

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20924 - L2 Version 2  
Chandra X-Ray Center

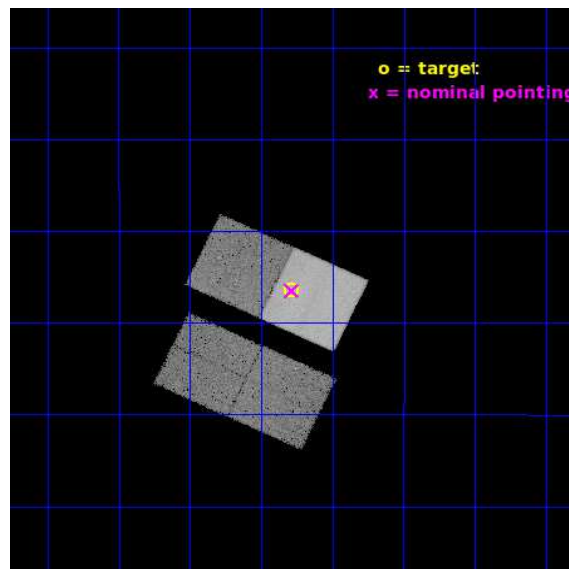
L2 Processing Date : Oct 24 2020

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# 1 Front

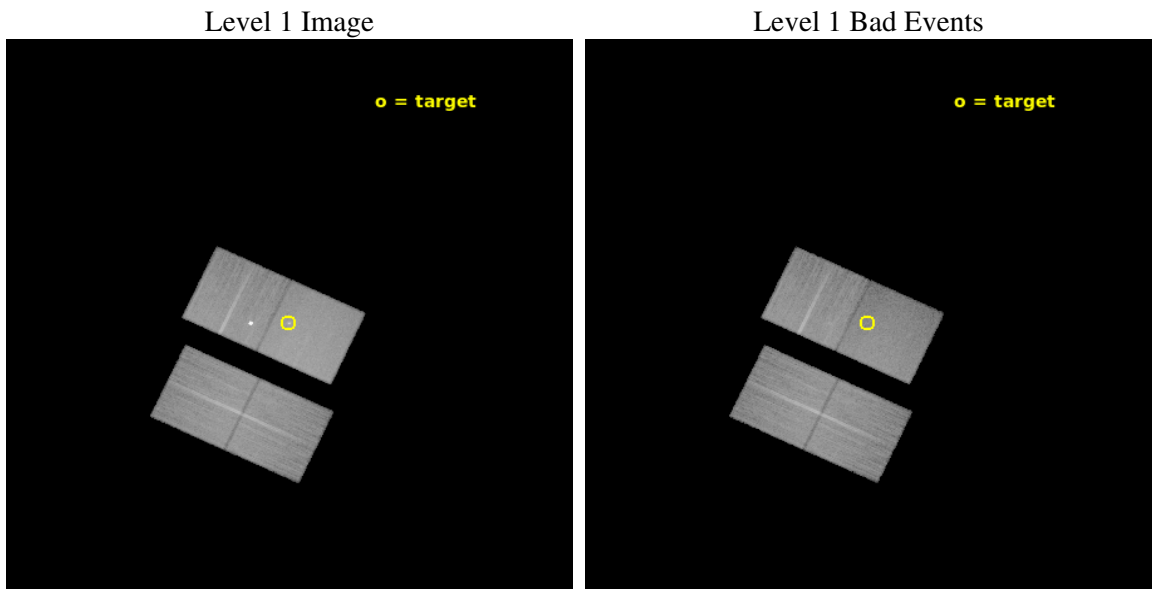
seq_num	601408	Sequence number
obs_id	20924	Observation id
title	The Mass Profiles of Two Massive Relic Galaxies	Proposal title
observer	David Buote	Principal investigator
object	Mrk1216	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	127.19625	Observer's specified target RA [deg]
dec_targ	-6.940278	Observer's specified target Dec [deg]
ra_nom	127.19614708575	Nominal RA [deg]
dec_nom	-6.9416734882987	Nominal Dec [deg]
roll_nom	25.144323872994	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30066.310242176	Sum of GTIs [s]
livetime	29673.471764366	Livetime [s]
ontime2	30056.763921618	Sum of GTIs [s]
ontime3	30063.08711195	Sum of GTIs [s]
ontime6	30063.128162026	Sum of GTIs [s]
ontime7	30066.310242176	Sum of GTIs [s]
l2events	179507	Number of level 2 events



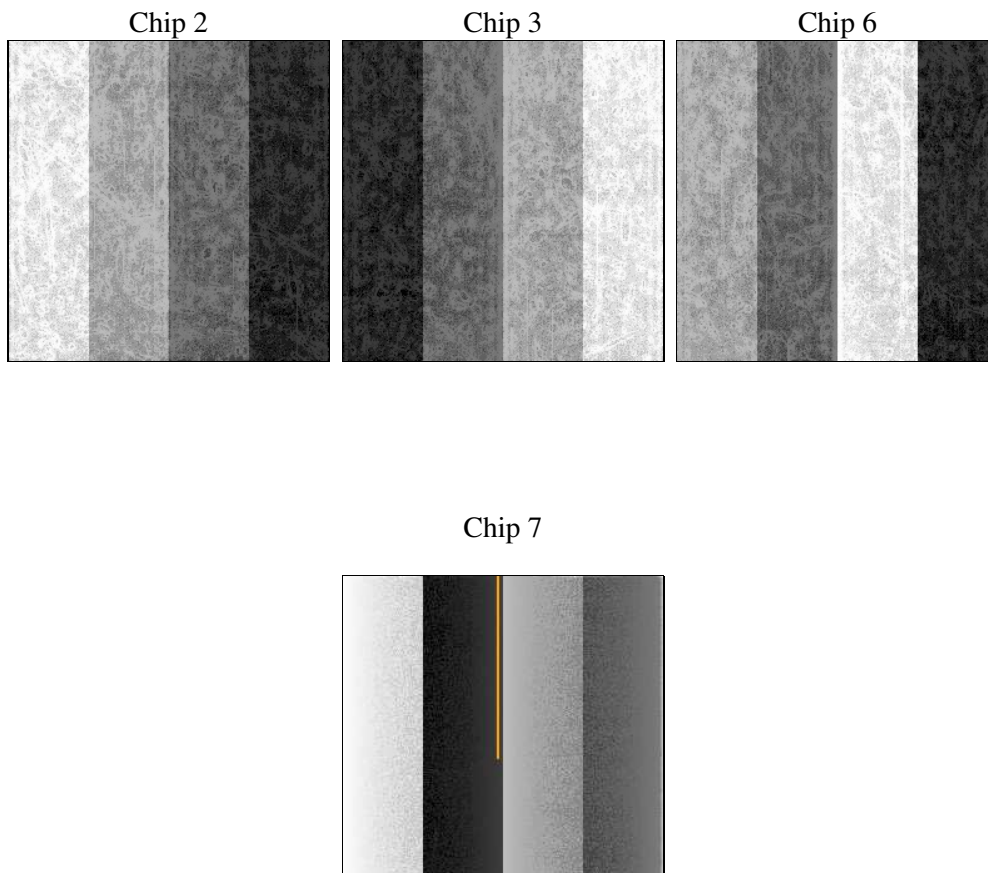
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	30066.310242176	Sum of GTIs [s]
caldsver	4.9.3	&#160	ontime2	30056.763921618	Sum of GTIs [s]
date	2020-10-24T06:30:47	Date and time of file creation	ontime3	30063.08711195	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30063.128162026	Sum of GTIs [s]
			ontime7	30066.310242176	Sum of GTIs [s]
			l1events	967365	Number of level 1 events

