

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3697 - L2 Version 3  
Chandra X-Ray Center

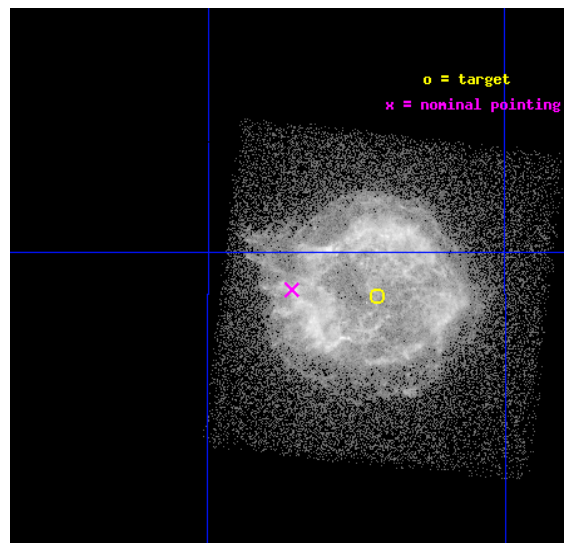
L2 Processing Date : Oct 24 2012

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# 1 Front

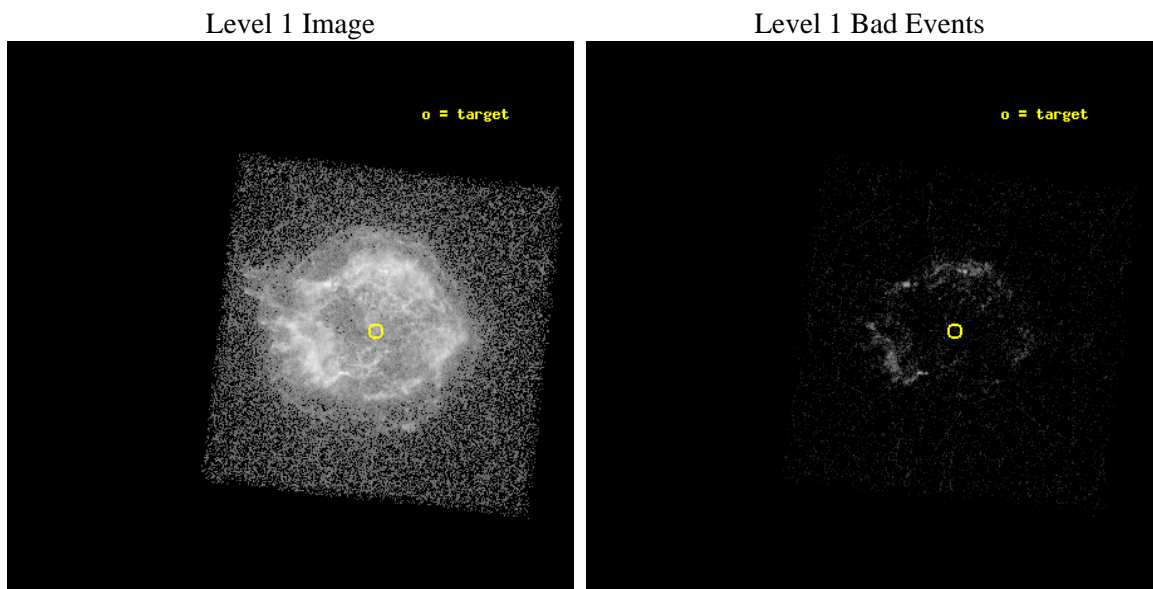
seq_num	590309	Sequence number
obs_id	3697	Observation id
title	AO4A OBSERVATIONS OF THE STANDARD CANDLES CAS A AND G21.5-09	Propo
observer	Dr. CXC Calibration	Principal investigator
object	CAS A[S3,-120,-2.0,0,0]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	350.8575	Observer's specified target RA [deg]
dec_targ	58.814833	Observer's specified target Dec [deg]
ra_nom	350.92940317221	Nominal RA [deg]
dec_nom	58.817221705302	Nominal Dec [deg]
roll_nom	6.4285344258515	Nominal Roll [deg]
revision	3	Processing version of data
ontime	1157.0473317206	Sum of GTIs [s]
livetime	1142.3961017161	Livetime [s]
ontime4	2069.4768002033	Sum of GTIs [s]
ontime5	2069.5178402066	Sum of GTIs [s]
ontime6	2069.3536802232	Sum of GTIs [s]
ontime7	1157.0473317206	Sum of GTIs [s]
ontime8	2069.4357602	Sum of GTIs [s]
ontime9	2069.3947201967	Sum of GTIs [s]
l2events	354251	Number of level 2 events



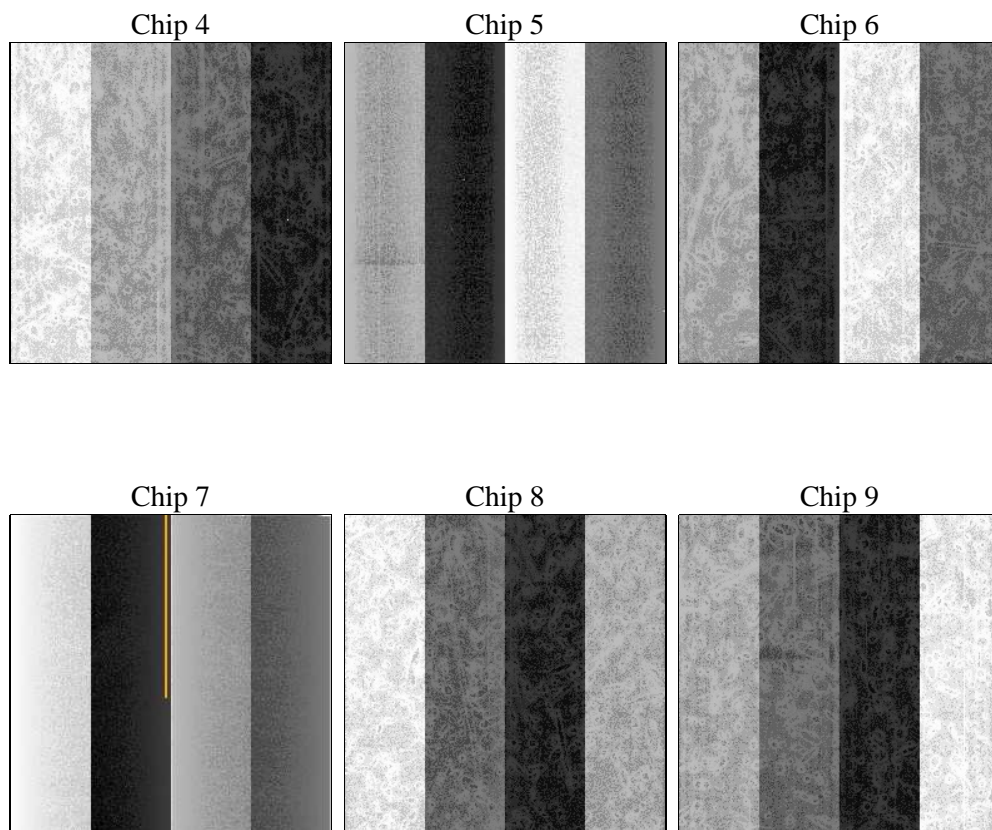
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2119.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	1157.0473317206	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime4	2069.4768002033	Sum of GTIs [s]
date	2012-10-24T18:22:56	Date and time of file creation	ontime5	2069.5178402066	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	2069.3536802232	Sum of GTIs [s]
			ontime7	1157.0473317206	Sum of GTIs [s]
			ontime8	2069.4357602	Sum of GTIs [s]
			ontime9	2069.3947201967	Sum of GTIs [s]
			l1events	397867	Number of level 1 events

