

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 99 - L2 Version 4  
Chandra X-Ray Center

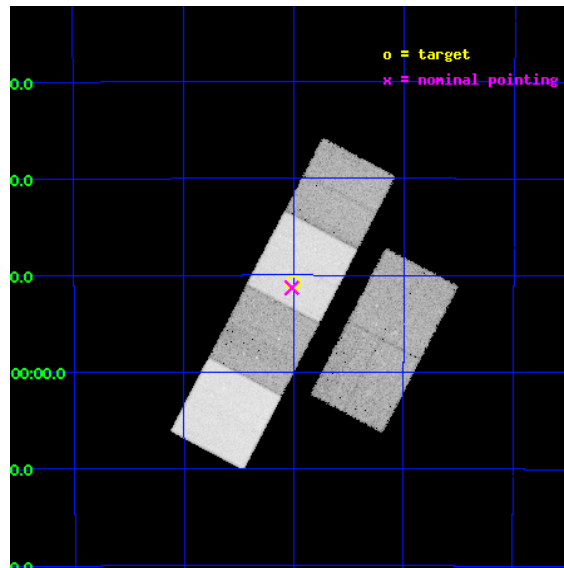
L2 Processing Date : Aug 30 2012

## 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

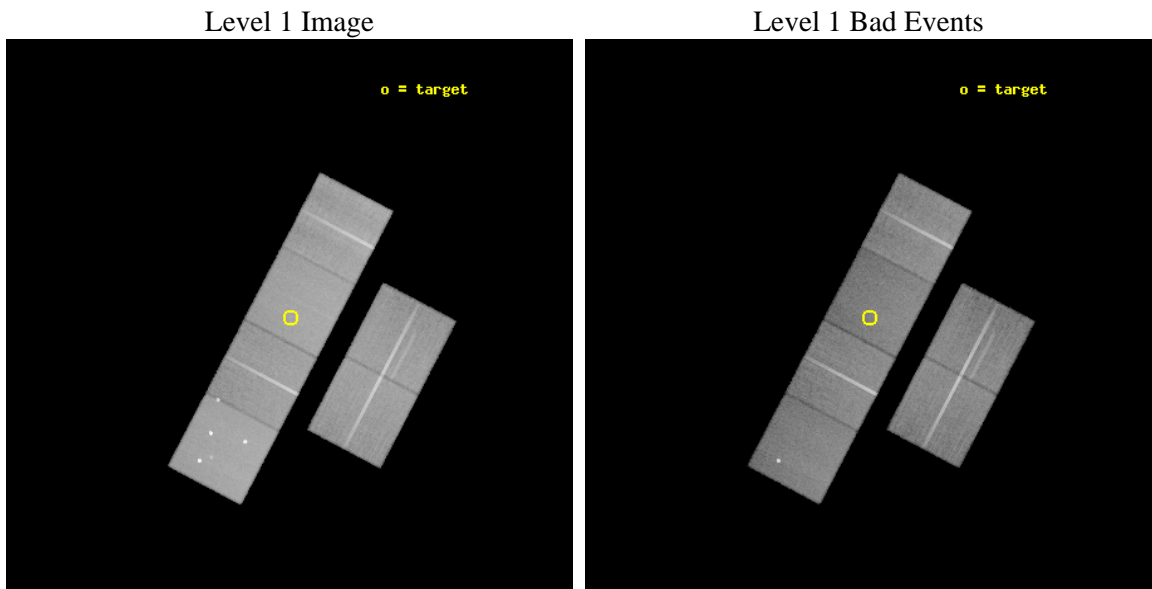
seq_num	400012	Sequence number
obs_id	99	Observation id
title	BLACK HOLE EVENT HORIZONS	Proposal title
observer	Professor Gordon Garmire	Principal investigator
object	GRO J1655-40	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	253.500417	Observer's specified target RA [deg]
dec_targ	-39.845806	Observer's specified target Dec [deg]
ra_nom	253.50423829571	Nominal RA [deg]
dec_nom	-39.855308096188	Nominal Dec [deg]
roll_nom	297.66943909761	Nominal Roll [deg]
revision	4	Processing version of data
ontime	43096.385827005	Sum of GTIs [s]
livetime	42550.673440135	Livetime [s]
ontime2	43096.426867008	Sum of GTIs [s]
ontime3	43089.780766547	Sum of GTIs [s]
ontime5	43096.344787002	Sum of GTIs [s]
ontime6	43096.303747013	Sum of GTIs [s]
ontime7	43096.385827005	Sum of GTIs [s]
ontime8	43096.221667007	Sum of GTIs [s]
l2events	423700	Number of level 2 events



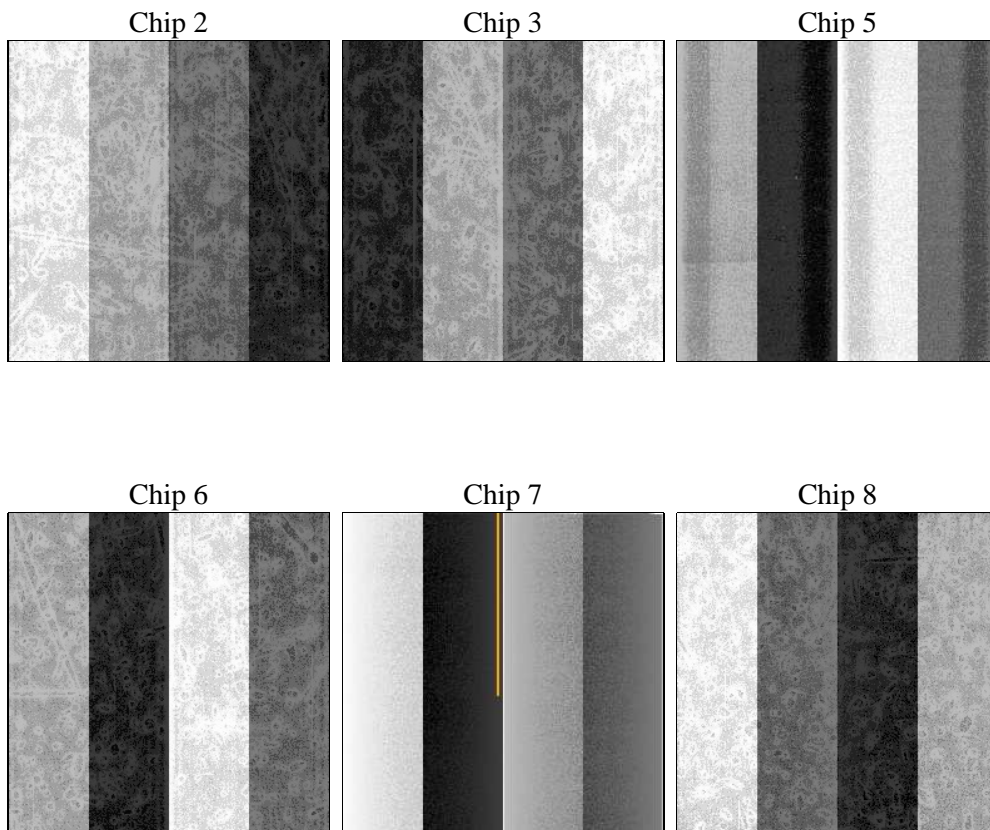
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	43000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	43096.385827005	Sum of GTIs [s]
caldbver	4.5.1.1	&#160	ontime2	43096.426867008	Sum of GTIs [s]
date	2012-08-30T02:32:04	Date and time of file creation	ontime3	43089.780766547	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	43096.344787002	Sum of GTIs [s]
			ontime6	43096.303747013	Sum of GTIs [s]
			ontime7	43096.385827005	Sum of GTIs [s]
			ontime8	43096.221667007	Sum of GTIs [s]
			l1events	1990650	Number of level 1 events

