

# V&V Reference Report

## L2 ASCDS Version : 10.6.4.1

Observation 21861 - L2 Version 1  
Chandra X-Ray Center

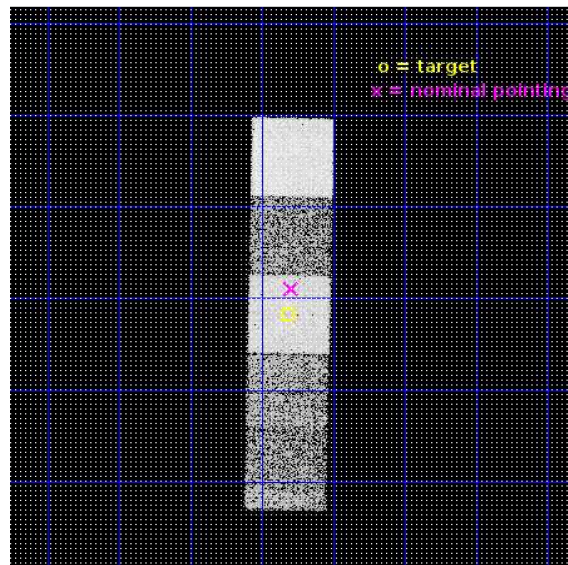
L2 Processing Date : Oct 4 2018

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# 1 Front

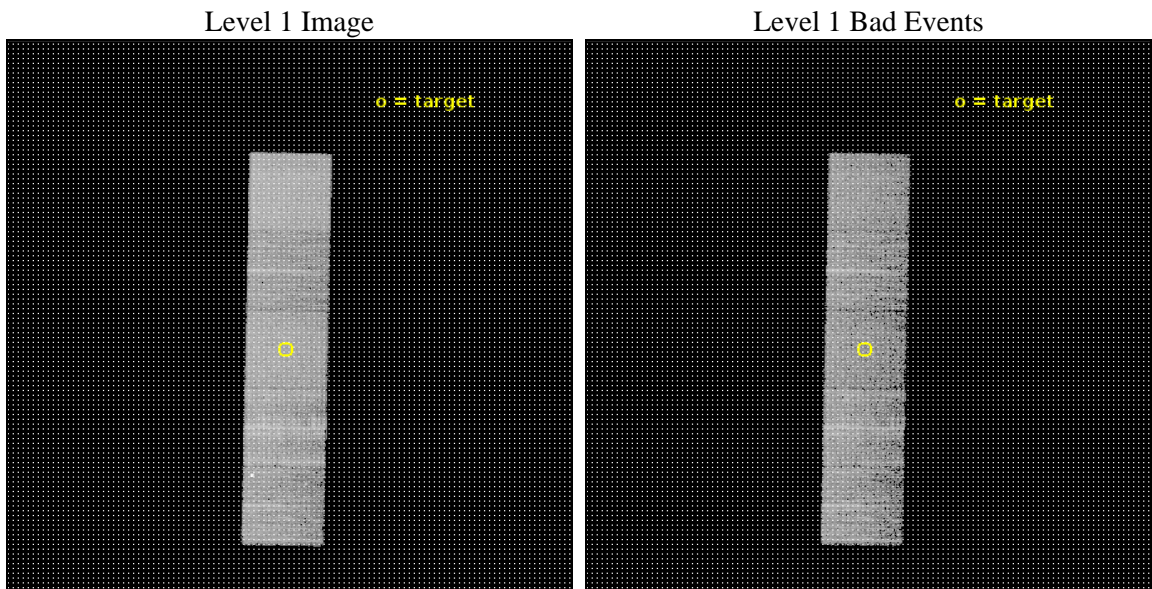
seq_num	100174	Sequence number
obs_id	21861	Observation id
title	Chandra Observations of the High-Heliospheric Latitude Comet 21P/Giacobini-Zinner	Proposal title
observer	Bradford Snios	Principal investigator
object	21P/Giacobini-Zinner	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	104.578931	Observer's specified target RA [deg]
dec_targ	-4.362424	Observer's specified target Dec [deg]
ra_nom	104.57324238777	Nominal RA [deg]
dec_nom	-4.3162885992351	Nominal Dec [deg]
roll_nom	91.156190693622	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5983.000046134	Sum of GTIs [s]
livetime	5904.8277459107	Livetime [s]
ontime5	5983.000046134	Sum of GTIs [s]
ontime6	5983.000046134	Sum of GTIs [s]
ontime7	5983.000046134	Sum of GTIs [s]
ontime8	5983.000046134	Sum of GTIs [s]
ontime9	5983.000046134	Sum of GTIs [s]
l2events	73687	Number of level 2 events



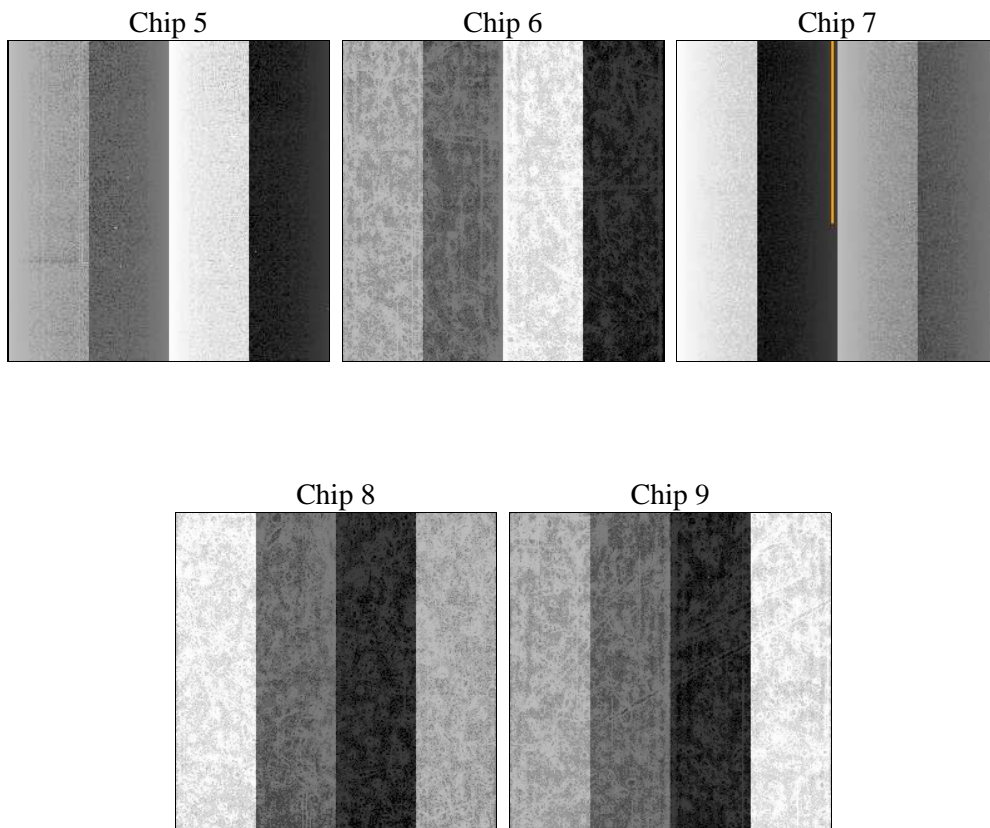
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5800.000000	[s] Scheduled observation exposure time
ascdsver	10.6.4.1	Processing system revision	ontime	5983.000046134	Sum of GTIs [s]
caldsver	4.8.0	&#160	ontime5	5983.000046134	Sum of GTIs [s]
date	2018-10-04T18:54:36	Date and time of file creation	ontime6	5983.000046134	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	5983.000046134	Sum of GTIs [s]
			ontime8	5983.000046134	Sum of GTIs [s]
			ontime9	5983.000046134	Sum of GTIs [s]
			l1events	299496	Number of level 1 events