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	0	0	0	397867	0	0
rejected events	0	0	0	39740	0	0
rejected %	0%	0%	0%	9%	0%	0%

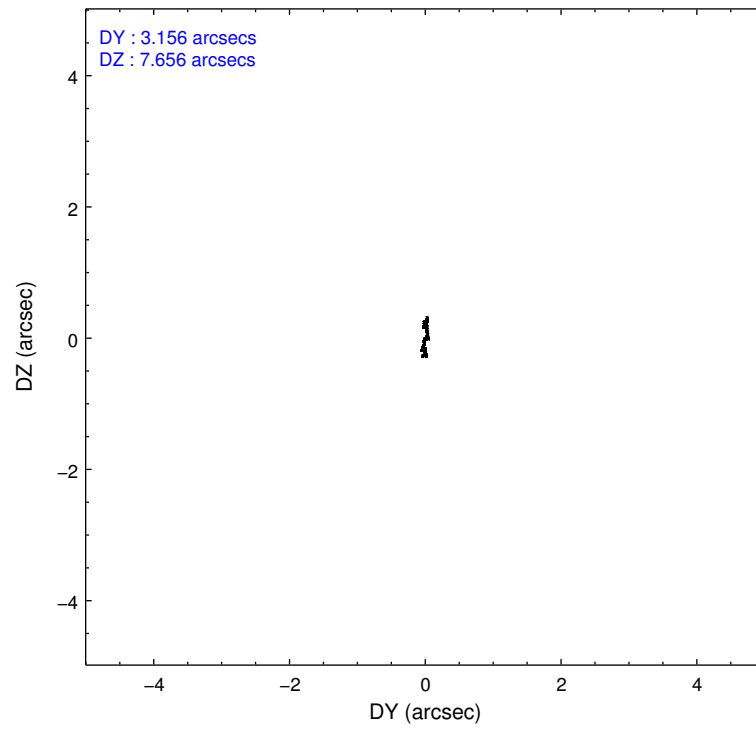
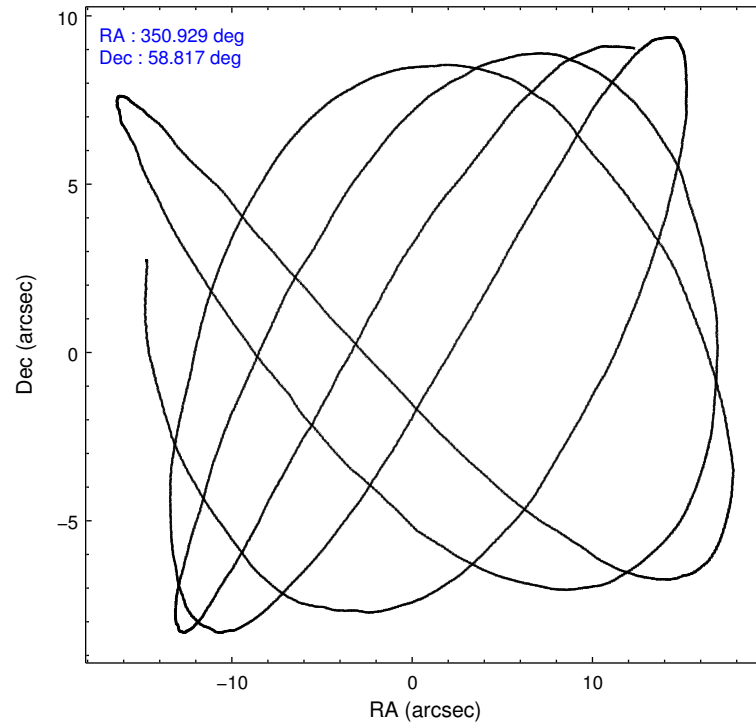
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	0	0	0	89541	0	0
	0%	0%	0%	22%	0%	0%
grade 1 events	0	0	0	1861	0	0
	0%	0%	0%	0%	0%	0%
grade 2 events	0	0	0	96491	0	0
	0%	0%	0%	24%	0%	0%
grade 3 events	0	0	0	42074	0	0
	0%	0%	0%	10%	0%	0%
grade 4 events	0	0	0	41473	0	0
	0%	0%	0%	10%	0%	0%
grade 5 events	0	0	0	7523	0	0
	0%	0%	0%	1%	0%	0%
grade 6 events	0	0	0	89610	0	0
	0%	0%	0%	22%	0%	0%
grade 7 events	0	0	0	29294	0	0
	0%	0%	0%	7%	0%	0%