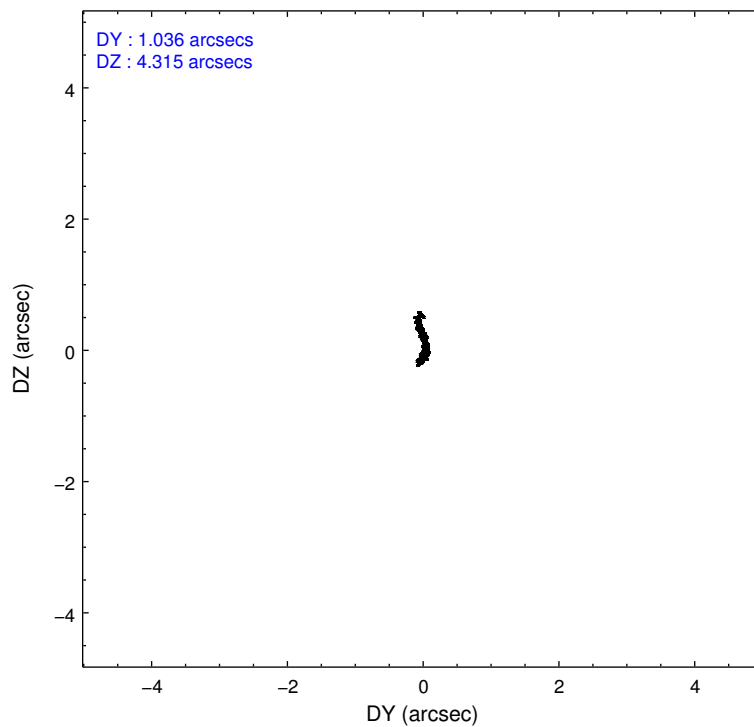
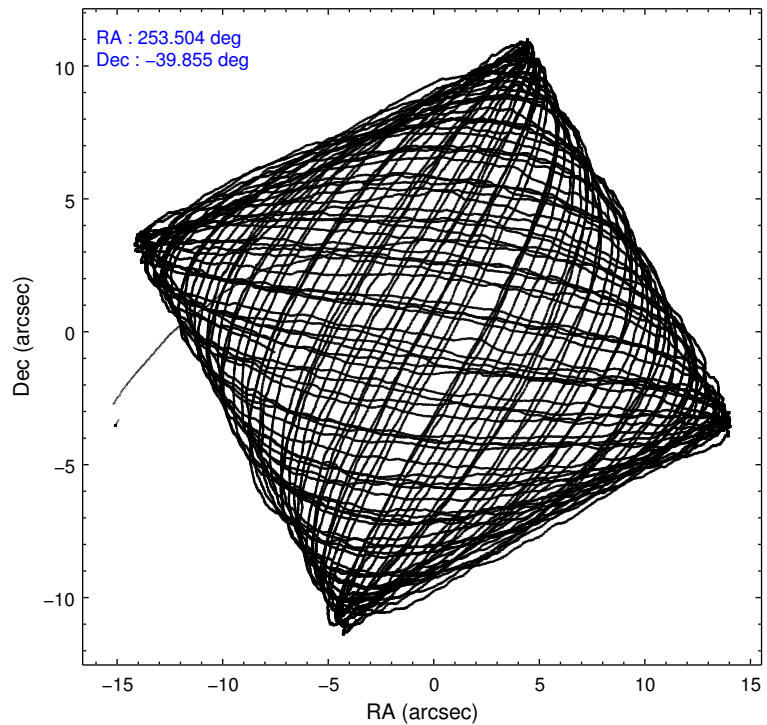
### 2.1.4 Events

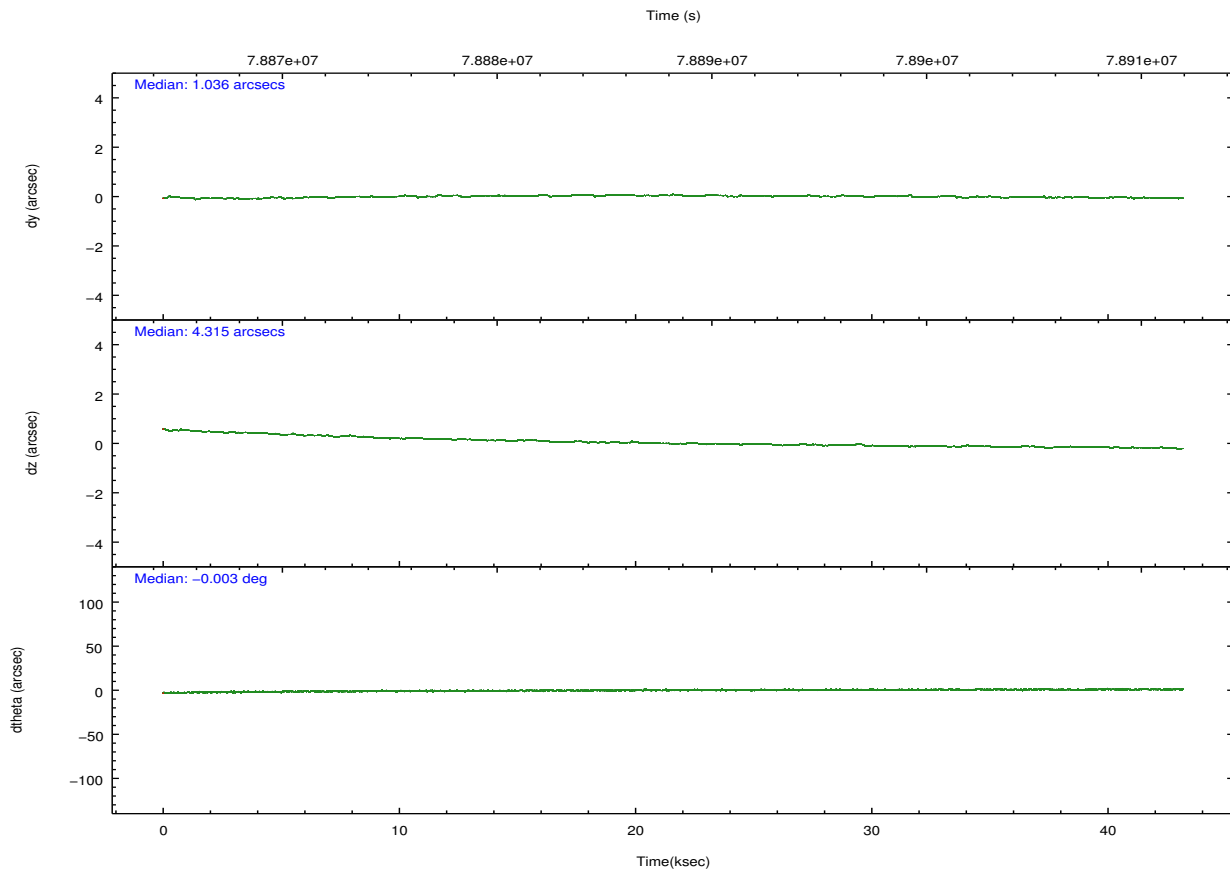
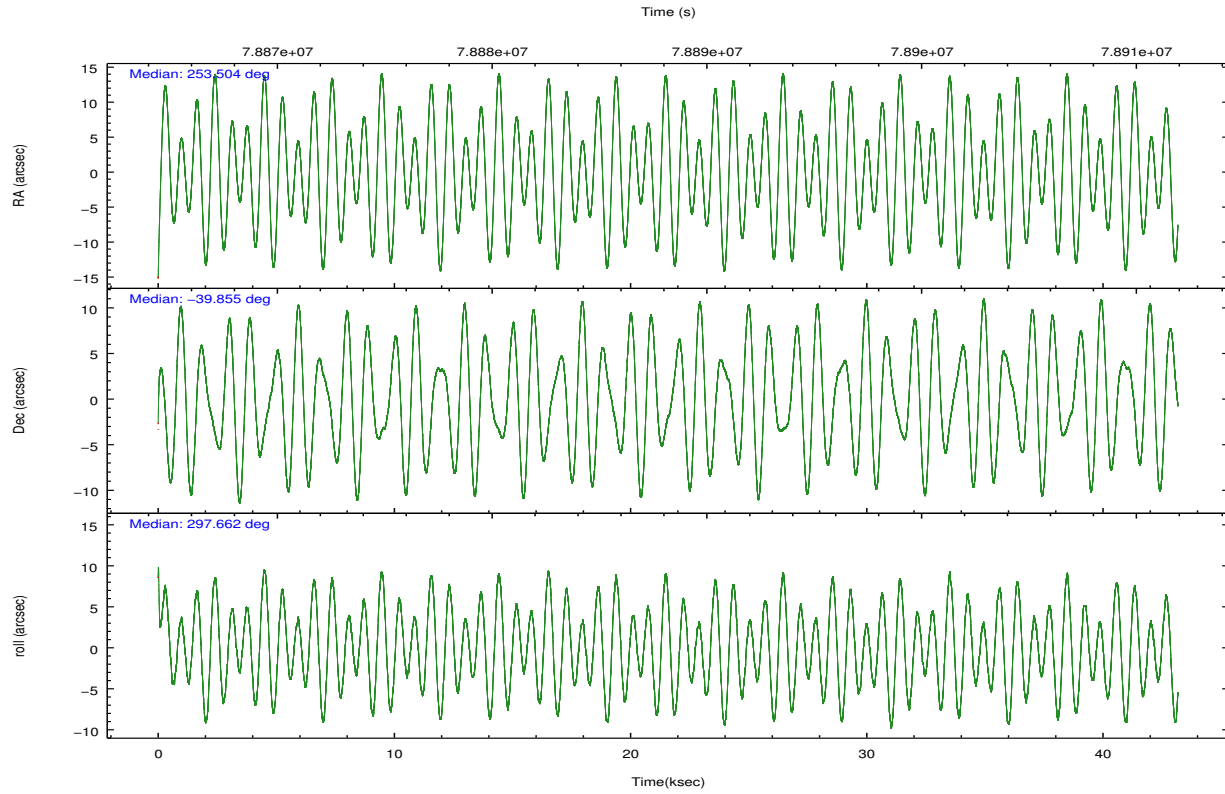
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	297451	285168	405522	295512	345451	361546	grade 0 events	14385	14622	37777	14696	15156	22992
rejected events	265223	253544	208575	262267	197400	291215		4%	5%	9%	4%	4%	6%
rejected %	89%	88%	51%	88%	57%	80%	grade 1 events	137	165	498	121	332	201
								0%	0%	0%	0%	0%	0%
							grade 2 events	6566	5799	54431	6184	29454	14867
								2%	2%	13%	2%	8%	4%
							grade 3 events	3165	3015	7935	3272	13983	7336
								1%	1%	1%	1%	4%	2%
							grade 4 events	2964	3056	7525	3122	13487	6884
								0%	1%	1%	1%	3%	1%
							grade 5 events	8838	9643	29250	10796	32569	13792
								2%	3%	7%	3%	9%	3%
							grade 6 events	5151	5138	89310	5978	75987	18256
								1%	1%	22%	2%	21%	5%
							grade 7 events	256245	243730	178796	251343	164483	277218
								86%	85%	44%	85%	47%	76%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	253.473995	253.5042382957094	Subarray requested	NONE	NONE
[deg] Pointing Dec	-39.840766	-39.85530809618812	Alternating exposures requested	N	N
[deg] Pointing Roll	297.493431	297.6694390976066	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	78866779.184000	78865744.867293			
Observation start date	2000-07-01T19:25:15	2000-07-01T19:09:04			
[s] Observation end time (MET)	78909779.184000	78910890.993957			
Observation end date	2000-07-02T07:21:55	2000-07-02T07:41:30			
Read mode	TIMED	TIMED			

