

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12363 - L2 Version 3  
Chandra X-Ray Center

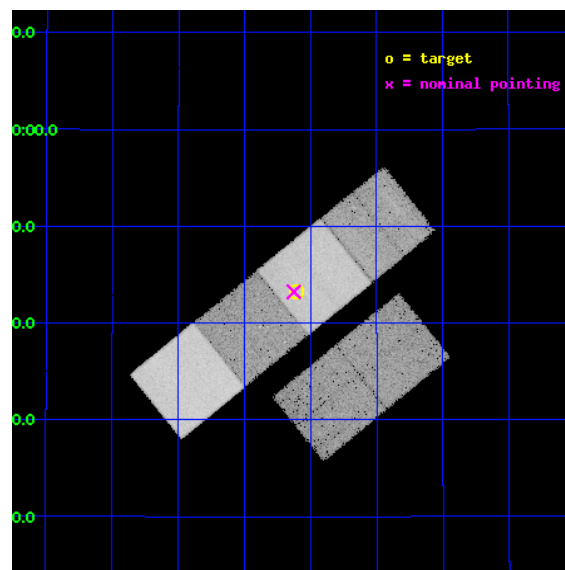
L2 Processing Date : Jul 9 2012

## 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 6 . . . . .	11
2.4.4	Slot 7 . . . . .	12
2.5	FID Slots . . . . .	13
2.5.1	Slot 0 . . . . .	13
2.5.2	Slot 1 . . . . .	14
2.5.3	Slot 2 . . . . .	15
<b>A</b>	<b>Summary</b>	<b>16</b>
A.1	Status . . . . .	16
A.2	Comments . . . . .	16

# 1 Front

seq_num	200697	Sequence number
obs_id	12363	Observation id
title	X-rays from Planetary Nebulae: Unveiling Binarity, Magnetic Fields, and Wind Collisions	Proposal title
observer	Dr. Joel Kastner	Principal investigator
object	NGC 6853	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	299.90125	Observer's specified target RA [deg]
dec_targ	22.721139	Observer's specified target Dec [deg]
ra_nom	299.90644948368	Nominal RA [deg]
dec_nom	22.72050003864	Nominal Dec [deg]
roll_nom	320.99097499695	Nominal Roll [deg]
revision	3	Processing version of data
ontime	20054.399925351	Sum of GTIs [s]
livetime	19800.459038186	Livetime [s]
ontime2	20051.158954978	Sum of GTIs [s]
ontime3	20051.158945024	Sum of GTIs [s]
ontime5	20054.399925351	Sum of GTIs [s]
ontime6	20054.399925351	Sum of GTIs [s]
ontime7	20054.399925351	Sum of GTIs [s]
ontime8	20054.399925351	Sum of GTIs [s]
l2events	284234	Number of level 2 events

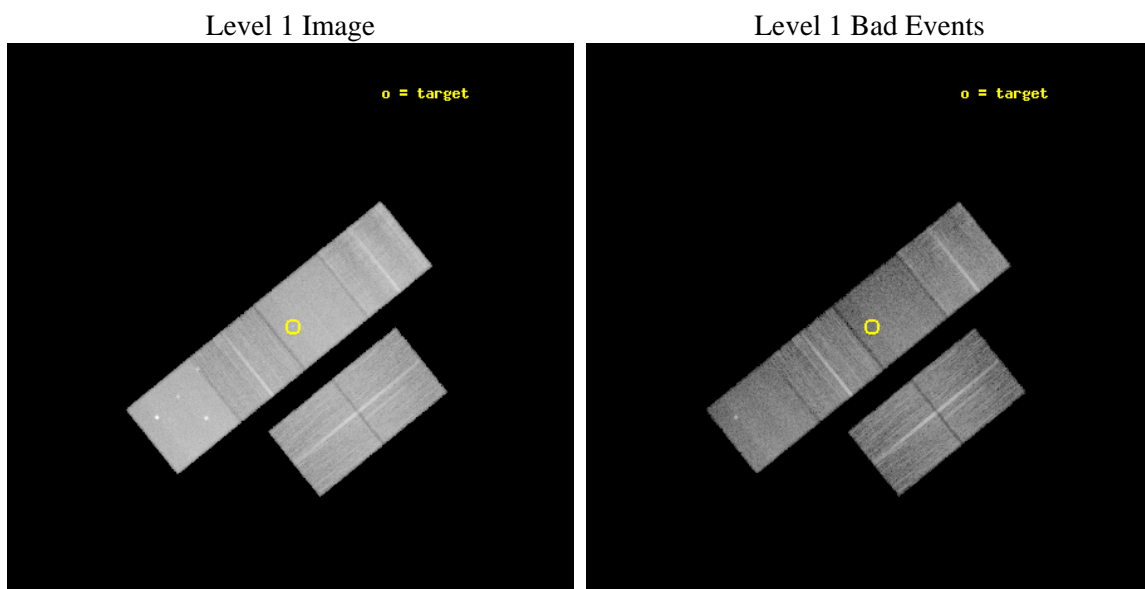




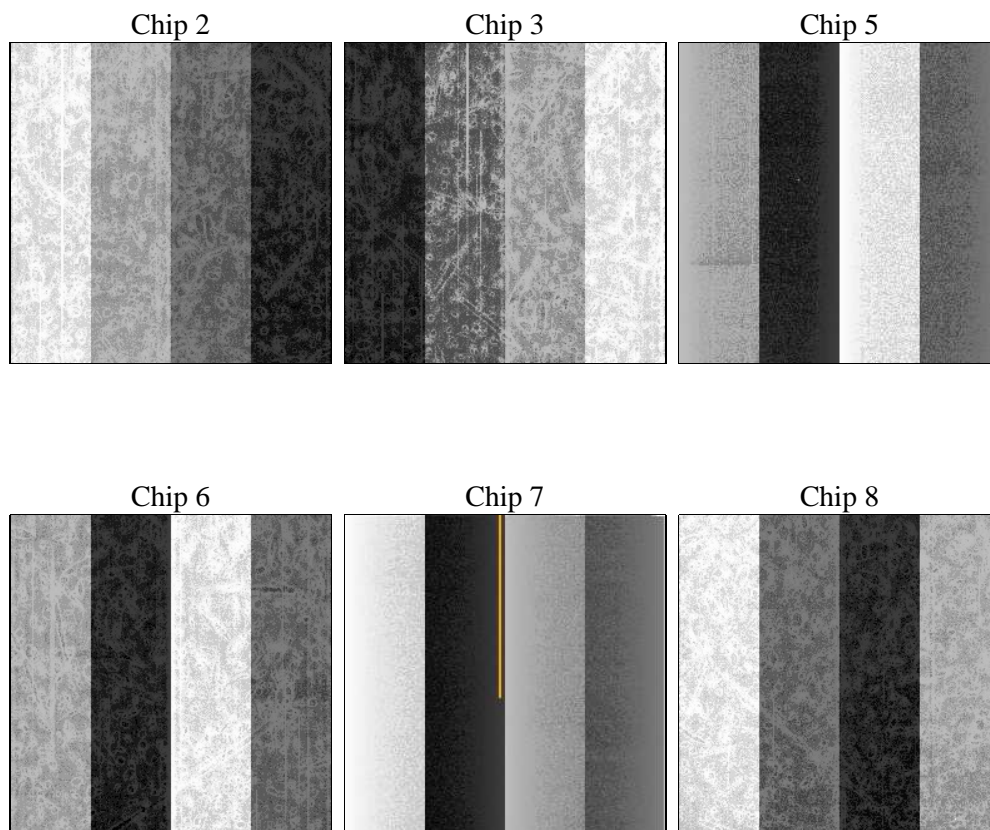
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20001.400000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	20054.399925351	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime2	20051.158954978	Sum of GTIs [s]
date	2012-07-09T13:49:43	Date and time of file creation	ontime3	20051.158945024	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	20054.399925351	Sum of GTIs [s]
			ontime6	20054.399925351	Sum of GTIs [s]
			ontime7	20054.399925351	Sum of GTIs [s]
			ontime8	20054.399925351	Sum of GTIs [s]
			l1events	1034170	Number of level 1 events

