

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5820 - L2 Version 4  
Chandra X-Ray Center

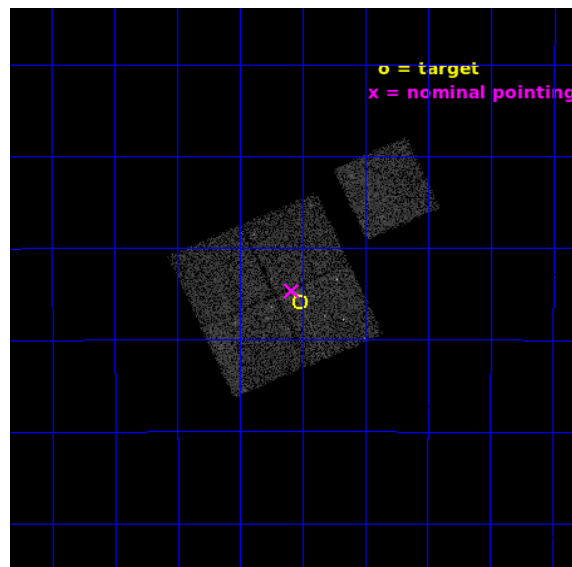
L2 Processing Date : Oct 7 2020

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# 1 Front

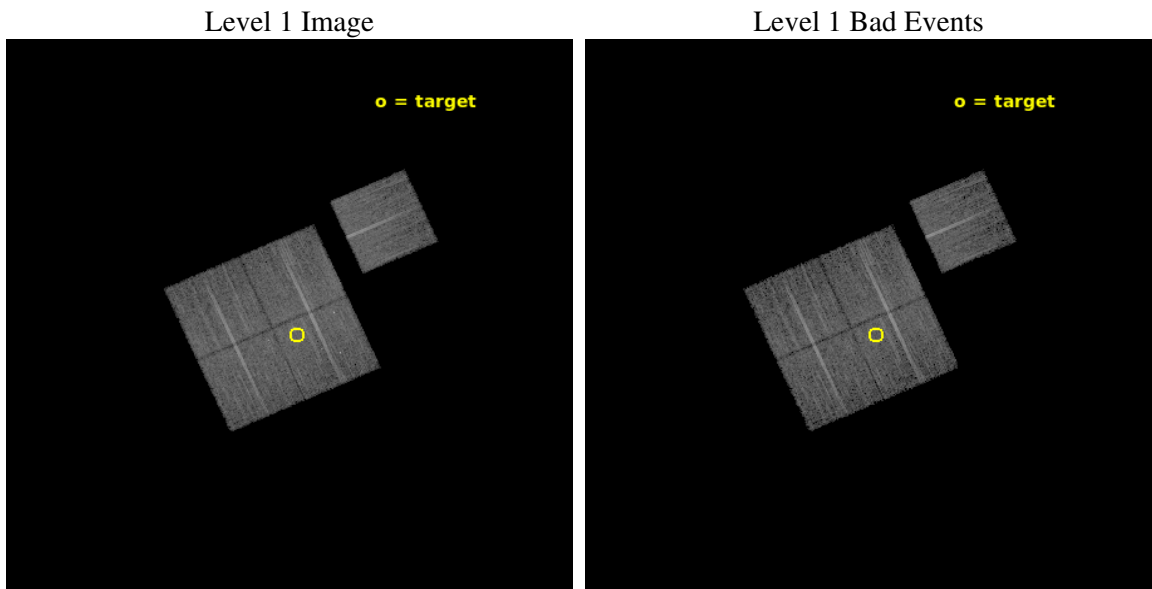
seq_num	800533	Sequence number
obs_id	5820	Observation id
title	MACS: The most massive galaxy clusters at z>0.3	Proposal title
observer	Harald Ebeling	Principal investigator
object	MACSJ1542.0-2915	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	235.504083	Observer's specified target RA [deg]
dec_targ	-29.266	Observer's specified target Dec [deg]
ra_nom	235.52129452357	Nominal RA [deg]
dec_nom	-29.244390939528	Nominal Dec [deg]
roll_nom	65.850489586841	Nominal Roll [deg]
revision	4	Processing version of data
ontime	10127.699980497	Sum of GTIs [s]
liveltime	9995.3741243479	Livetime [s]
ontime0	10127.699980497	Sum of GTIs [s]
ontime1	10124.559010237	Sum of GTIs [s]
ontime2	10127.699980497	Sum of GTIs [s]
ontime3	10127.699980497	Sum of GTIs [s]
ontime6	10124.559020251	Sum of GTIs [s]
l2events	33504	Number of level 2 events



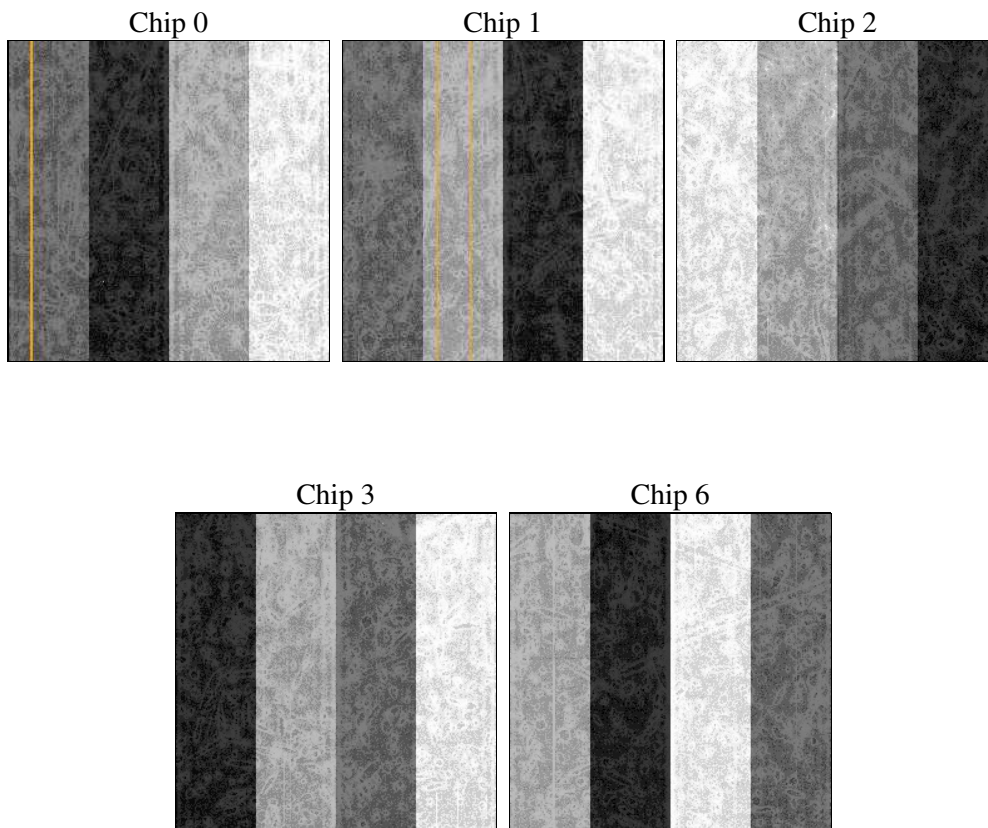
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	10127.699980497	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	10127.699980497	Sum of GTIs [s]
date	2020-10-07T18:06:27	Date and time of file creation	ontime1	10124.559010237	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	10127.699980497	Sum of GTIs [s]
			ontime3	10127.699980497	Sum of GTIs [s]
			ontime6	10124.559020251	Sum of GTIs [s]
			l1events	341638	Number of level 1 events

