

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 17173 - L2 Version 1  
Chandra X-Ray Center

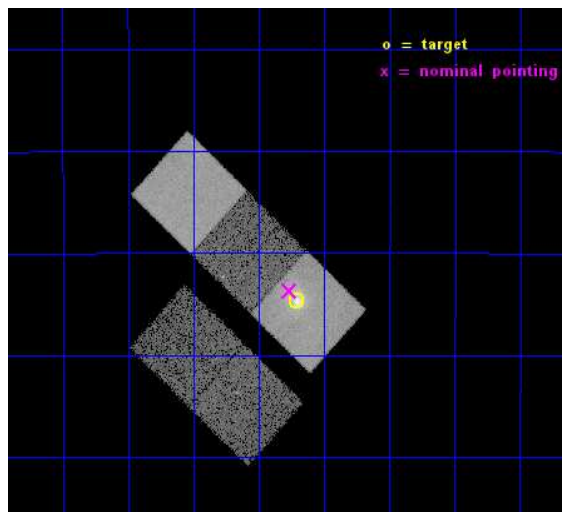
L2 Processing Date : Mar 15 2015

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

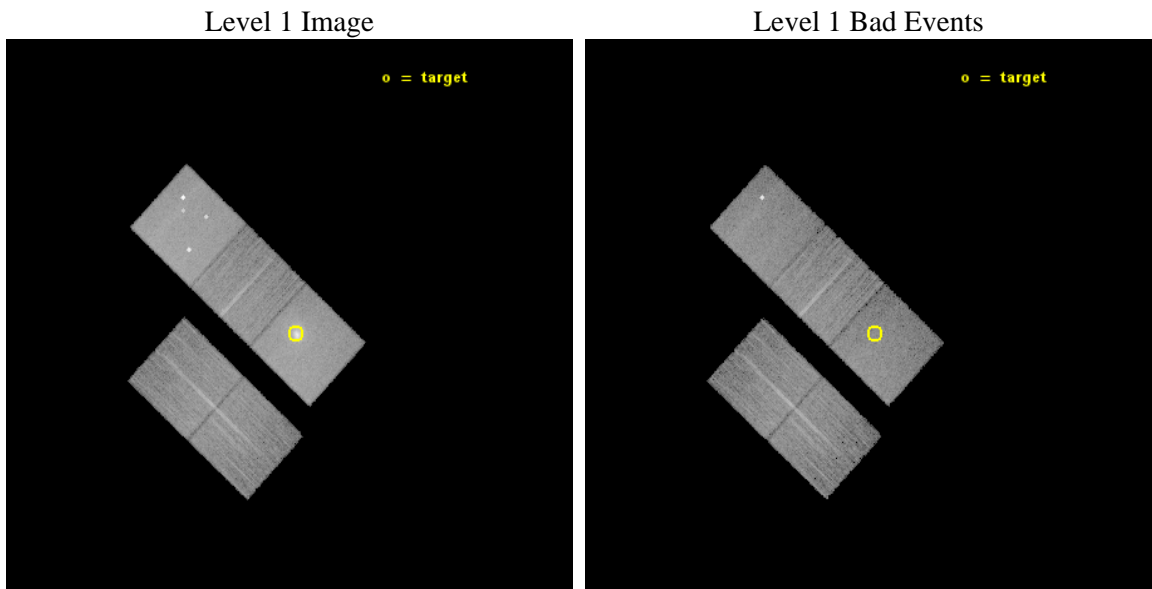
seq_num	801457	Sequence number
obs_id	17173	Observation id
title	The origin of the massive cold gas flows in the galaxy cluster A1664	&#160
observer	Dr Helen Russell	Principal investigator
object	Abell 1664	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	195.9275	Observer's specified target RA [deg]
dec_targ	-24.245056	Observer's specified target Dec [deg]
ra_nom	195.941658146	Nominal RA [deg]
dec_nom	-24.228299017276	Nominal Dec [deg]
roll_nom	43.162424125202	Nominal Roll [deg]
revision	1	Processing version of data
ontime	19322.300148726	Sum of GTIs [s]
livetime	19069.840072412	Livetime [s]
ontime2	19319.04002583	Sum of GTIs [s]
ontime3	19319.081015944	Sum of GTIs [s]
ontime5	19322.300148726	Sum of GTIs [s]
ontime6	19322.263096094	Sum of GTIs [s]
ontime7	19322.300148726	Sum of GTIs [s]
l2events	174983	Number of level 2 events



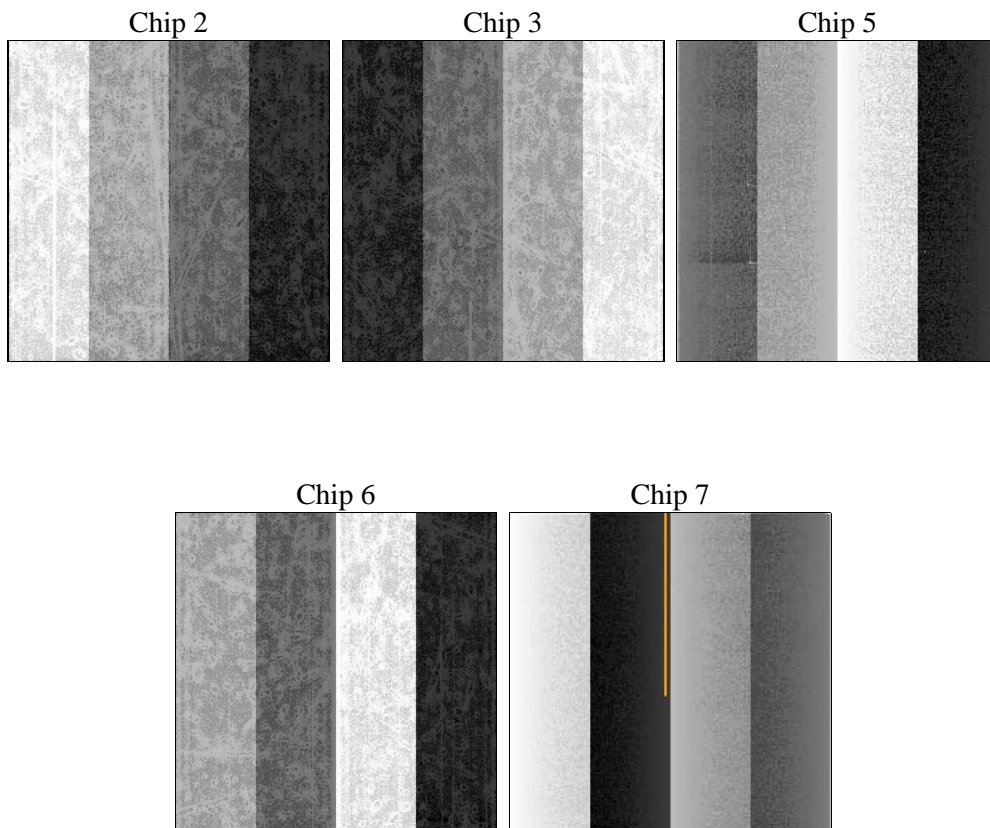
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	19255.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	19322.300148726	Sum of GTIs [s]
caldbver	4.6.7	&#160	ontime2	19319.04002583	Sum of GTIs [s]
date	2015-03-15T18:03:28	Date and time of file creation	ontime3	19319.081015944	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	19322.300148726	Sum of GTIs [s]
			ontime6	19322.263096094	Sum of GTIs [s]
			ontime7	19322.300148726	Sum of GTIs [s]
			l1events	586193	Number of level 1 events