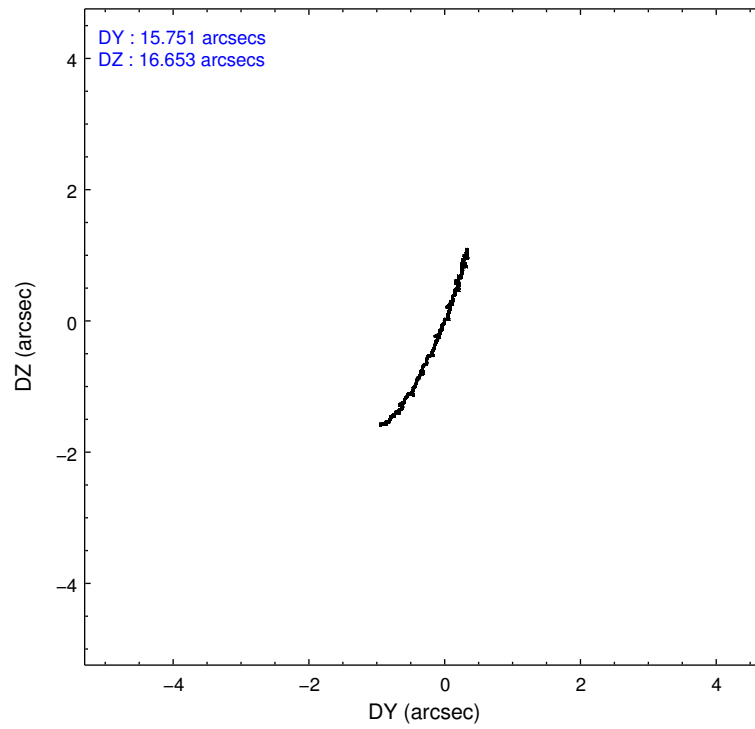
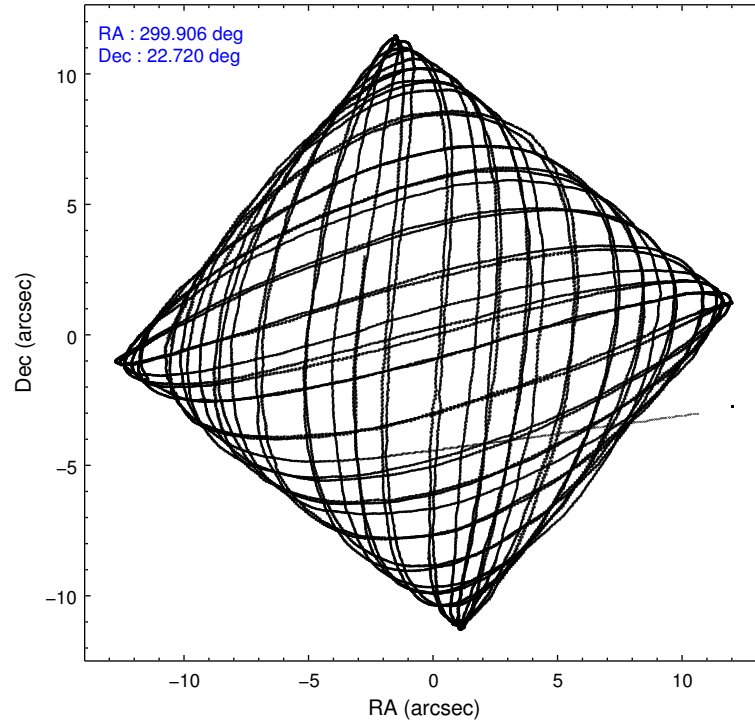
### 2.1.4 Events

