

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11670 - L2 Version 2  
Chandra X-Ray Center

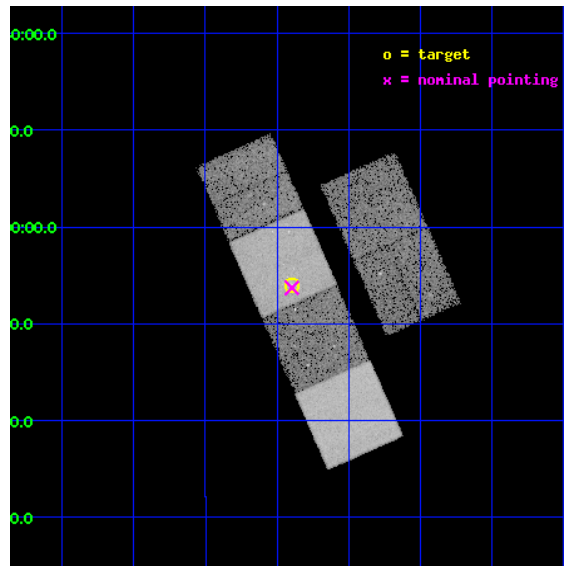
L2 Processing Date : Jun 30 2012

## 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	702256	Sequence number
obs_id	11670	Observation id
title	Investigating the Nuclear Activity of Barred and Unbarred Spiral Galaxies	Proposal title
observer	Dr Leigh Jenkins	Principal investigator
object	NGC 4030	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	180.098458	Observer's specified target RA [deg]
dec_targ	-1.100083	Observer's specified target Dec [deg]
ra_nom	180.09914112195	Nominal RA [deg]
dec_nom	-1.1049143346145	Nominal Dec [deg]
roll_nom	246.09645121493	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15049.509563684	Sum of GTIs [s]
livetime	14858.943611862	Livetime [s]
ontime2	15049.550603688	Sum of GTIs [s]
ontime3	15049.386443675	Sum of GTIs [s]
ontime5	15049.468523681	Sum of GTIs [s]
ontime6	15049.427483678	Sum of GTIs [s]
ontime7	15049.509563684	Sum of GTIs [s]
ontime8	15049.345403671	Sum of GTIs [s]
l2events	182704	Number of level 2 events

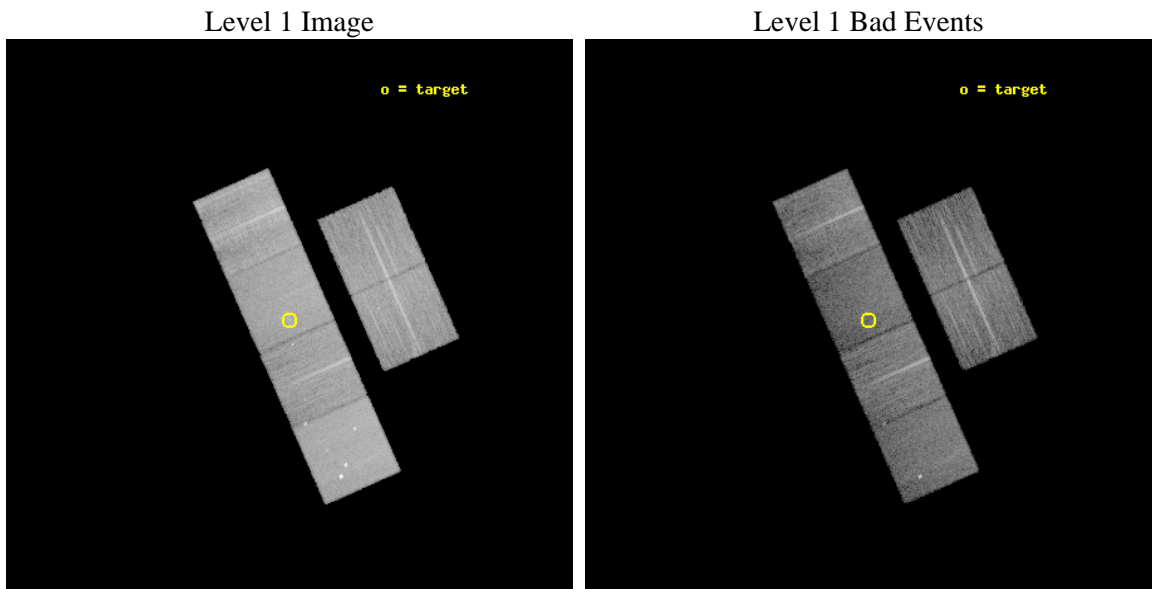




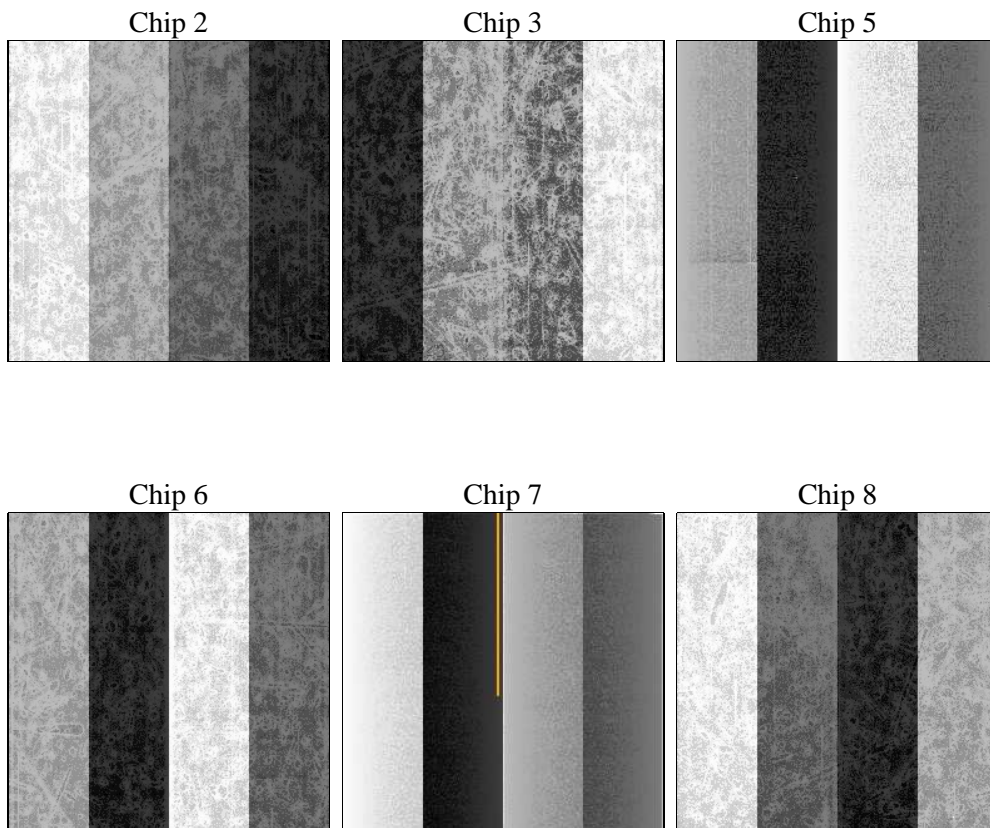
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	15049.509563684	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime2	15049.550603688	Sum of GTIs [s]
date	2012-06-30T15:31:17	Date and time of file creation	ontime3	15049.386443675	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	15049.468523681	Sum of GTIs [s]
			ontime6	15049.427483678	Sum of GTIs [s]
			ontime7	15049.509563684	Sum of GTIs [s]
			ontime8	15049.345403671	Sum of GTIs [s]
			l1events	791291	Number of level 1 events