## 2.3 Aspect





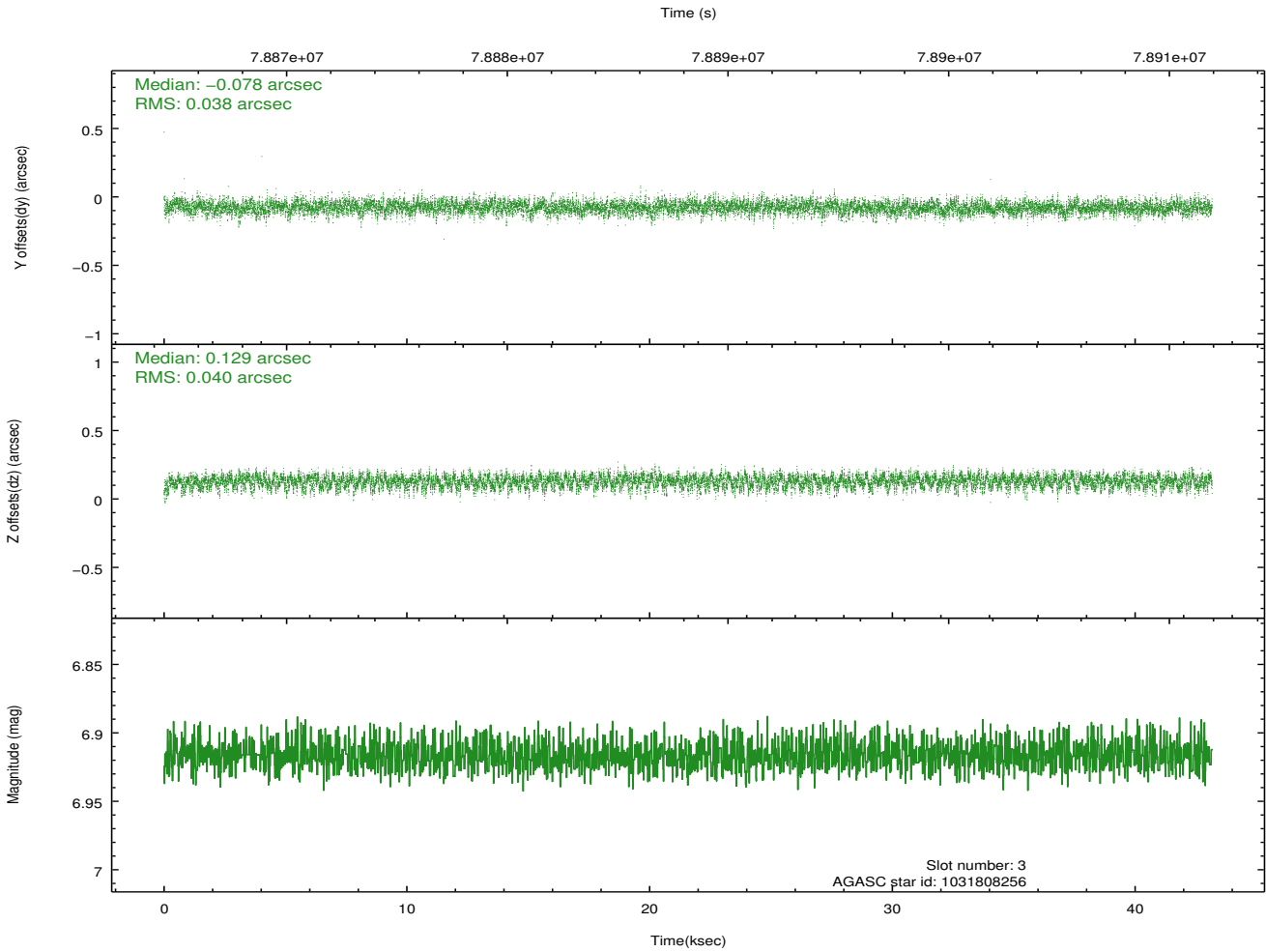
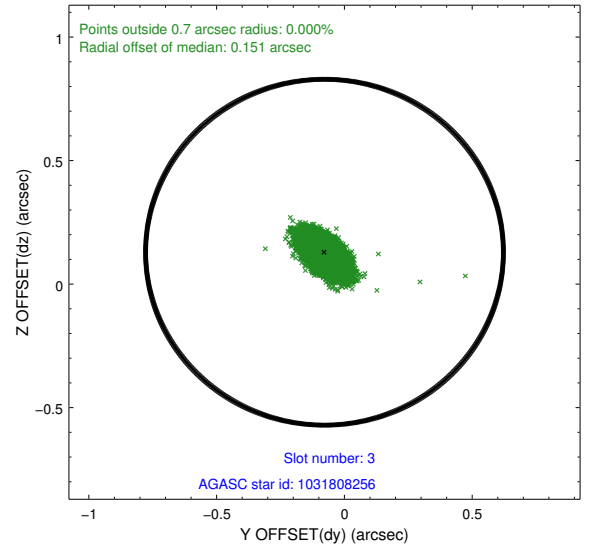
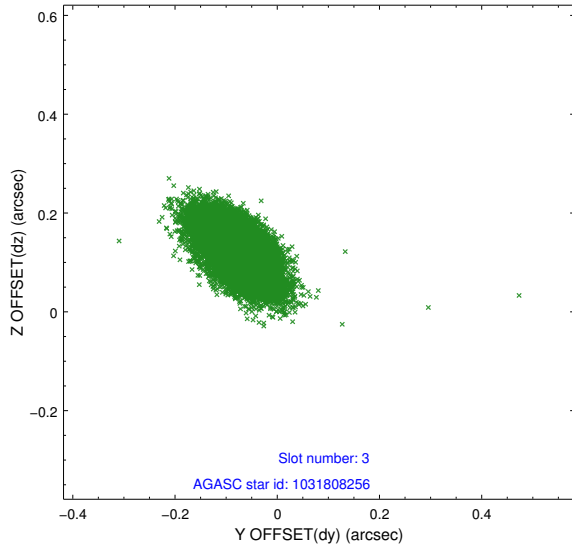
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	10530	-0.023	-0.009	0.009	0.016	0.000000	0.000000	-753.66	-1725.47
1	FID	ACIS-S-4	7.21	10529	-0.007	0.013	0.006	0.018	0.000000	0.000000	2159.65	183.00
2	FID	ACIS-S-5	7.23	10528	-0.002	0.004	0.008	0.014	0.000000	0.000000	-1806.46	176.70
3	GUIDE	1031808256	6.92	21058	-0.078	0.129	0.056	0.099	253.549379	-40.452817	2049.88	-832.68
4	GUIDE	1031805304	8.39	21056	0.055	0.015	0.068	0.114	254.276305	-39.974862	1458.69	1737.14
5	GUIDE	1031804728	8.74	21052	0.038	-0.032	0.083	0.136	254.103364	-39.579793	-22.04	1981.01
6	GUIDE	1031807512	8.24	21059	-0.052	-0.024	0.064	0.104	252.886468	-39.697545	-1203.95	-1207.12
7	GUIDE	1031280504	9.45	21055	0.042	-0.086	0.124	0.196	254.101226	-39.301331	-911.05	2444.45

