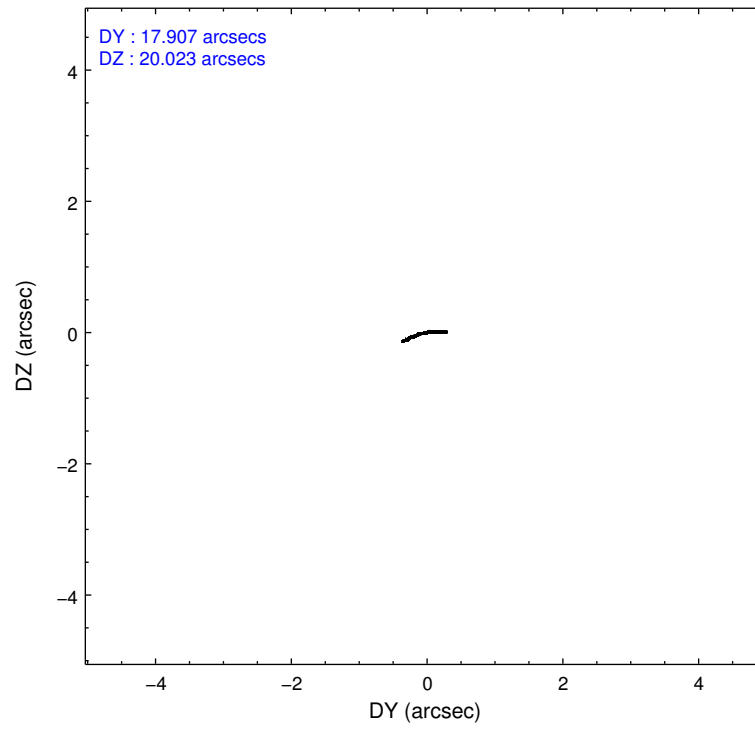
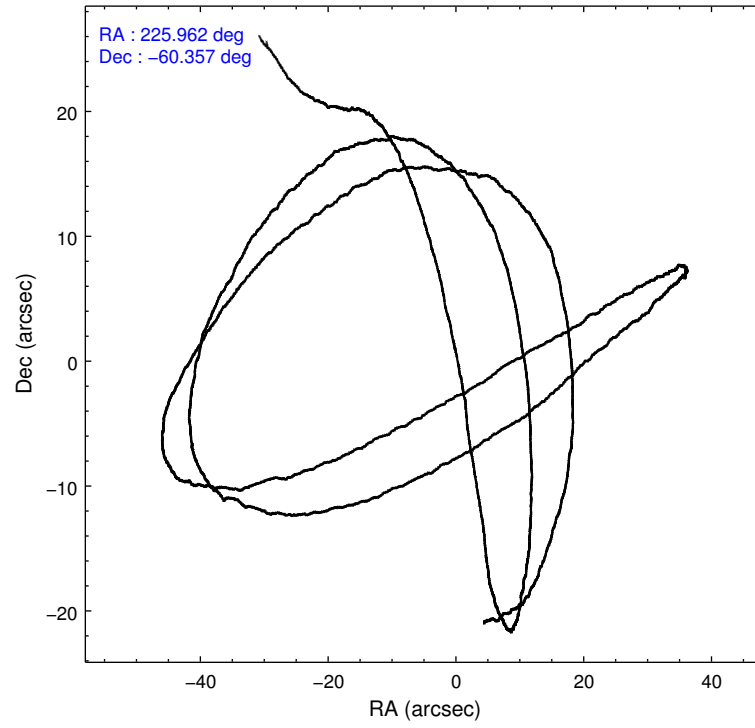
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	32883	31628	36149	33115	35929	44719	grade 0 events	1394	1665	1727	1560	1444	1734
rejected events	28877	27055	31765	29072	31670	24906		4%	5%	4%	4%	4%	3%
rejected %	87%	85%	87%	87%	88%	55%	grade 1 events	24	23	27	29	18	47
								0%	0%	0%	0%	0%	0%
							grade 2 events	1020	1155	973	891	1011	4294
								3%	3%	2%	2%	2%	9%
							grade 3 events	398	426	428	406	411	1642
								1%	1%	1%	1%	1%	3%
							grade 4 events	410	426	435	405	445	1626
								1%	1%	1%	1%	1%	3%
							grade 5 events	1494	1545	1315	1689	1820	4432
								4%	4%	3%	5%	5%	9%
							grade 6 events	790	904	826	789	948	10537
								2%	2%	2%	2%	2%	23%
							grade 7 events	27353	25484	30418	27346	29832	20407
								83%	80%	84%	82%	83%	45%

