

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9745 - L2 Version 2  
Chandra X-Ray Center

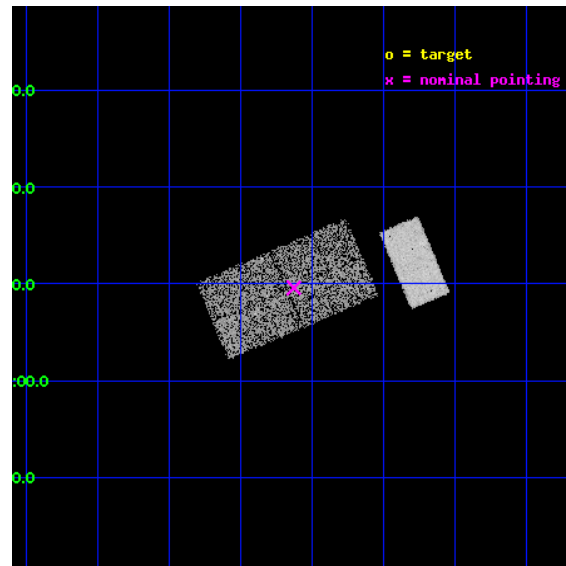
L2 Processing Date : May 3 2012

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# 1 Front

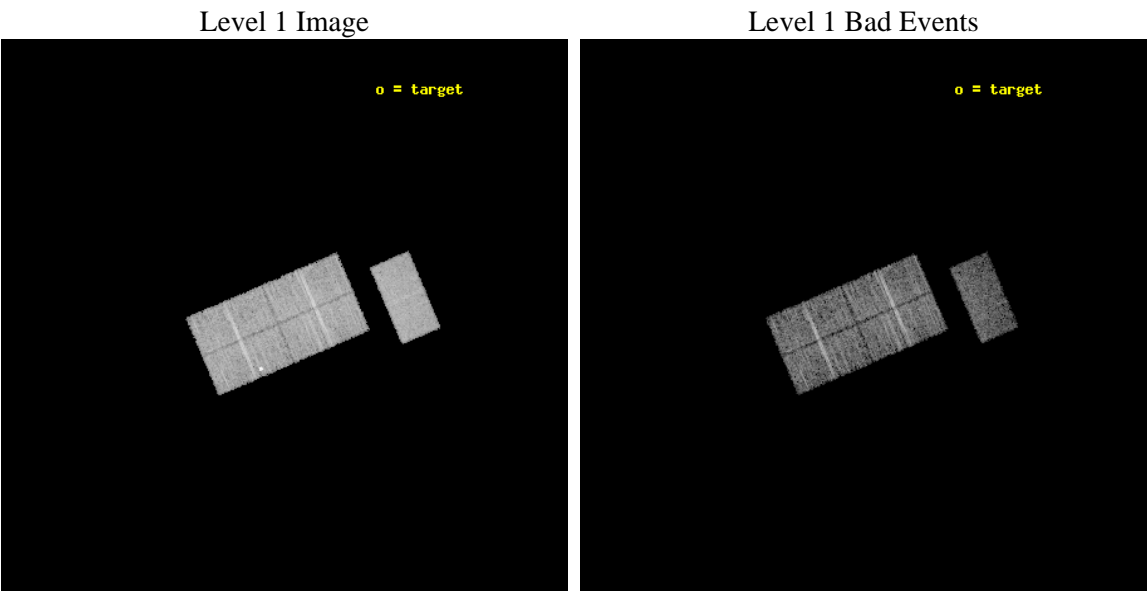
seq_num	100069	Sequence number
obs_id	9745	Observation id
title	Solar wind charge exchange induced X-rays at Venus during the Messenger flyby	Proposal title
observer	Dr. Konrad Dennerl	Principal investigator
object	Venus	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	168.733292	Observer's specified target RA [deg]
dec_targ	4.922889	Observer's specified target Dec [deg]
ra_nom	170.90662927452	Nominal RA [deg]
dec_nom	4.1598998392604	Nominal Dec [deg]
roll_nom	66.847971945117	Nominal Roll [deg]
revision	2	Processing version of data
ontime	6890.4000455737	Sum of GTIs [s]
livetime	6736.8009831577	Livetime [s]
ontime0	6890.4000455737	Sum of GTIs [s]
ontime1	6890.4000455737	Sum of GTIs [s]
ontime2	6890.4000455737	Sum of GTIs [s]
ontime3	6890.4000455737	Sum of GTIs [s]
ontime7	6890.4000455737	Sum of GTIs [s]
l2events	24363	Number of level 2 events



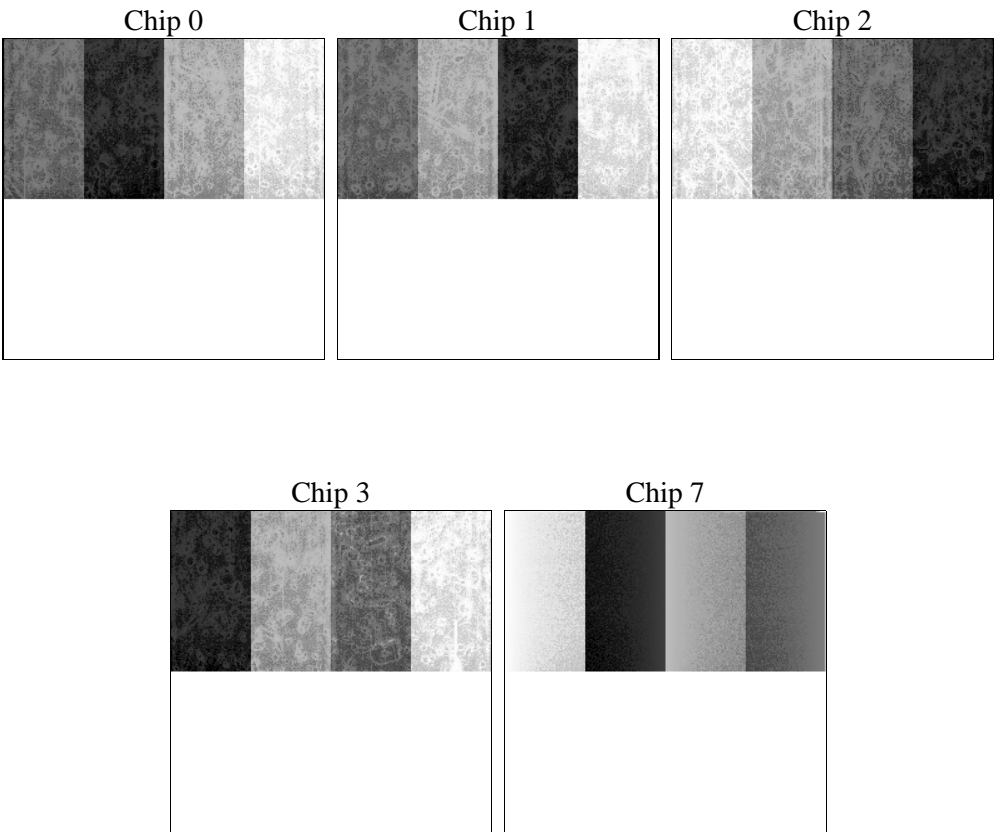
# 2 OBI

## 2.1 OBI

### 2.1.1 Images



### 2.1.2 Bias



Chip 3



Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6700.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	6890.4000455737	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	6890.4000455737	Sum of GTIs [s]
date	2012-05-03T14:48:49	Date and time of file creation	ontime1	6890.4000455737	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	6890.4000455737	Sum of GTIs [s]
			ontime3	6890.4000455737	Sum of GTIs [s]
			ontime7	6890.4000455737	Sum of GTIs [s]
			l1events	163243	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	30869	32017	32817	33140	34400
rejected events	27789	27398	29949	30284	19147
rejected %	90%	85%	91%	91%	55%