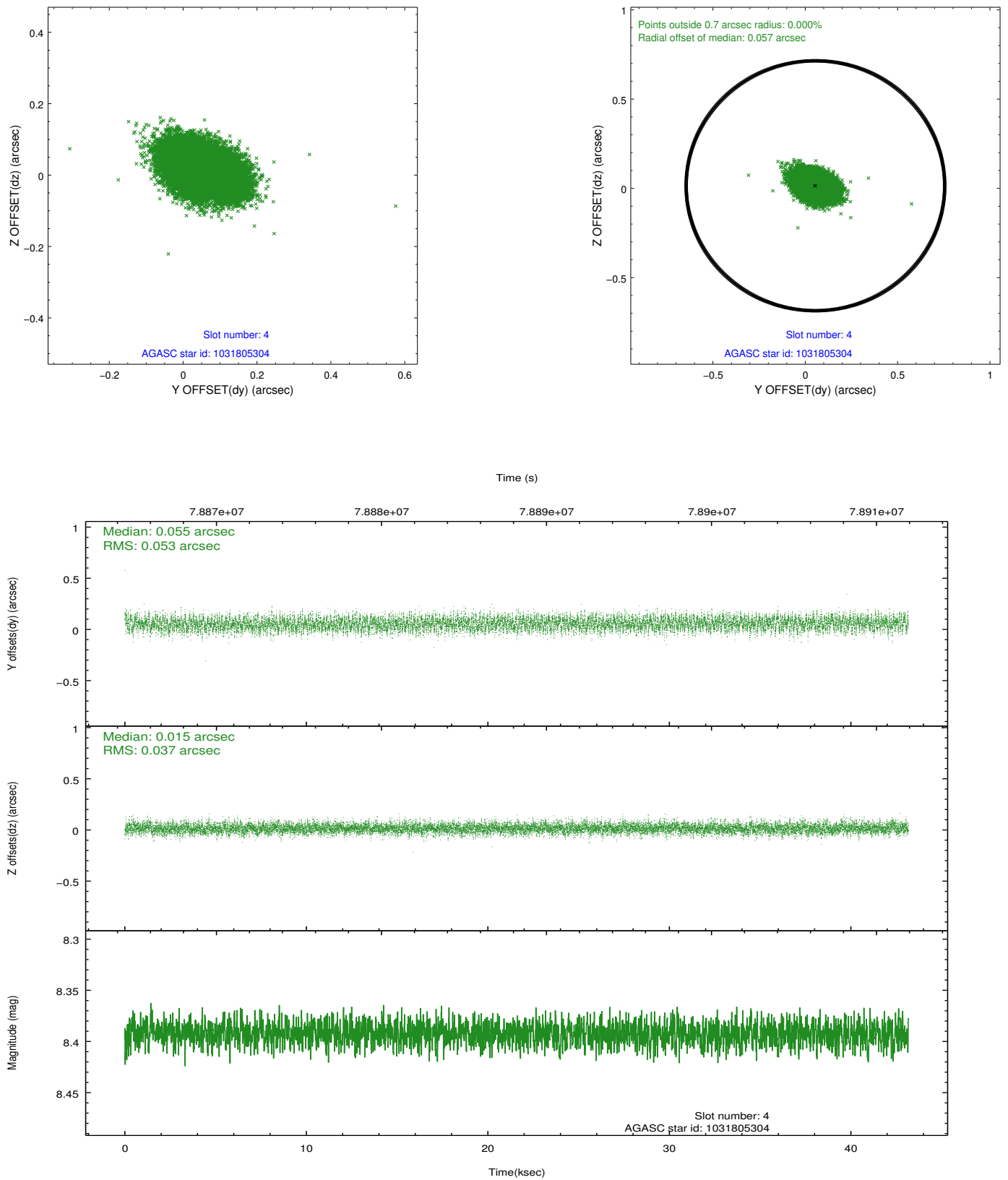
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## 2.4 Star Slots

