

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11785 - L2 Version 2  
Chandra X-Ray Center

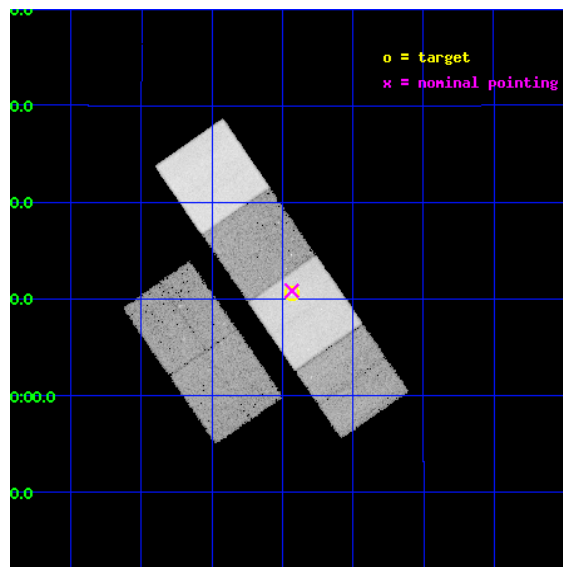
L2 Processing Date : Jun 16 2012

## 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

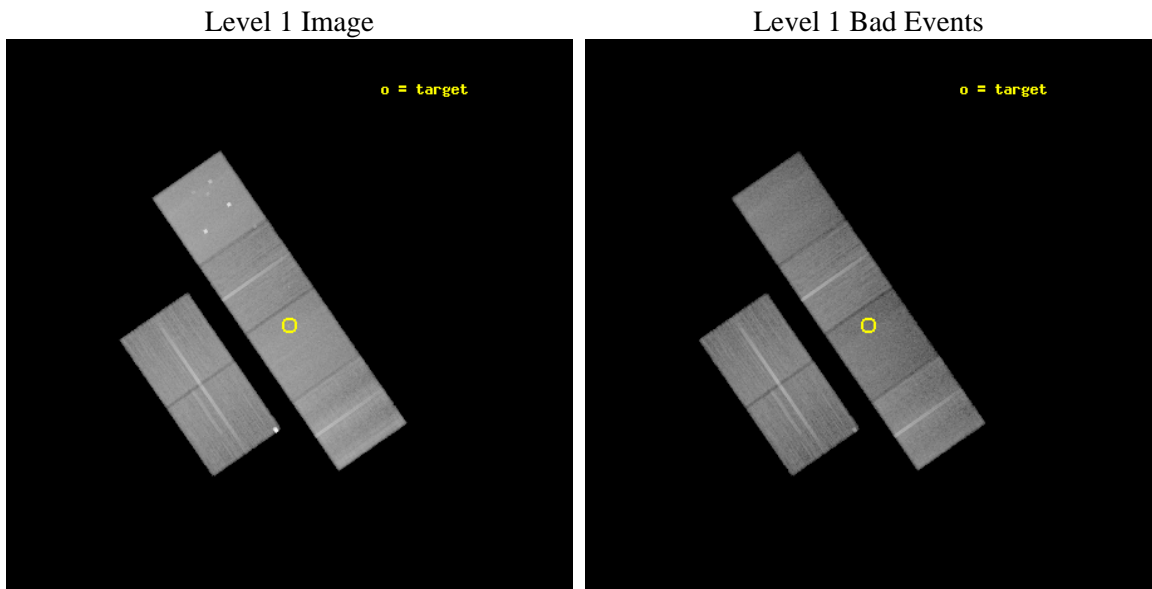
seq_num	900920	Sequence number
obs_id	11785	Observation id
title	COMBH: Chandra Observations of M-sigma Black Holes	Proposal title
observer	Dr. Kayhan Gultekin	Principal investigator
object	NGC4596	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	189.982917	Observer's specified target RA [deg]
dec_targ	10.176083	Observer's specified target Dec [deg]
ra_nom	189.98316082161	Nominal RA [deg]
dec_nom	10.180914977902	Nominal Dec [deg]
roll_nom	55.292387626174	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31382.399883151	Sum of GTIs [s]
livetime	30985.017039618	Livetime [s]
ontime2	31382.399883151	Sum of GTIs [s]
ontime3	31382.399883151	Sum of GTIs [s]
ontime5	31382.399883151	Sum of GTIs [s]
ontime6	31382.399883151	Sum of GTIs [s]
ontime7	31382.399883151	Sum of GTIs [s]
ontime8	31382.399883151	Sum of GTIs [s]
l2events	425093	Number of level 2 events



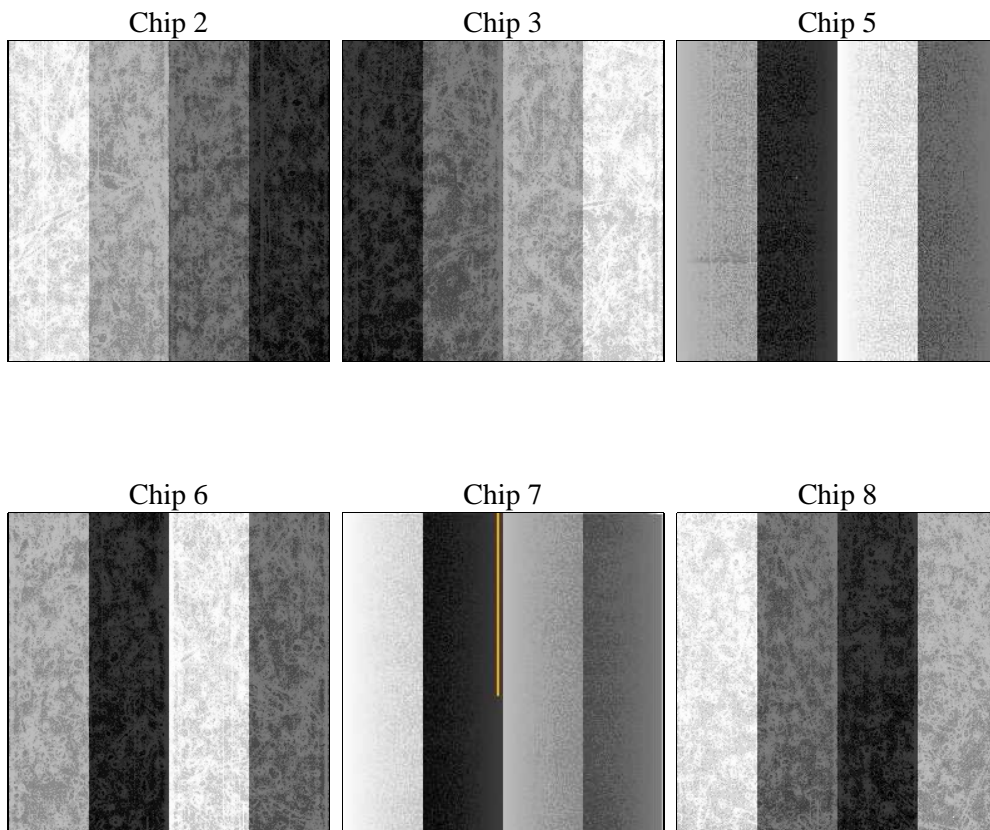
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	31250.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	31382.399883151	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime2	31382.399883151	Sum of GTIs [s]
date	2012-06-16T17:03:21	Date and time of file creation	ontime3	31382.399883151	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	31382.399883151	Sum of GTIs [s]
			ontime6	31382.399883151	Sum of GTIs [s]
			ontime7	31382.399883151	Sum of GTIs [s]
			ontime8	31382.399883151	Sum of GTIs [s]
			l1events	1945698	Number of level 1 events

