

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8073 - L2 Version 2  
Chandra X-Ray Center

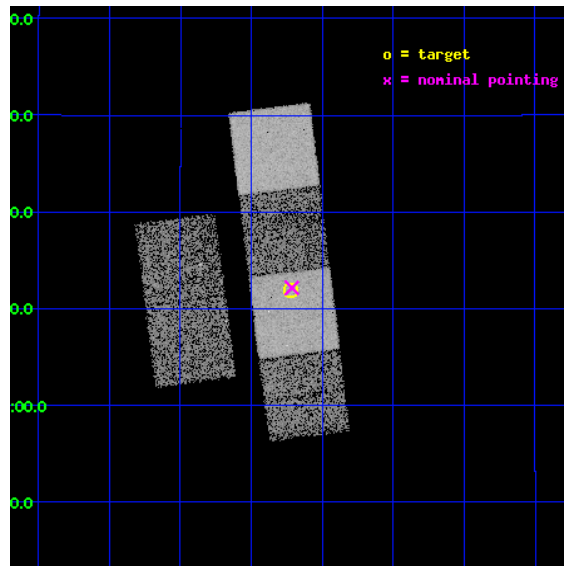
L2 Processing Date : May 10 2012

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# 1 Front

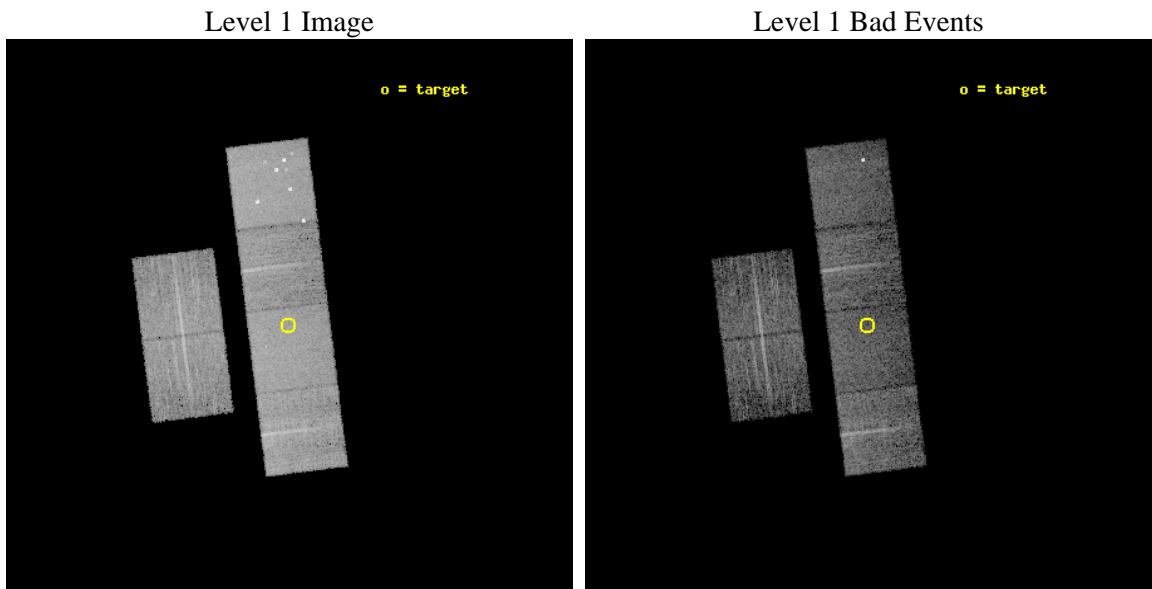
seq_num	900614	Sequence number
obs_id	8073	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	575	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	185.680417	Observer's specified target RA [deg]
dec_targ	8.19825	Observer's specified target Dec [deg]
ra_nom	185.6783355943	Nominal RA [deg]
dec_nom	8.2027423959508	Nominal Dec [deg]
roll_nom	82.874273760019	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.1126042008	Sum of GTIs [s]
livetime	5092.7974765639	Livetime [s]
ontime2	5158.1536442041	Sum of GTIs [s]
ontime3	5157.9894841909	Sum of GTIs [s]
ontime5	5158.0715641975	Sum of GTIs [s]
ontime6	5158.0305241942	Sum of GTIs [s]
ontime7	5158.1126042008	Sum of GTIs [s]
ontime8	5154.7074043155	Sum of GTIs [s]
l2events	81419	Number of level 2 events



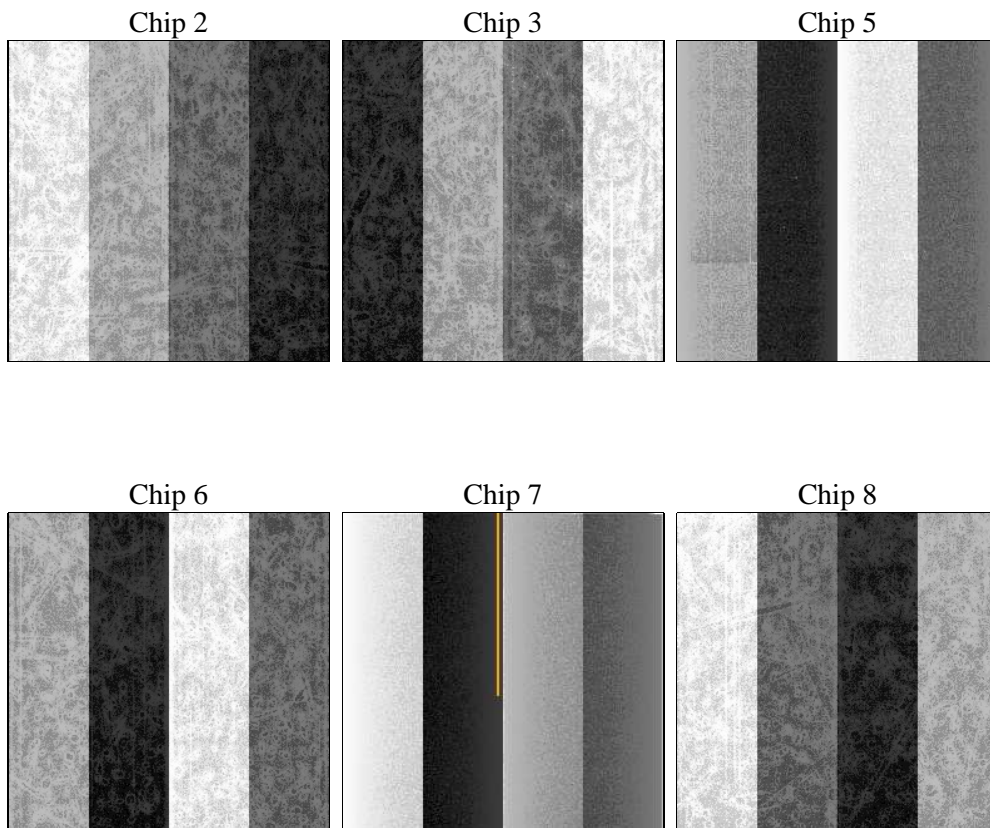
## 2 OBI

### 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	5158.1126042008	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5158.1536442041	Sum of GTIs [s]
date	2012-05-10T08:10:09	Date and time of file creation	ontime3	5157.9894841909	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5158.0715641975	Sum of GTIs [s]
			ontime6	5158.0305241942	Sum of GTIs [s]
			ontime7	5158.1126042008	Sum of GTIs [s]
			ontime8	5154.7074043155	Sum of GTIs [s]
			l1events	371236	Number of level 1 events