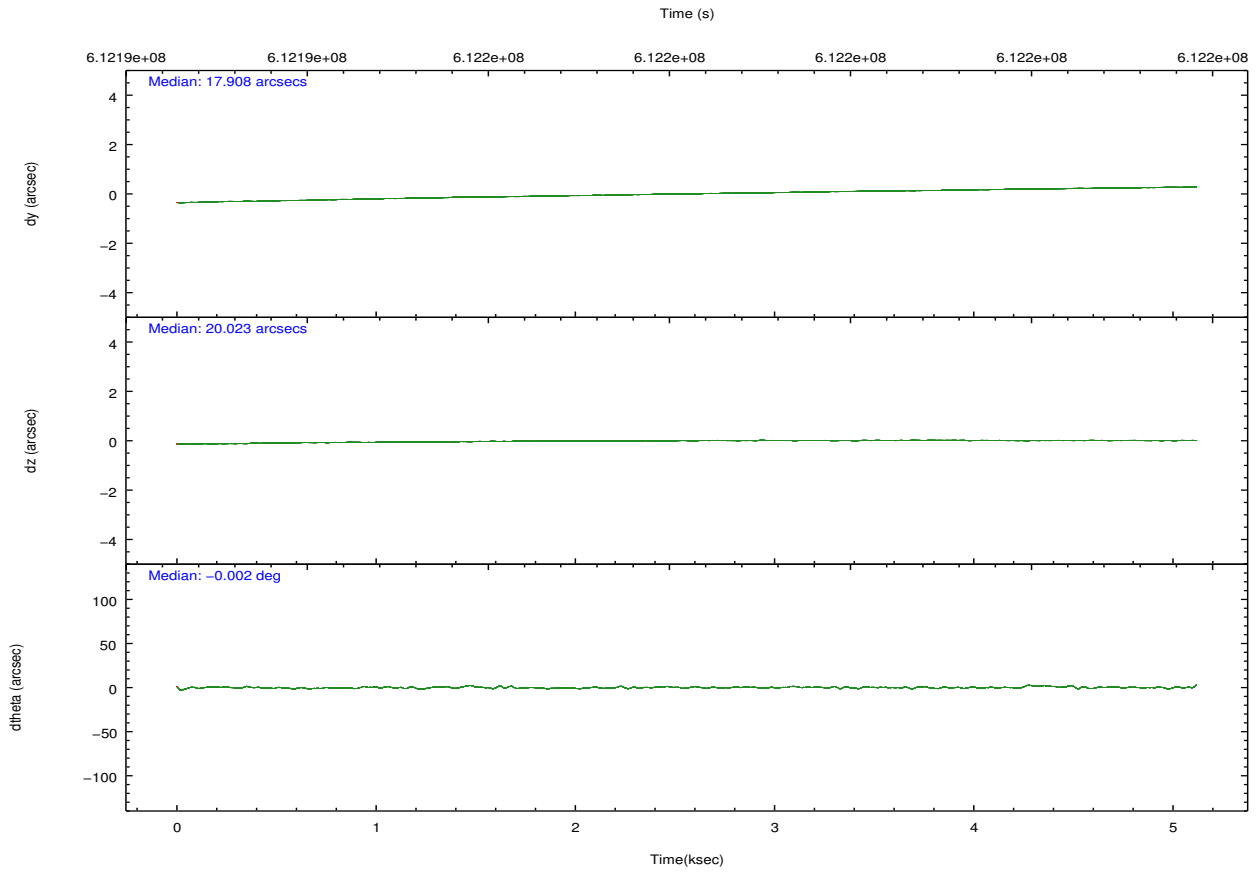
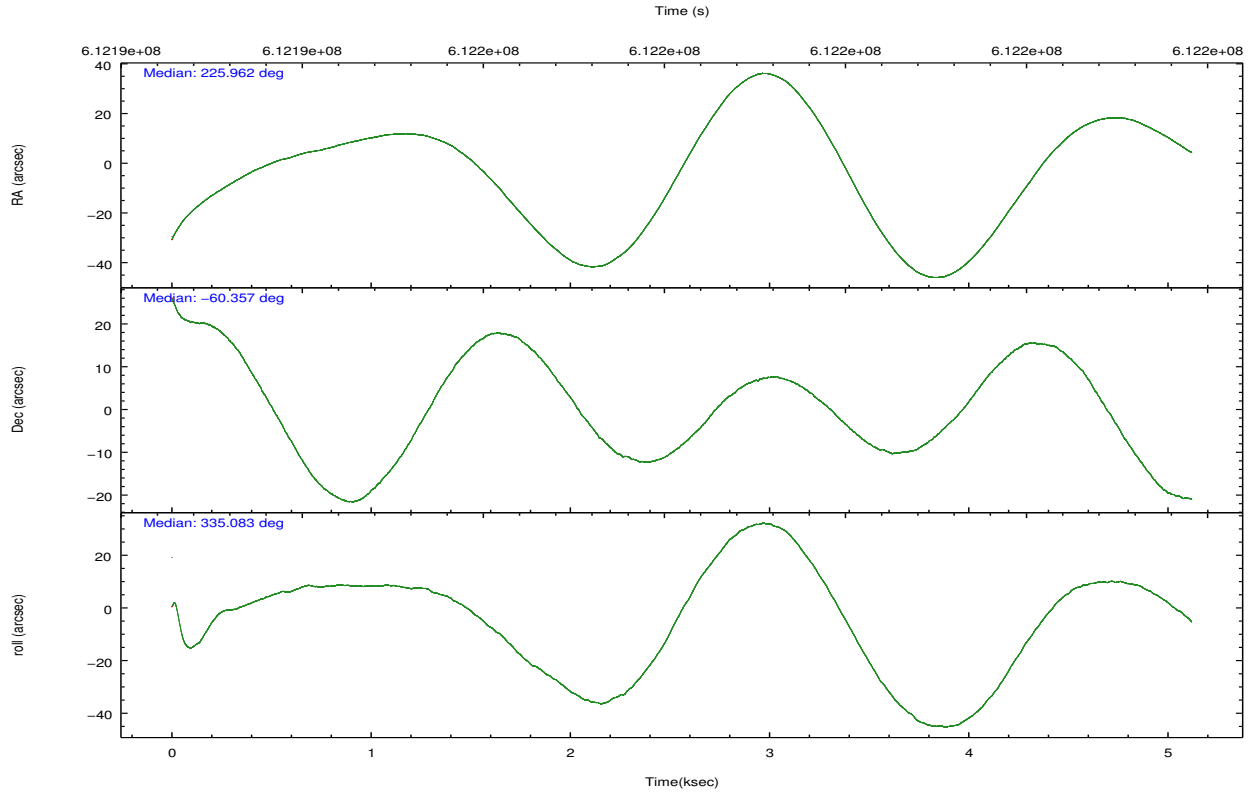
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	225.904736	225.9607953096674
[deg] Pointing Dec	-60.359226	-60.35658285030686
[deg] Pointing Roll	334.837224	335.0947363980019
[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)	612193678.184000	612192498.3804899
Observation start date	2017-05-26T13:46:49	2017-05-26T13:28:18
[s] Observation end time (MET)	612198678.184000	612199295.15589
Observation end date	2017-05-26T15:10:09	2017-05-26T15:21:35
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	O2	Y
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