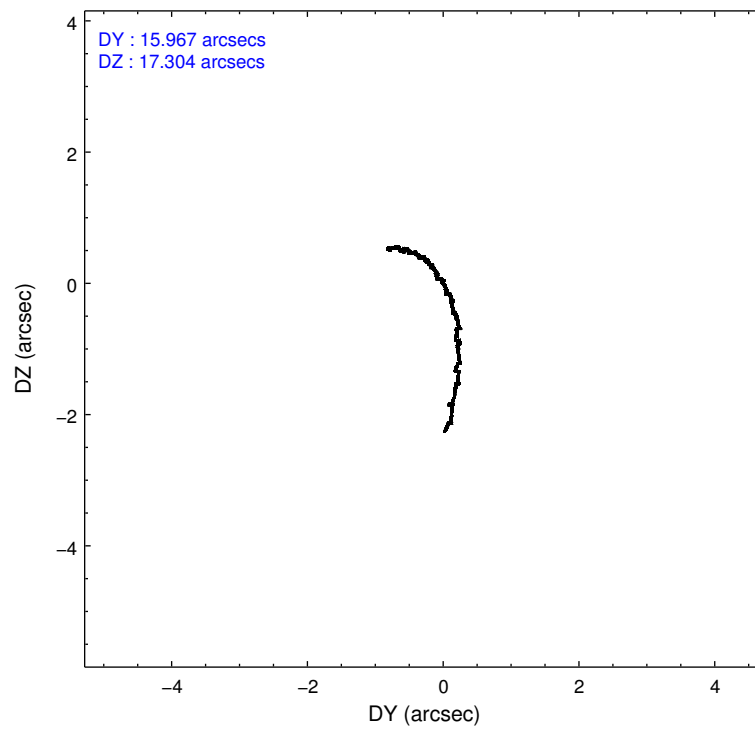
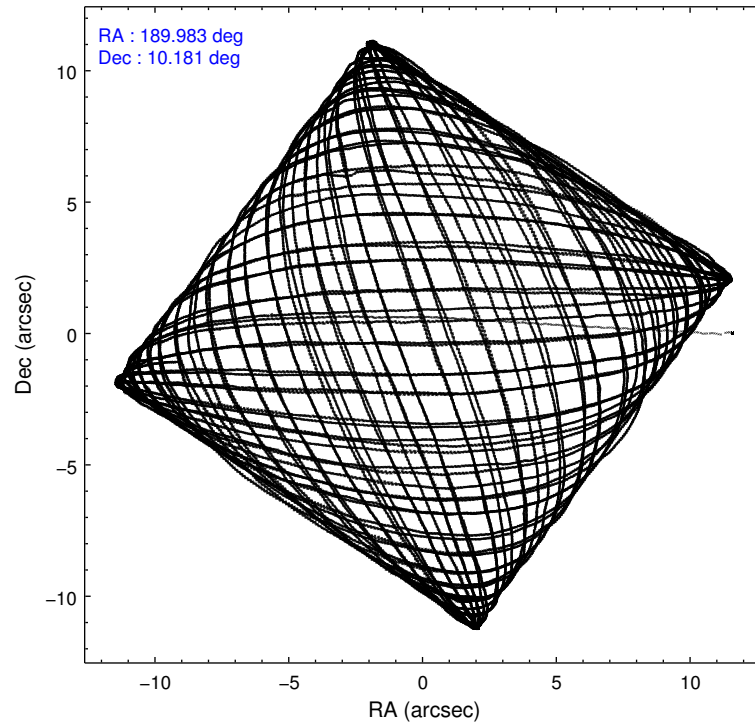
### 2.1.4 Events

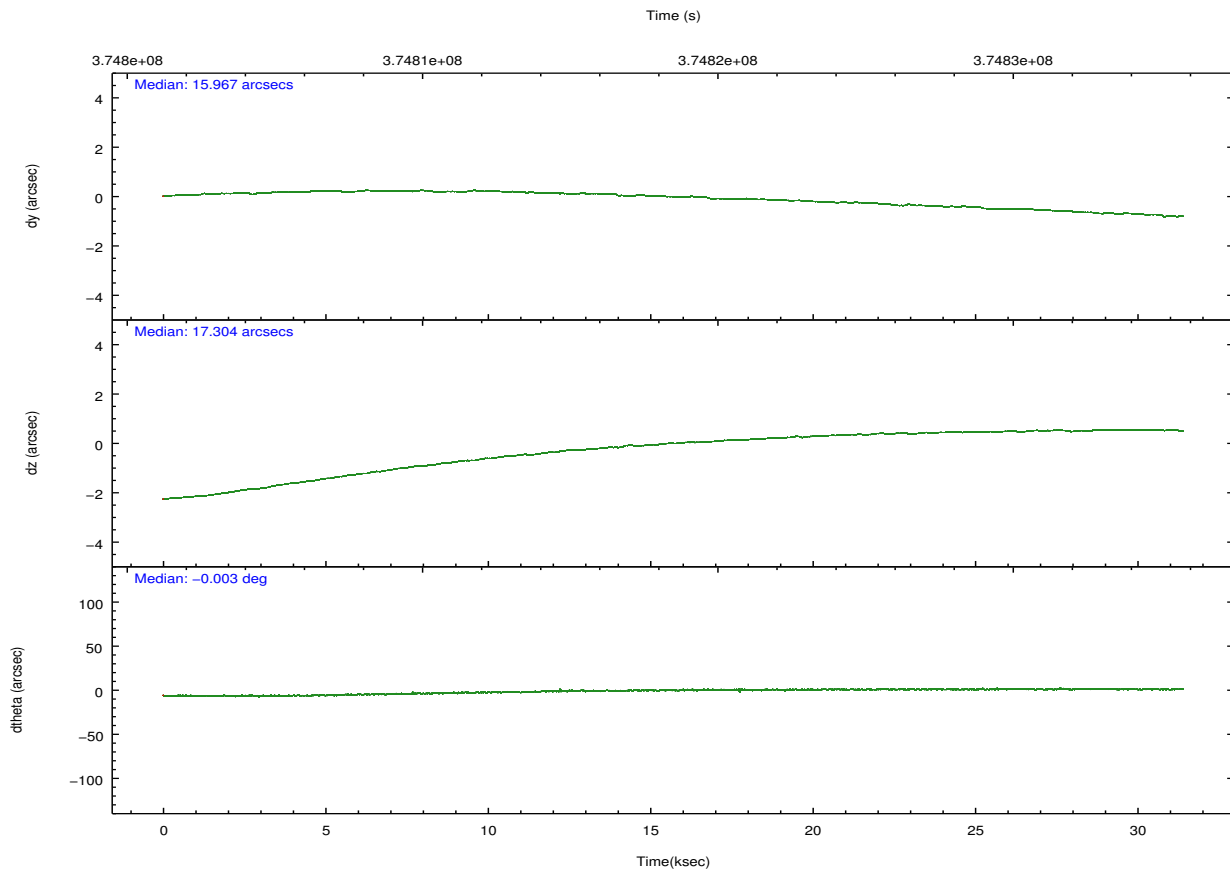
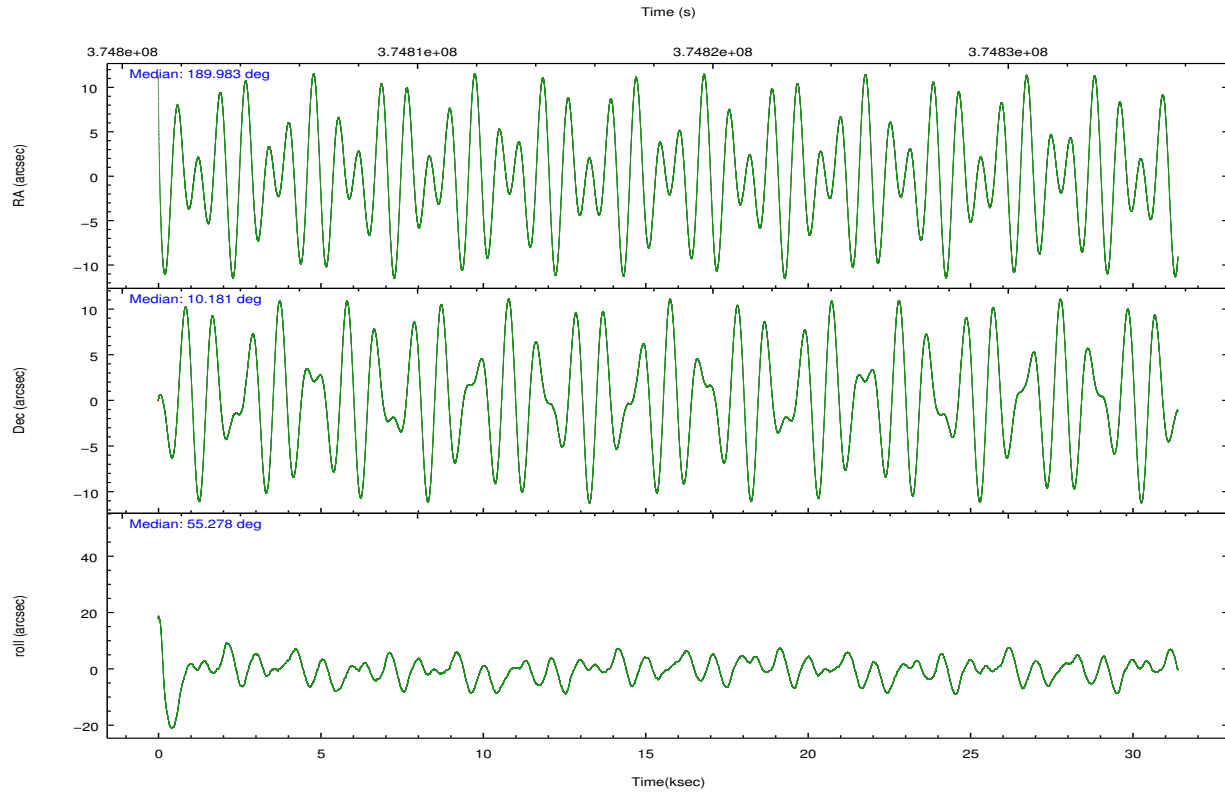
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	297133	287934	404169	284054	320350	352058	grade 0 events	10278	9304	29254	10643	14672	26945
rejected events	268968	242619	200183	254605	174633	262876		3%	3%	7%	3%	4%	7%
rejected %	90%	84%	49%	89%	54%	74%	grade 1 events	166	149	914	146	407	308
								0%	0%	0%	0%	0%	0%
							grade 2 events	7011	25213	58909	6696	30539	20879
								2%	8%	14%	2%	9%	5%
							grade 3 events	2911	2987	7922	3087	13305	9539
								0%	1%	1%	1%	4%	2%
							grade 4 events	2914	2960	7520	3062	13087	8871
								0%	1%	1%	1%	4%	2%
							grade 5 events	9793	11330	30693	11599	33435	16747
								3%	3%	7%	4%	10%	4%
							grade 6 events	5319	5288	102515	6258	75586	23993
								1%	1%	25%	2%	23%	6%
							grade 7 events	258741	230703	166442	242563	139319	244776
								87%	80%	41%	85%	43%	69%