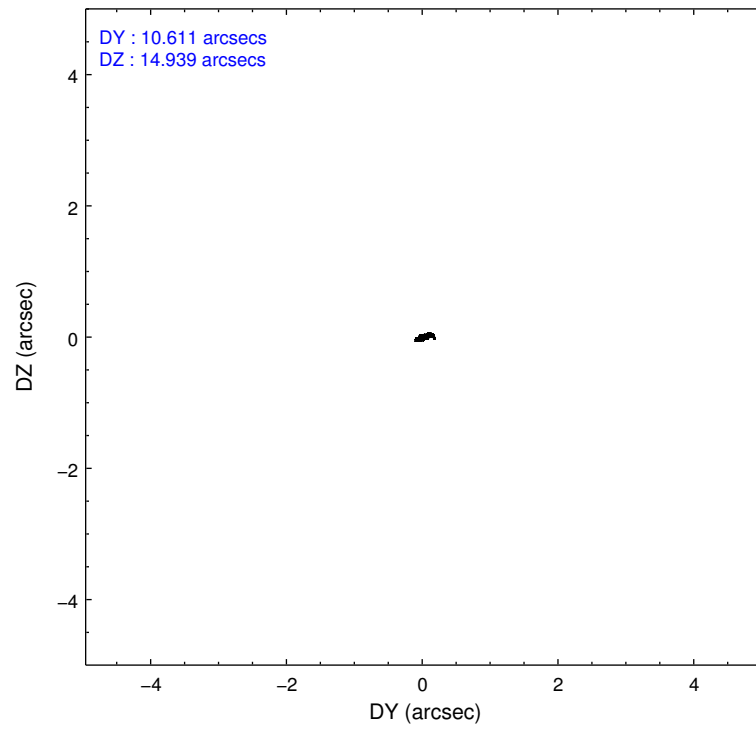
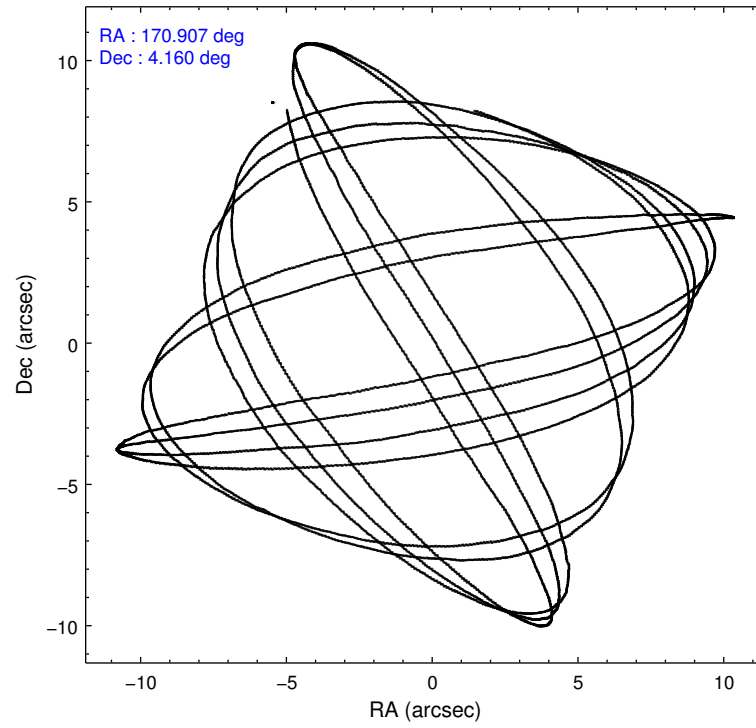
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	1170	2700	1000	1009	1555
	3%	8%	3%	3%	4%
grade 1 events	24	29	21	16	56
	0%	0%	0%	0%	0%
grade 2 events	712	713	677	625	3375
	2%	2%	2%	1%	9%
grade 3 events	427	417	450	394	1595
	1%	1%	1%	1%	4%
grade 4 events	390	376	391	384	1632
	1%	1%	1%	1%	4%
grade 5 events	1102	1138	1034	1291	3783
	3%	3%	3%	3%	10%
grade 6 events	540	624	475	561	7792
	1%	1%	1%	1%	22%
grade 7 events	26504	26020	28769	28860	14612
	85%	81%	87%	87%	42%

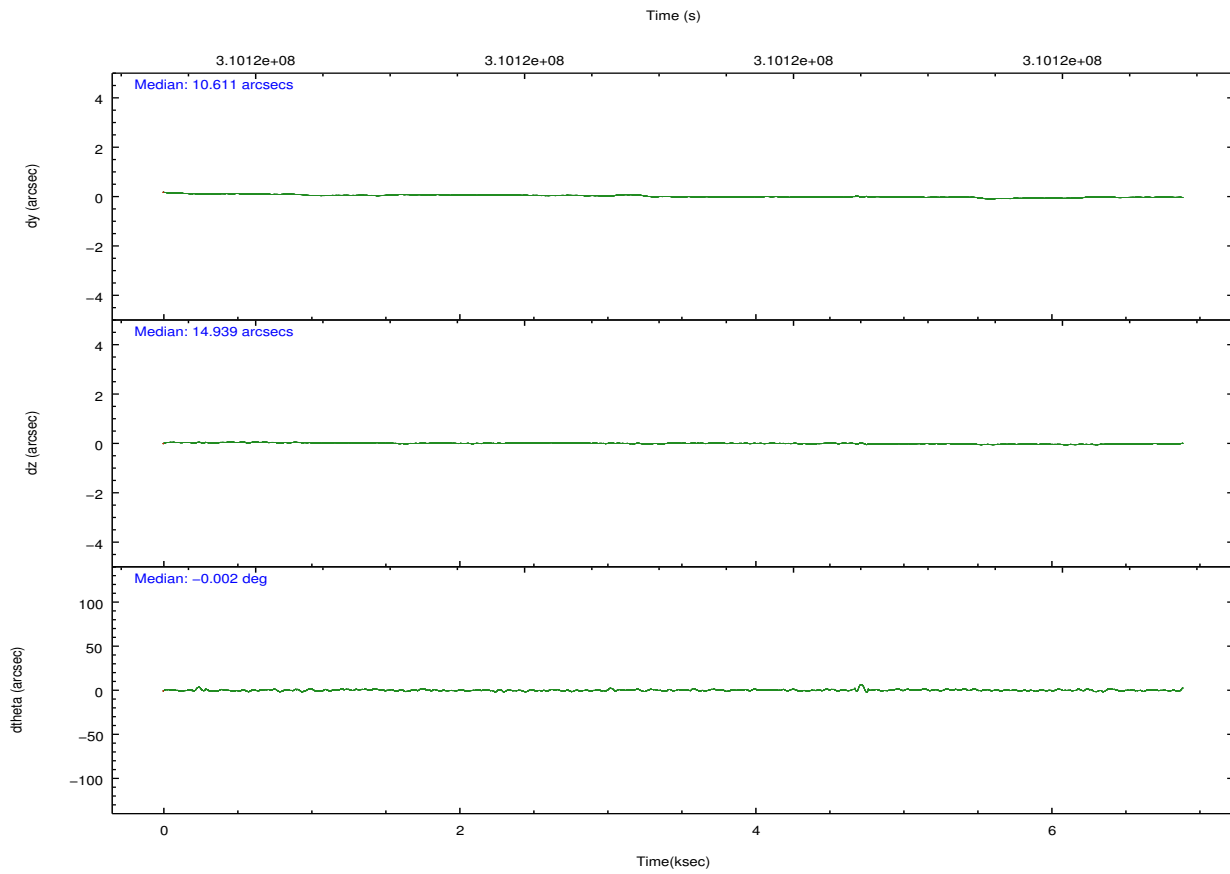
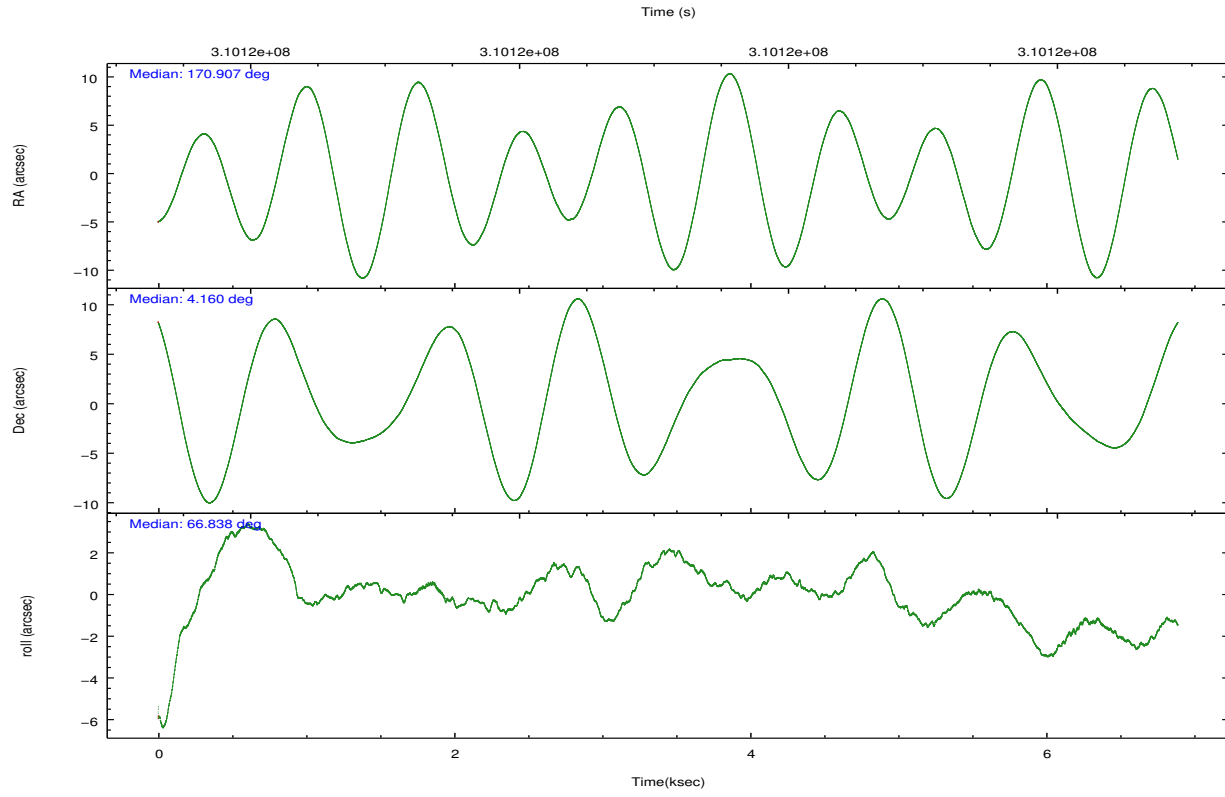


