

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8131 - L2 Version 2  
Chandra X-Ray Center

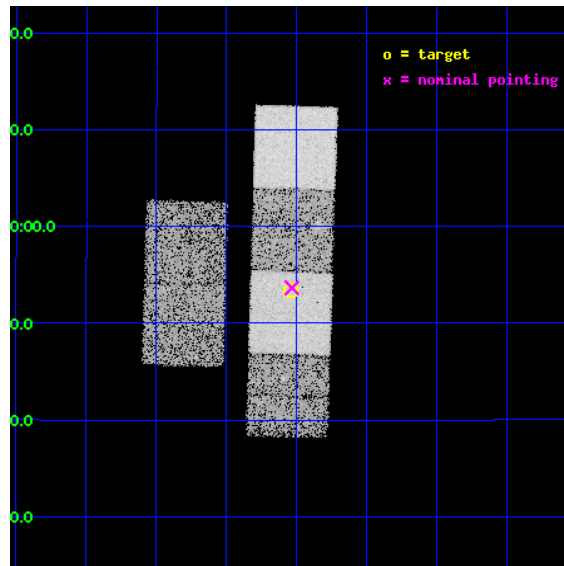
L2 Processing Date : May 10 2012

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# 1 Front

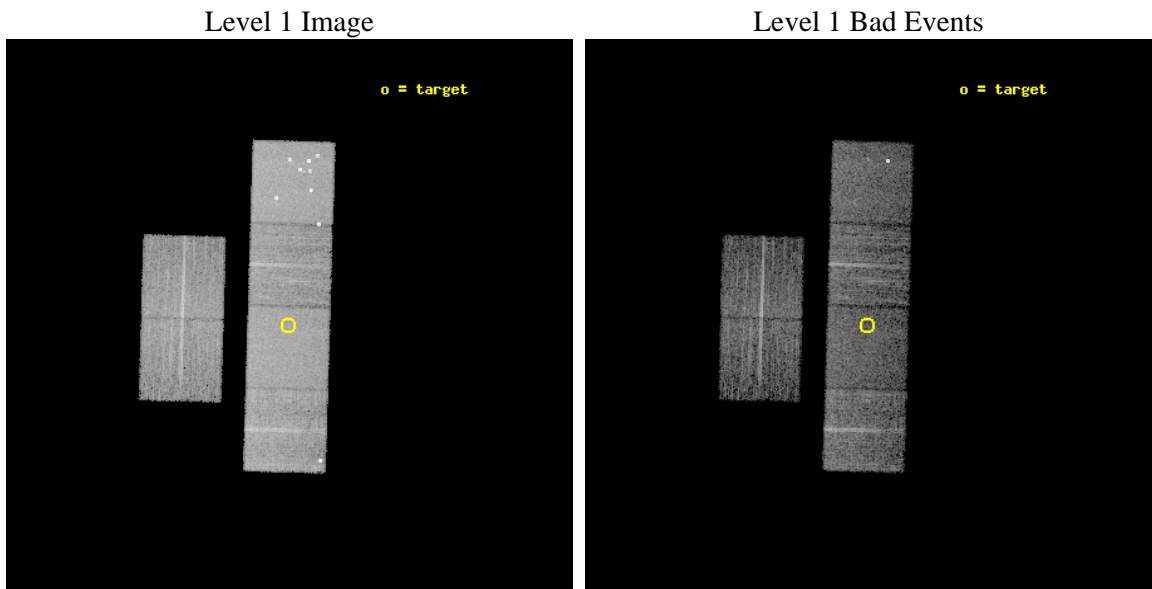
seq_num	900672	Sequence number
obs_id	8131	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1407	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.01125	Observer's specified target RA [deg]
dec_targ	11.890222	Observer's specified target Dec [deg]
ra_nom	188.00846969722	Nominal RA [deg]
dec_nom	11.894285723186	Nominal Dec [deg]
roll_nom	91.69791851743	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.3999808431	Sum of GTIs [s]
livetime	5093.0812142701	Livetime [s]
ontime2	5158.3999808431	Sum of GTIs [s]
ontime3	5158.3999808431	Sum of GTIs [s]
ontime5	5158.3999808431	Sum of GTIs [s]
ontime6	5158.3999808431	Sum of GTIs [s]
ontime7	5158.3999808431	Sum of GTIs [s]
ontime8	5155.1589505076	Sum of GTIs [s]
l2events	99205	Number of level 2 events



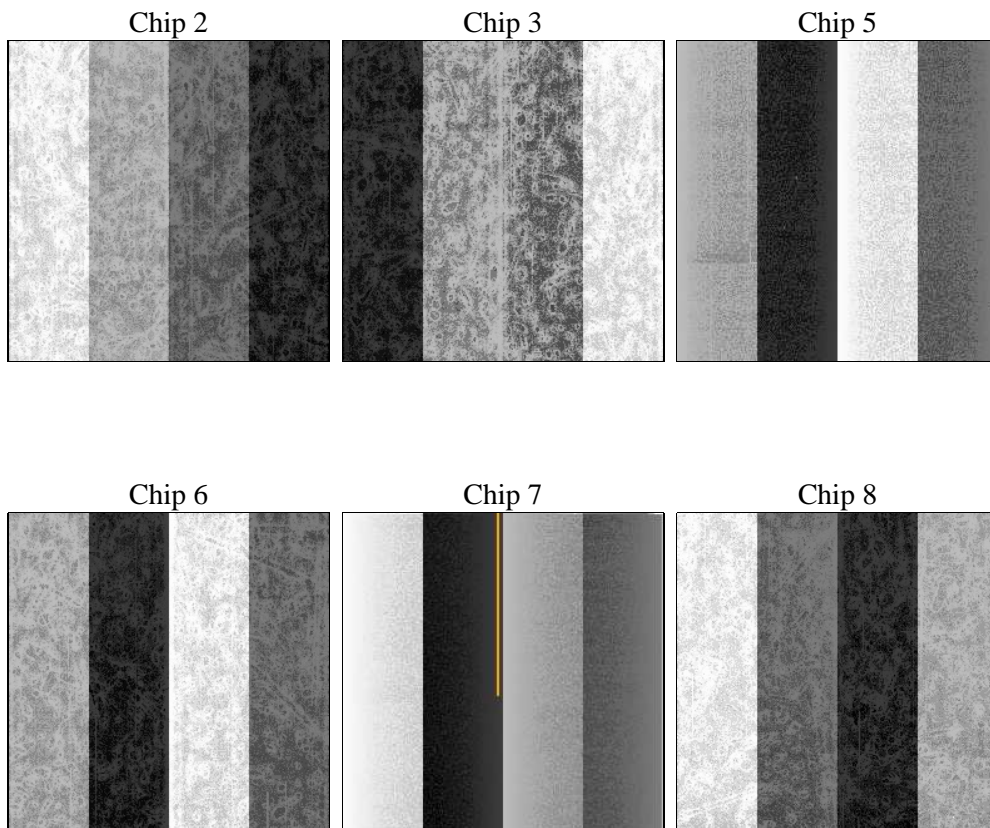
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5158.3999808431	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	5158.3999808431	Sum of GTIs [s]
date	2012-05-10T08:40:30	Date and time of file creation	ontime3	5158.3999808431	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5158.3999808431	Sum of GTIs [s]
			ontime6	5158.3999808431	Sum of GTIs [s]
			ontime7	5158.3999808431	Sum of GTIs [s]
			ontime8	5155.1589505076	Sum of GTIs [s]
			l1events	399506	Number of level 1 events