### 2.1.4 Events

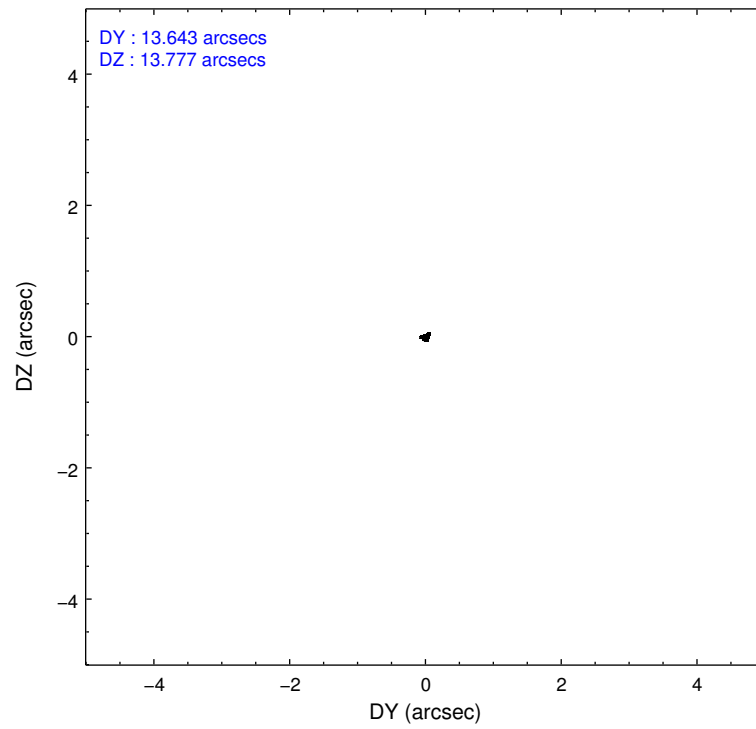
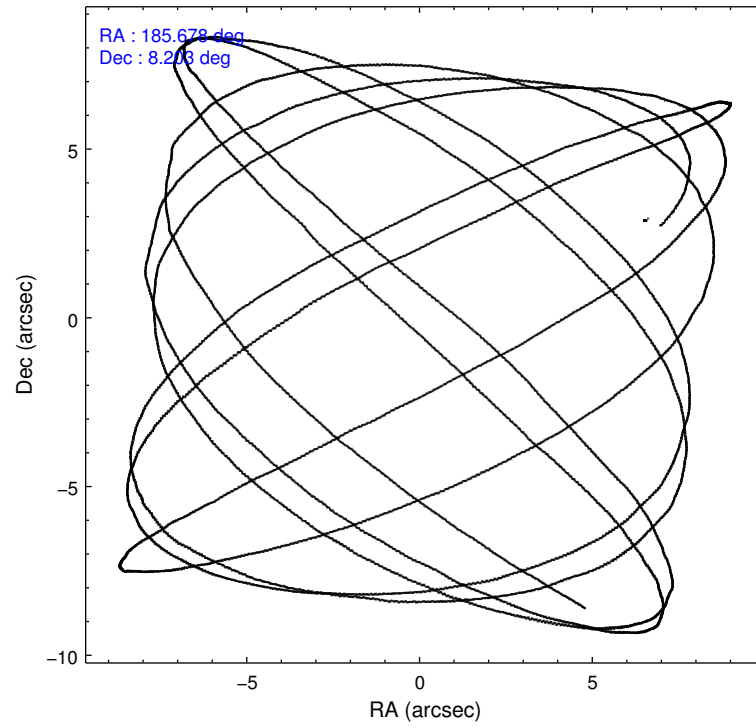
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	51860	48450	83555	50403	68596	68372	grade 0 events	2439	2598	6895	2194	2424	4302
rejected events	46006	42517	43319	44458	40309	54752		4%	5%	8%	4%	3%	6%
rejected %	88%	87%	51%	88%	58%	80%	grade 1 events	32	25	123	28	63	55
								0%	0%	0%	0%	0%	0%
							grade 2 events	1271	1181	10679	1328	5803	3048
								2%	2%	12%	2%	8%	4%
							grade 3 events	566	586	1178	573	2324	1444
								1%	1%	1%	1%	3%	2%
							grade 4 events	531	539	1143	557	2296	1283
								1%	1%	1%	1%	3%	1%
							grade 5 events	1987	2266	5067	2410	6175	3044
								3%	4%	6%	4%	9%	4%
							grade 6 events	1052	1037	20386	1297	15452	3555
								2%	2%	24%	2%	22%	5%
							grade 7 events	43982	40218	38084	42016	34059	51641
								84%	83%	45%	83%	49%	75%