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	170.910001	170.9066292745178	CCD I2 on	Y	Y
[deg] Pointing Dec	4.132660	4.159899839260425	CCD I3 on	Y	Y
[deg] Pointing Roll	66.639050	66.84797194511651	CCD S0 on	N	N
[s] Window start time (MET)	309398465.184000	309398465.184000	CCD S1 on	N	N
[s] Window stop time (MET)	310608065.184000	310608065.184000	CCD S2 on	O1	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	O2	Y
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S5 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	Number of optional ACIS chips dropped	1	1
[s] Observation start time (MET)	310117849.184000	310117473.2162	On-chip summing requested	N	N
Observation start date	2007-10-30T07:49:44	2007-10-30T07:44:33	Subarray requested	CUSTOM	1/2
[s] Observation end time (MET)	310124549.184000	310124683.06655	Subarray start row	513	513
Observation end date	2007-10-30T09:41:24	2007-10-30T09:44:43	Subarray row count	512	512
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.8

## 2.3 Aspect



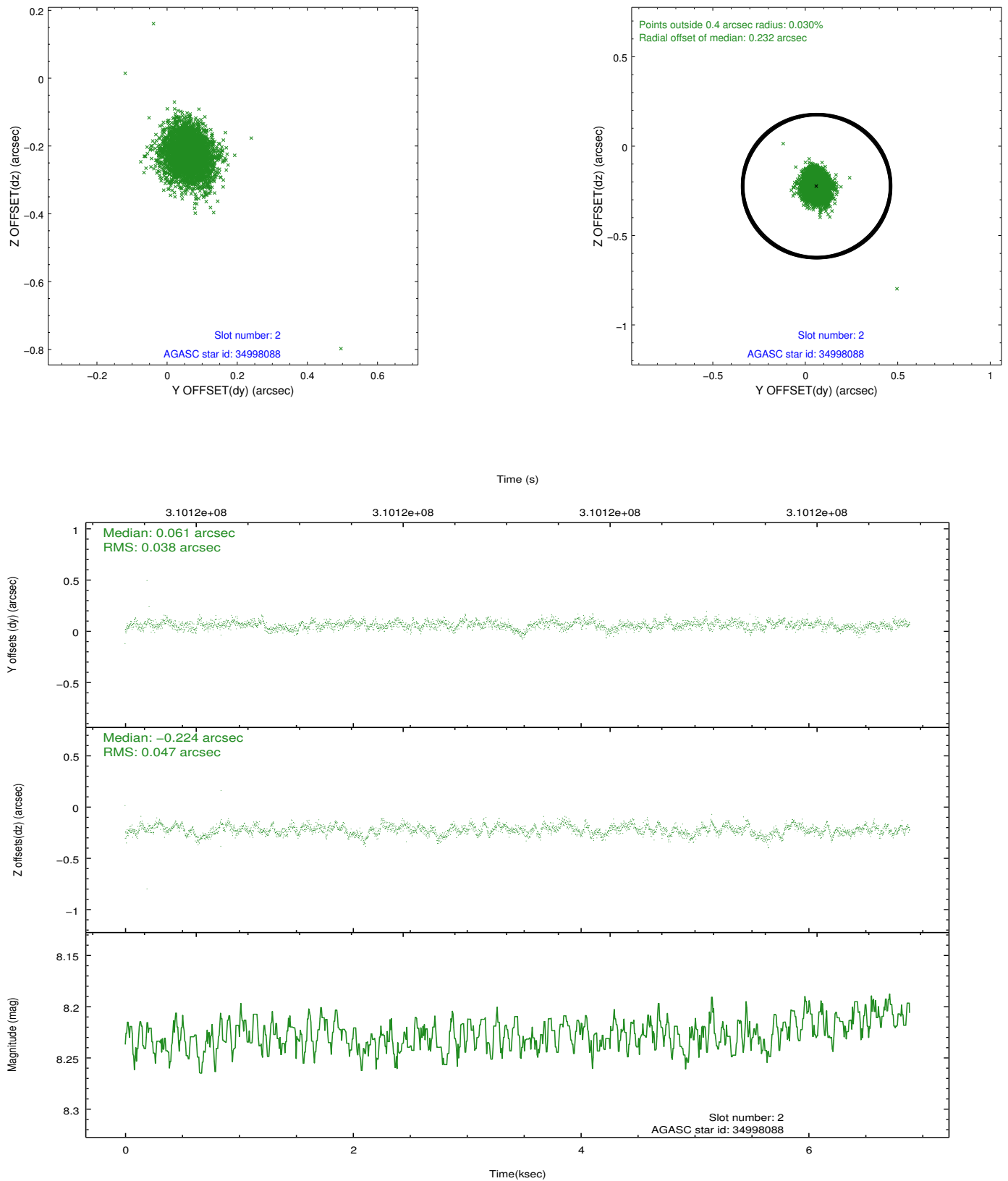


### Slot Statistics

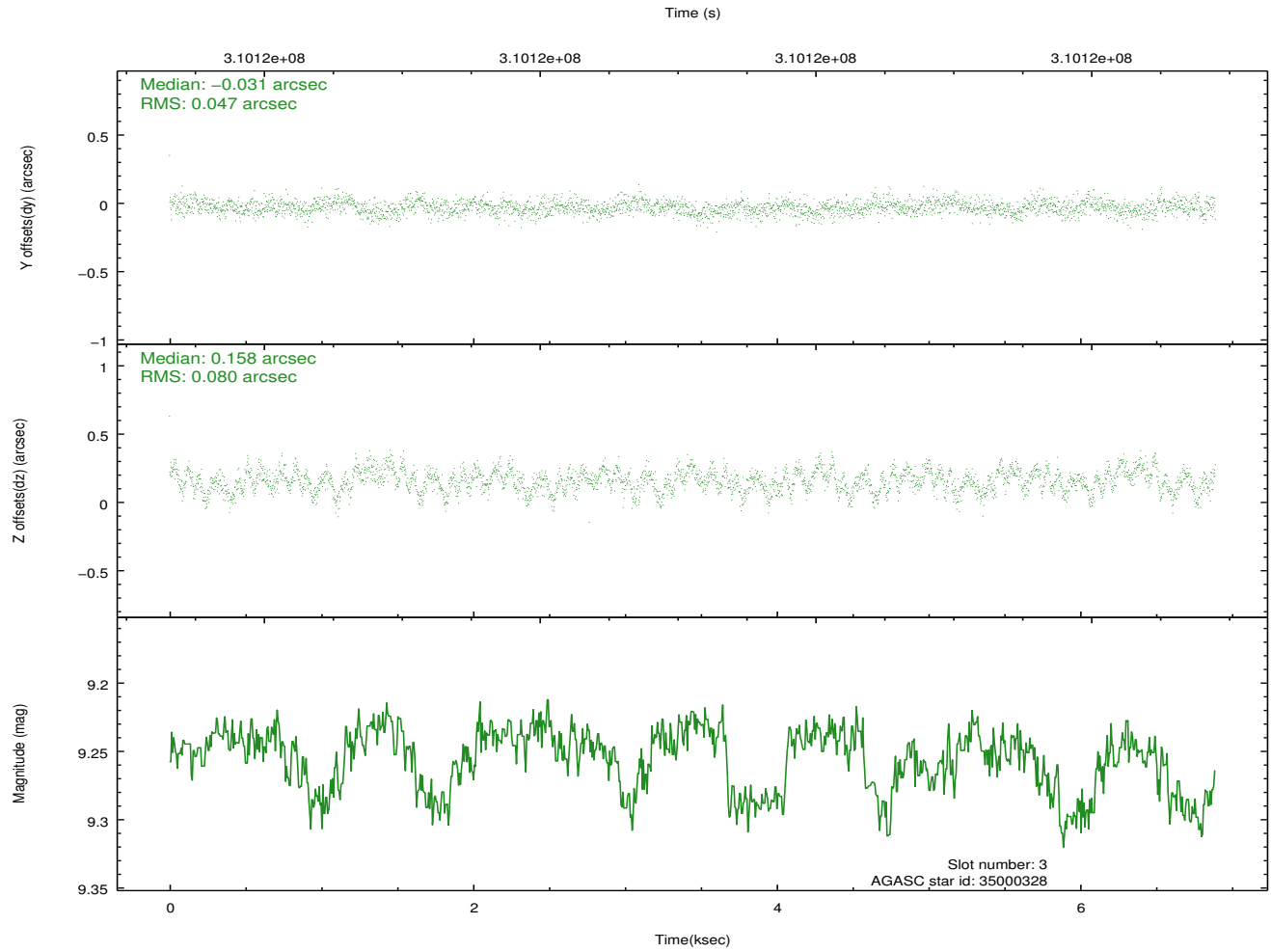
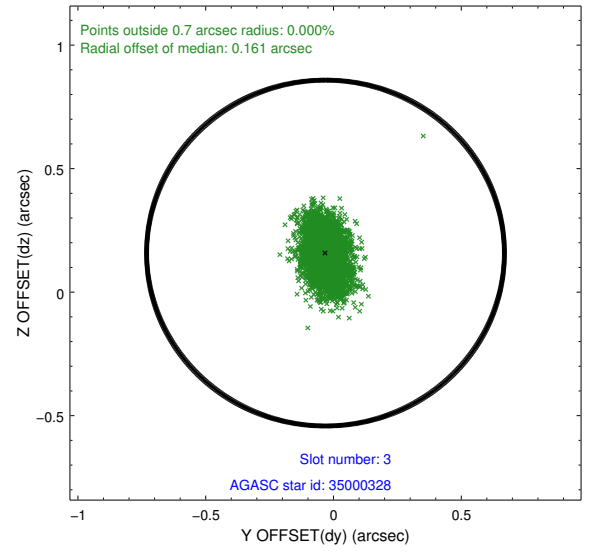
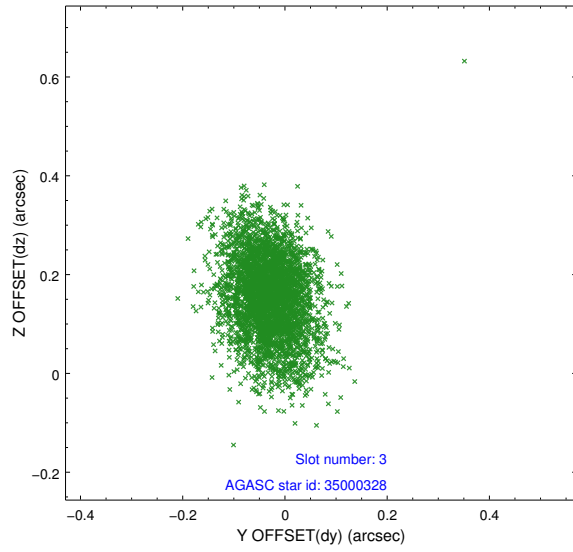
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.13	1681	0.013	-0.058	0.008	0.015	0.000000	0.000000	-765.21	-844.96
1	FID	ACIS-I-5	7.23	1681	-0.076	0.106	0.008	0.015	0.000000	0.000000	-1819.78	1058.62
2	GUIDE	34998088	8.23	3361	0.061	-0.224	0.063	0.102	170.391115	4.208300	-488.47	1819.27
3	GUIDE	35000328	9.25	3361	-0.031	0.158	0.096	0.169	171.456629	4.002792	350.30	-1985.42
4	GUIDE	35000464	8.78	3360	0.060	0.053	0.080	0.127	170.965623	3.618933	-1619.14	-916.57
5	GUIDE	35000776	7.22	3362	-0.084	-0.280	0.053	0.082	170.371940	3.937464	-1411.30	1495.52
6	GUIDE	35002848	9.92	3352	0.083	0.251	0.126	0.206	171.207329	3.477909	-1739.81	-1914.52
7	GUIDE	35005744	6.63	3361	-0.090	0.041	0.069	0.109	171.458567	3.860108	-119.29	-2197.18