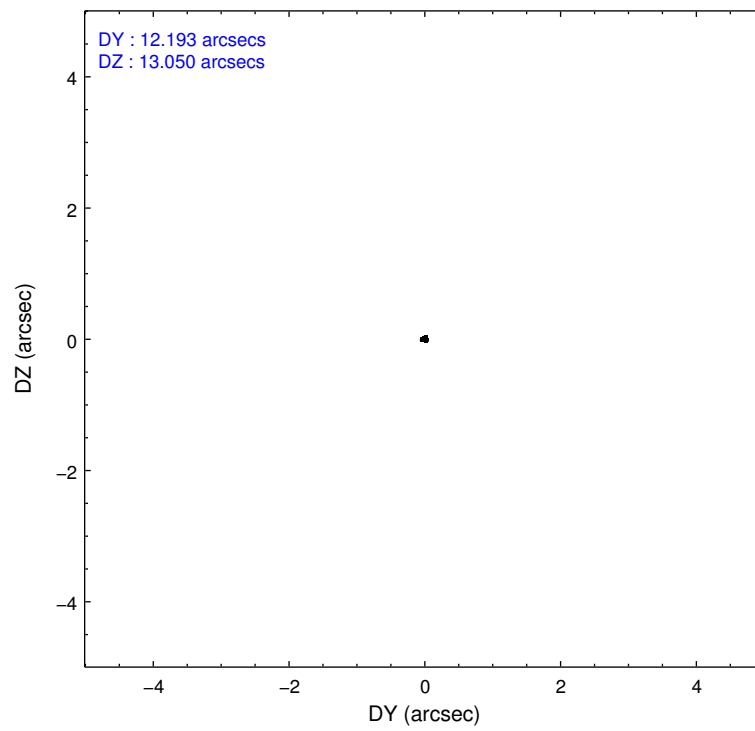
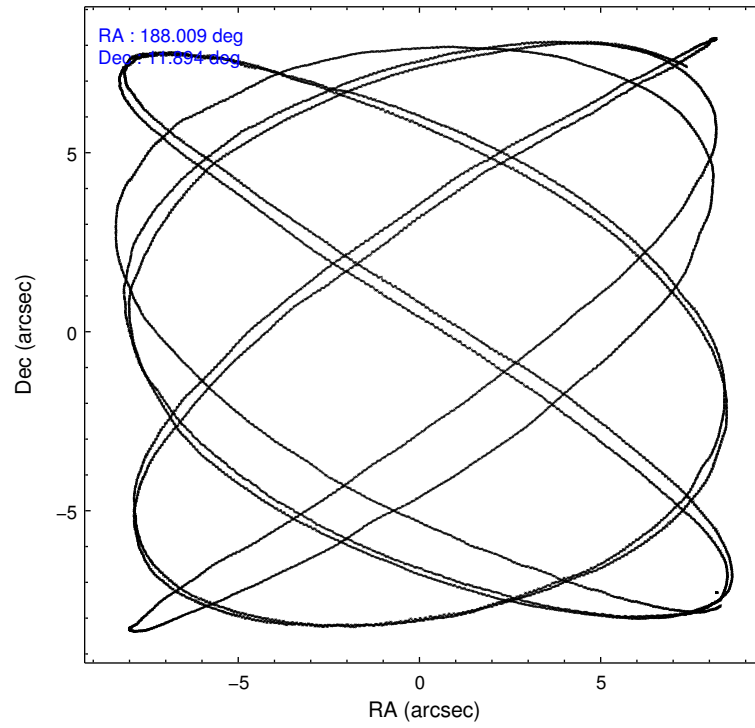
### 2.1.4 Events

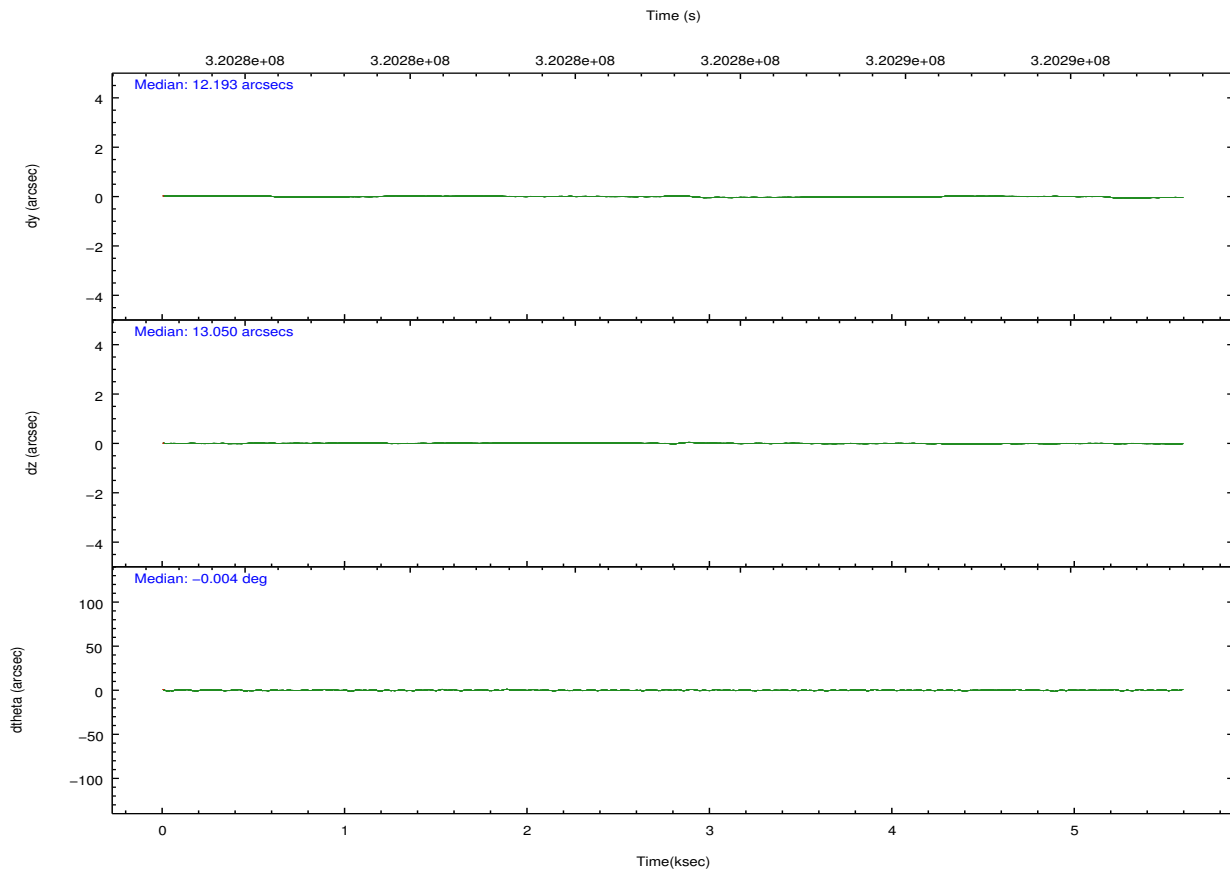
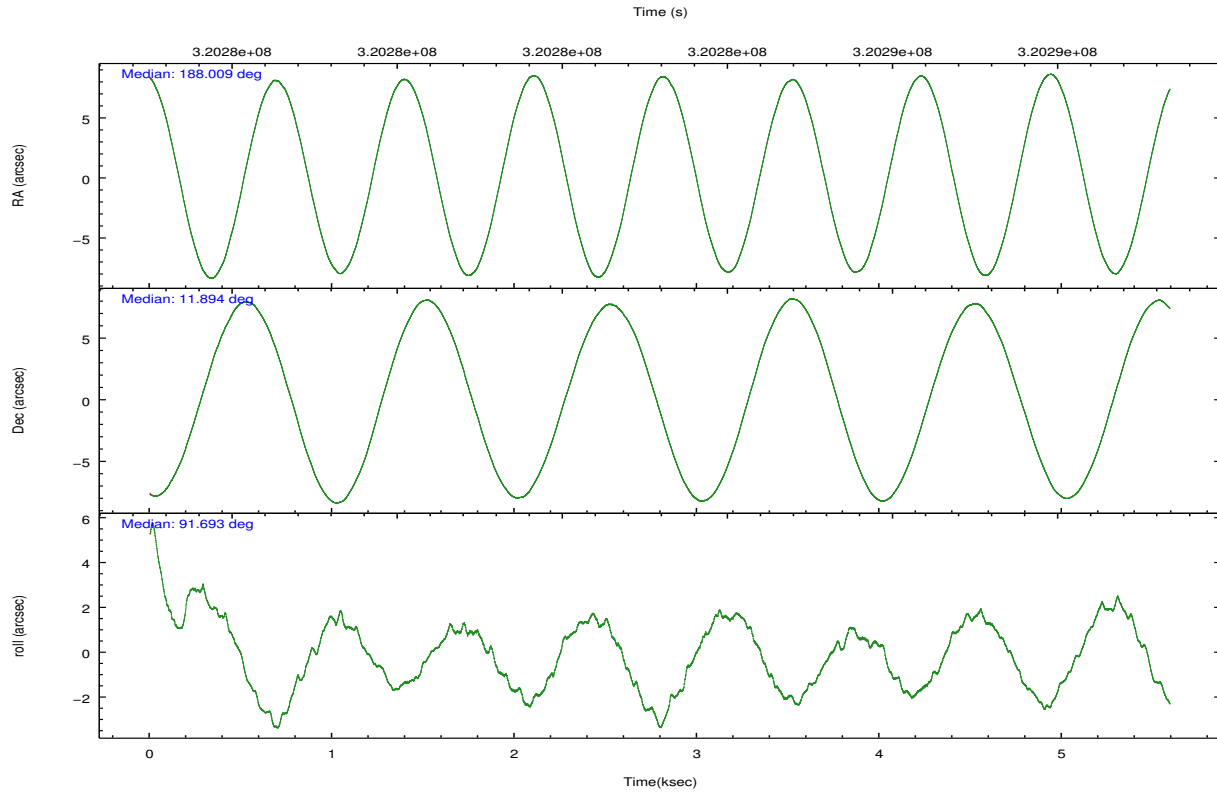
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	52912	50497	94370	56671	73386	71670	grade 0 events	3827	3805	10663	5183	3373	7319
rejected events	45541	43095	44593	47201	40934	54070		7%	7%	11%	9%	4%	10%
rejected %	86%	85%	47%	83%	55%	75%	grade 1 events	33	37	101	55	50	82
								0%	0%	0%	0%	0%	0%
							grade 2 events	1356	1307	13824	1680	6739	3351
								2%	2%	14%	2%	9%	4%
							grade 3 events	603	596	1947	670	2726	1561
								1%	1%	2%	1%	3%	2%
							grade 4 events	591	590	1615	626	2681	1455
								1%	1%	1%	1%	3%	2%
							grade 5 events	1985	2250	5343	2193	6452	3039
								3%	4%	5%	3%	8%	4%
							grade 6 events	999	1106	21760	1317	16956	3927
								1%	2%	23%	2%	23%	5%
							grade 7 events	43518	40806	39117	44947	34409	50936
								82%	80%	41%	79%	46%	71%