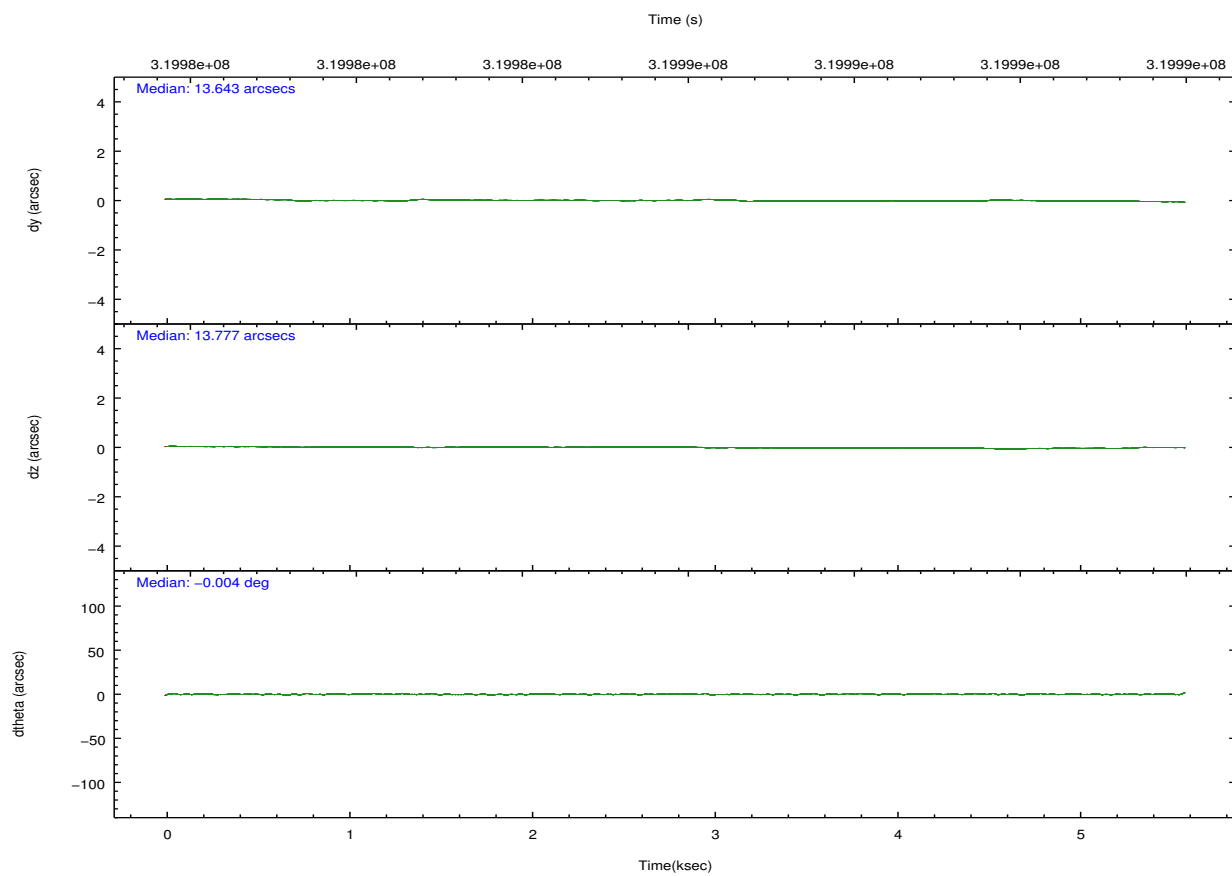
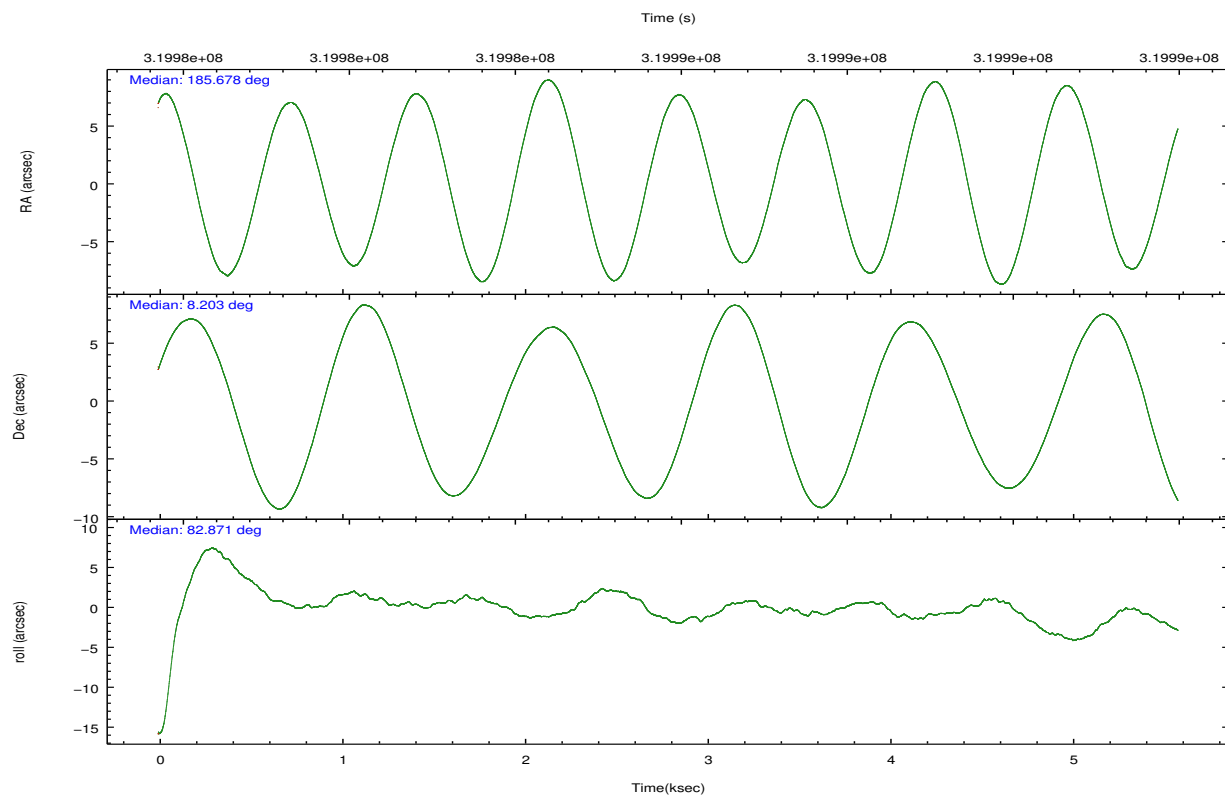


## 2.2 Compared Parameters

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	185.689464	185.6783355942998	CCD I2 on	O1	Y
[deg] Pointing Dec	8.177617	8.202742395950819	CCD I3 on	O2	Y
[deg] Pointing Roll	82.716052	82.87427376001922	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	O4	Y
[s] Observation start time (MET)	319983308.184000	319982825.53117	CCD S5 on	N	N
Observation start date	2008-02-21T12:14:03	2008-02-21T12:07:05	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	319988708.184000	319989057.01897	On-chip summing requested	N	N
Observation end date	2008-02-21T13:44:03	2008-02-21T13:50:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