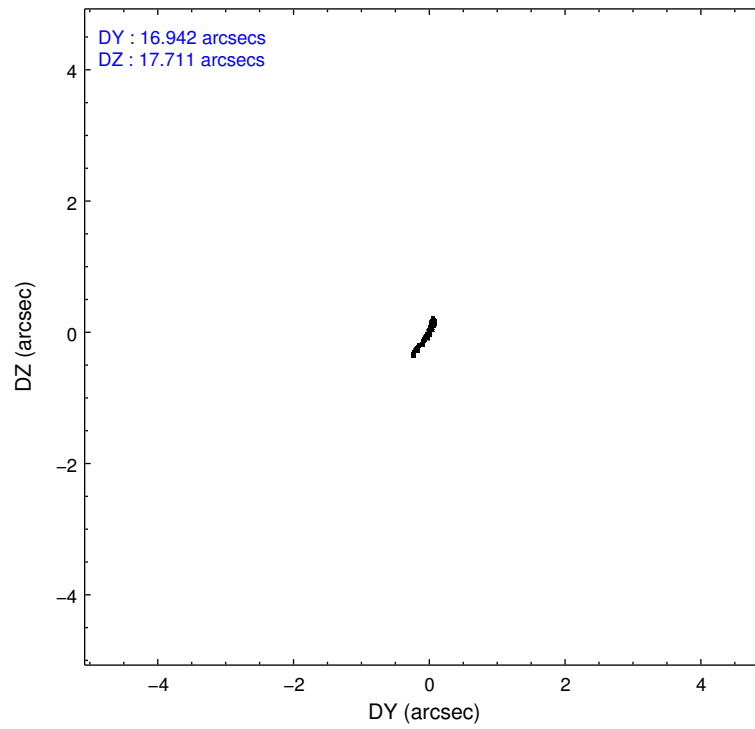
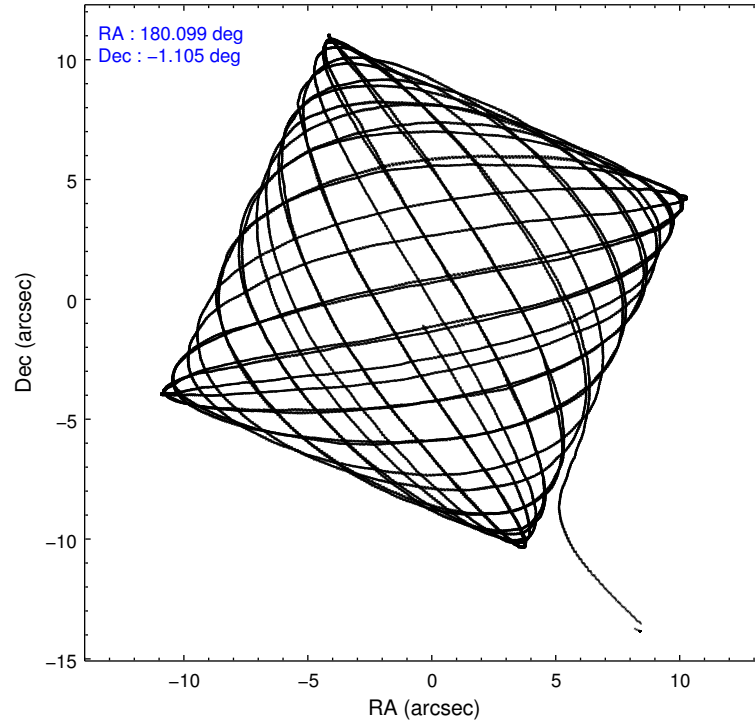
### 2.1.4 Events

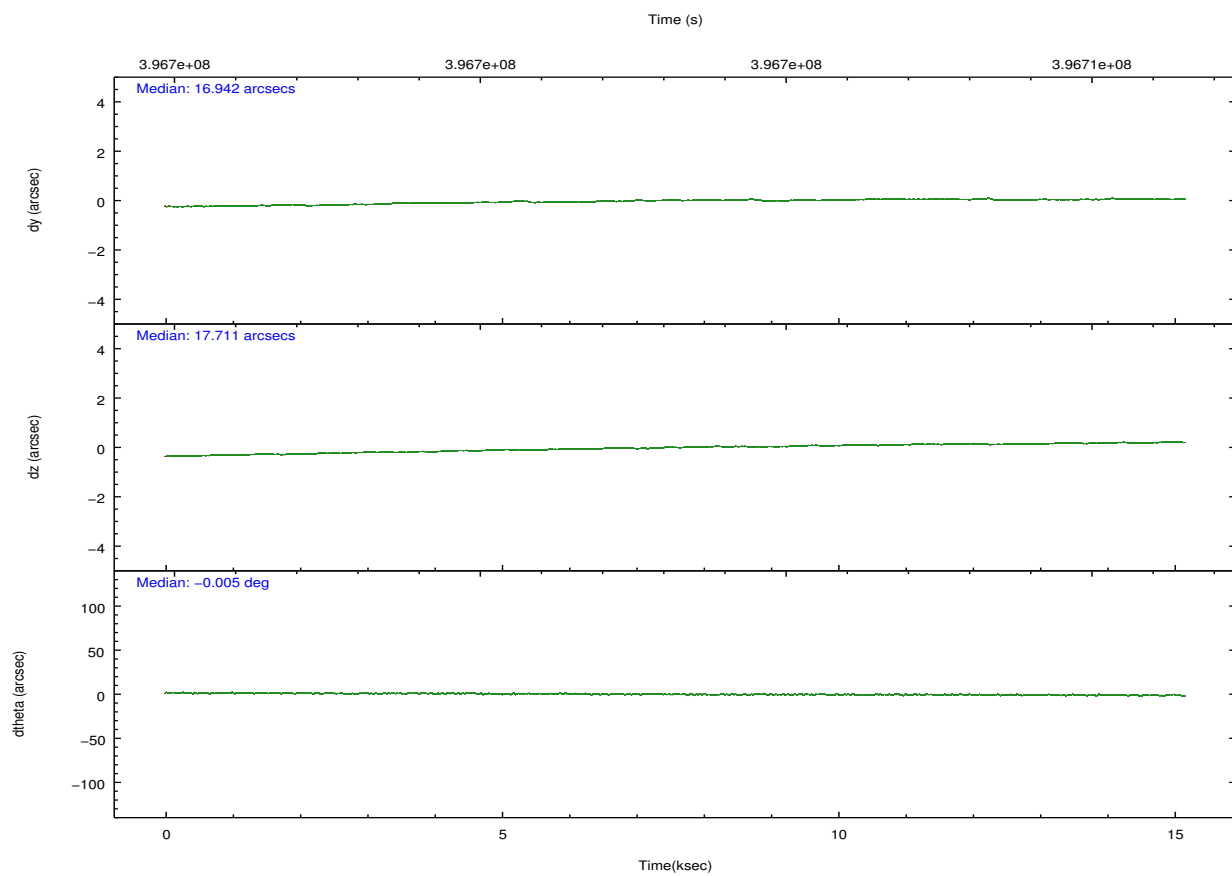
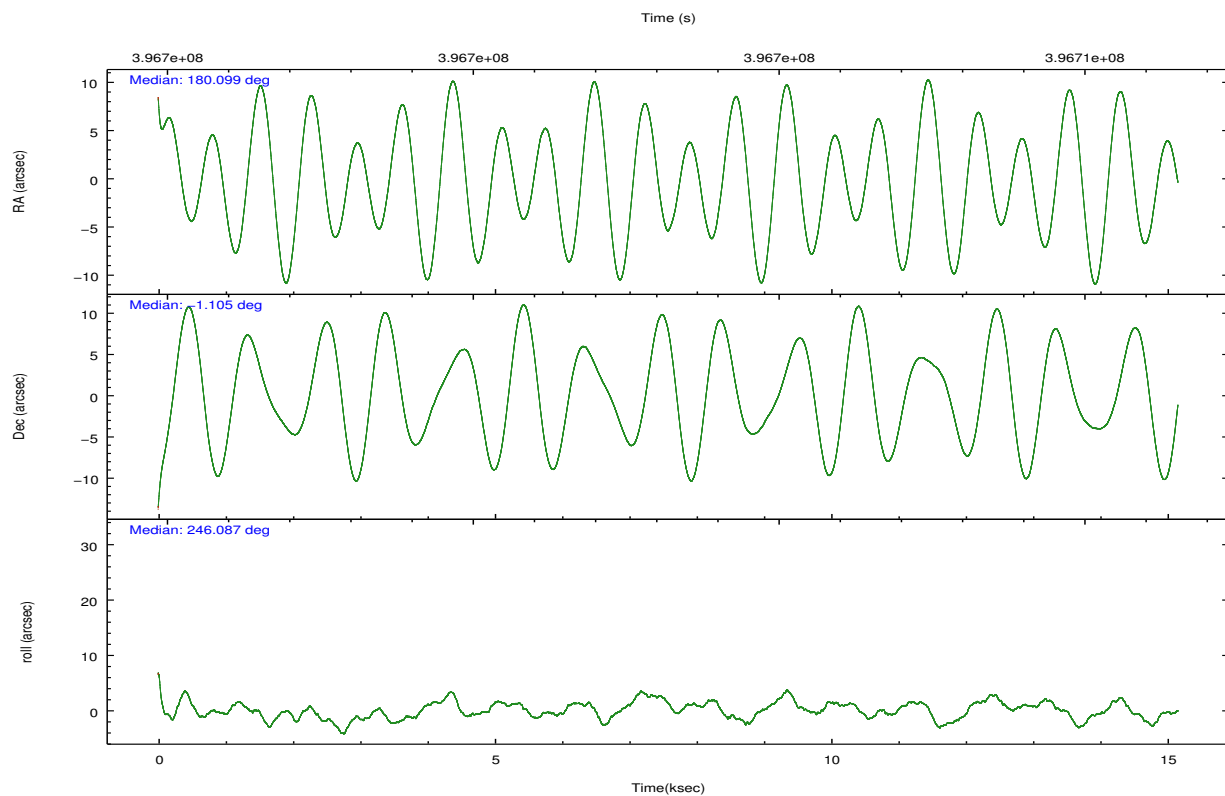
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	114174	107503	171387	113812	137058	147357	grade 0 events	4345	3851	10114	4777	5918	11667
rejected events	102117	96304	84813	100911	75057	108259		3%	3%	5%	4%	4%	7%
rejected %	89%	89%	49%	88%	54%	73%	grade 1 events	71	78	1412	63	179	115
								0%	0%	0%	0%	0%	0%
							grade 2 events	2959	2452	25868	2821	12732	9074
								2%	2%	15%	2%	9%	6%
							grade 3 events	1253	1282	3387	1301	5478	4008
								1%	1%	1%	1%	3%	2%
							grade 4 events	1226	1220	3232	1313	5558	3821
								1%	1%	1%	1%	4%	2%
							grade 5 events	4316	4973	12977	4985	14258	7274
								3%	4%	7%	4%	10%	4%
							grade 6 events	2281	2397	44020	2693	32339	10564
								1%	2%	25%	2%	23%	7%
							grade 7 events	97723	91250	70377	95859	60596	100834
								85%	84%	41%	84%	44%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	180.095837	180.099141121948	CCD I2 on	O1	Y
[deg] Pointing Dec	-1.077736	-1.104914334614518	CCD I3 on	O2	Y
[deg] Pointing Roll	245.939755	246.0964512149322	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	396695760.184000	396694397.48942	CCD S5 on	N	N
Observation start date	2010-07-28T09:14:54	2010-07-28T08:53:17	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	396710760.184000	396711627.2278	On-chip summing requested	N	N
Observation end date	2010-07-28T13:24:54	2010-07-28T13:40:27	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