## 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	188.023528	188.0084696972177	CCD I2 on	O1	Y
[deg] Pointing Dec	11.871208	11.89428572318561	CCD I3 on	O2	Y
[deg] Pointing Roll	91.538184	91.69791851743005	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	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	O4	Y
[s] Observation start time (MET)	320281987.184000	320281518.23317	CCD S5 on	N	N
Observation start date	2008-02-24T23:12:02	2008-02-24T23:05:18	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320287387.184000	320288319.621	On-chip summing requested	N	N
Observation end date	2008-02-25T00:42:02	2008-02-25T00:58:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



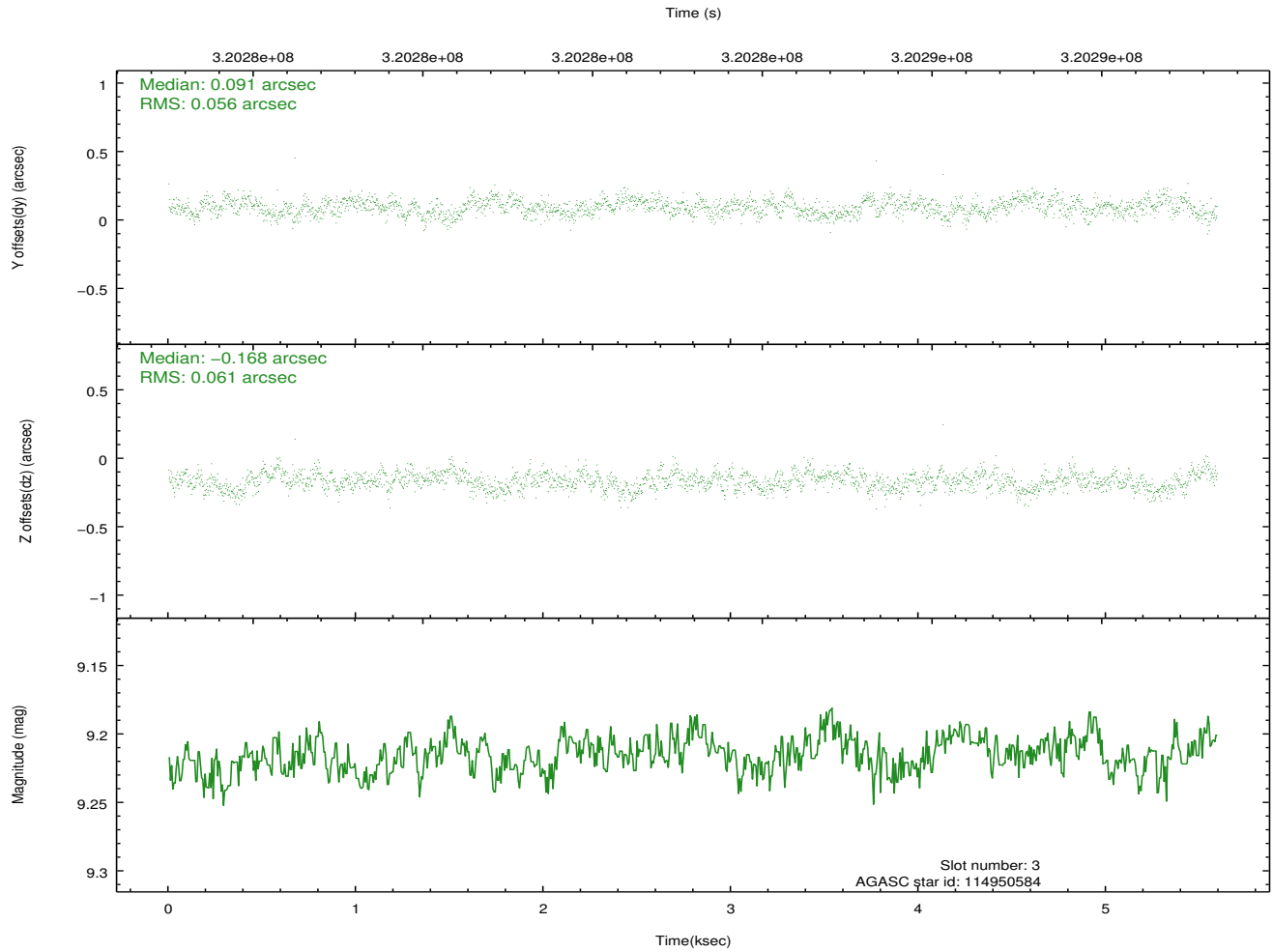
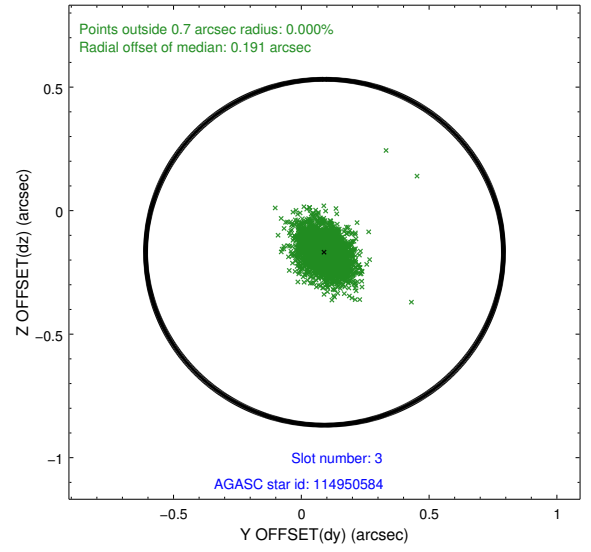
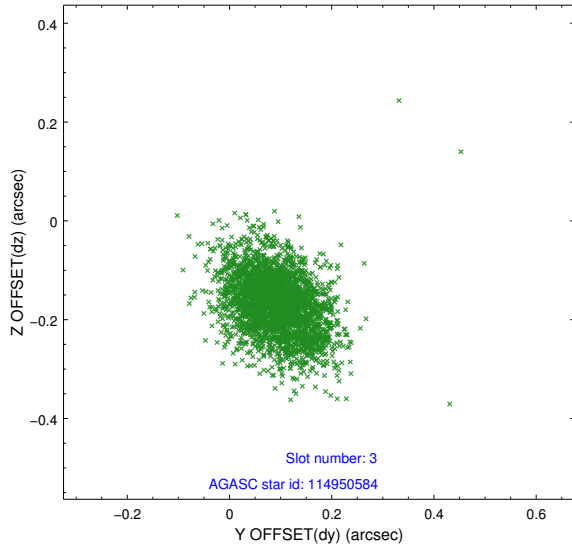