## 2.4 Star Slots

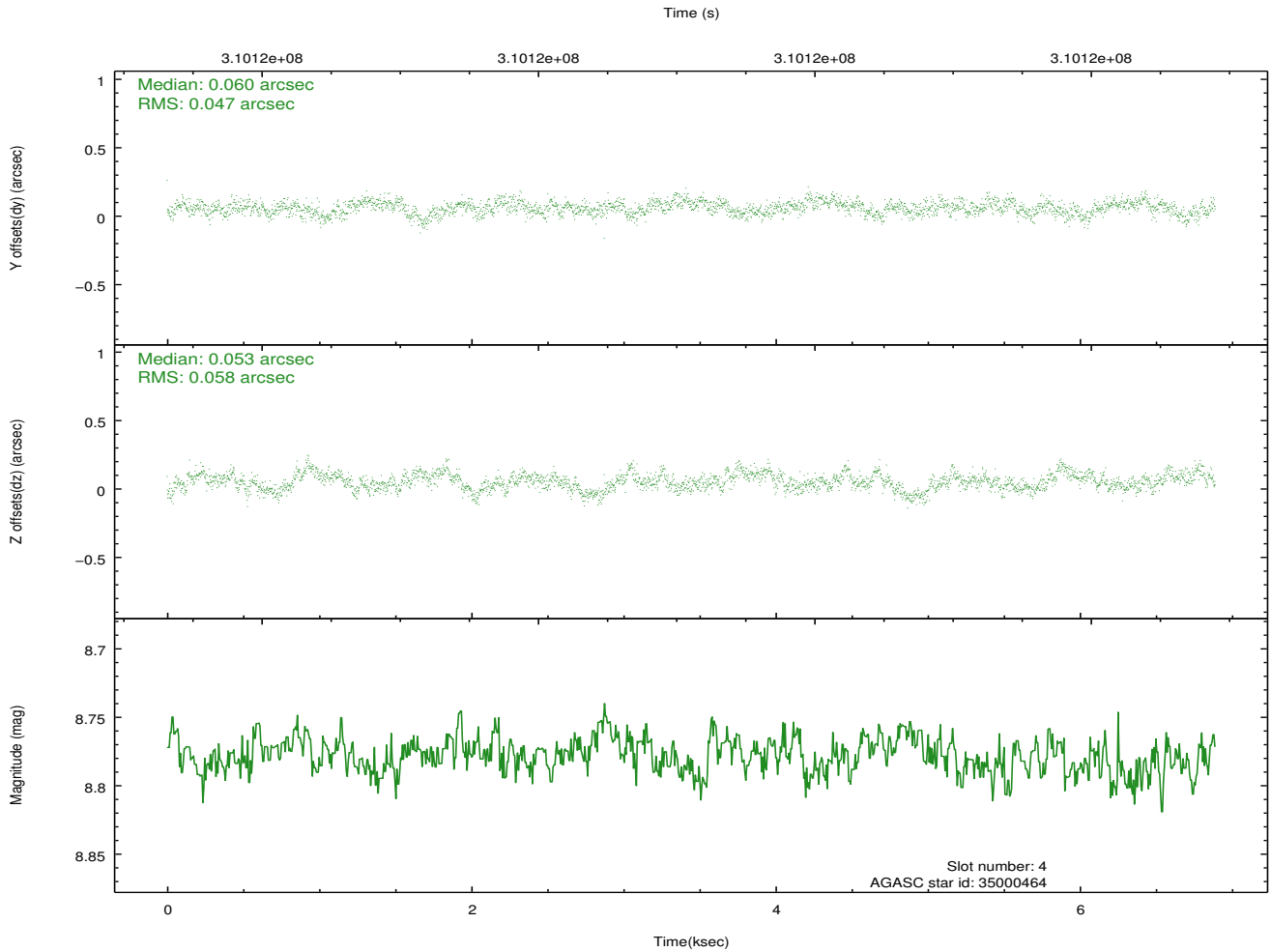
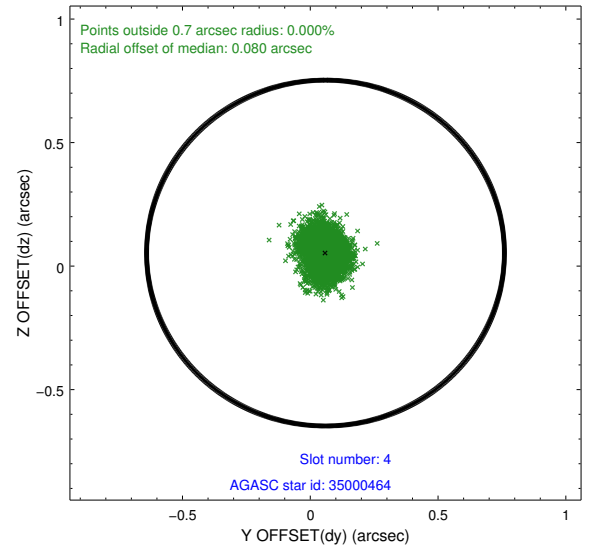
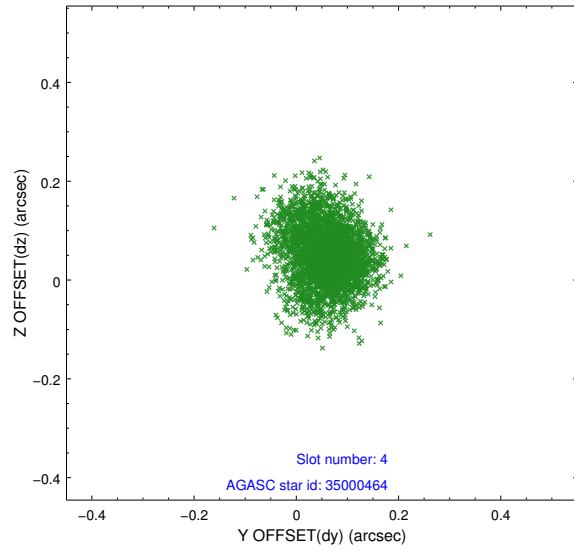