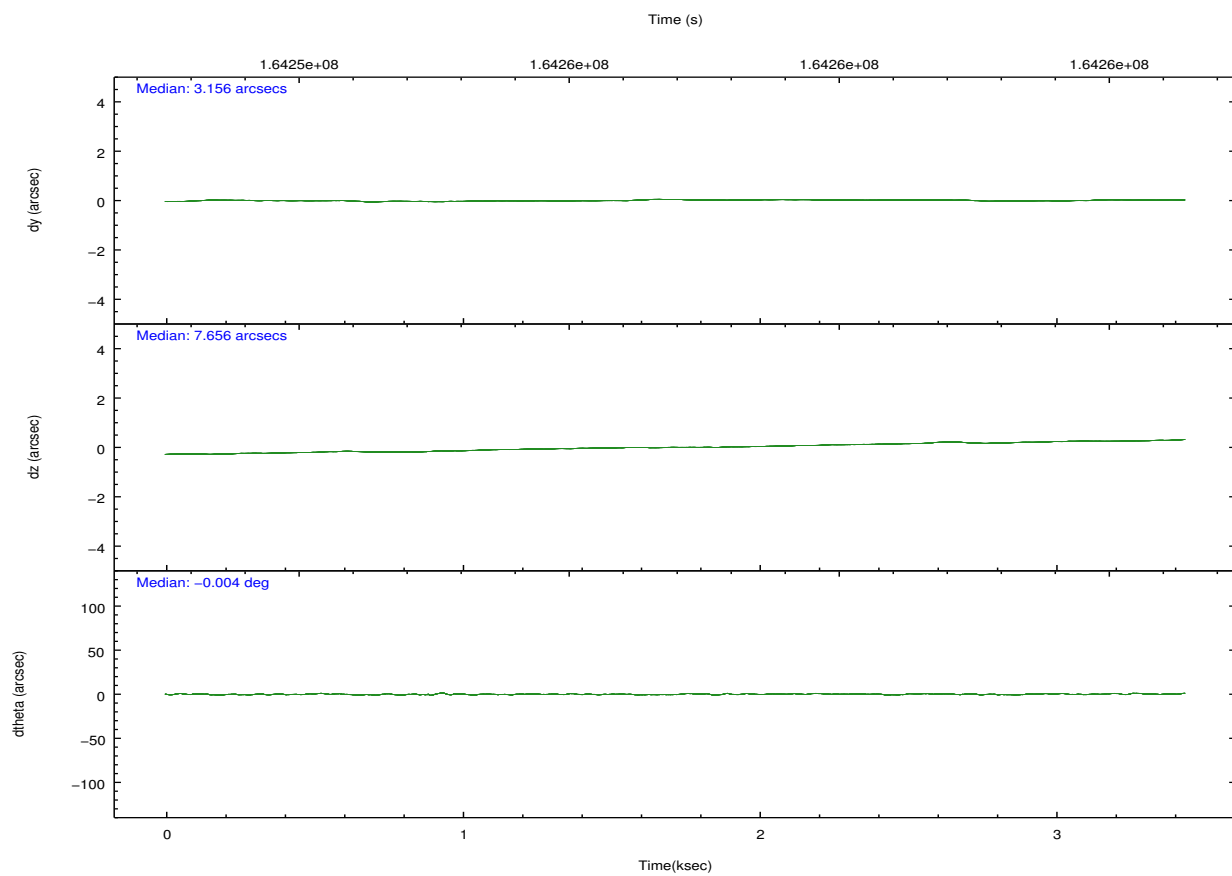
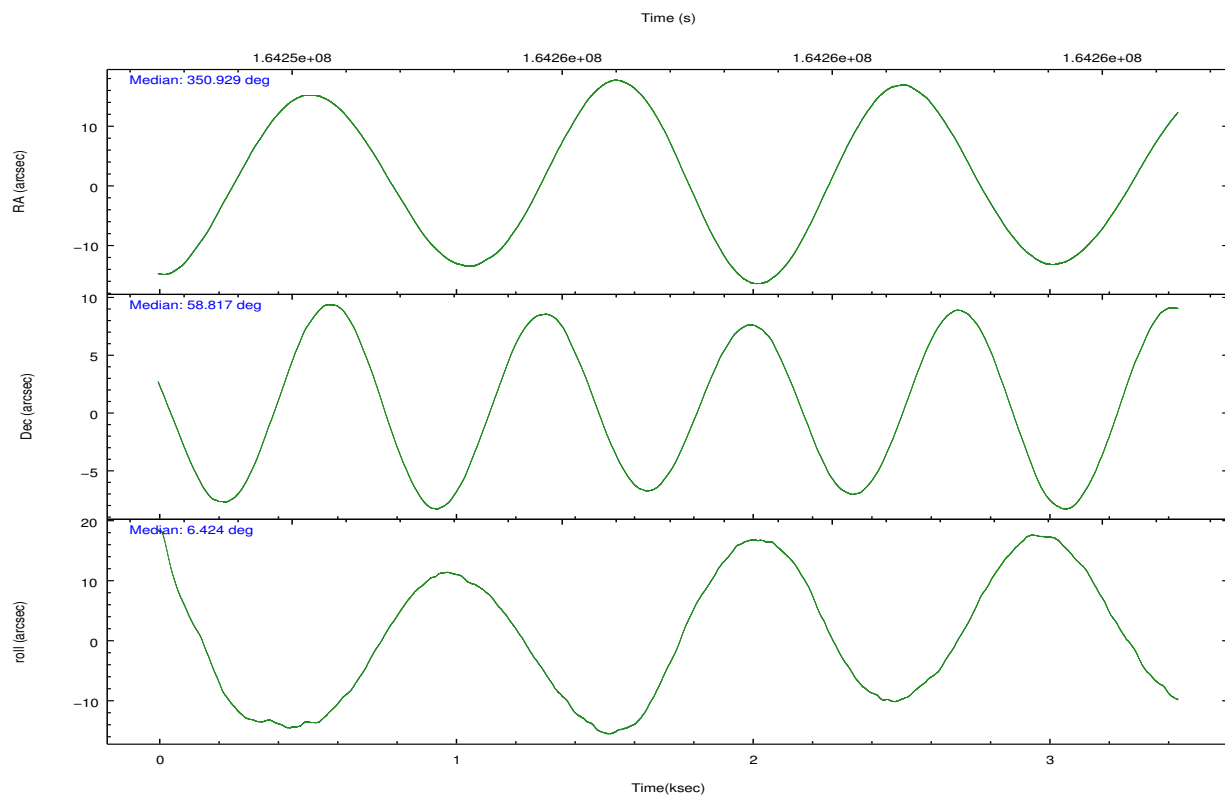


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-456789	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	350.887702	350.9294031722069	CCD I2 on	Y	N
[deg] Pointing Dec	58.800794	58.81722170530212	CCD I3 on	Y	N
[deg] Pointing Roll	6.307582	6.428534425851455	CCD S0 on	N	Y
[s] Window start time (MET)	164073664.184000	164073664.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	168134464.184000	168134464.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S5 on	N	Y
[mm] SIM translation stage offset	0	0.01005778216563158	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	164254993.184000	164253463.46452	On-chip summing requested	N	N
Observation start date	2003-03-17T02:22:09	2003-03-17T01:57:43	Subarray requested	NONE	NONE
[s] Observation end time (MET)	164257112.184000	164257300.03968	Alternating exposures requested	N	N
Observation end date	2003-03-17T02:57:28	2003-03-17T03:01:40	[s] Primary exposure time	0.000000	3.2
Read mode	TIMED	TIMED			