### 2.1.4 Events

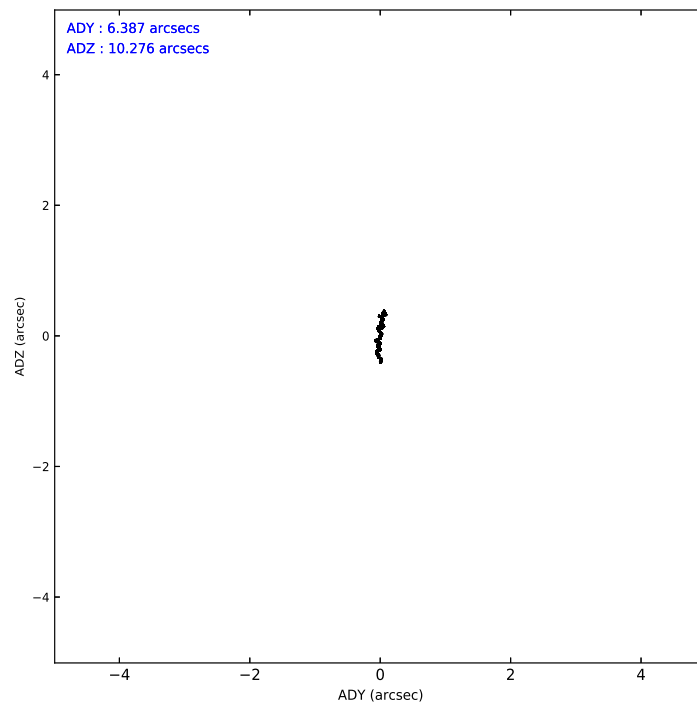
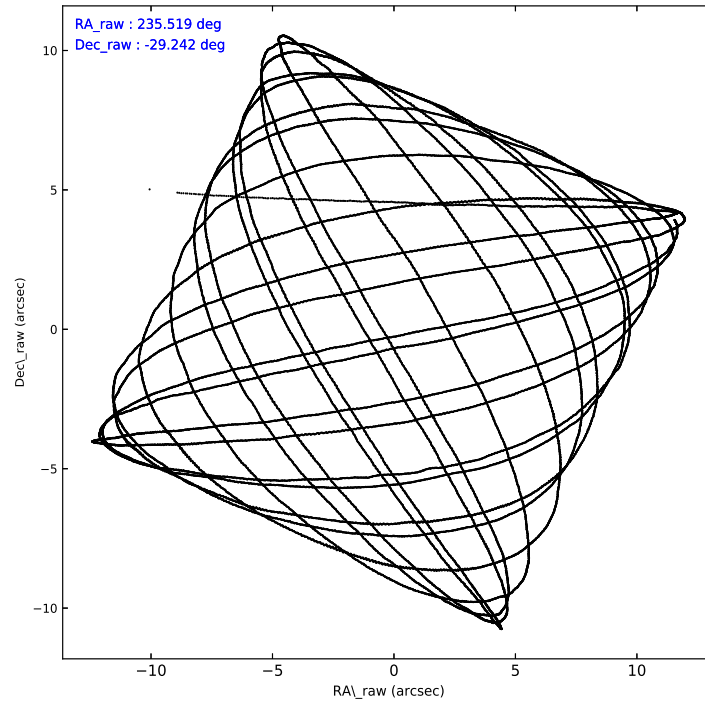
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	64487	64187	71232	74729	67003
rejected events	57763	56316	64543	63938	59931
rejected %	89%	87%	90%	85%	89%

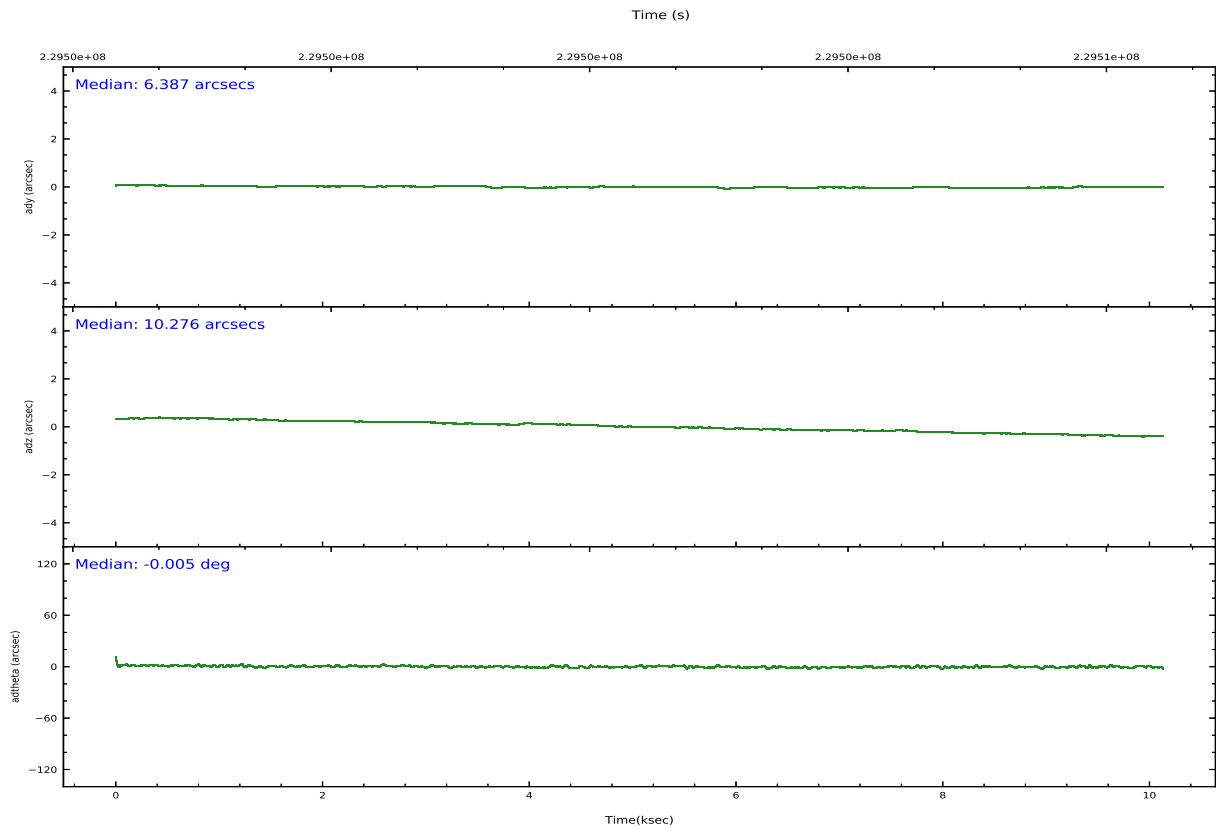
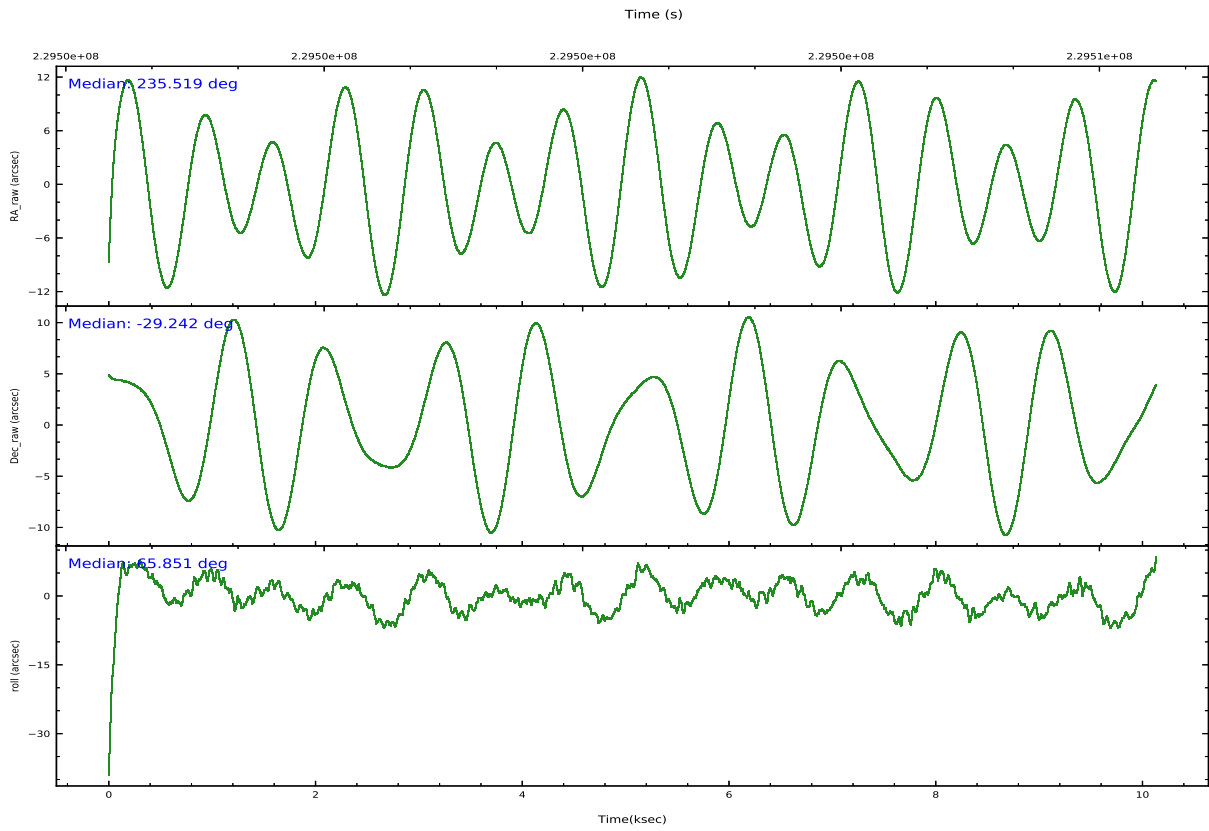
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2518	3354	2835	5216	2872
	3%	5%	3%	6%	4%
grade 1 events	31	33	28	523	32
	0%	0%	0%	0%	0%
grade 2 events	1658	1651	1475	1994	1478
	2%	2%	2%	2%	2%
grade 3 events	797	830	693	1032	782
	1%	1%	0%	1%	1%
grade 4 events	699	836	751	992	736
	1%	1%	1%	1%	1%
grade 5 events	2348	2627	2266	3330	2615
	3%	4%	3%	4%	3%
grade 6 events	1298	1455	1150	1917	1456
	2%	2%	1%	2%	2%
grade 7 events	55138	53401	62034	59725	57032
	85%	83%	87%	79%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	235.522336	235.52129452357	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.268822	-29.244390939528	Alternating exposures requested	N	N
[deg] Pointing Roll	65.635564	65.85048958684099	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-229.442463	-229.4438428438578			
[mm] SIM translation stage offset	-4.15	-4.148610159071865			
[s] Observation start time (MET)	229498049.184000	229496902.64995			
Observation start date	2005-04-10T05:26:25	2005-04-10T05:08:22			
[s] Observation end time (MET)	229508049.184000	229508831.60049			
Observation end date	2005-04-10T08:13:05	2005-04-10T08:27:11			
Read mode	TIMED	TIMED			