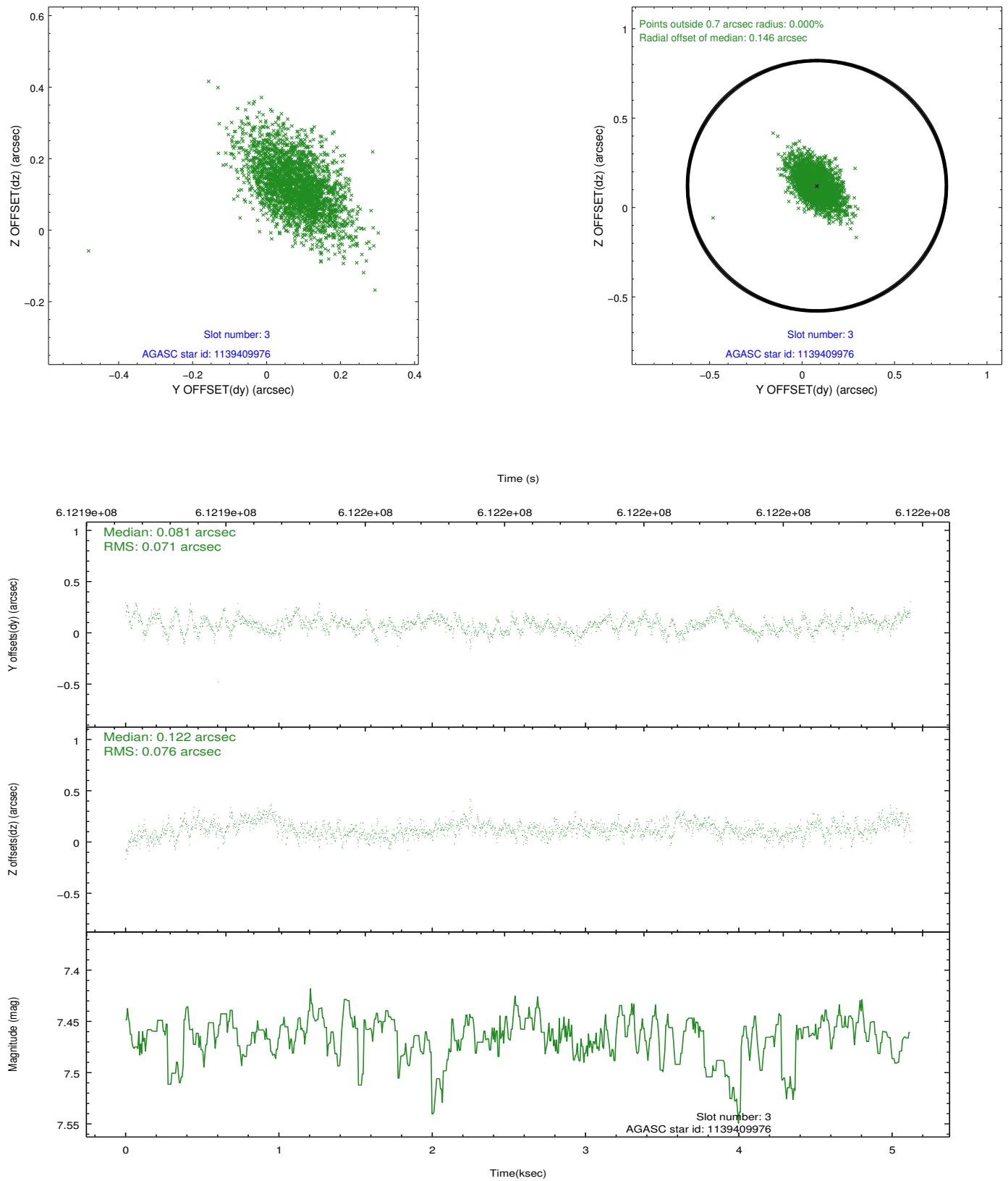


### Slot Statistics

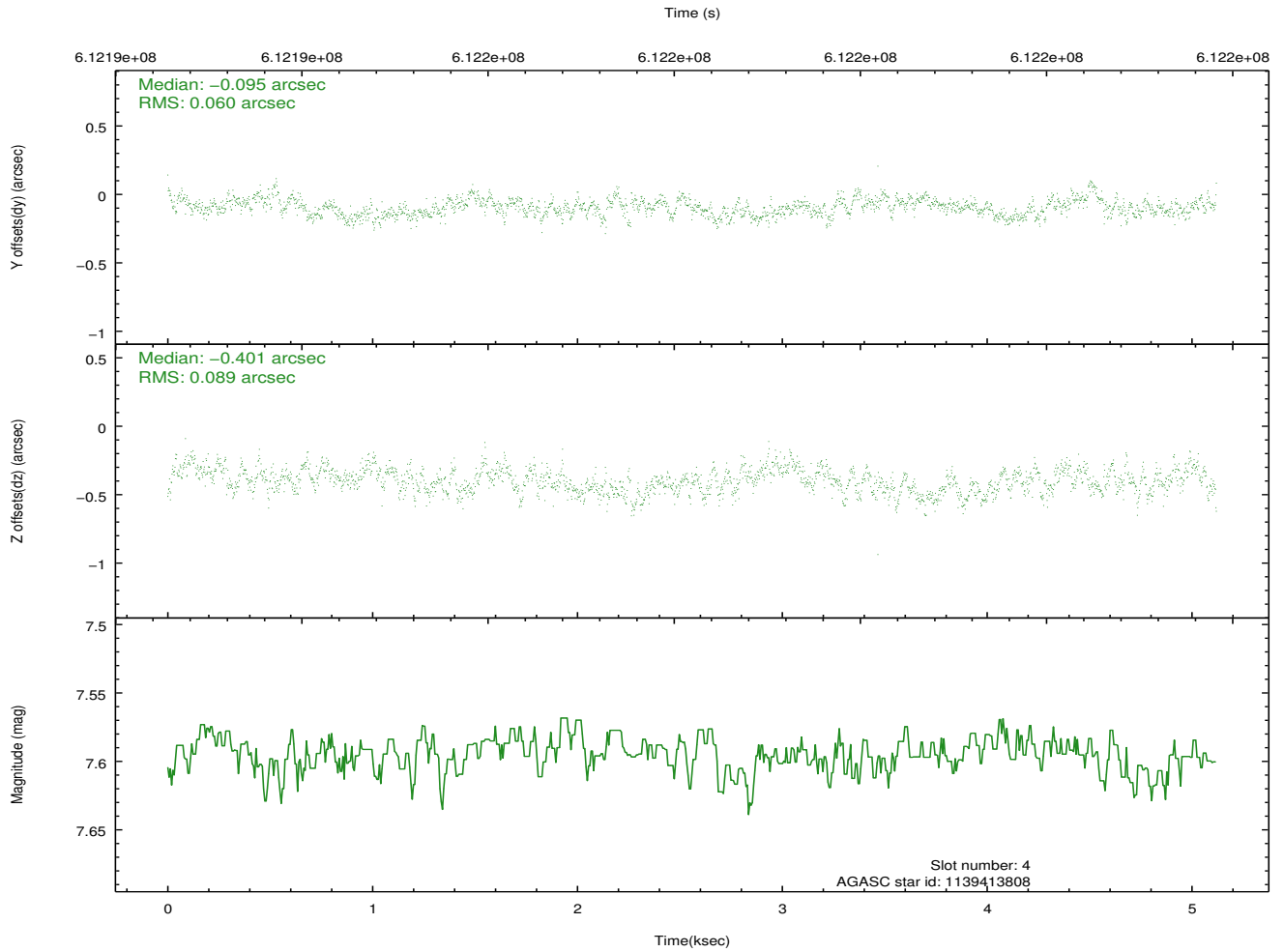
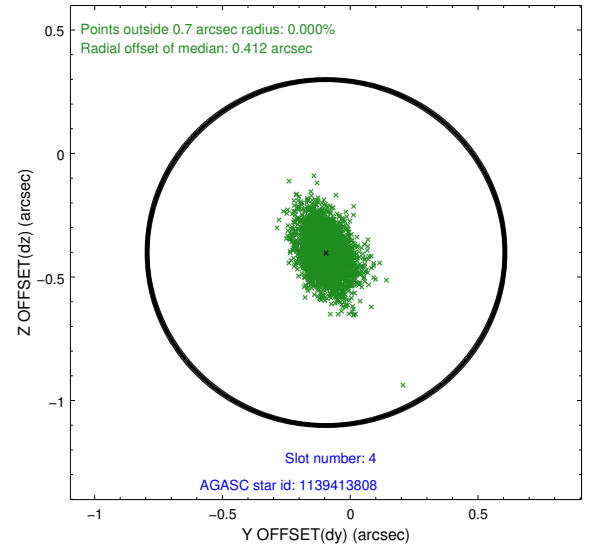
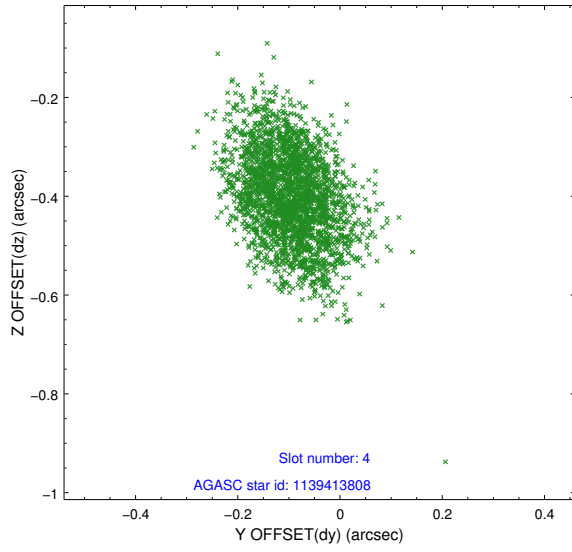
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	1249	-0.166	-0.100	0.009	0.015	0.000000	0.000000	921.32	-843.83
1	FID		ACIS-I-4	7.02	1249	0.230	0.160	0.009	0.015	0.000000	0.000000	2142.40	1055.64
2	FID		ACIS-I-6	7.08	1249	-0.160	0.005	0.009	0.014	0.000000	0.000000	388.74	1699.01
3	GUIDE	used	1139409976	7.46	2498	0.081	0.122	0.106	0.189	225.187201	-59.811775	-2010.37	1223.91
4	GUIDE	used	1139413808	7.60	2498	-0.095	-0.401	0.113	0.184	226.199465	-59.794877	-381.84	2064.28
5	GUIDE	used	1182289848	8.55	2498	-0.153	0.084	0.106	0.179	225.543224	-60.813679	121.76	-1751.74
6	GUIDE	used	1182287656	9.13	2497	0.170	0.302	0.163	0.269	225.247013	-60.918696	-182.38	-2318.88
7	GUIDE	used	1182288104	8.76	2491	-0.009	-0.112	0.143	0.227	225.998925	-60.820953	856.42	-1435.60