## 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	189.981274	189.983160821607	CCD I2 on	O1	Y
[deg] Pointing Dec	10.153646	10.18091497790208	CCD I3 on	O2	Y
[deg] Pointing Roll	55.136094	55.29238762617378	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	374802916.184000	374801708.37785	CCD S5 on	N	N
Observation start date	2009-11-16T23:54:10	2009-11-16T23:35:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	374834166.184000	374834988.59203	On-chip summing requested	N	N
Observation end date	2009-11-17T08:35:00	2009-11-17T08:49:48	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



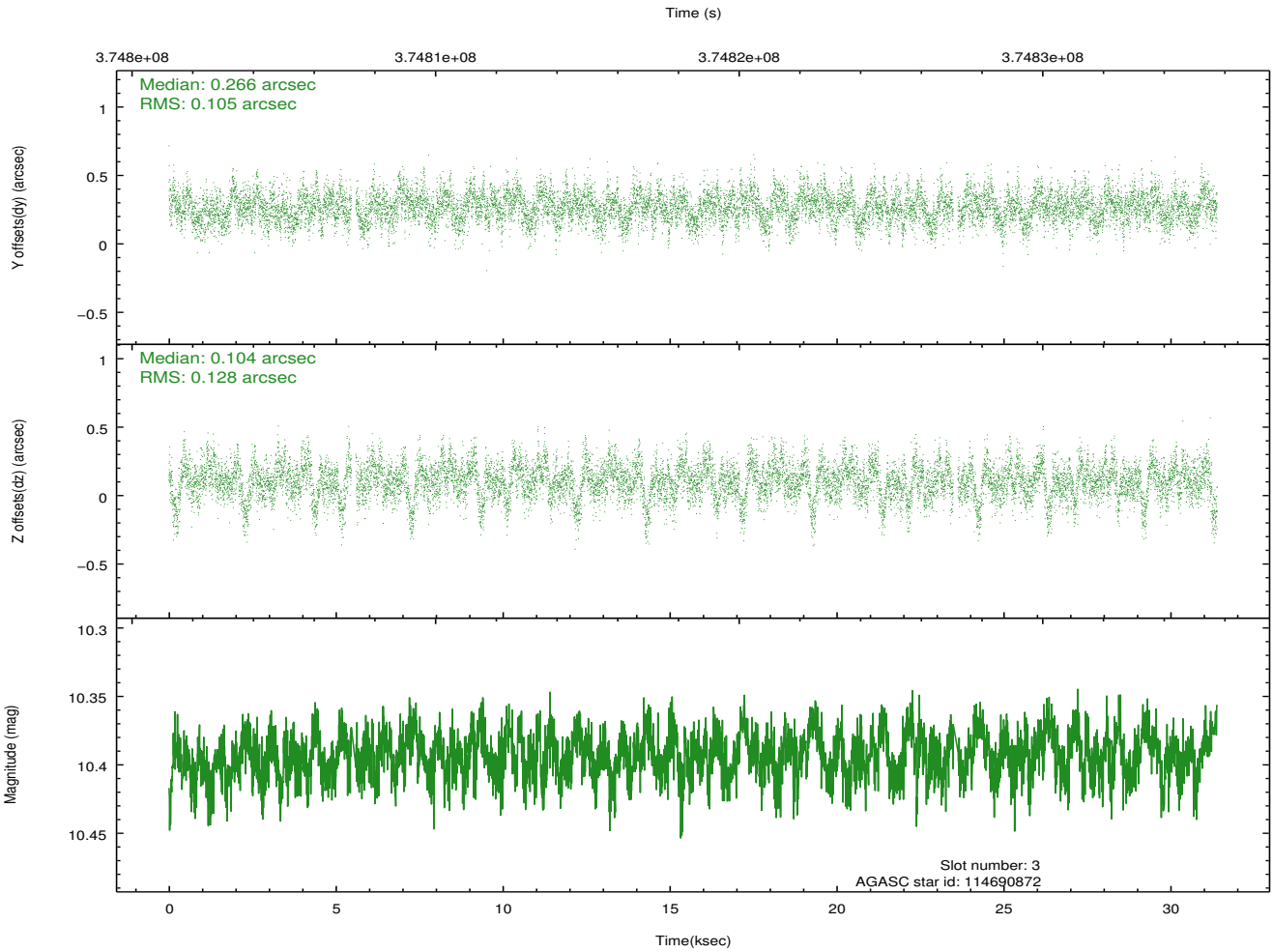
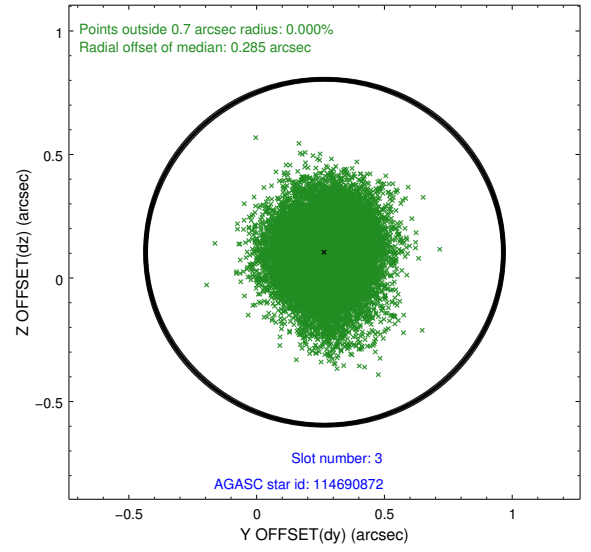
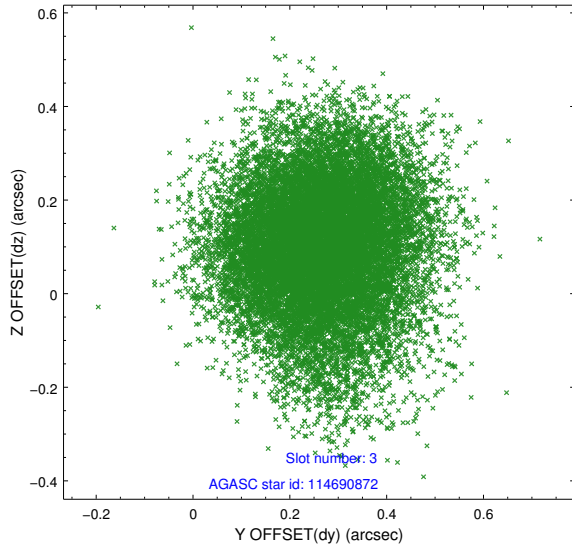