### 2.1.4 Events

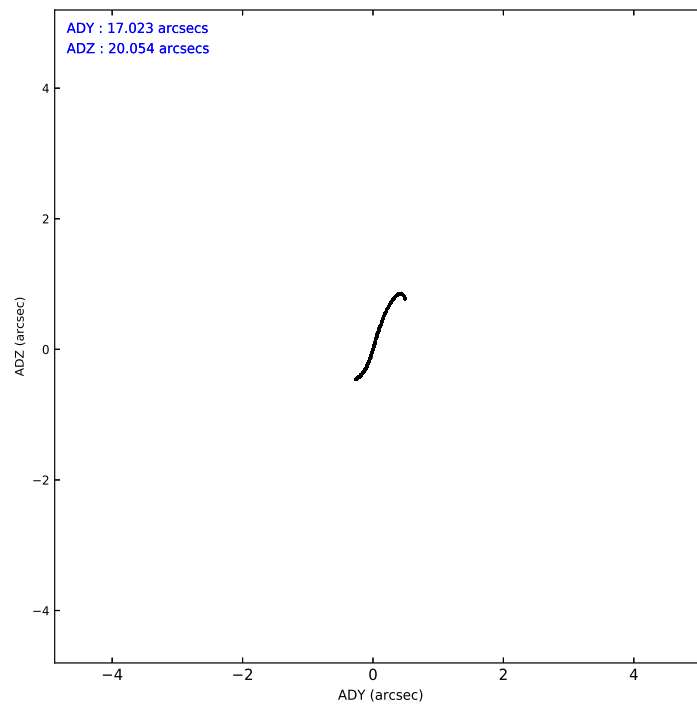
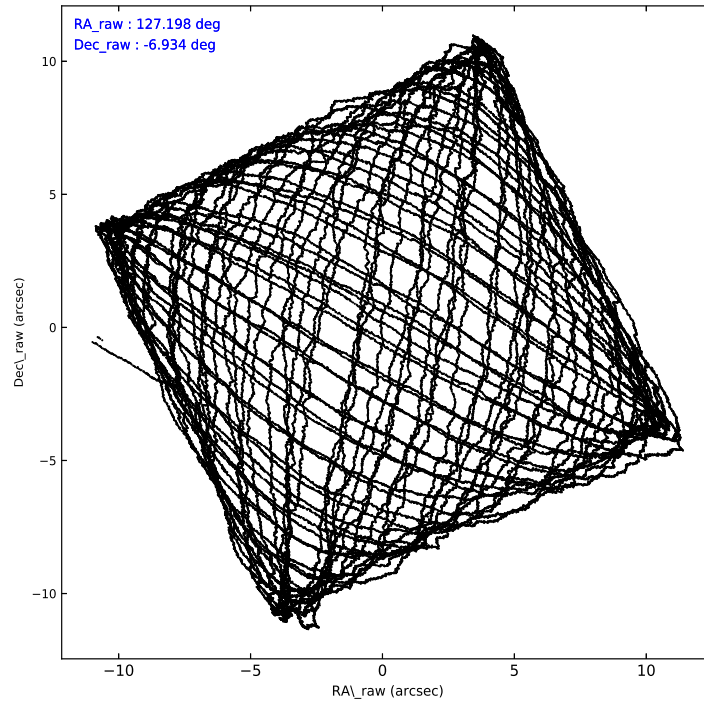
	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	228896	215360	240592	282517
rejected events	206521	193592	202566	158828
rejected %	90%	89%	84%	56%