### 2.4.1 Slot 2



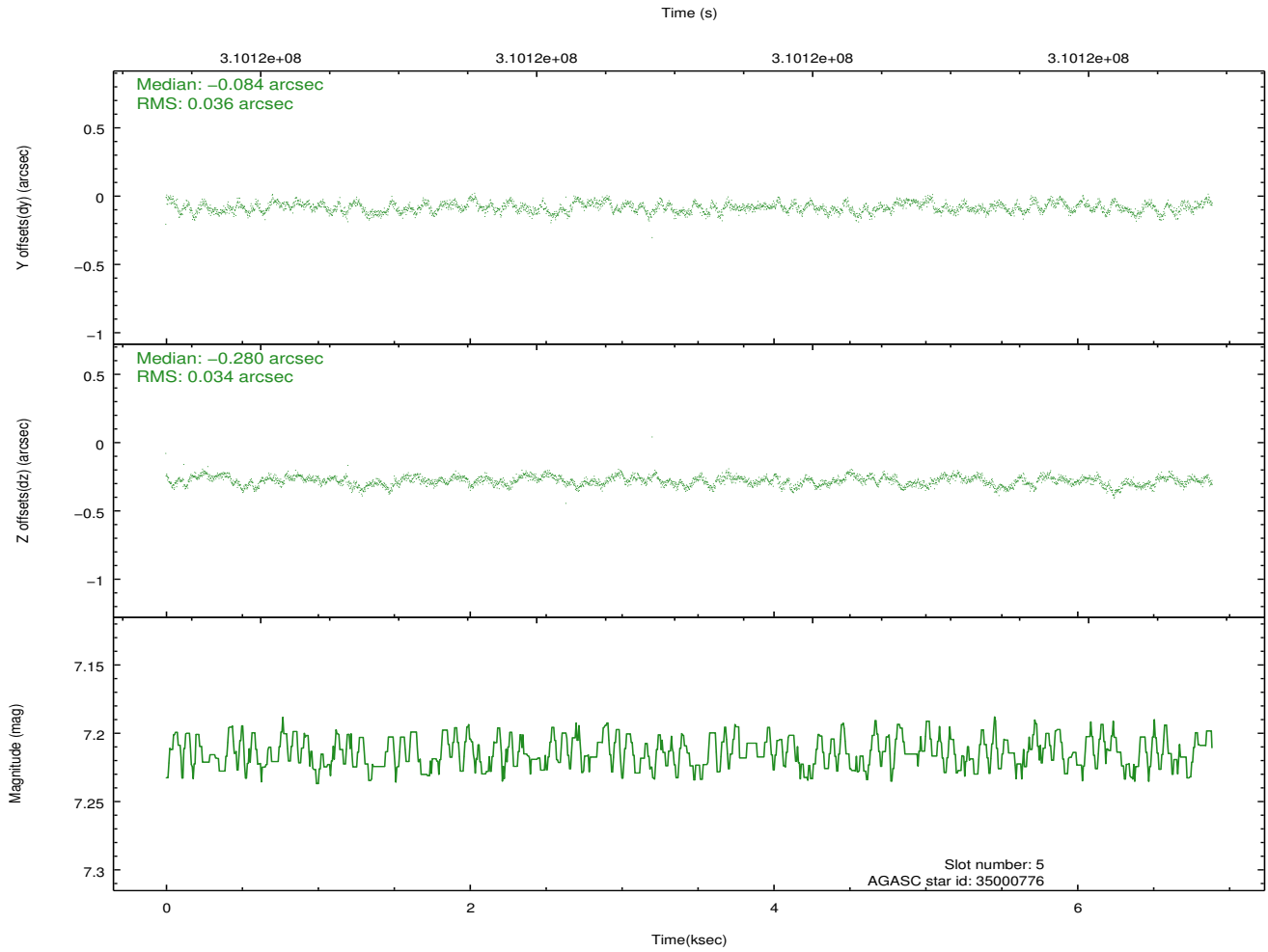
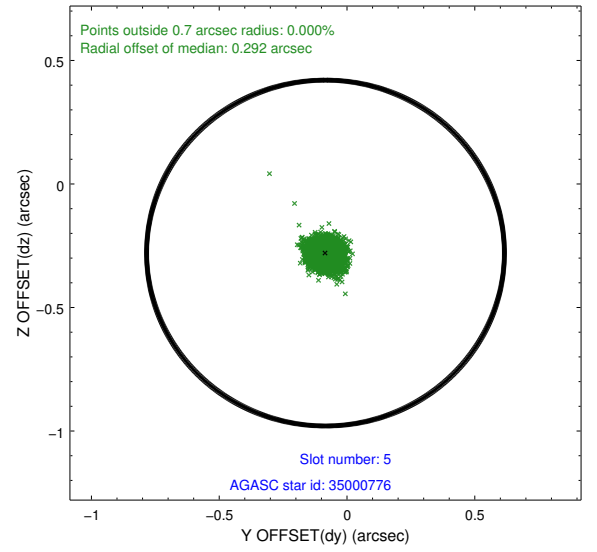
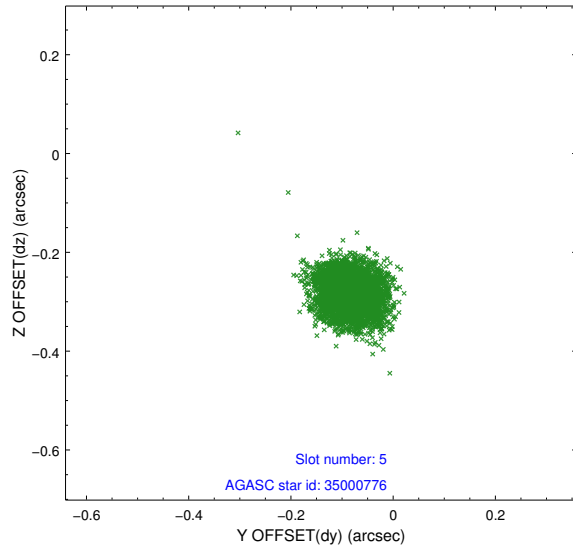
## 2.4.2 Slot 3



