

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12293 - L2 Version 2  
Chandra X-Ray Center

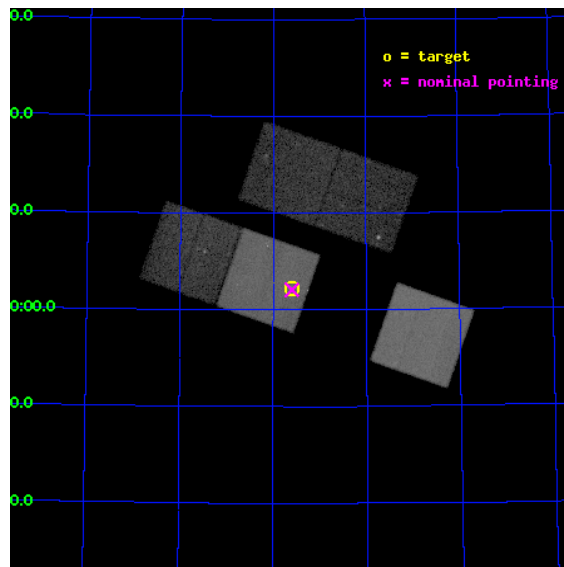
L2 Processing Date : Jan 12 2012

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# 1 Front

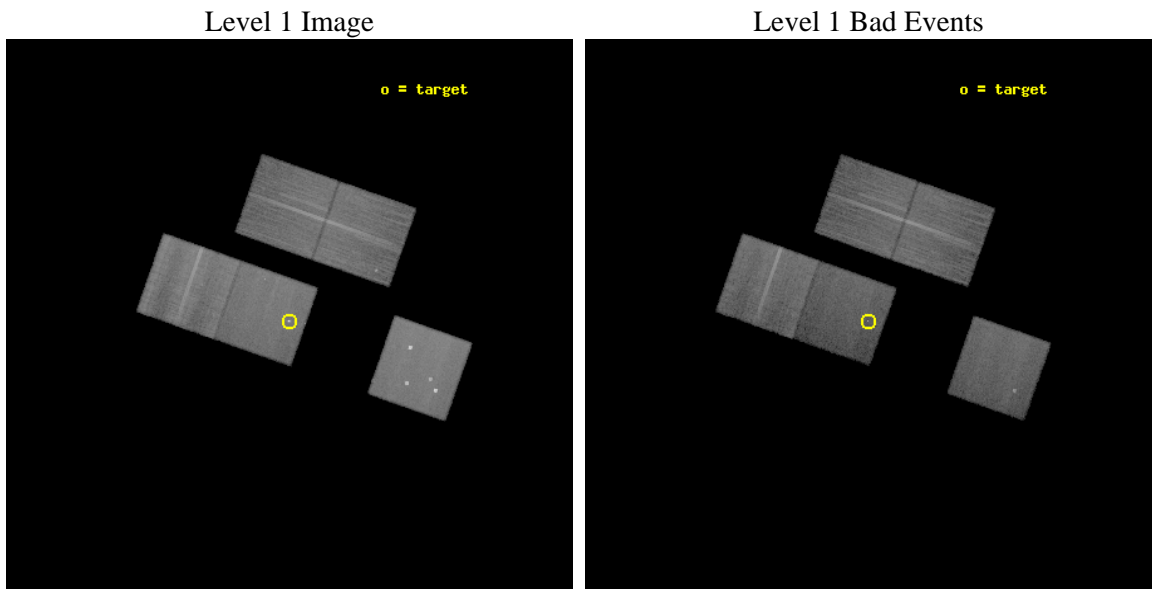
seq_num	900948	Sequence number
obs_id	12293	Observation id
title	A CHandra survey of Extended Emission-line Regions in nearby Seyfert galaxies (CHEERS)	Proposal title
observer	Dr. Junfeng Wang	Principal investigator
object	Mrk 3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	93.901667	Observer's specified target RA [deg]
dec_targ	71.037528	Observer's specified target Dec [deg]
ra_nom	93.899518157094	Nominal RA [deg]
dec_nom	71.034575299918	Nominal Dec [deg]
roll_nom	199.34721868515	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31038.929709911	Sum of GTIs [s]
livetime	30633.383242724	Livetime [s]
ontime2	31035.624519646	Sum of GTIs [s]
ontime3	31035.706599534	Sum of GTIs [s]
ontime5	31038.888669908	Sum of GTIs [s]
ontime7	31038.929709911	Sum of GTIs [s]
ontime8	31038.806589901	Sum of GTIs [s]
l2events	288087	Number of level 2 events



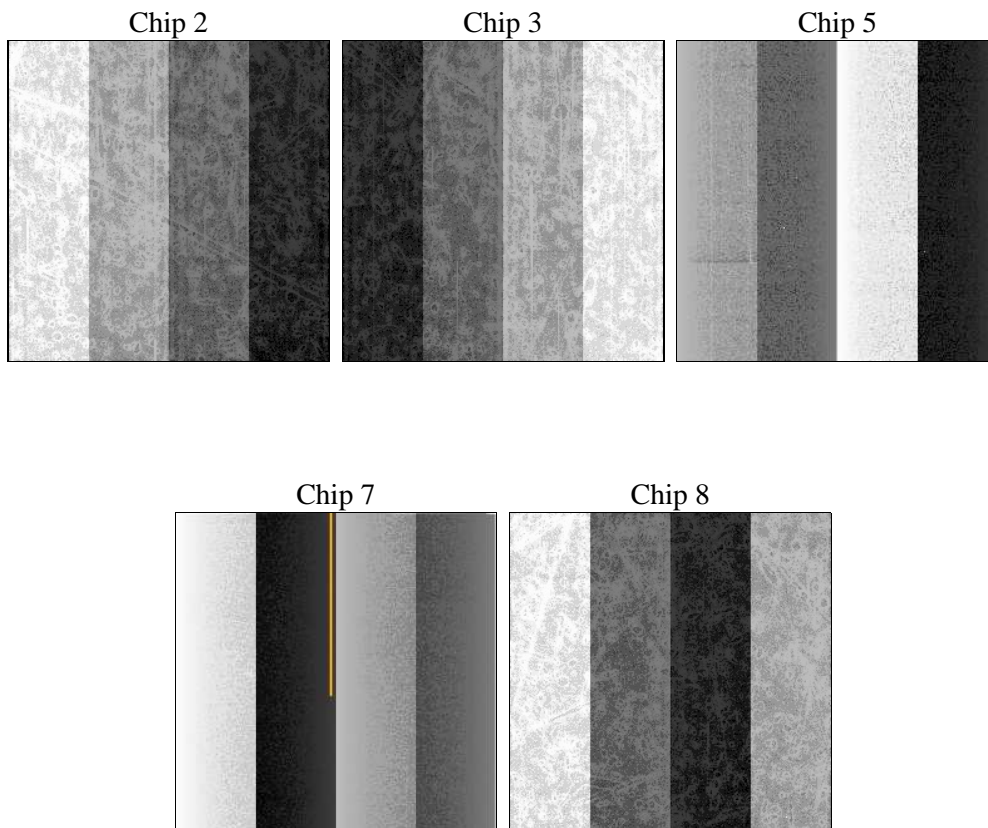
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	31038.929709911	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime2	31035.624519646	Sum of GTIs [s]
date	2012-01-12T19:22:05	Date and time of file creation	ontime3	31035.706599534	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	31038.888669908	Sum of GTIs [s]
			ontime7	31038.929709911	Sum of GTIs [s]
			ontime8	31038.806589901	Sum of GTIs [s]
			l1events	1116124	Number of level 1 events