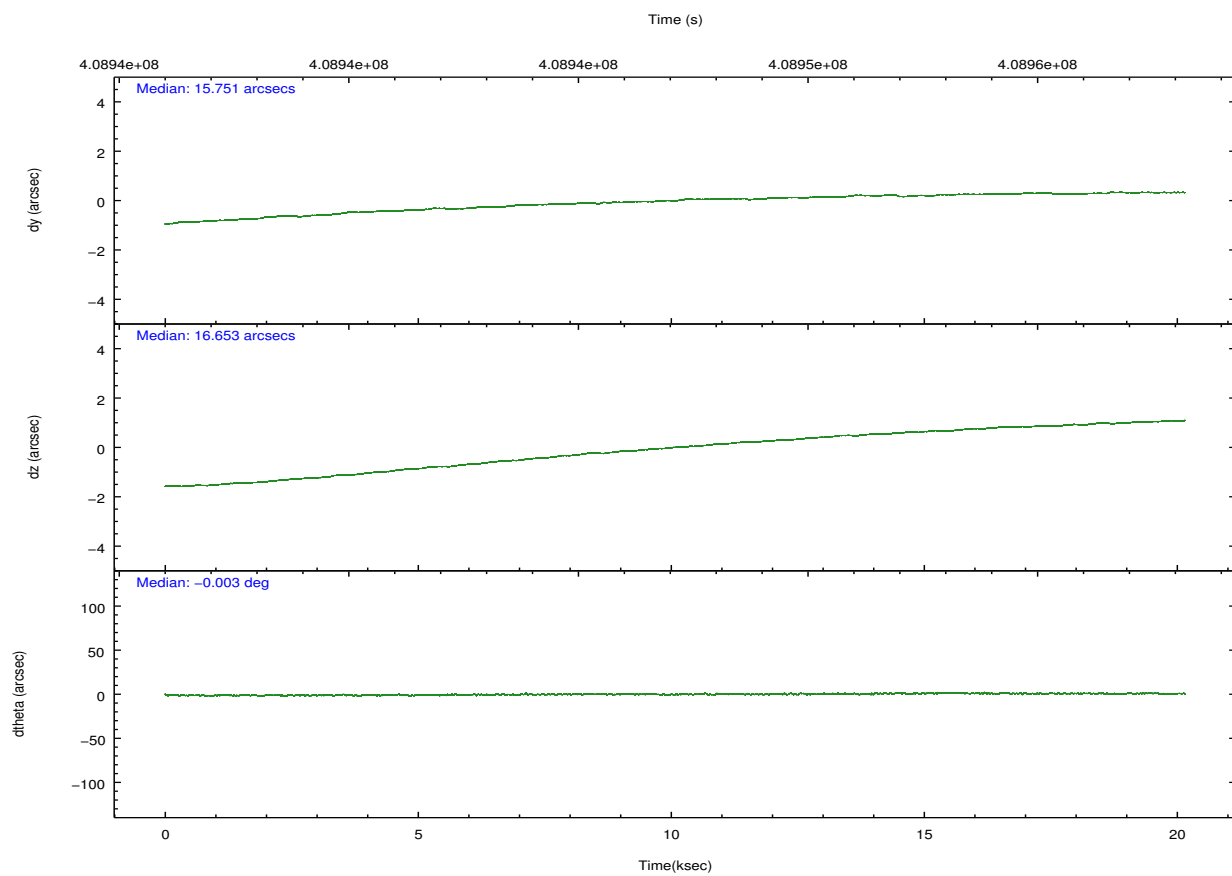
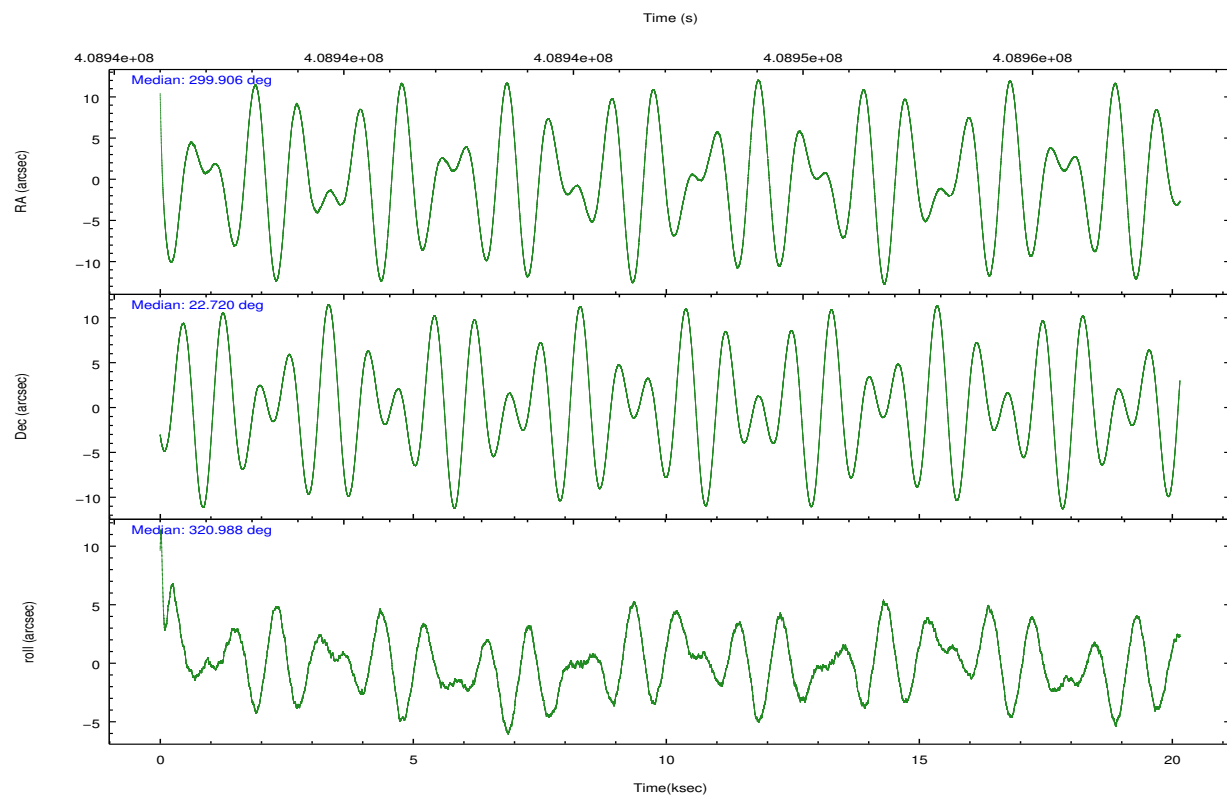
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	146298	137875	223793	148712	185780	191712	grade 0 events	10388	9799	12878	11509	8731	22957
rejected events	124422	117052	106720	124492	94319	132767		7%	7%	5%	7%	4%	11%
rejected %	85%	84%	47%	83%	50%	69%	grade 1 events	126	98	743	106	215	178
								0%	0%	0%	0%	0%	0%
							grade 2 events	4403	3900	35263	4579	17929	12176
								3%	2%	15%	3%	9%	6%
							grade 3 events	1855	1820	4502	1959	7828	5421
								1%	1%	2%	1%	4%	2%
							grade 4 events	1806	1841	4327	1961	7720	5116
								1%	1%	1%	1%	4%	2%
							grade 5 events	5537	6279	15865	6493	18027	9149
								3%	4%	7%	4%	9%	4%
							grade 6 events	3427	3468	60118	4219	49269	13288
								2%	2%	26%	2%	26%	6%
							grade 7 events	118756	110670	90097	117886	76061	123427
								81%	80%	40%	79%	40%	64%

## 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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	299.877117	299.9064494836753	CCD I2 on	O4	Y
[deg] Pointing Dec	22.724427	22.72050003864018	CCD I3 on	O5	Y
[deg] Pointing Roll	320.845672	320.9909749969547	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	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	O2	Y
[s] Observation start time (MET)	408937174.184000	408936050.50593	CCD S5 on	N	N
Observation start date	2010-12-17T01:38:28	2010-12-17T01:20:50	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	408957175.184000	408957401.76953	On-chip summing requested	N	N
Observation end date	2010-12-17T07:11:49	2010-12-17T07:16:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