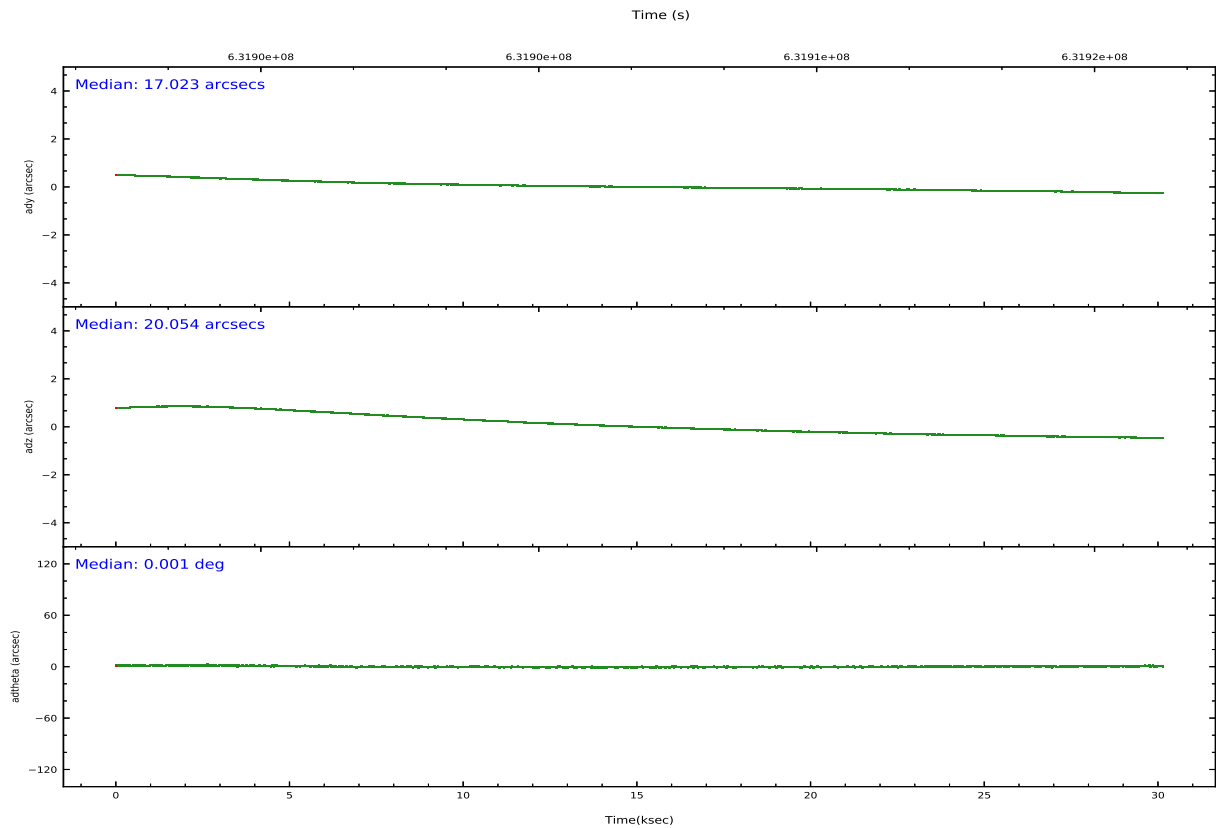
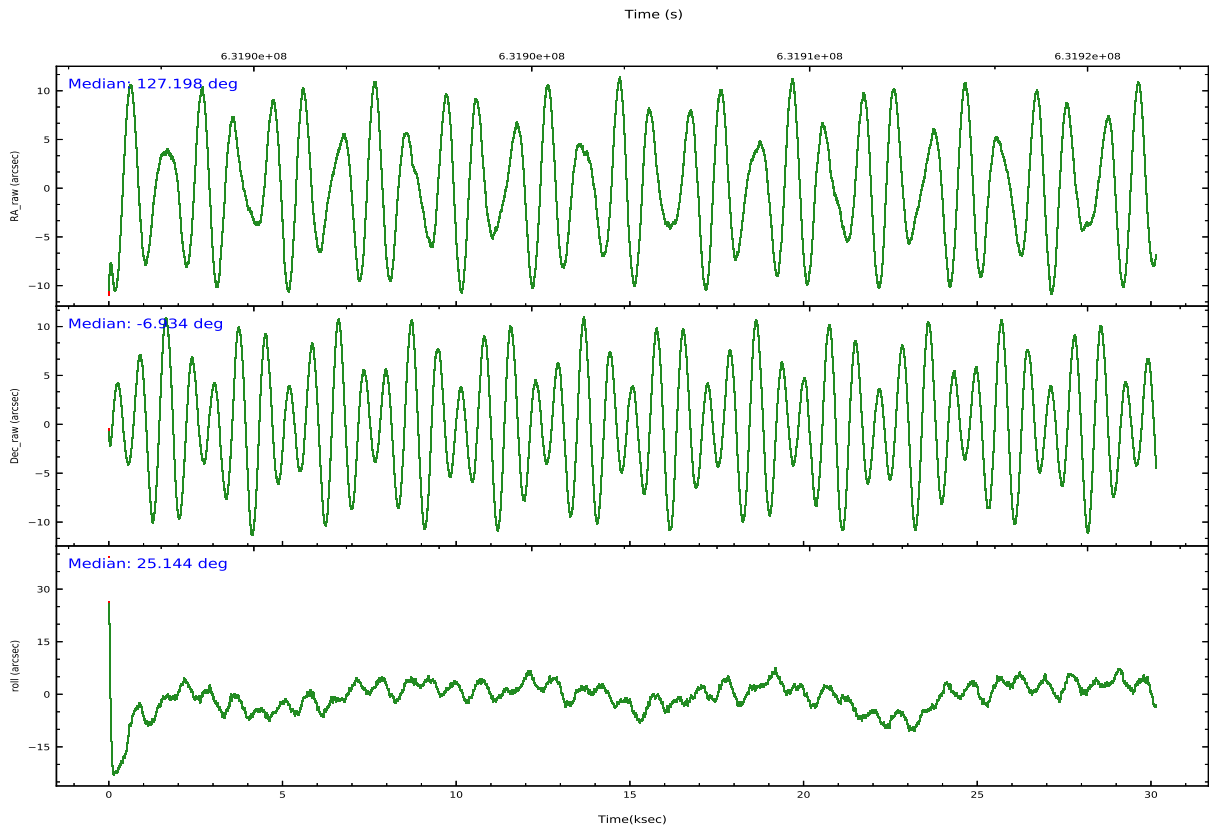
	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	7778	7493	7412	11084
	3%	3%	3%	3%
grade 1 events	116	122	101	341
	0%	0%	0%	0%
grade 2 events	5340	4852	19853	25969
	2%	2%	8%	9%
grade 3 events	2328	2340	2188	10148
	1%	1%	0%	3%
grade 4 events	2311	2400	2154	9972
	1%	1%	0%	3%
grade 5 events	8412	10089	9790	27876
	3%	4%	4%	9%
grade 6 events	4624	4690	6424	66539
	2%	2%	2%	23%
grade 7 events	197987	183374	192670	130588
	86%	85%	80%	46%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-2367	ACIS-2367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	O2	N
Observation mode	POINTING	POINTING	CCD I1 on	O1	N
[deg] Pointing RA	127.182691	127.19614708575	CCD I2 on	Y	Y
[deg] Pointing Dec	-6.957069	-6.9416734882987	CCD I3 on	Y	Y
[deg] Pointing Roll	24.998360	25.144323872994	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	N	N
[s] Observation start time (MET)	631891974.184000	631890760.93299	CCD S5 on	N	N
Observation start date	2018-01-09T13:31:45	2018-01-09T13:12:40	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	631921974.184000	631923120.18489	On-chip summing requested	N	N
Observation end date	2018-01-09T21:51:45	2018-01-09T22:12:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





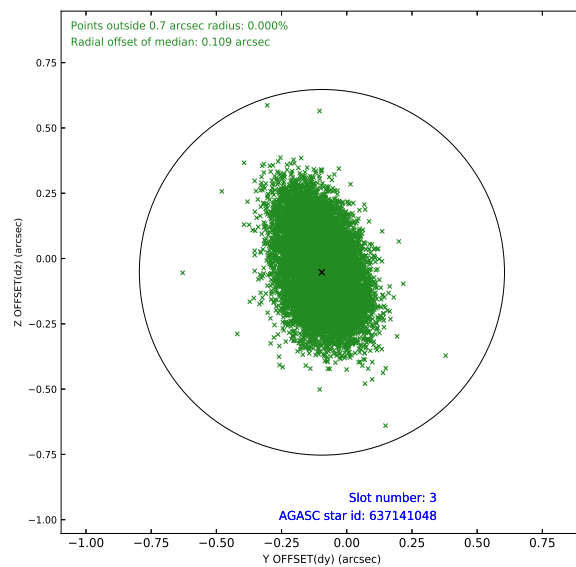
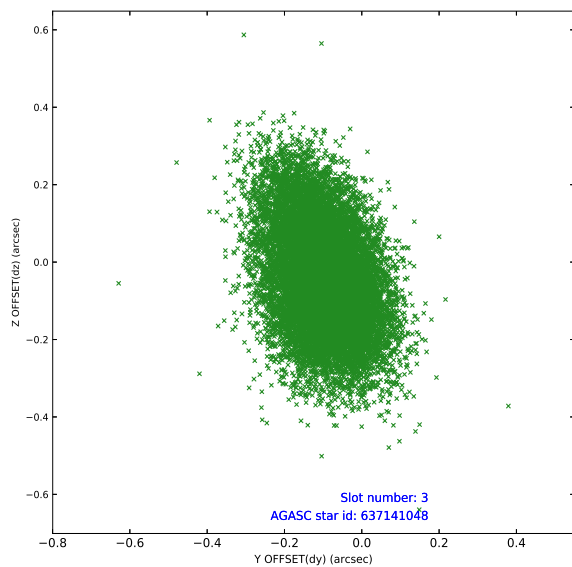
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.22	7352	1.000	0.281	-0.157	0.016	0.024	0.000000	0.000000	926.02	-1737
1	FID		ACIS-S-4	7.25	7354	1.000	0.064	-0.021	0.014	0.022	0.000000	0.000000	2143.46	166
2	FID		ACIS-S-5	7.24	7354	1.000	-0.371	0.191	0.010	0.016	0.000000	0.000000	-1823.20	160
3	GUIDE	used	637141048	9.24	14692	1.000	-0.095	-0.053	0.162	0.280	127.462654	-7.078875	721.47	-820
4	GUIDE	used	637143216	7.01	14708	1.000	-0.065	0.238	0.110	0.186	126.941738	-7.220354	-1180.24	-495
5	GUIDE	used	637152496	9.06	14697	1.000	0.175	-0.064	0.131	0.221	126.870796	-6.559955	-406.99	1766
6	GUIDE	used	711467944	8.67	14688	1.000	0.169	0.198	0.121	0.208	127.206727	-7.544375	-815.33	-1952
7	GUIDE	used	637158032	6.77	14707	1.000	-0.186	-0.337	0.121	0.200	126.821957	-6.409718	-338.36	2330