### 2.1.4 Events

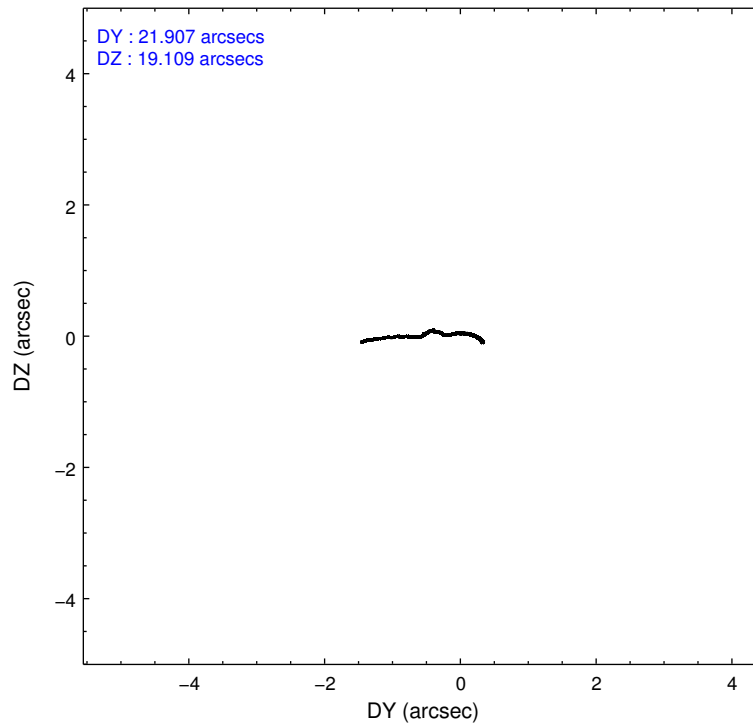
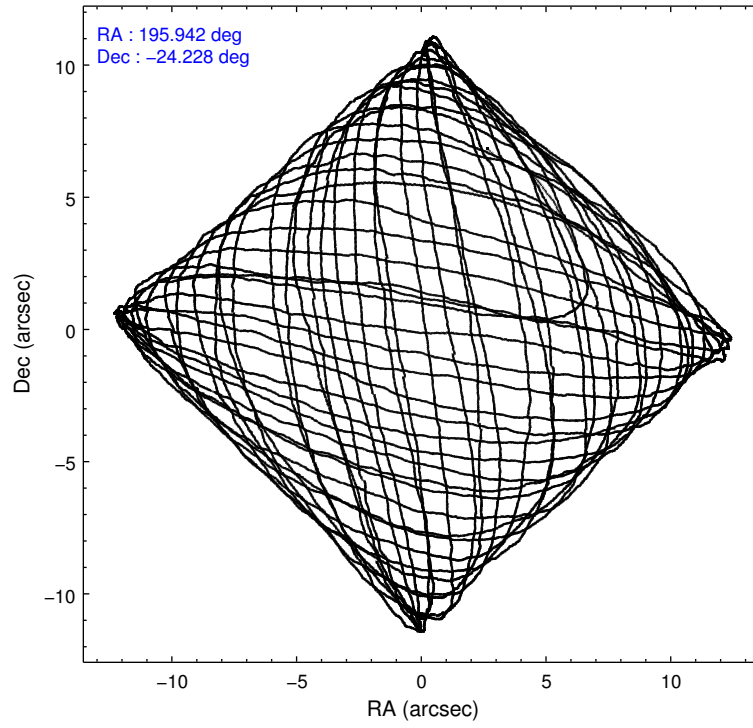
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	89424	87405	162468	96572	150324
rejected events	79026	77162	82643	84526	70942
rejected %	88%	88%	50%	87%	47%

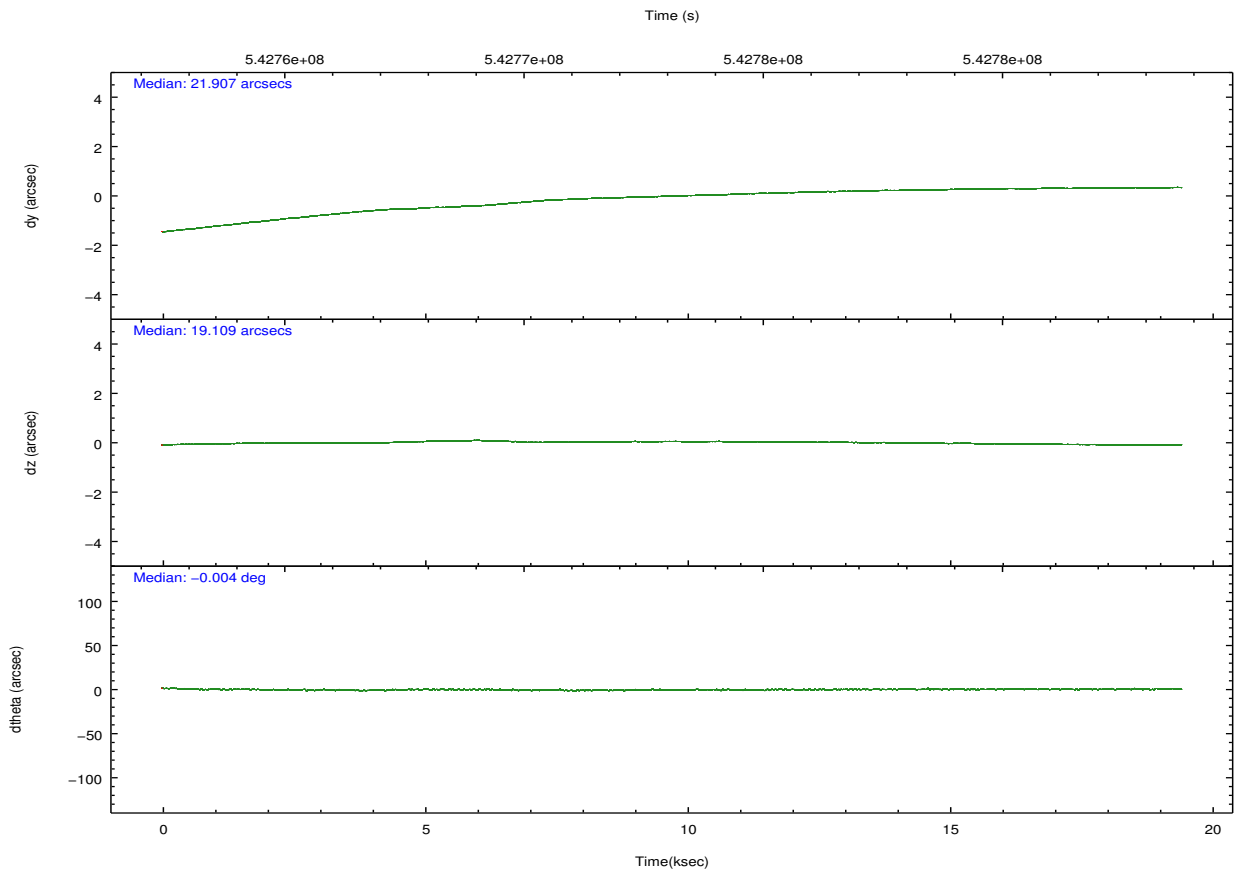
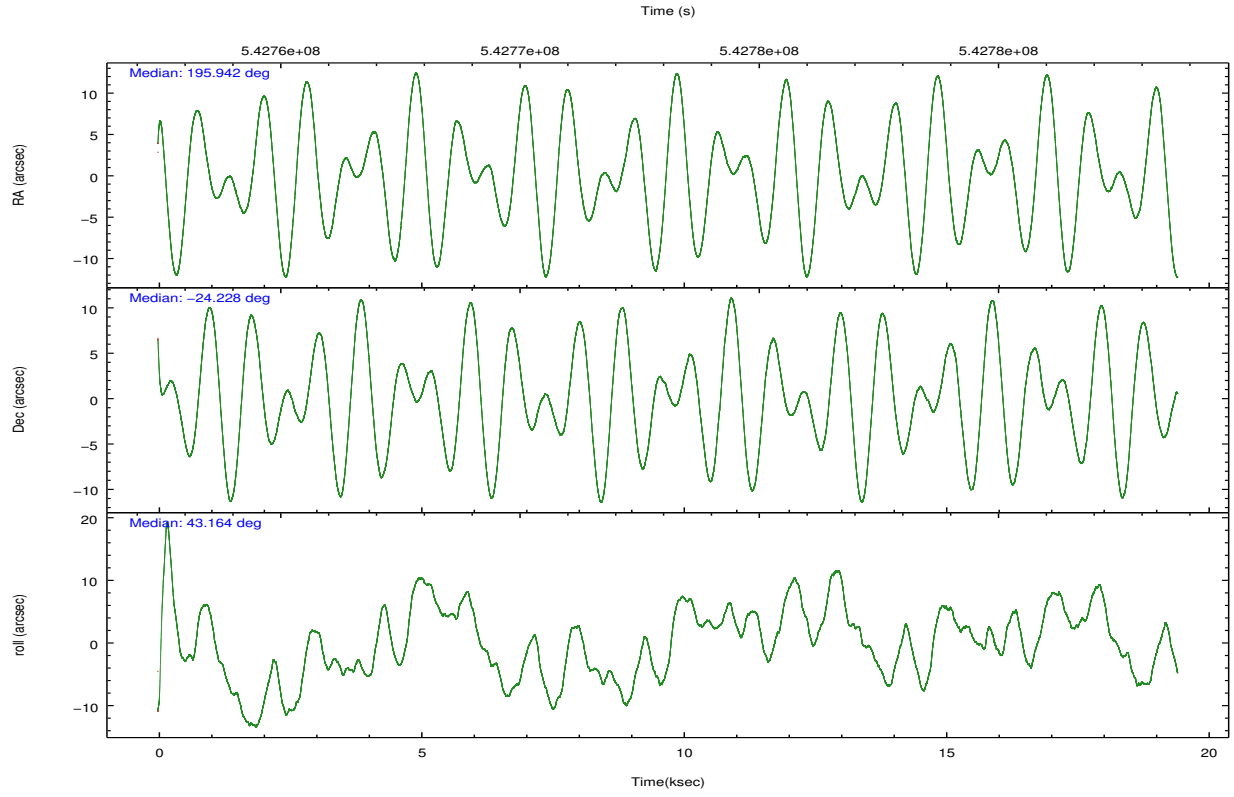
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	3726	3682	10938	4506	11983
	4%	4%	6%	4%	7%
grade 1 events	54	49	277	54	159
	0%	0%	0%	0%	0%
grade 2 events	2620	2320	24546	2653	17797
	2%	2%	15%	2%	11%
grade 3 events	1016	1070	2480	1156	7520
	1%	1%	1%	1%	5%
grade 4 events	1049	998	2390	1177	7309
	1%	1%	1%	1%	4%
grade 5 events	3912	4799	11580	4943	12830
	4%	5%	7%	5%	8%
grade 6 events	1988	2175	39485	2556	34791
	2%	2%	24%	2%	23%
grade 7 events	75059	72312	70772	79527	57935
	83%	82%	43%	82%	38%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	195.933346	195.9416581460029	CCD I2 on	O1	Y
[deg] Pointing Dec	-24.254677	-24.22829901727622	CCD I3 on	O2	Y
[deg] Pointing Roll	43.002398	43.16242412520209	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	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	N	N
[s] Observation start time (MET)	542763538.184000	542762411.04171	CCD S5 on	N	N
Observation start date	2015-03-14T23:37:51	2015-03-14T23:20:11	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	542782793.184000	542783463.51789	On-chip summing requested	N	N
Observation end date	2015-03-15T04:58:46	2015-03-15T05:11:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