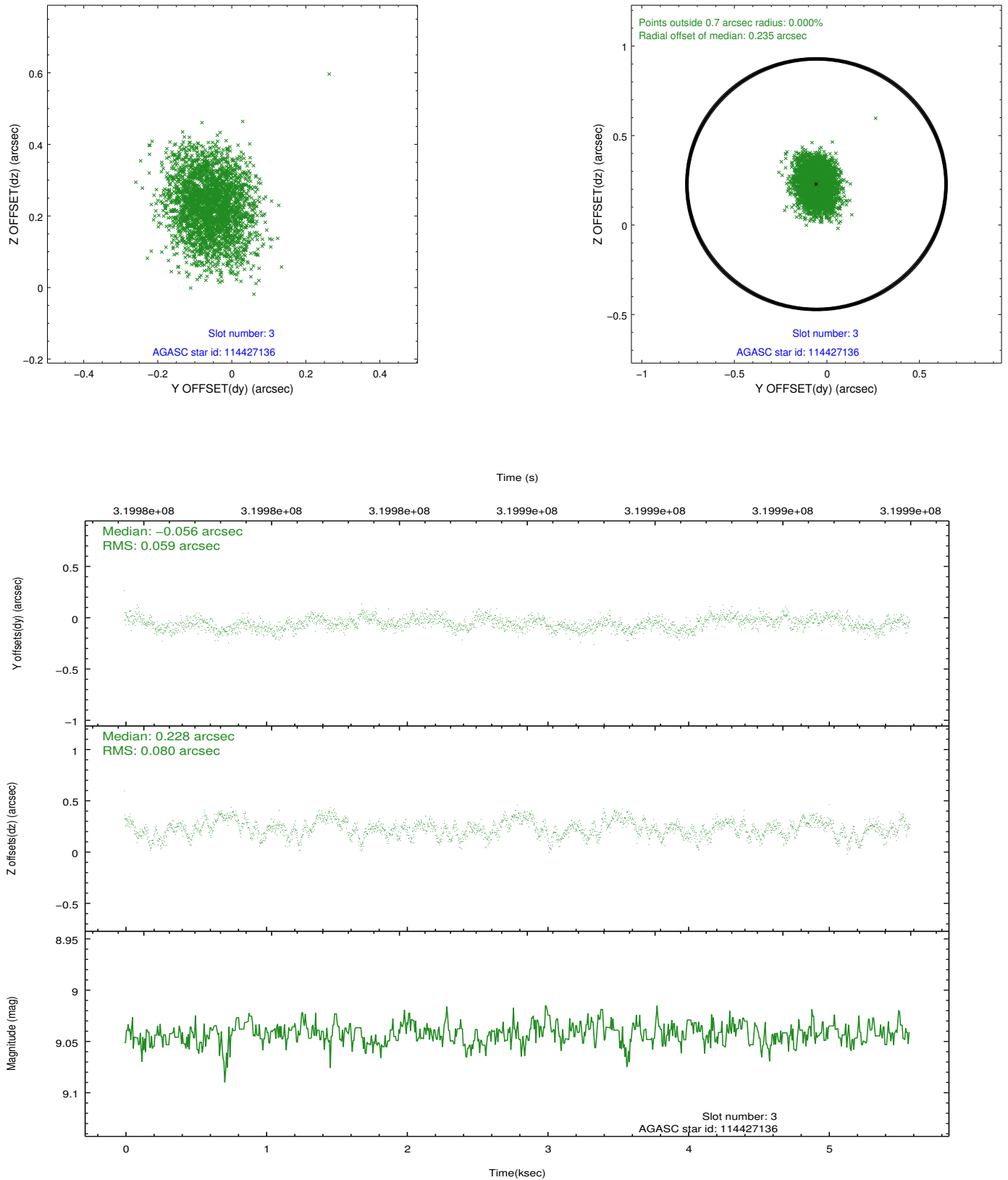


### Slot Statistics

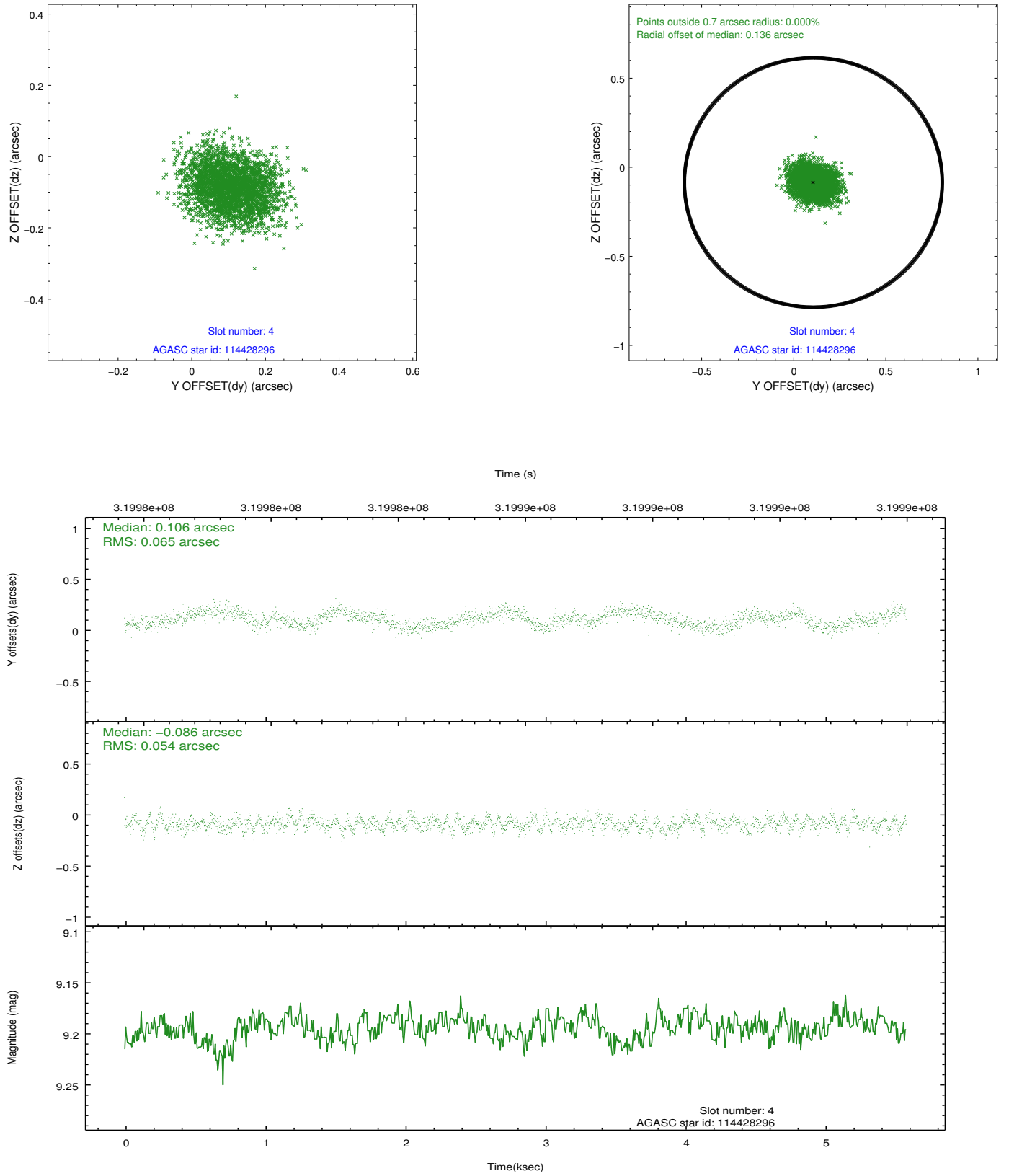
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1362	-0.046	-0.061	0.007	0.011	0.000000	0.000000	-766.62	-1735.13
1	FID	ACIS-S-4	7.20	1362	0.175	0.039	0.006	0.011	0.000000	0.000000	2146.38	172.34
2	FID	ACIS-S-5	7.23	1362	-0.160	0.031	0.006	0.011	0.000000	0.000000	-1818.20	167.23
3	GUIDE	114427136	9.04	2719	-0.056	0.228	0.107	0.171	185.962563	8.343983	717.61	-888.47
4	GUIDE	114428296	9.19	2723	0.106	-0.086	0.091	0.144	185.626025	8.050776	-481.21	166.37
5	GUIDE	114428472	9.34	2714	-0.223	-0.122	0.107	0.181	185.686963	8.270901	331.56	51.41
6	GUIDE	114433792	9.59	2720	0.121	-0.032	0.173	0.255	185.373016	7.818558	-1425.03	955.47
7	GUIDE	114434008	8.74	2723	0.062	0.009	0.082	0.130	185.534773	7.569663	-2241.44	270.65