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	75188	47427	61766	65566	49549
rejected events	40913	42287	36136	48232	42564
rejected %	54%	89%	58%	73%	85%

	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1994	1784	2280	5504	3628
	2%	3%	3%	8%	7%
grade 1 events	168	28	99	45	45
	0%	0%	0%	0%	0%
grade 2 events	11597	1326	5809	4259	1356
	15%	2%	9%	6%	2%
grade 3 events	1214	549	2214	1984	585
	1%	1%	3%	3%	1%
grade 4 events	1122	516	2141	1878	577
	1%	1%	3%	2%	1%
grade 5 events	5378	2312	6075	3527	2527
	7%	4%	9%	5%	5%
grade 6 events	20199	1253	14627	4708	1238
	26%	2%	23%	7%	2%
grade 7 events	33516	39659	28521	43661	39593
	44%	83%	46%	66%	79%

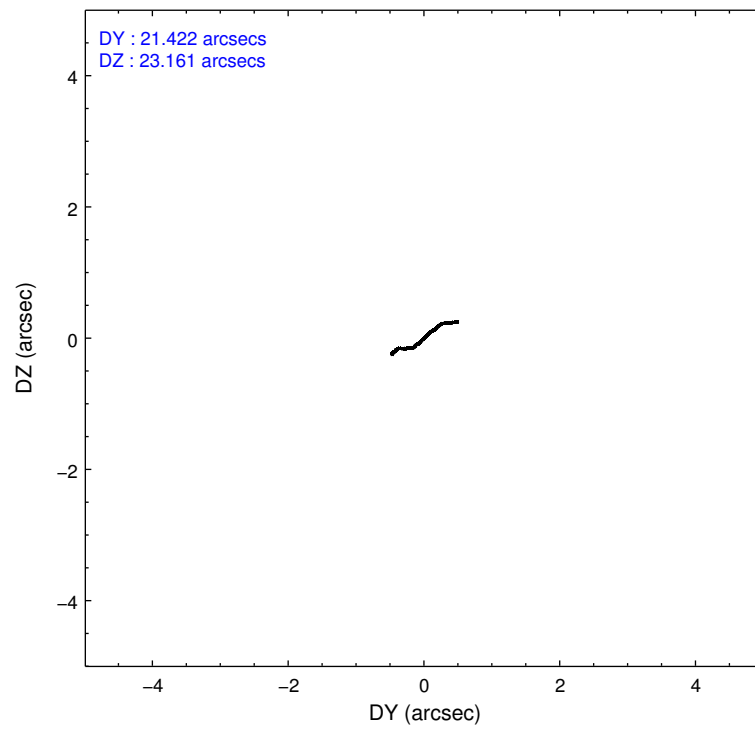
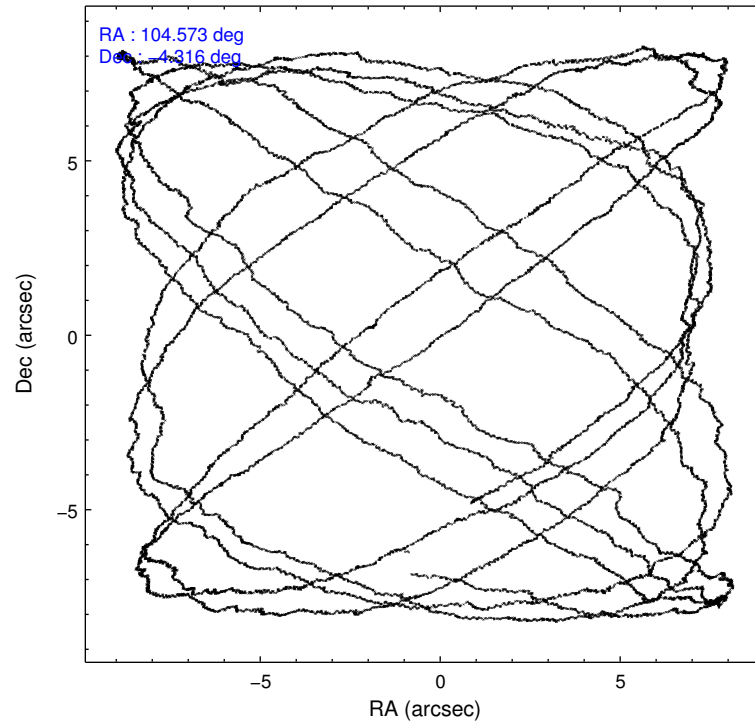