## 2.4 Star Slots

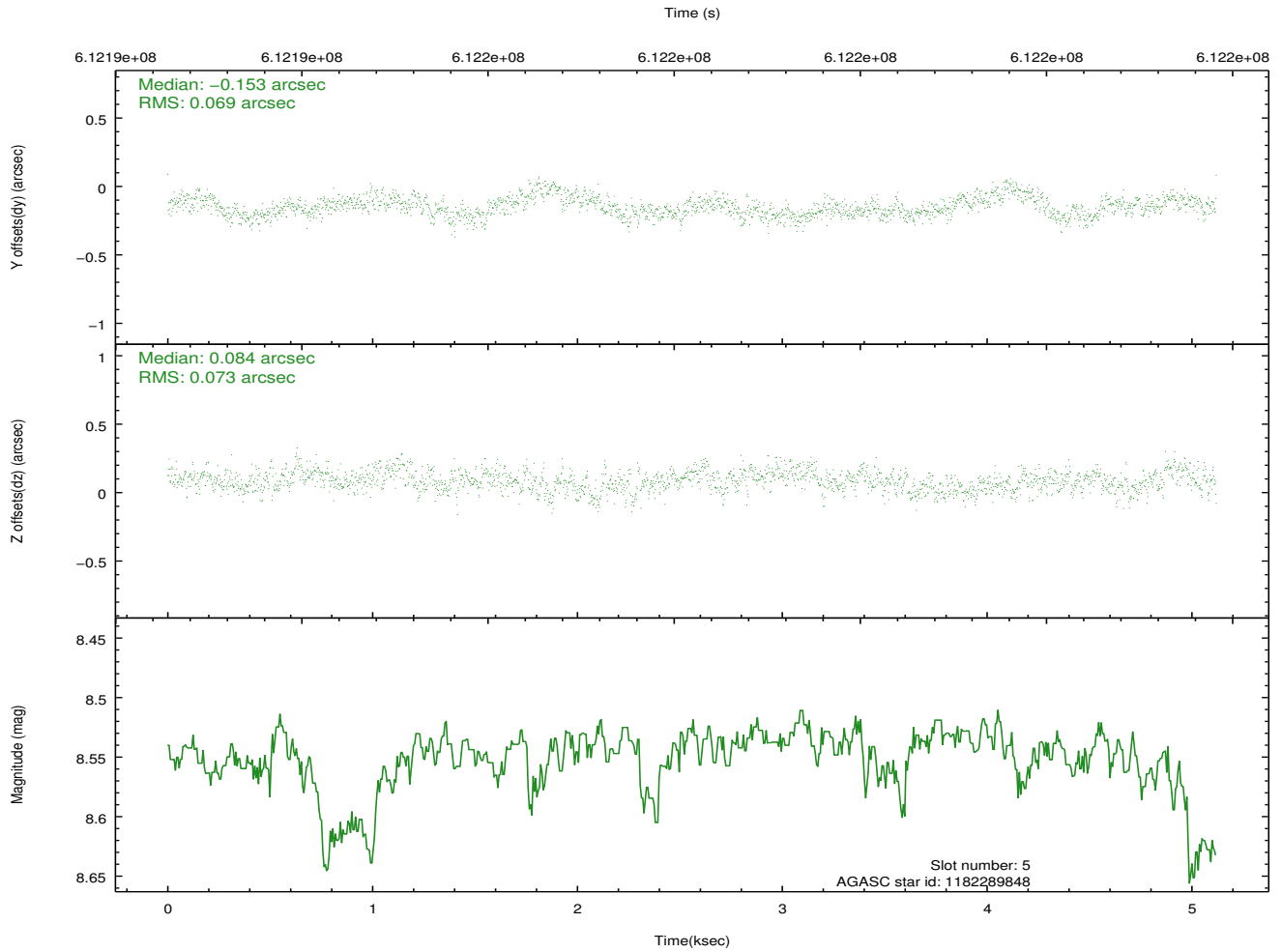
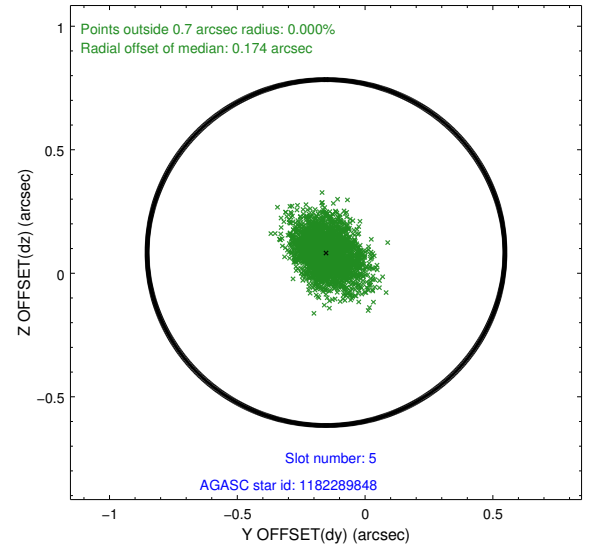
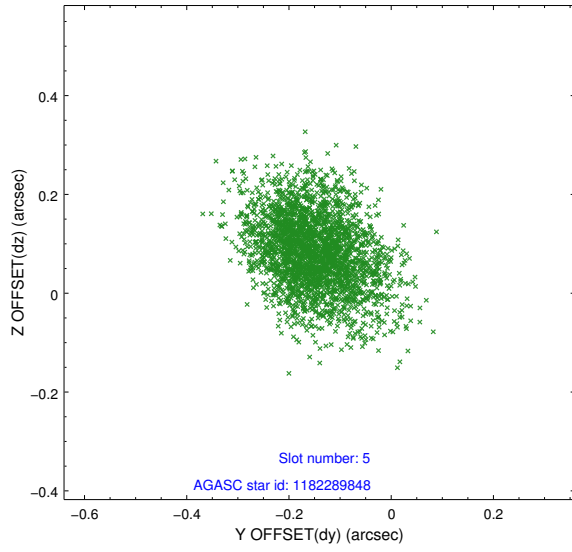
### 2.4.1 Slot 3