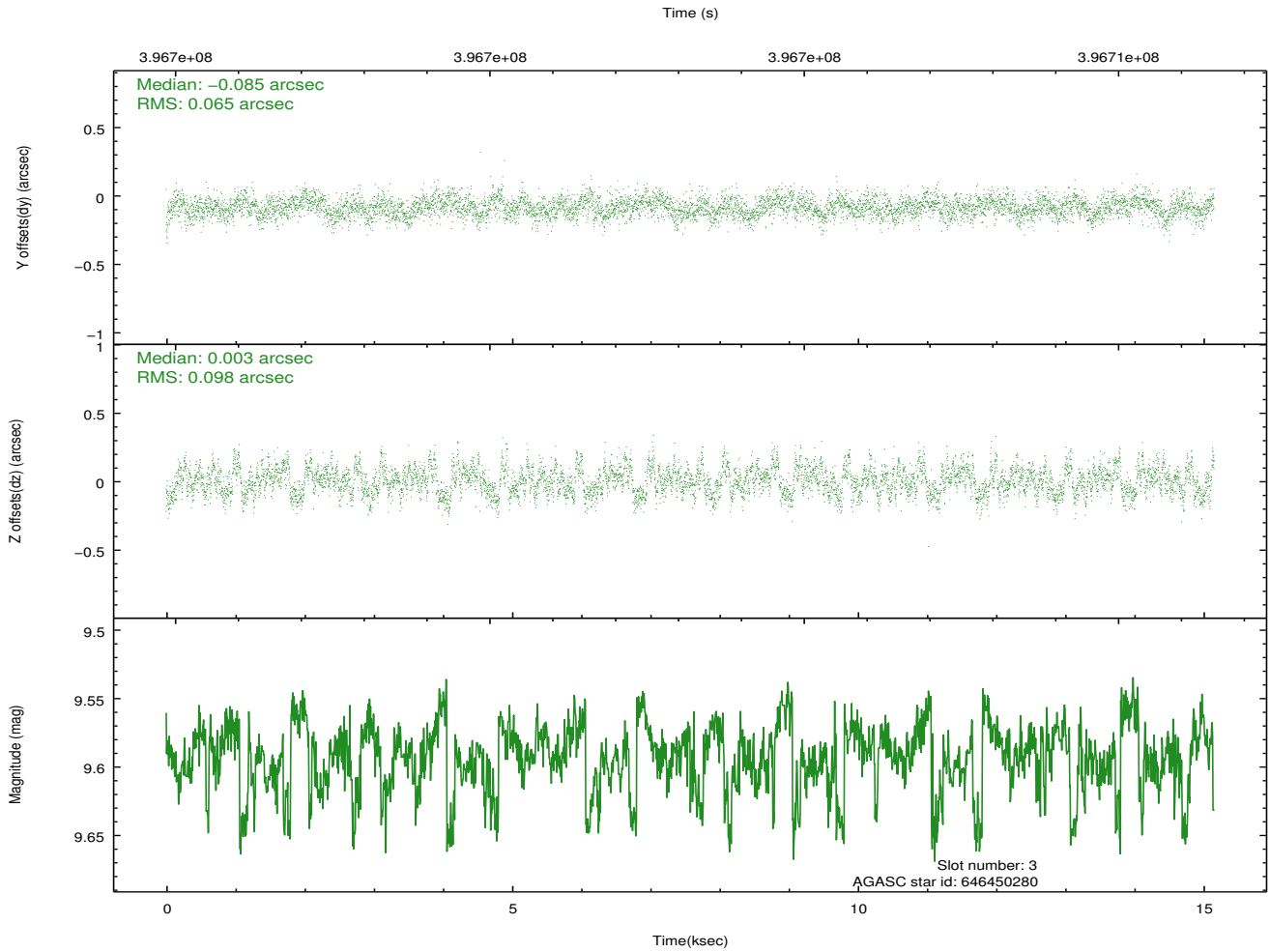
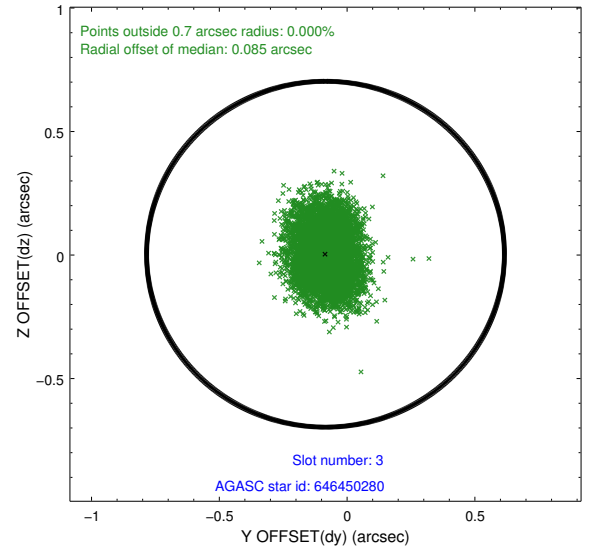
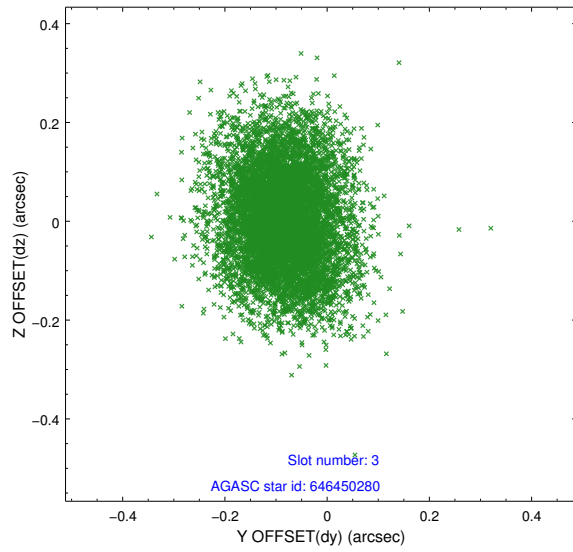