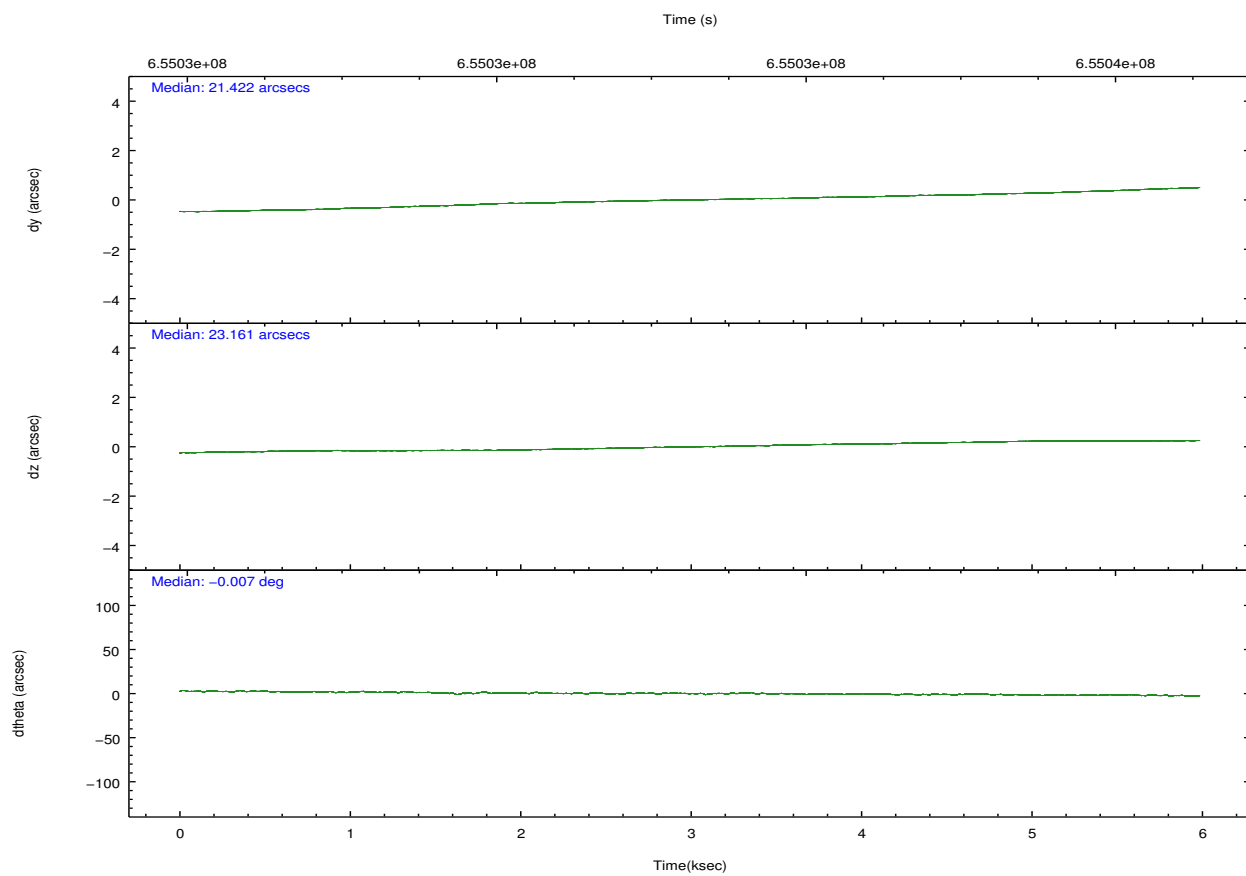
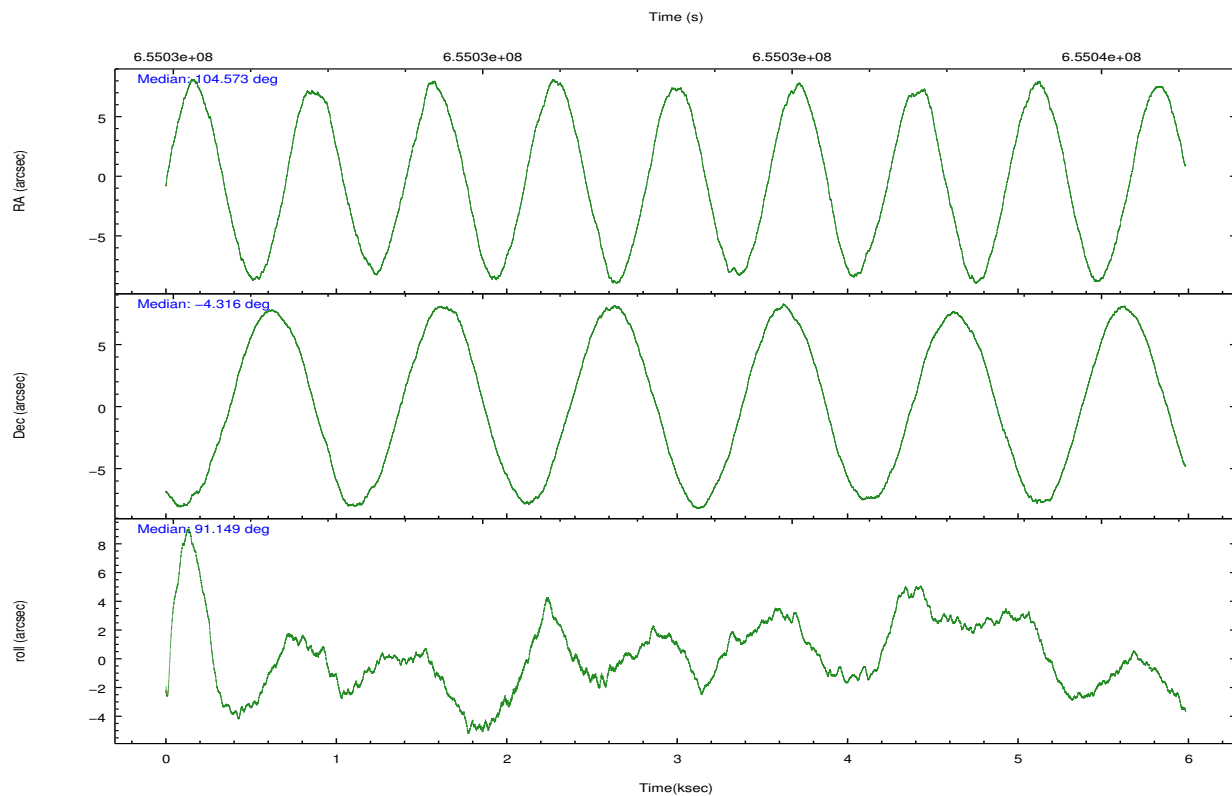
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-56789	ACIS-56789
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	104.587718	104.5732423877652
[deg] Pointing Dec	-4.339584	-4.316288599235113
[deg] Pointing Roll	91.000655	91.15619069362216
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	655030413.184000	655030037.3637201
Observation start date	2018-10-04T08:52:24	2018-10-04T08:47:17
[s] Observation end time (MET)	655036213.184000	655036347.2641
Observation end date	2018-10-04T10:29:04	2018-10-04T10:32:27
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	N	N
CCD S0 on	N	N
CCD S1 on	O1	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	O2	Y
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