## 2.4 Star Slots

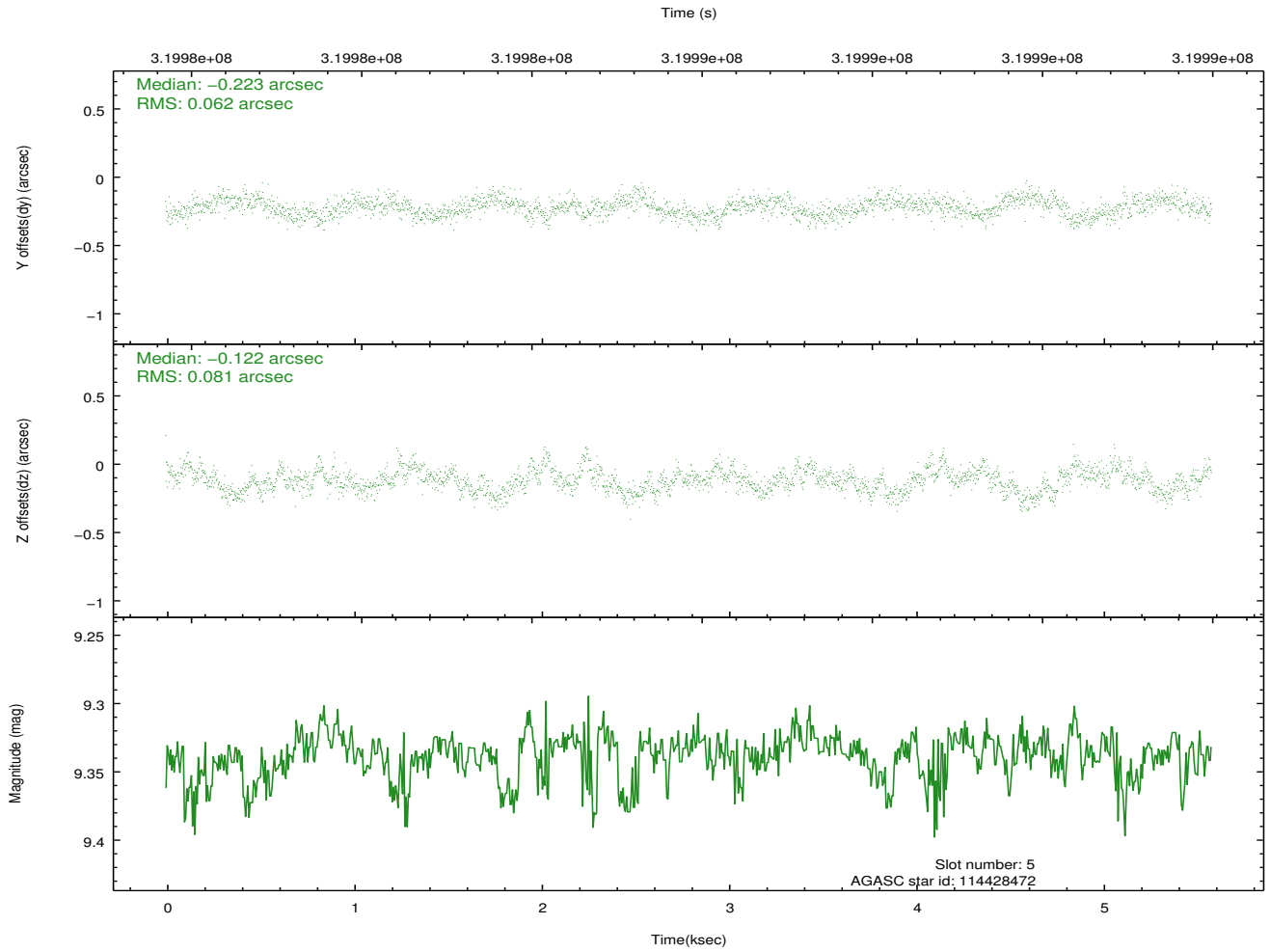
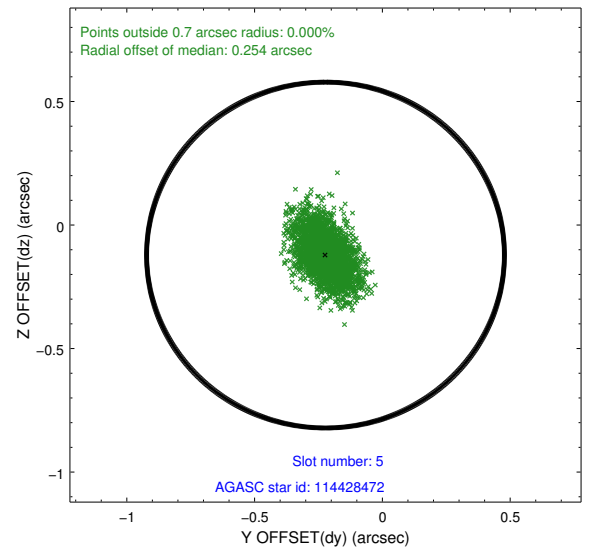
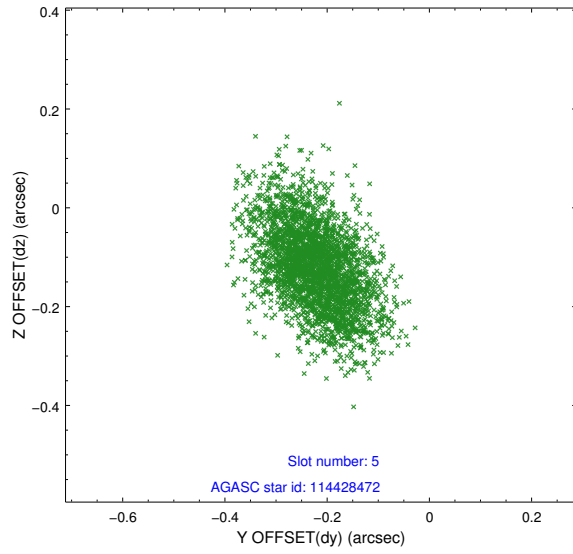
### 2.4.1 Slot 3