### Slot Statistics

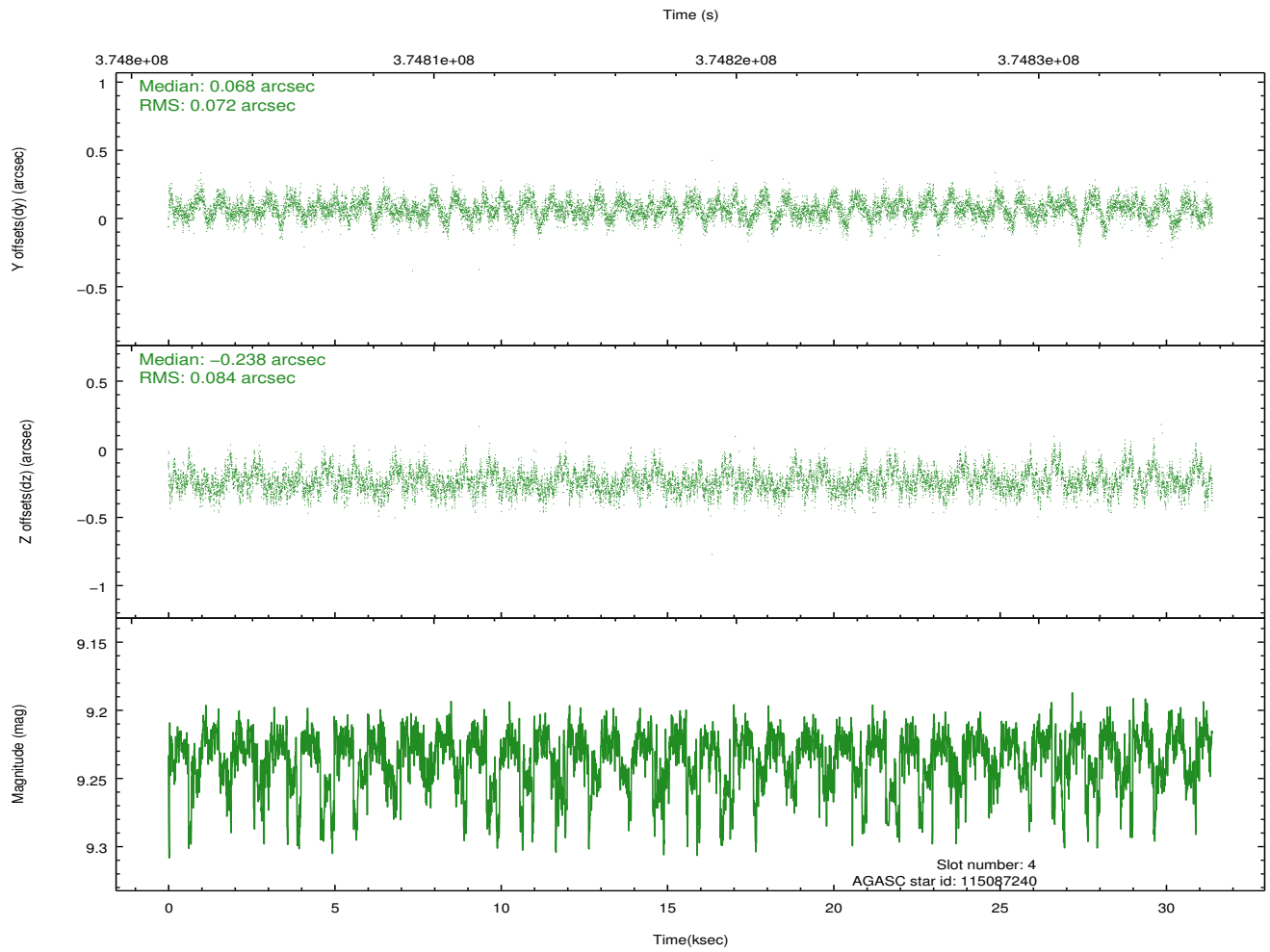
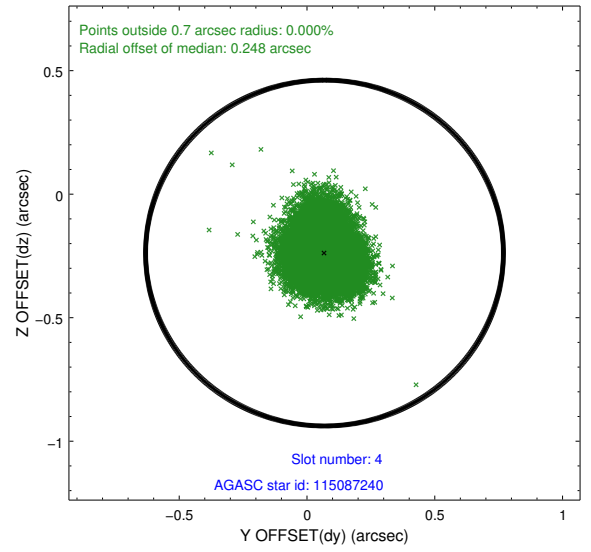
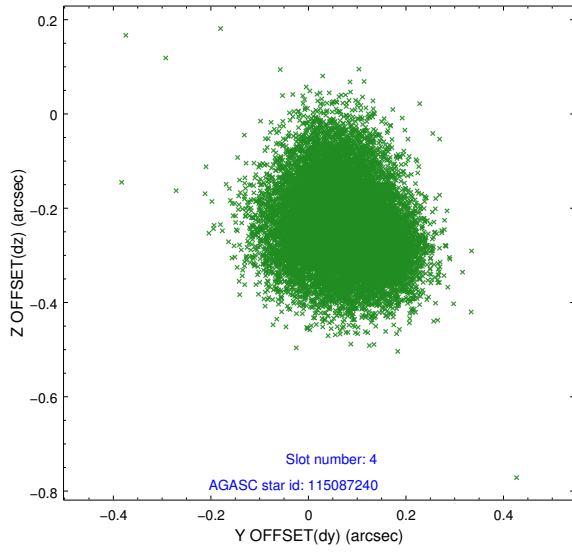
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.93	7657	-0.077	-0.036	0.024	0.035	0.000000	0.000000	-768.95	-1738.39
1	FID	ACIS-S-4	7.01	7658	0.166	0.048	0.016	0.026	0.000000	0.000000	2144.57	170.07
2	FID	ACIS-S-5	7.05	7657	-0.115	0.000	0.031	0.039	0.000000	0.000000	-1821.73	163.82
3	GUIDE	114690872	10.39	15134	0.266	0.104	0.175	0.289	190.075859	9.436880	-1924.41	-1750.68
4	GUIDE	115087240	9.23	15283	0.068	-0.238	0.119	0.190	189.980657	10.358703	604.35	423.96
5	GUIDE	115089624	9.65	15283	0.416	-0.379	0.136	0.218	189.471947	10.002512	-1477.27	1171.04
6	GUIDE	115090024	6.60	15313	-0.488	0.421	0.090	0.147	190.393304	10.426268	1639.60	-634.14
7	GUIDE	114690280	10.10	15274	-0.251	0.097	0.170	0.281	190.625397	9.900527	560.52	-2393.34