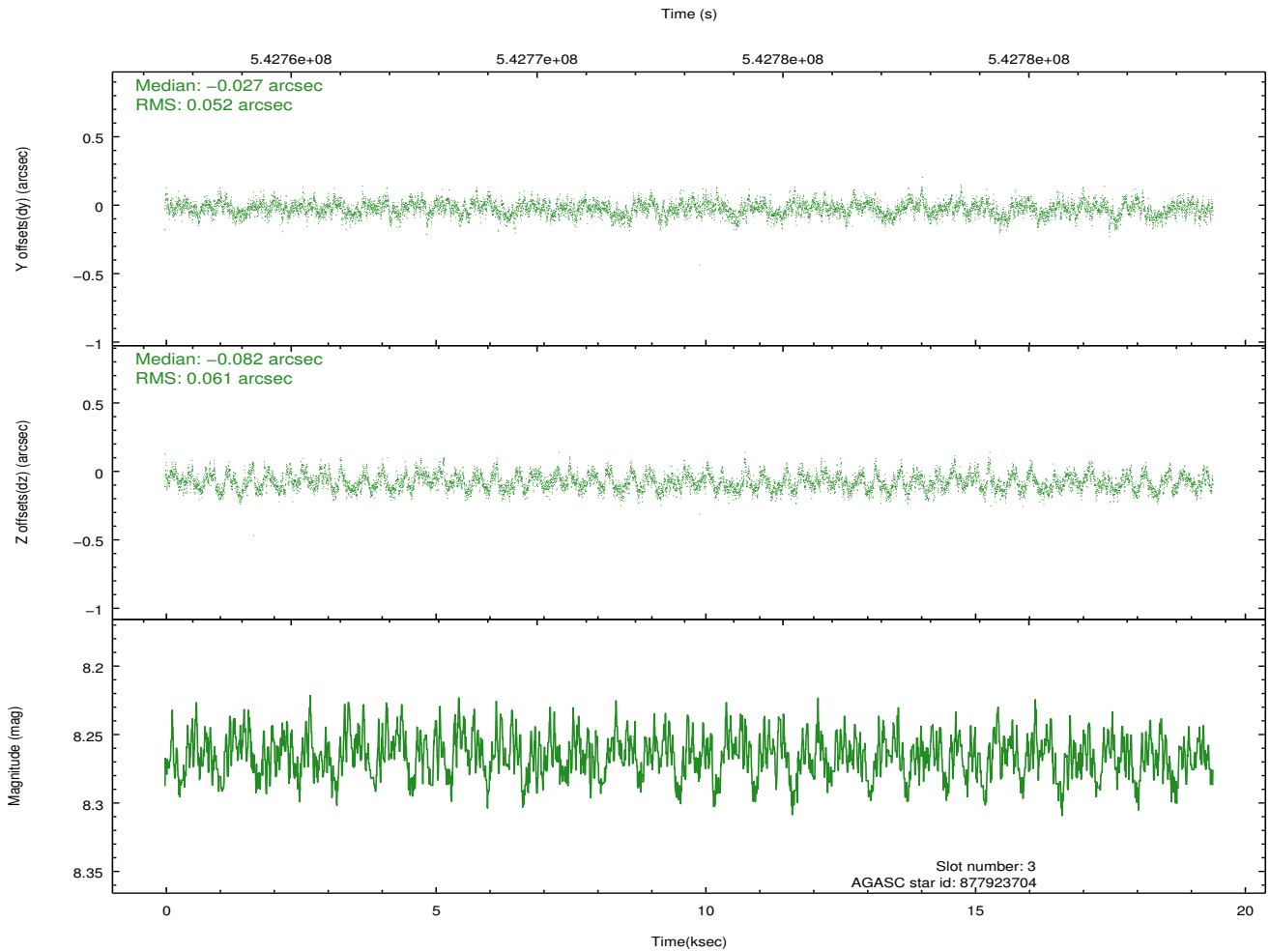
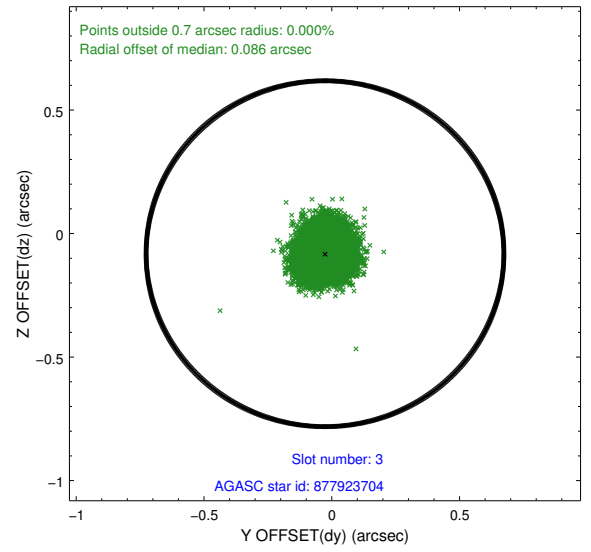
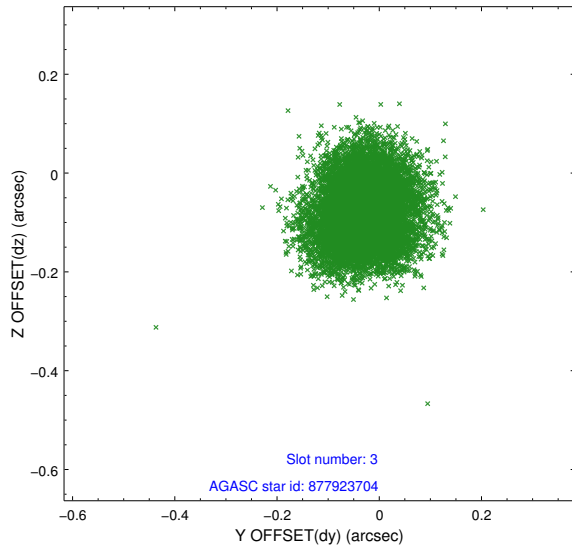
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.88	4739	-0.141	-0.058	0.009	0.014	0.000000	0.000000	-775.01	-1740.66
1	FID		ACIS-S-4	6.97	4739	0.329	0.084	0.008	0.014	0.000000	0.000000	2138.64	167.77
2	FID		ACIS-S-5	6.99	4739	-0.219	-0.017	0.010	0.016	0.000000	0.000000	-1827.69	161.55
3	GUIDE	used	877923704	8.27	9474	-0.027	-0.082	0.086	0.136	195.777573	-24.149712	-116.43	624.61
4	GUIDE	used	877927728	9.68	9428	-0.229	-0.275	0.159	0.253	195.960480	-23.522727	1862.45	1865.81
5	GUIDE	used	877929496	9.57	9469	0.095	-0.201	0.158	0.256	195.067784	-24.273572	-2129.59	1881.33
6	GUIDE	used	878444816	7.15	9478	0.019	0.243	0.122	0.185	195.982981	-24.517217	-525.78	-801.11
7	GUIDE	used	878445112	9.36	9471	0.131	0.309	0.119	0.194	195.967344	-24.500475	-521.39	-722.98