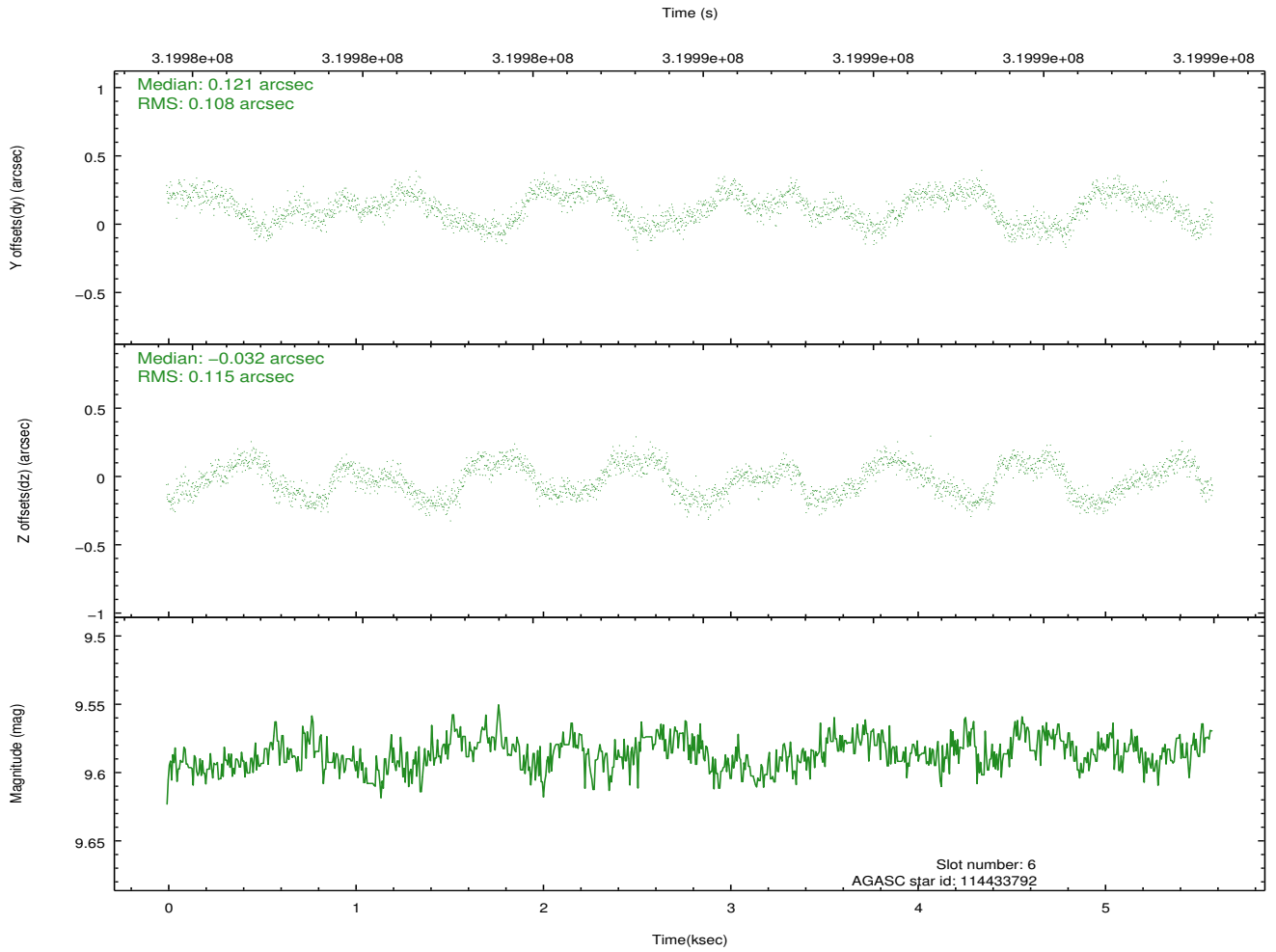
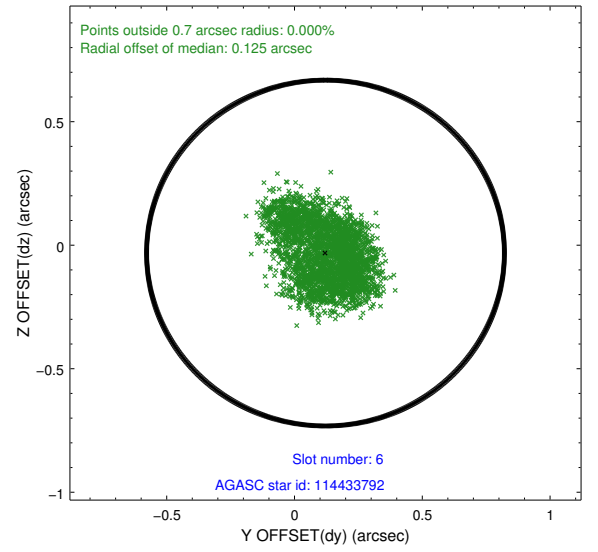
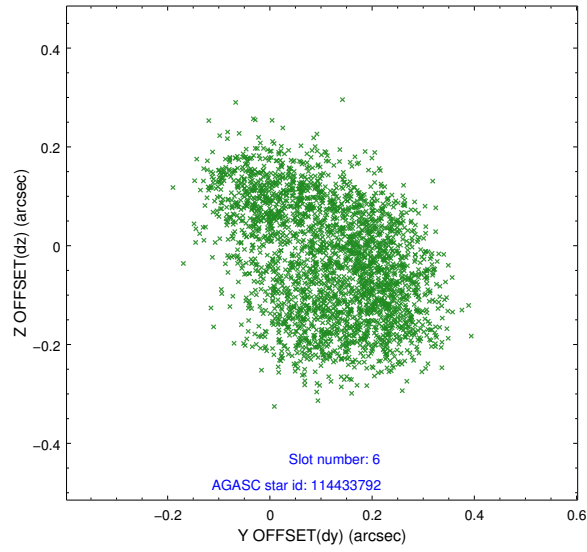