### Slot Statistics

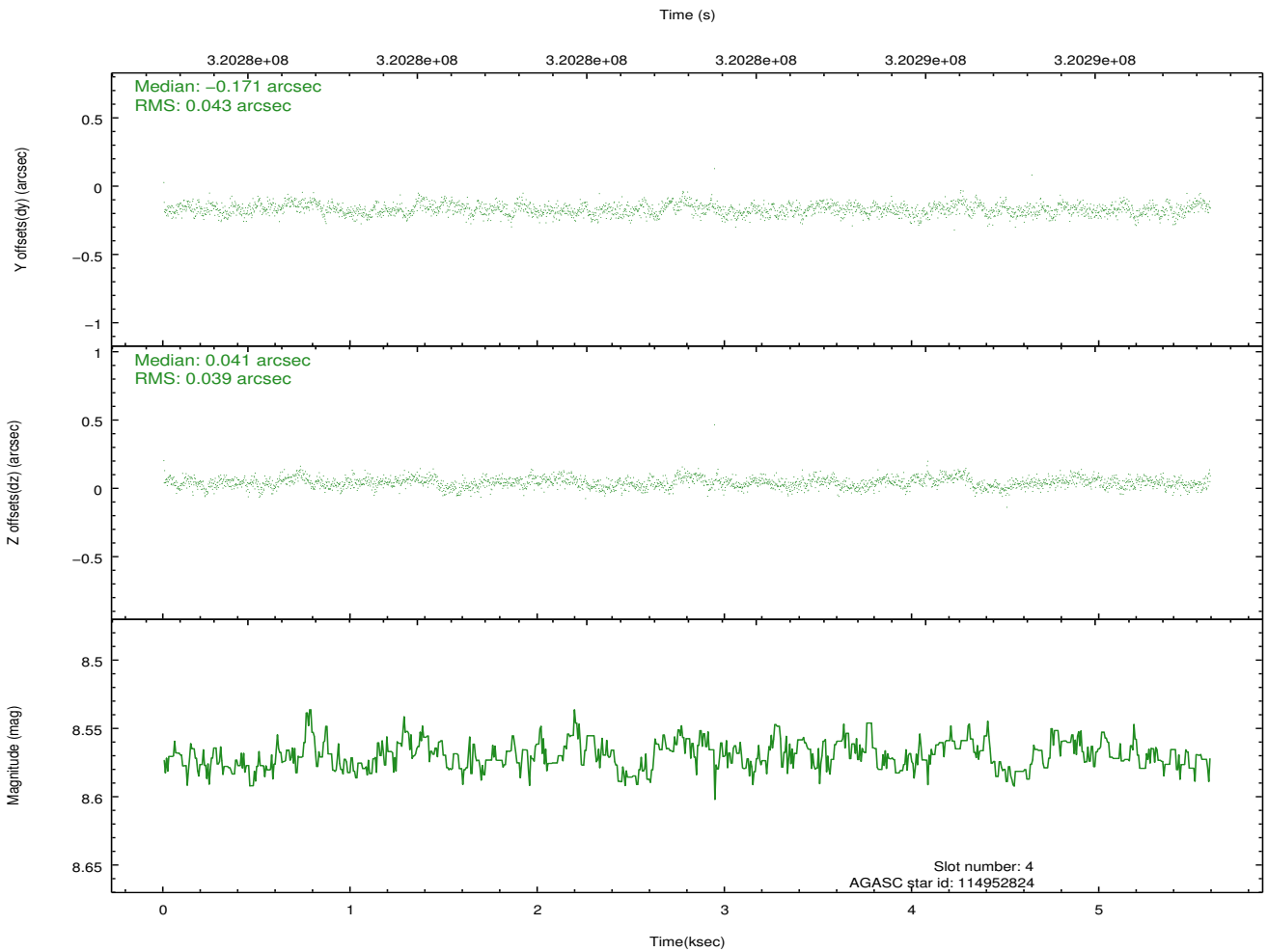
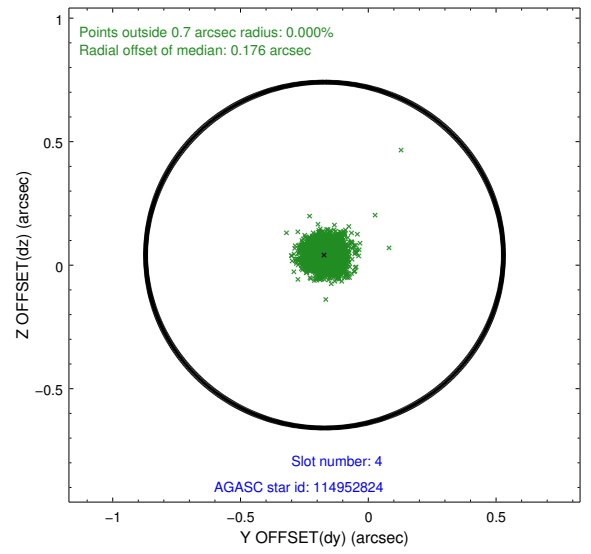
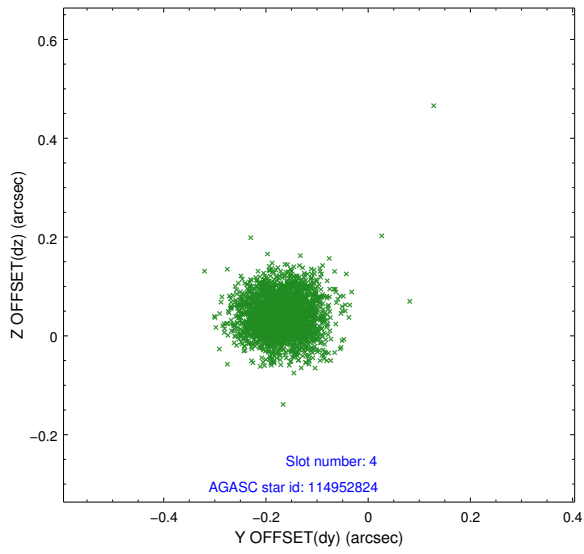
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1364	-0.022	-0.050	0.007	0.011	0.000000	0.000000	-765.11	-1734.42
1	FID	ACIS-S-4	7.20	1364	0.114	0.024	0.005	0.010	0.000000	0.000000	2147.82	173.01
2	FID	ACIS-S-5	7.24	1364	-0.124	0.035	0.007	0.011	0.000000	0.000000	-1816.67	167.93
3	GUIDE	114950584	9.22	2726	0.091	-0.168	0.086	0.141	187.487323	11.827248	-105.75	1892.86
4	GUIDE	114952824	8.57	2727	-0.171	0.041	0.060	0.098	187.703904	12.486727	2245.60	1064.73
5	GUIDE	114954720	8.71	2727	0.093	-0.308	0.078	0.129	187.384636	11.492566	-1298.61	2289.76
6	GUIDE	114955056	8.30	2725	0.077	0.283	0.069	0.107	187.914001	12.127854	933.64	361.76
7	GUIDE	114955592	8.12	2723	-0.094	0.155	0.063	0.103	188.657433	11.300977	-2109.25	-2181.97

## 2.4 Star Slots

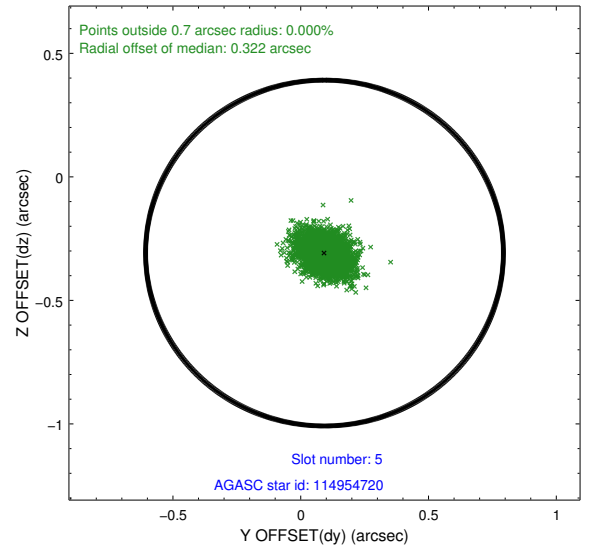
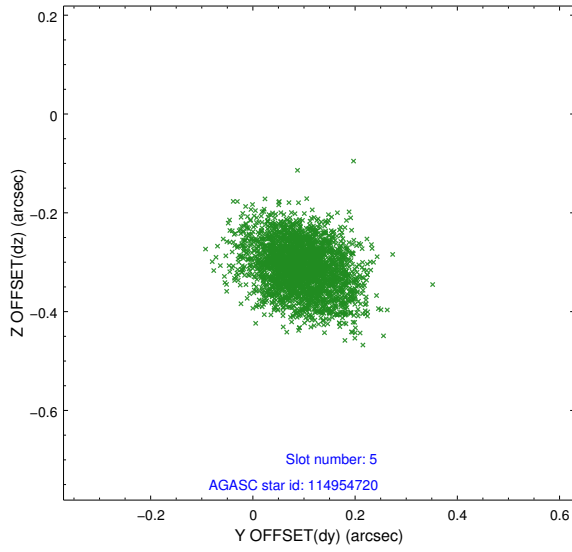
### 2.4.1 Slot 3