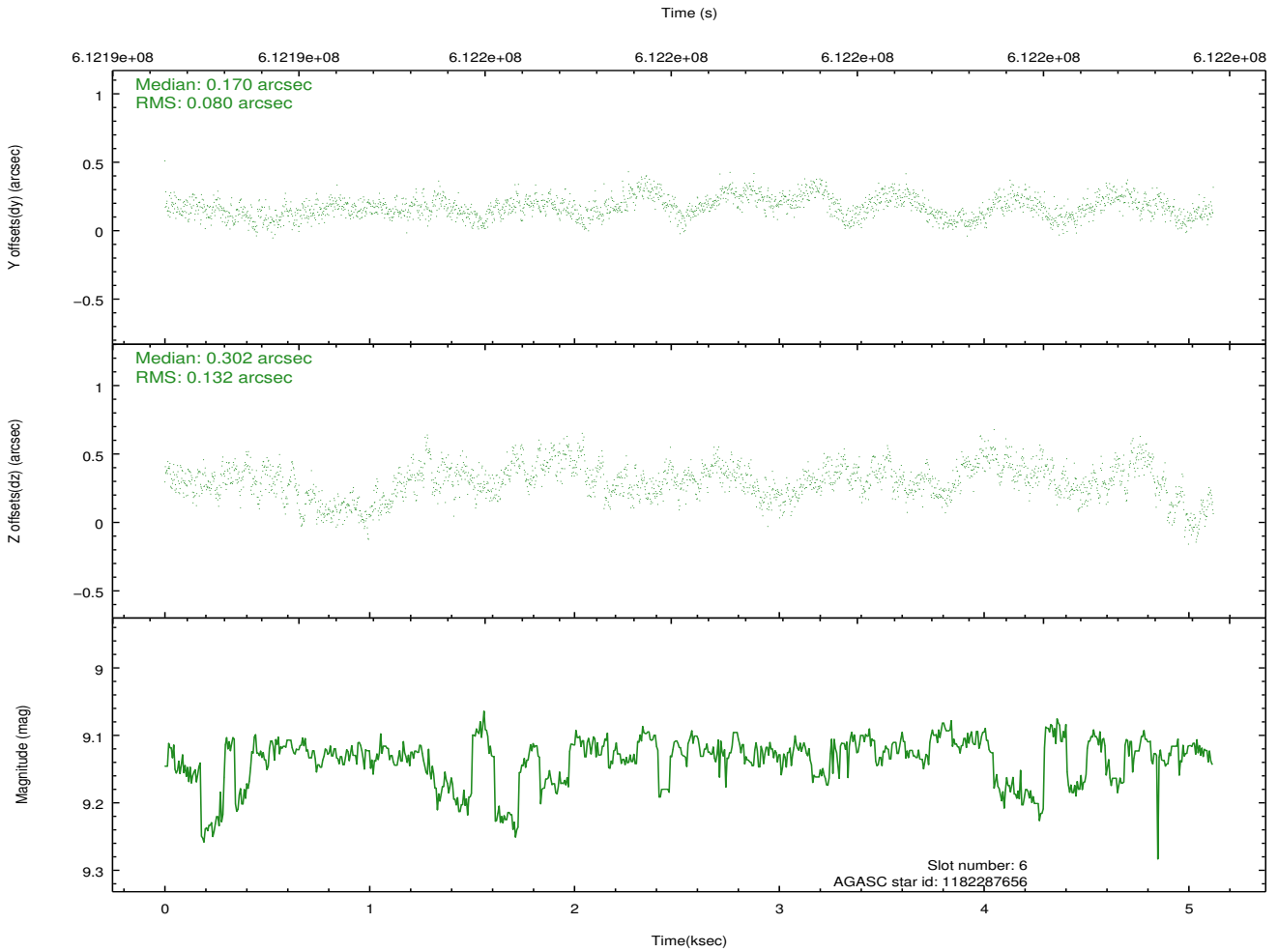
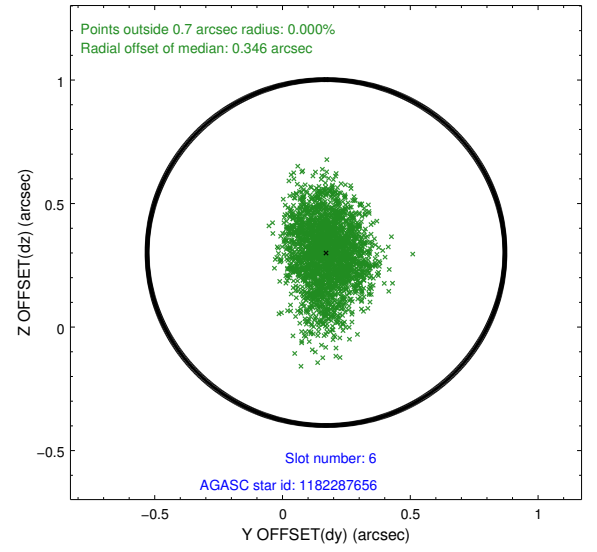
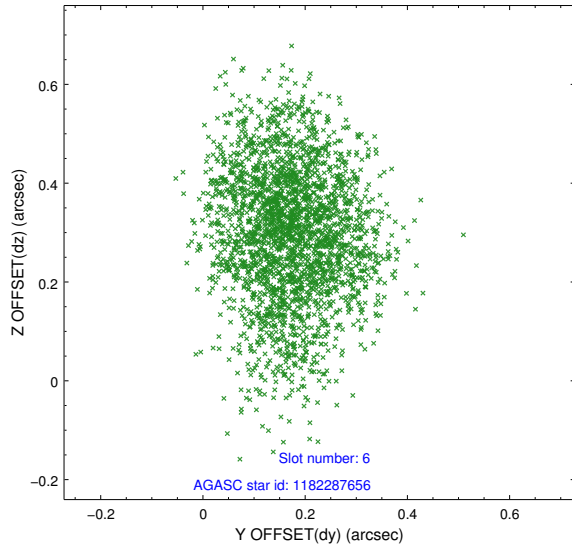
## 2.4.2 Slot 4