## 2.4.2 Slot 4



### 2.4.3 Slot 5

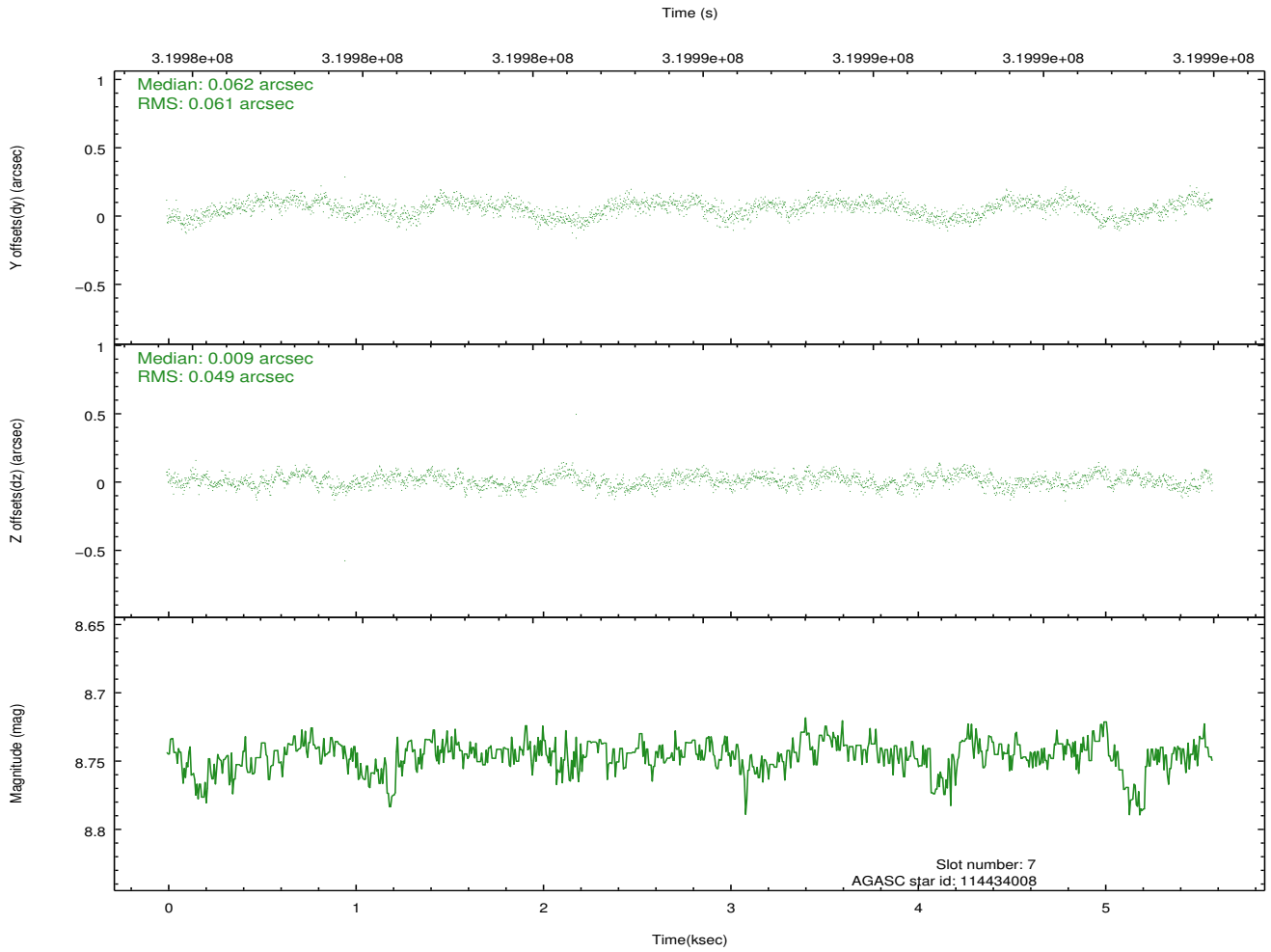
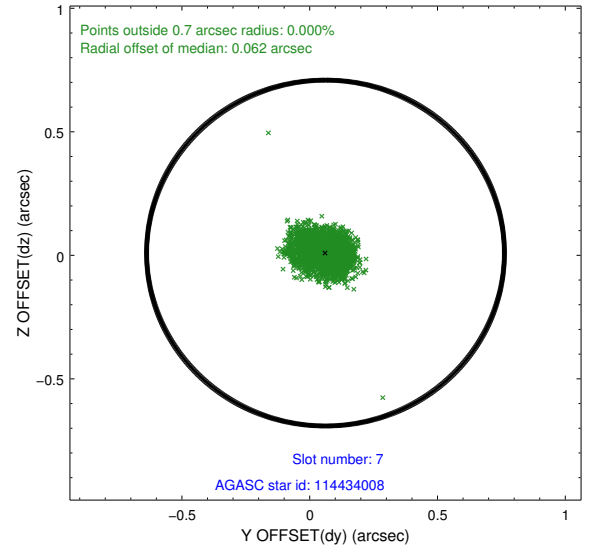
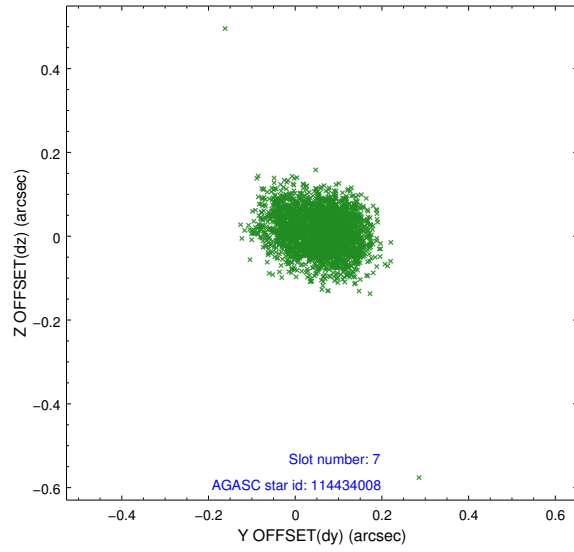