### 2.4.3 Slot 4

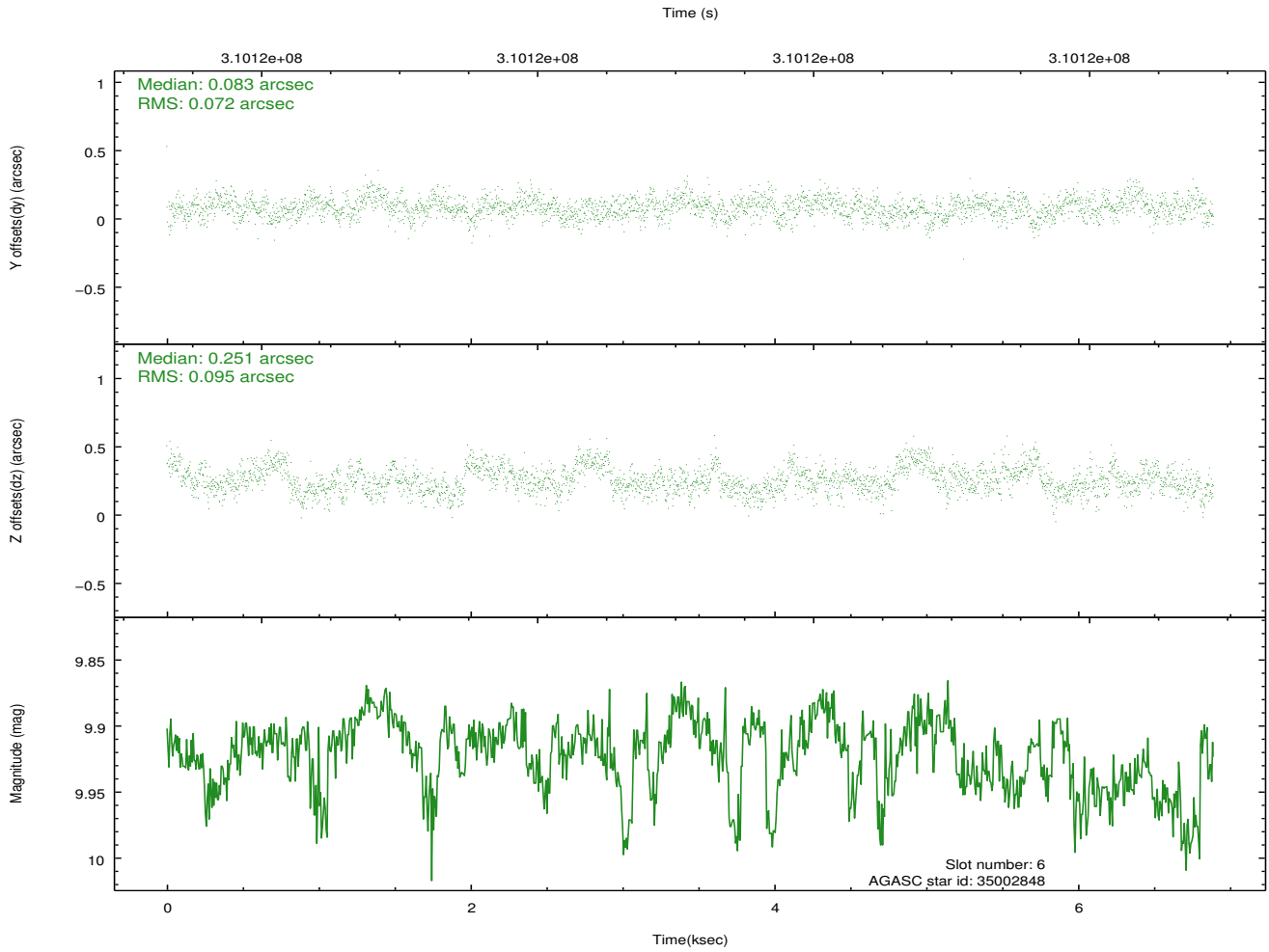
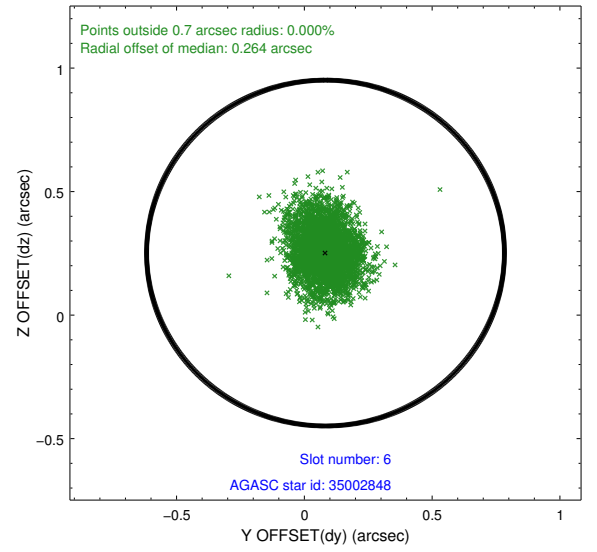
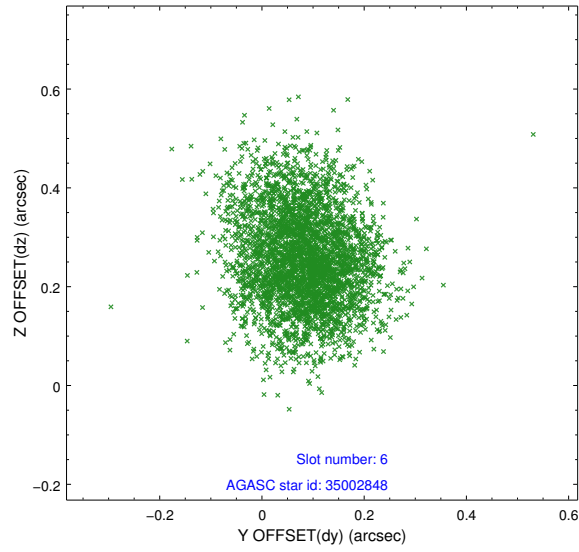