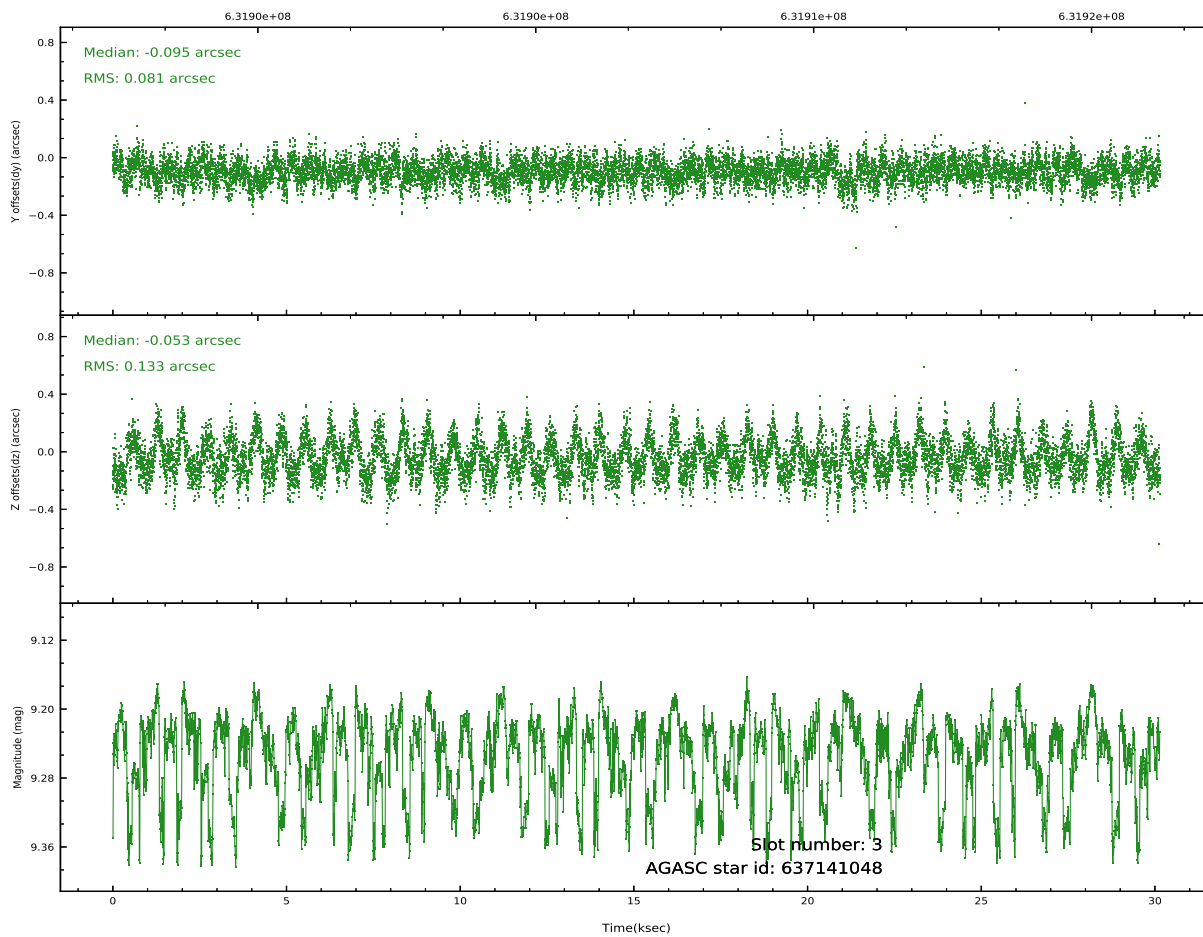
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## 2.4 Star Slots

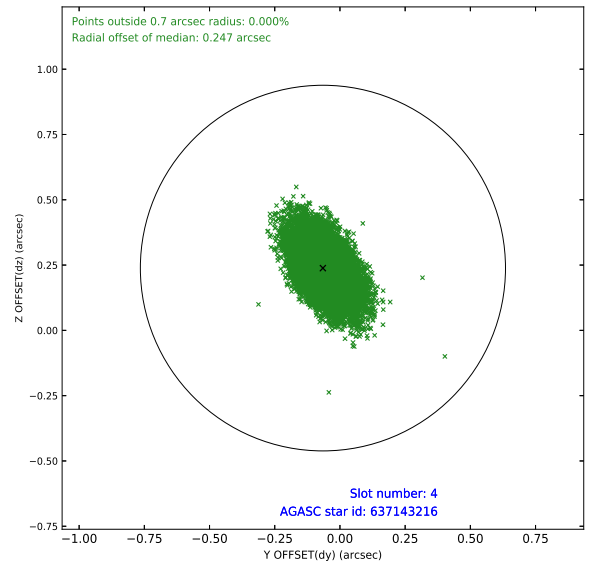
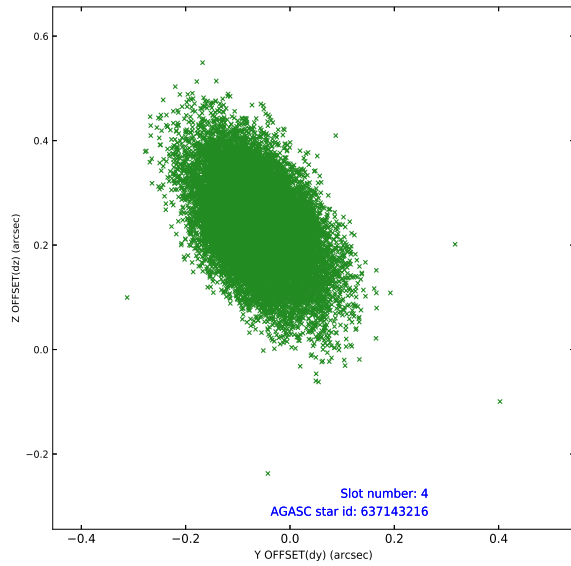
### 2.4.1 Slot 3