### 2.1.4 Events

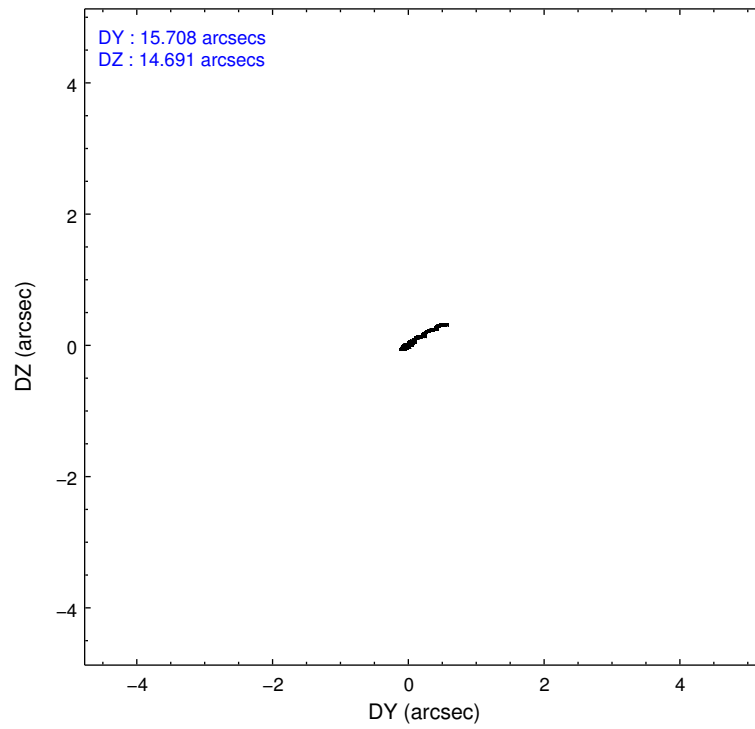
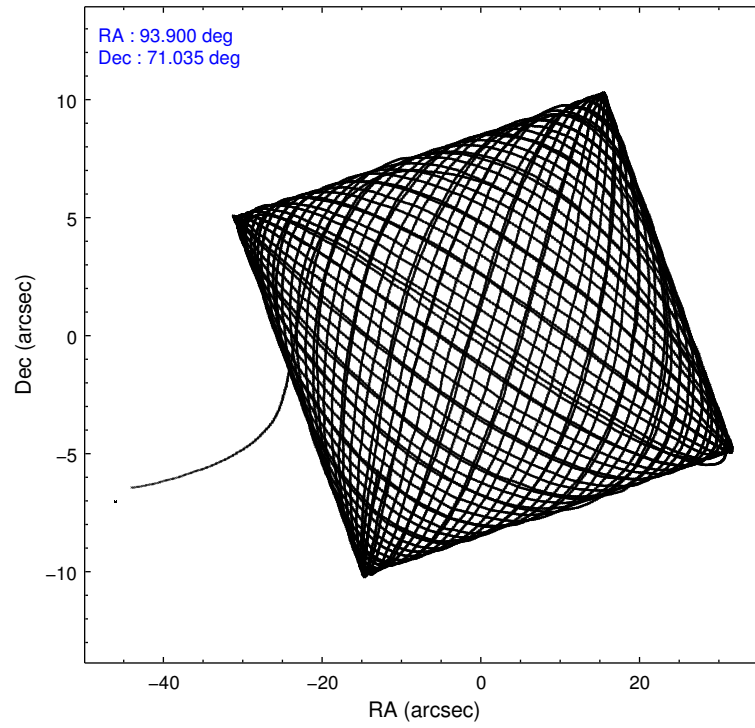
	ccd 2	ccd 3	ccd 5	ccd 7	ccd 8
level 1 events	190428	181398	286312	215490	242496
rejected events	169653	162315	130371	109243	177271
rejected %	89%	89%	45%	50%	73%

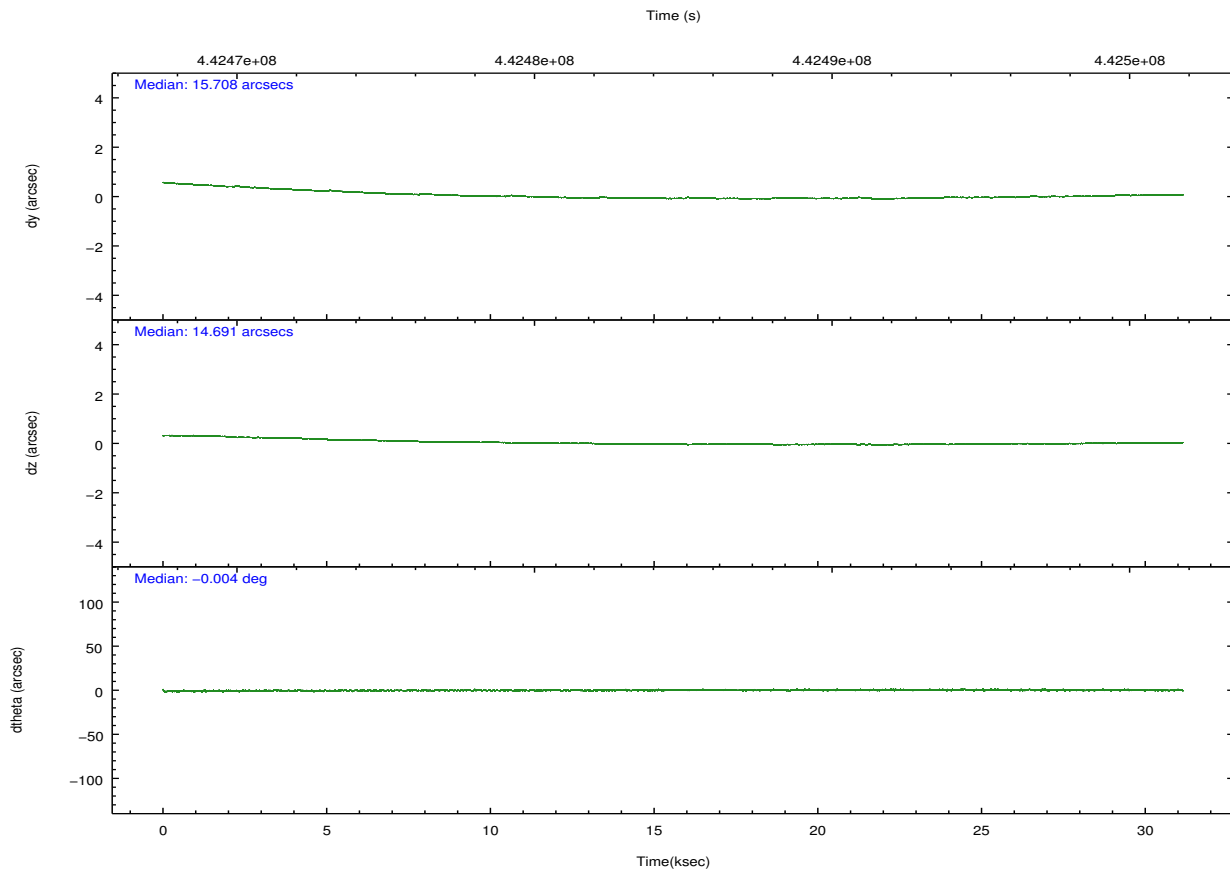
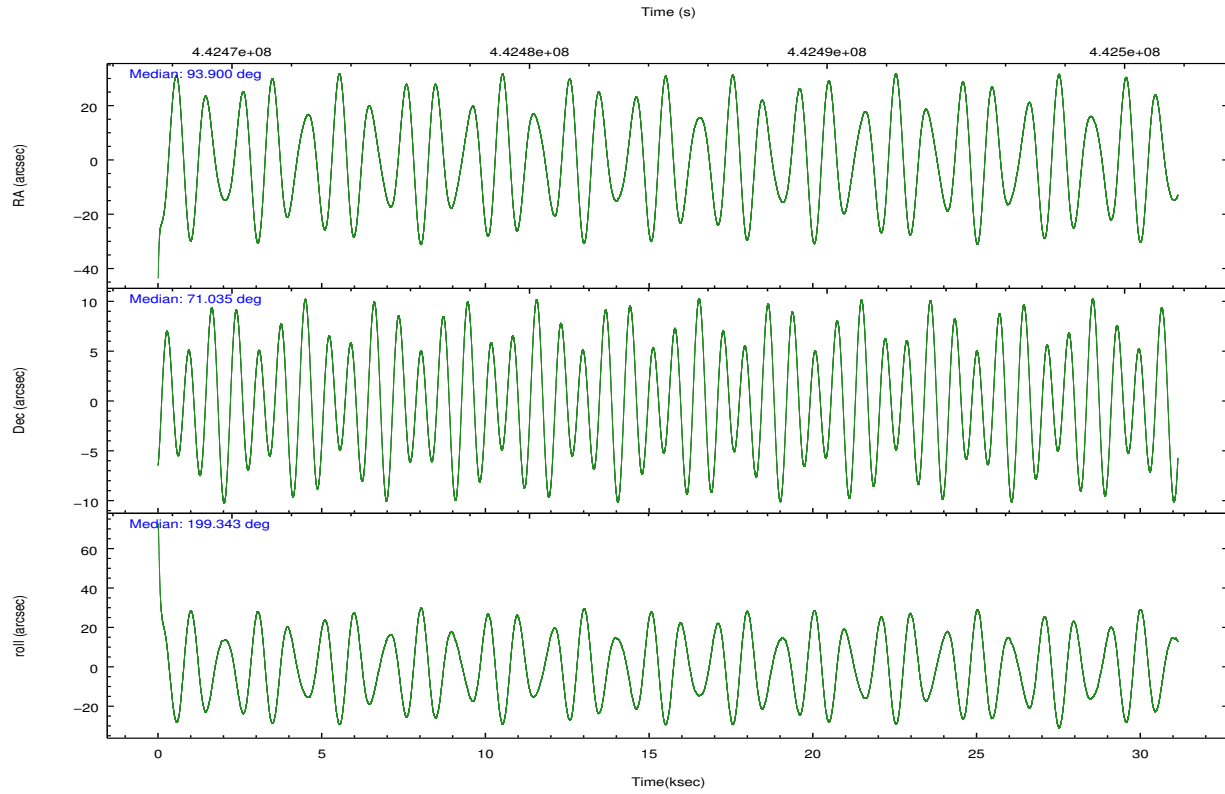
	ccd 2	ccd 3	ccd 5	ccd 7	ccd 8
grade 0 events	7849	6866	27330	11646	18037
	4%	3%	9%	5%	7%
grade 1 events	106	87	1344	382	207
	0%	0%	0%	0%	0%
grade 2 events	5016	4336	46454	23247	15789
	2%	2%	16%	10%	6%
grade 3 events	2126	2015	5172	9622	6991
	1%	1%	1%	4%	2%
grade 4 events	2100	2064	4951	9542	6616
	1%	1%	1%	4%	2%
grade 5 events	6354	7760	20738	22166	11947
	3%	4%	7%	10%	4%
grade 6 events	3686	3804	72043	52205	17792
	1%	2%	25%	24%	7%
grade 7 events	163191	154466	108280	86680	165117
	85%	85%	37%	40%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23578	ACIS-23578	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	93.953537	93.89951815709423	CCD I2 on	O4	Y
[deg] Pointing Dec	71.055556	71.03457529991815	CCD I3 on	O3	Y
[deg] Pointing Roll	199.139490	199.3472186851515	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O5	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	N
[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)	442469239.184000	442468200.45807	CCD S5 on	N	N
Observation start date	2012-01-09T04:06:13	2012-01-09T03:50:00	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	442500239.184000	442501081.43481	On-chip summing requested	N	N
Observation end date	2012-01-09T12:42:53	2012-01-09T12:58:01	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