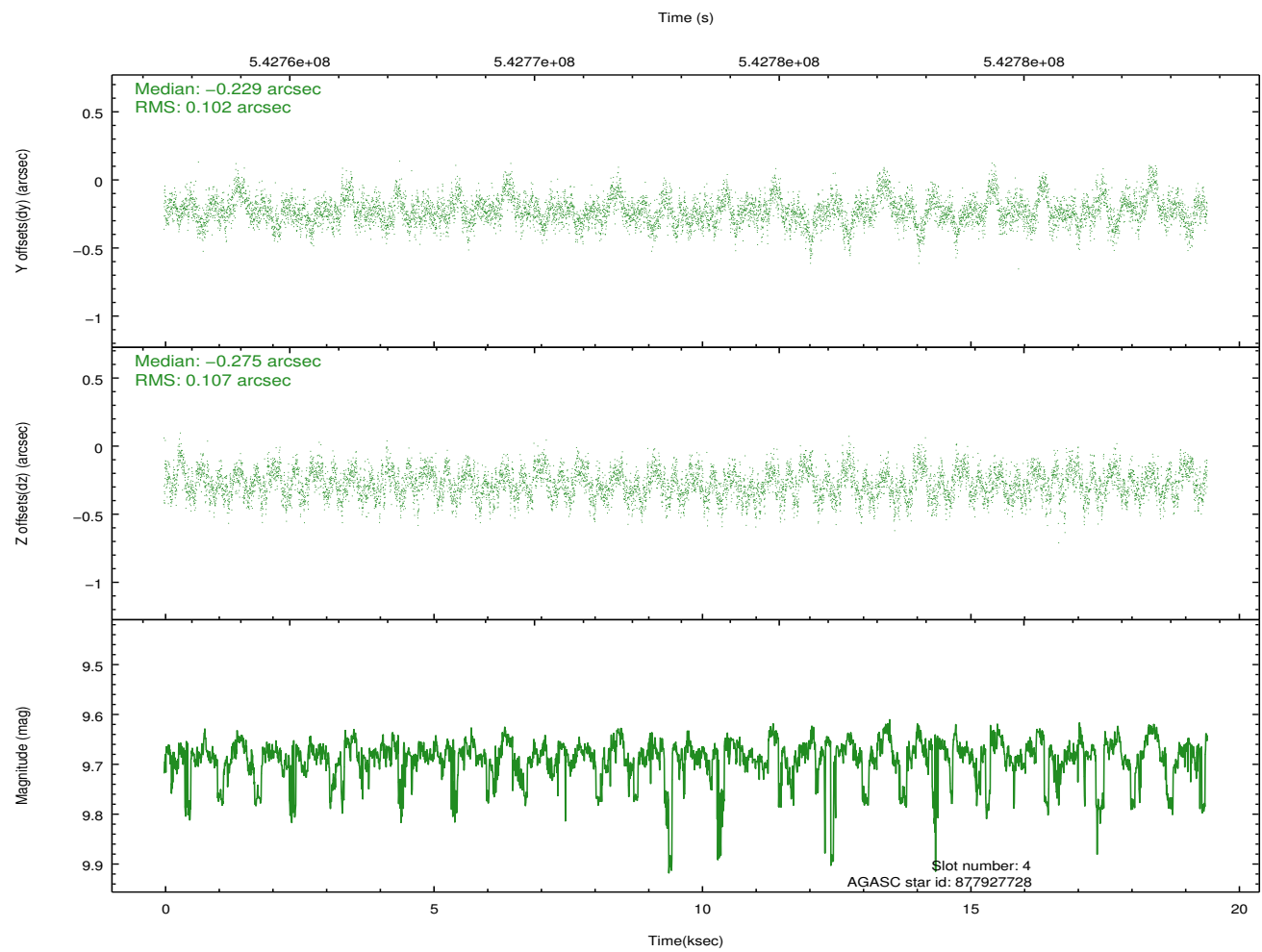
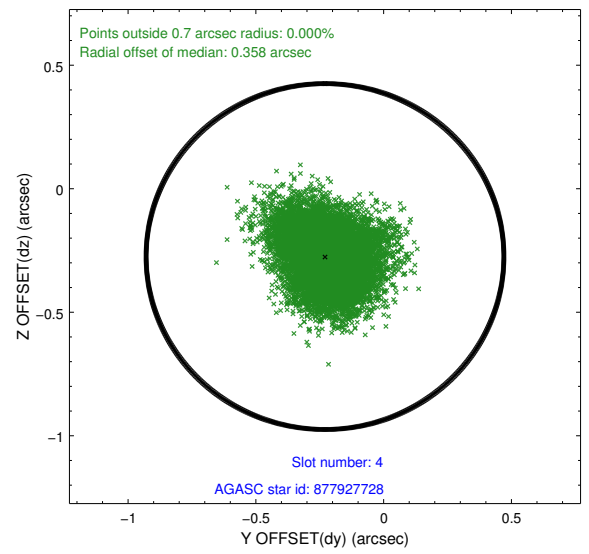
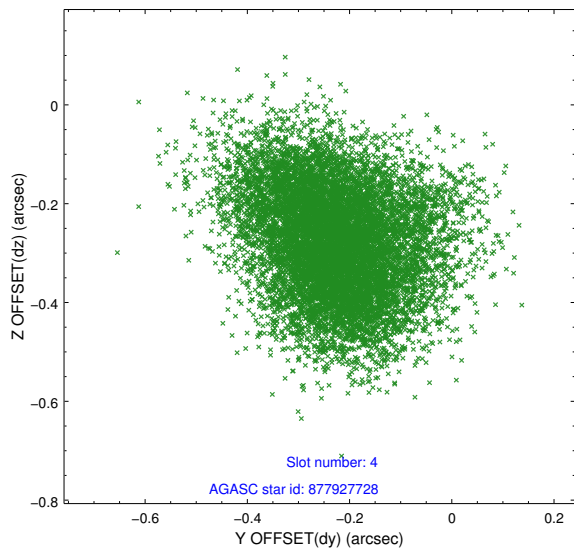
∞