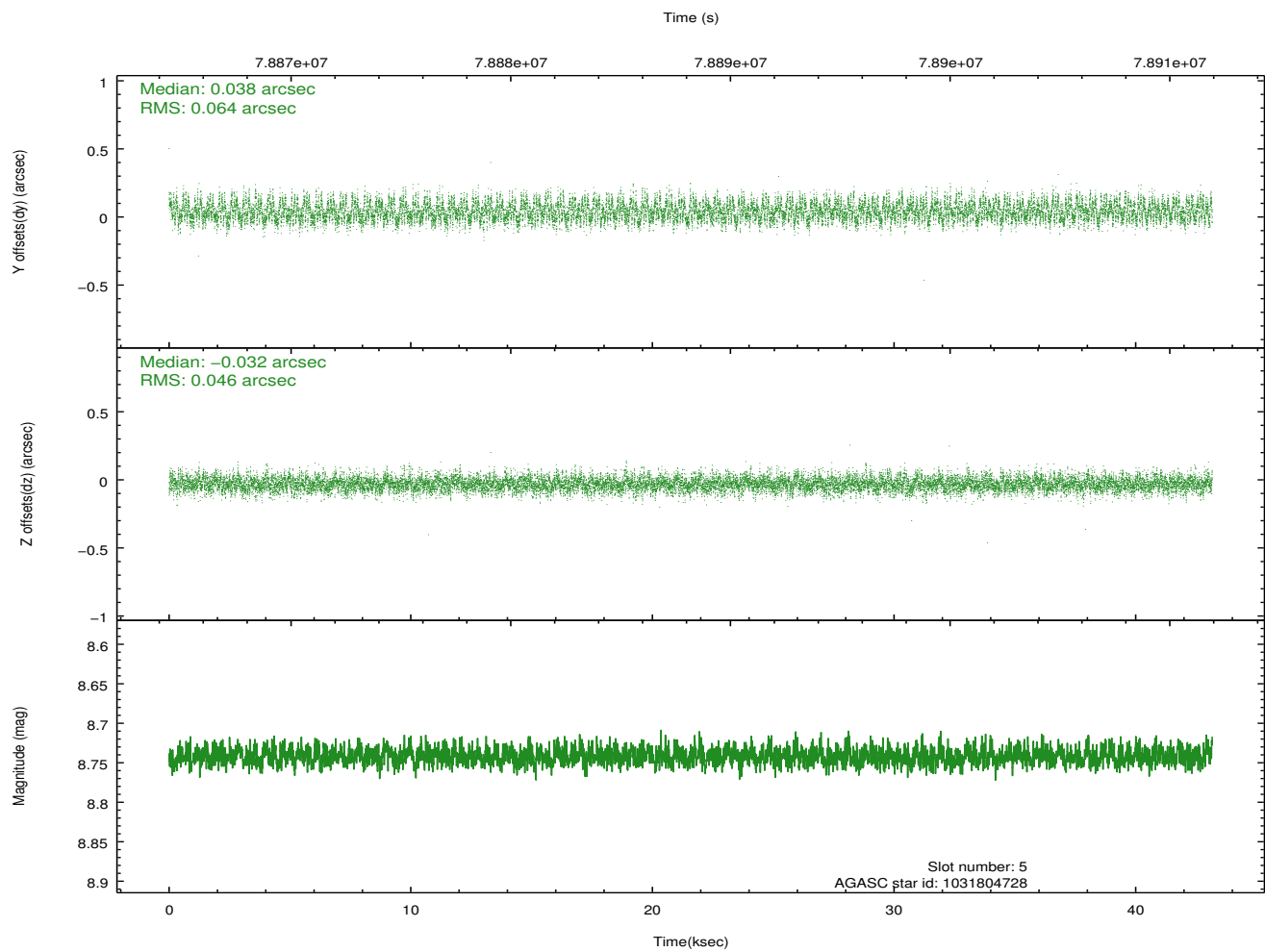
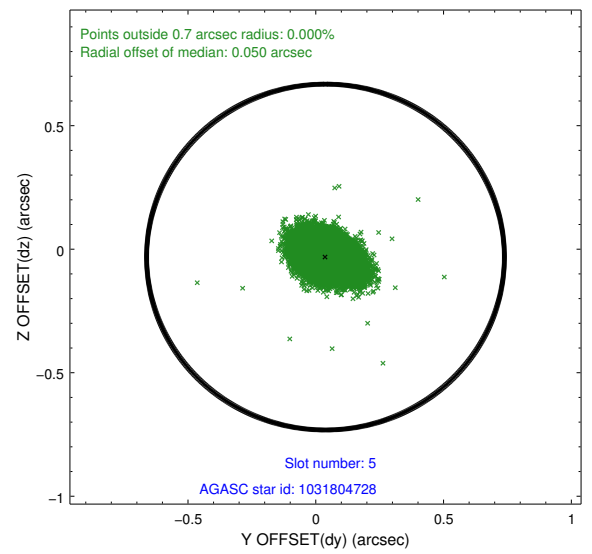
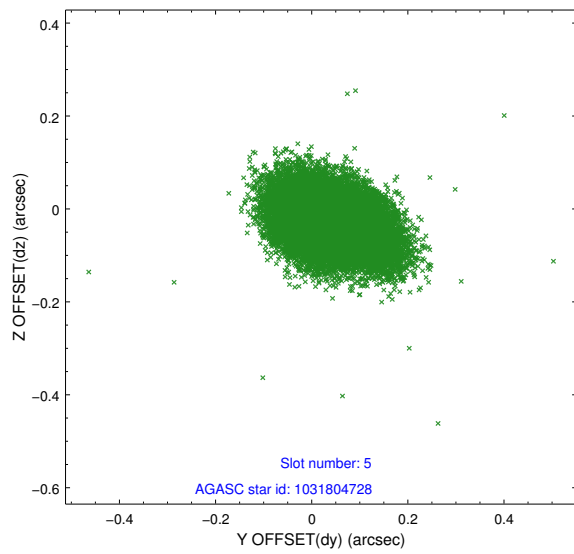
### 2.4.1 Slot 3



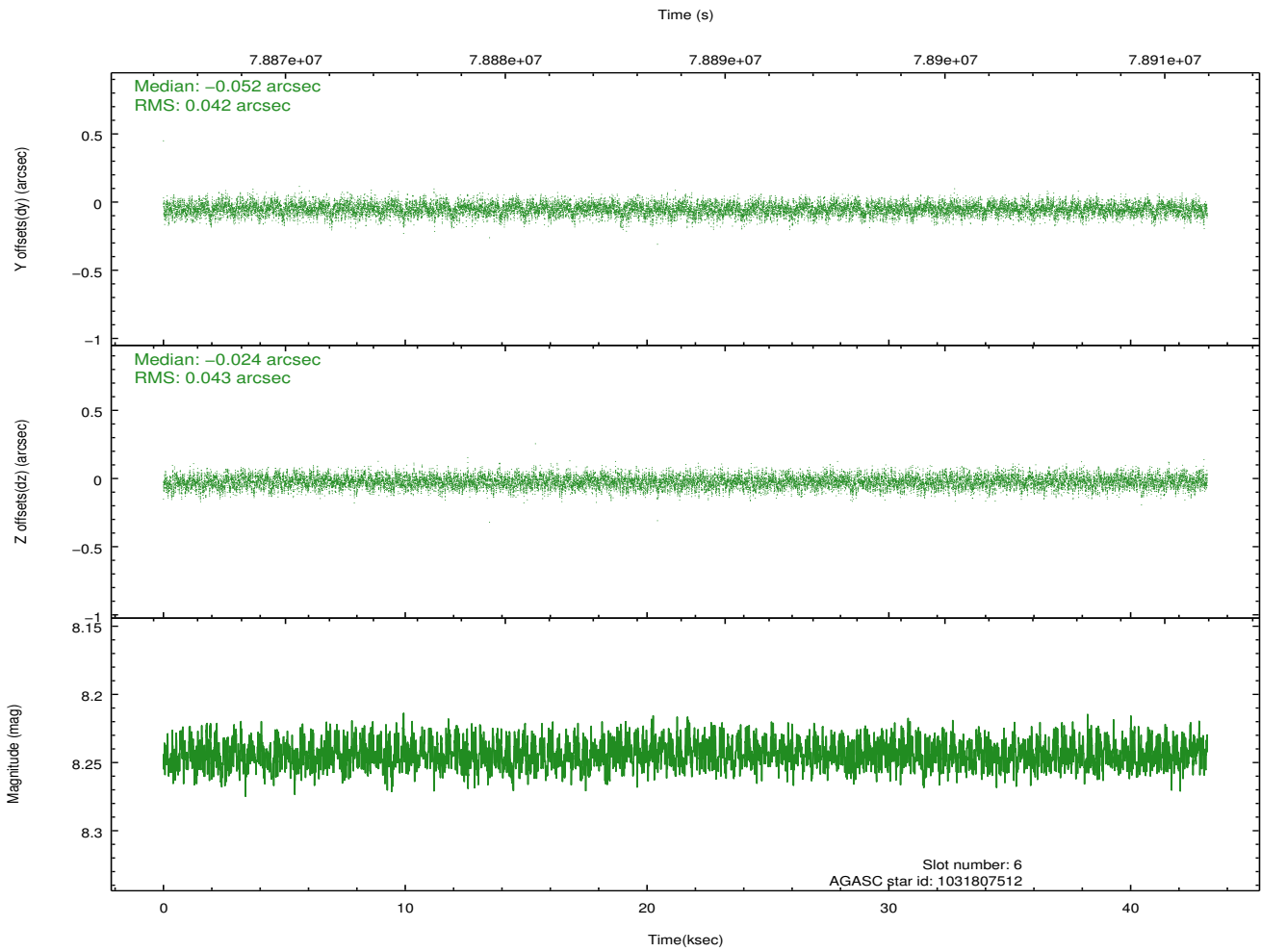
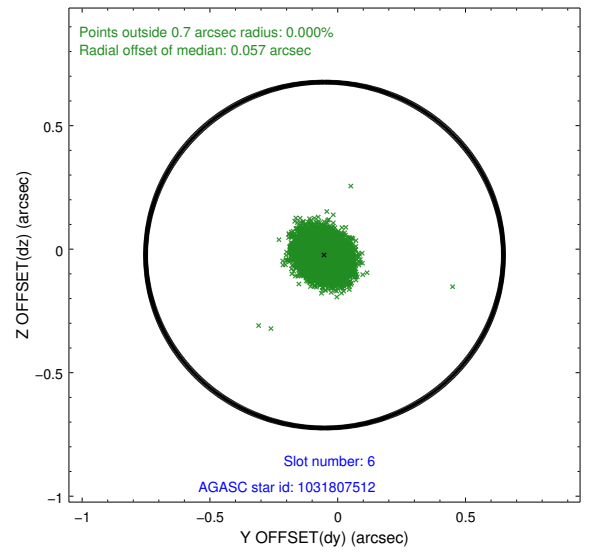
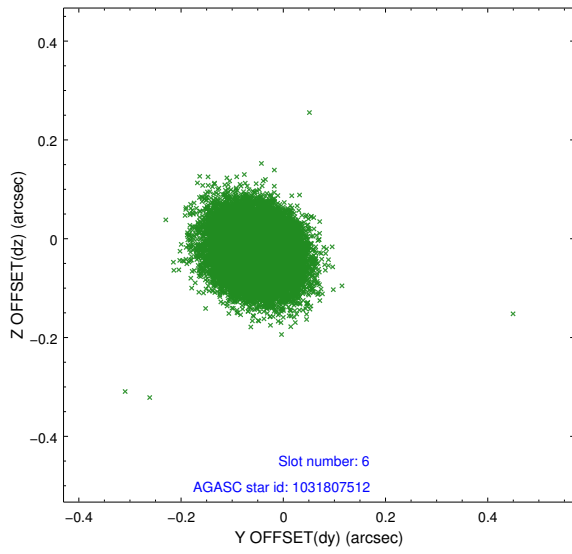
## 2.4.2 Slot 4