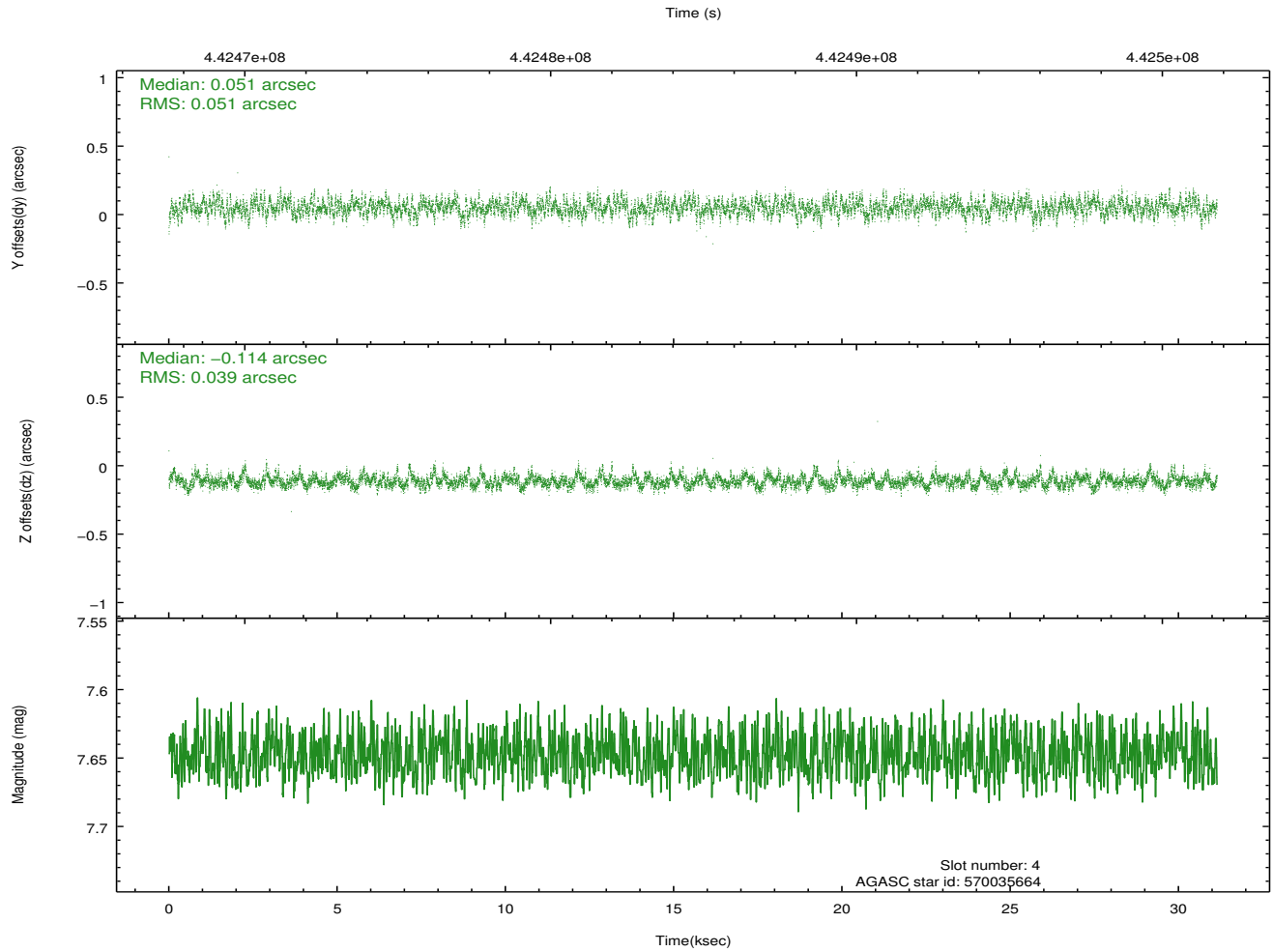
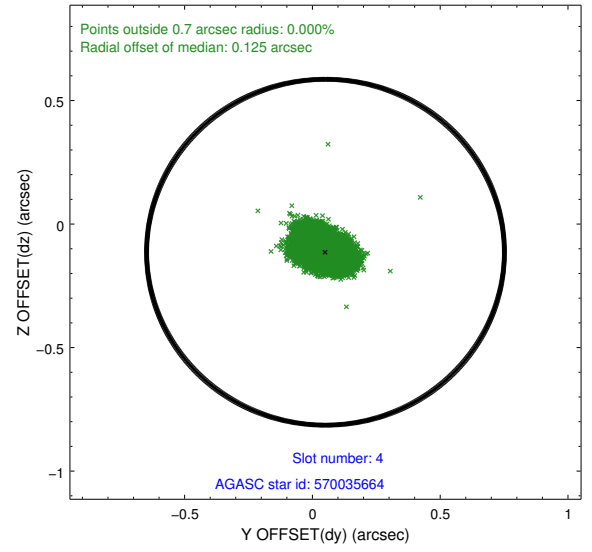
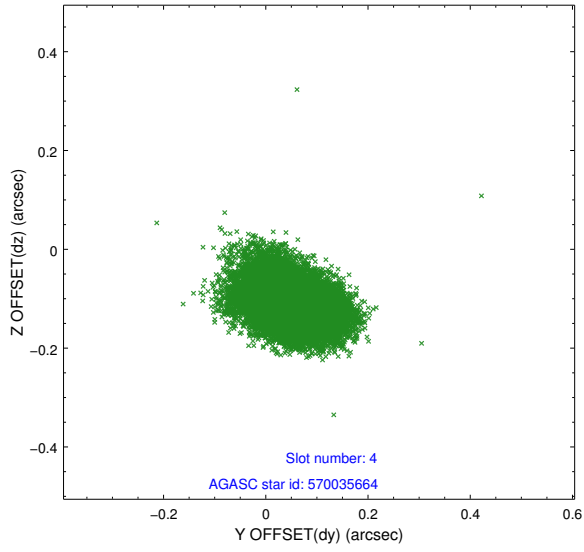