### Slot Statistics

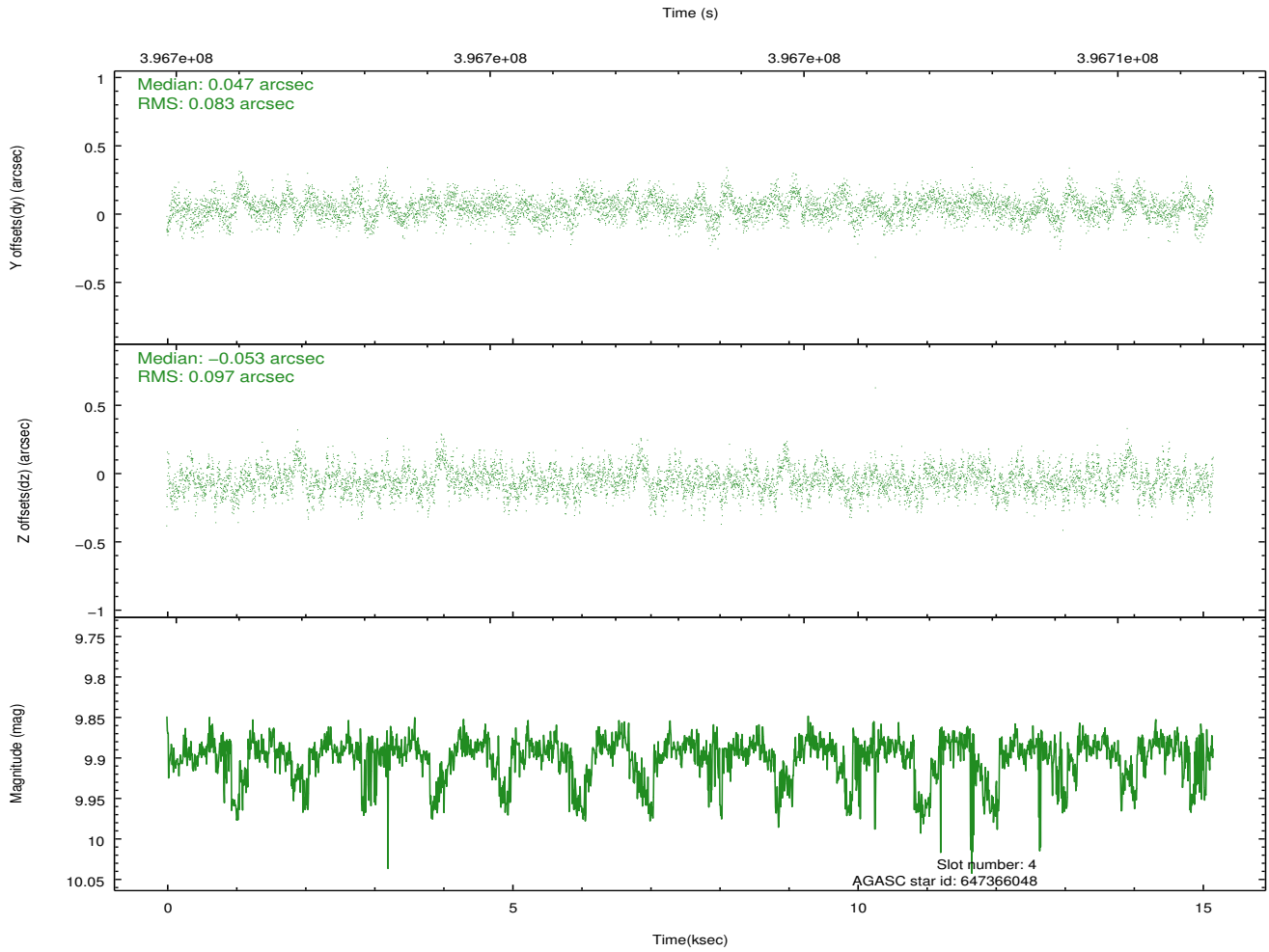
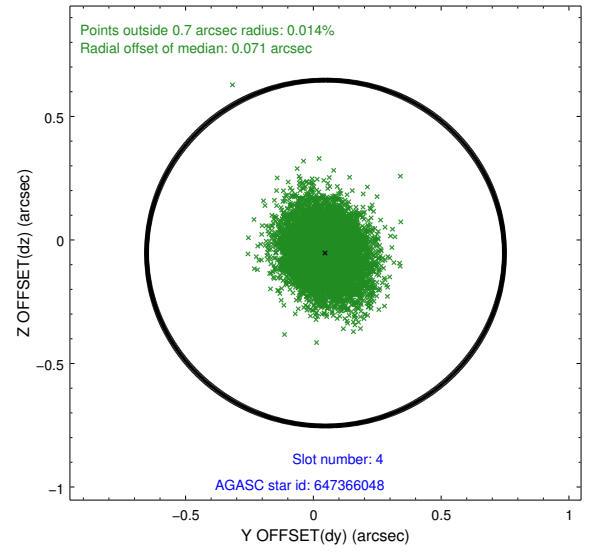
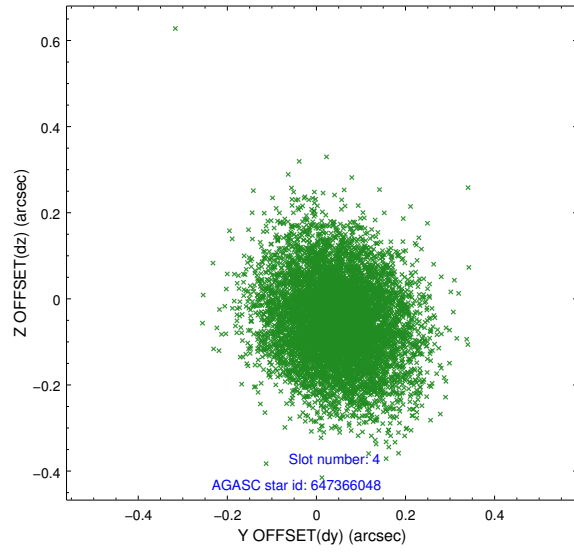
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.93	3698	0.145	-0.046	0.008	0.012	0.000000	0.000000	926.24	-1734.82
1	FID	ACIS-S-2	6.86	3698	-0.090	0.003	0.011	0.019	0.000000	0.000000	-769.74	-1739.60
2	FID	ACIS-S-5	6.97	3698	-0.078	0.049	0.007	0.011	0.000000	0.000000	-1823.25	162.56
3	GUIDE	646450280	9.59	7366	-0.085	0.003	0.125	0.205	179.696883	-1.033222	439.87	-1376.44
4	GUIDE	647366048	9.90	7377	0.047	-0.053	0.136	0.221	180.316299	-0.943873	-763.24	527.88
5	GUIDE	647367072	9.16	7388	0.032	-0.103	0.099	0.158	180.260700	-1.592431	1451.62	1296.24
6	GUIDE	647367560	9.25	7392	0.134	0.324	0.111	0.179	180.100932	-0.691762	-1275.45	-549.92
7	GUIDE	647368192	9.70	7387	-0.128	-0.173	0.116	0.196	180.906450	-0.862973	-1895.74	2348.91