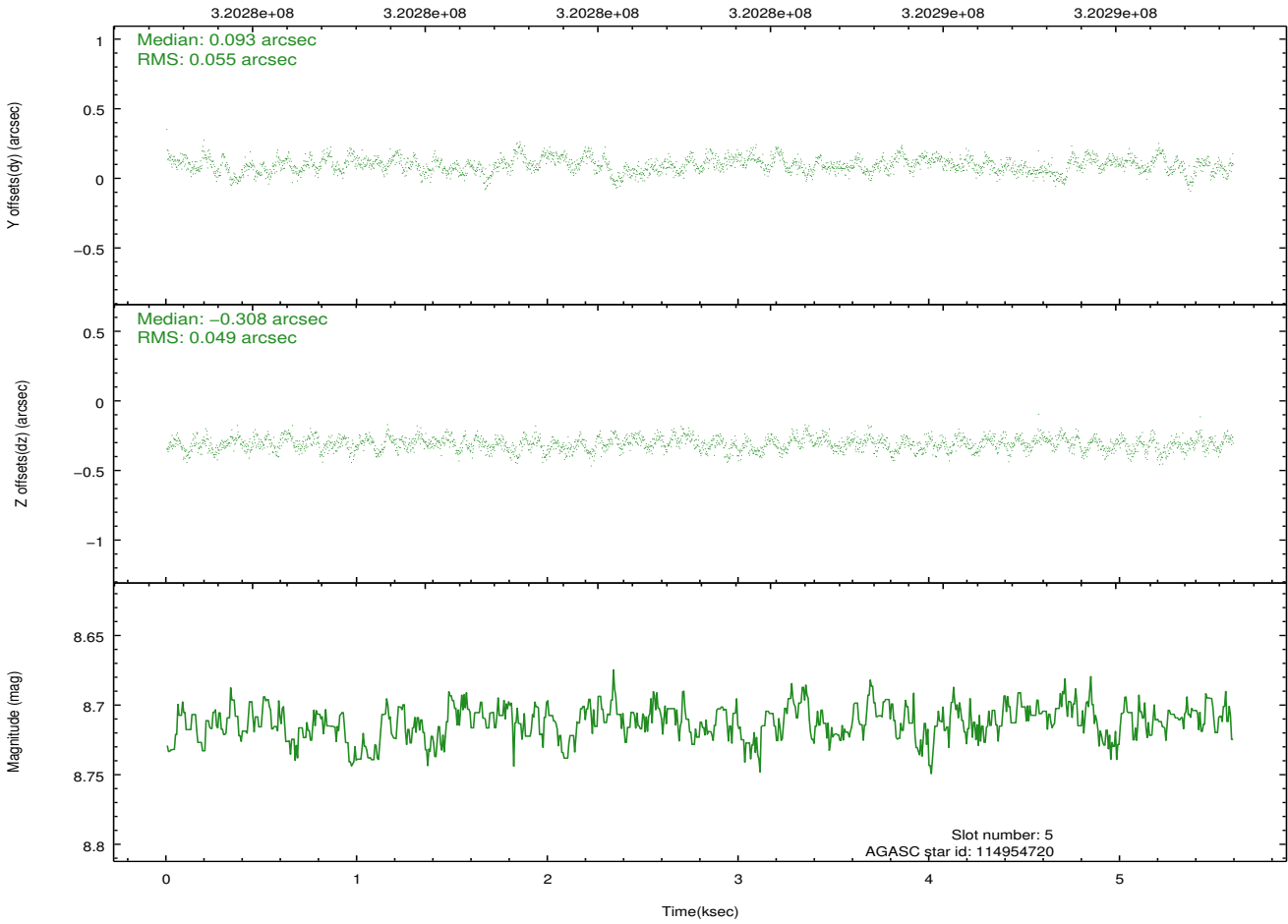
## 2.4.2 Slot 4



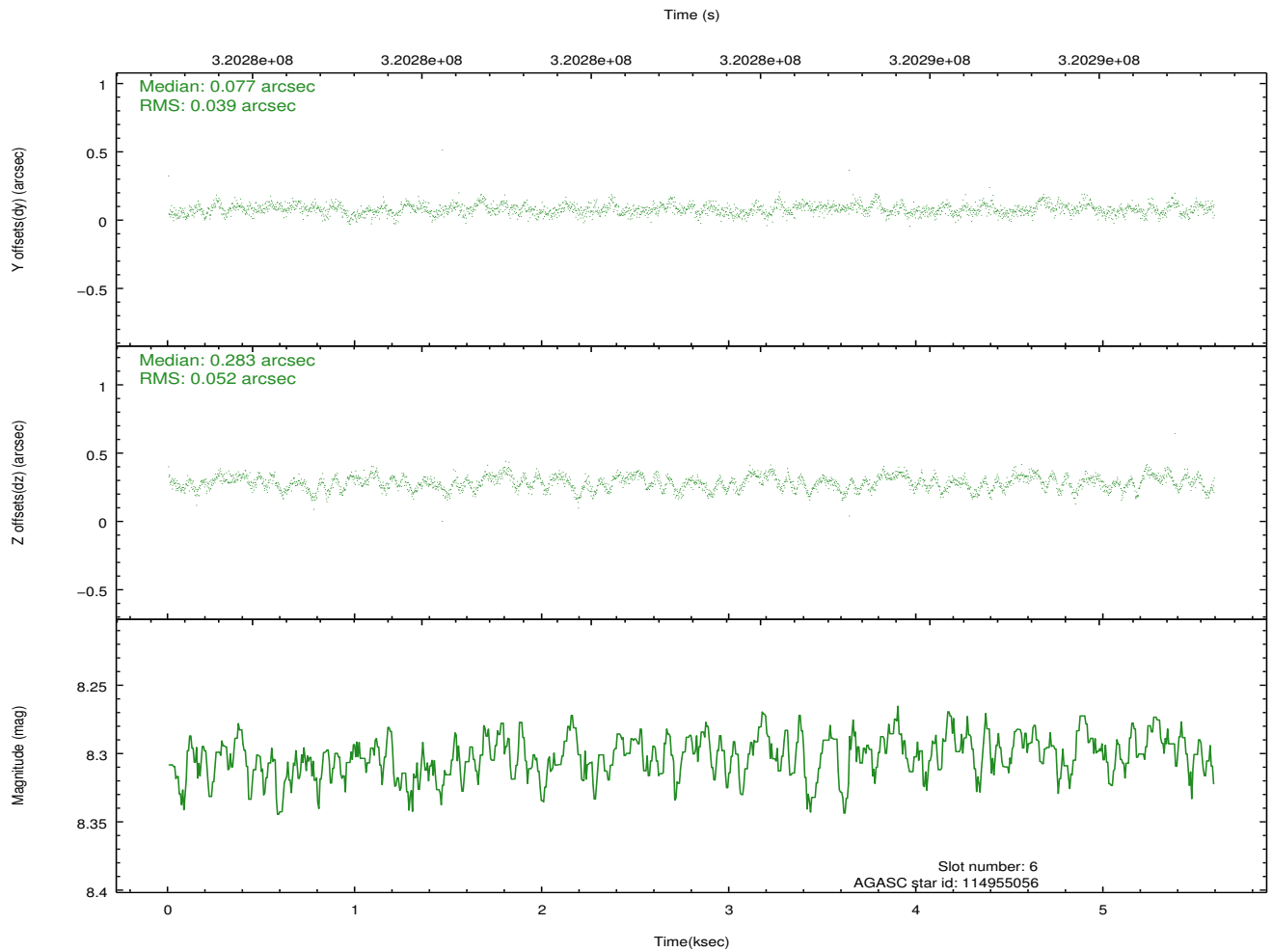
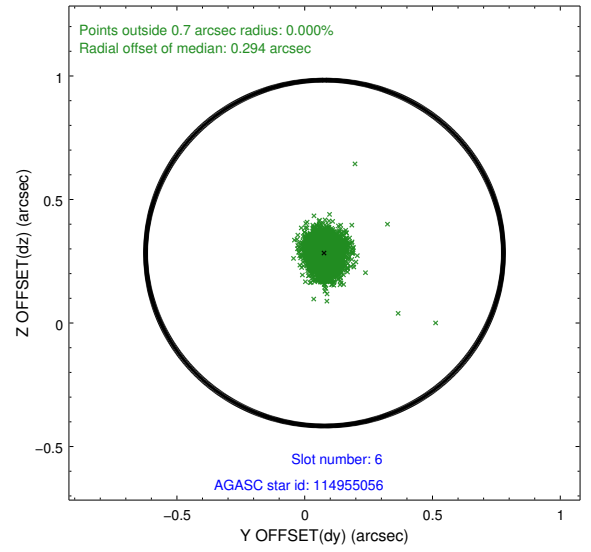
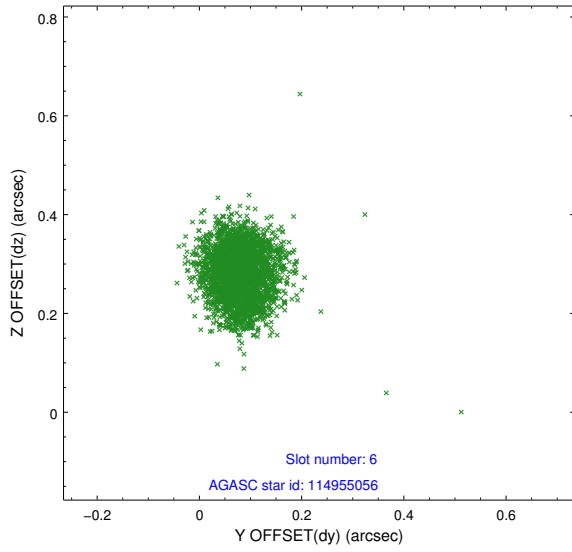
### 2.4.3 Slot 5