### Slot Statistics

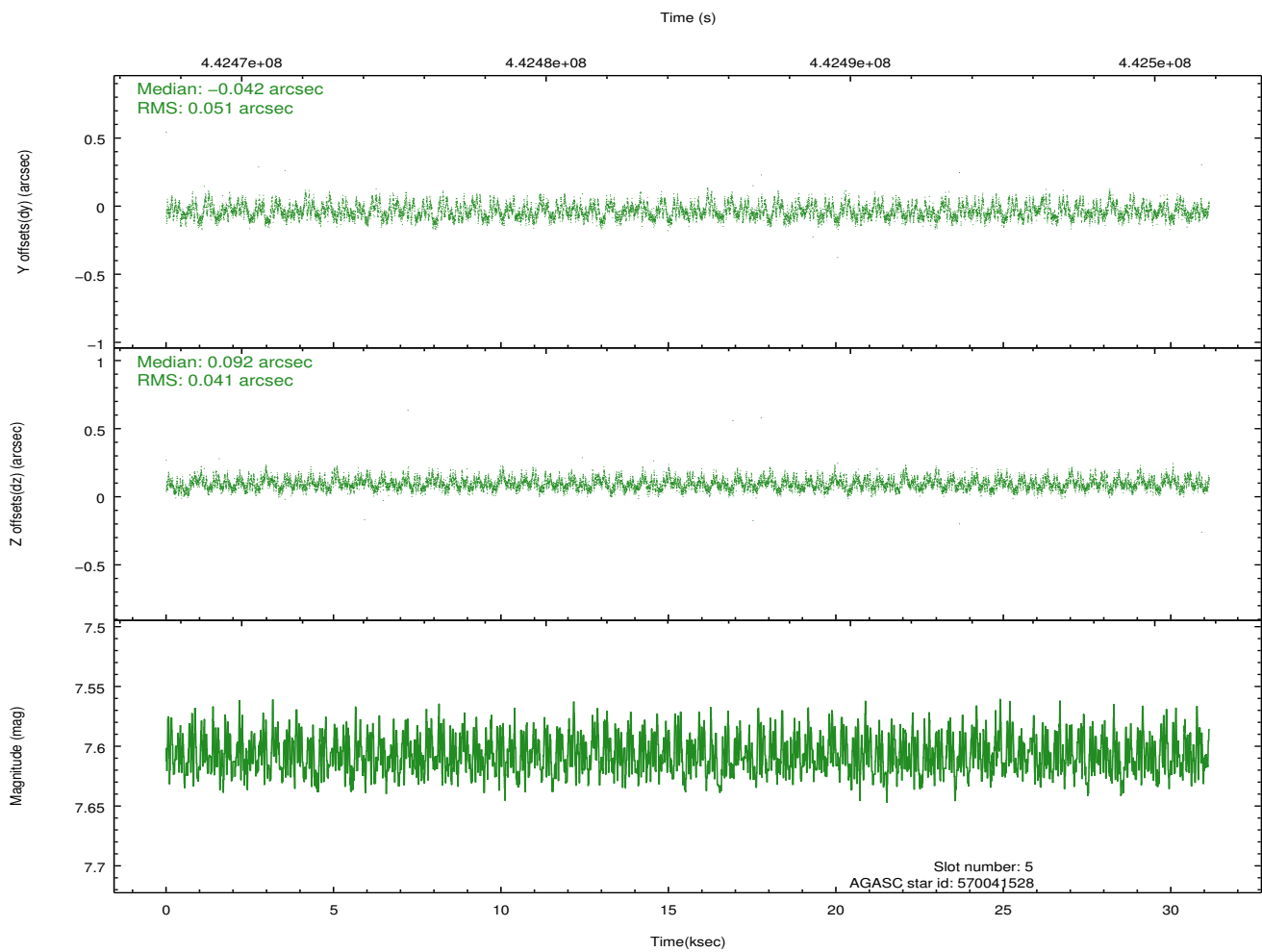
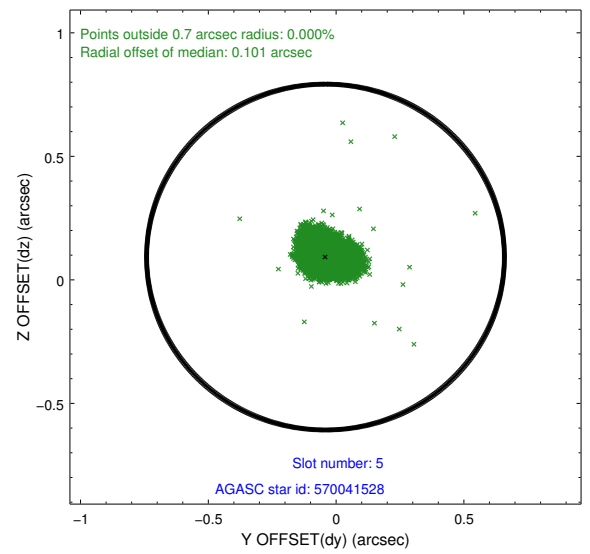
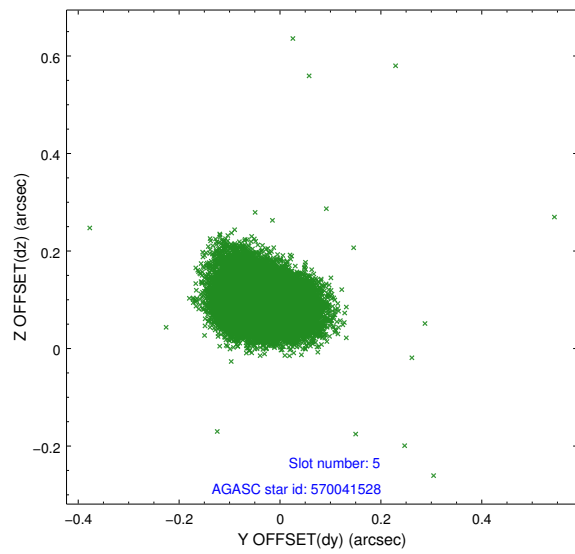
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.01	7597	-0.128	-0.029	0.007	0.013	0.000000	0.000000	-768.88	-1736.08
1	FID	ACIS-S-4	7.10	7597	0.251	0.070	0.006	0.012	0.000000	0.000000	2144.74	172.43
2	FID	ACIS-S-5	7.13	7596	-0.154	-0.031	0.007	0.013	0.000000	0.000000	-1821.67	166.07
3	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
4	GUIDE	570035664	7.65	15193	0.051	-0.114	0.067	0.112	92.975426	71.130782	984.65	-638.07
5	GUIDE	570041528	7.61	15188	-0.042	0.092	0.069	0.110	93.751561	70.667714	685.22	1240.19
6	GUIDE	570565312	8.27	15188	0.032	-0.074	0.072	0.111	94.342210	71.606805	-1067.50	-1730.73
7	GUIDE	570566592	8.45	15187	-0.050	0.092	0.071	0.114	95.385239	71.260466	-1812.48	-172.60