## 2.4 Star Slots

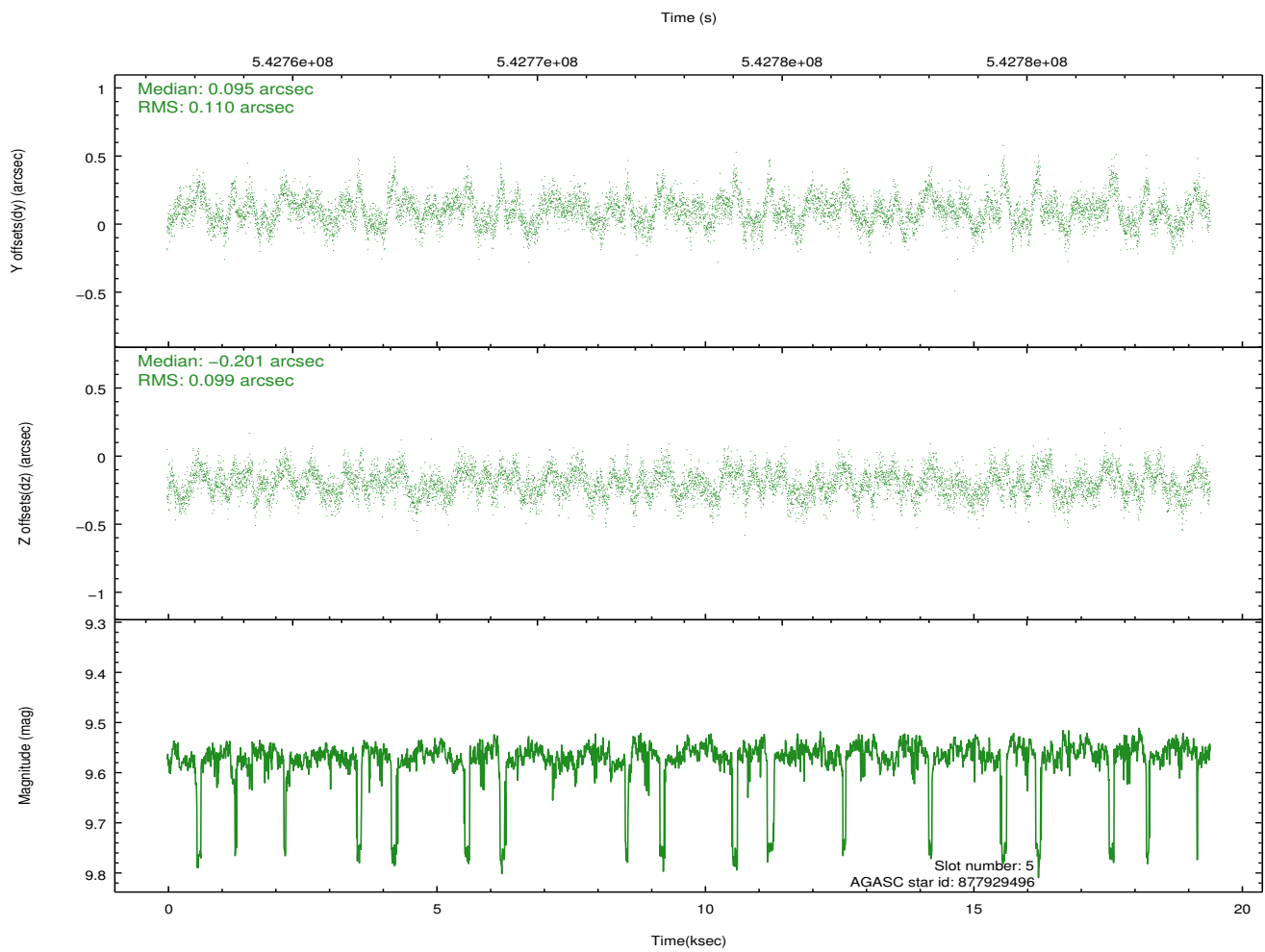
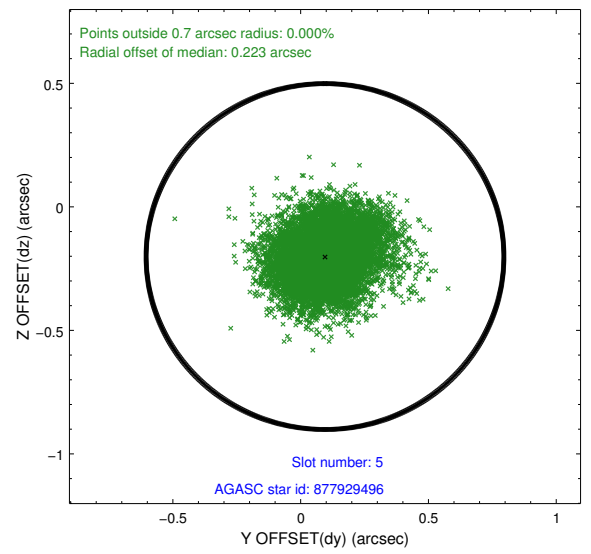
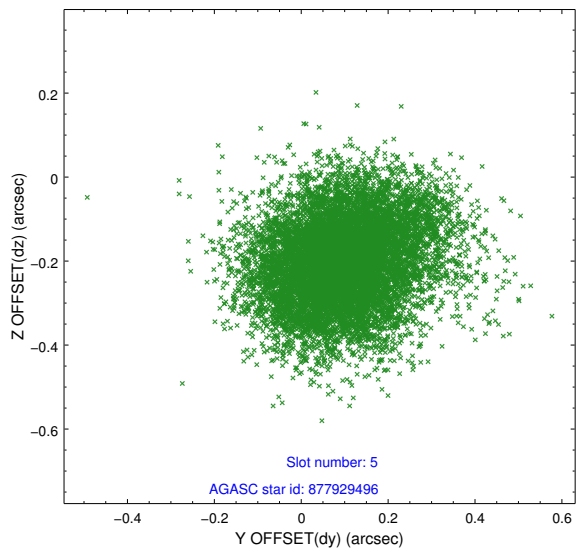
### 2.4.1 Slot 3



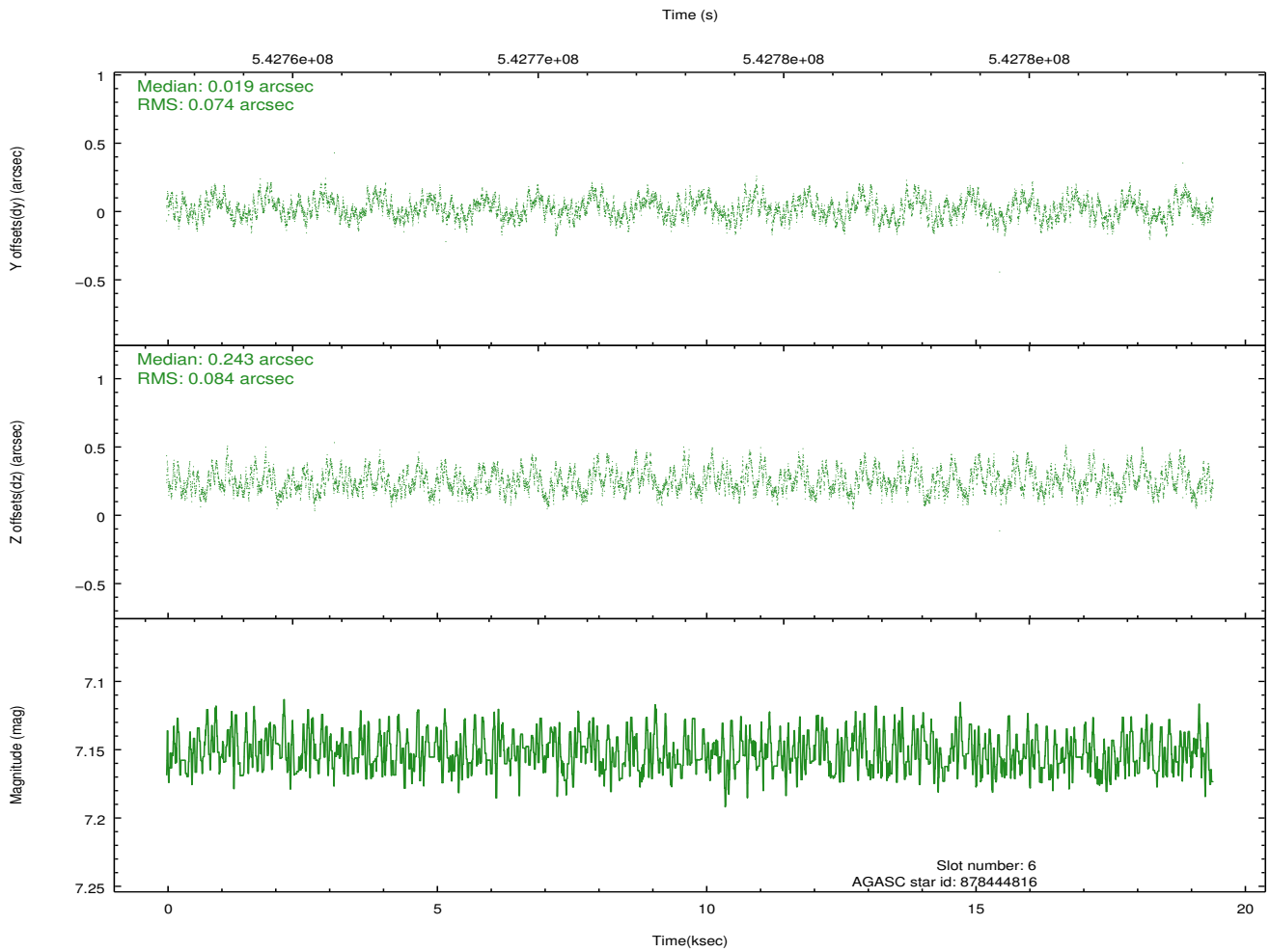
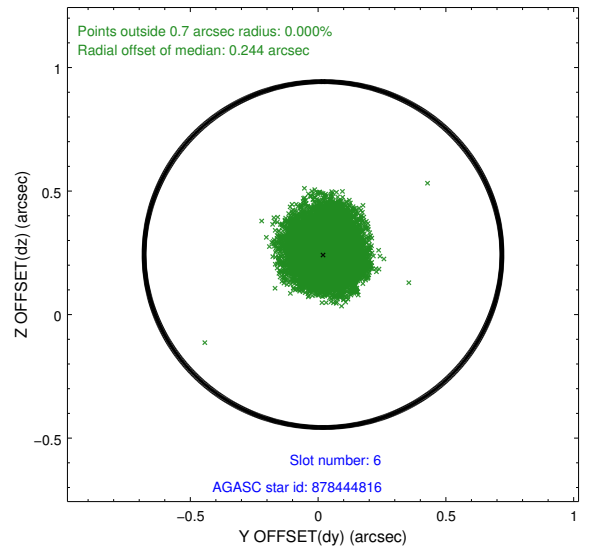
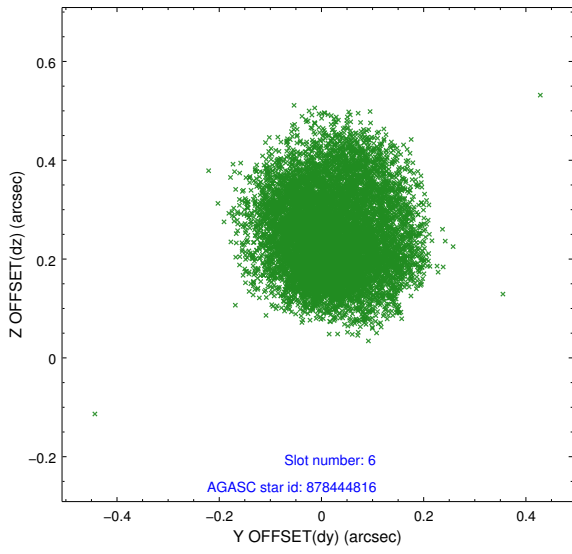
## 2.4.2 Slot 4