## 2.4 Star Slots

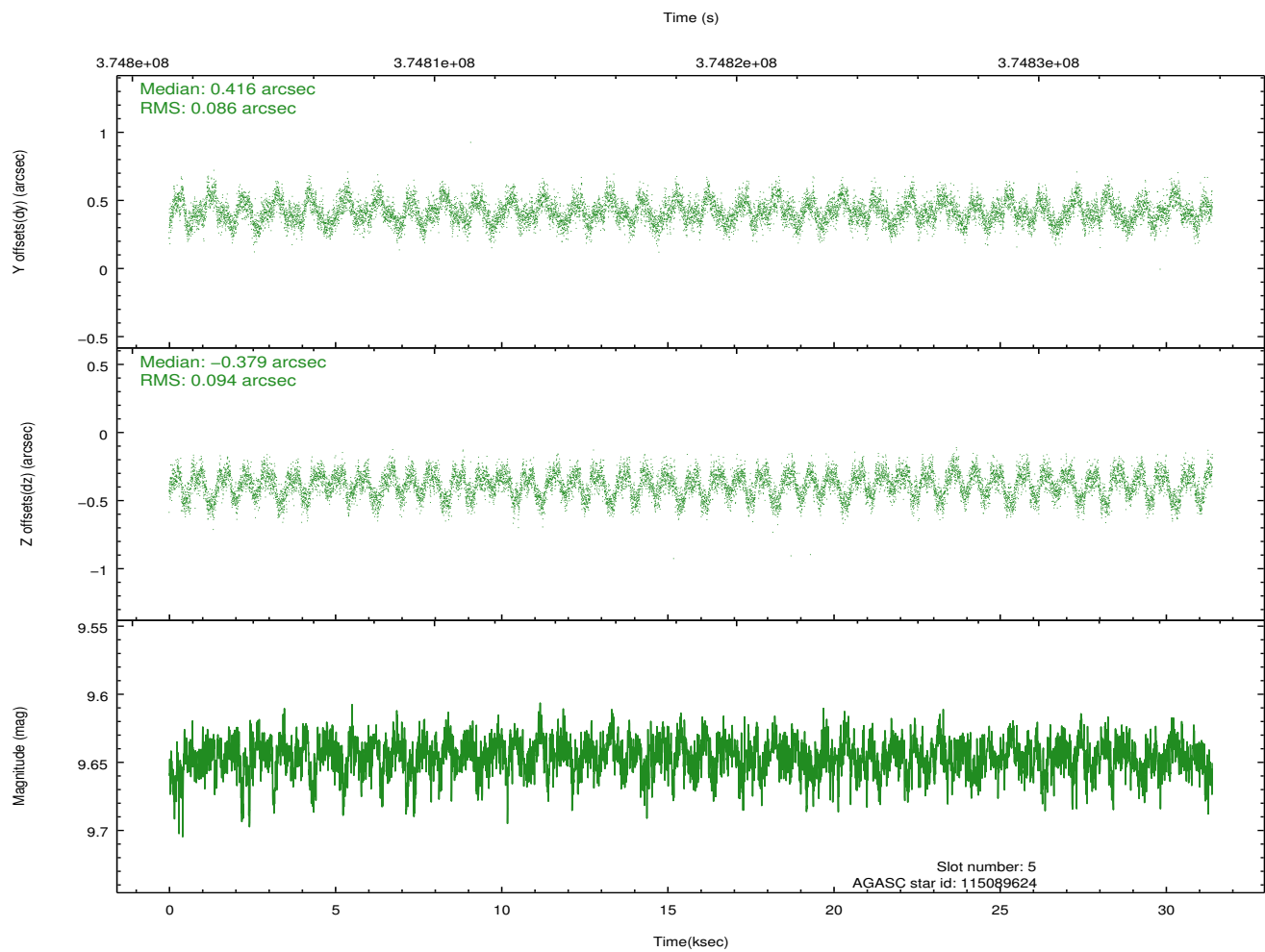
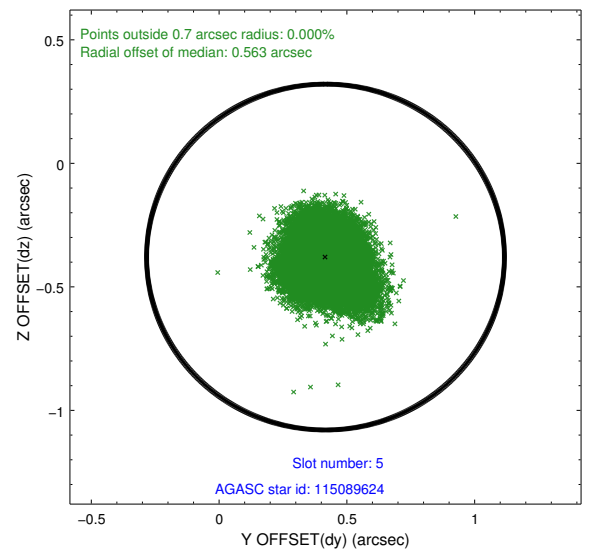
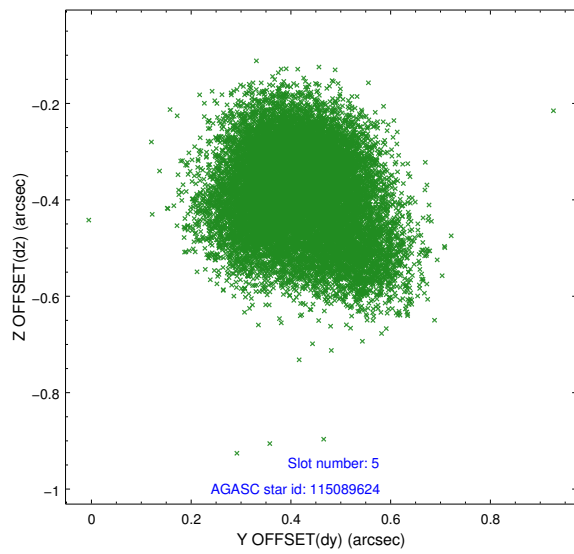
### 2.4.1 Slot 3



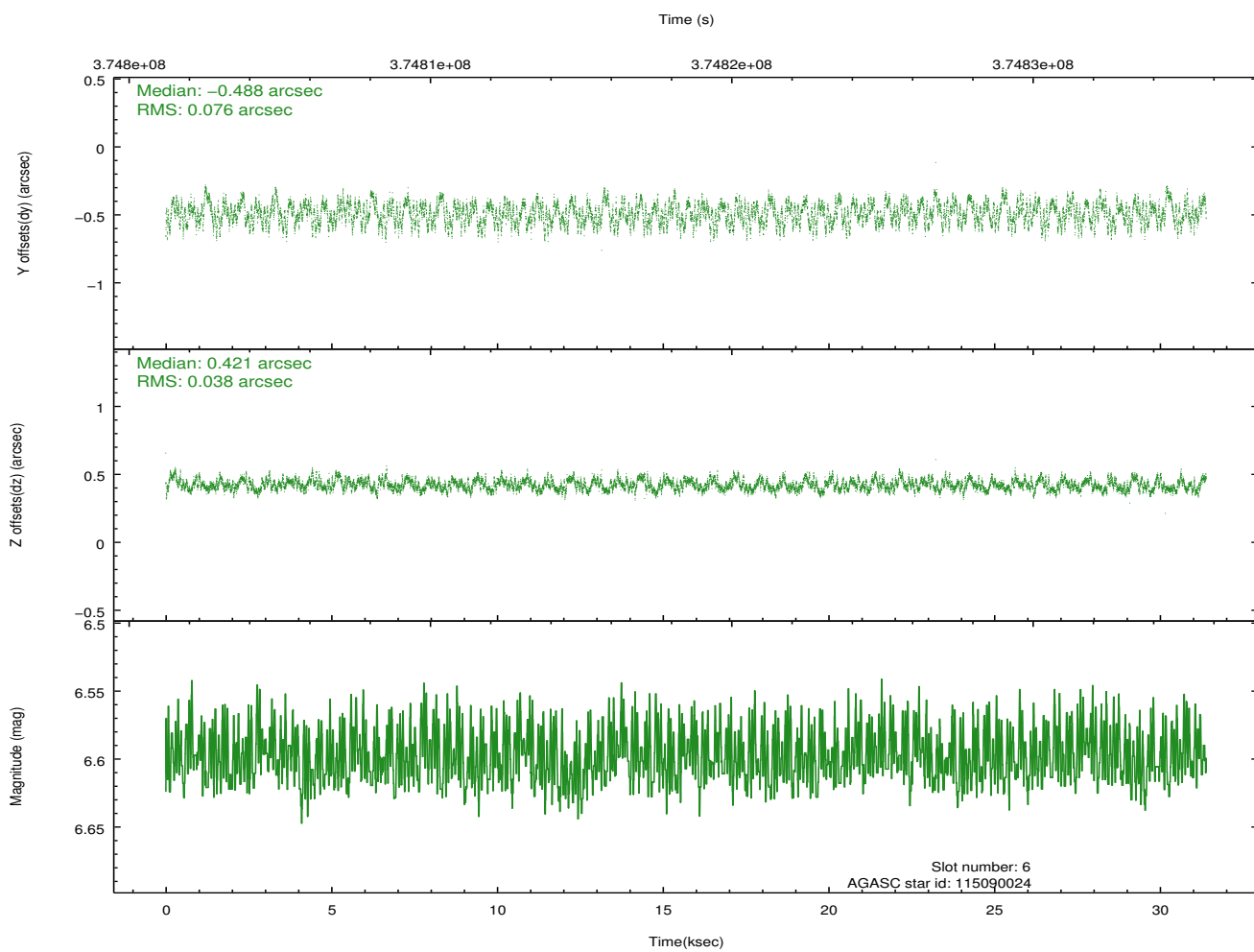
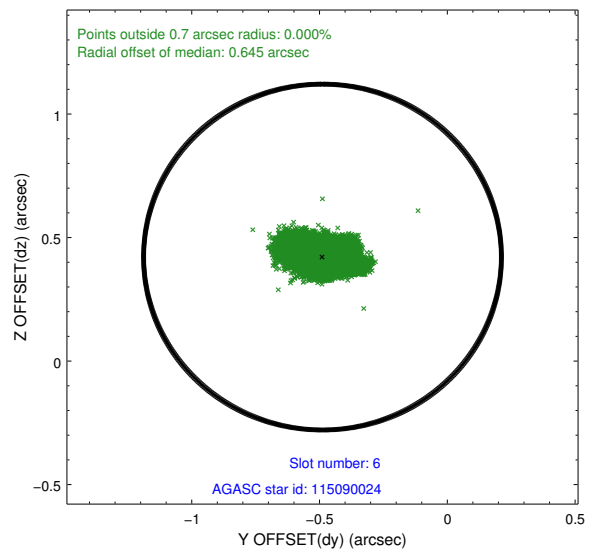
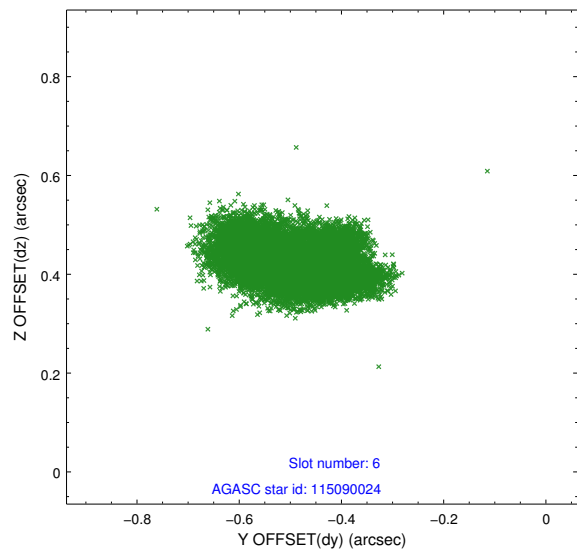
## 2.4.2 Slot 4