## 2.4 Star Slots

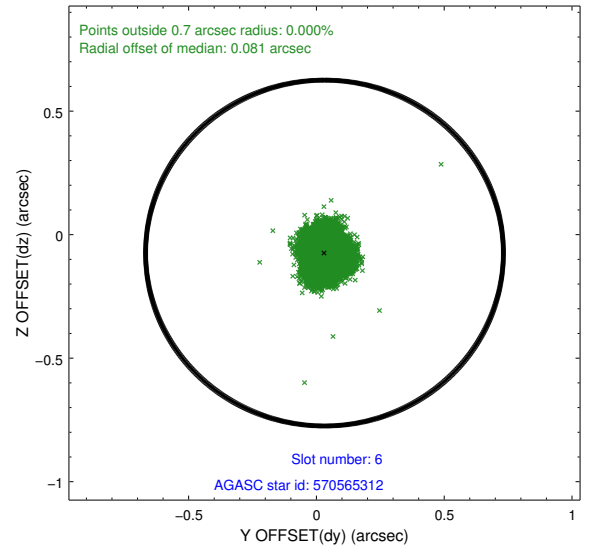
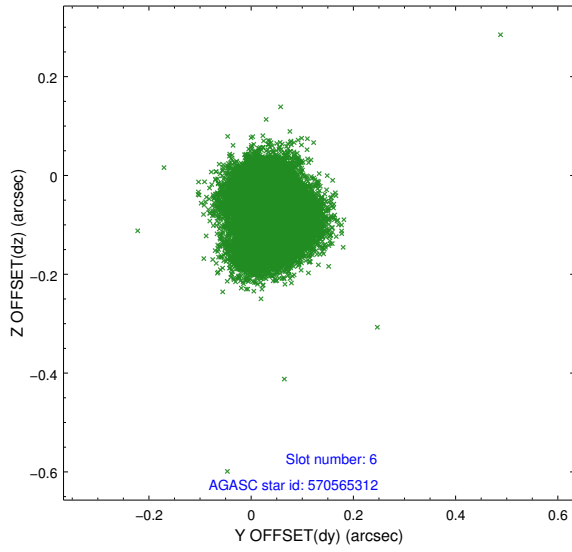
### 2.4.1 Slot 4