## 2.4 Star Slots

### 2.4.1 Slot 3

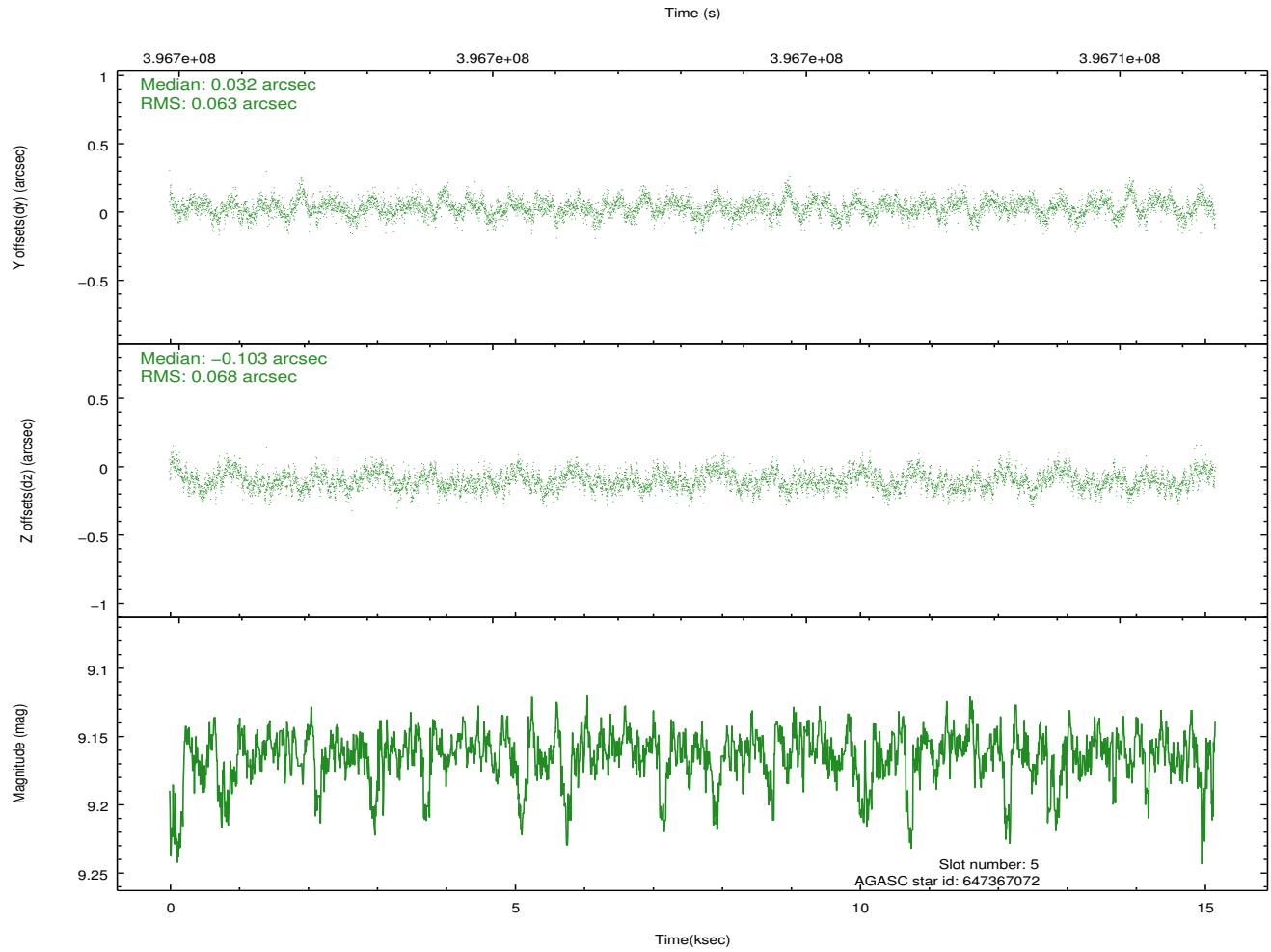
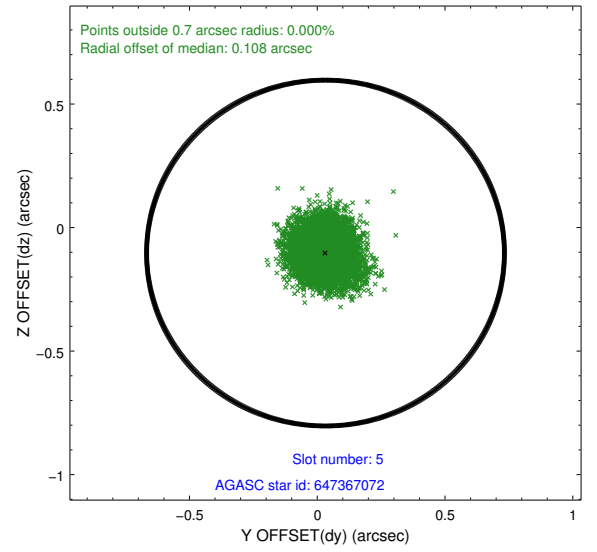
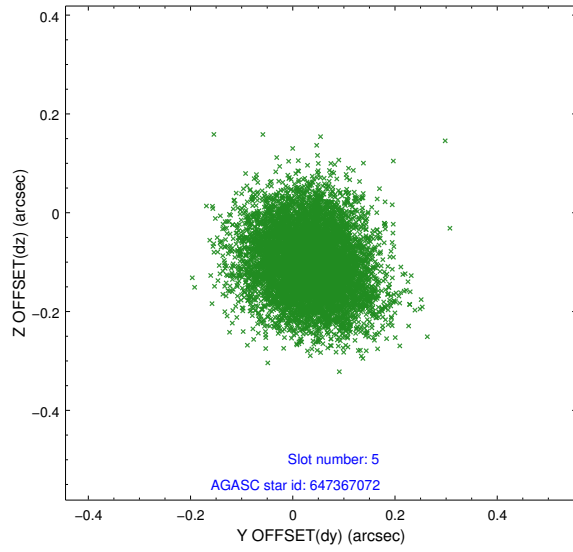