## 2.3 Aspect





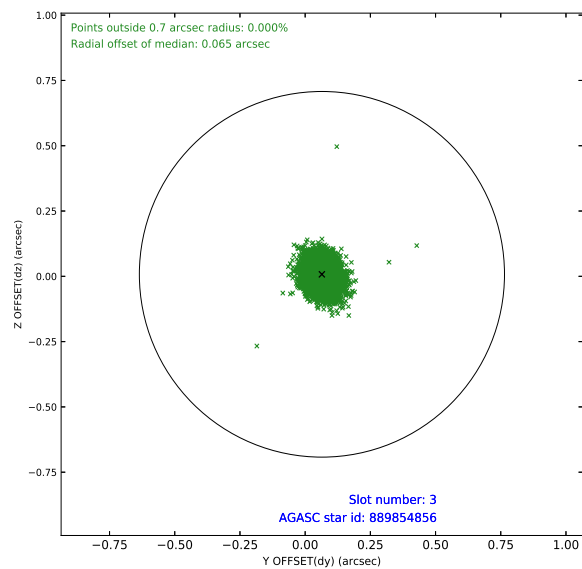
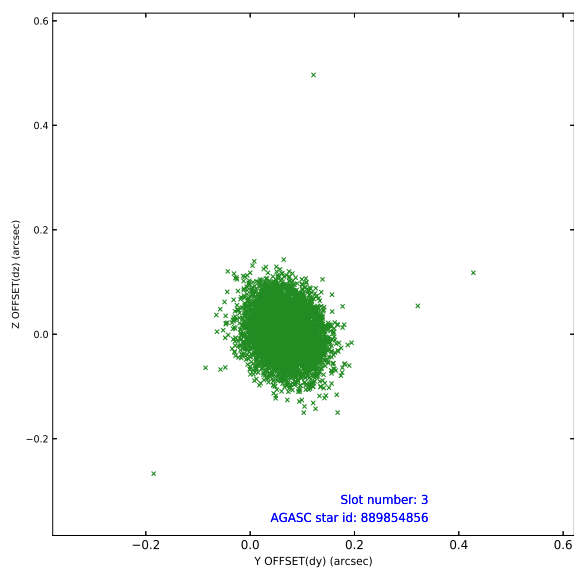
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.25	2472	1.000	-0.014	-0.061	0.015	0.026	0.000000	0.000000	933.27	-918
1	FID		ACIS-I-2	7.16	2472	1.000	-0.180	-0.030	0.009	0.014	0.000000	0.000000	-760.91	-925
2	FID		ACIS-I-4	7.15	2472	1.000	0.096	0.158	0.009	0.016	0.000000	0.000000	2152.69	981
3	GUIDE	used	889854856	8.45	4944	1.000	0.064	0.008	0.062	0.099	235.149556	-29.324698	-667.74	982
4	GUIDE	used	889855320	9.28	4939	1.000	0.132	-0.047	0.088	0.141	235.175576	-29.648595	-1694.72	423
5	GUIDE	used	889857064	8.57	4944	1.000	-0.097	0.043	0.068	0.111	235.145891	-29.077300	137.13	1362
6	GUIDE	used	889858448	9.50	4940	1.000	-0.183	-0.060	0.107	0.169	235.209214	-28.619746	1718.89	1865
7	GUIDE	used	889860280	8.40	4943	1.000	0.085	0.062	0.082	0.138	234.589463	-29.596256	-2289.10	2169

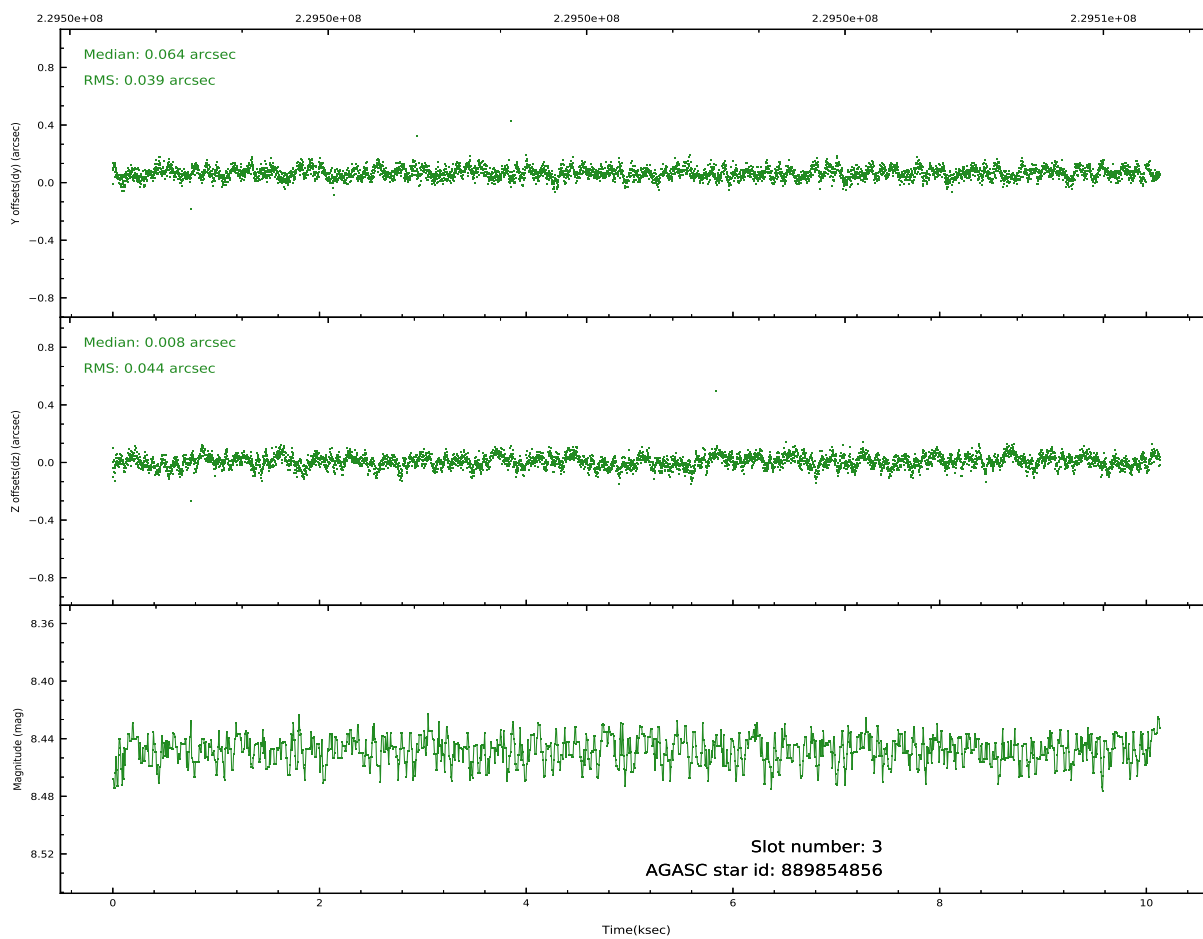
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## 2.4 Star Slots