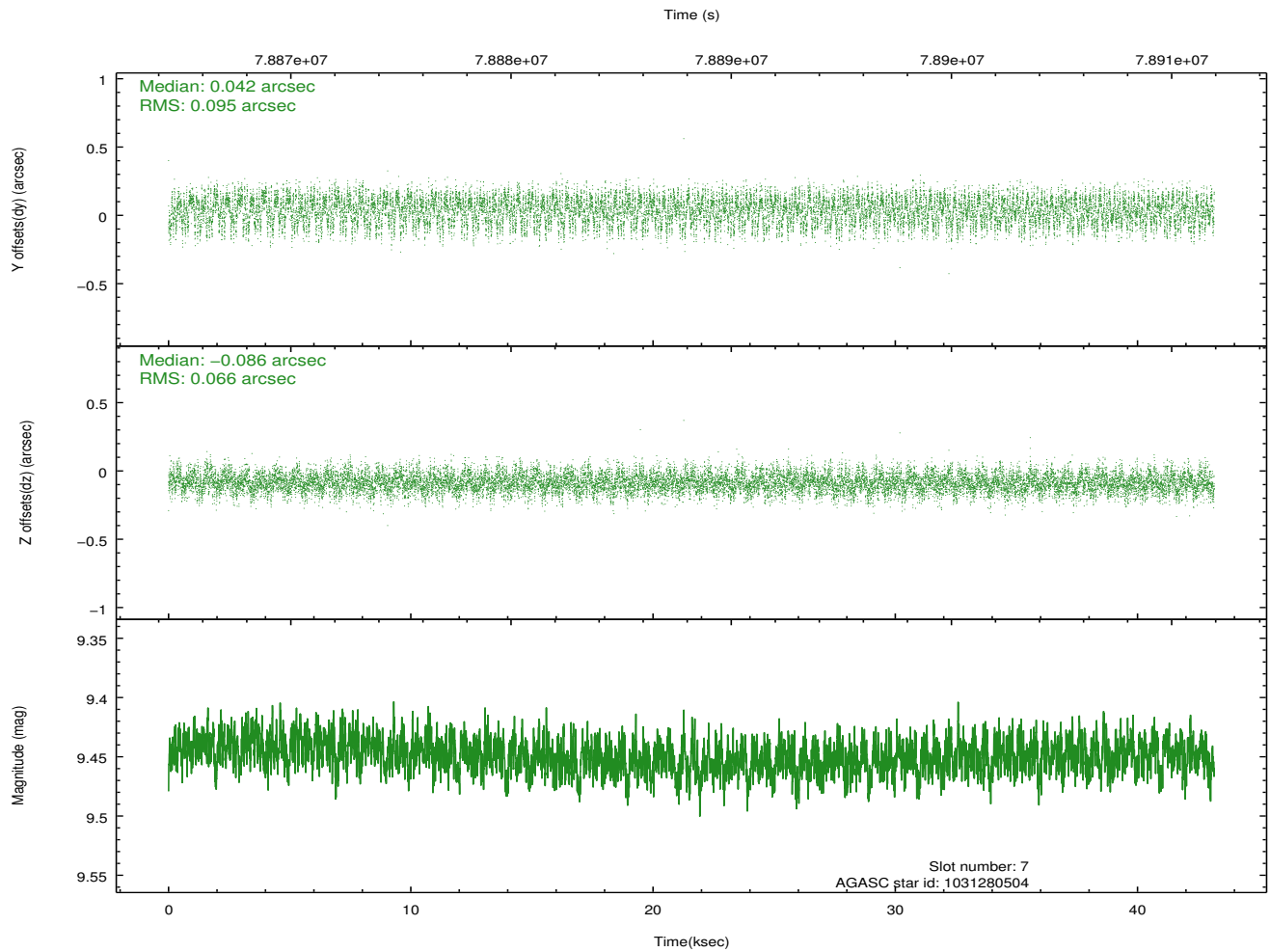
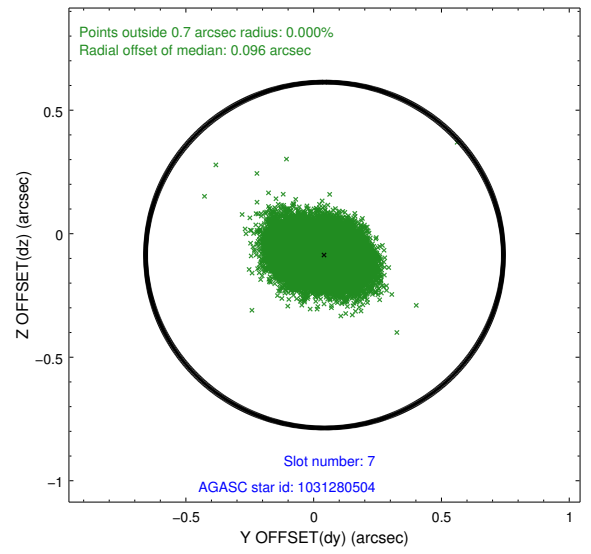
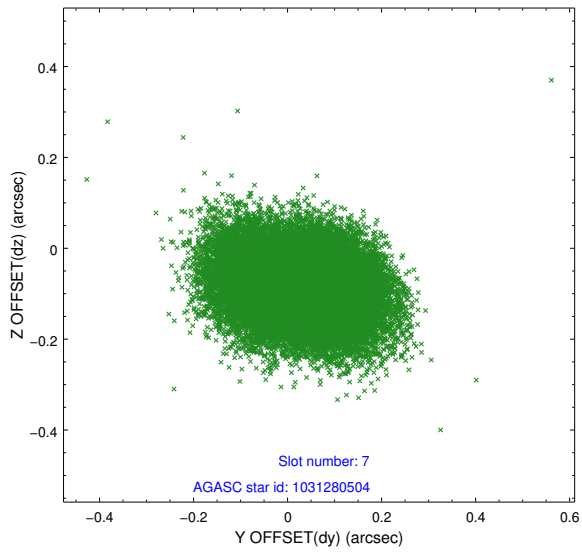
### 2.4.3 Slot 5