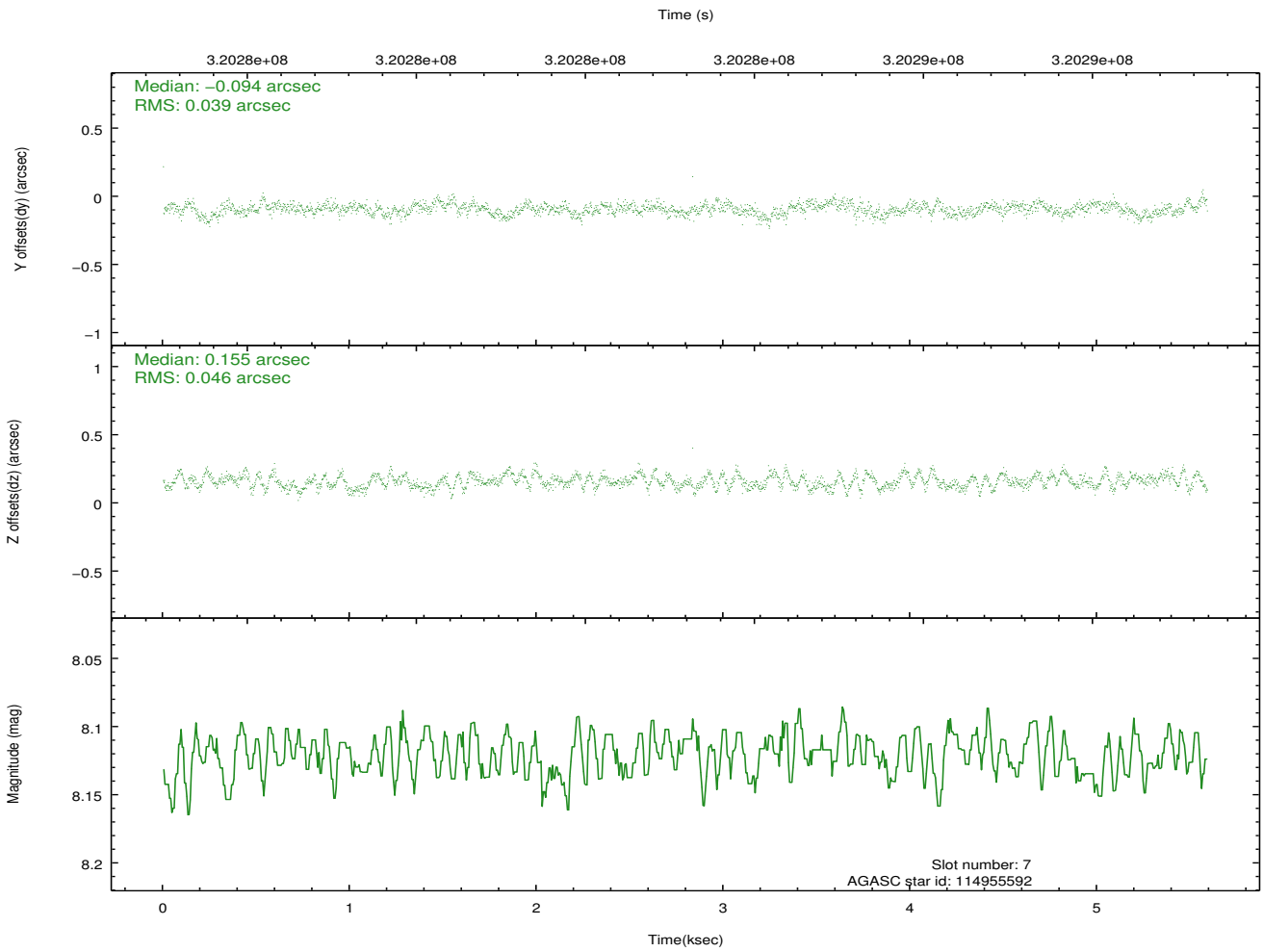
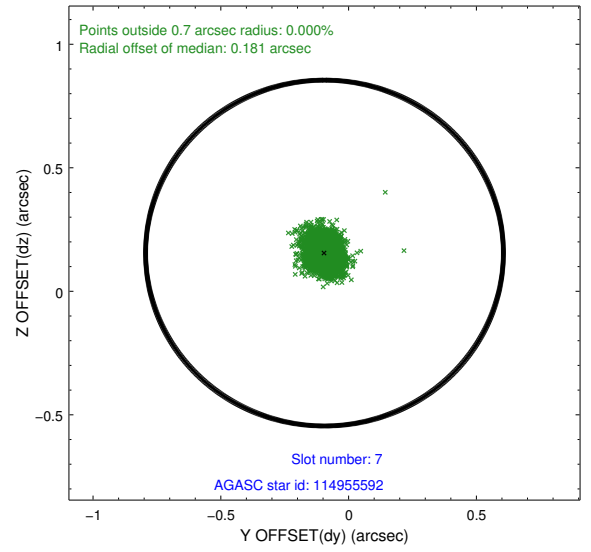
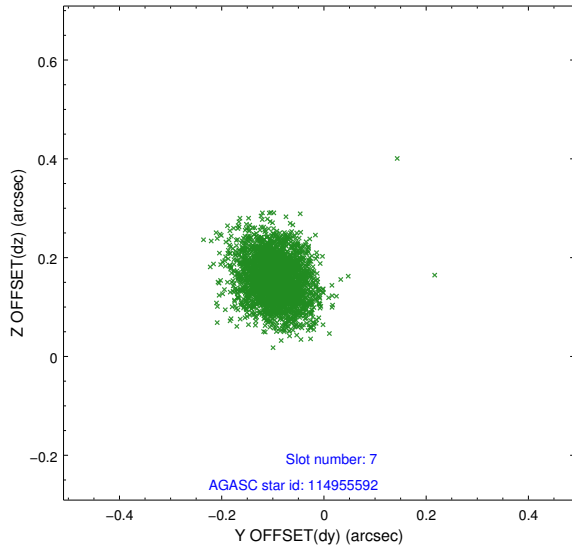
Time (s)