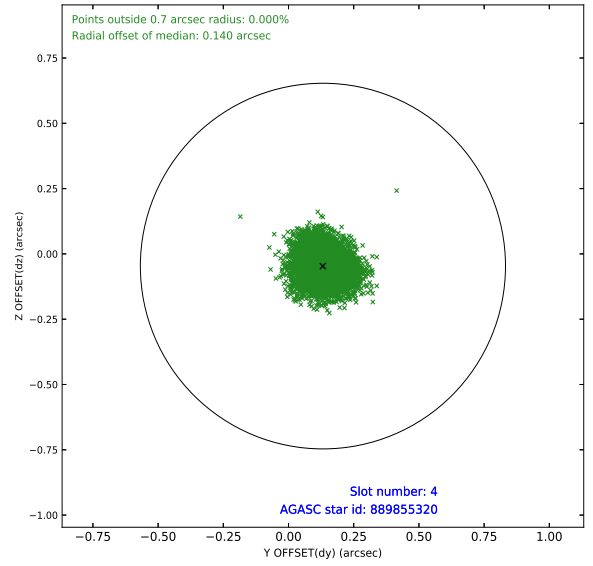
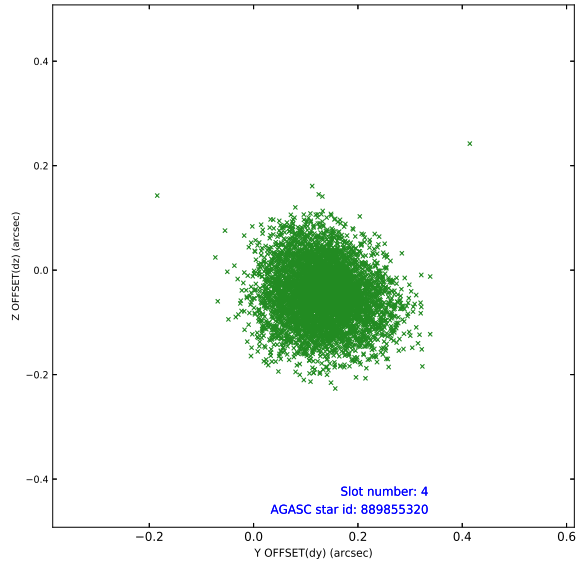
### 2.4.1 Slot 3



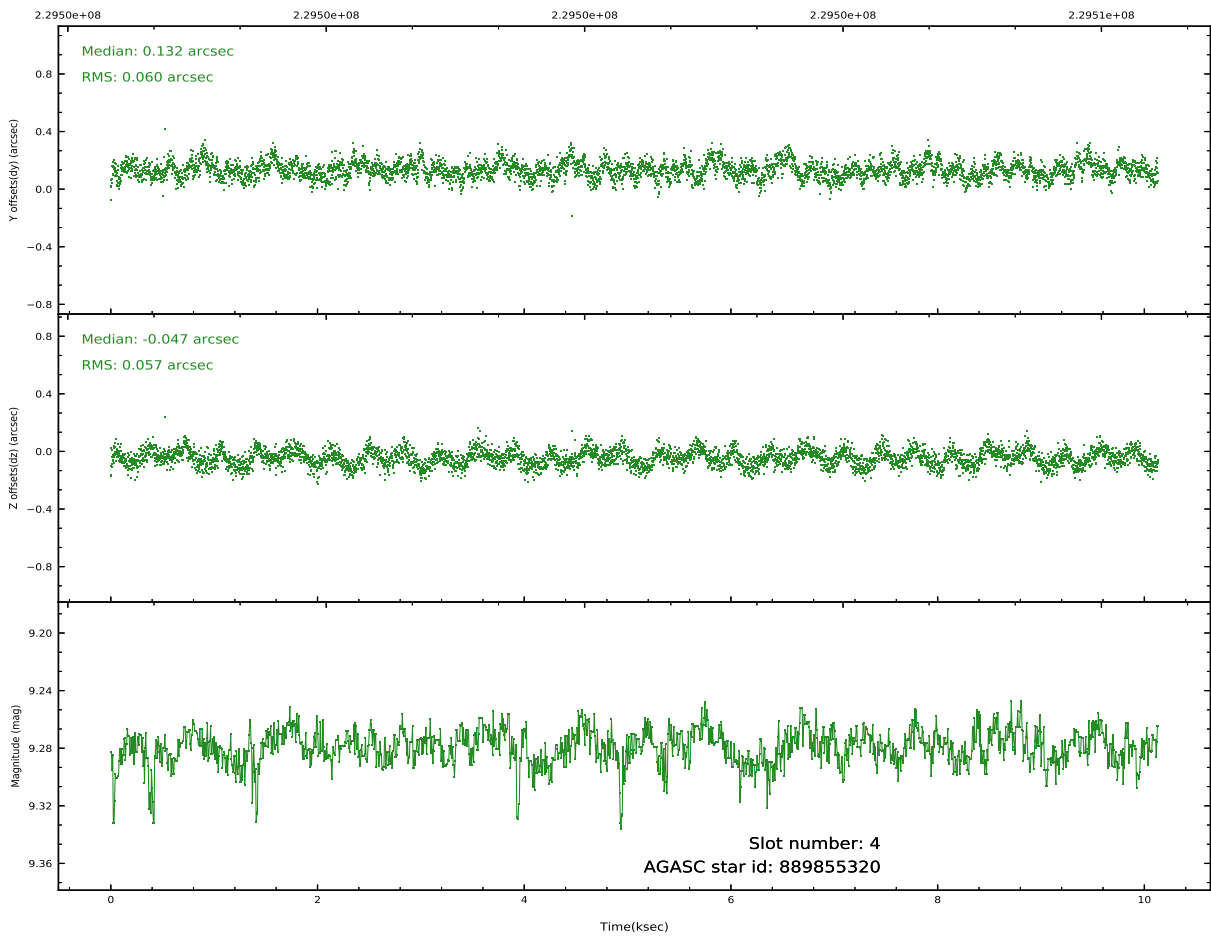
Time (s)



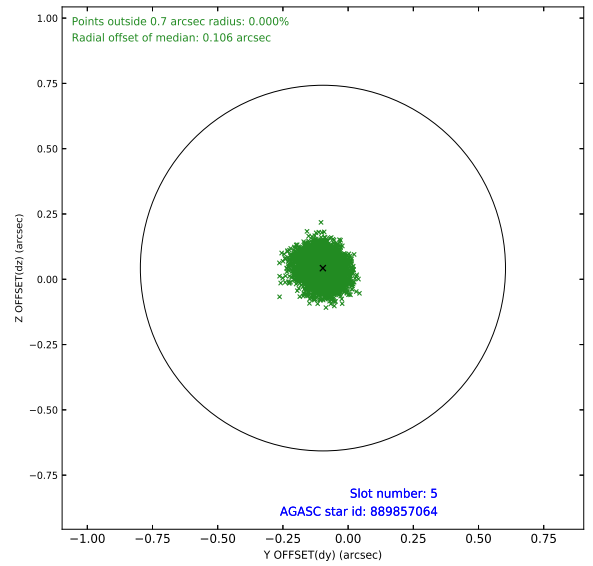
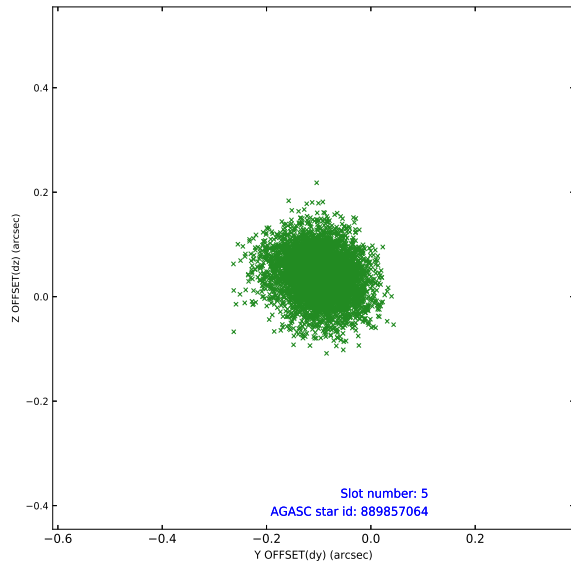
## 2.4.2 Slot 4