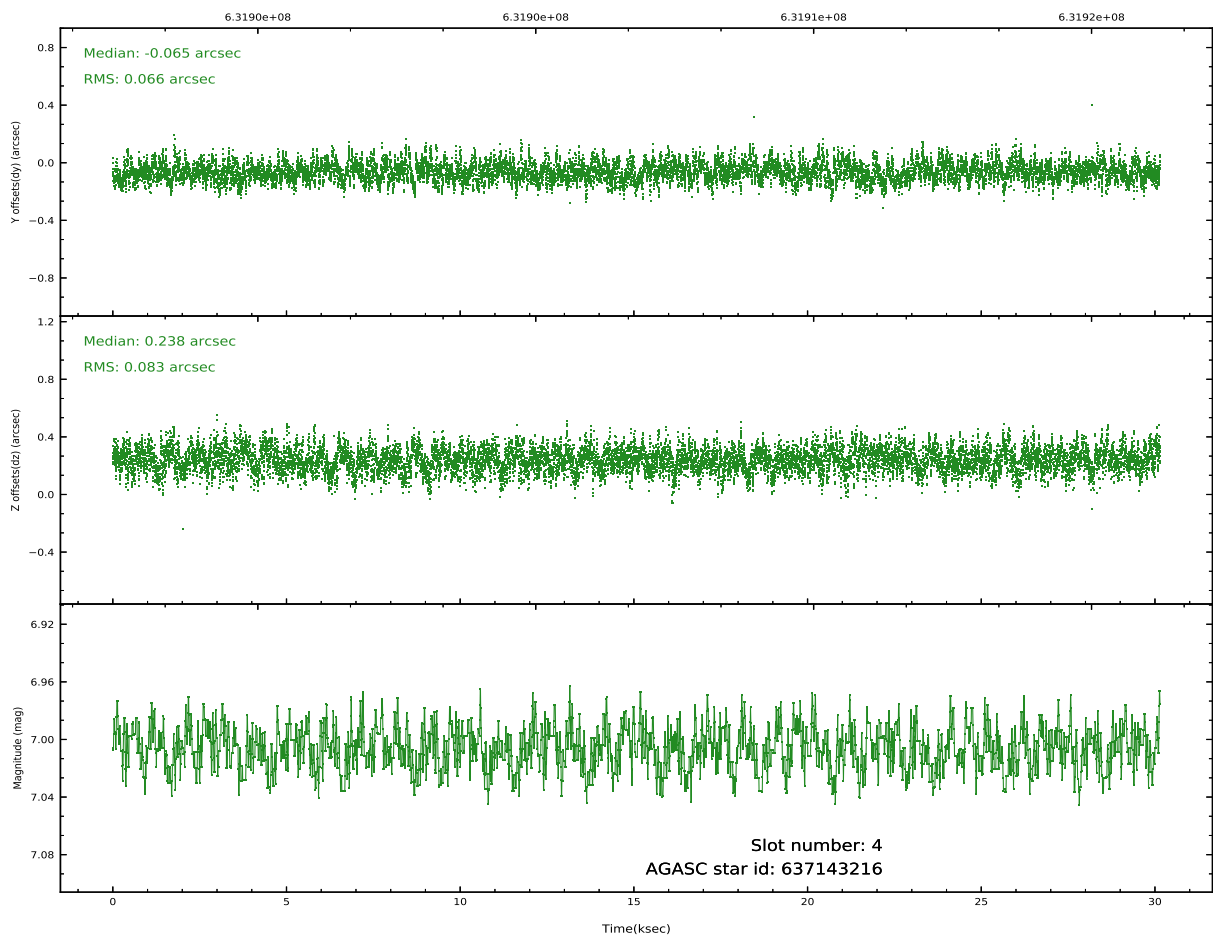
Time (s)



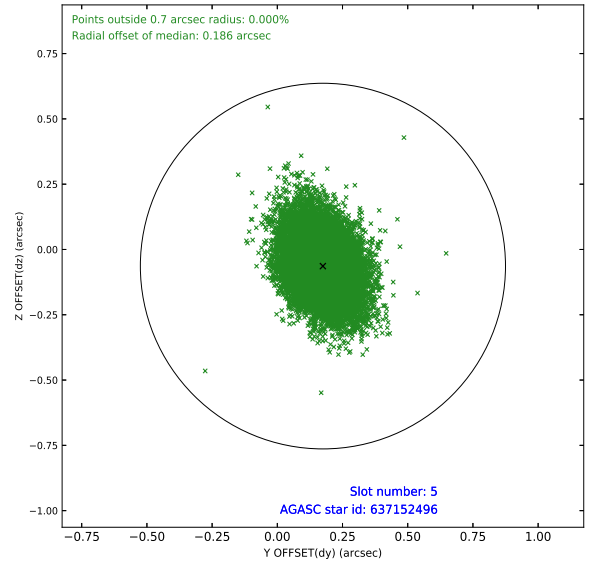
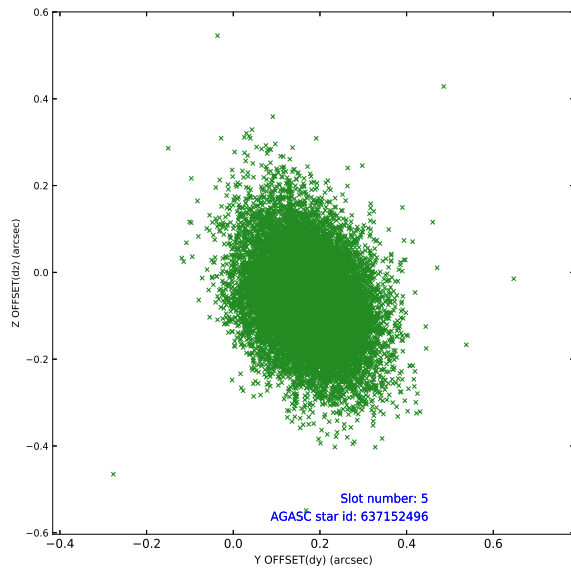
## 2.4.2 Slot 4



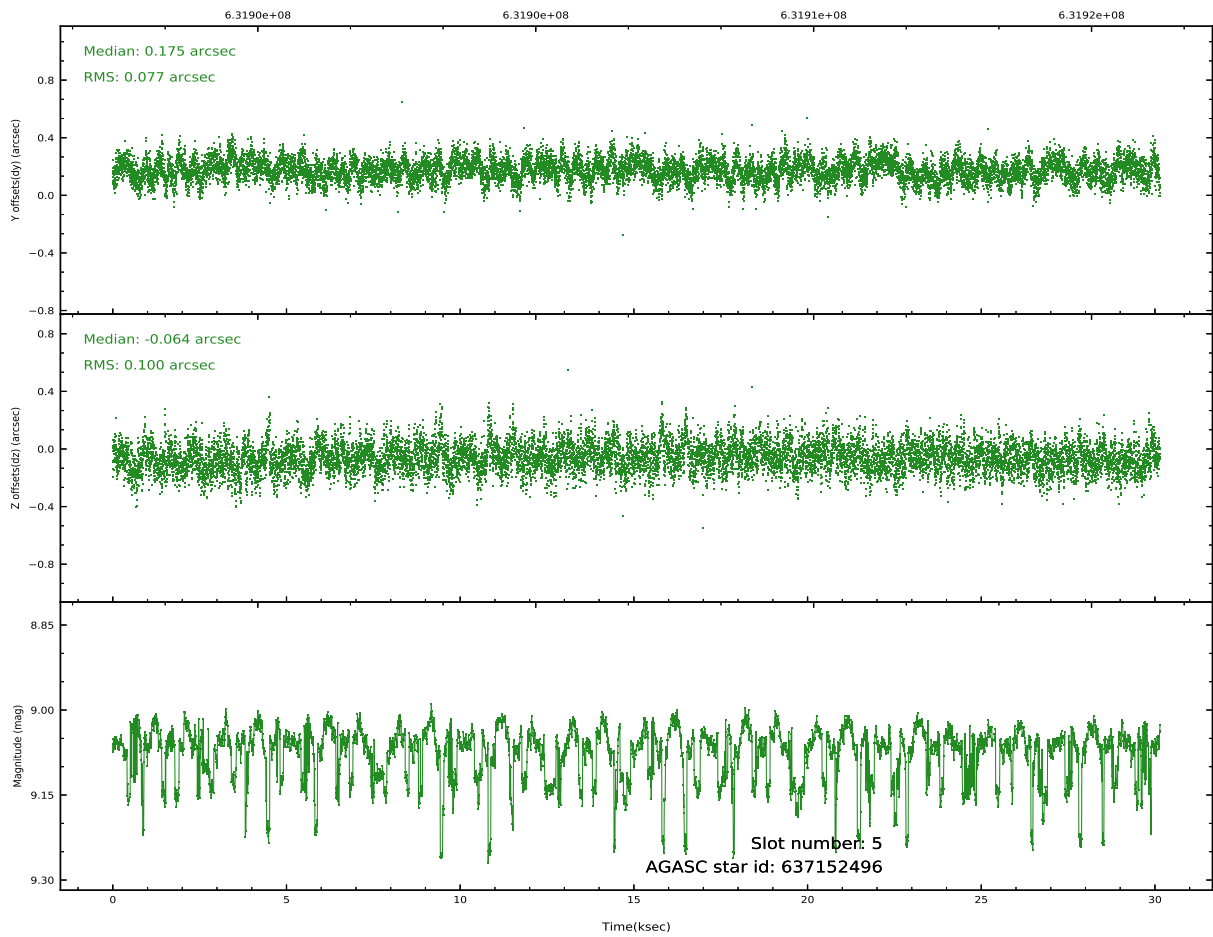
Time (s)