## 2.4.4 Slot 6

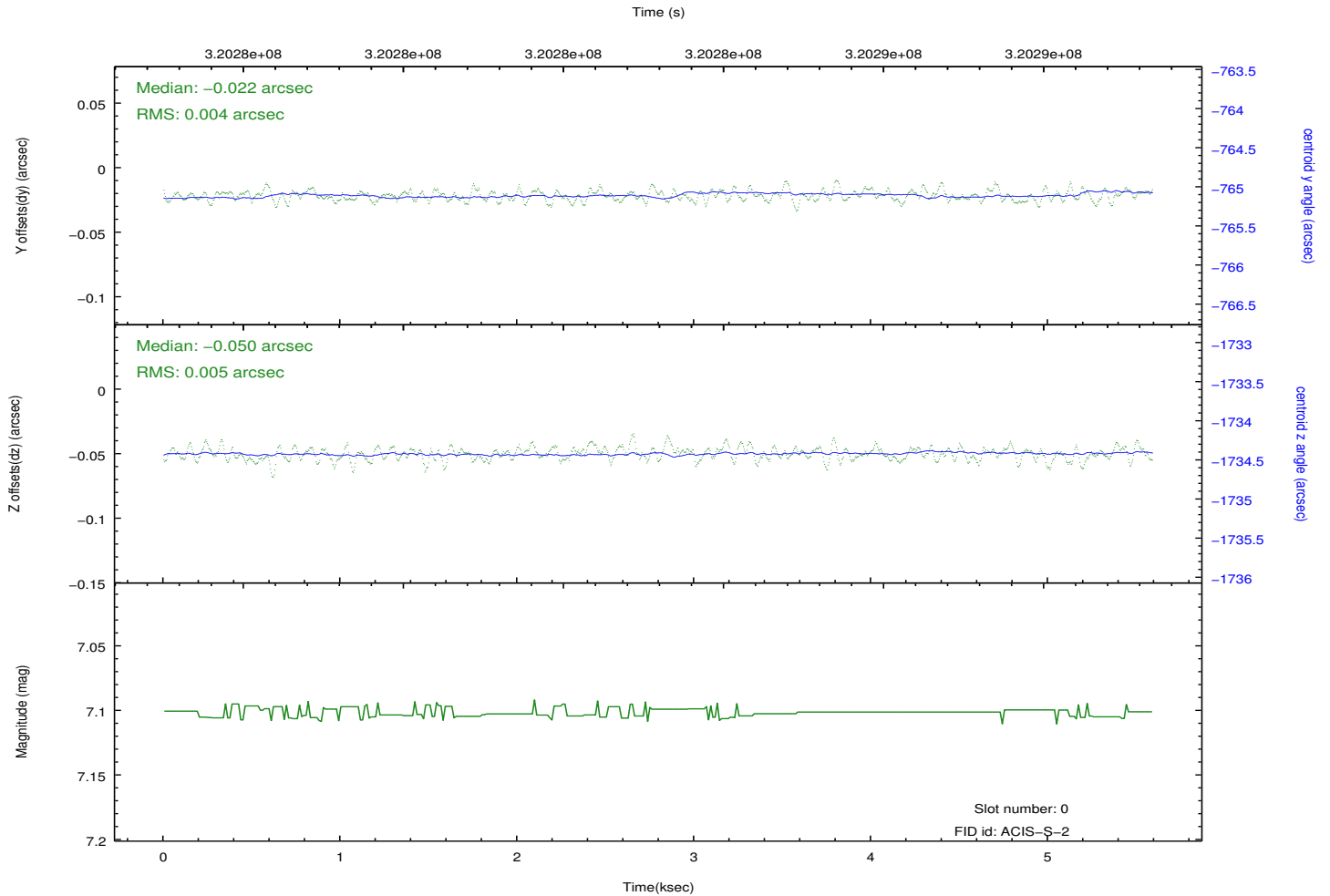
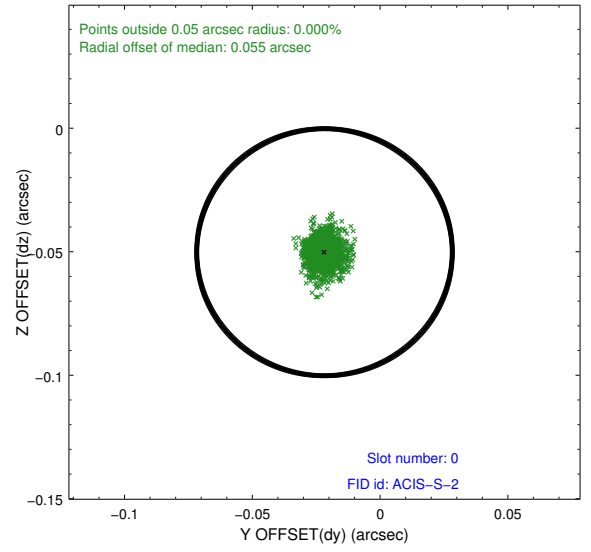
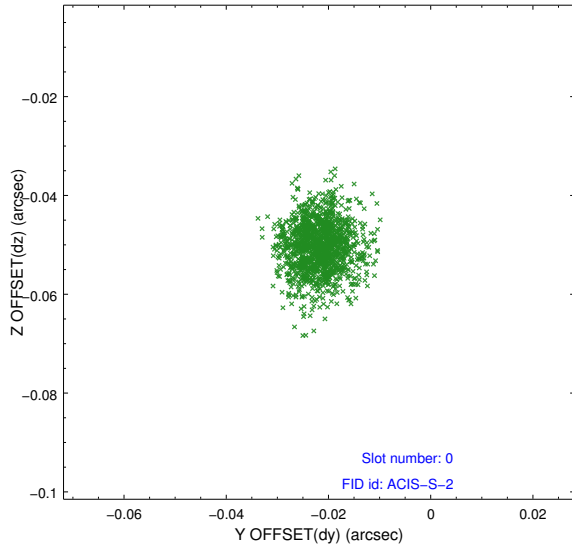


## 2.4.5 Slot 7

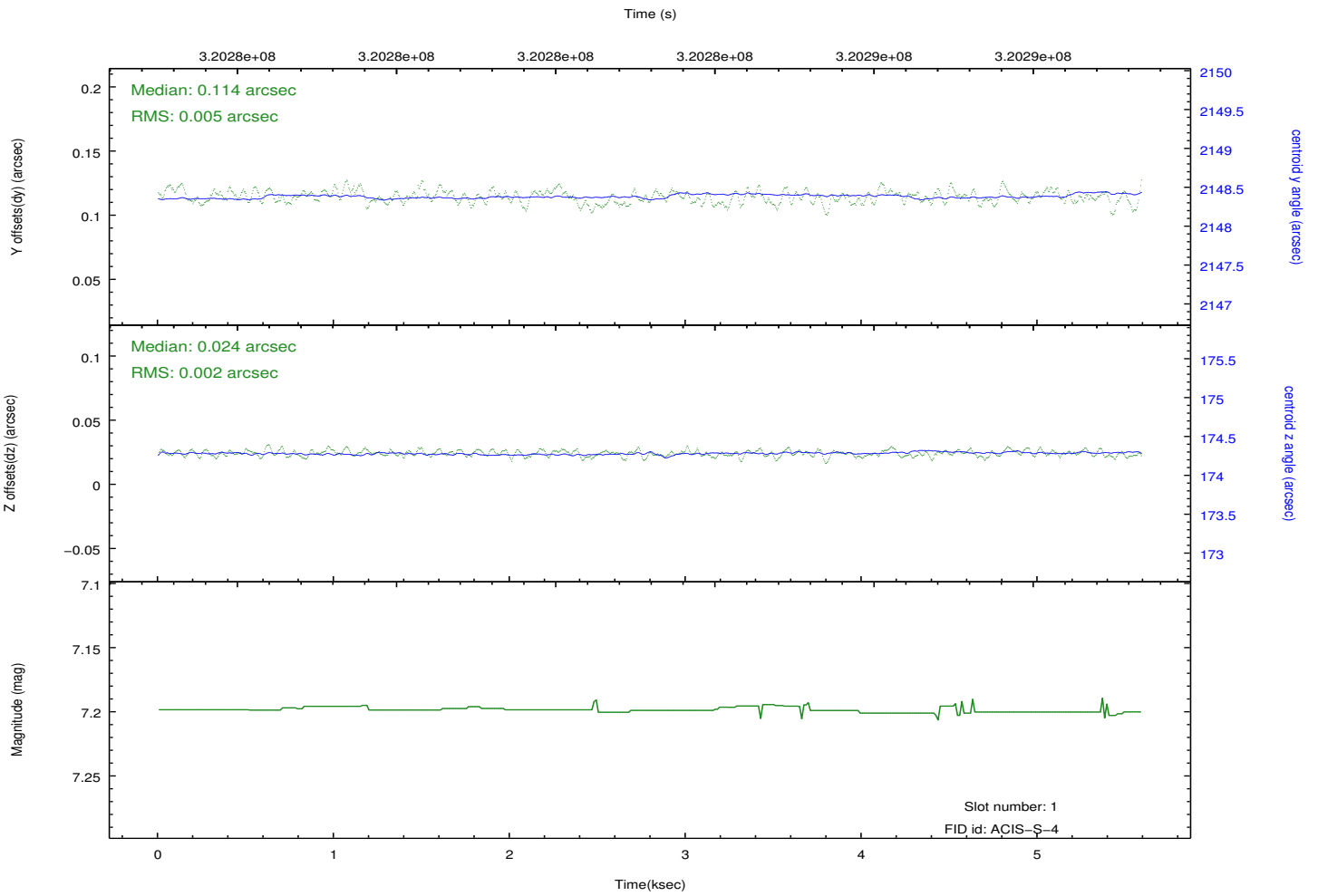
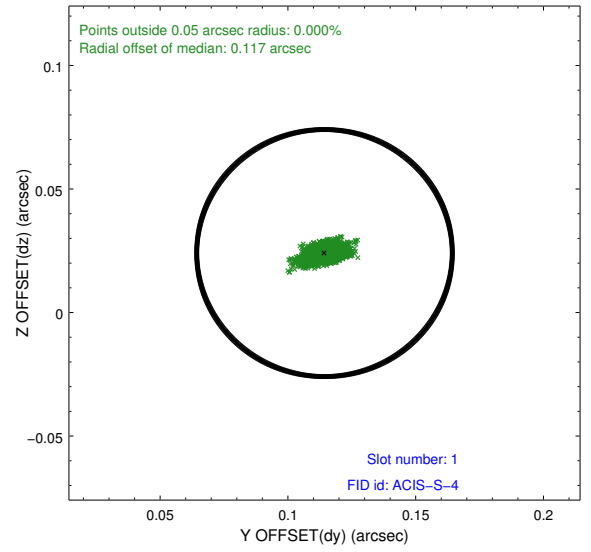
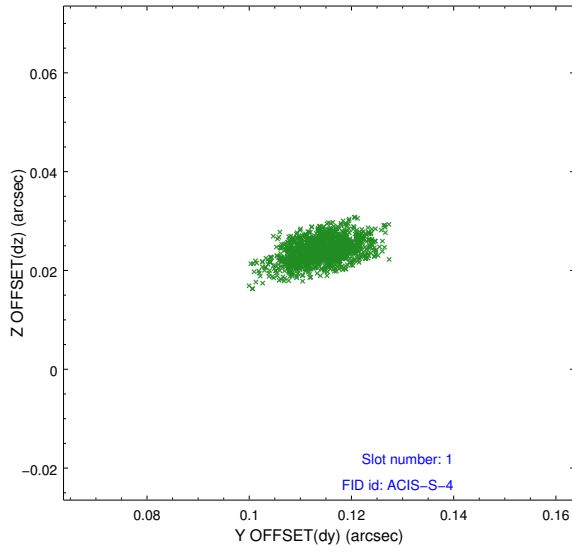