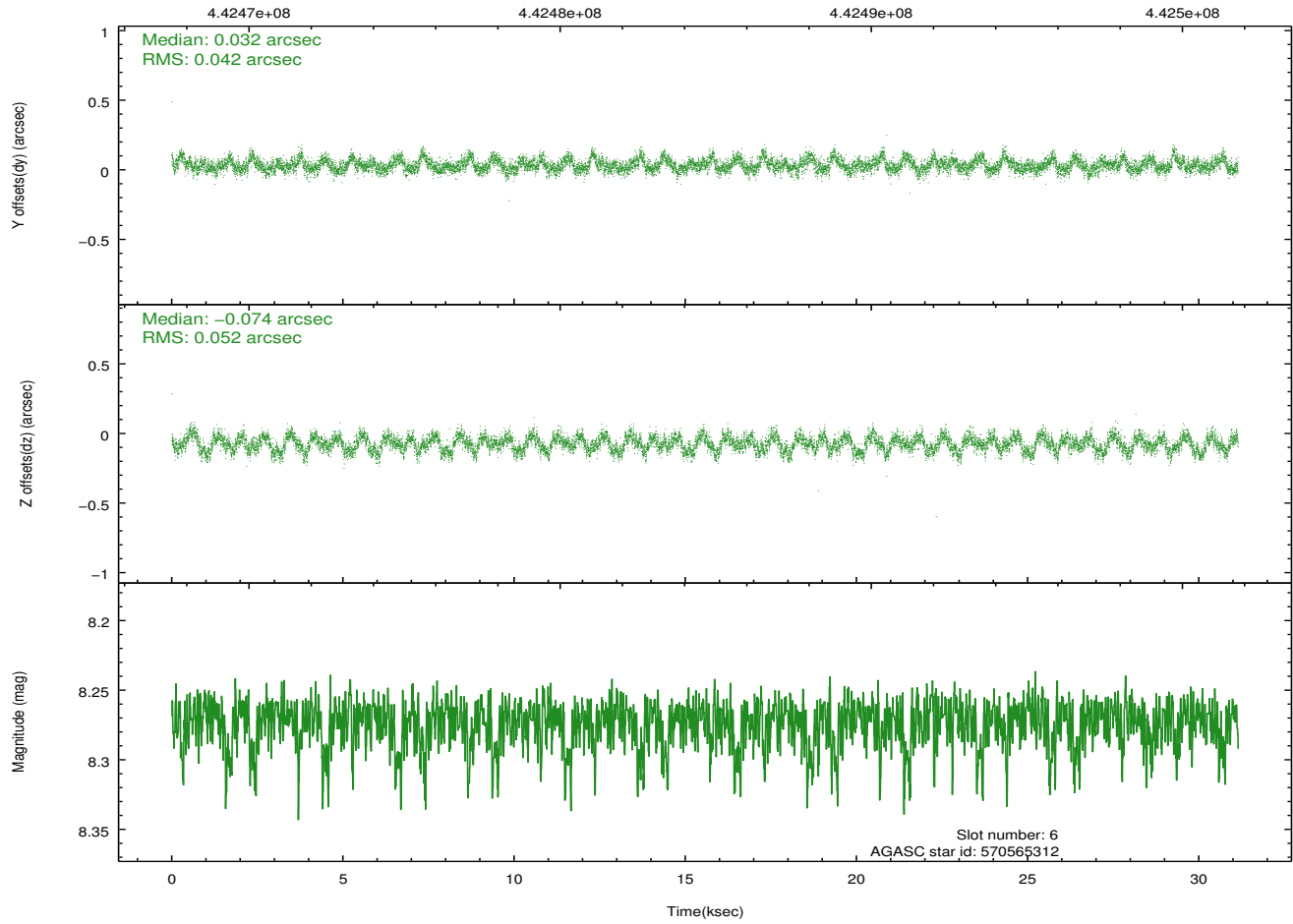
## 2.4.2 Slot 5



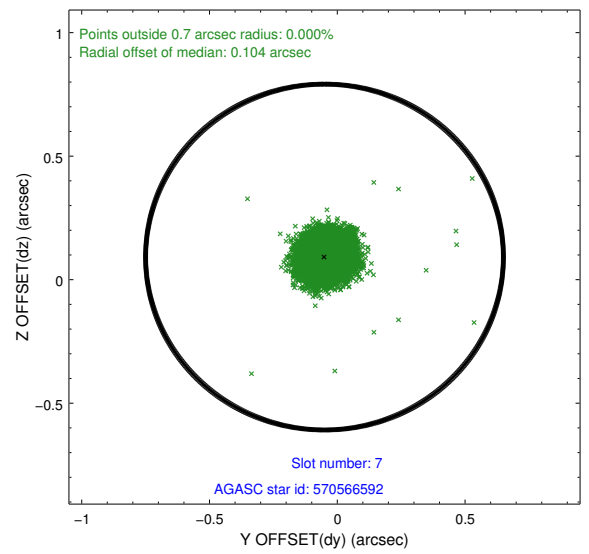
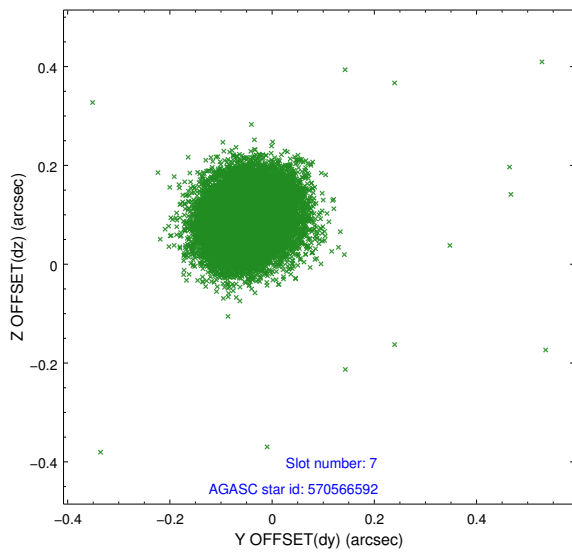
### 2.4.3 Slot 6



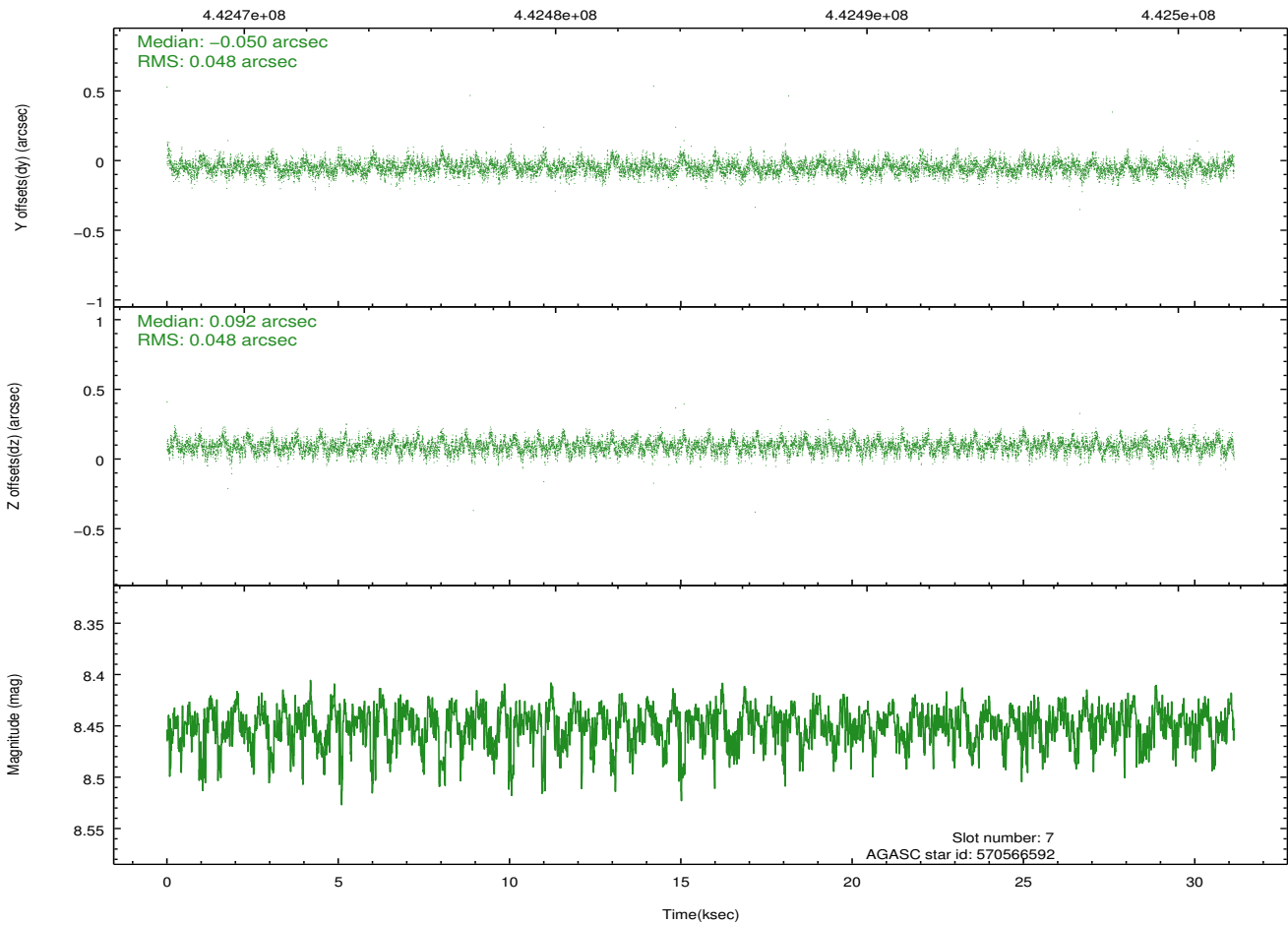
Time (s)