## 2.4.4 Slot 6

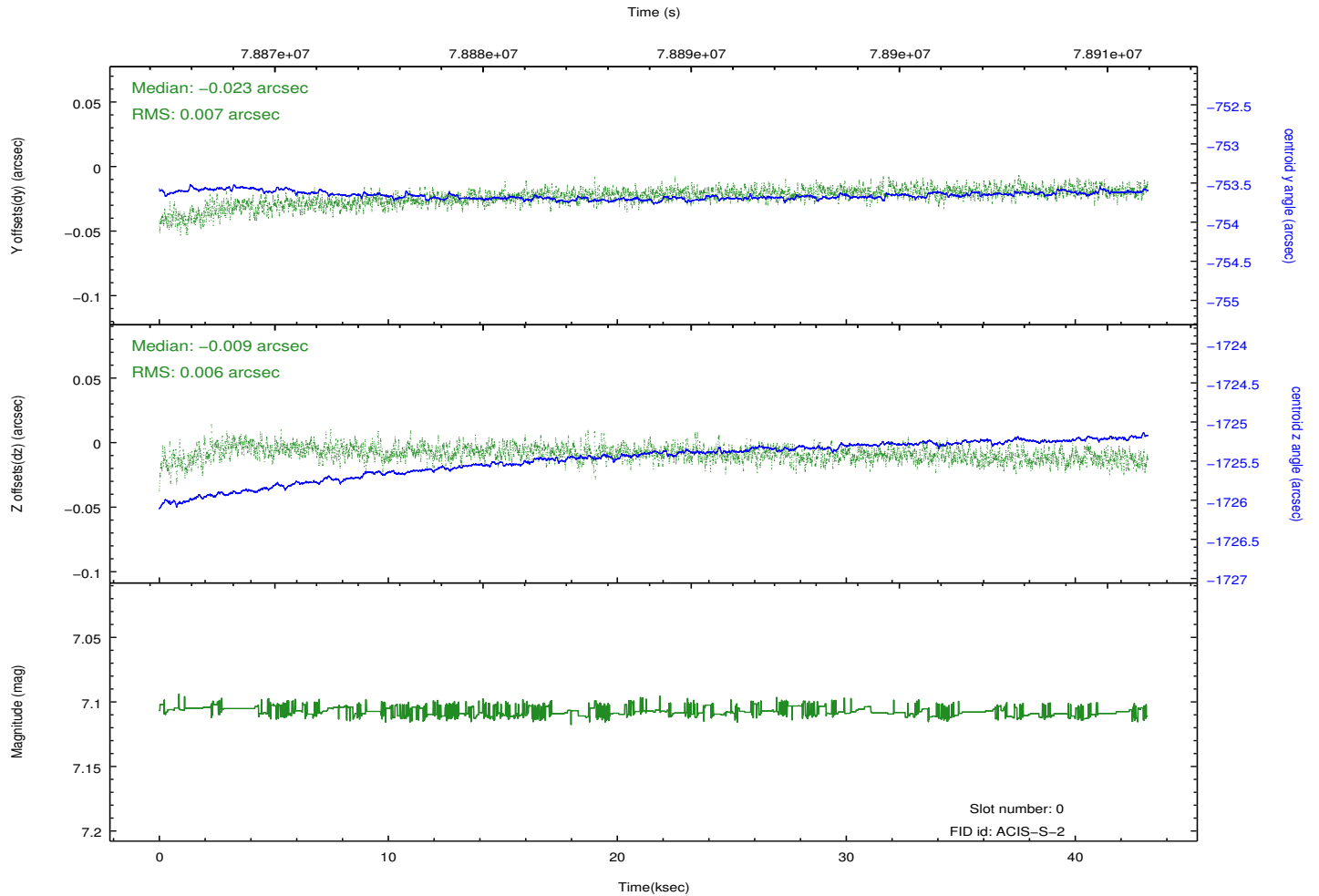
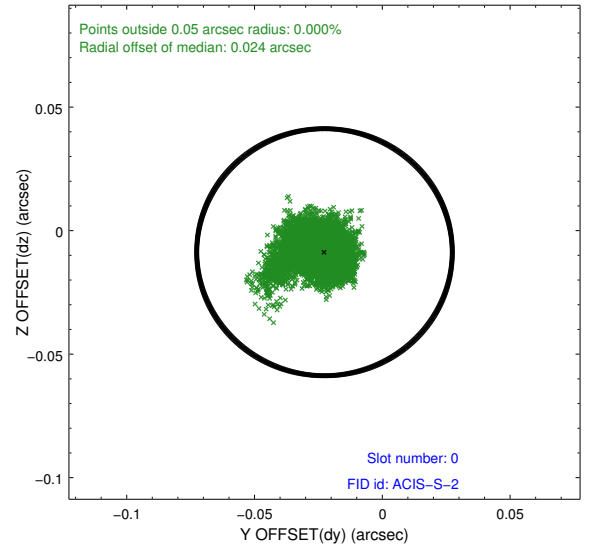
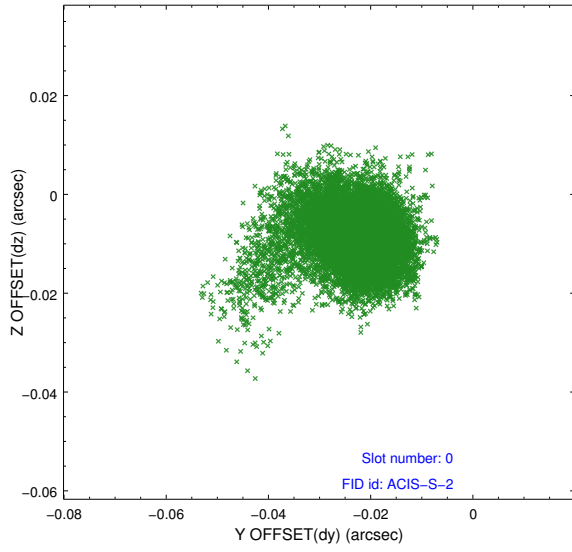


## 2.4.5 Slot 7

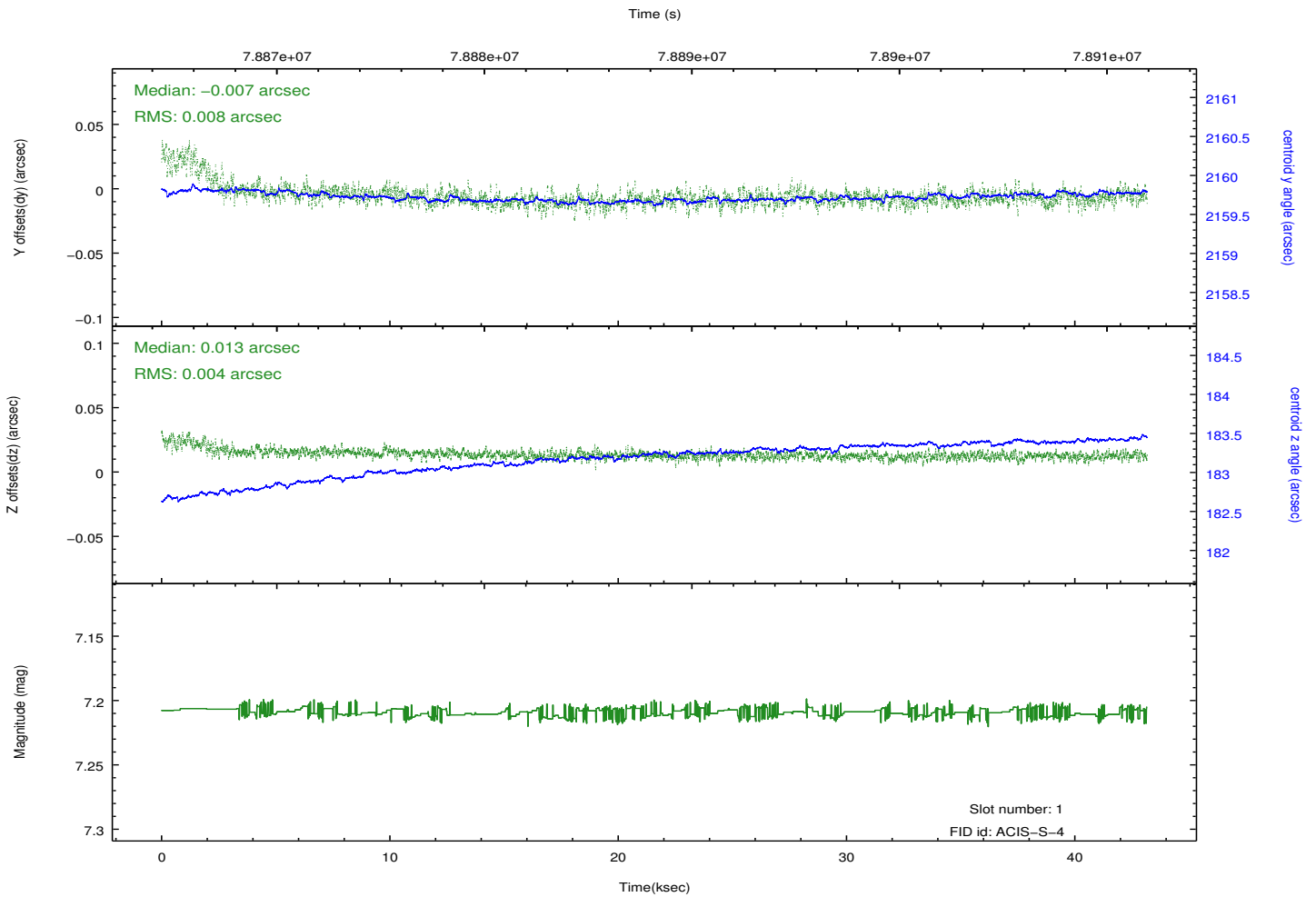
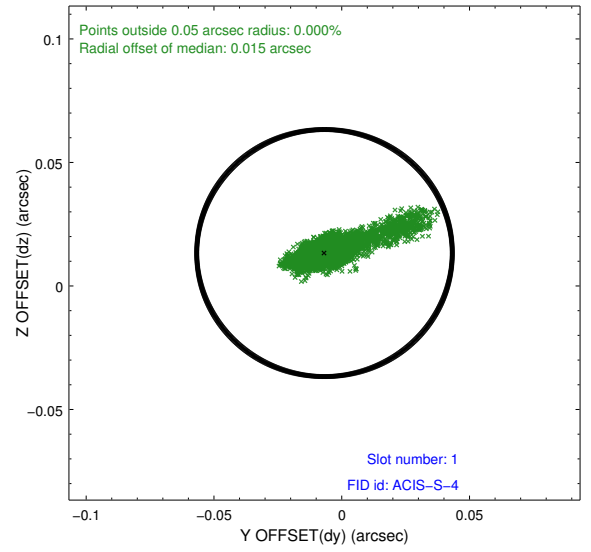
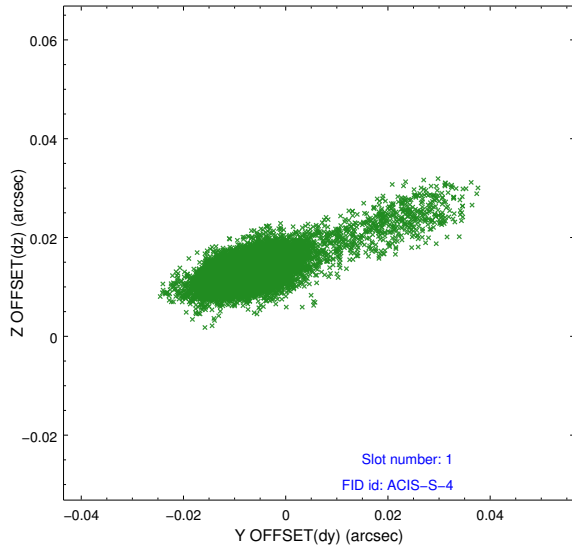