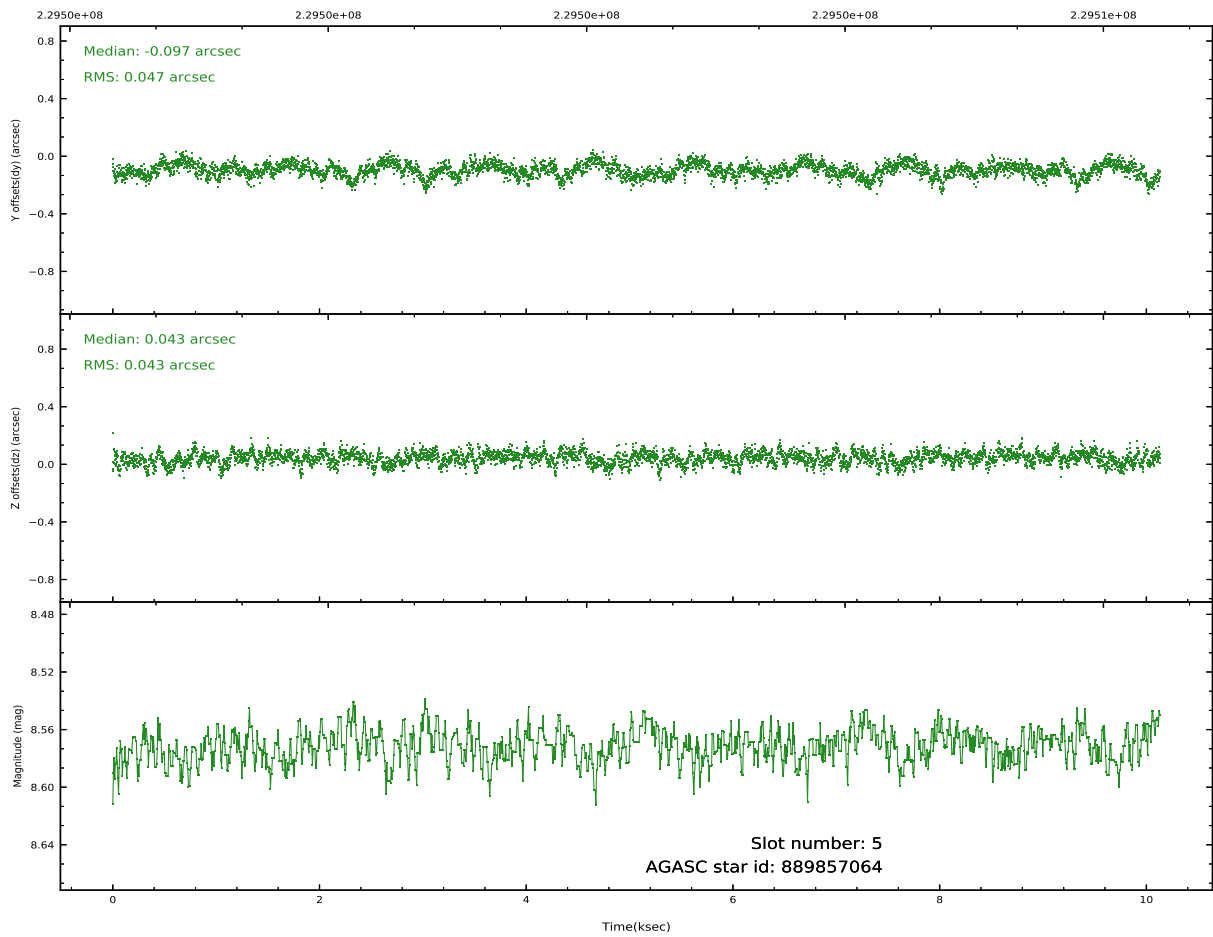
Time (s)



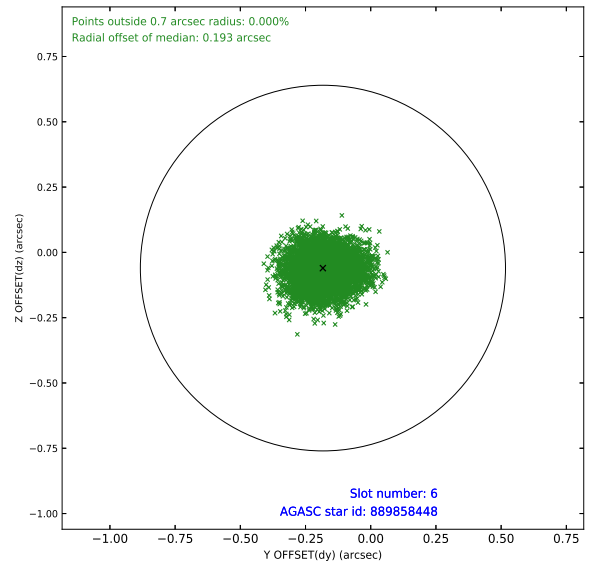
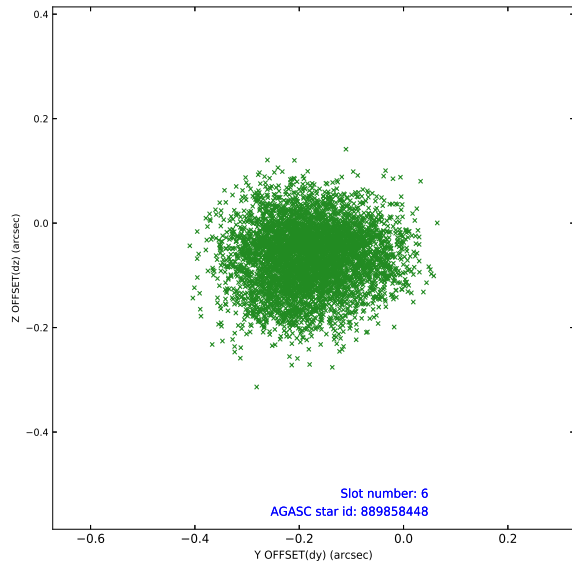
### 2.4.3 Slot 5



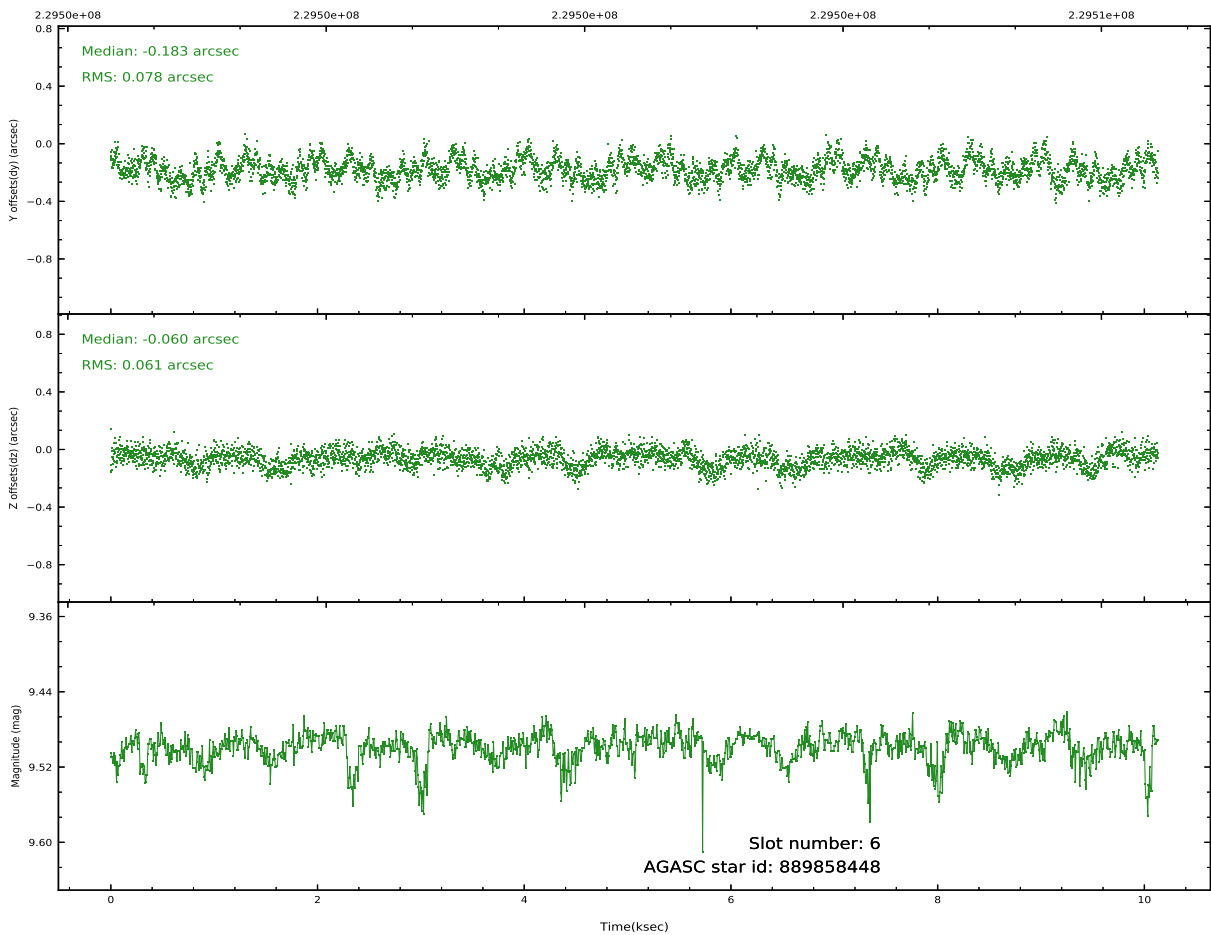
Time (s)