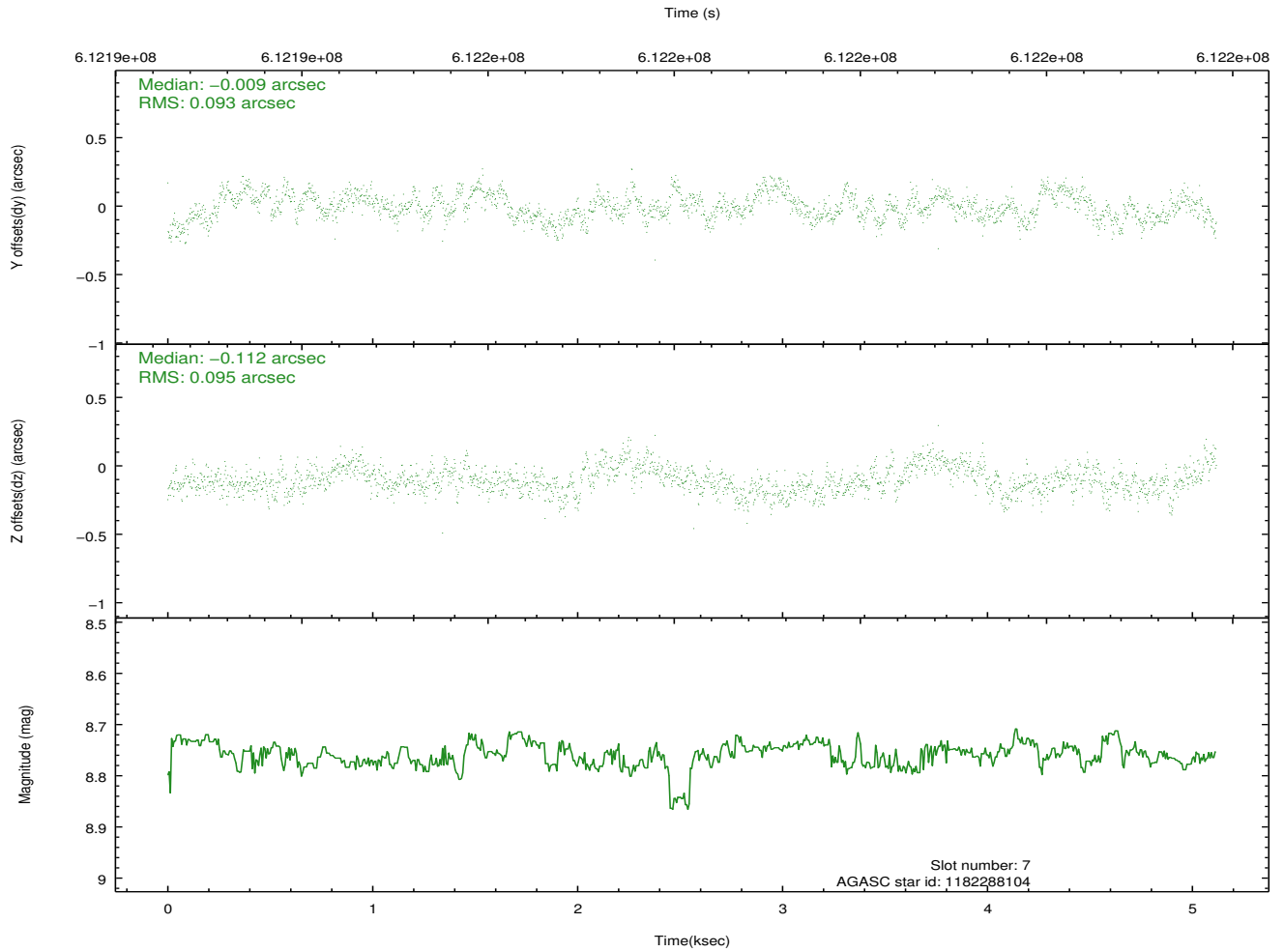
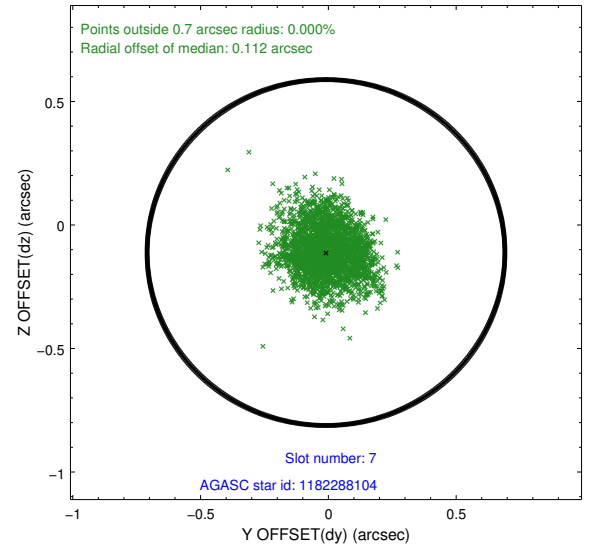
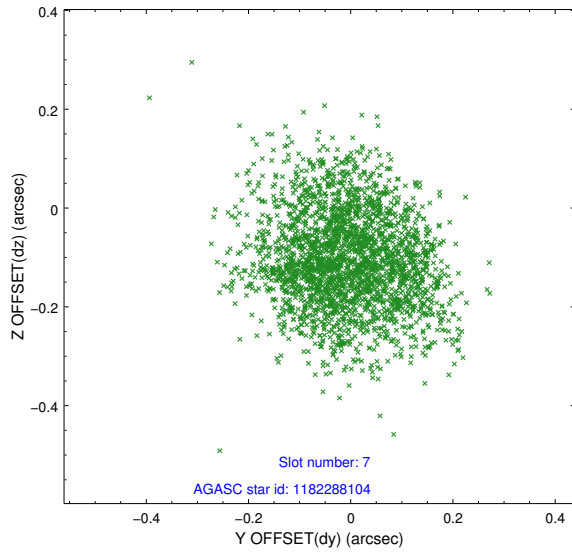
### 2.4.3 Slot 5