## 2.5 FID Slots

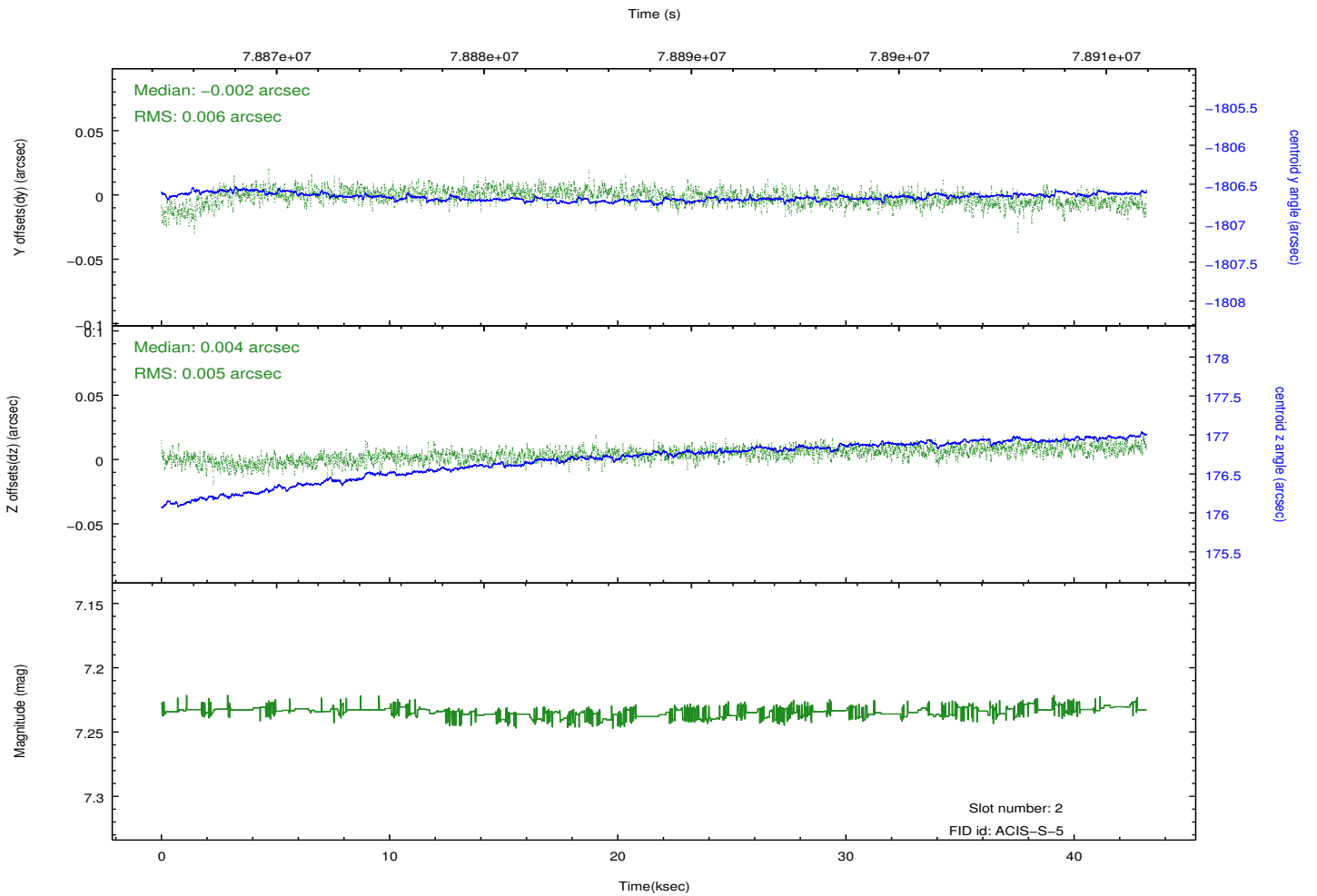
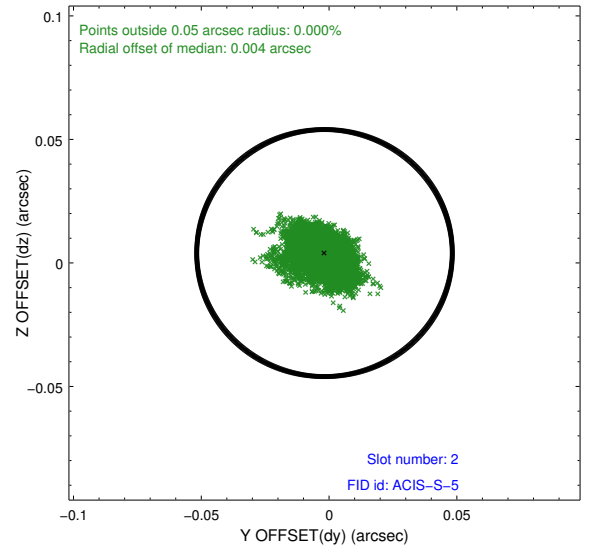
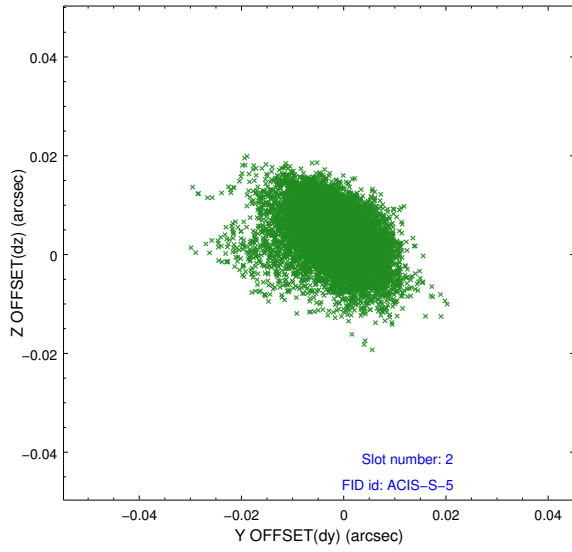
### 2.5.1 Slot 0



## 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)	2012.09.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	43.097

### **A.2 Comments**