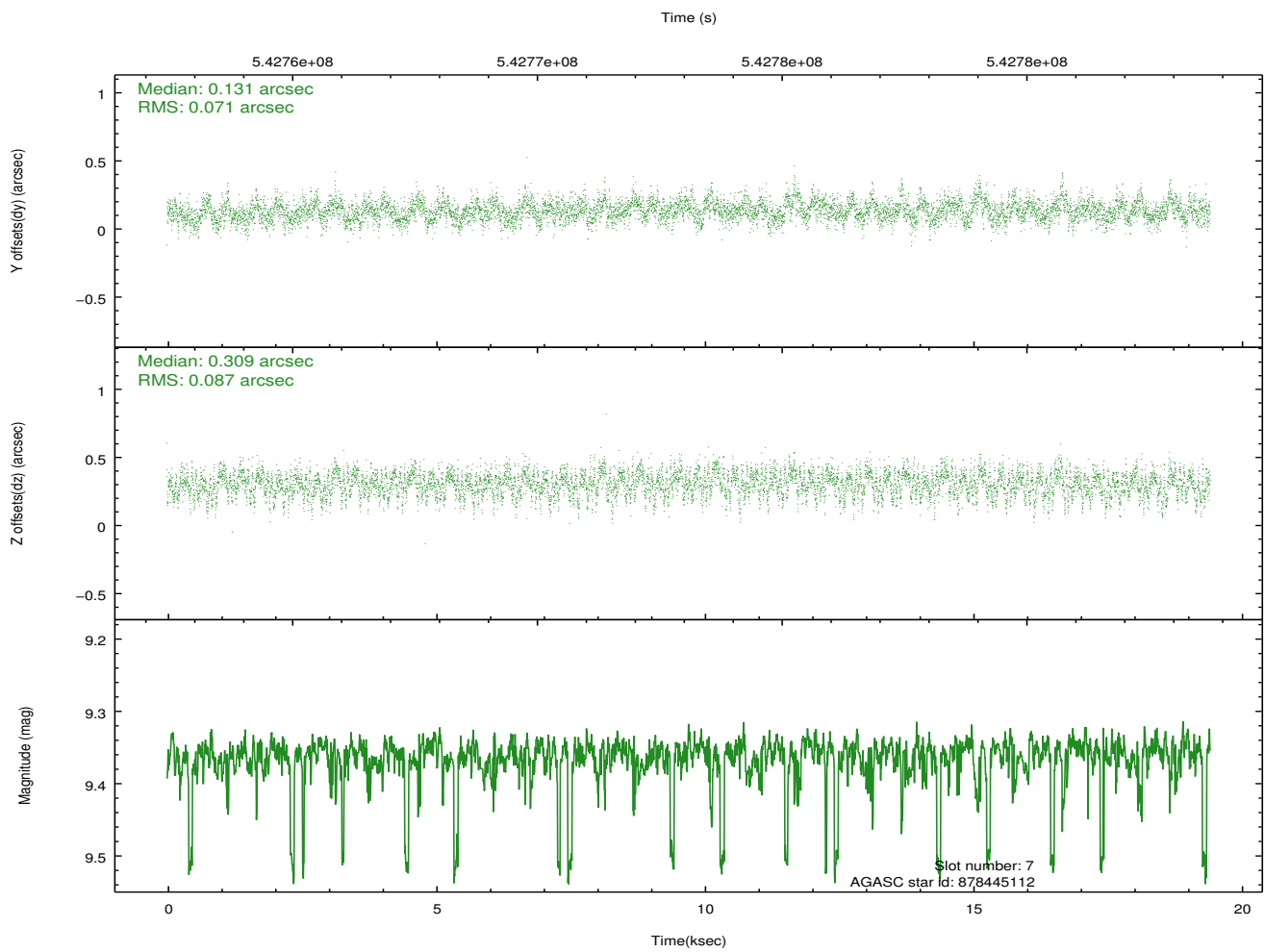
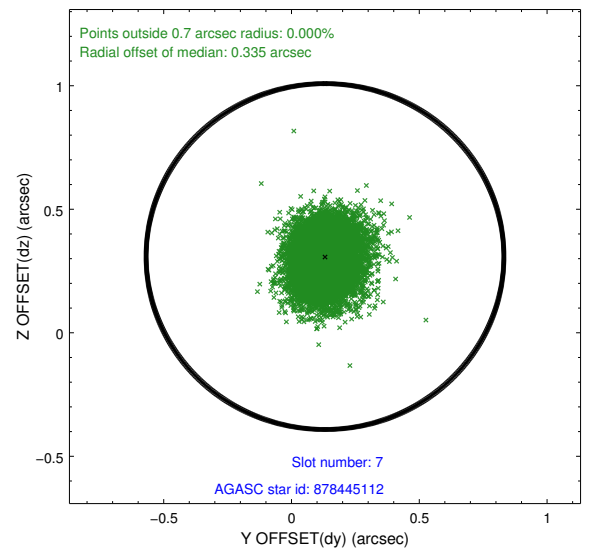
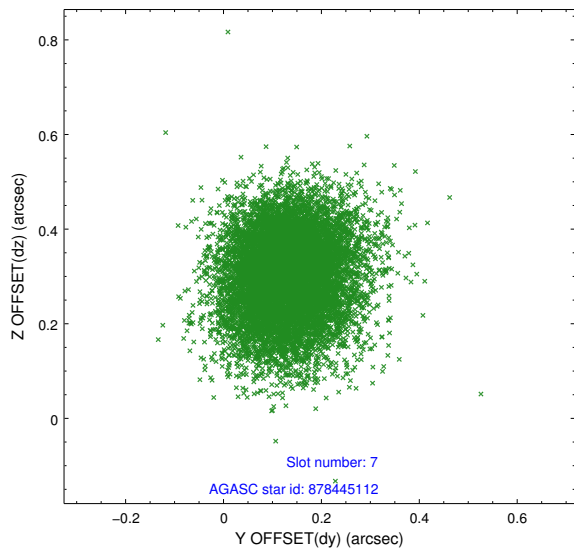
### 2.4.3 Slot 5