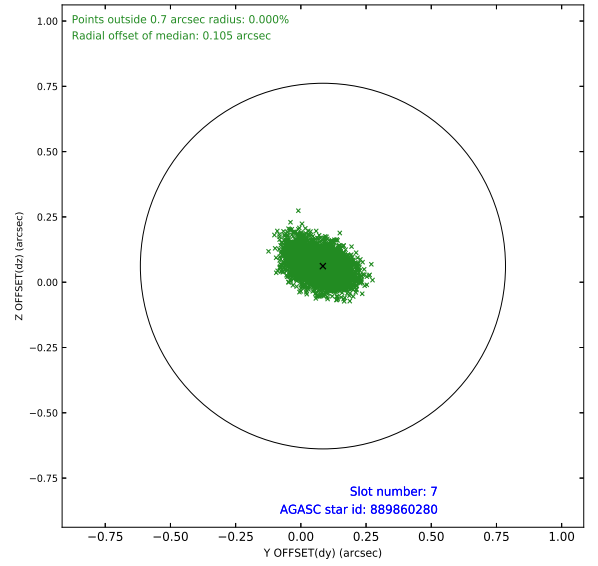
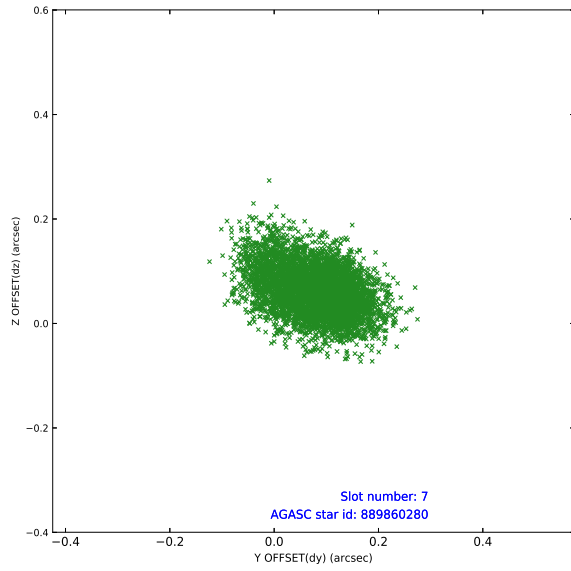
## 2.4.4 Slot 6



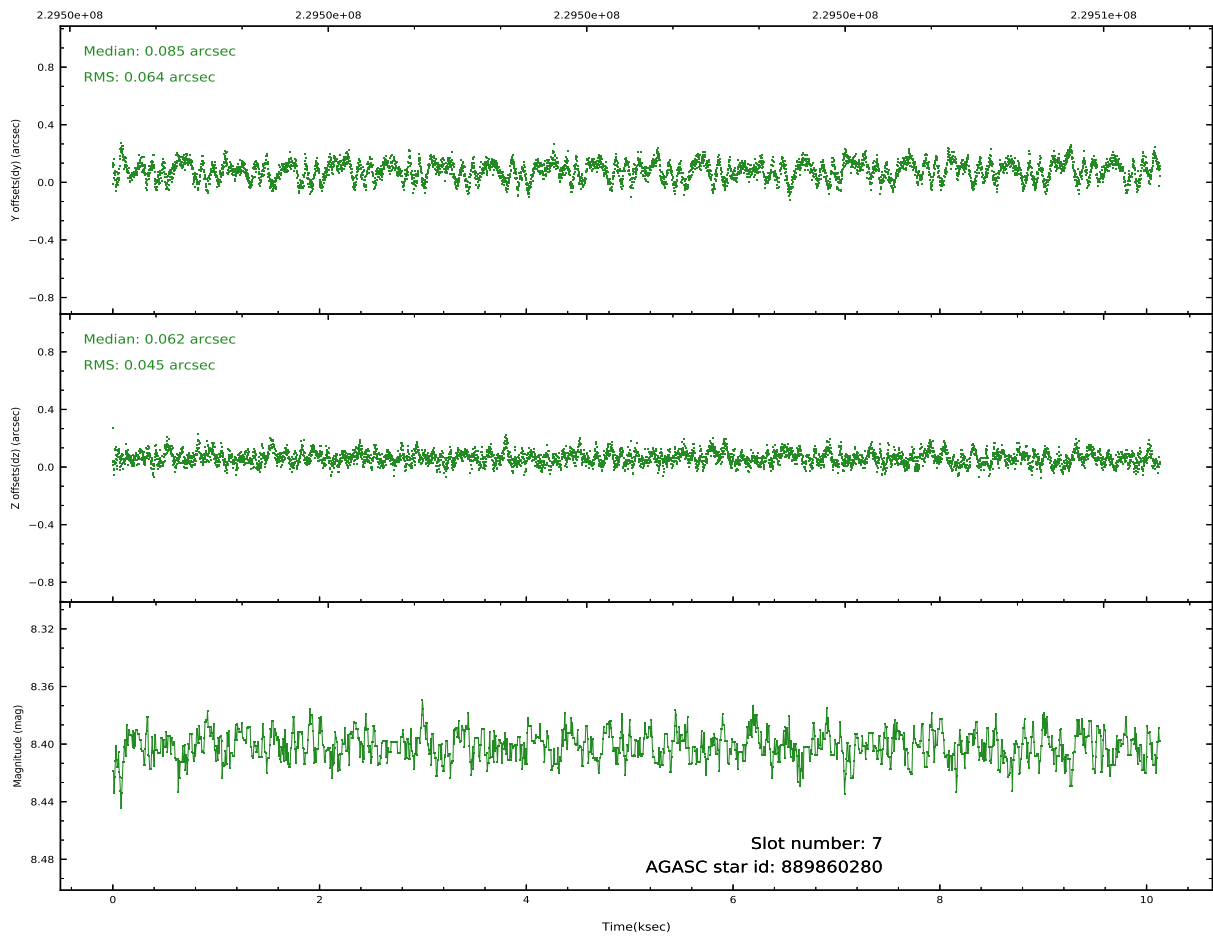
Time (s)