## 2.3 Aspect



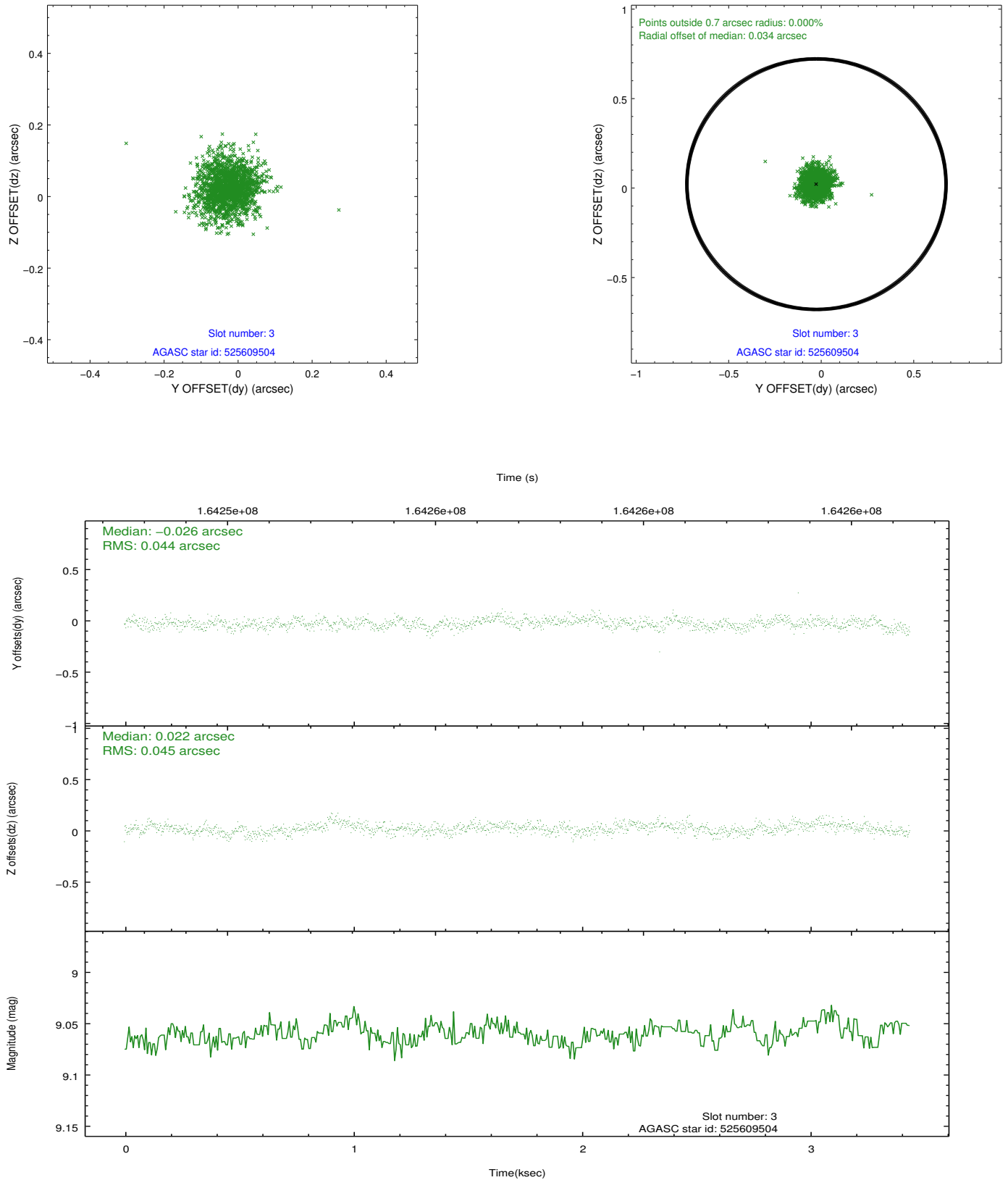


### Slot Statistics

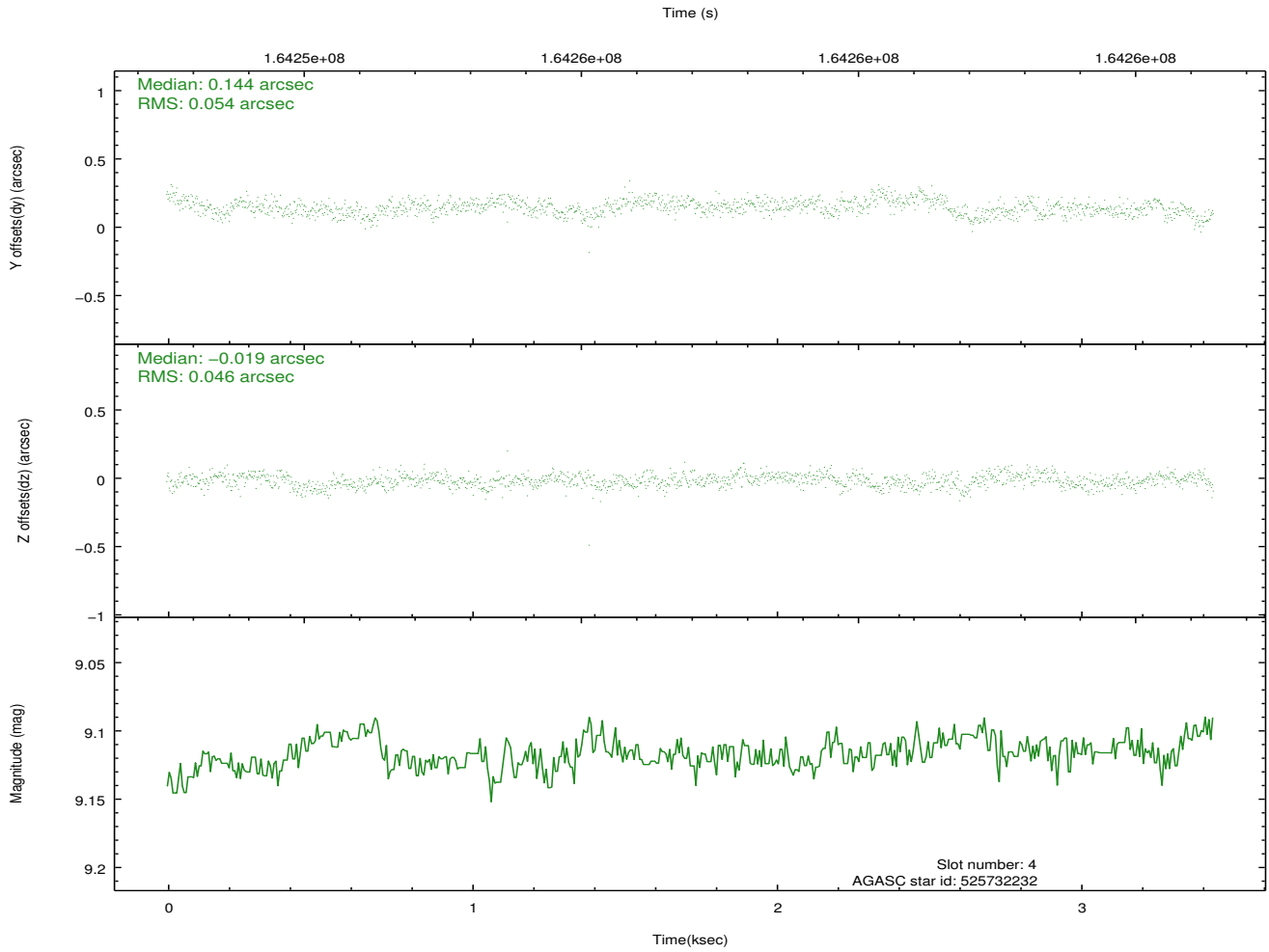
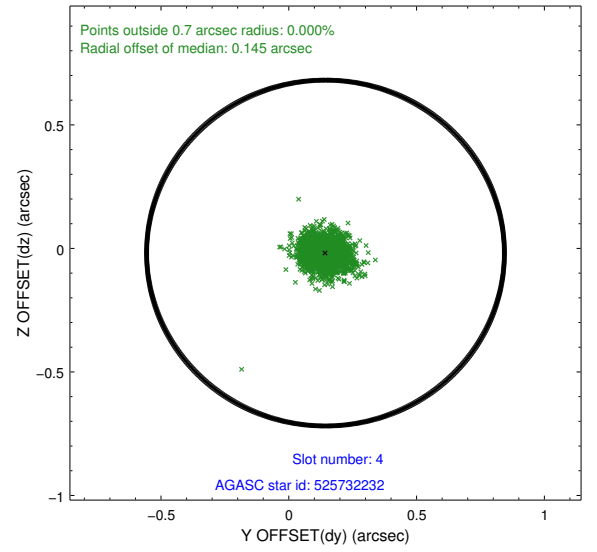
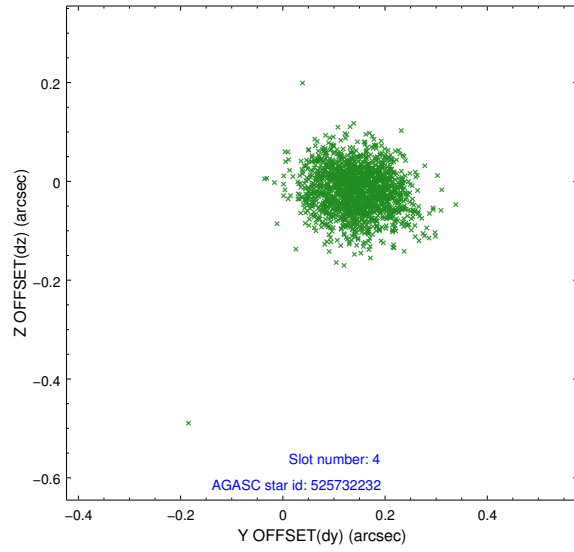
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	839	-0.027	-0.009	0.005	0.011	0.000000	0.000000	-755.83	-1728.80
1	FID	ACIS-S-4	7.20	839	0.014	0.016	0.007	0.011	0.000000	0.000000	2156.66	177.81
2	FID	ACIS-S-6	7.36	839	-0.015	0.000	0.007	0.013	0.000000	0.000000	408.53	817.28
3	GUIDE	525609504	9.06	1678	-0.026	0.022	0.066	0.109	349.896632	58.356658	-2034.15	-1369.76
4	GUIDE	525732232	9.12	1677	0.144	-0.019	0.074	0.118	351.669550	58.757012	1434.40	-309.49
5	GUIDE	525735976	8.84	1678	-0.070	-0.027	0.079	0.127	350.142956	58.277622	-1605.93	-1709.52
6	GUIDE	525732896	9.70	1678	-0.066	-0.021	0.108	0.175	351.456486	59.410070	1276.48	2069.34
7	GUIDE	525732528	9.36	1676	0.018	0.041	0.082	0.137	351.607241	59.298932	1513.43	1645.85