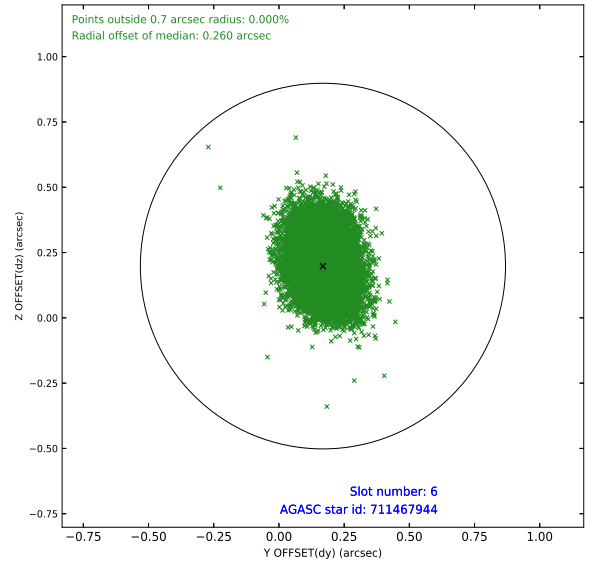
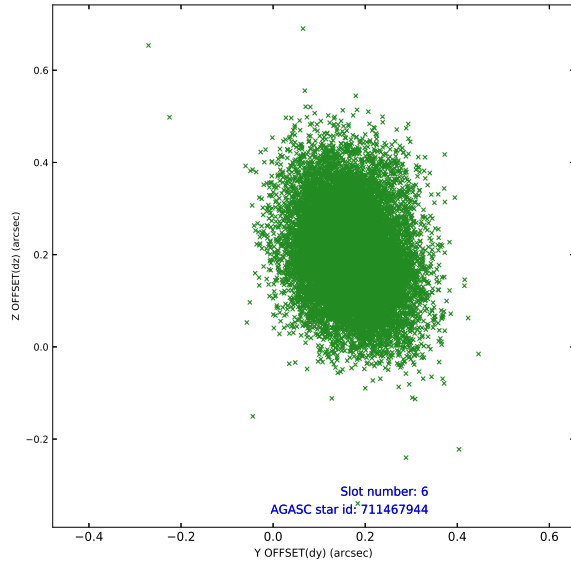
### 2.4.3 Slot 5



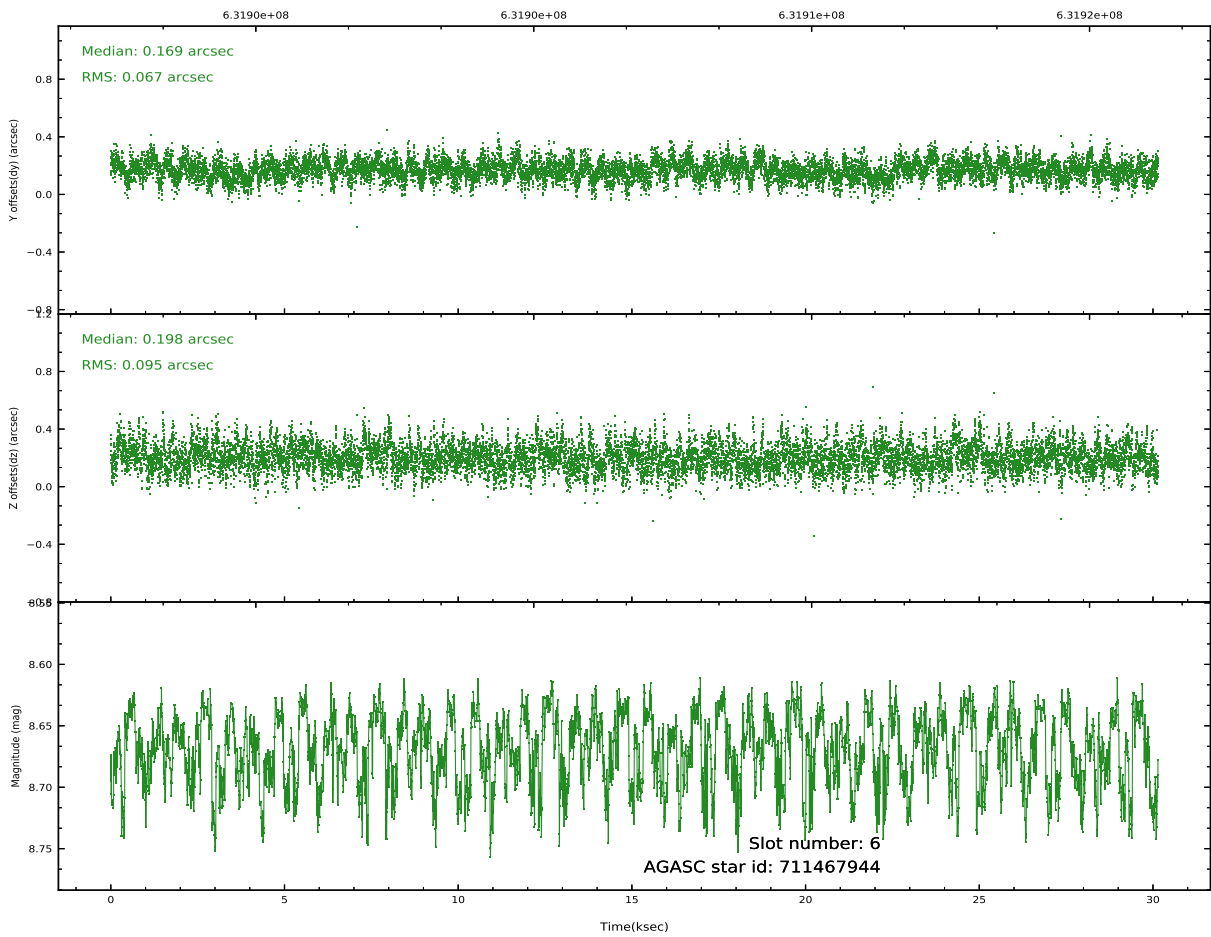
Time (s)