## 2.5 FID Slots

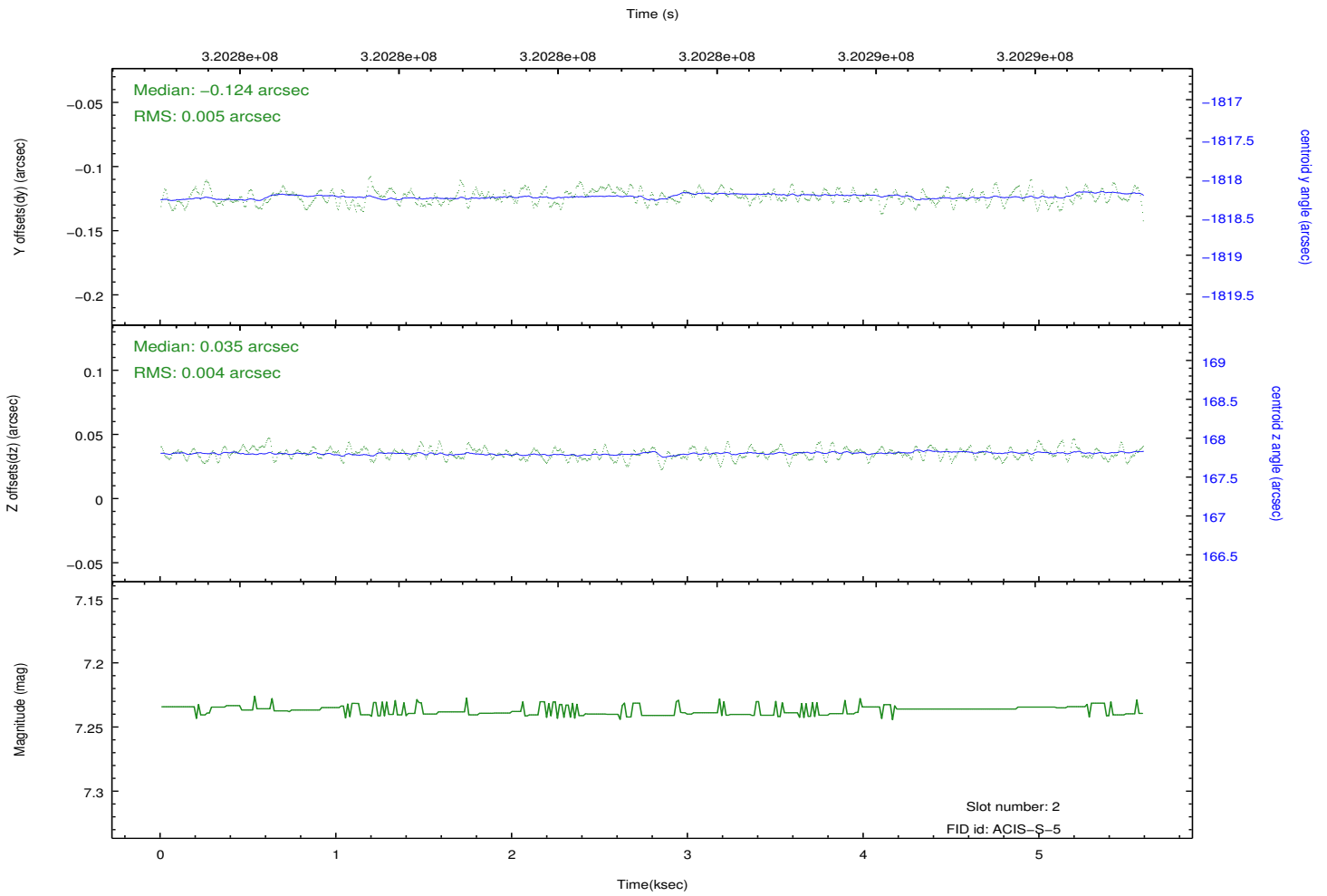
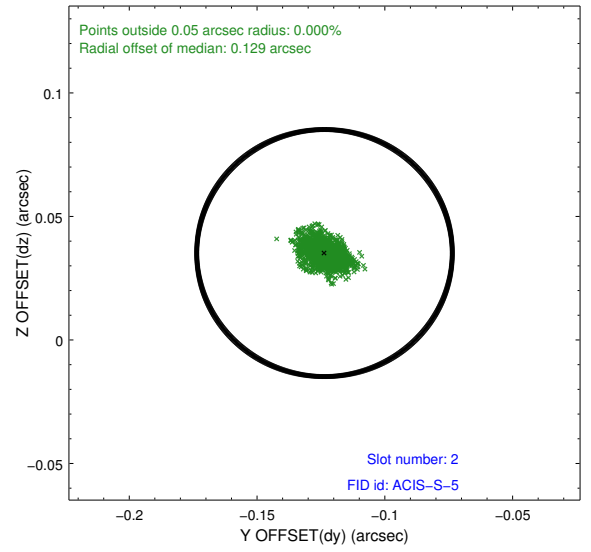
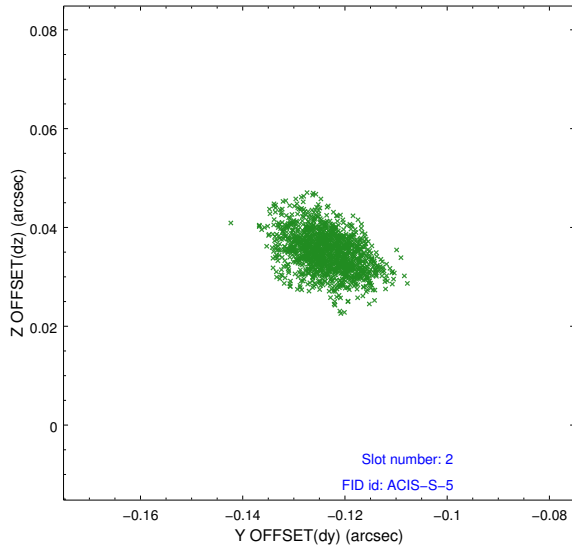
### 2.5.1 Slot 0



## 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)	2012.05.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

## A.2 Comments

Joint Proposal: Spitzer