## 2.4.4 Slot 6



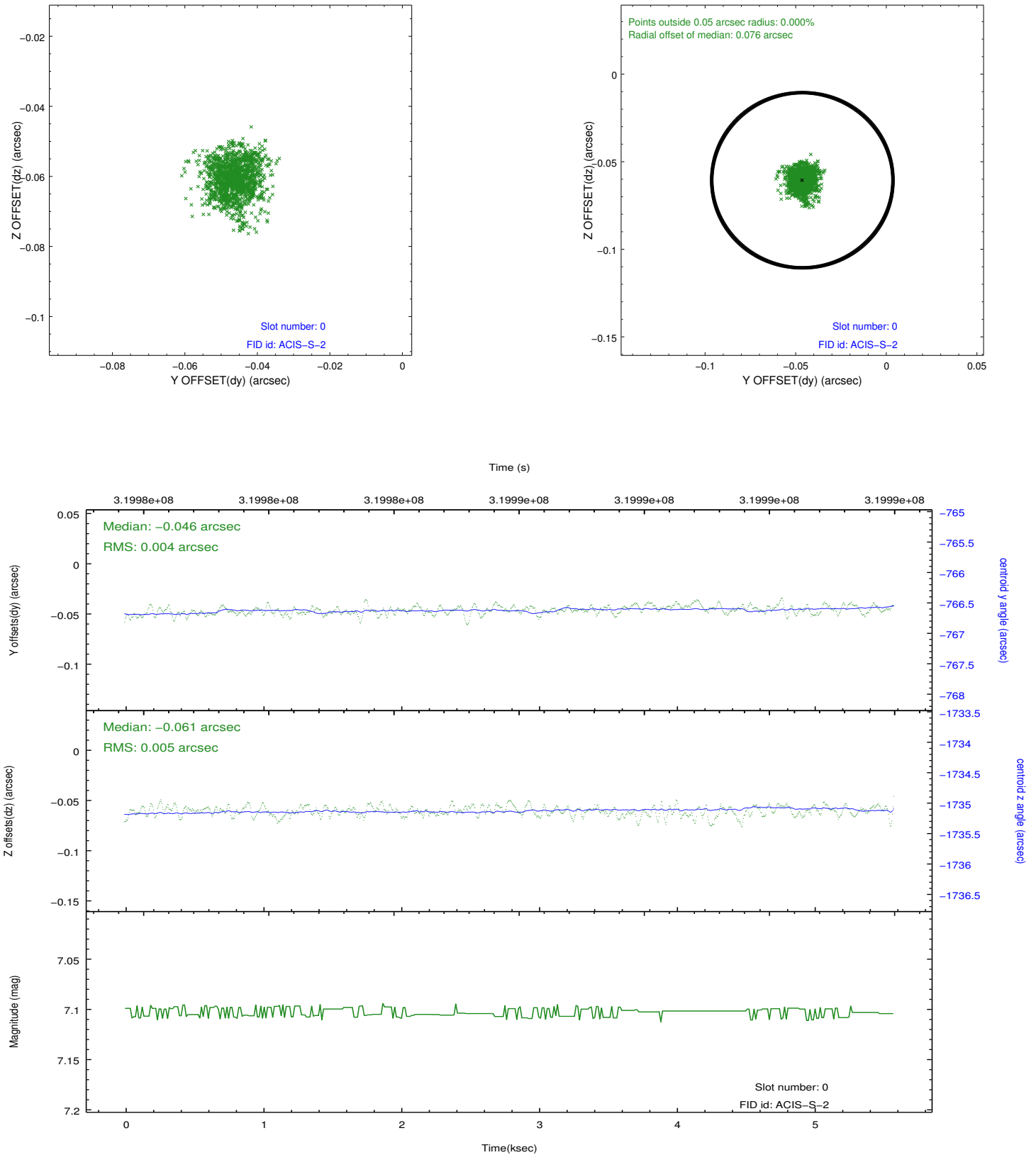


## 2.4.5 Slot 7

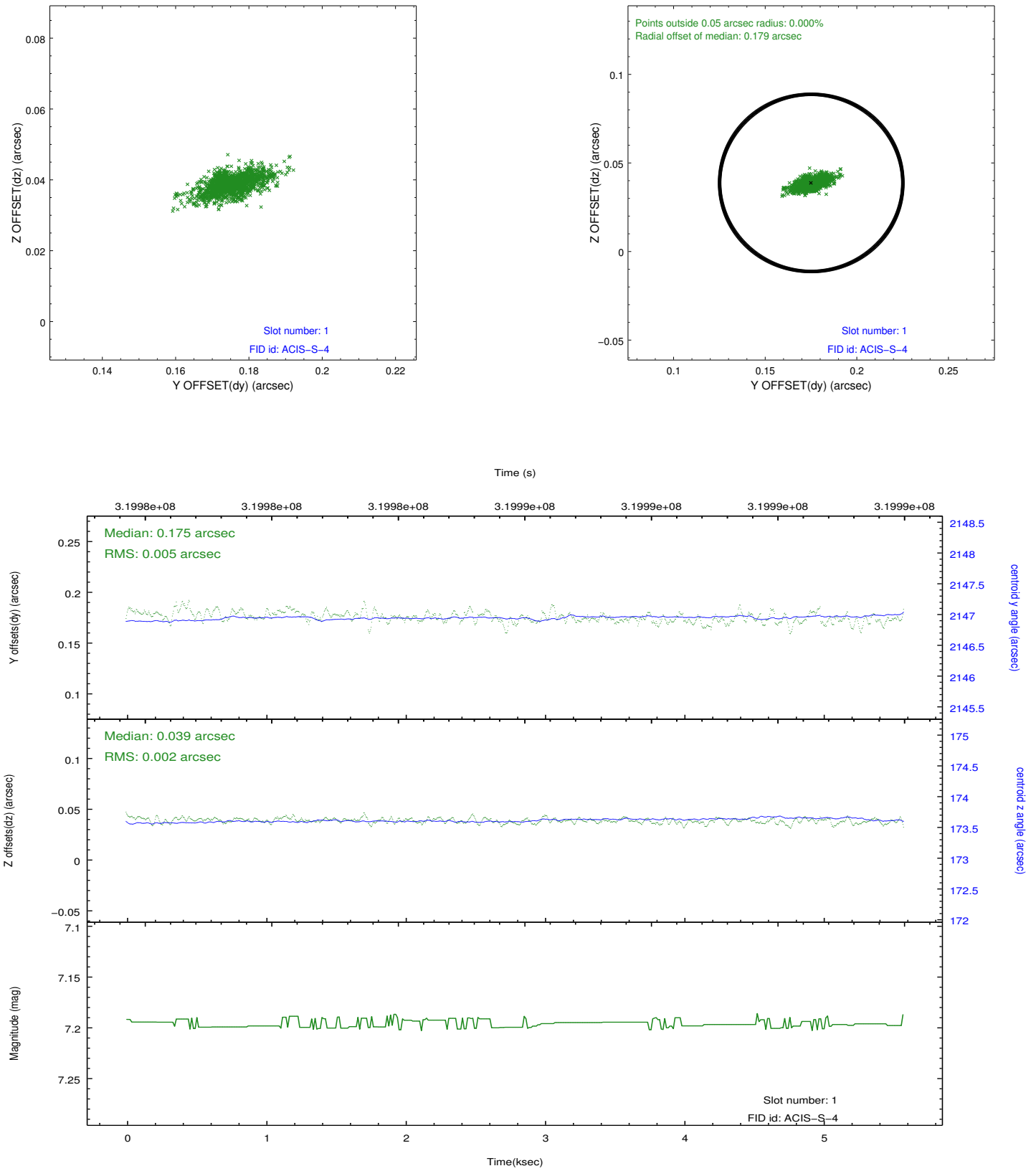


## 2.5 FID Slots

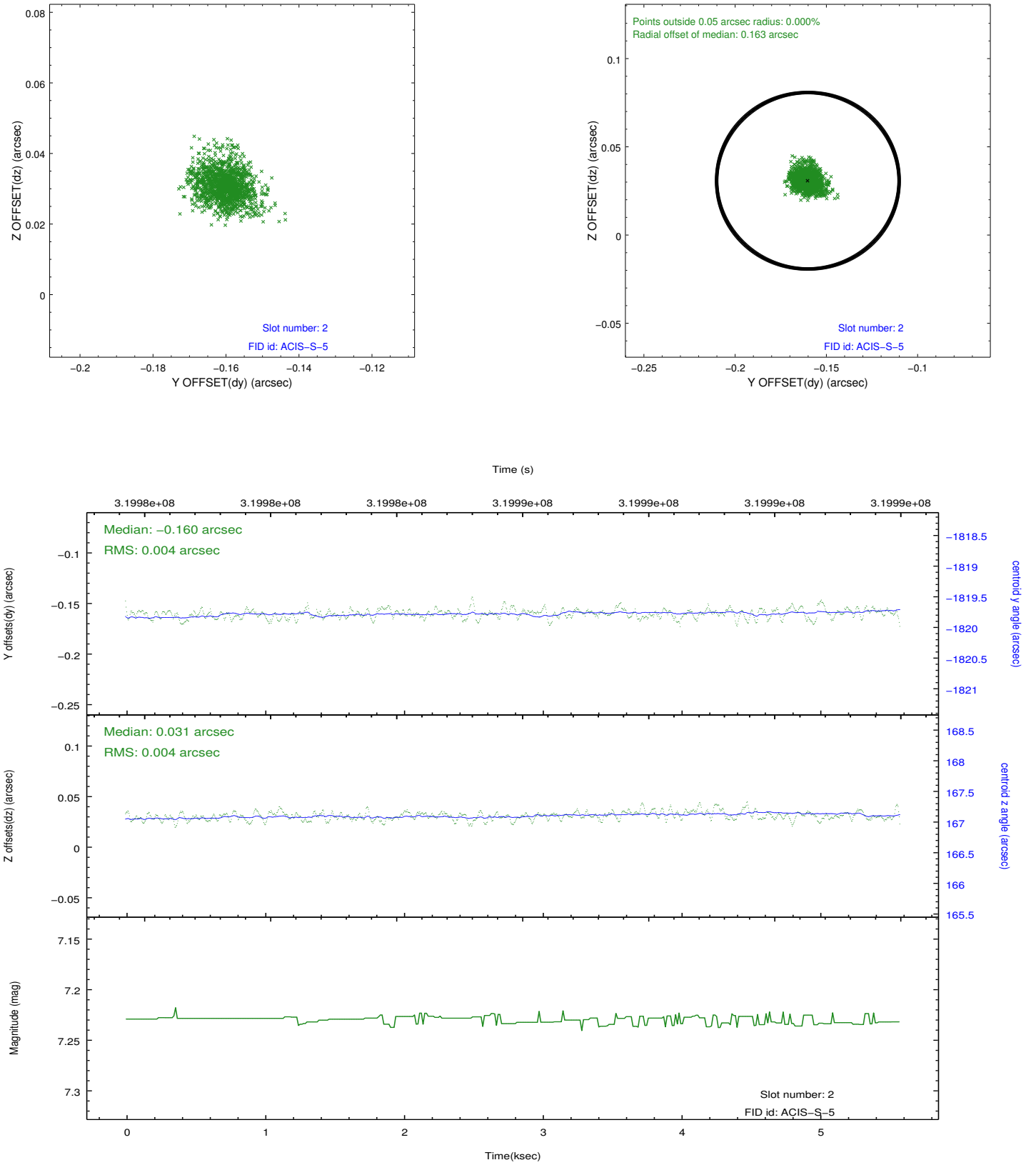
### 2.5.1 Slot 0



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

### A.2 Comments

Joint Proposal: Spitzer