## 2.4.4 Slot 6

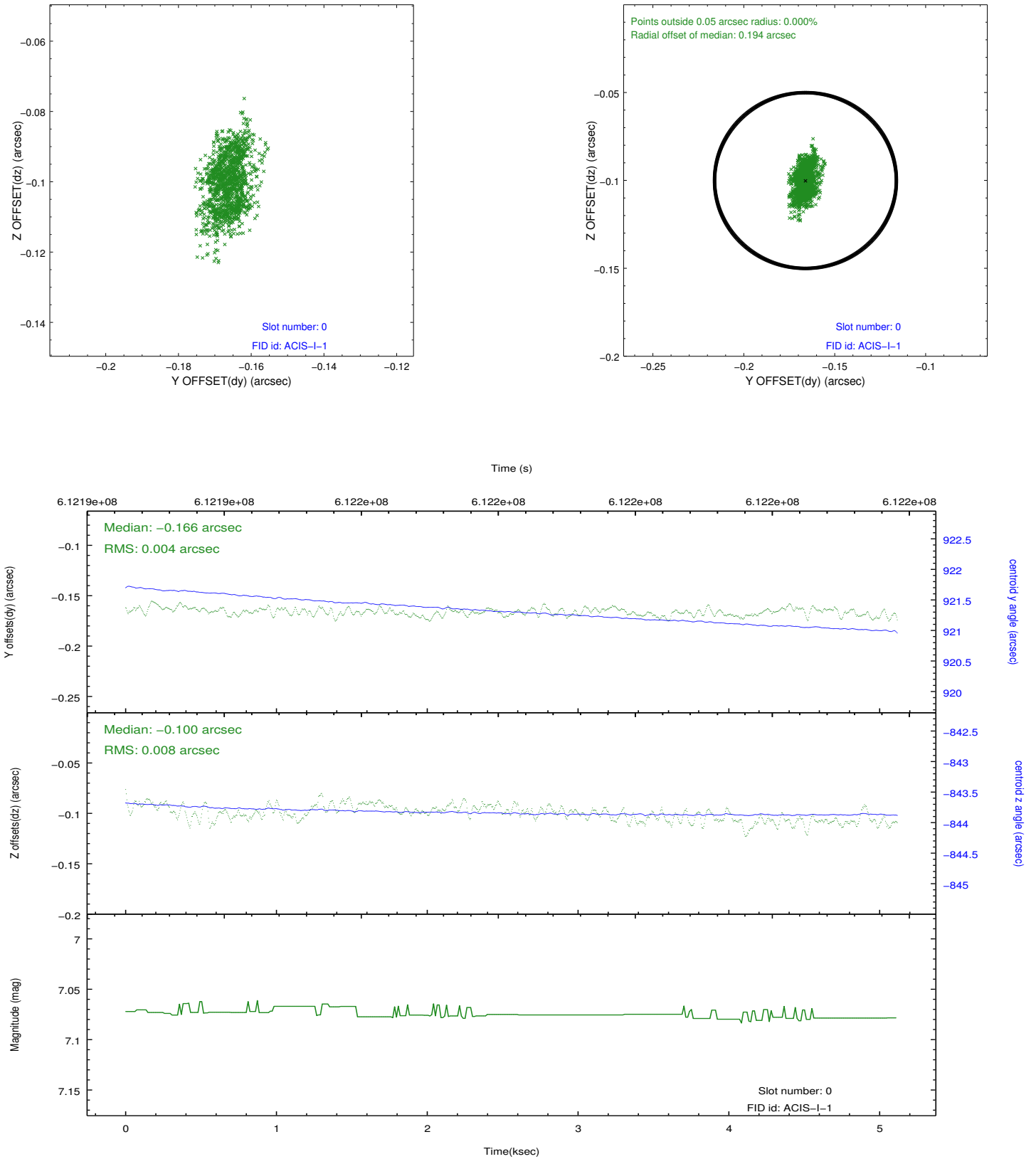


## 2.4.5 Slot 7

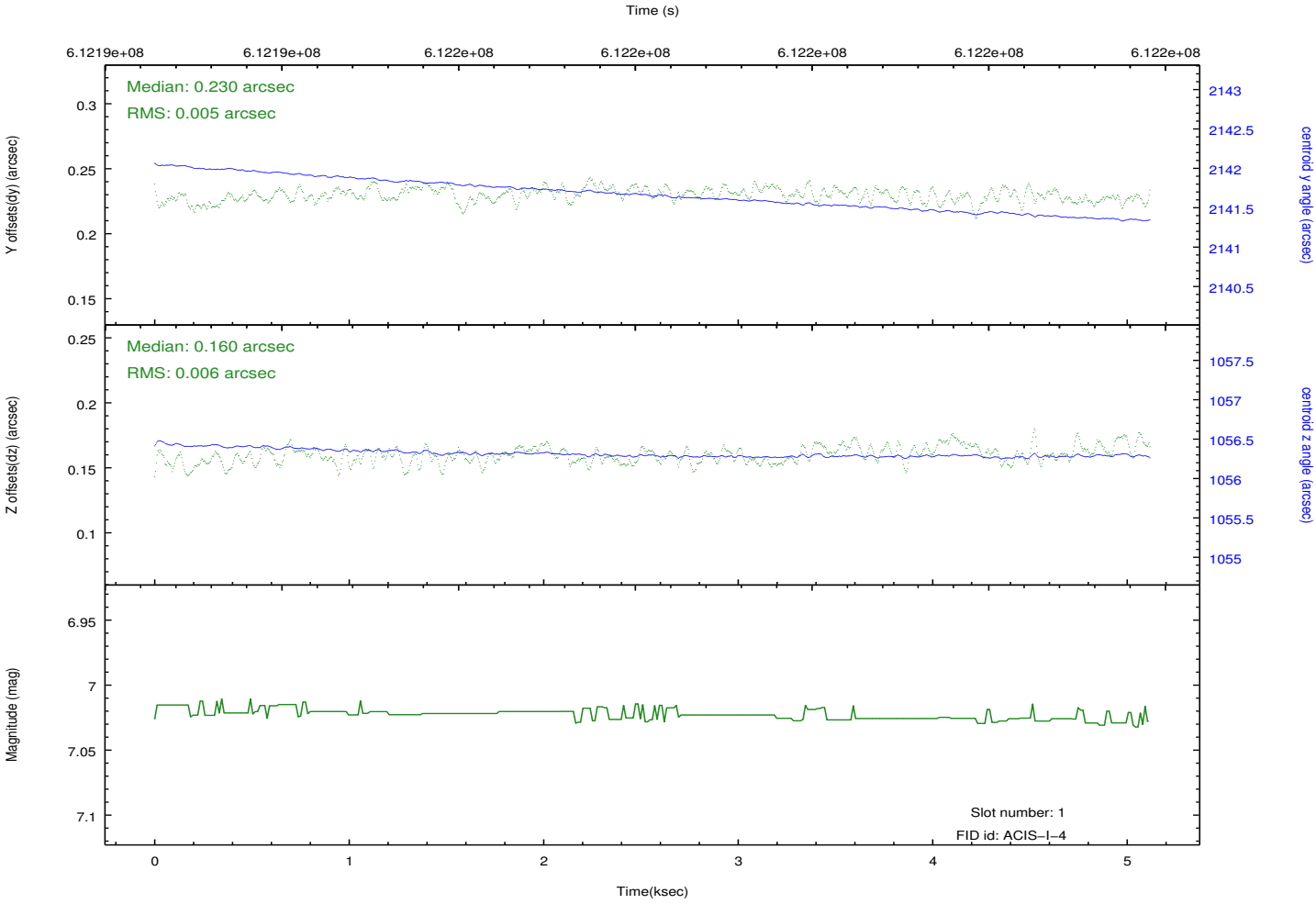
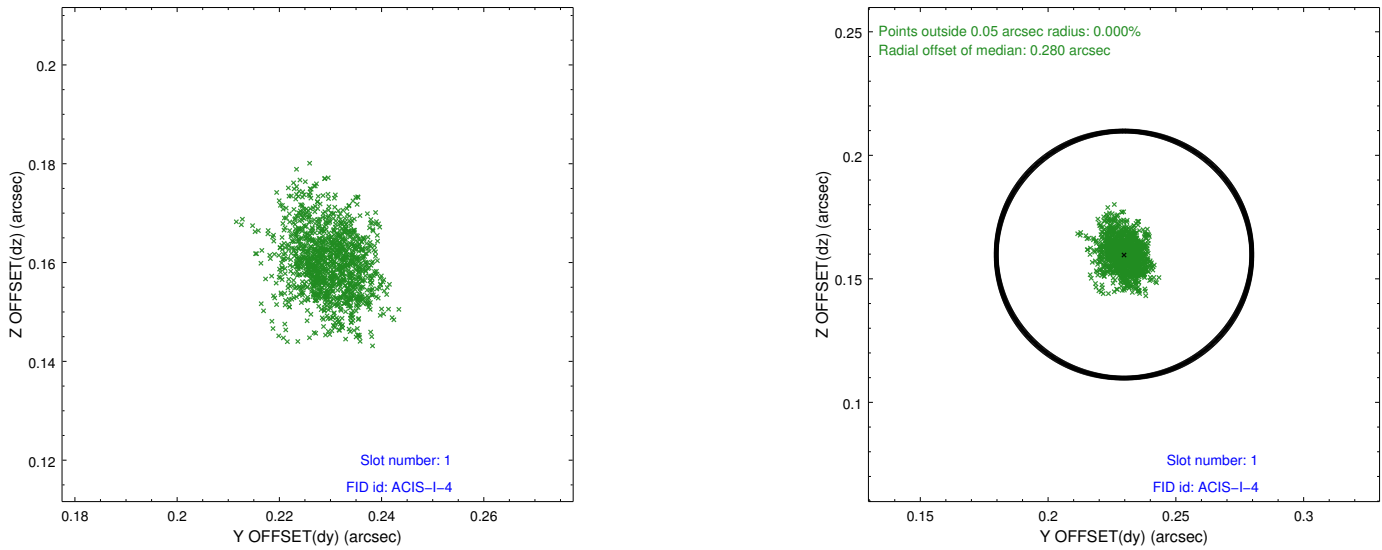