## 2.4.5 Slot 7

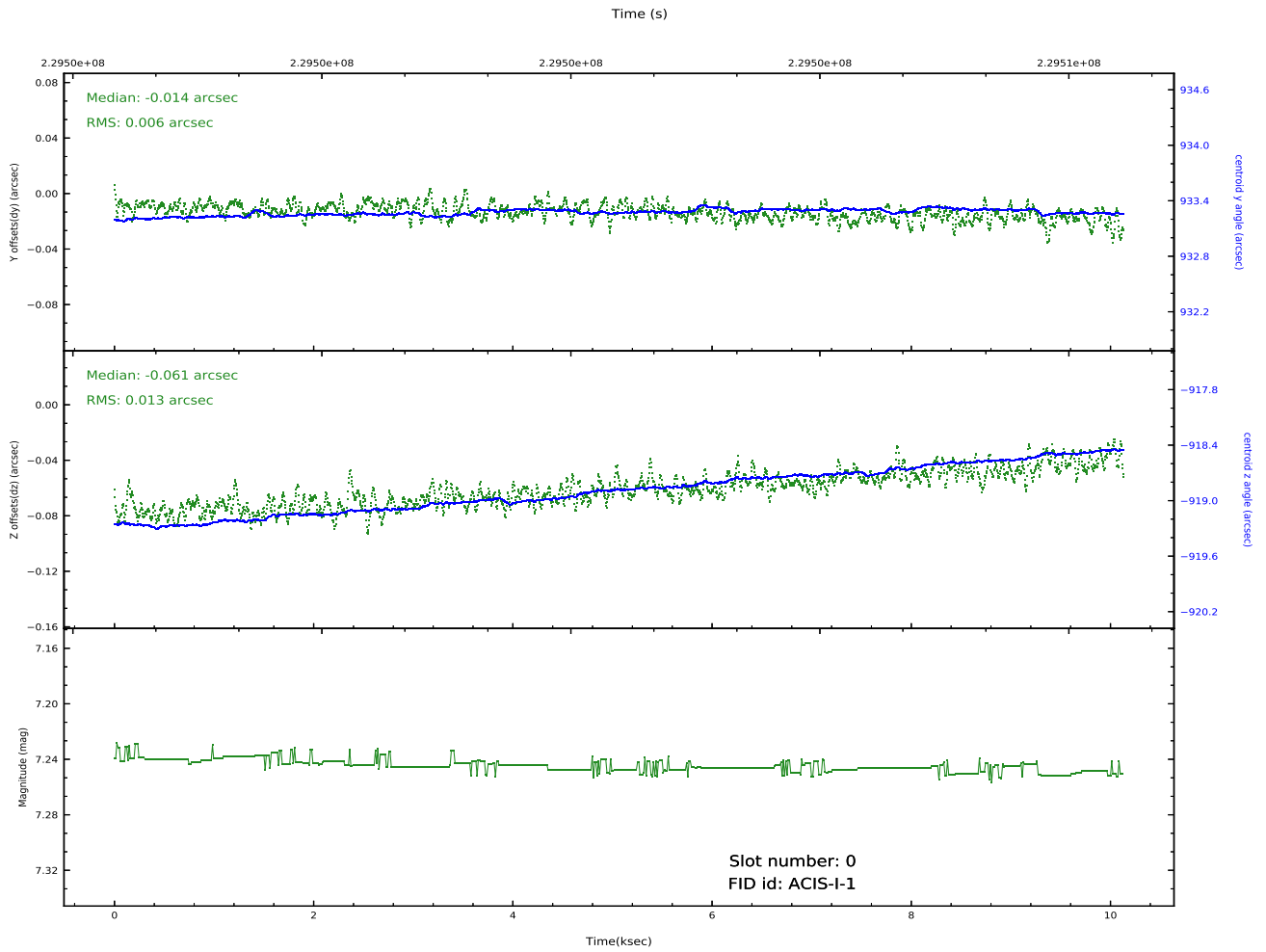
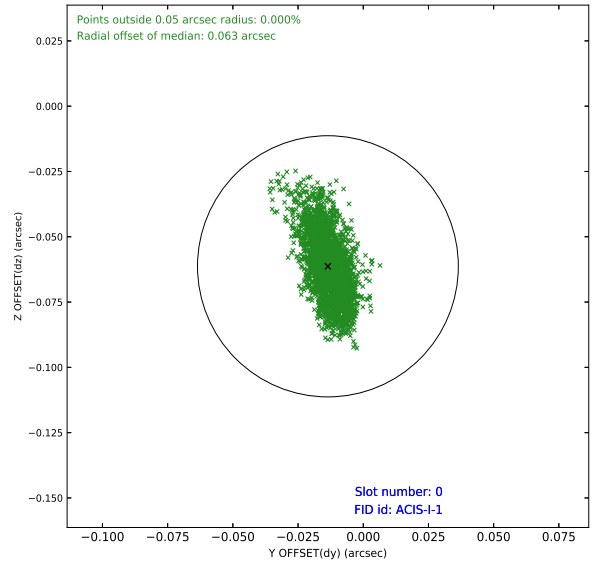
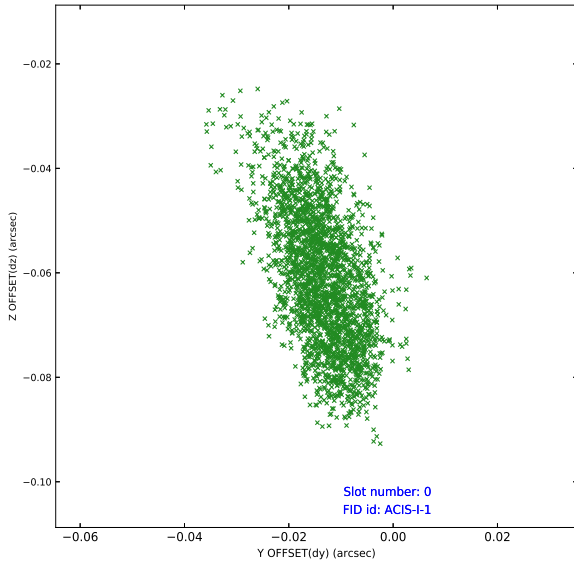


Time (s)

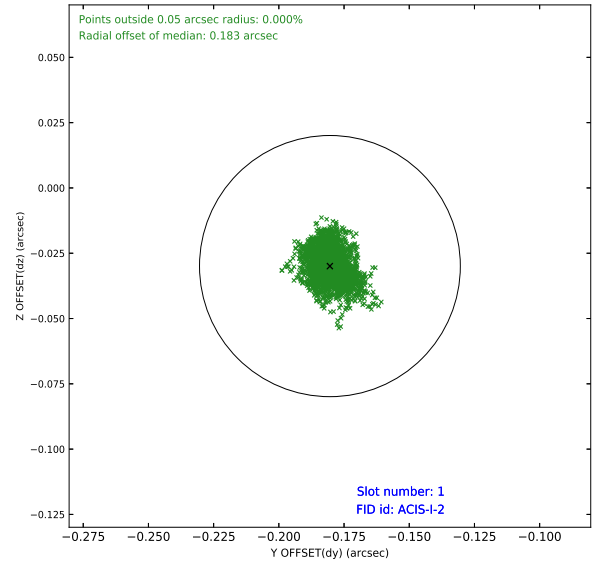
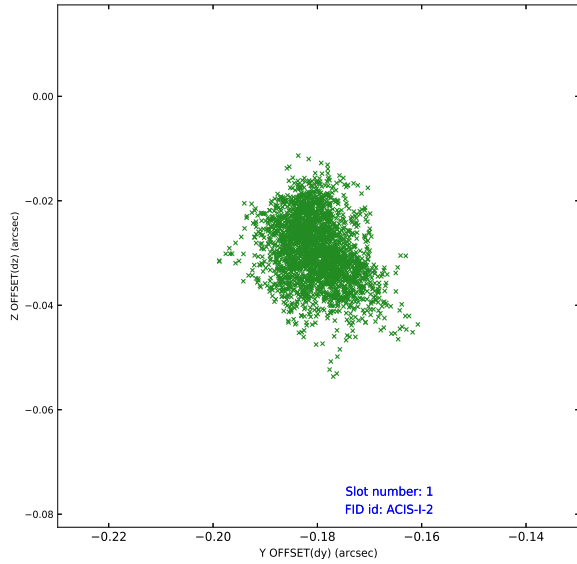