## 2.4 Star Slots

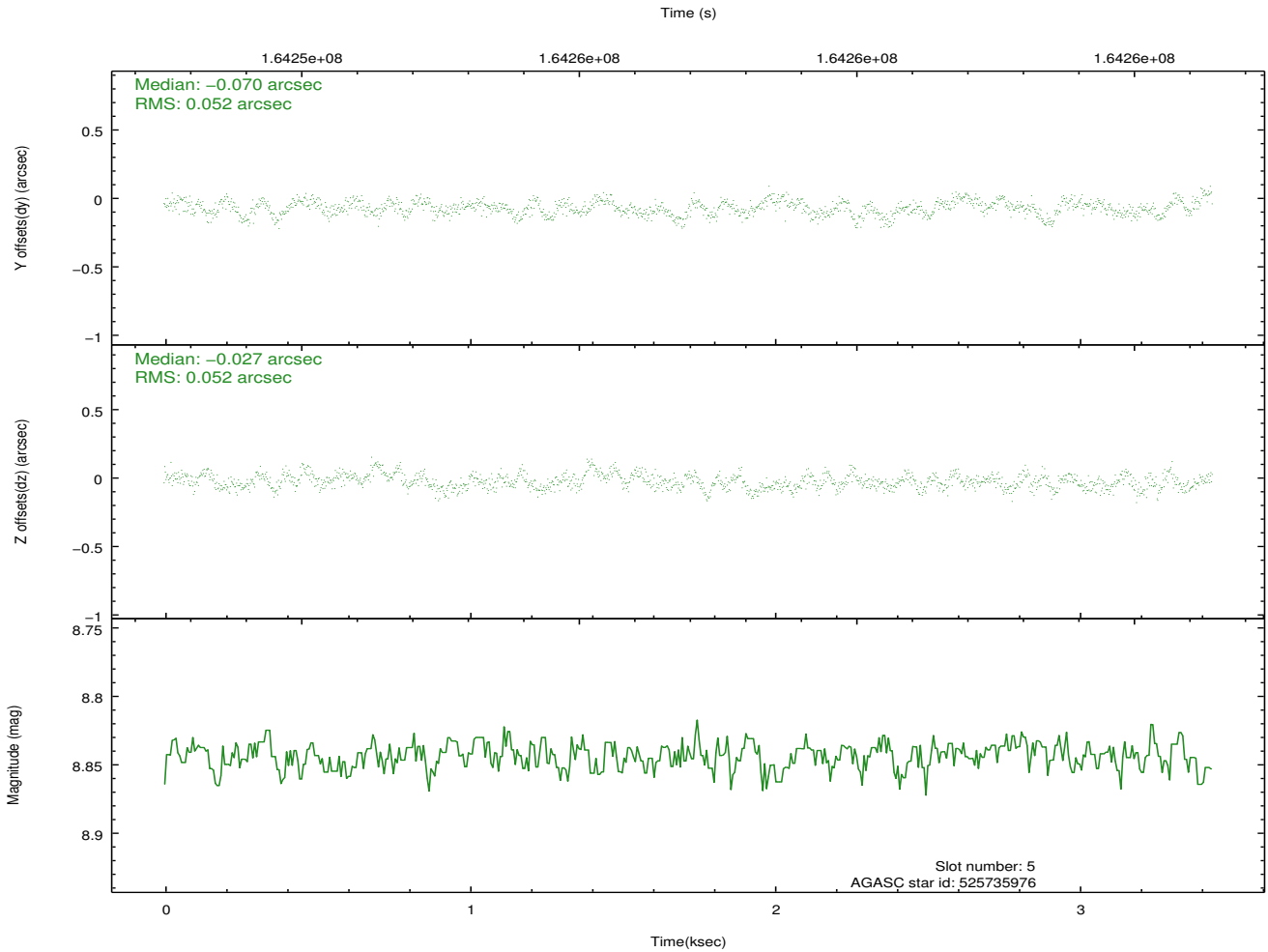
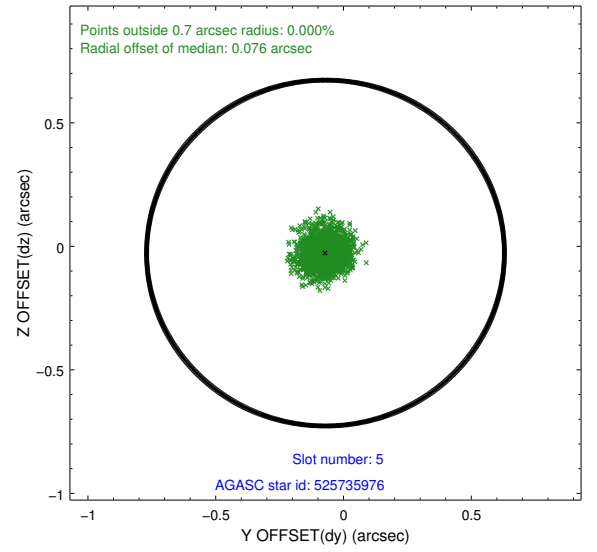
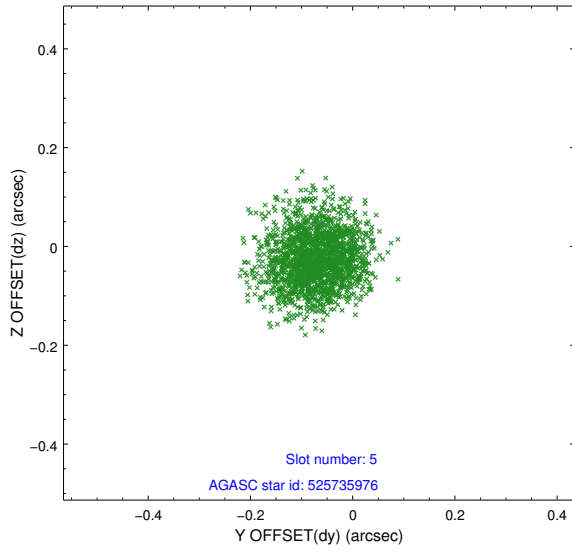
### 2.4.1 Slot 3



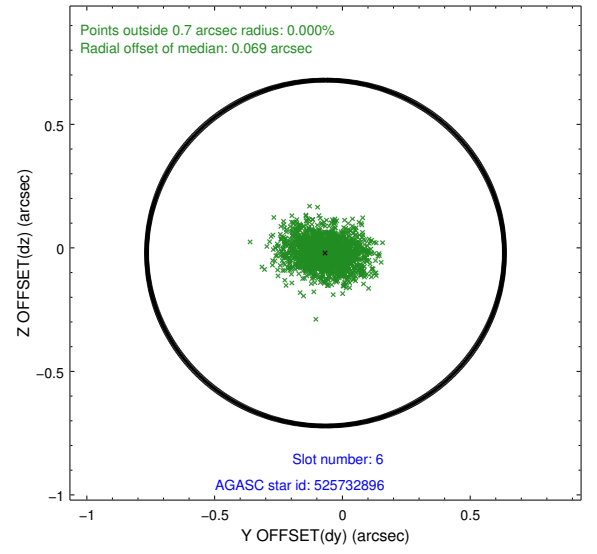
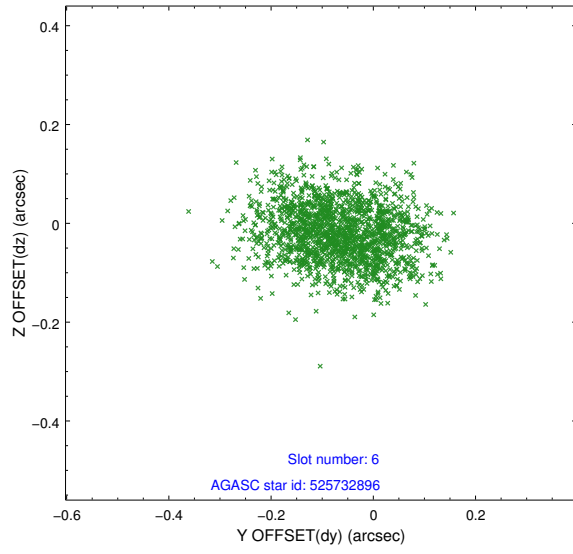
## 2.4.2 Slot 4