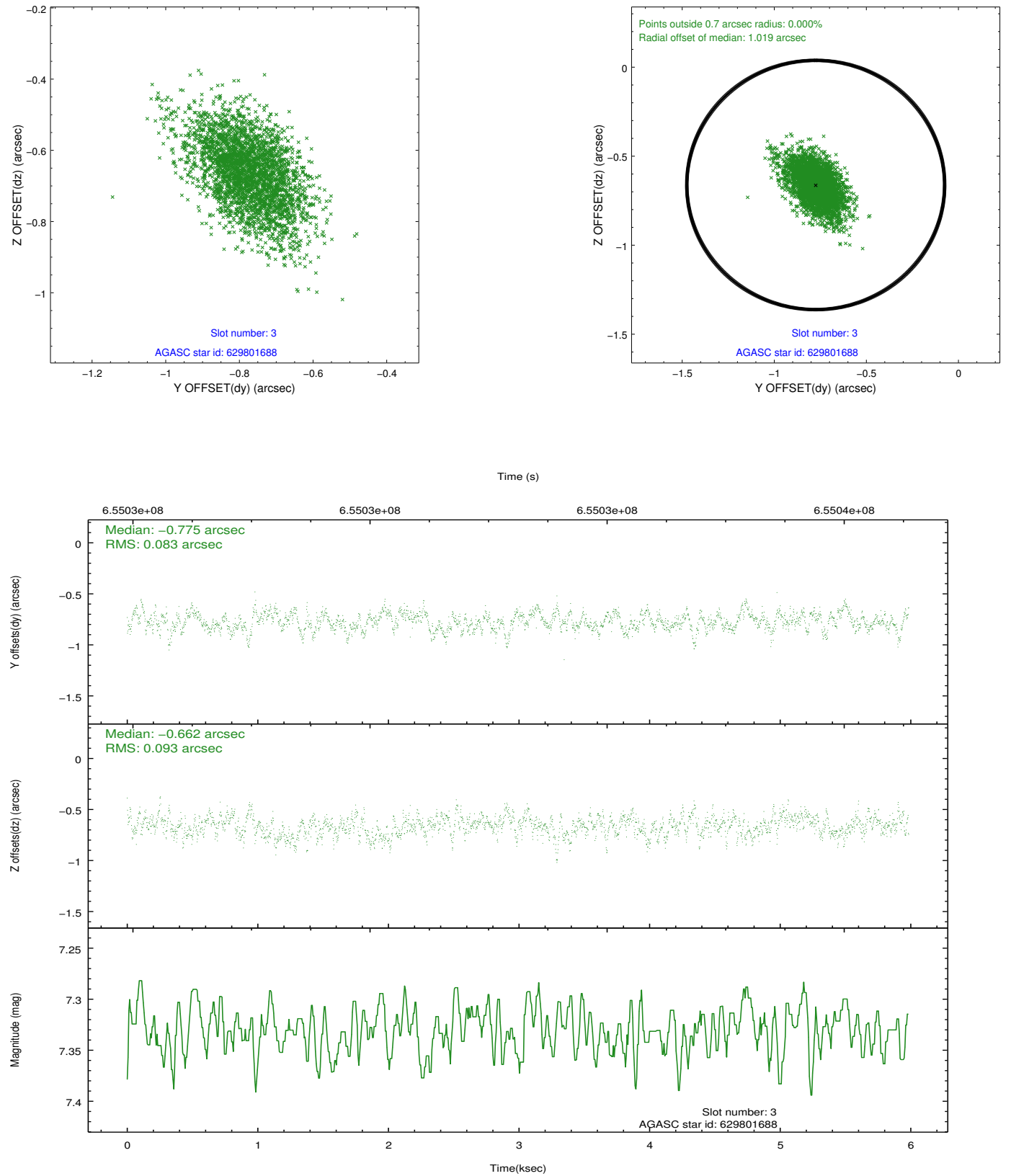


Slot Statistics

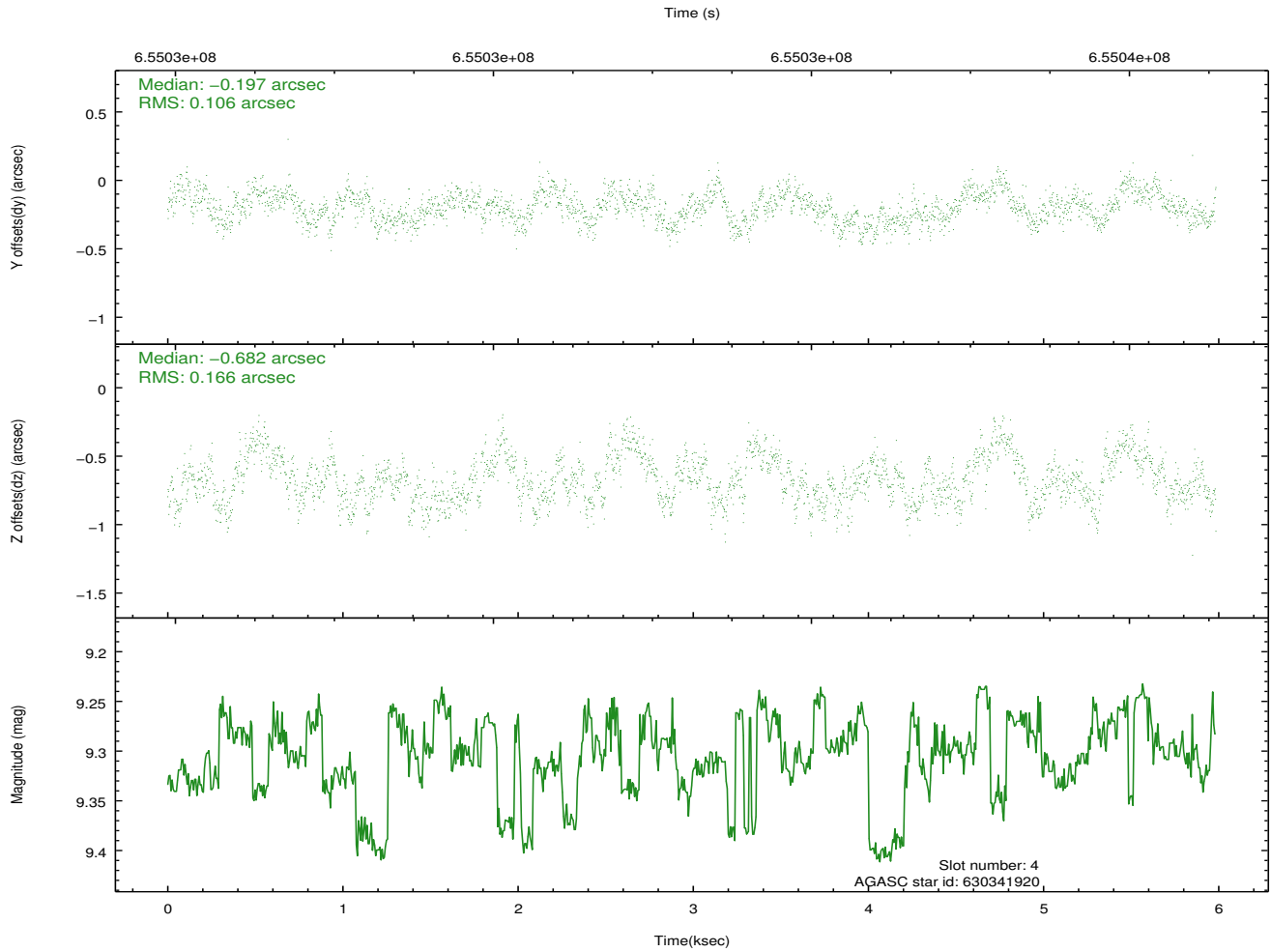
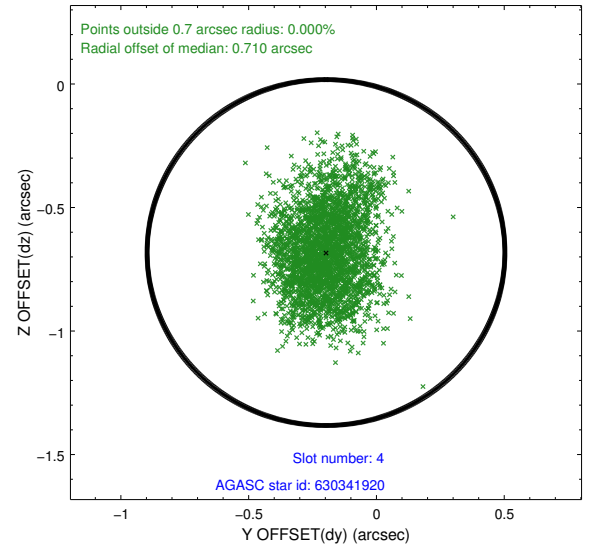
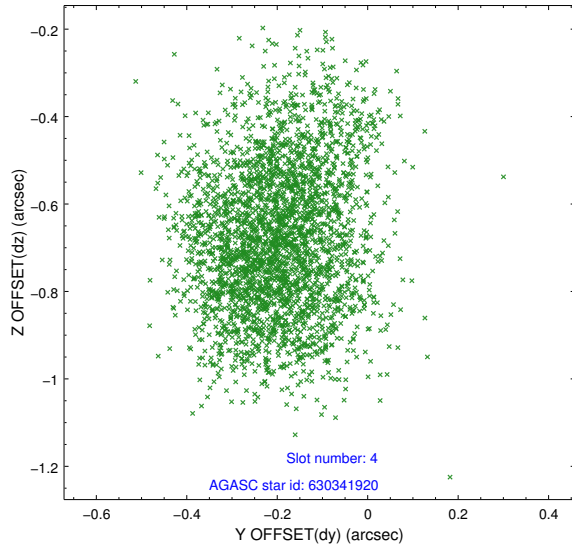
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.13	1459	1.000	0.016	0.004	0.007	0.013	0.000000	0.000000	921.55	-1740
1	FID		ACIS-S-4	7.15	1460	1.000	0.380	-0.005	0.007	0.012	0.000000	0.000000	2139.80	162
2	FID		ACIS-S-5	7.17	1460	1.000	-0.424	0.014	0.008	0.013	0.000000	0.000000	-1826.56	157
3	GUIDE	used	629801688	7.33	2919	1.000	-0.775	-0.662	0.129	0.223	104.215078	-3.692396	2351.46	1298
4	GUIDE	used	630341920	9.30	2917	1.000	-0.197	-0.682	0.208	0.343	103.979848	-4.428340	-281.53	2187
5	GUIDE	used	630342888	9.16	2916	1.000	0.659	0.815	0.185	0.293	104.990132	-4.781929	-1616.85	-1414
6	GUIDE	used	632039320	7.96	2920	1.000	0.327	0.432	0.138	0.223	105.061225	-4.610052	-1003.56	-1681
7	GUIDE	used	631504920	9.22	2917	1.000	-0.010	0.101	0.206	0.359	105.178942	-3.698587	2269.49	-2163