## 2.4.2 Slot 4

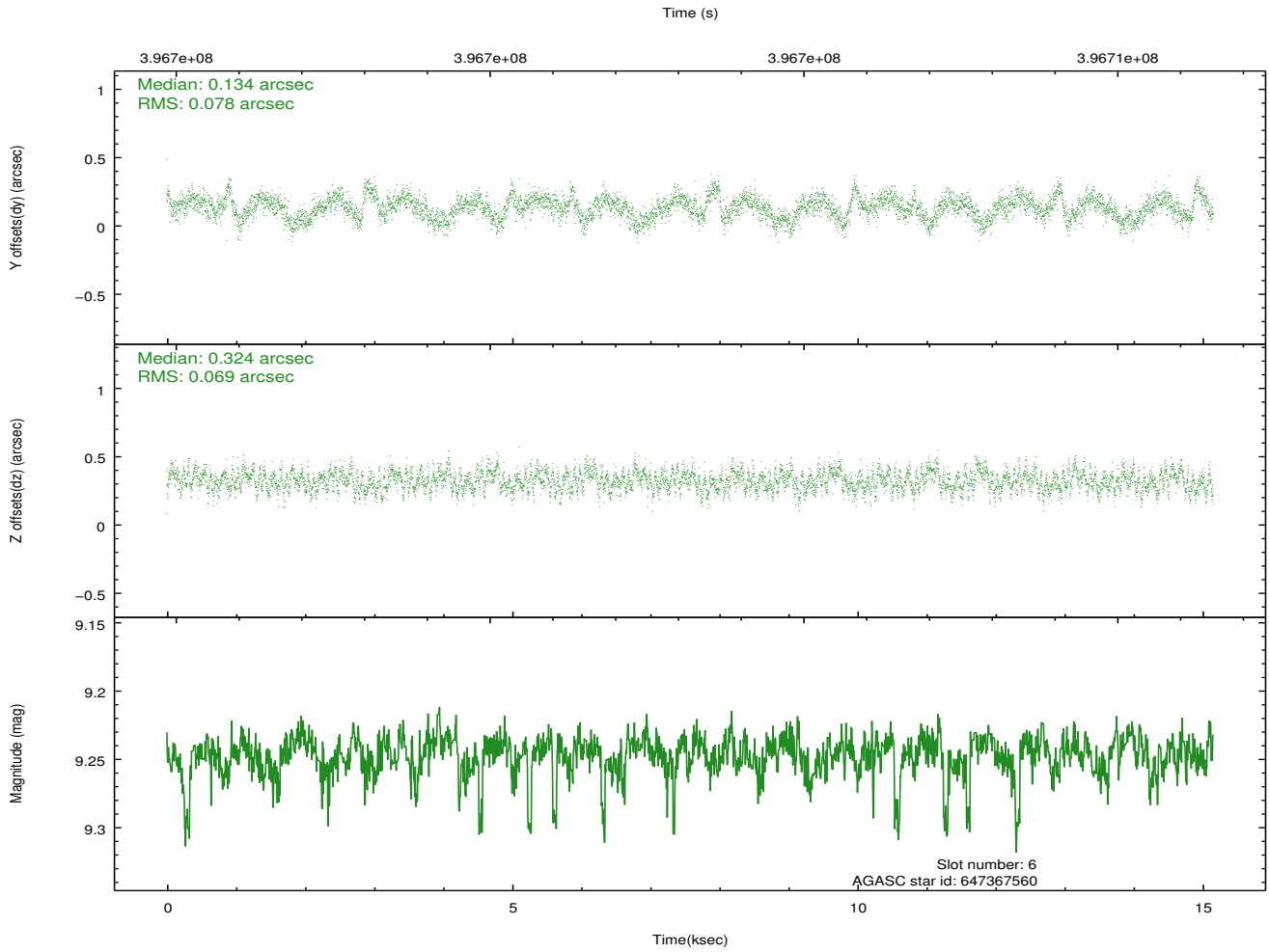
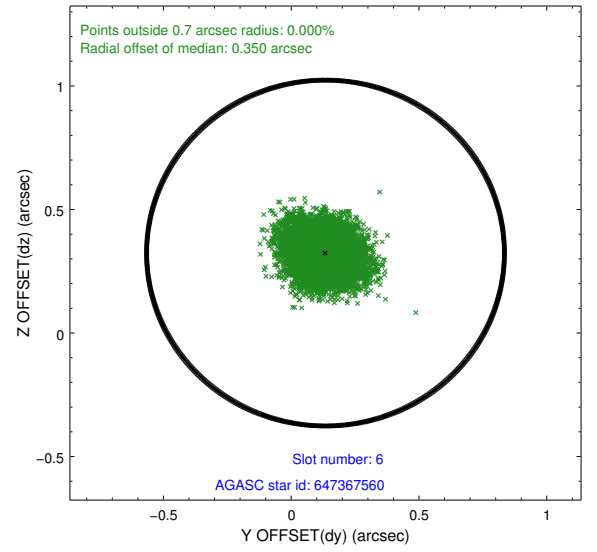
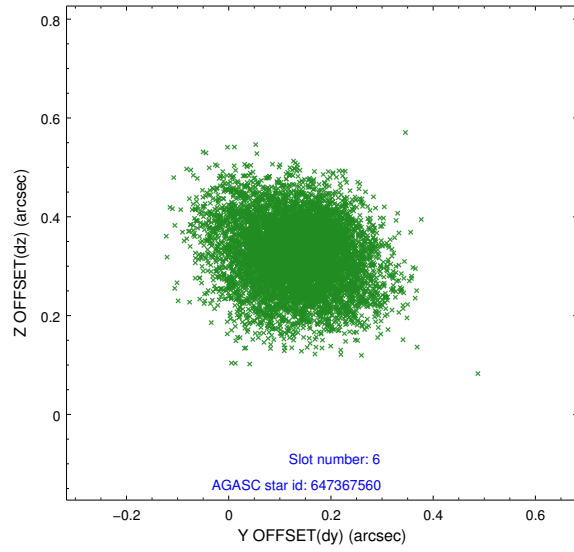