## 2.4.4 Slot 7

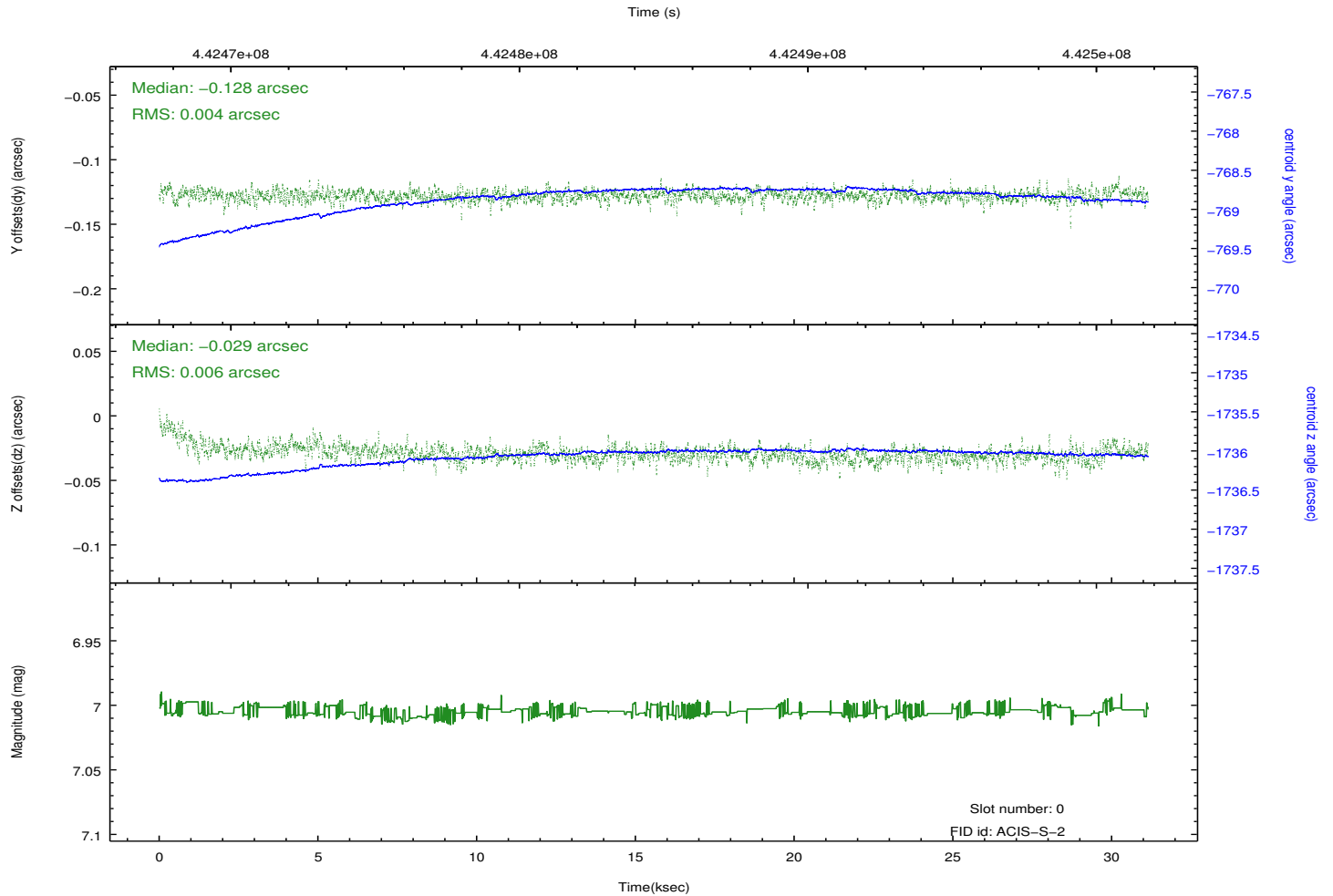
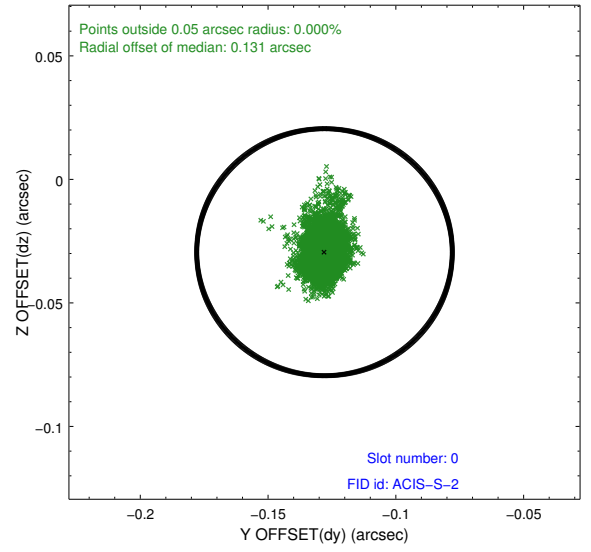
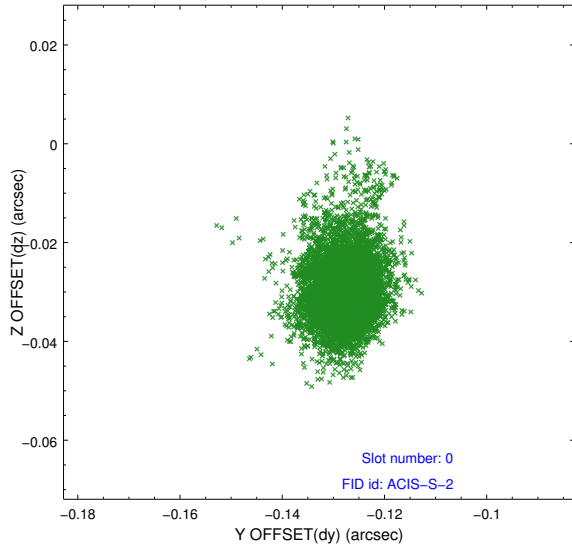


Time (s)

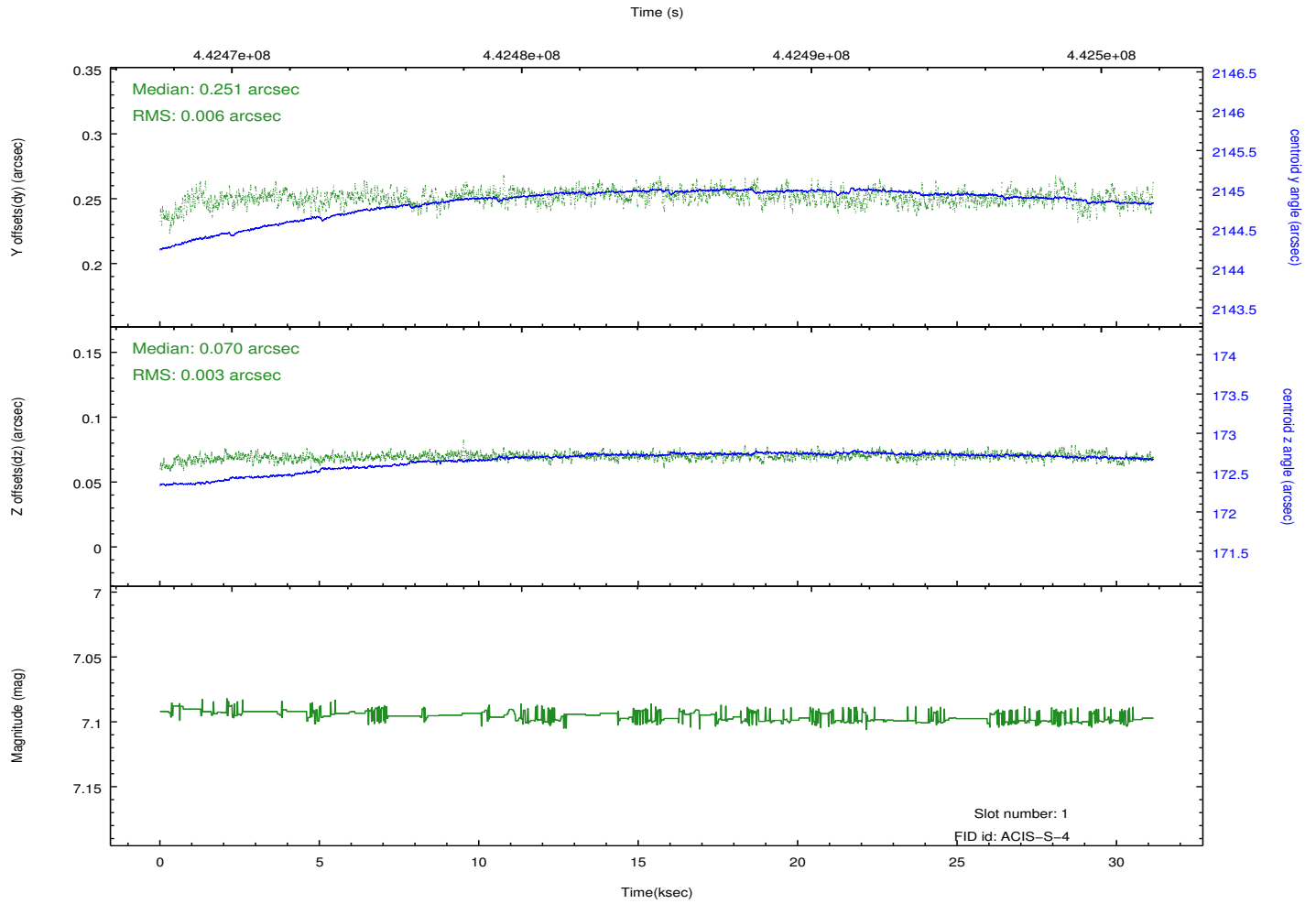
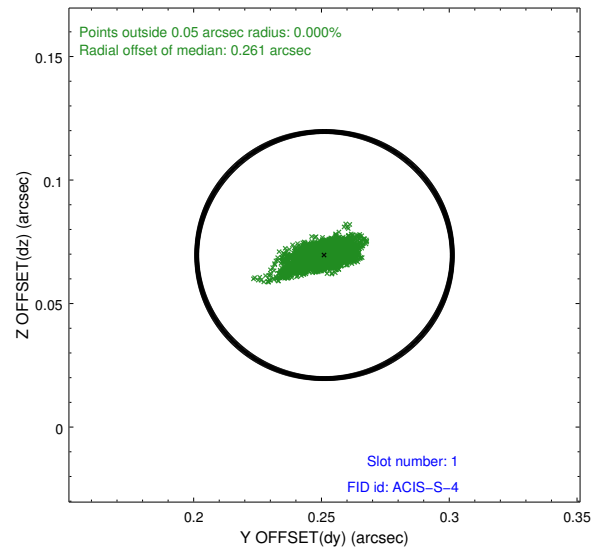
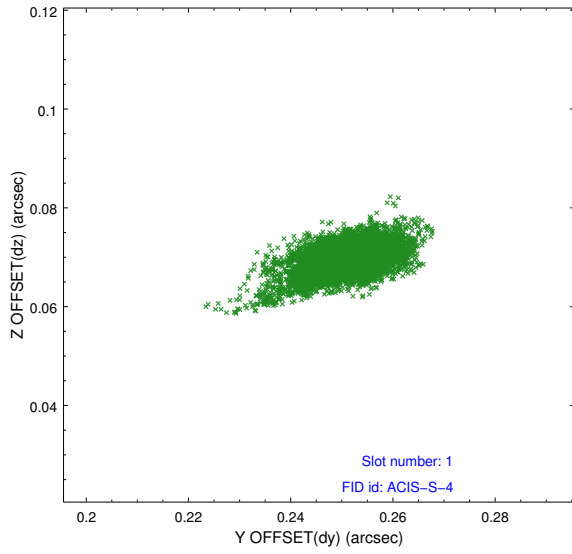