## 2.4 Star Slots

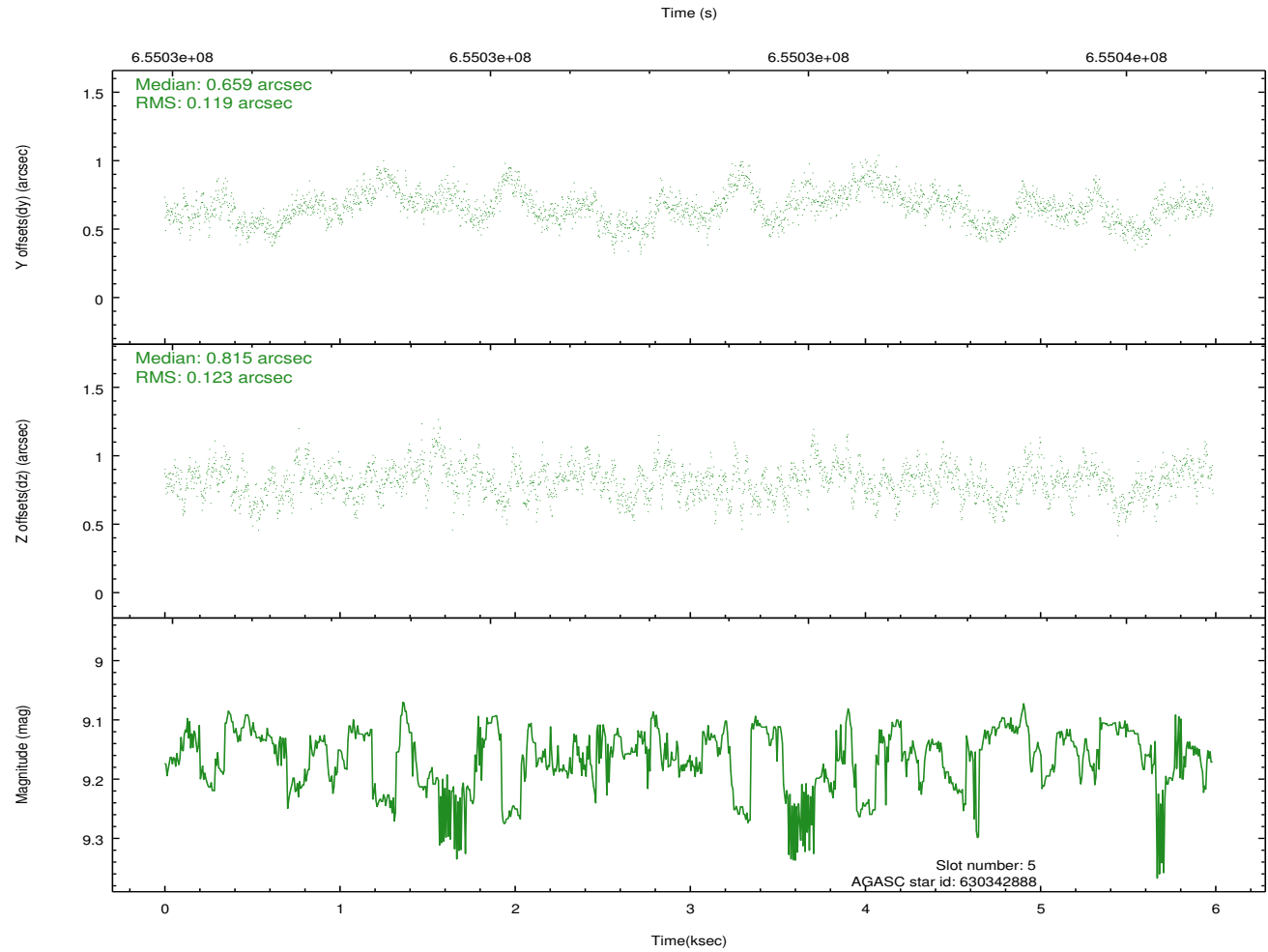
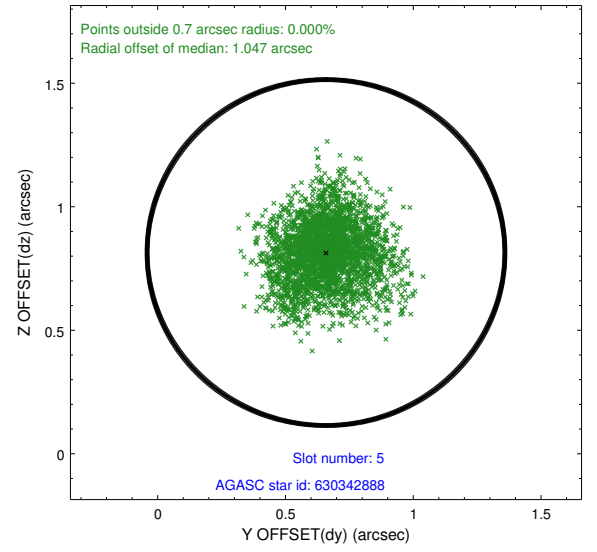
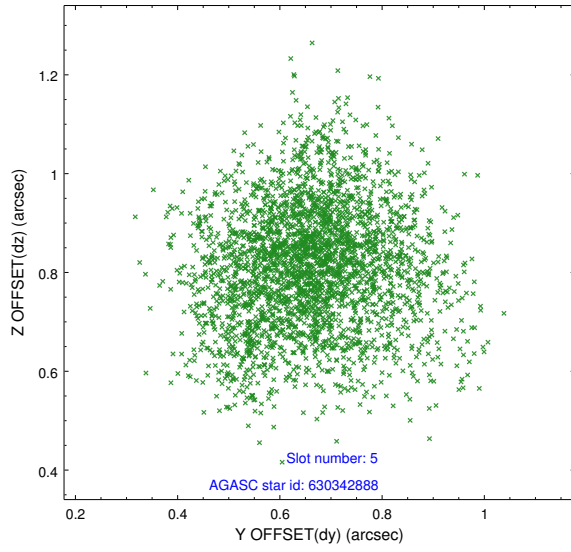
### 2.4.1 Slot 3