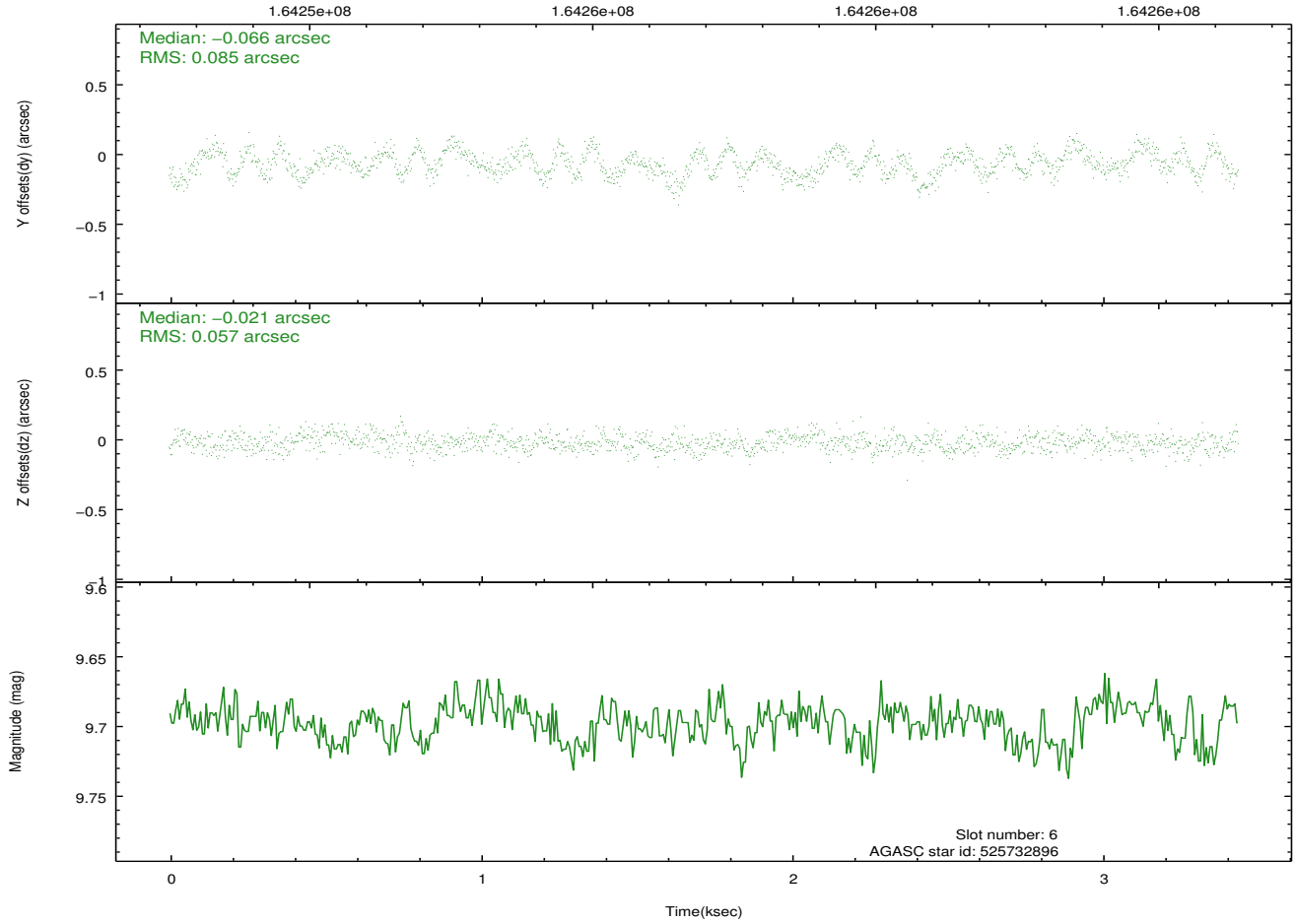
### 2.4.3 Slot 5



## 2.4.4 Slot 6

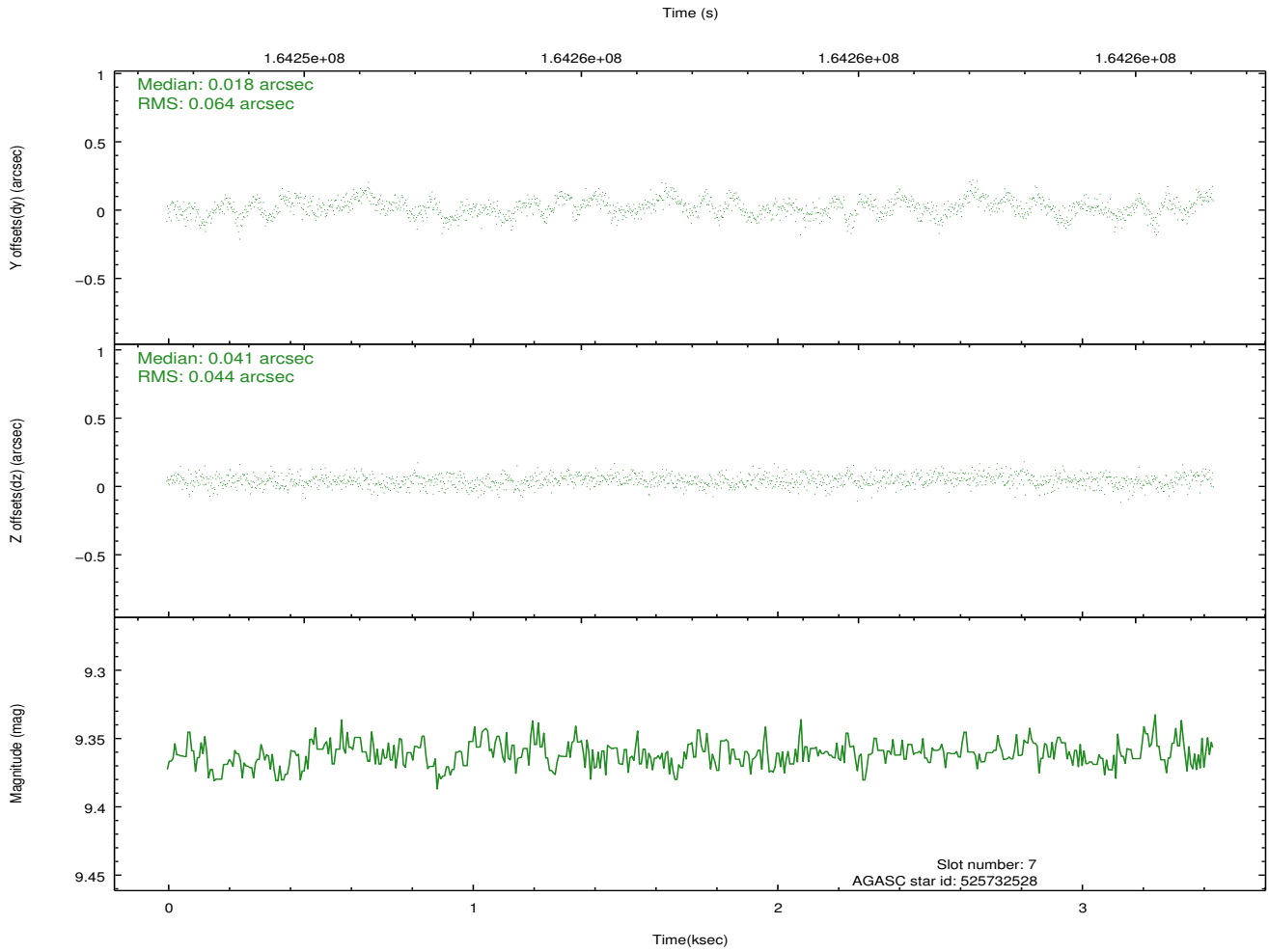
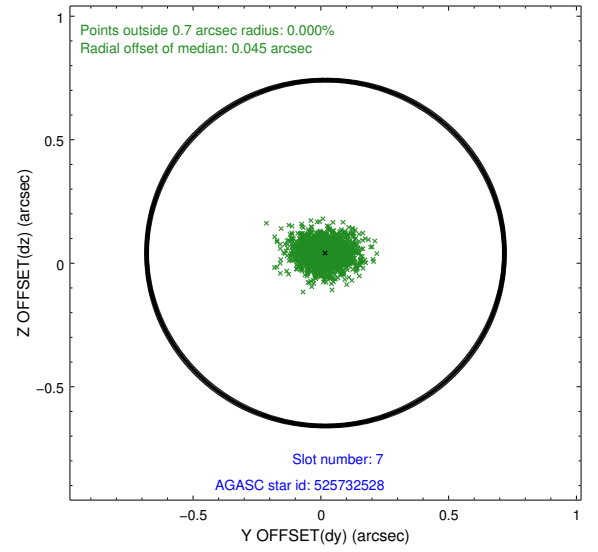
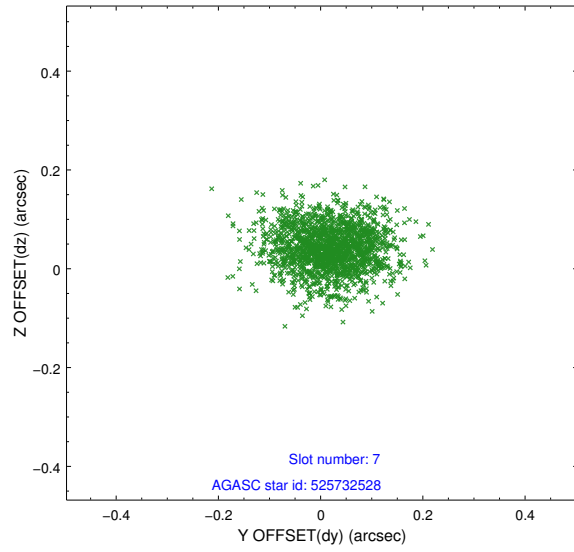


Time (s)