## 2.4.4 Slot 5

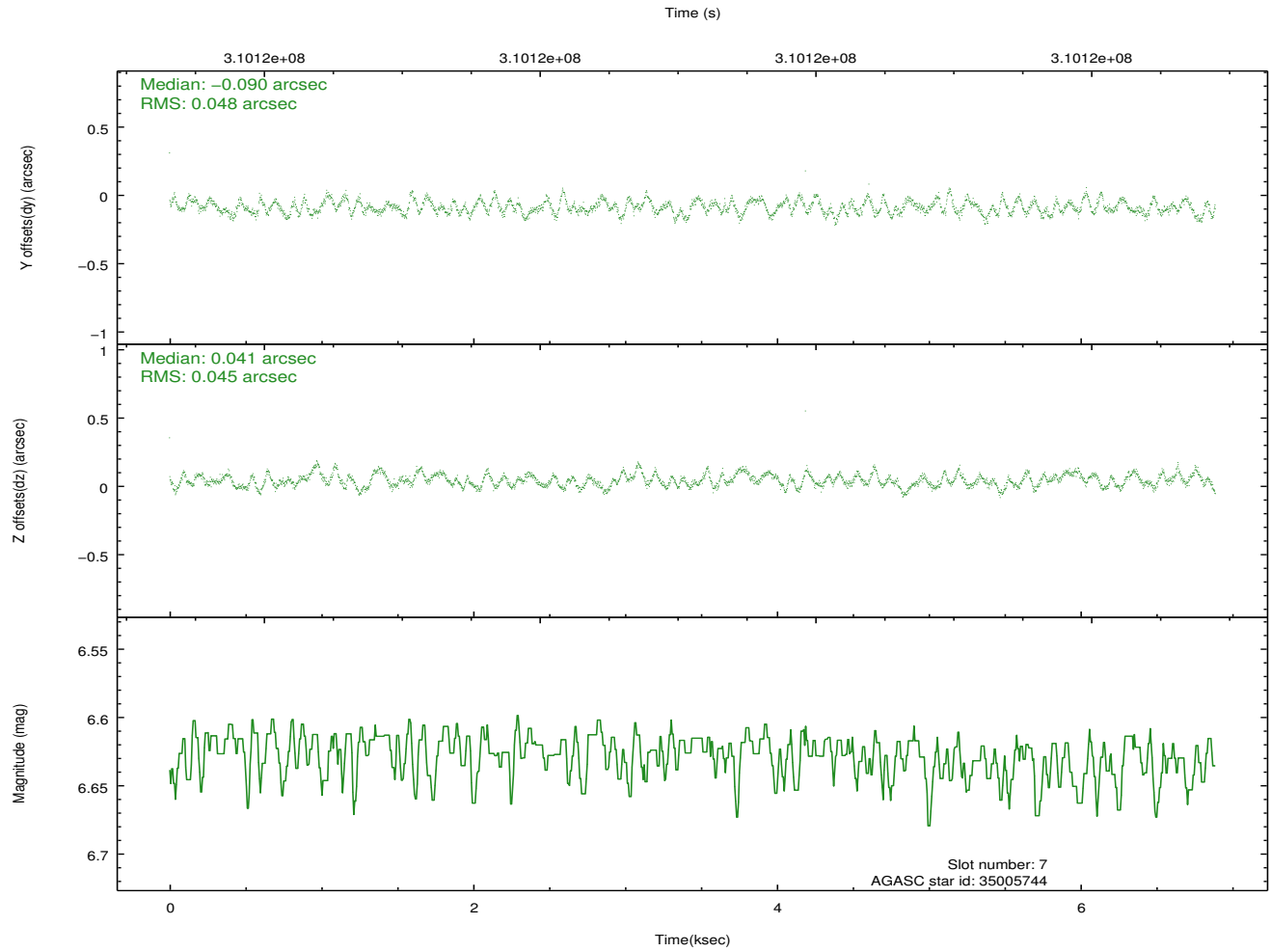
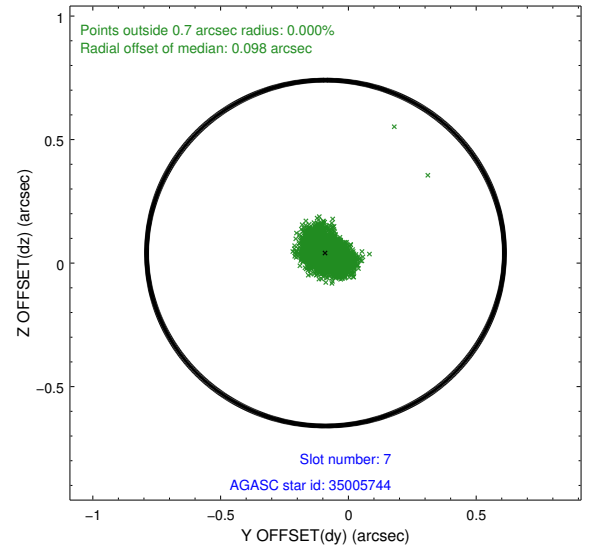
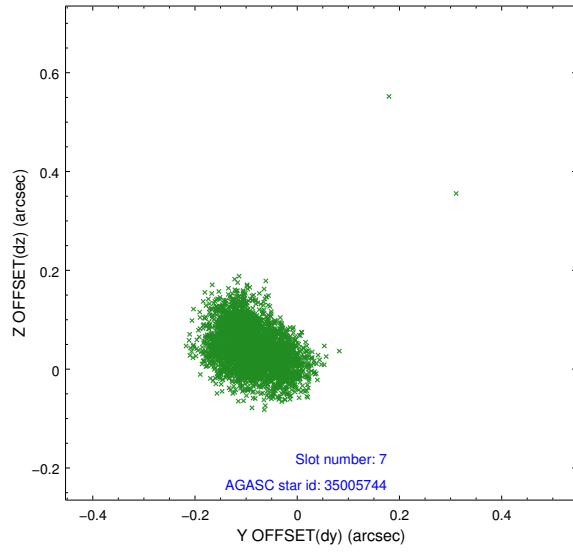