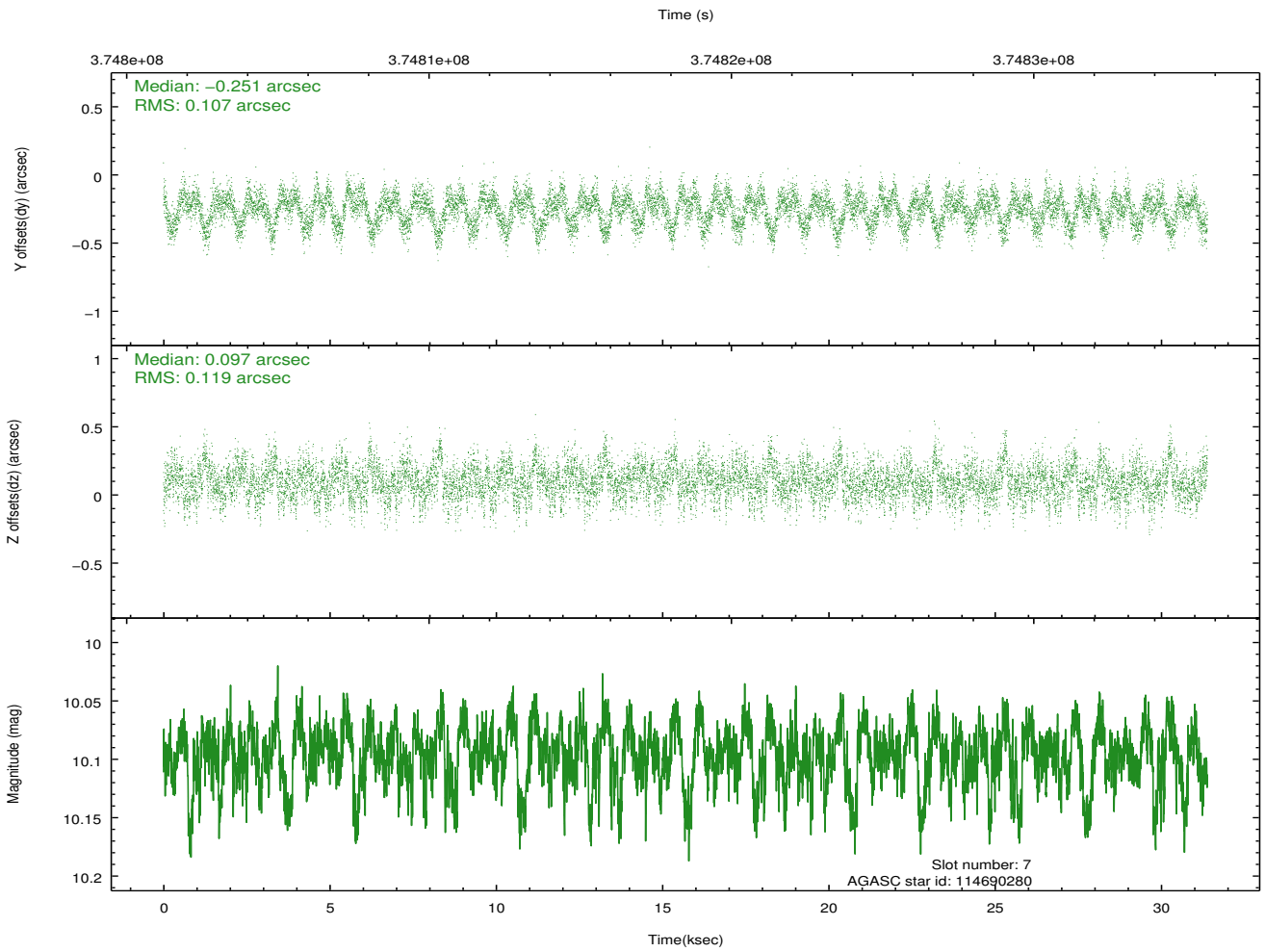
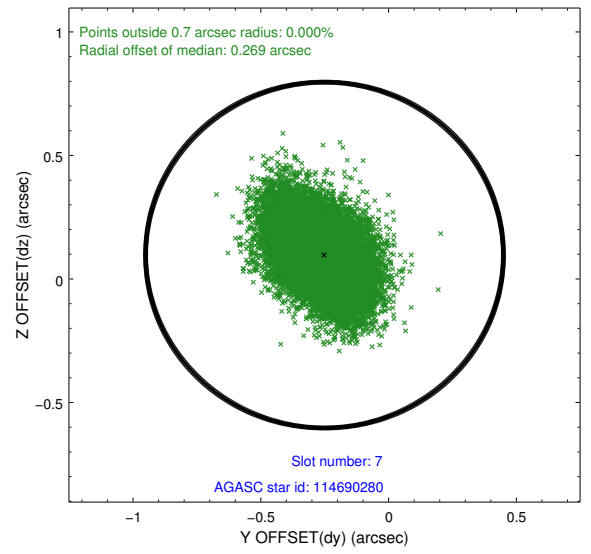
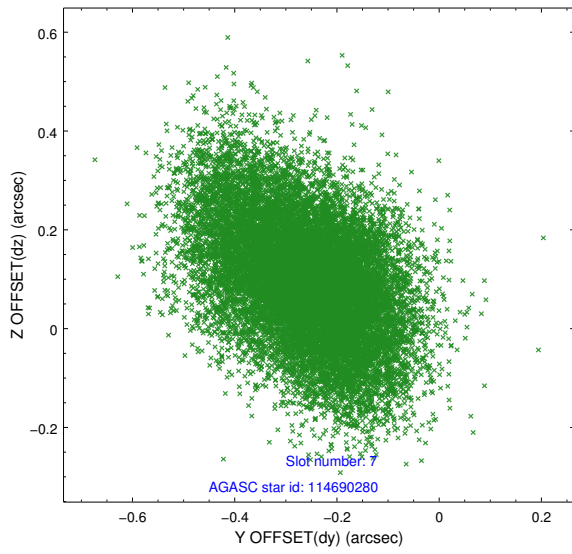
### 2.4.3 Slot 5