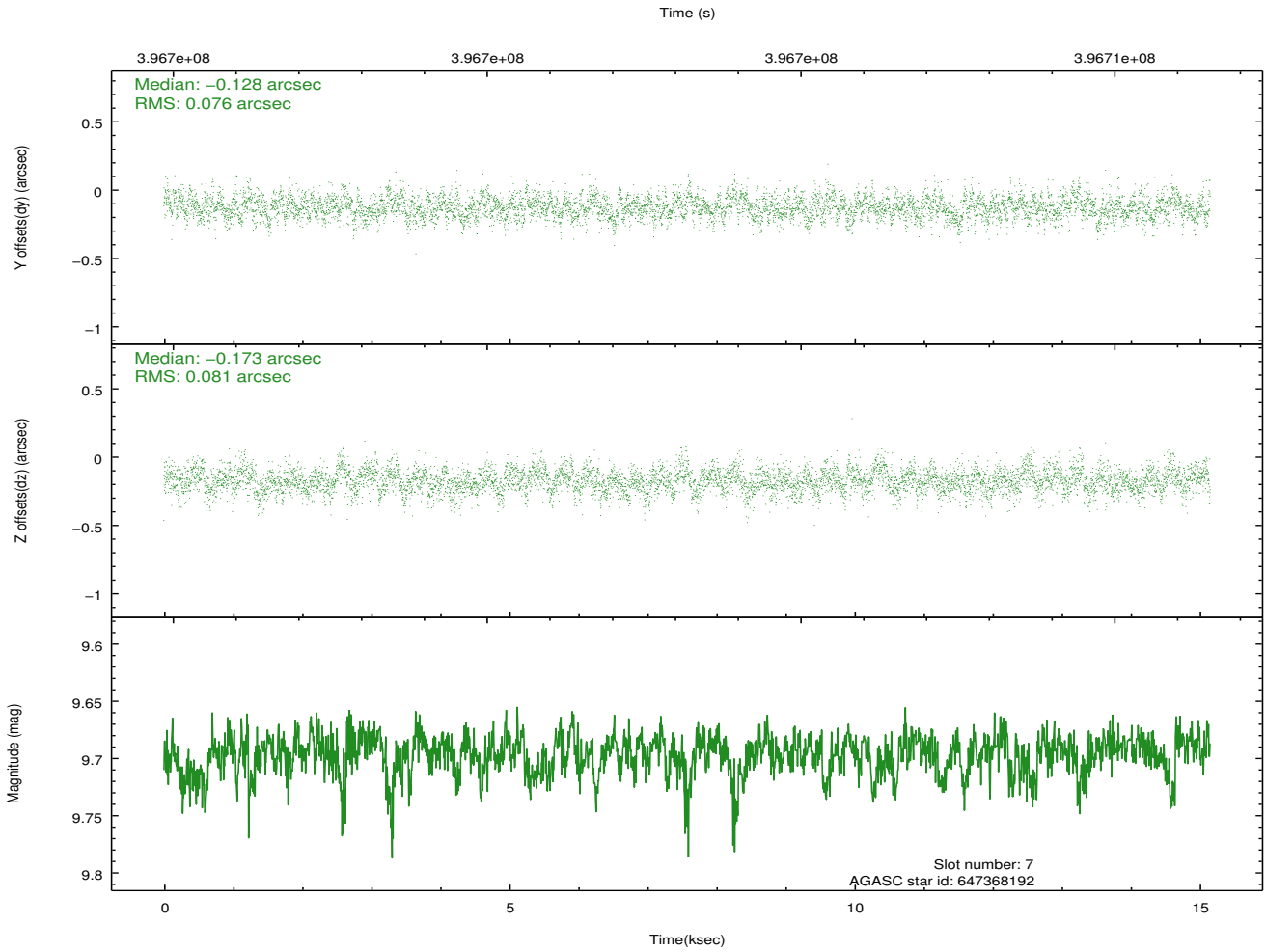
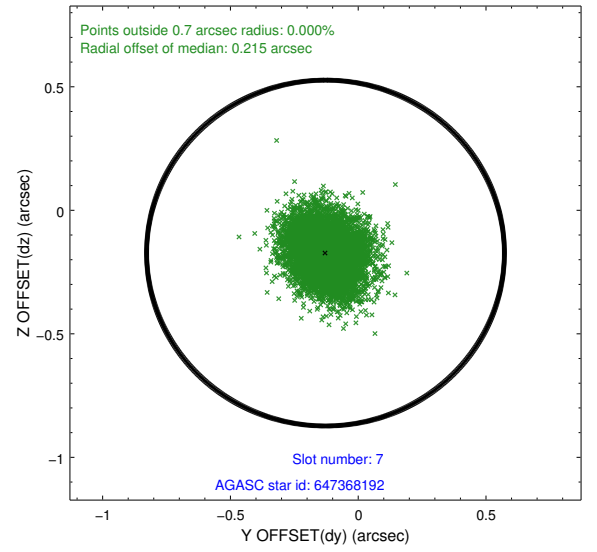
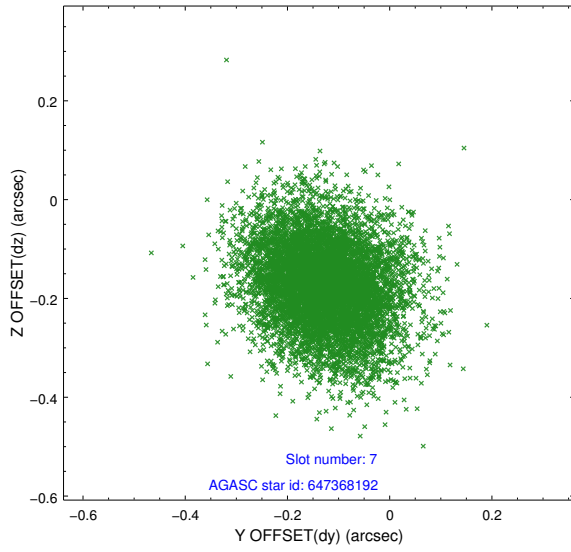
### 2.4.3 Slot 5