## 2.4.5 Slot 6

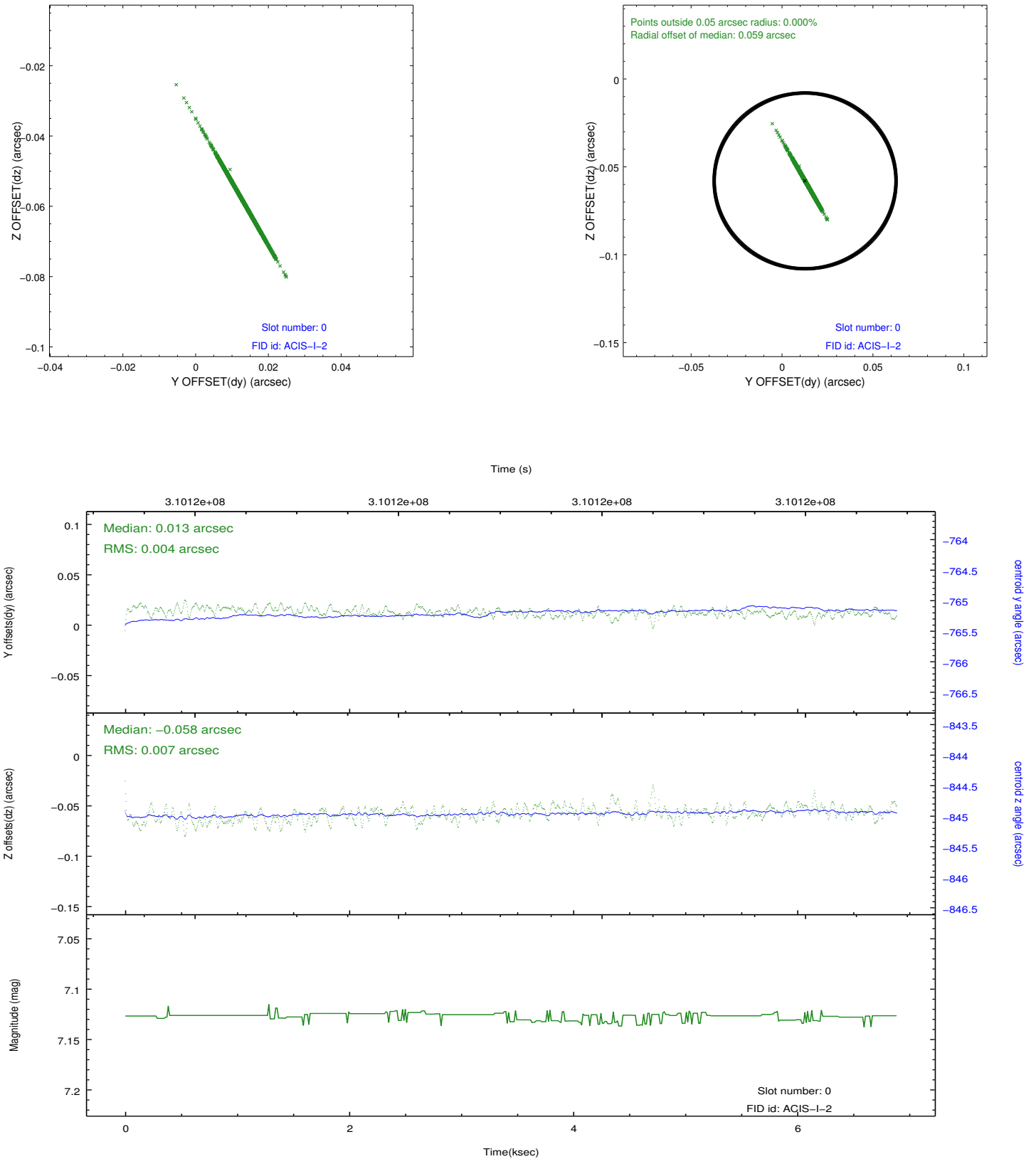


## 2.4.6 Slot 7

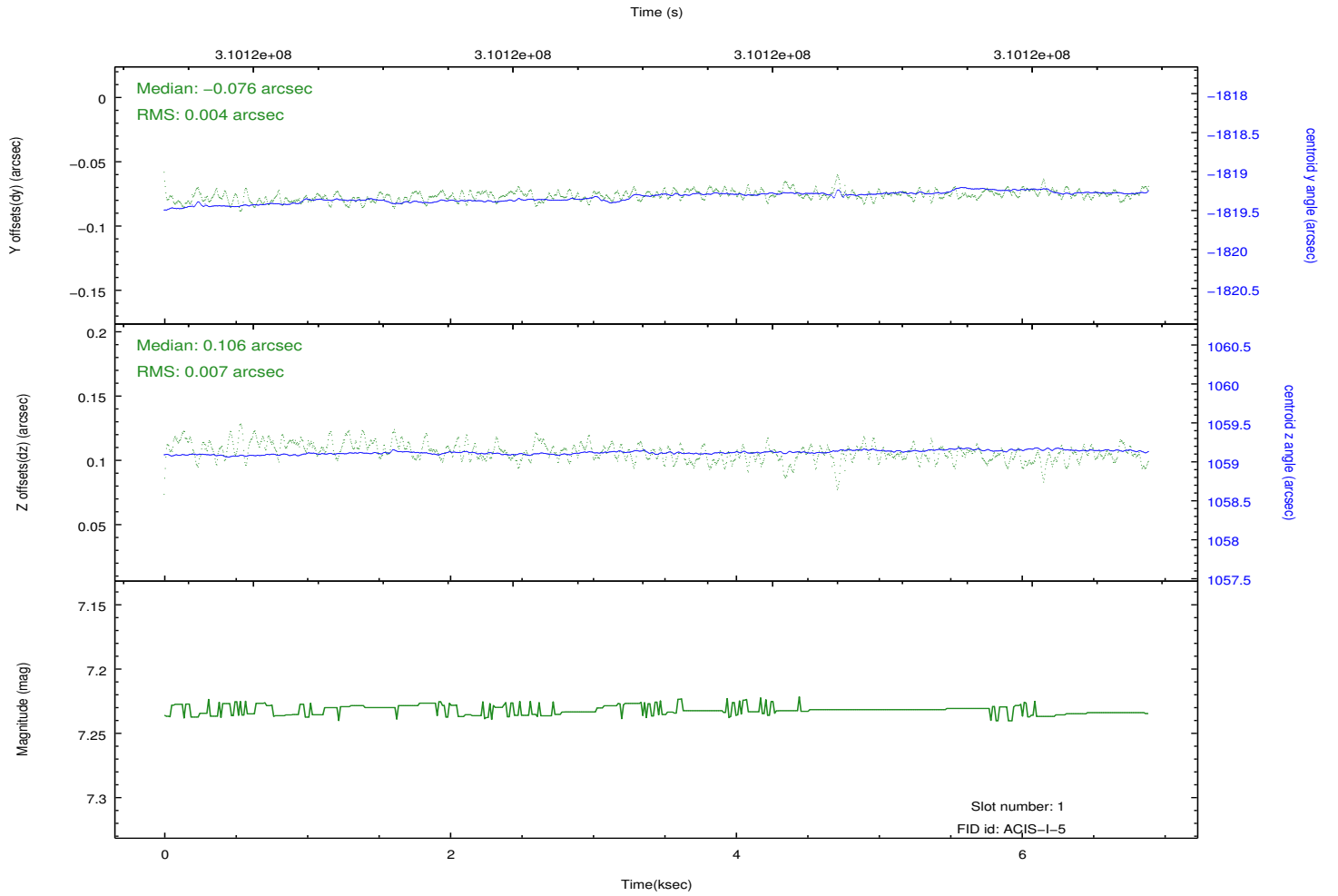
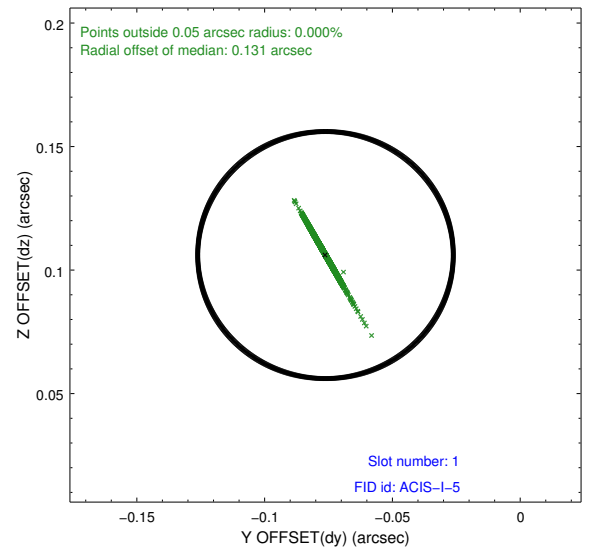
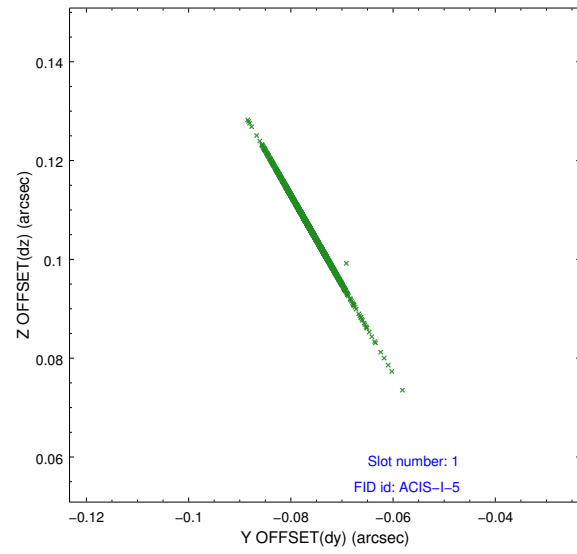


## 2.5 FID Slots

### 2.5.1 Slot 0



## 2.5.2 Slot 1



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.05.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.89040004

### A.2 Comments

Window preference met.