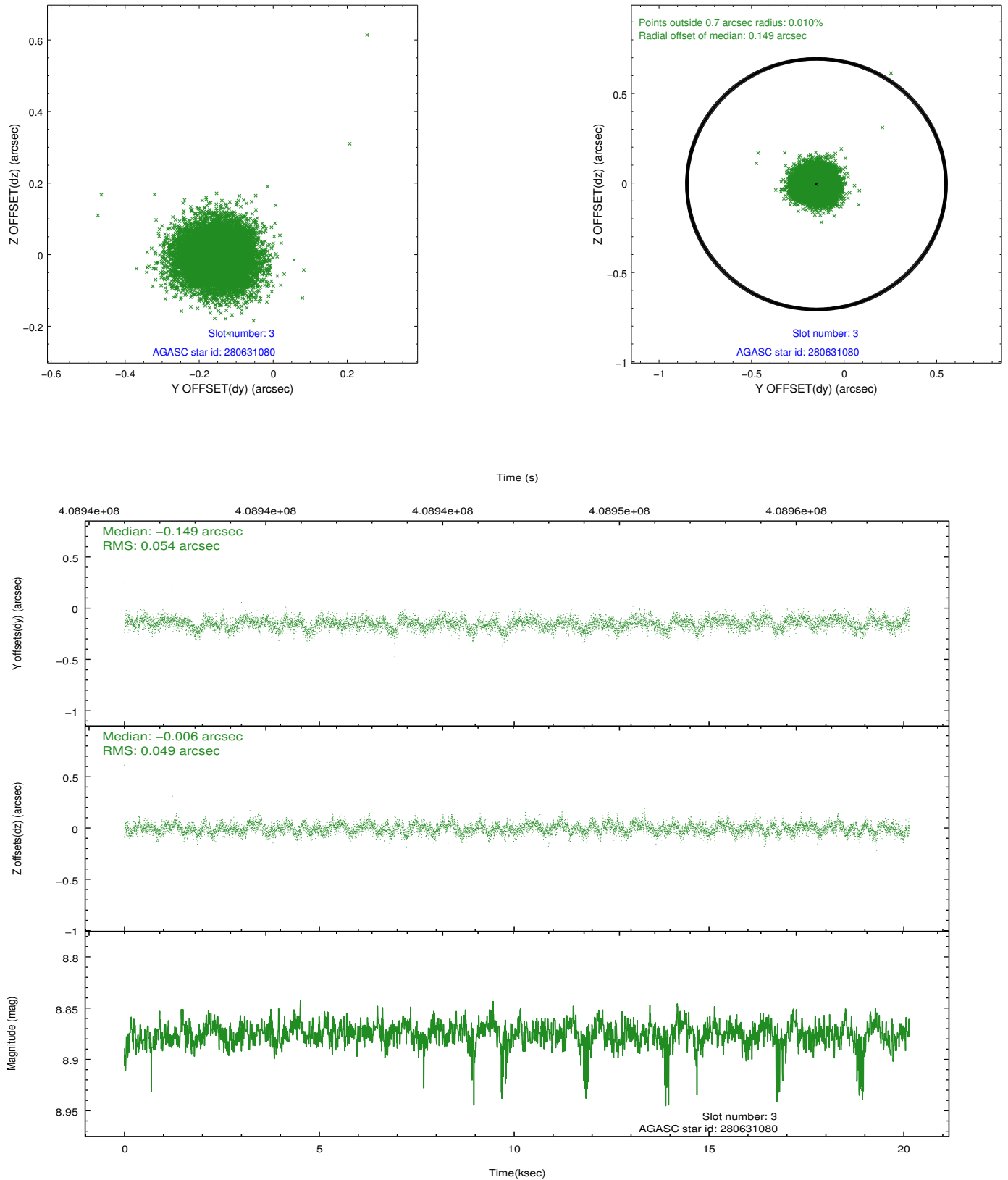


Slot Statistics

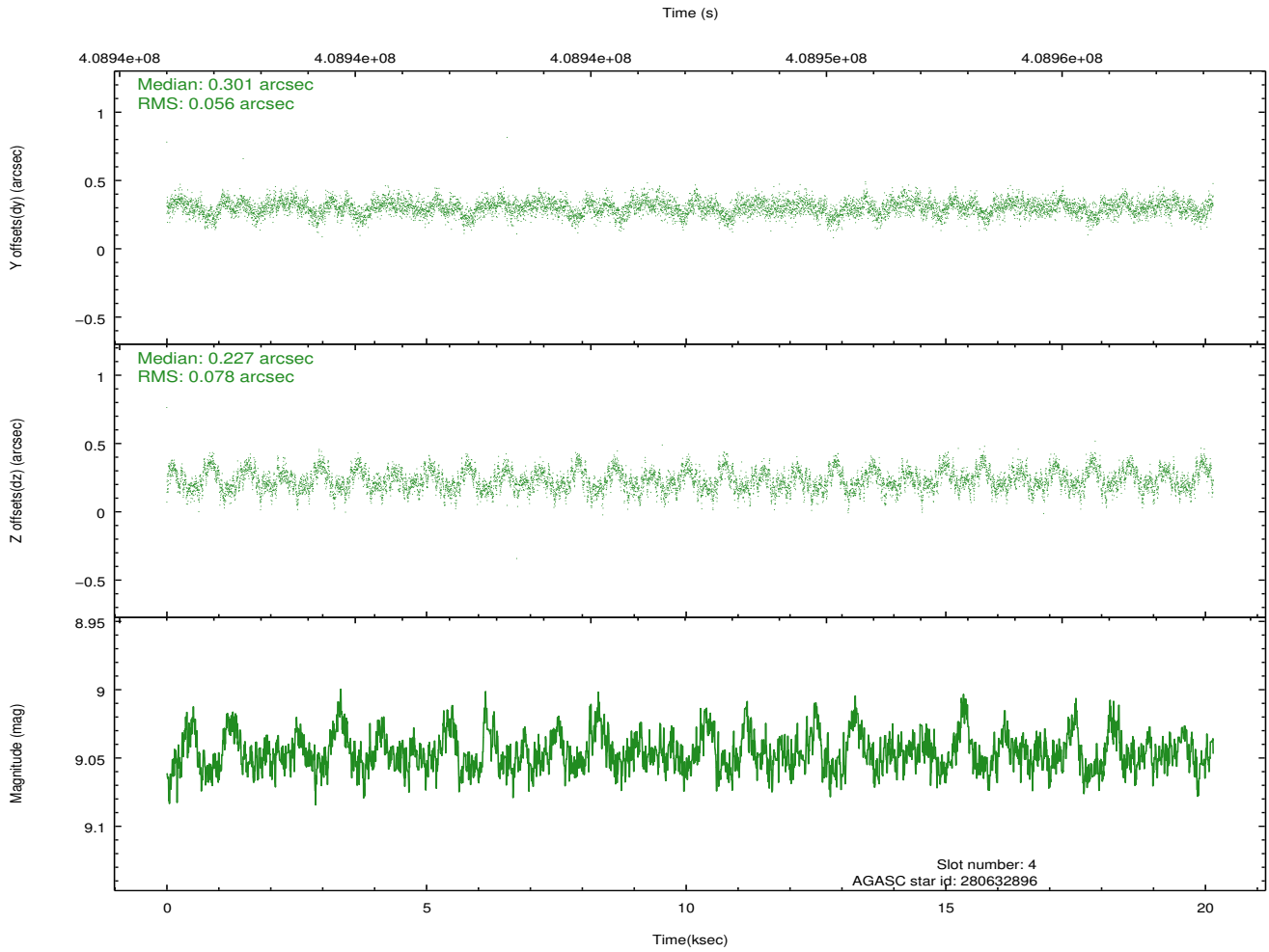
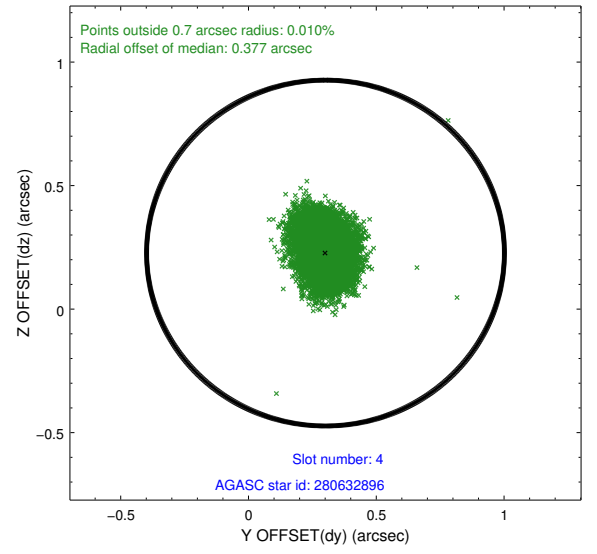
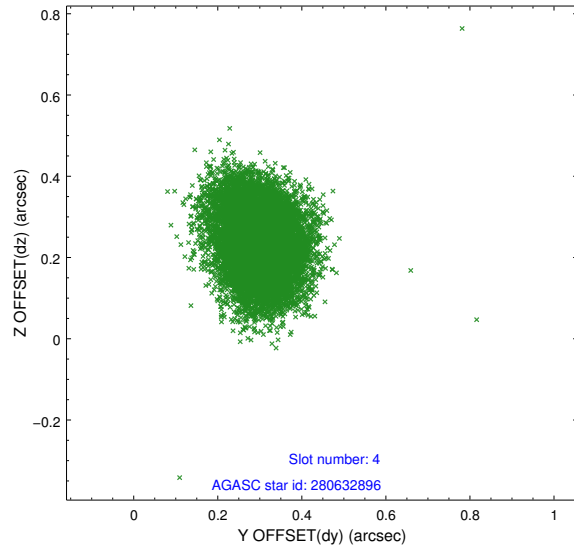
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.93	4915	-0.102	-0.064	0.019	0.029	0.000000	0.000000	-768.78	-1737.95
1	FID	ACIS-S-4	7.02	4916	0.125	0.049	0.009	0.017	0.000000	0.000000	2144.68	170.38
2	FID	ACIS-S-6	7.16	4916	-0.053	0.021	0.017	0.025	0.000000	0.000000	393.55	808.00
3	GUIDE	280631080	8.88	9819	-0.149	-0.006	0.077	0.125	299.578484	23.303541	-2082.73	994.29
4	GUIDE	280632896	9.05	9830	0.301	0.227	0.102	0.166	299.532468	22.850727	-1174.27	-367.67
5	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	280633064	8.21	9832	-0.172	-0.032	0.068	0.114	299.694491	23.488361	-2204.59	1752.43
7	GUIDE	280640784	9.10	9827	0.023	-0.193	0.074	0.123	300.454026	22.565622	1845.76	771.03