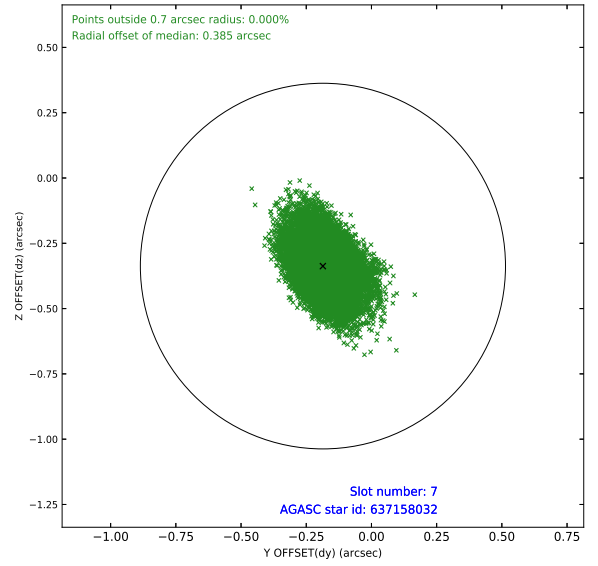
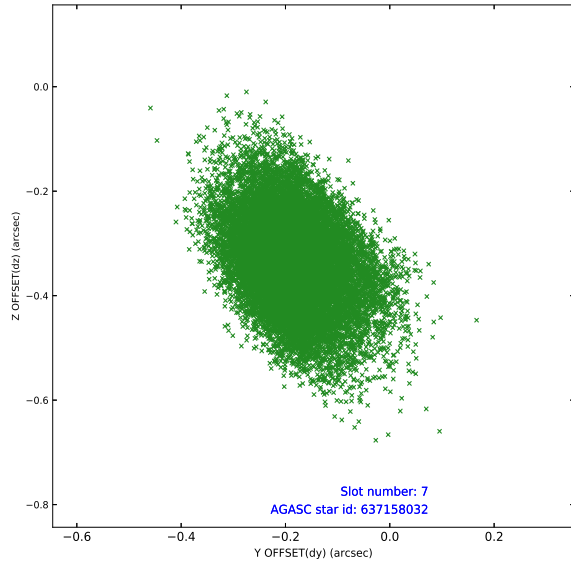
## 2.4.4 Slot 6



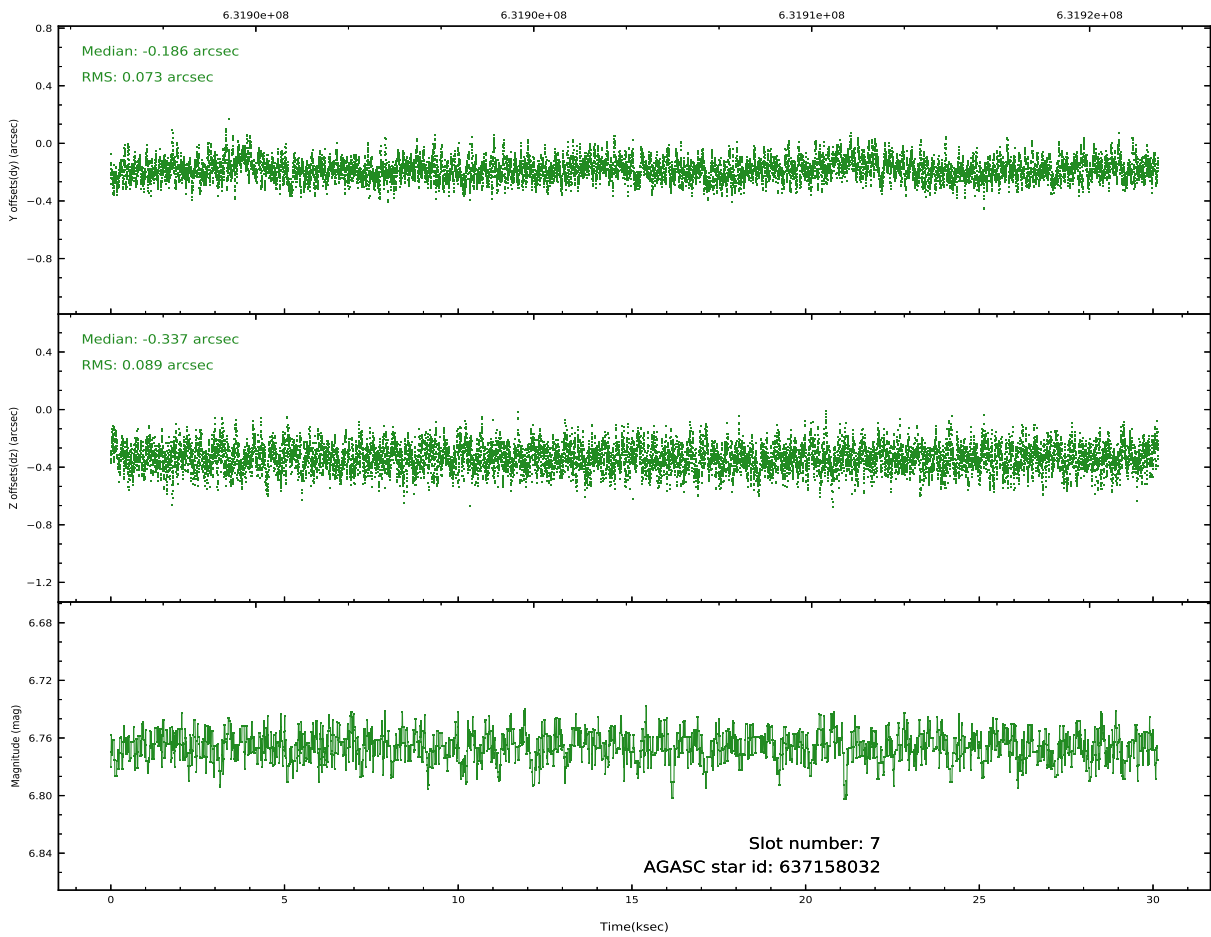
Time (s)