## 2.4.4 Slot 6

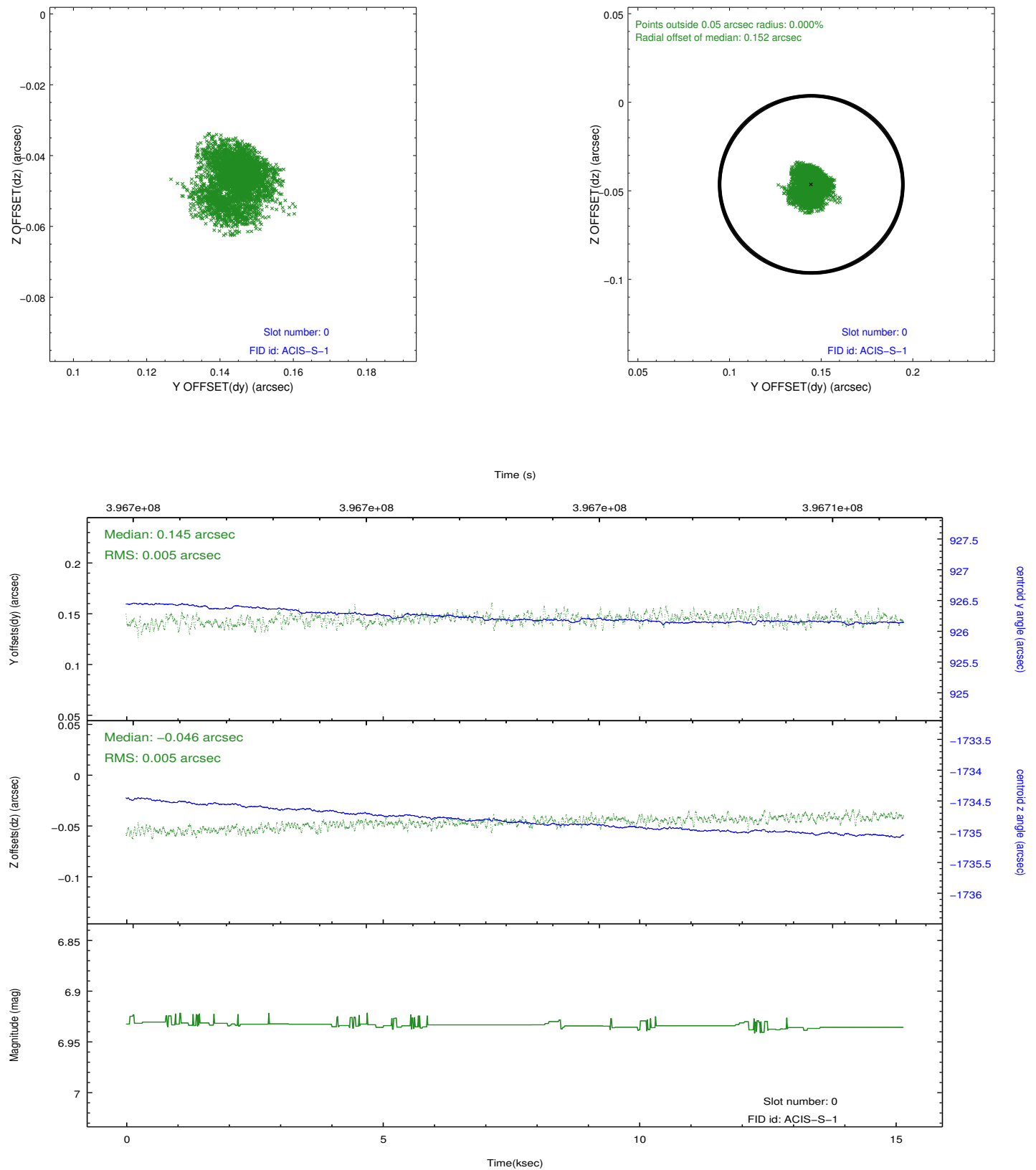


## 2.4.5 Slot 7

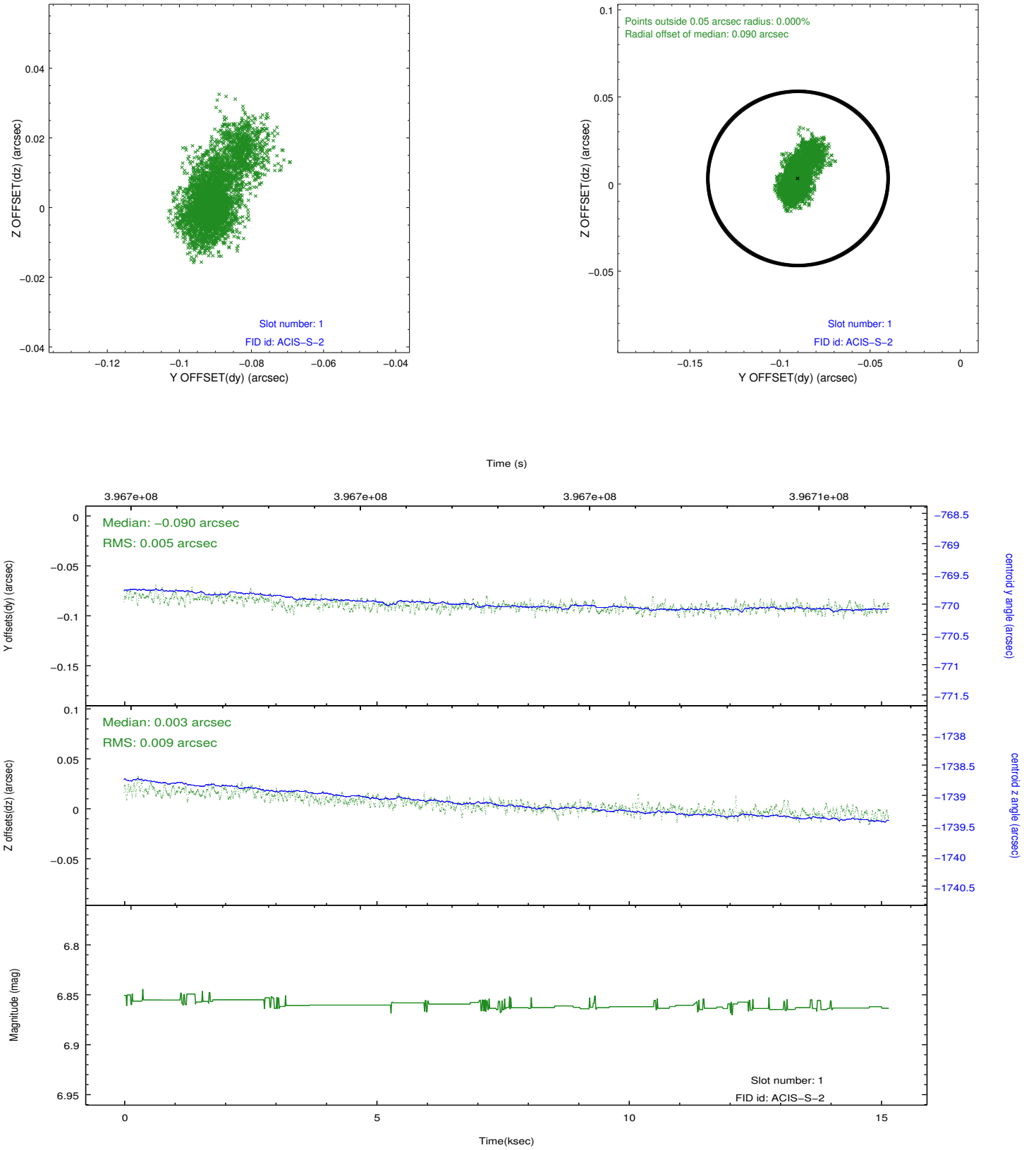


## 2.5 FID Slots

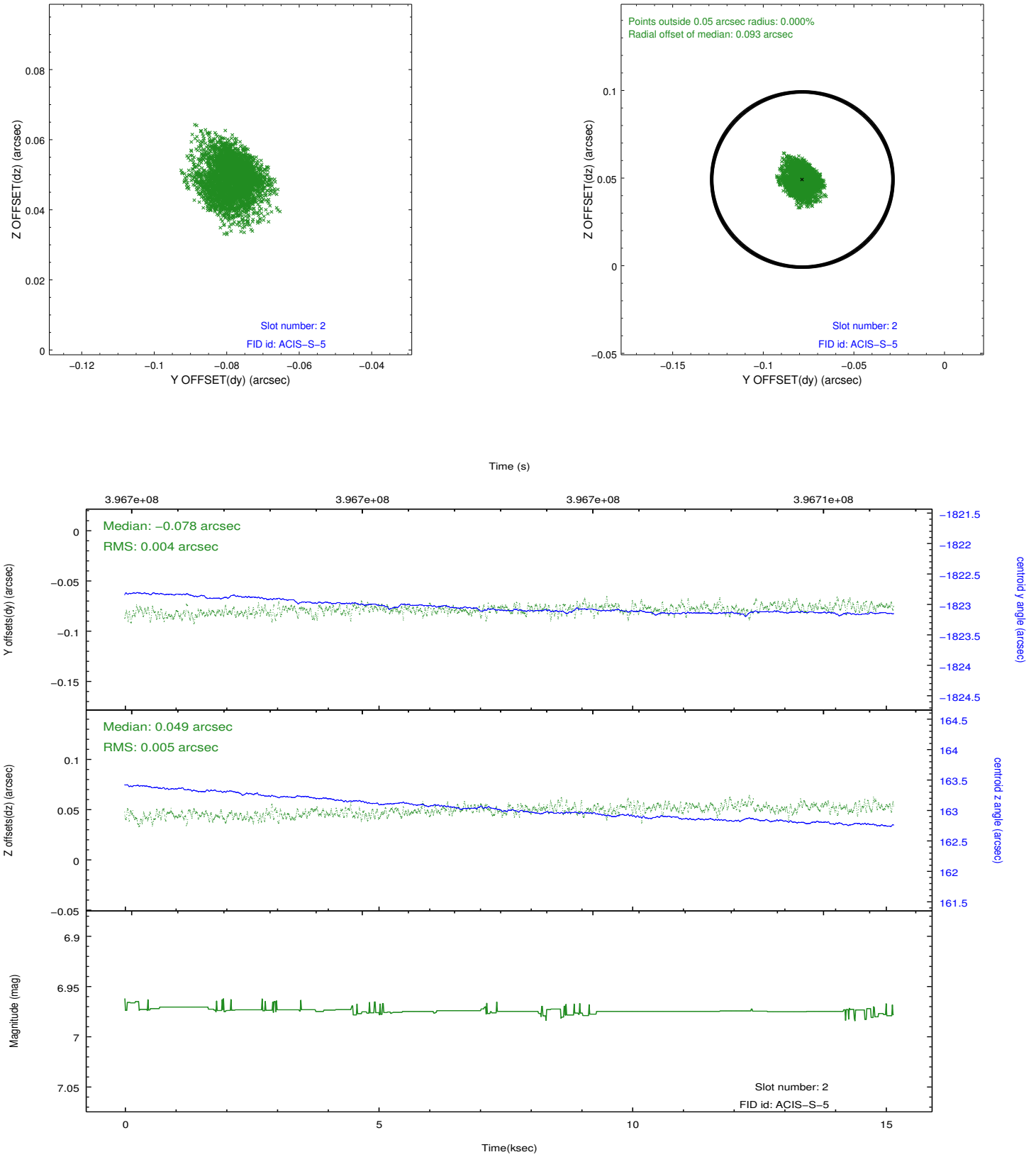
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.07.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.049509564996

### A.2 Comments