## 2.4.4 Slot 6

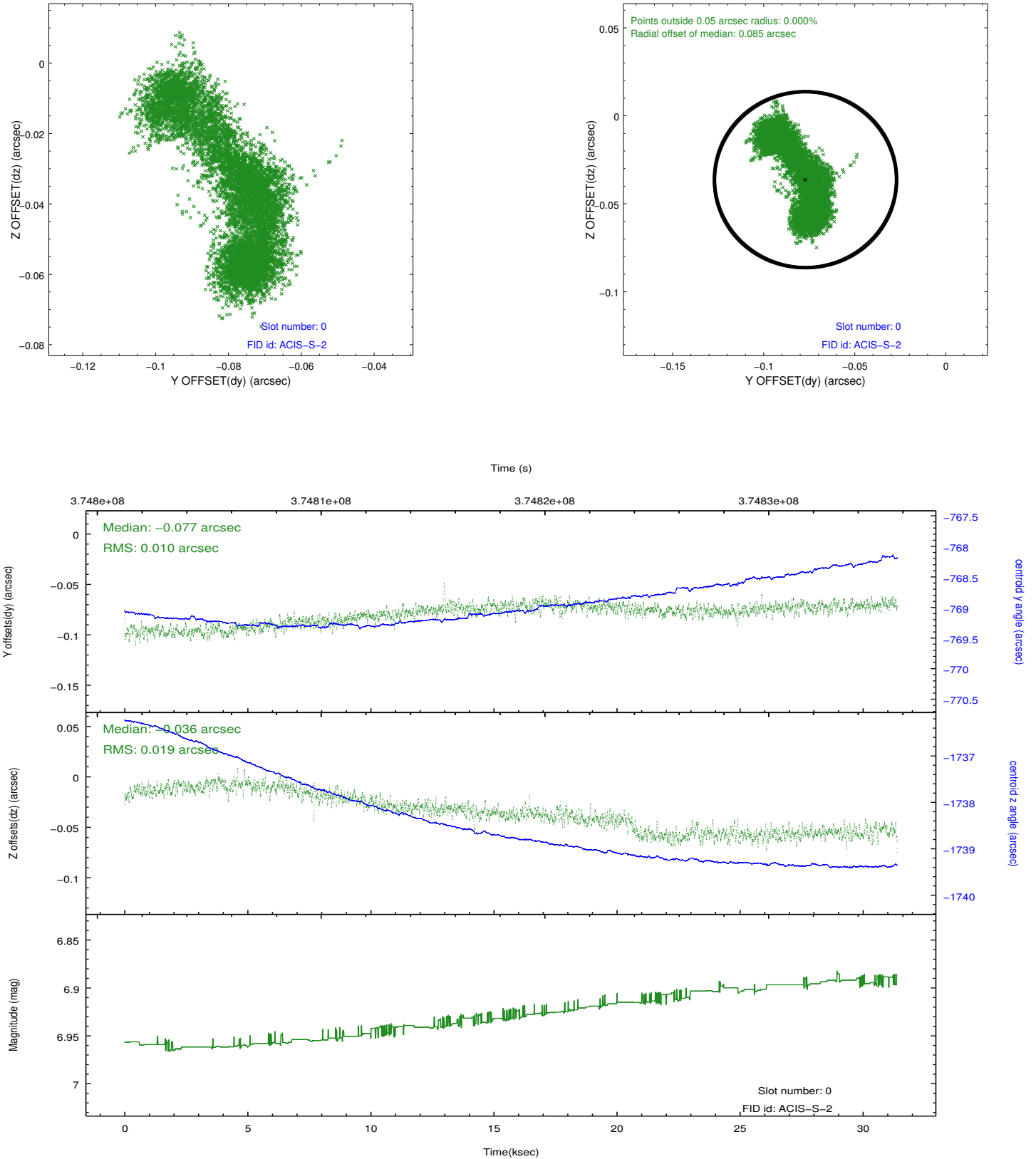


### 2.4.5 Slot 7

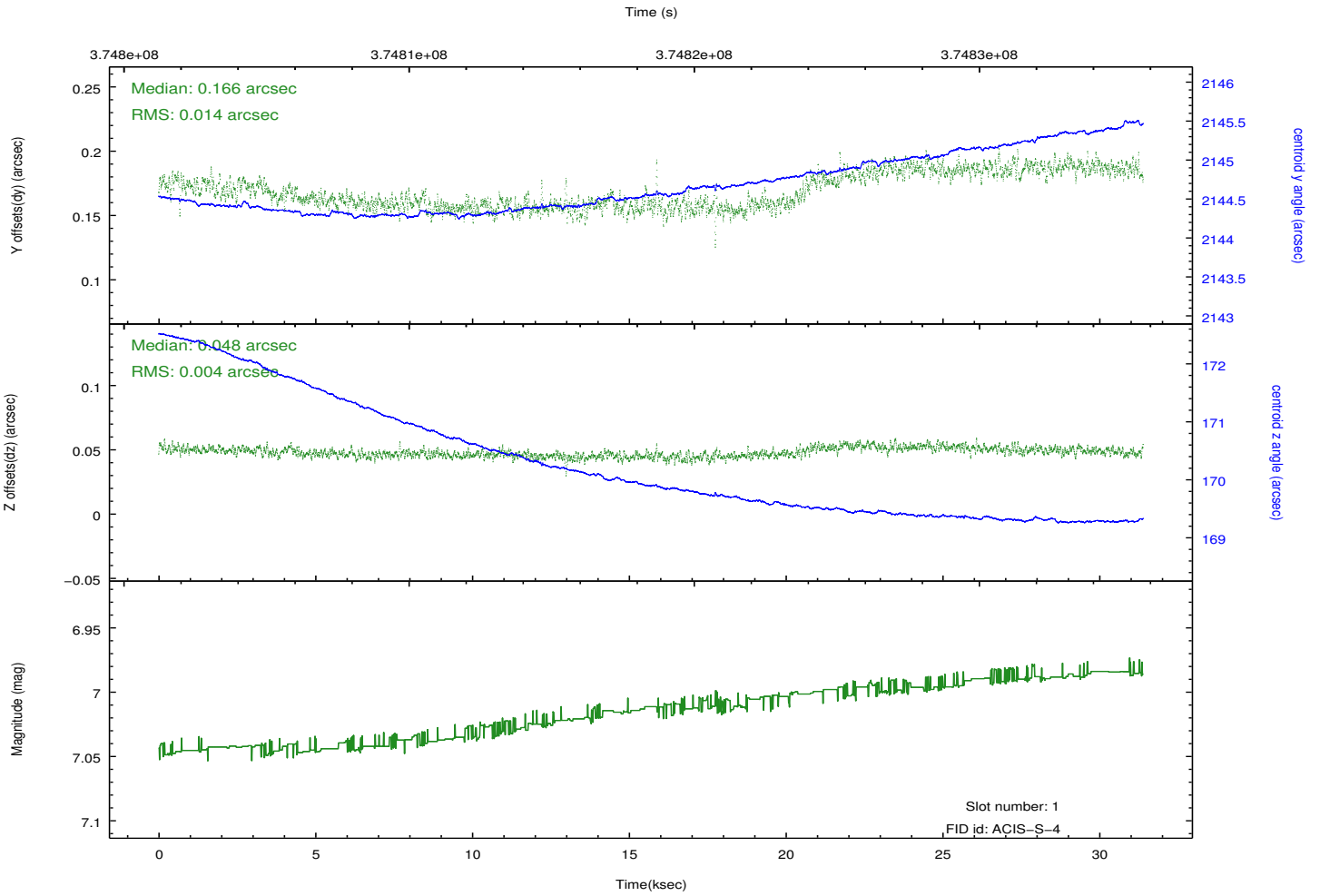
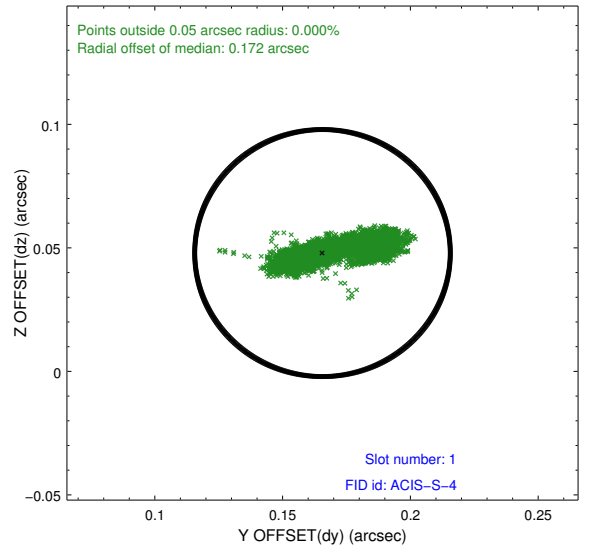
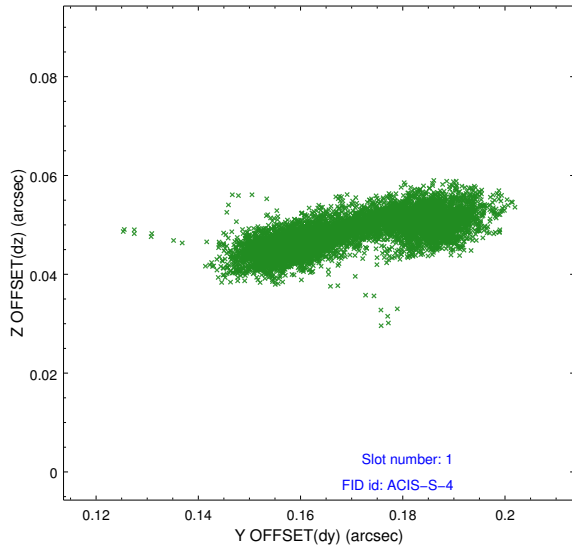