## 2.4 Star Slots

### 2.4.1 Slot 3

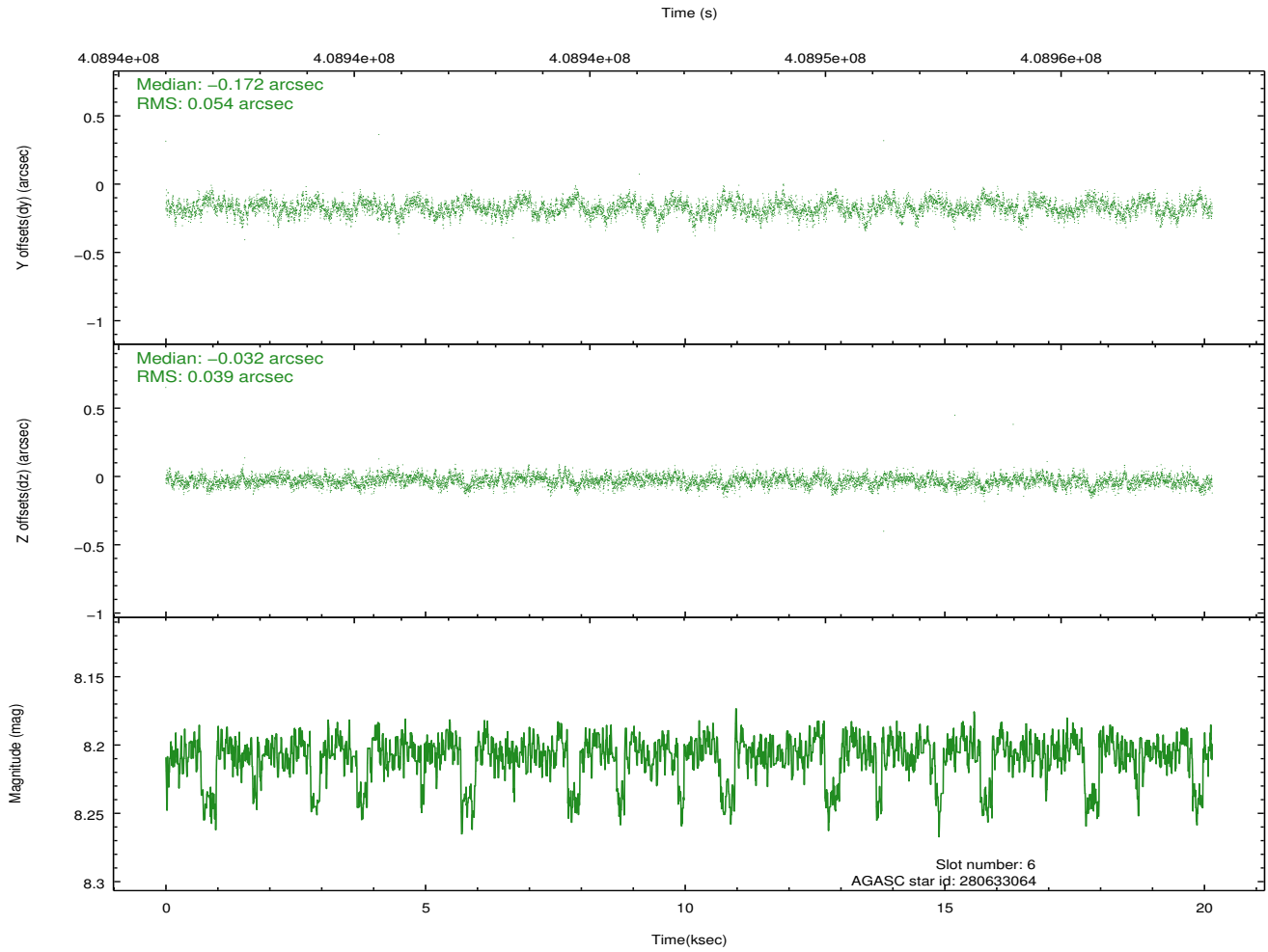
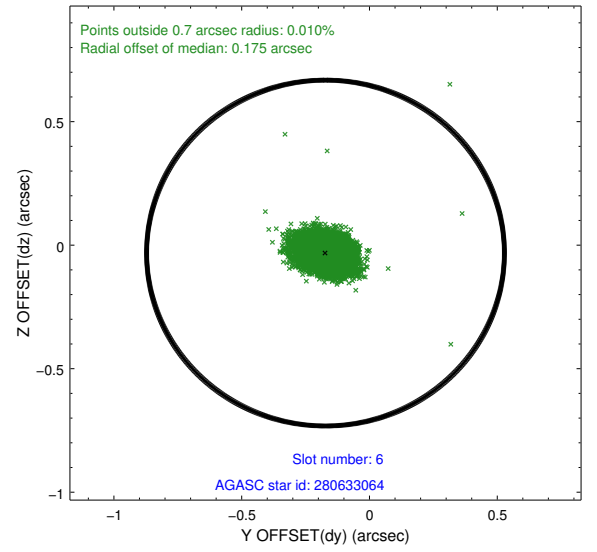
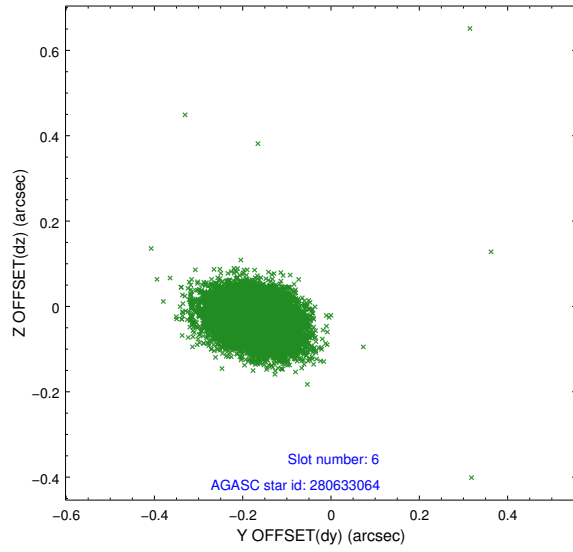