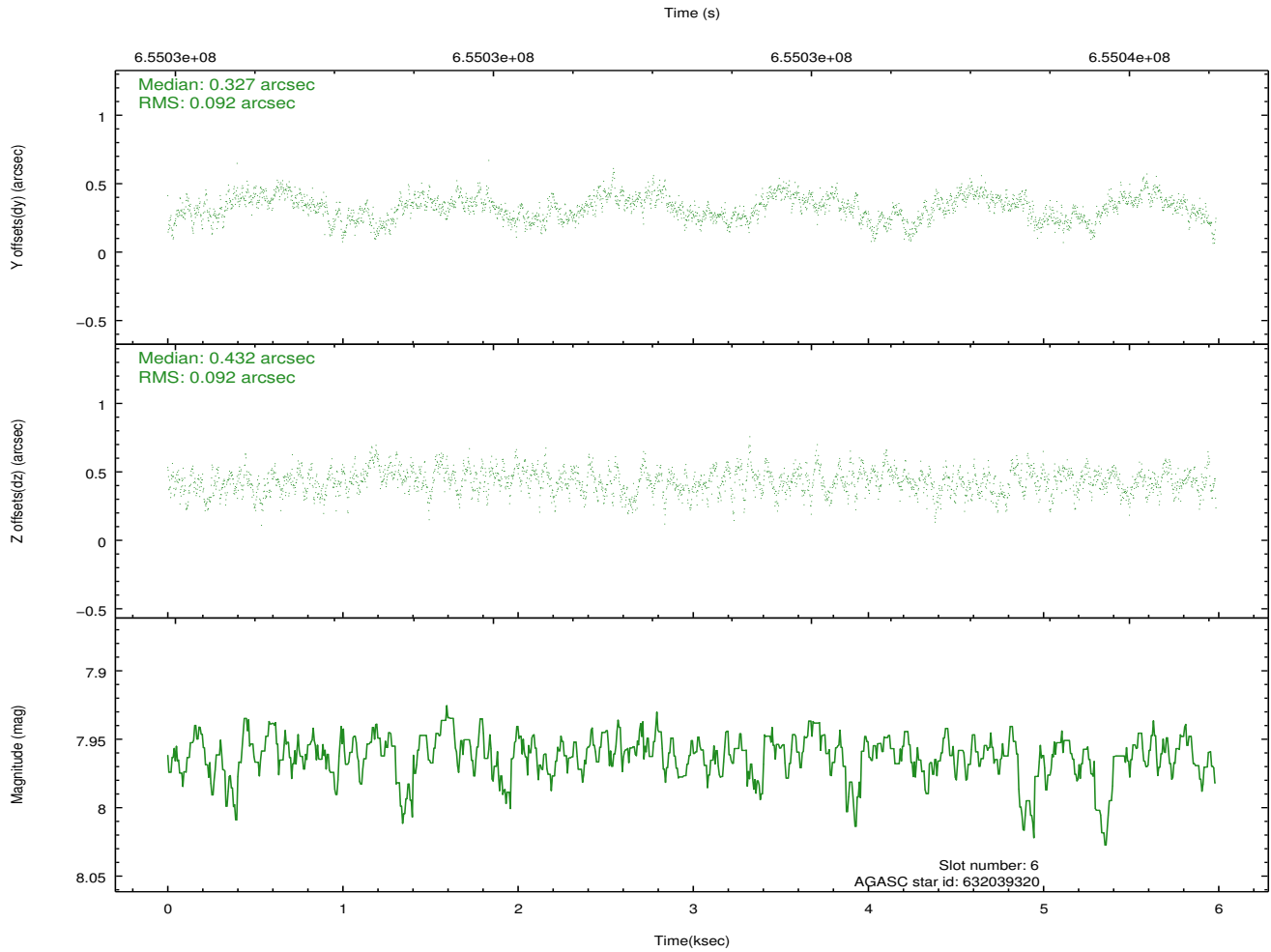
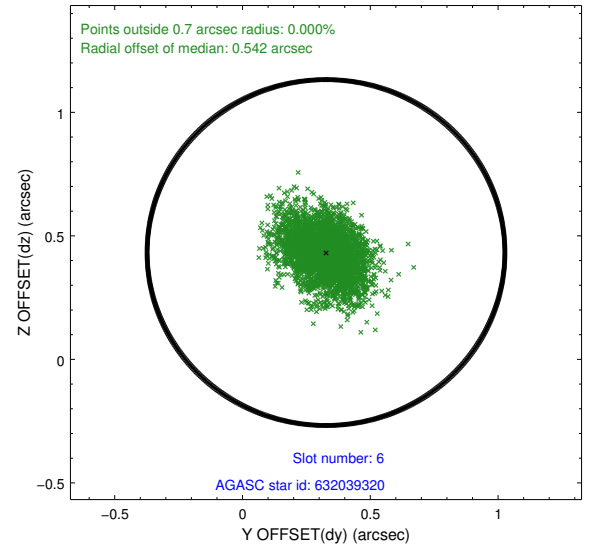
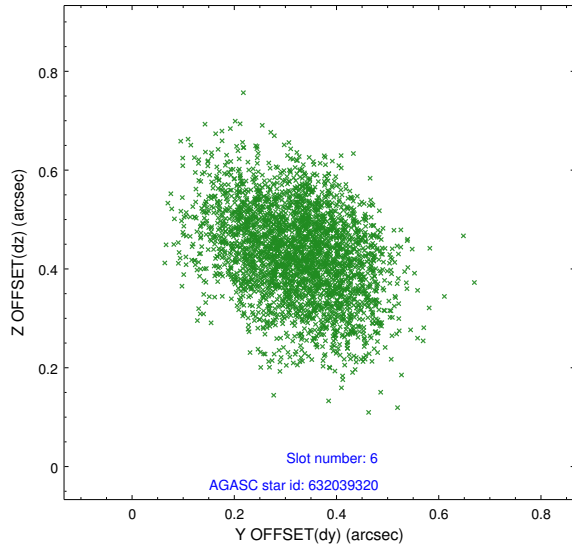
## 2.4.2 Slot 4



### 2.4.3 Slot 5

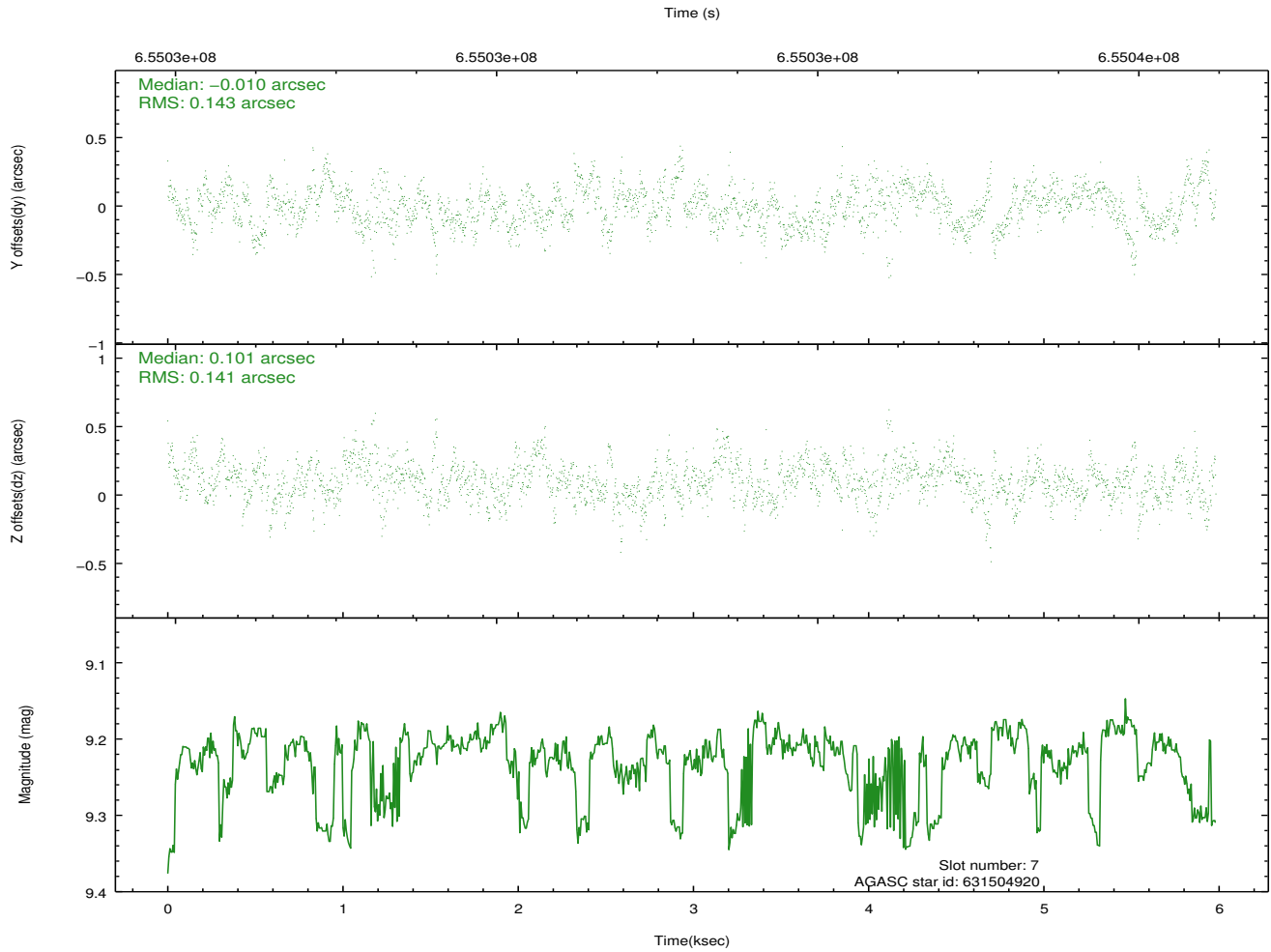
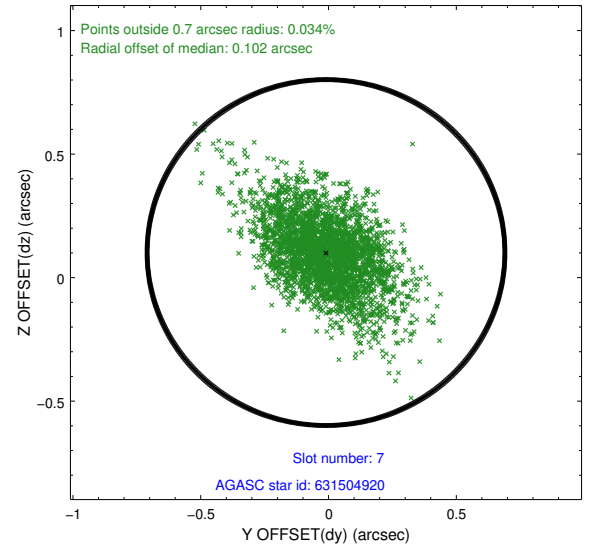
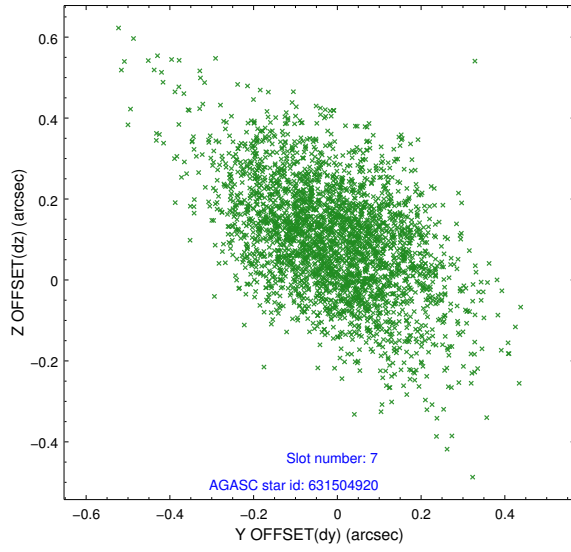