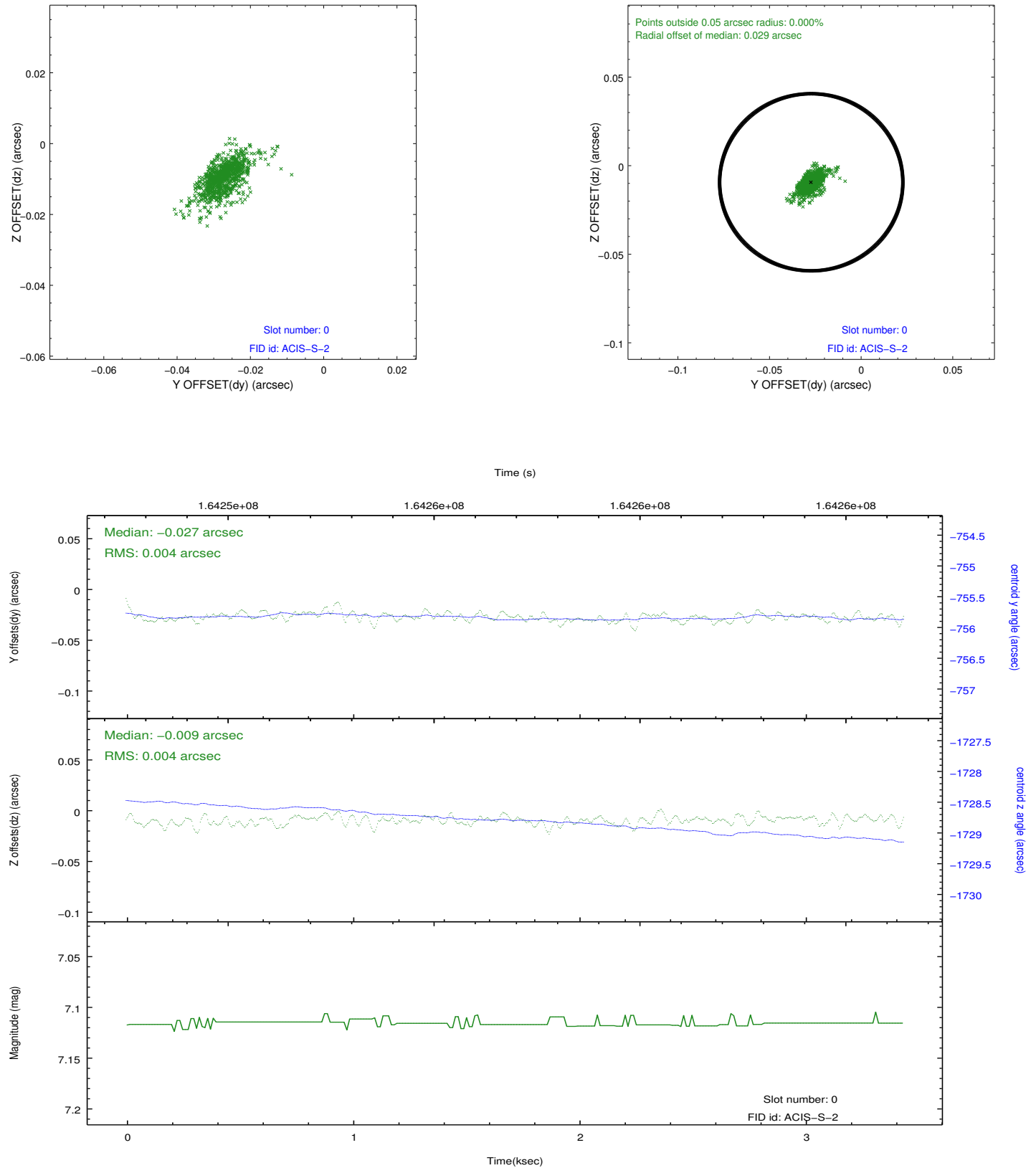


## 2.4.5 Slot 7

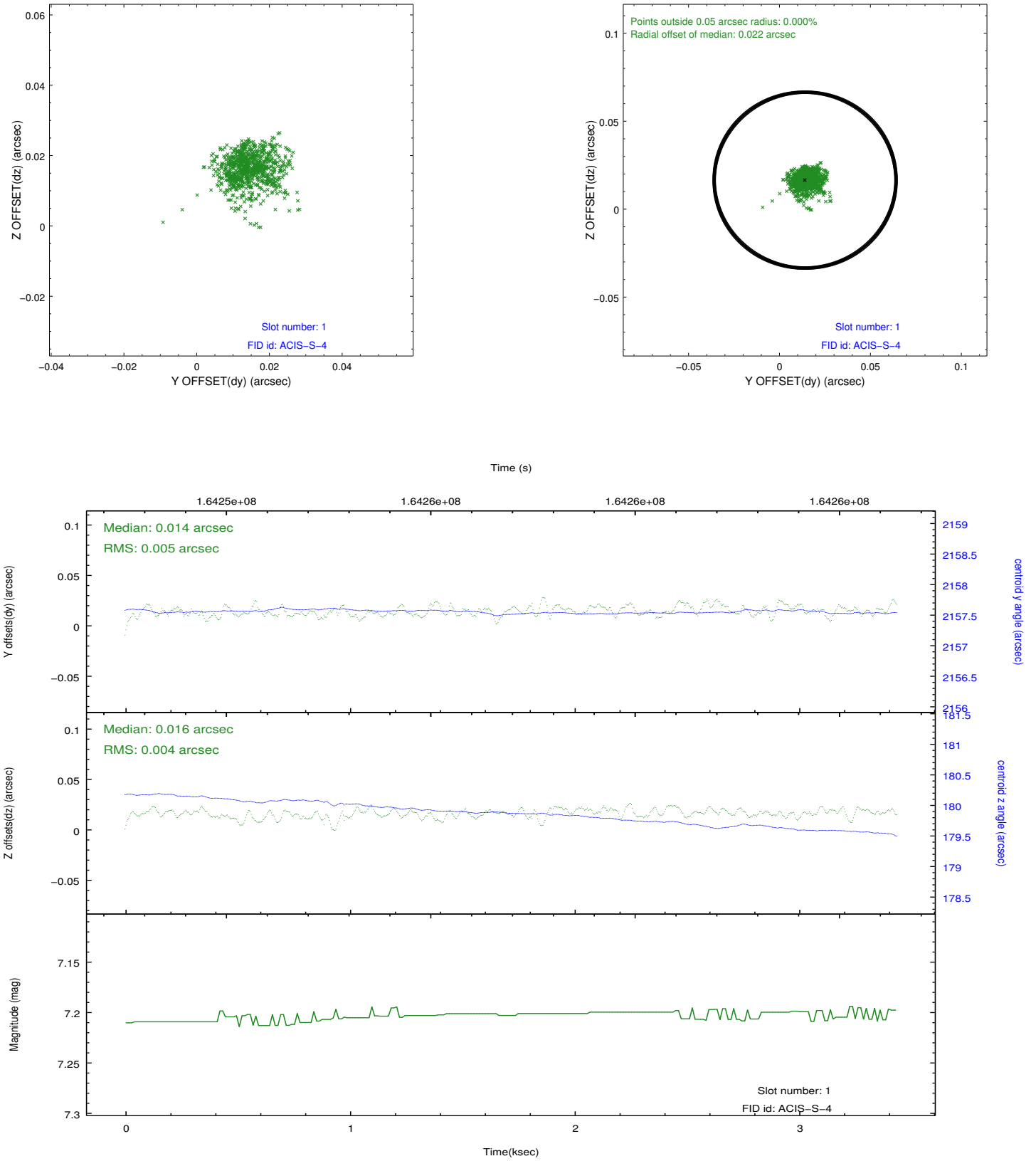


## 2.5 FID Slots

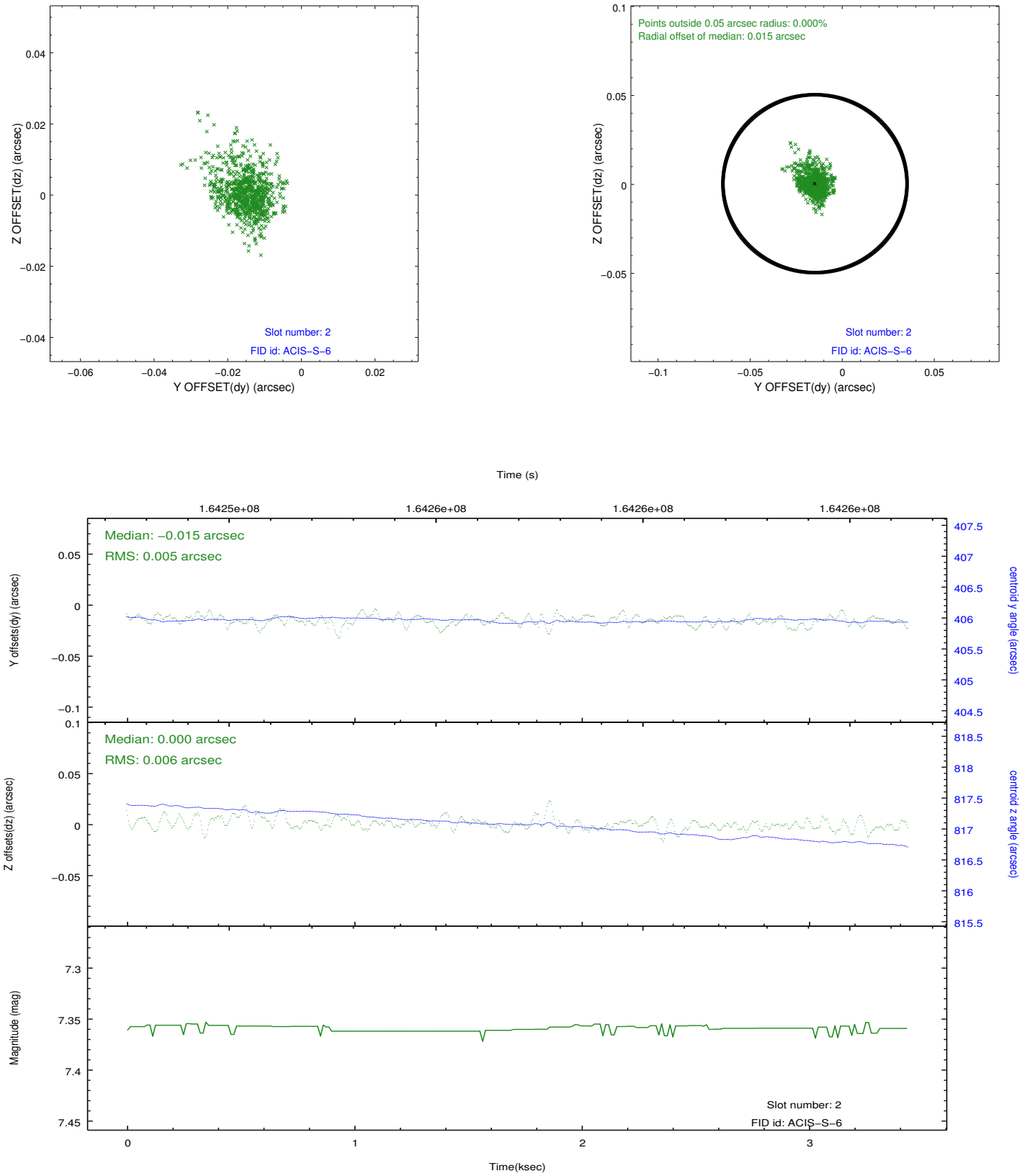
### 2.5.1 Slot 0



## 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)	2012.11.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.156

## A.2 Comments

Window constraint met. Because the used detector is a subset of the planned detector, the difference between planned and actual does not affect the observation.