## 2.4.2 Slot 4

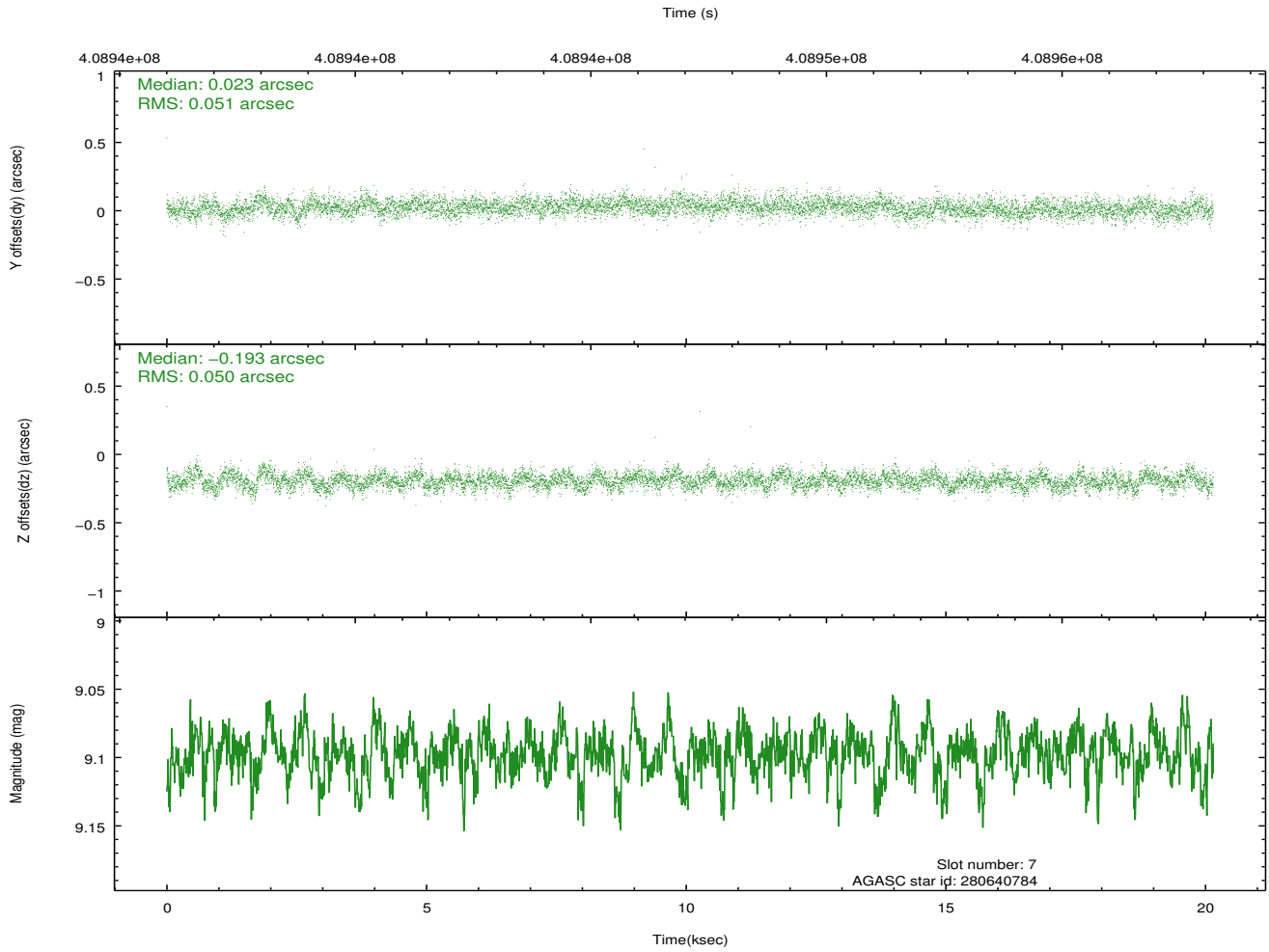
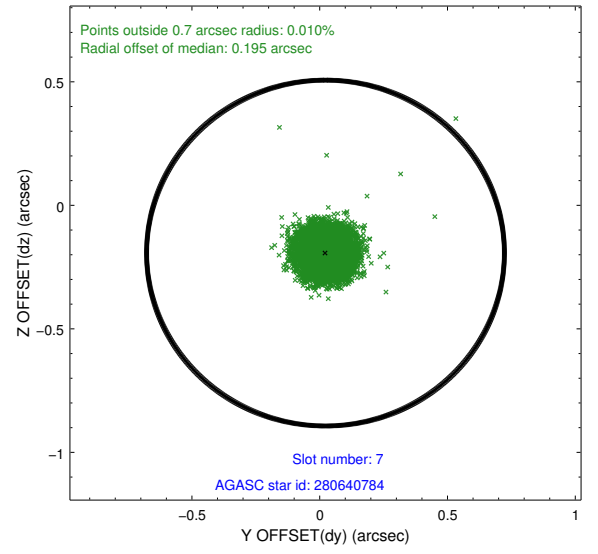
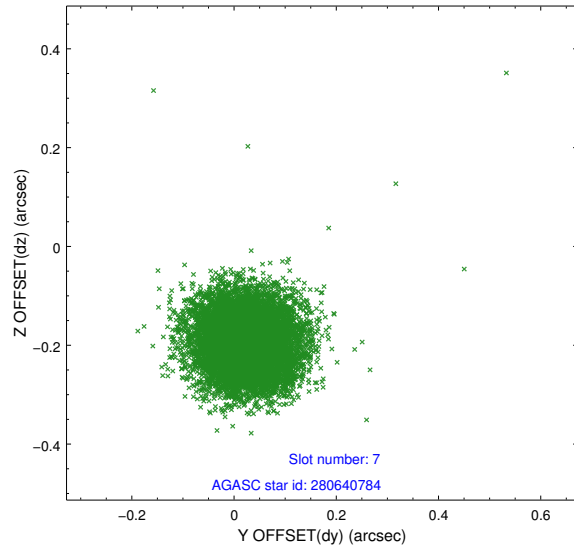