### 2.4.4 Slot 6

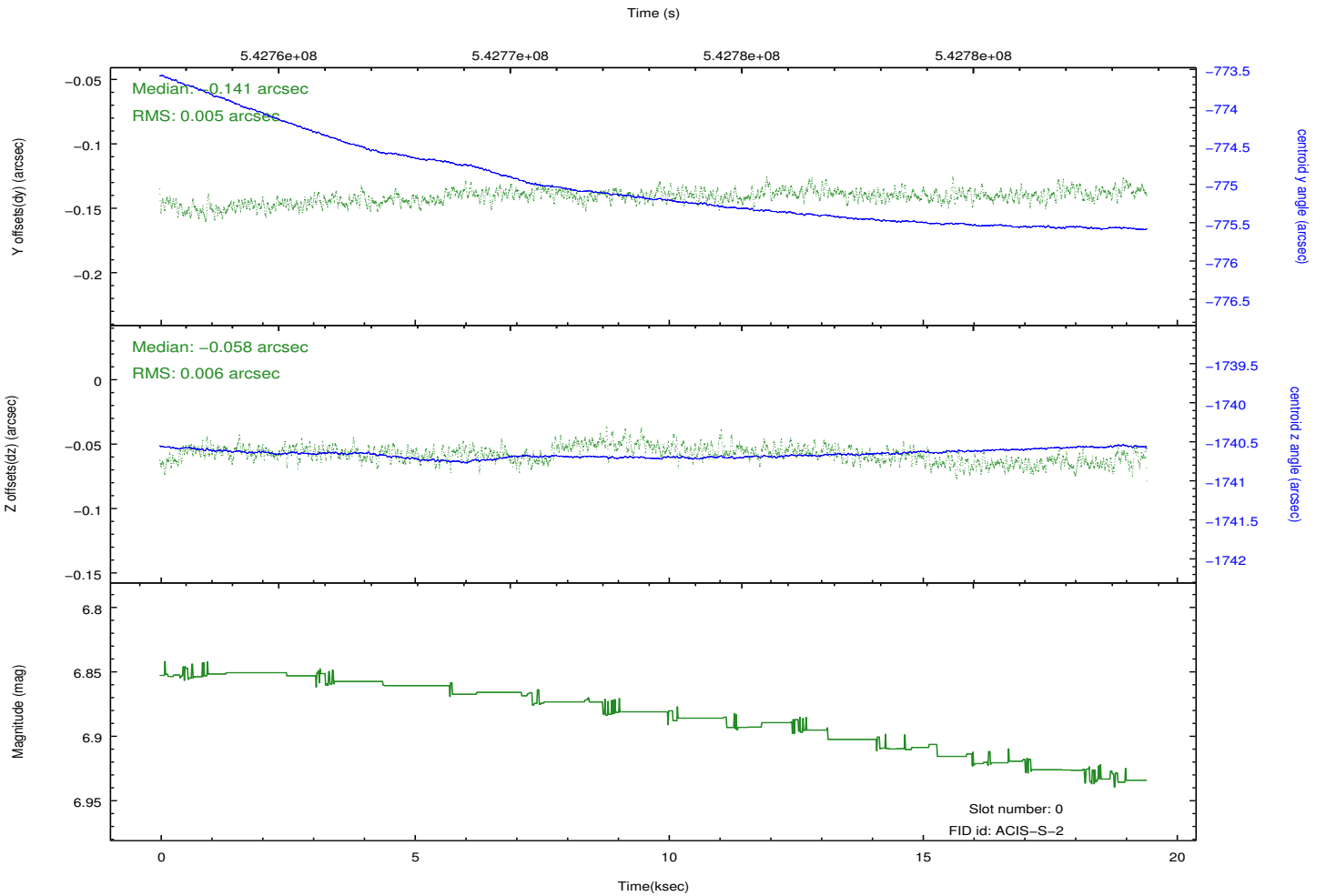
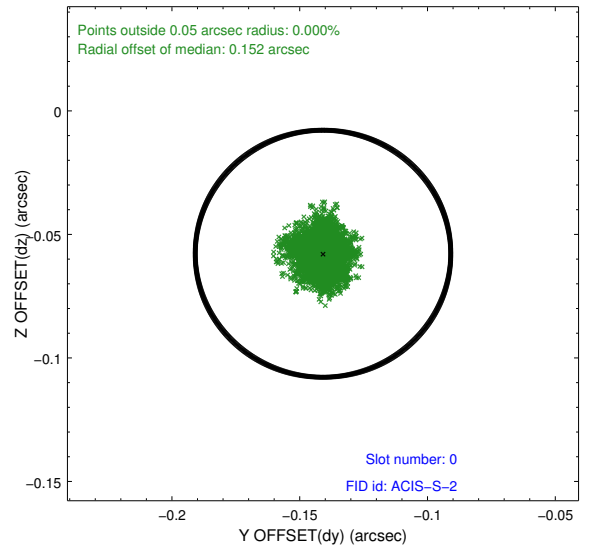
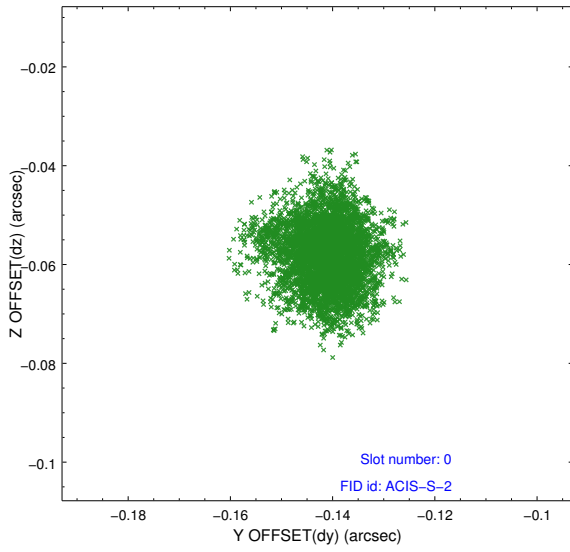


## 2.4.5 Slot 7

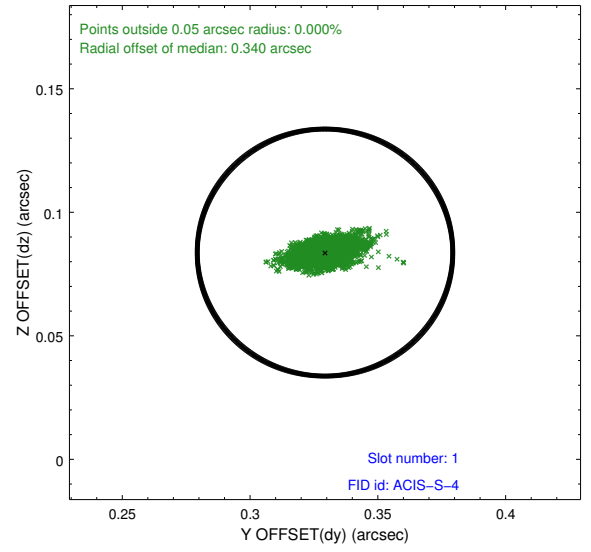
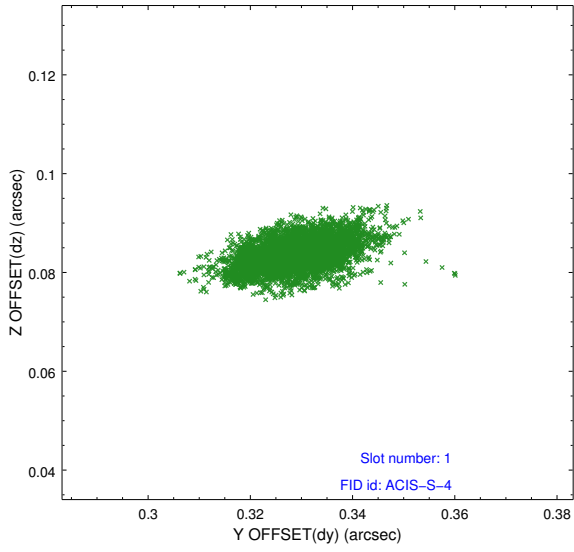