## 2.4.4 Slot 6



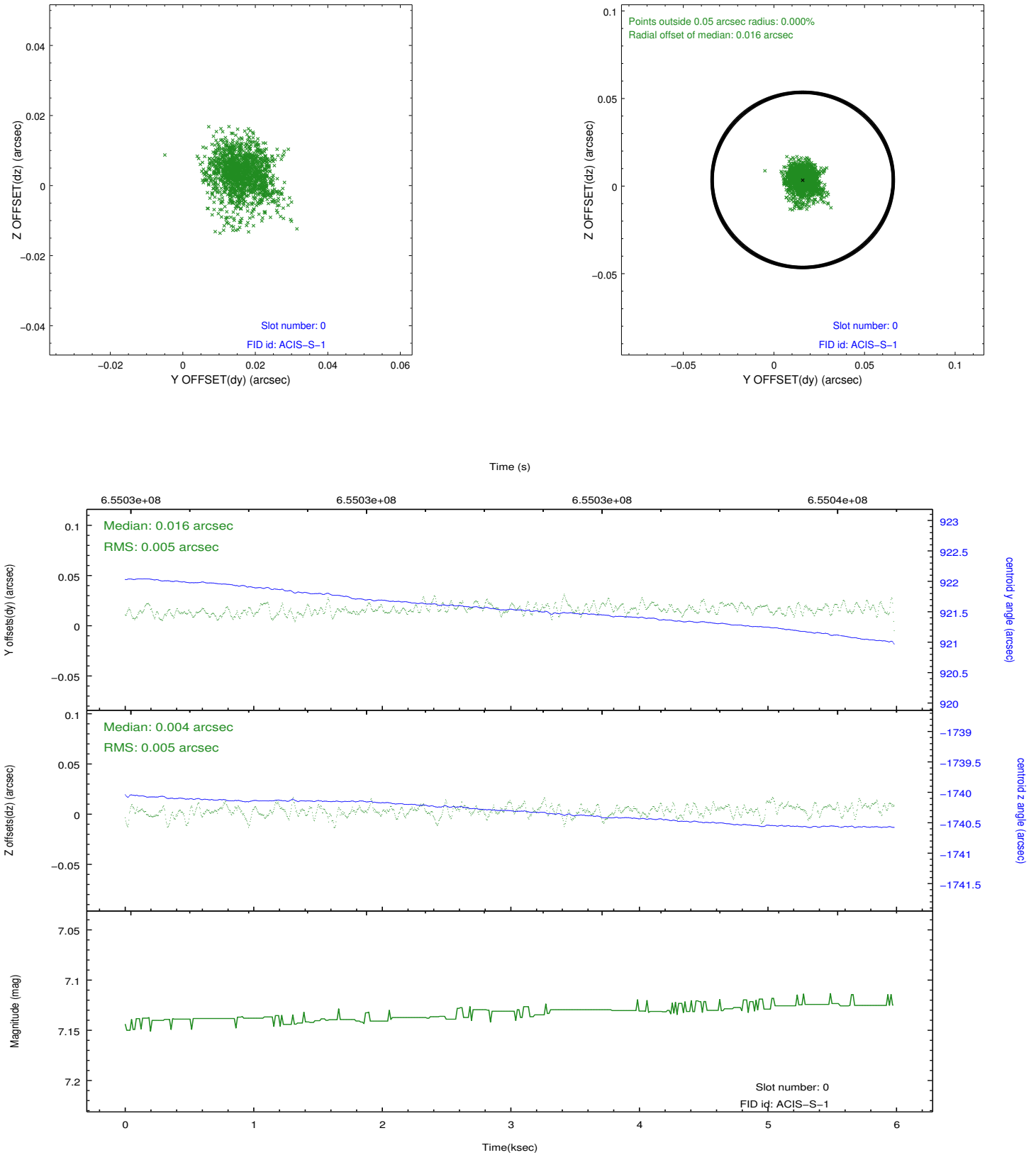


## 2.4.5 Slot 7

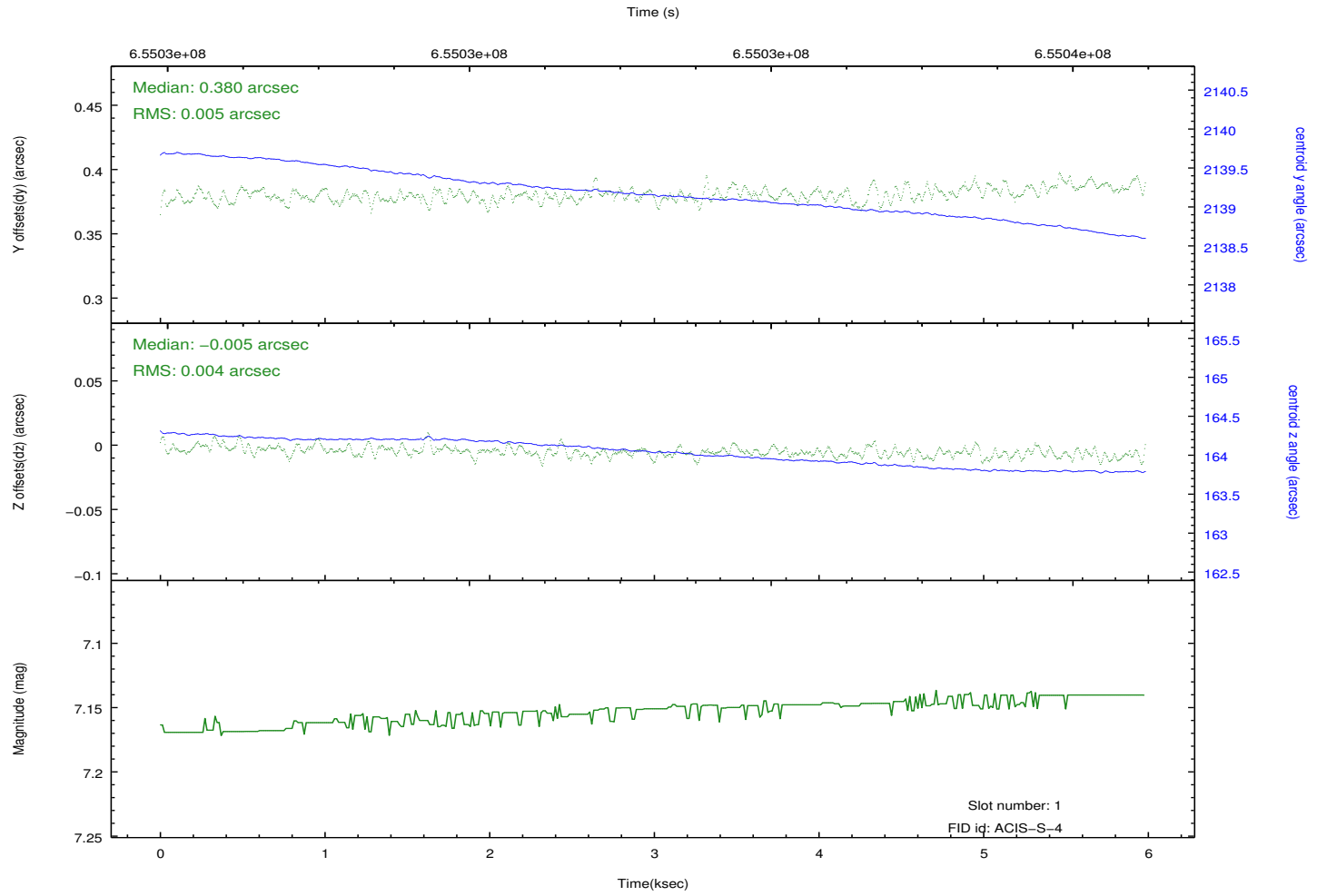
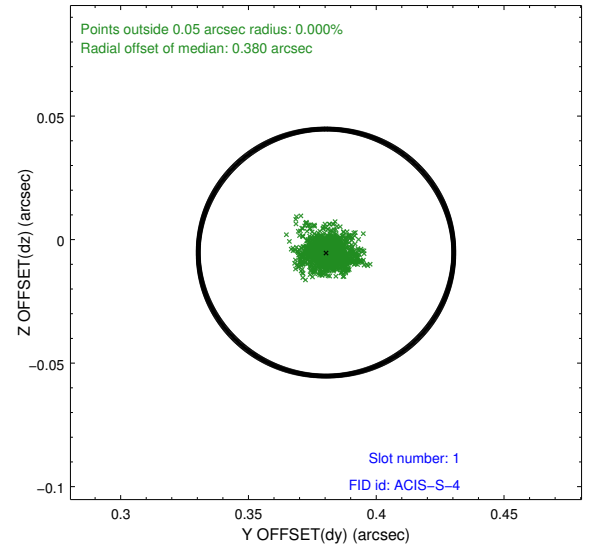
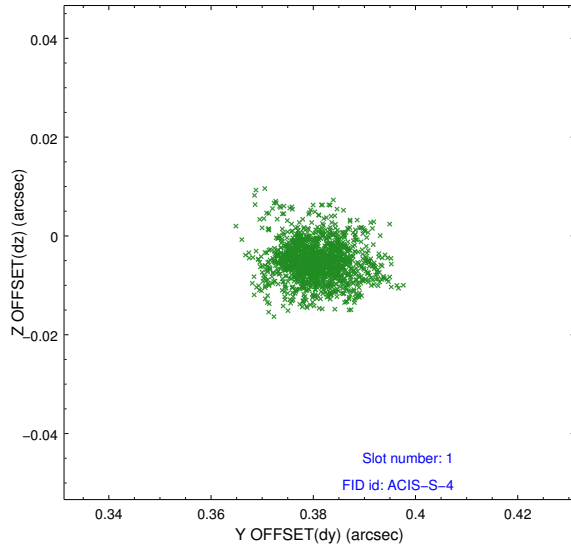


## 2.5 FID Slots

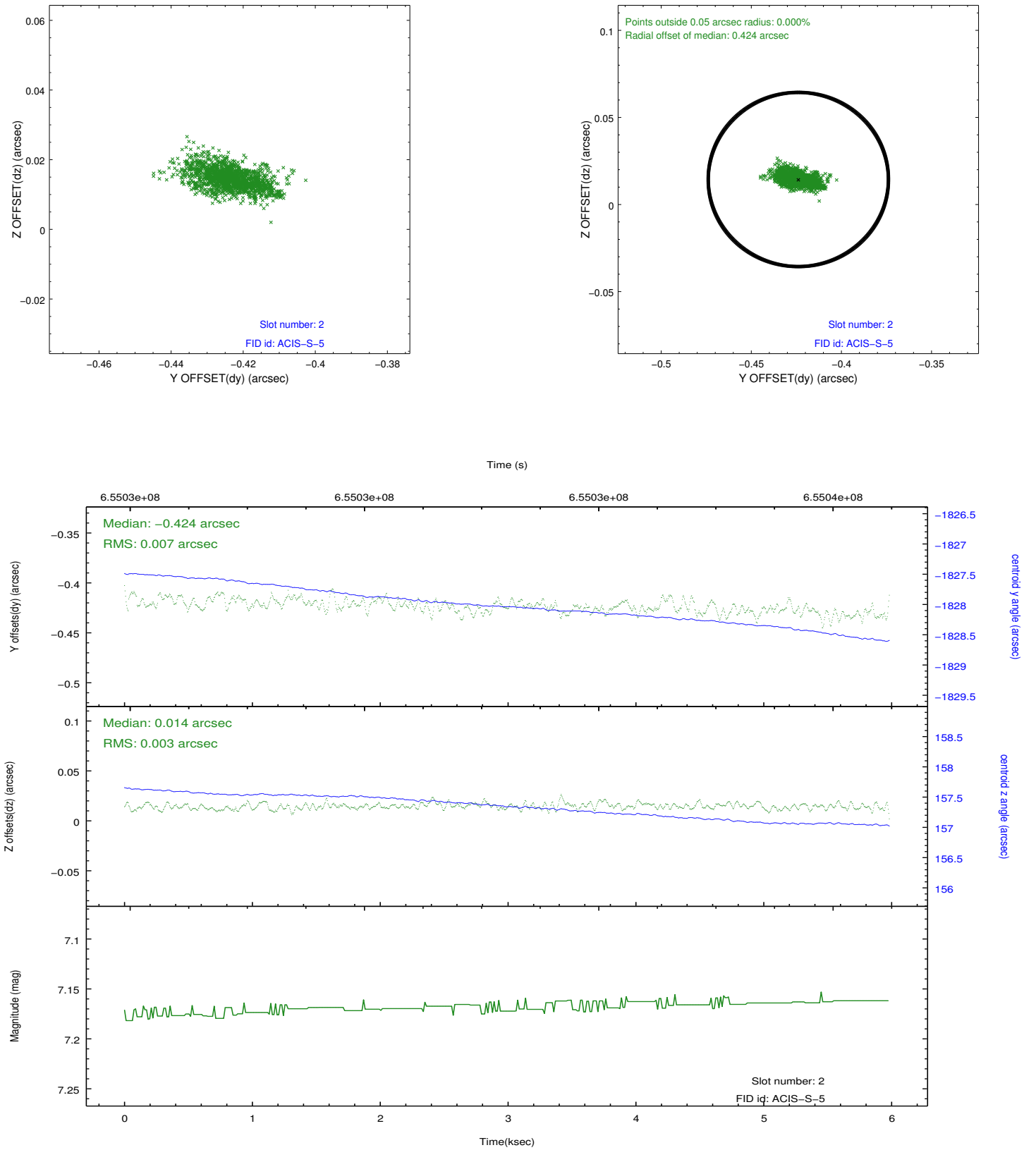
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2018.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.983000046134

## A.2 Comments

This is an observation of a moving target. Users will need to run `sso_freeze` or similar software to position the events in the reference frame of the target.