### 2.4.3 Slot 6

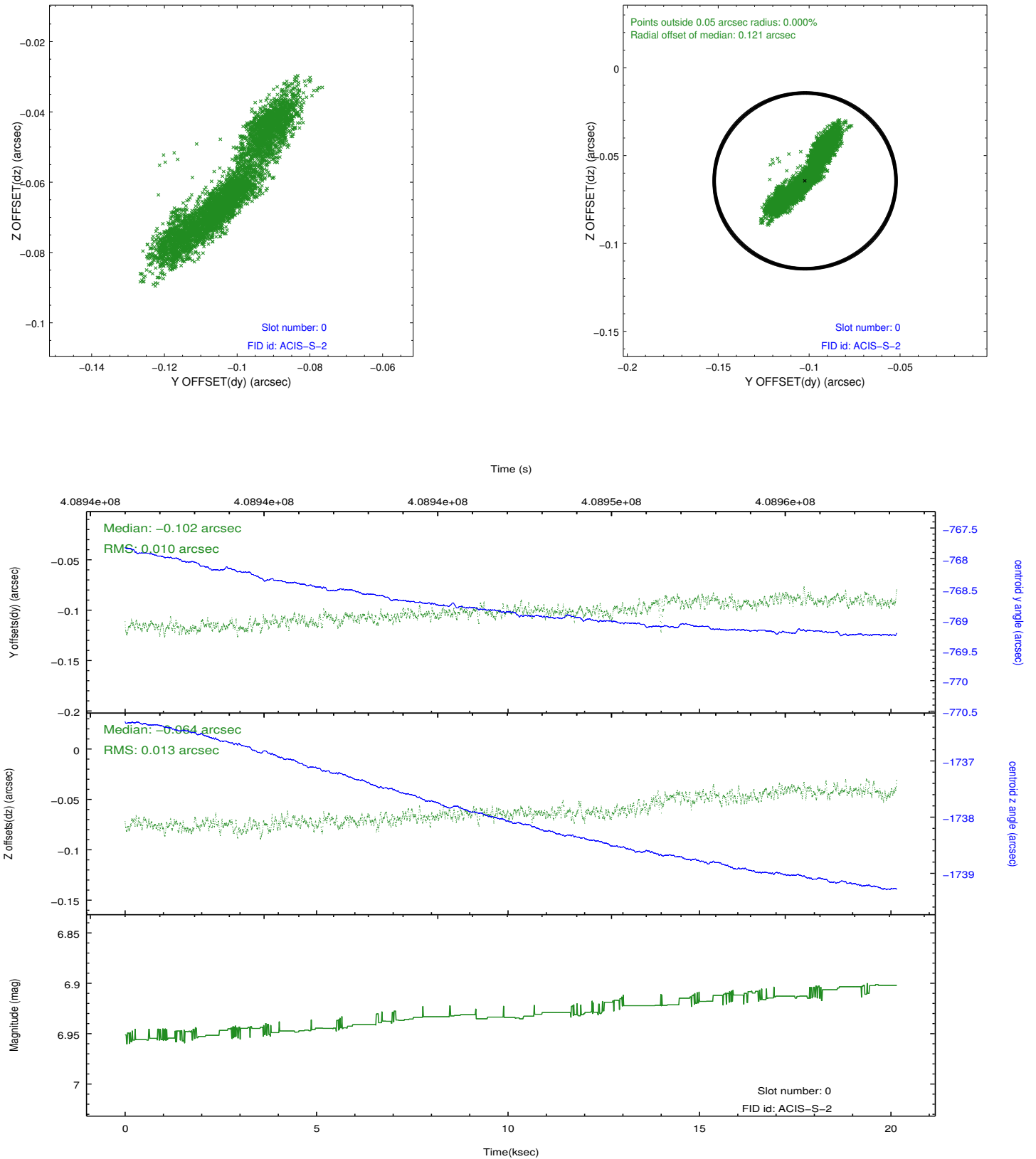


## 2.4.4 Slot 7

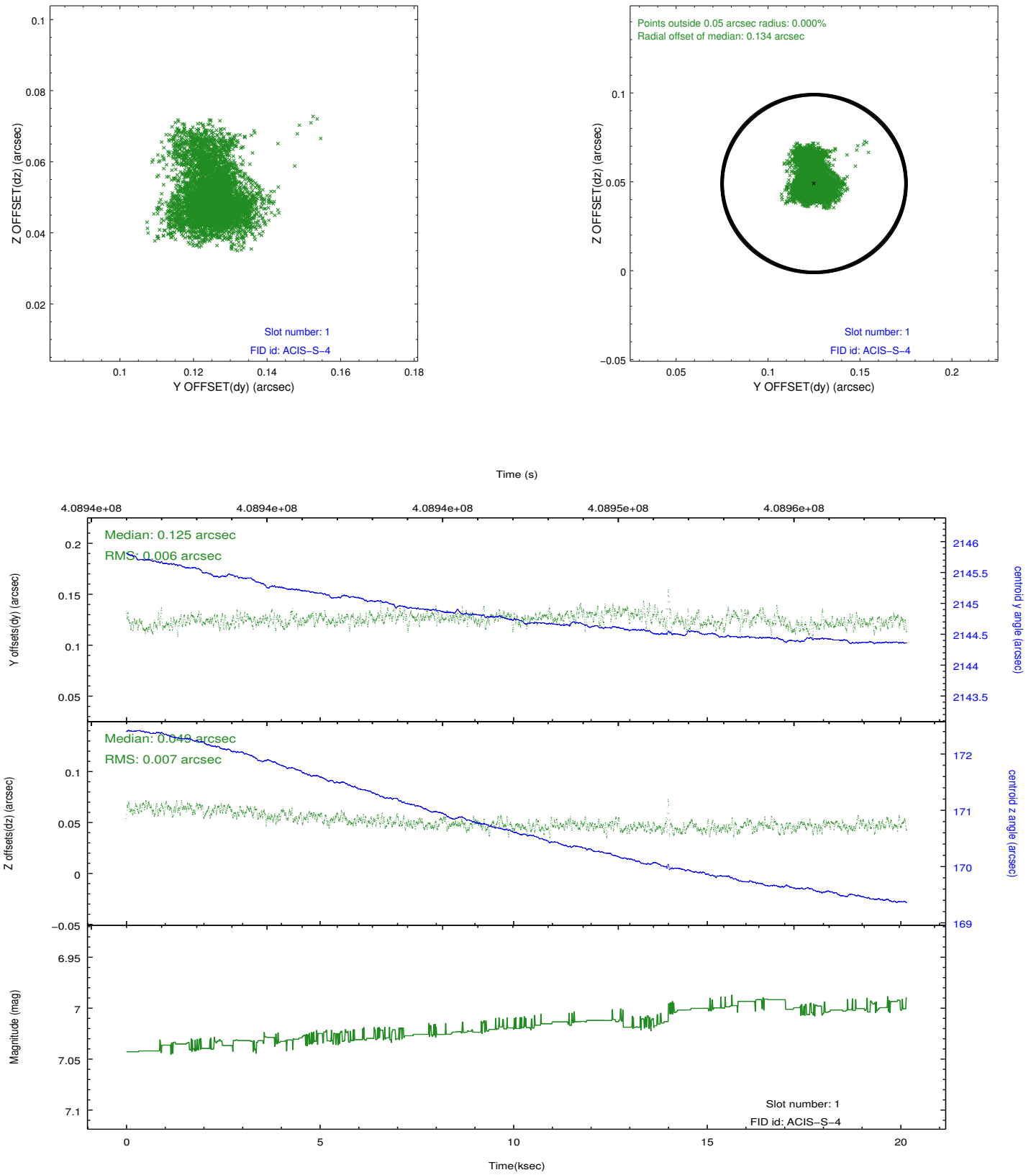


## 2.5 FID Slots

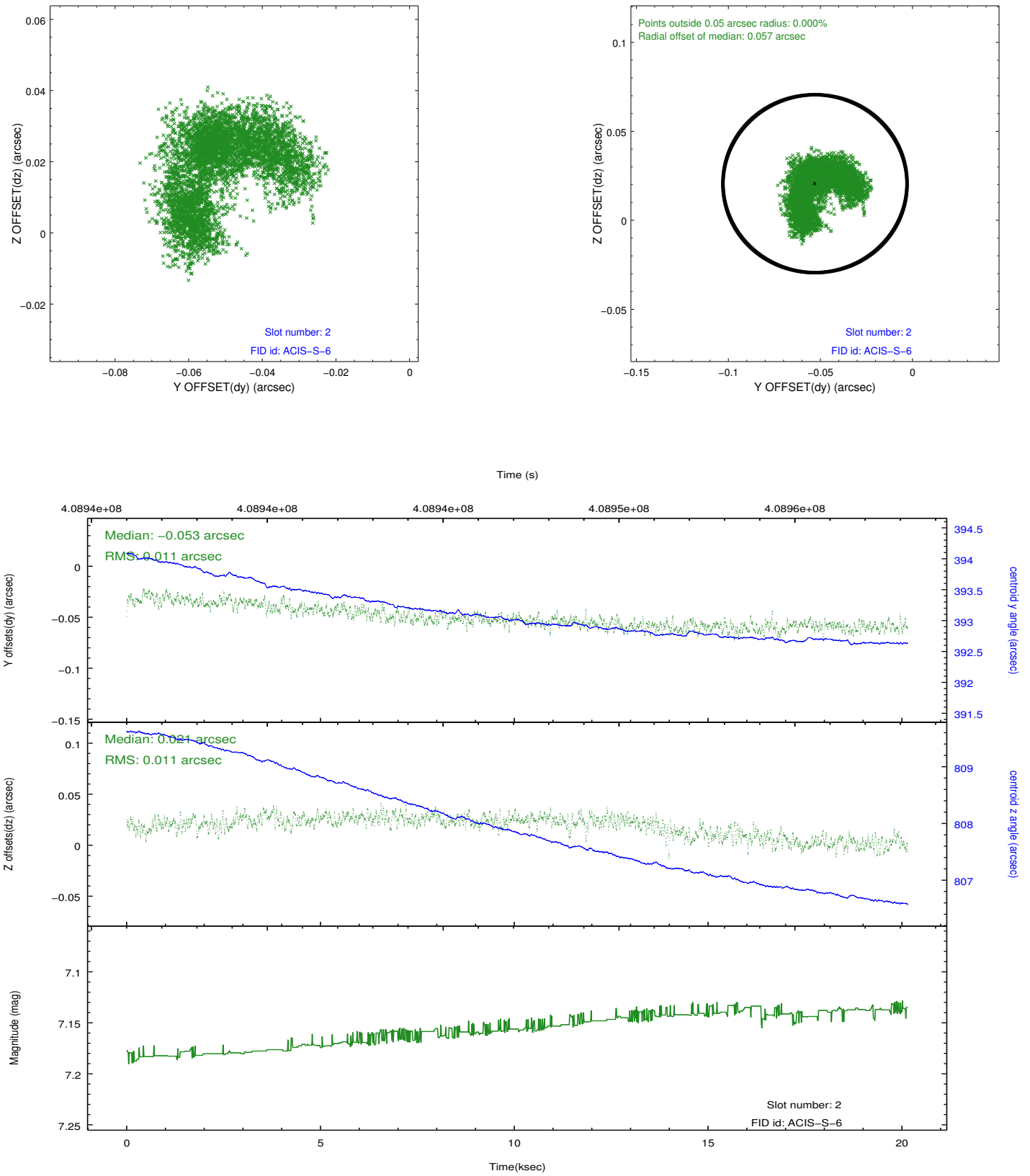
### 2.5.1 Slot 0



## 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)	2012.07.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.054399925351

### A.2 Comments

The guide star in slot 5 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.