## 2.5 FID Slots

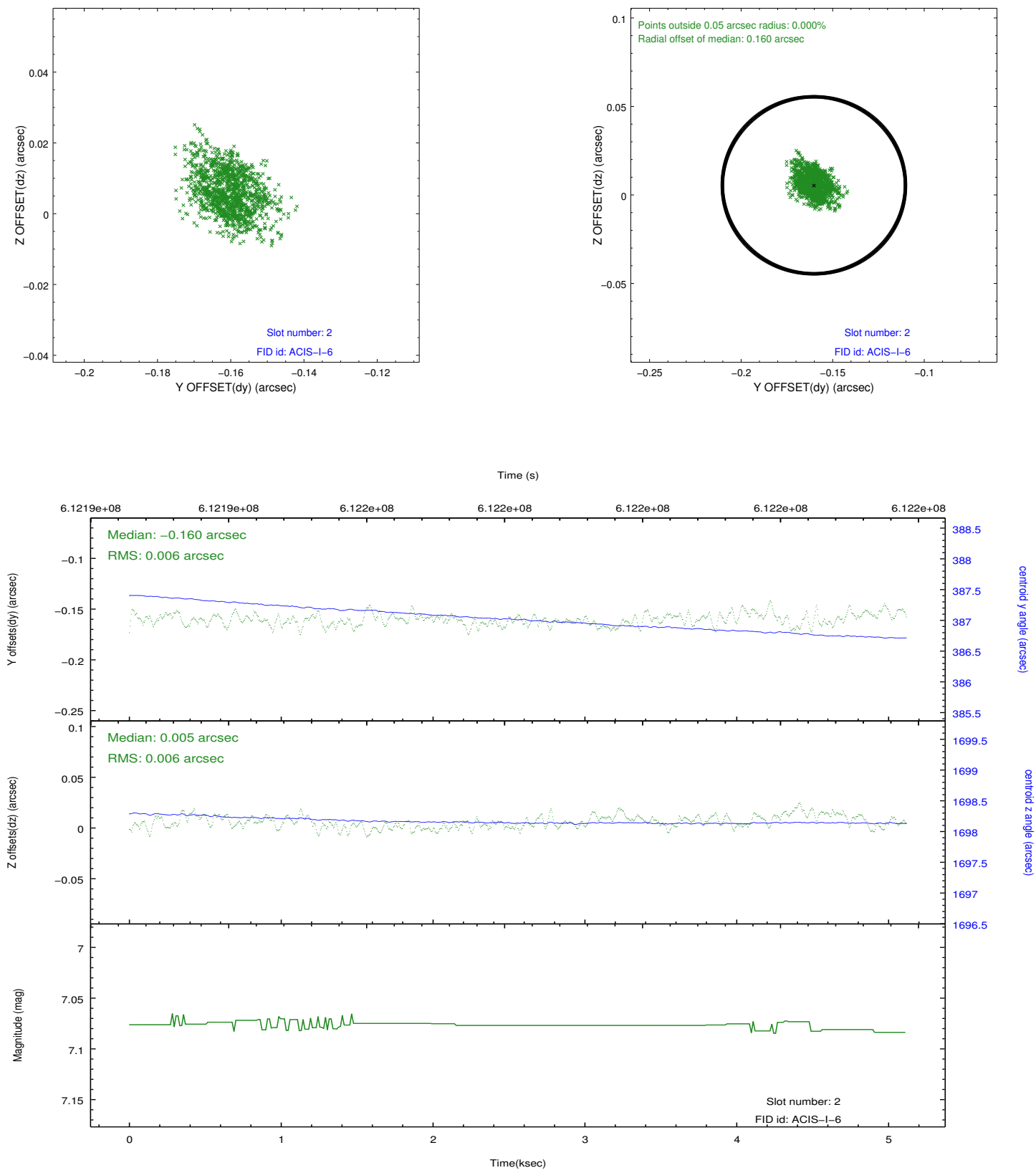
### 2.5.1 Slot 0



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)	2017.05.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.9592902703285

### A.2 Comments