## 2.5 FID Slots

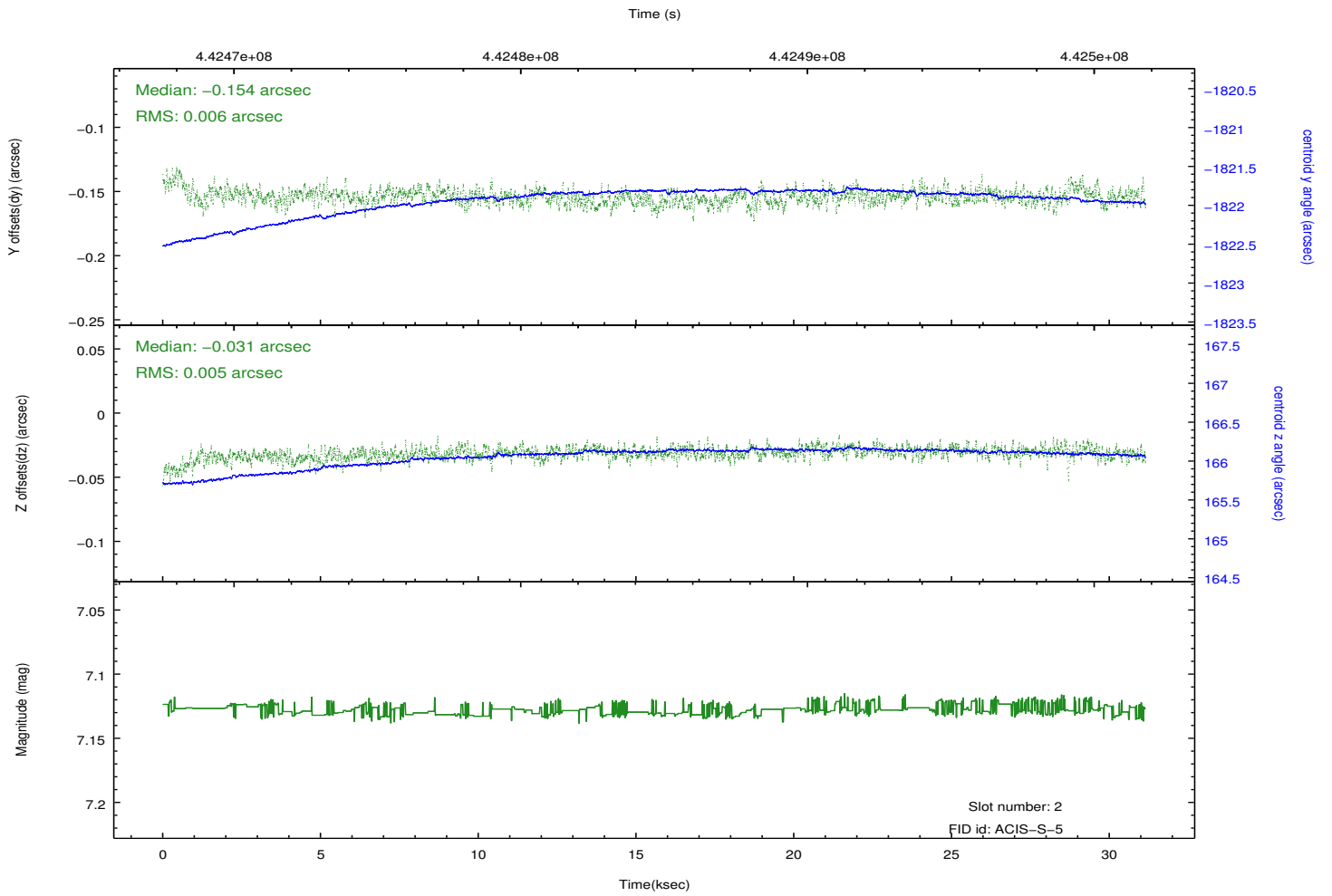
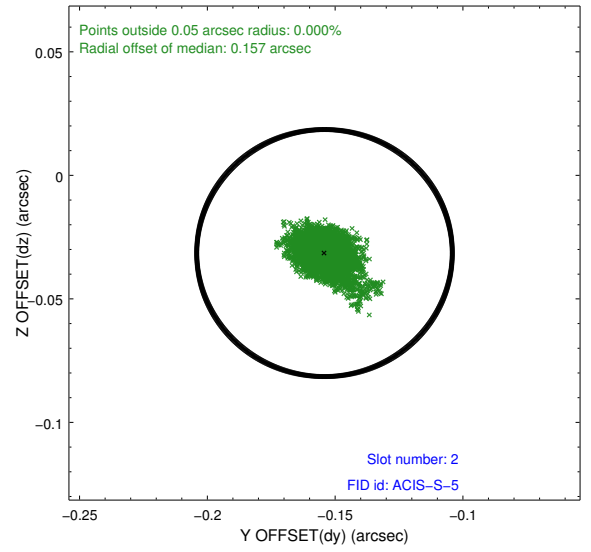
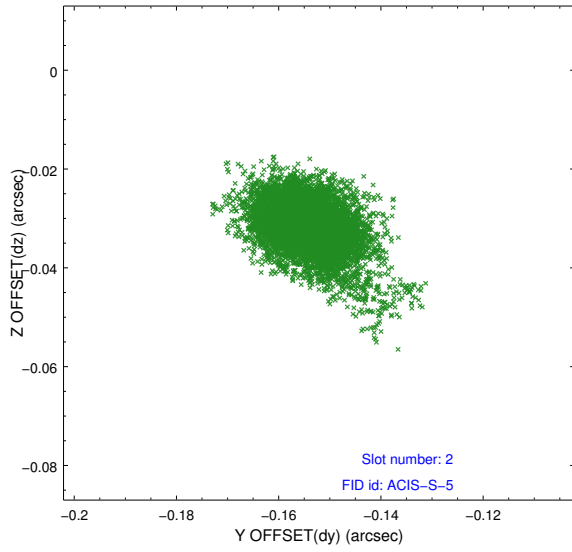
### 2.5.1 Slot 0



## 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)	2012.01.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.038929709911

## A.2 Comments

Joint Proposal: HST. Optional chip S2 not used.

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The guide star in slot 3 was removed from the aspect solution due to poor data quality. The aspect solution is not expected to be degraded by removing one guide star from the solution.