## 2.5 FID Slots

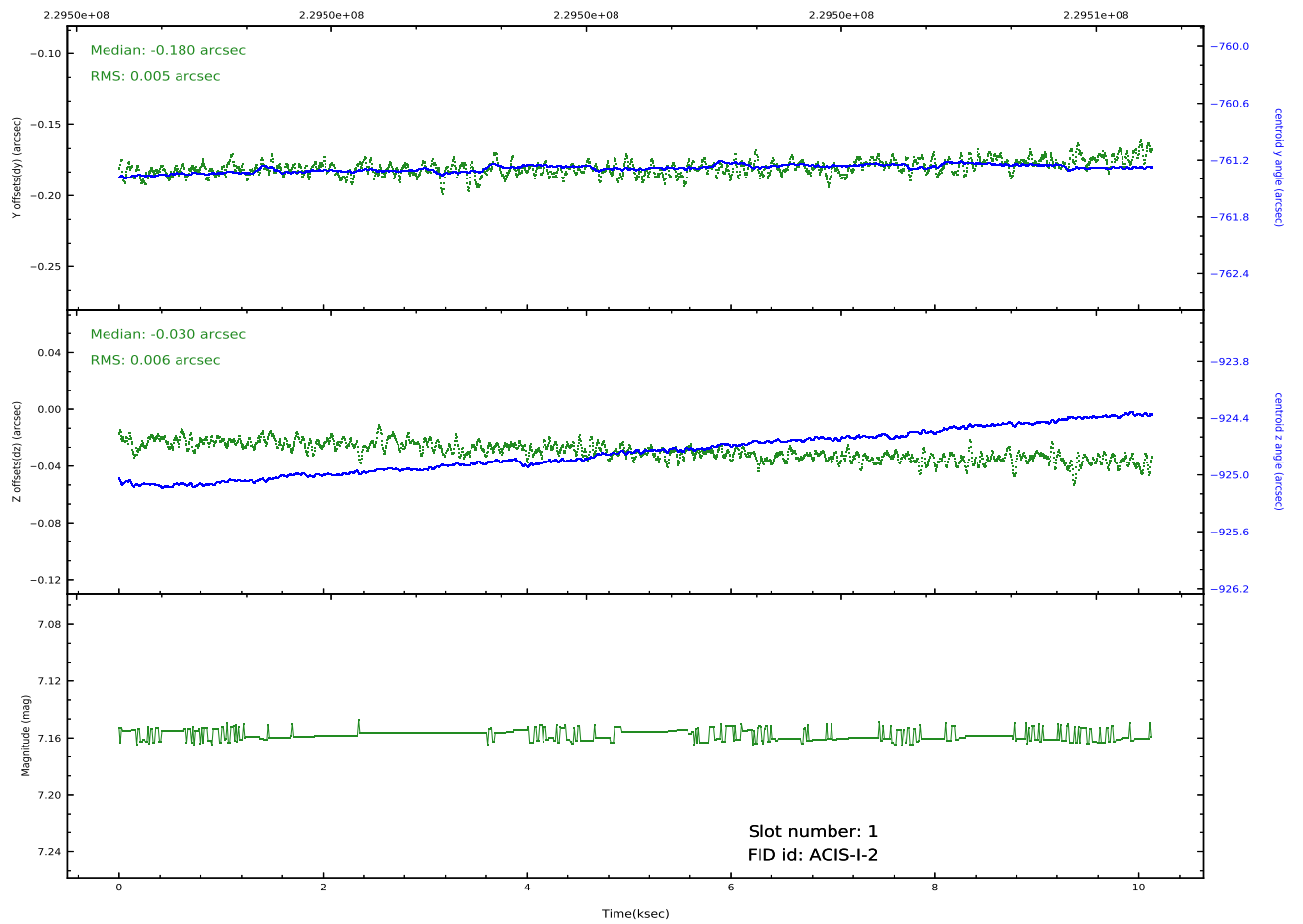
### 2.5.1 Slot 0



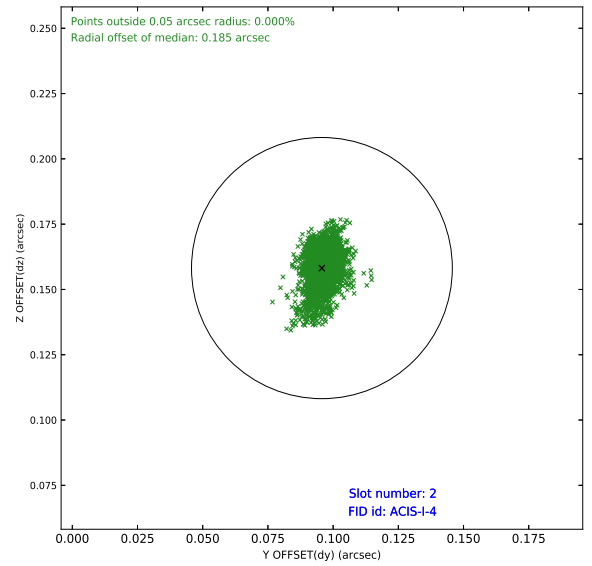
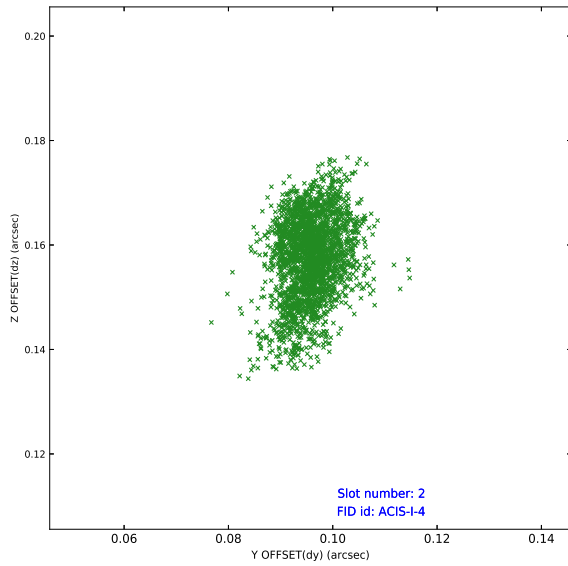
## 2.5.2 Slot 1



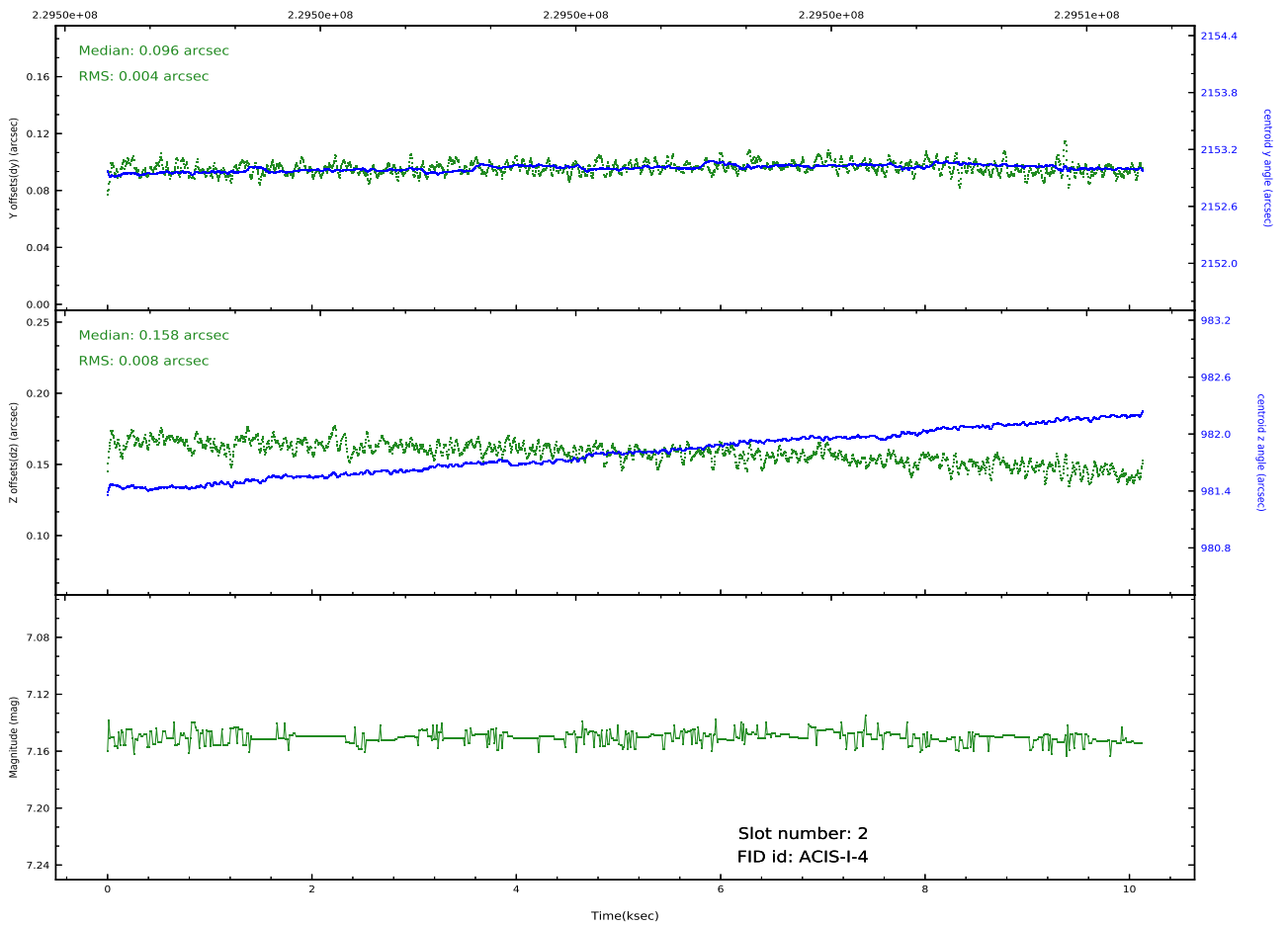
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.12769

## A.2 Comments