## 2.5 FID Slots

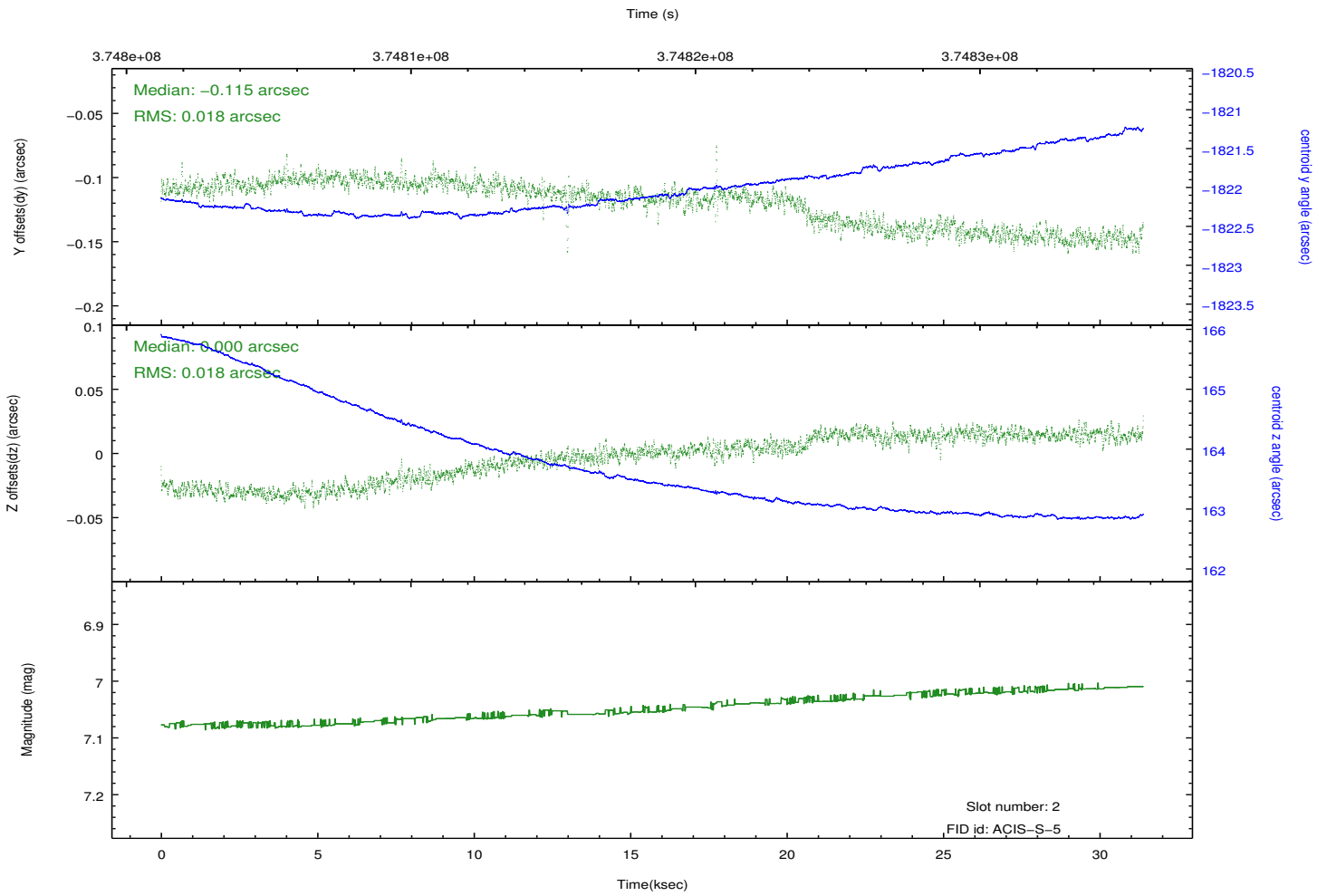
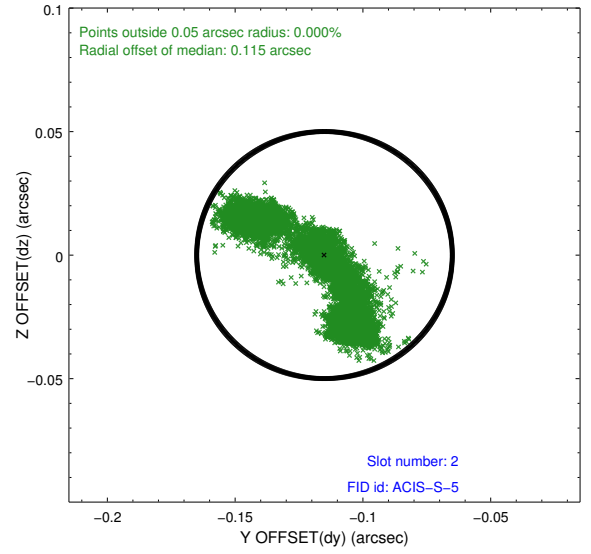
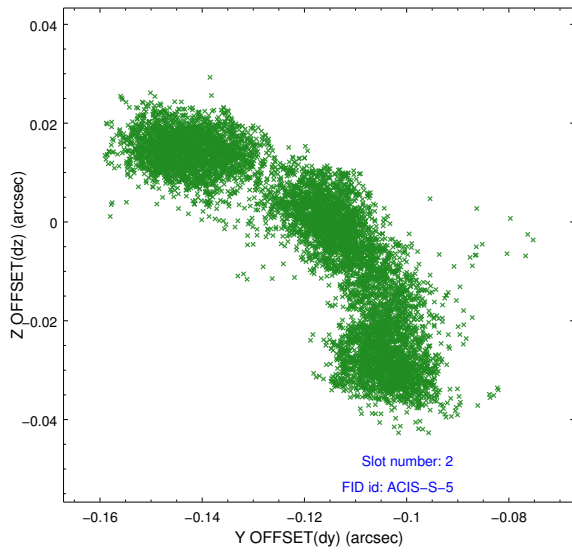
### 2.5.1 Slot 0



## 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)	2012.06.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.382399883151

## A.2 Comments

Joint proposal with NRAO.