## 2.5 FID Slots

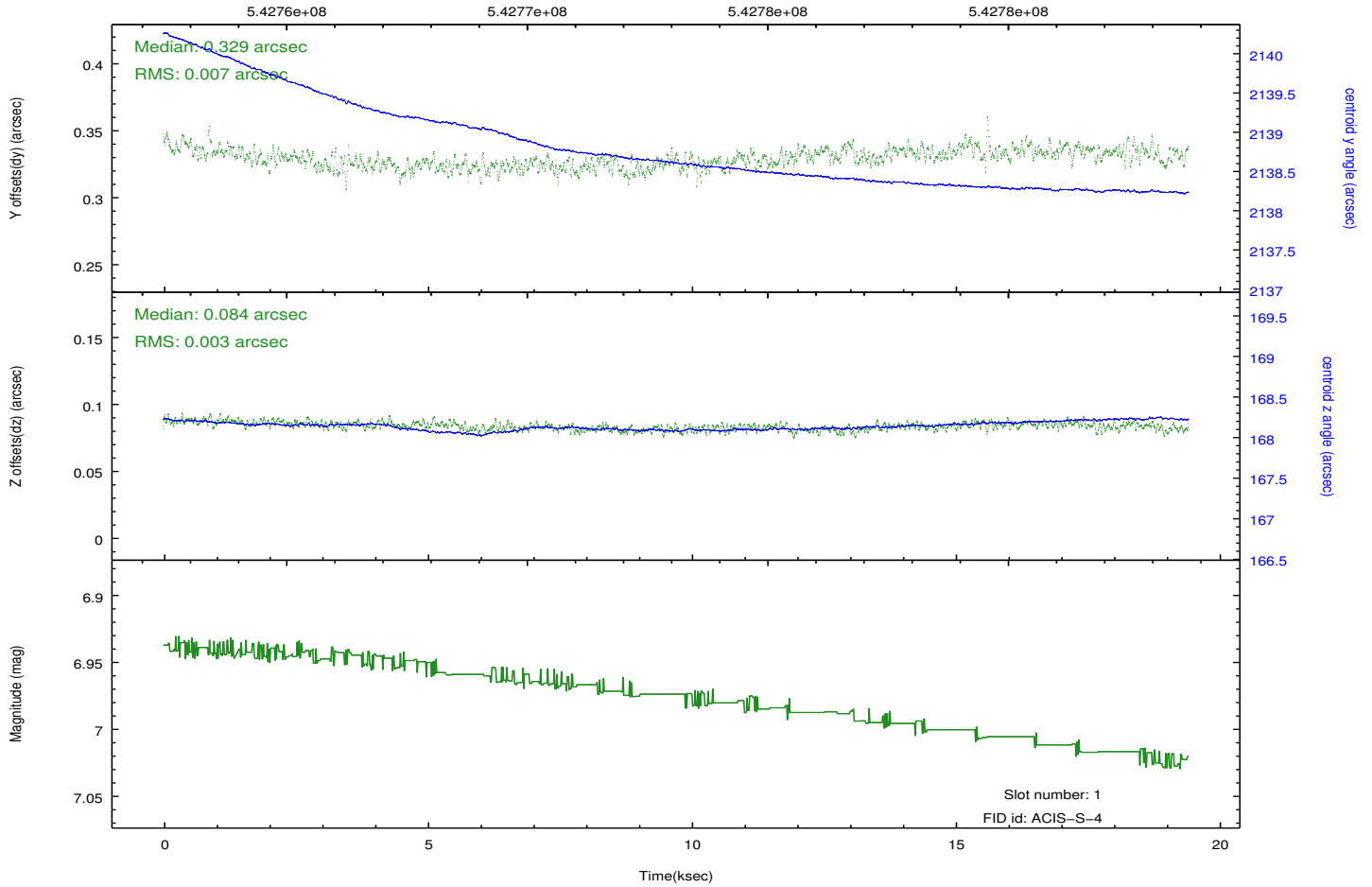
### 2.5.1 Slot 0



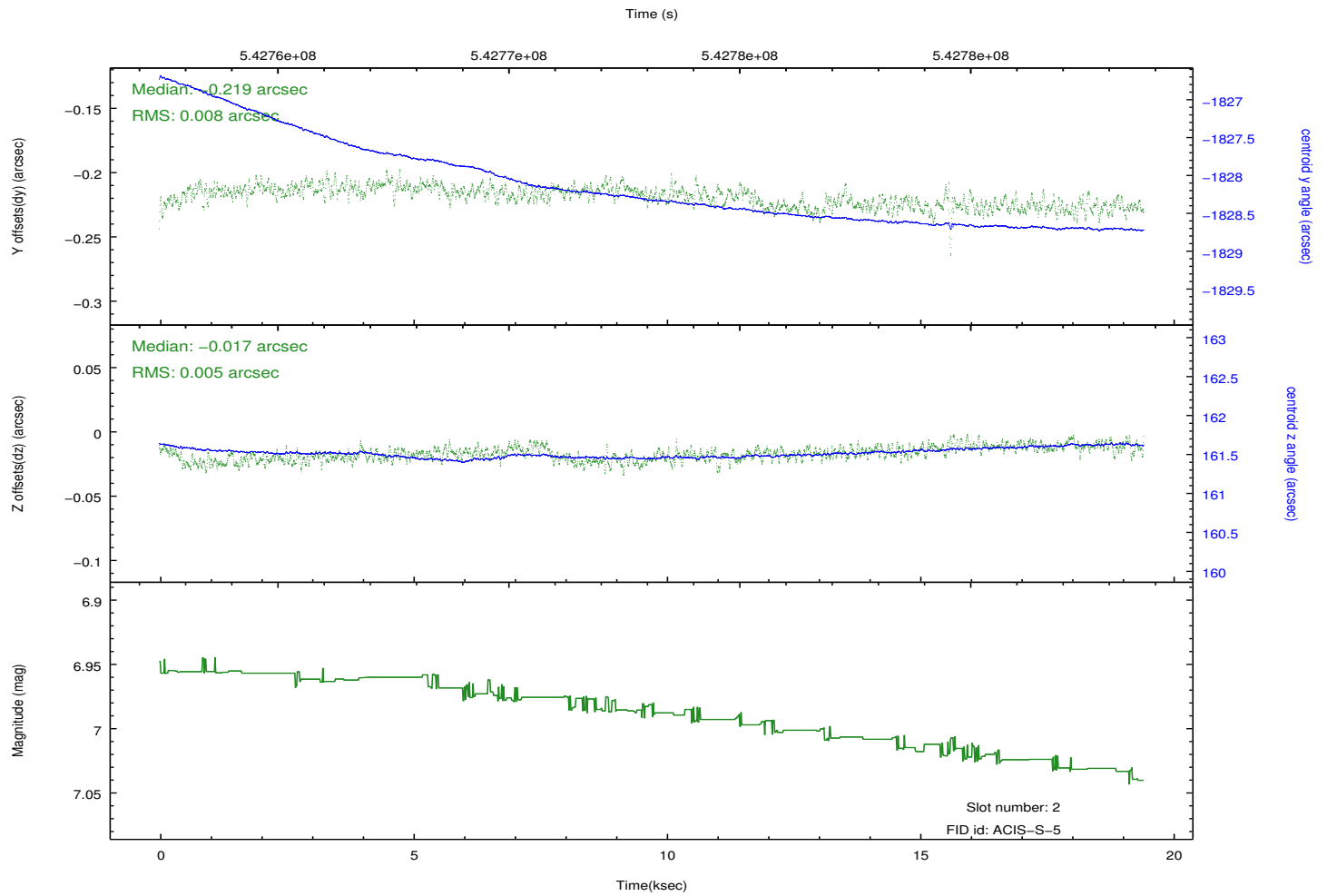
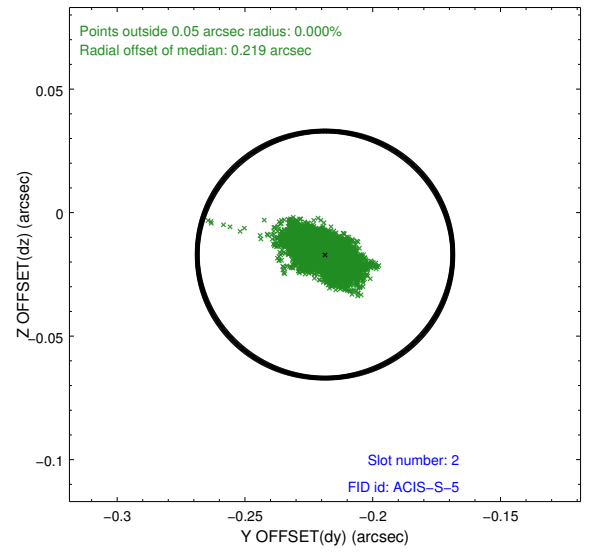
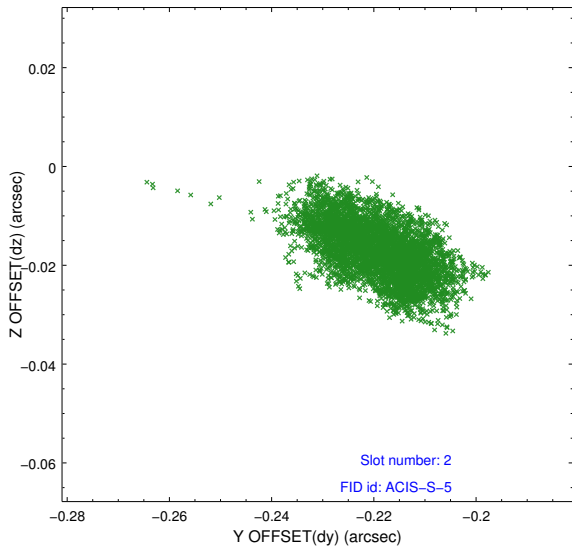
## 2.5.2 Slot 1



Time (s)



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2015.03.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.322300148726

## A.2 Comments