## 2.4.5 Slot 7

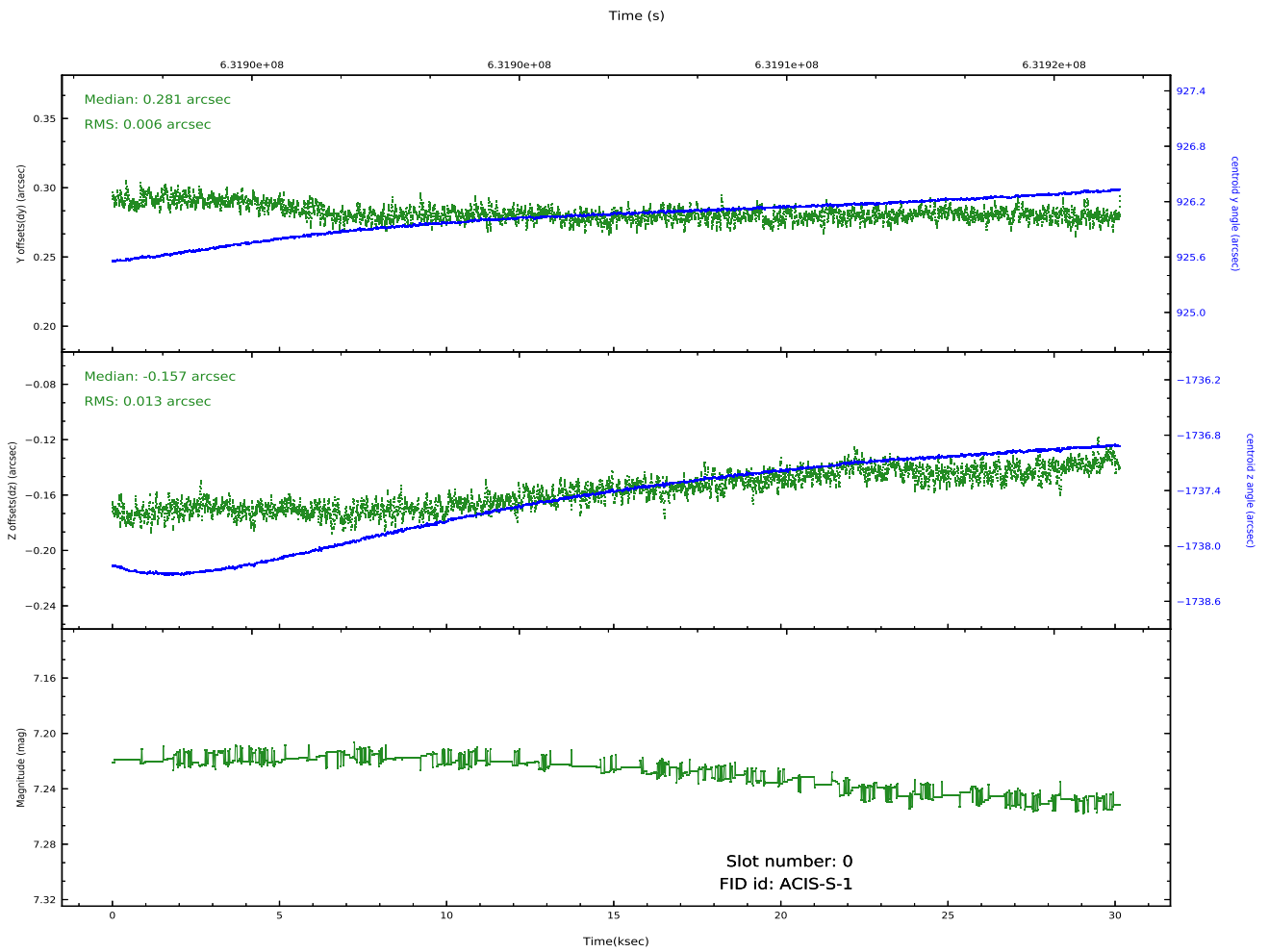
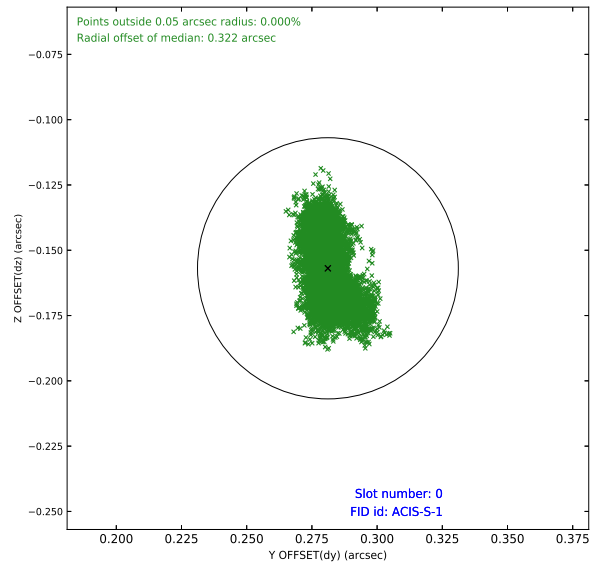
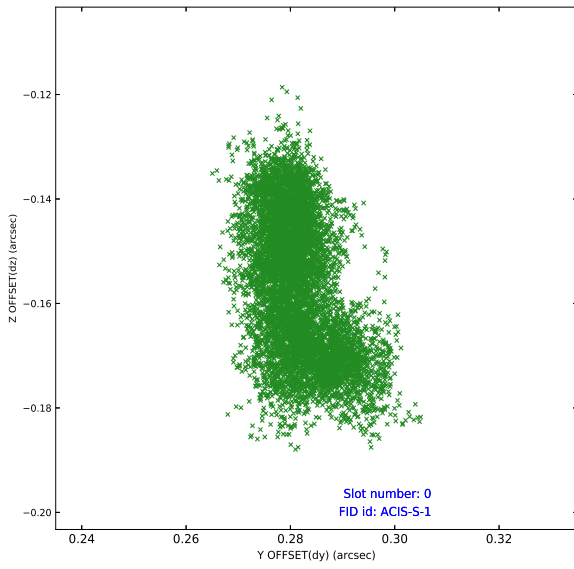


Time (s)

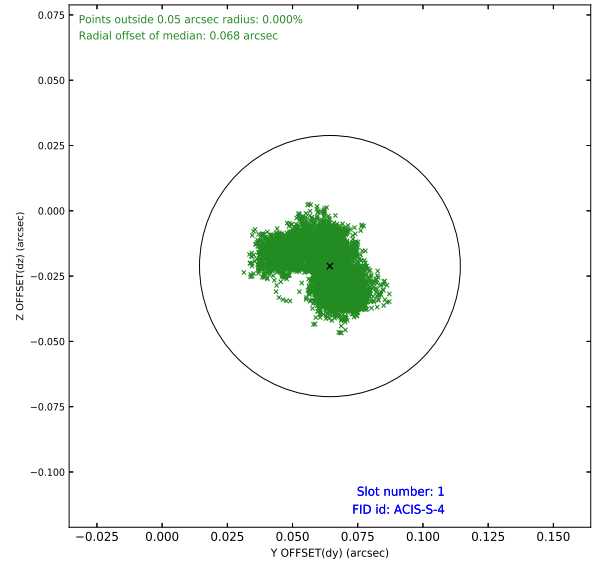
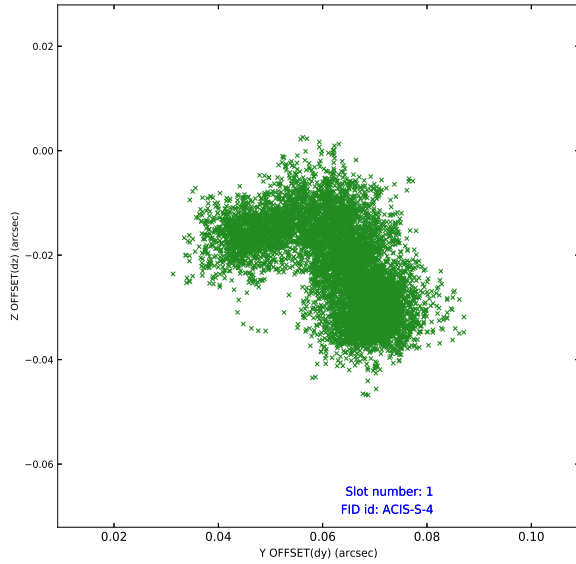


## 2.5 FID Slots

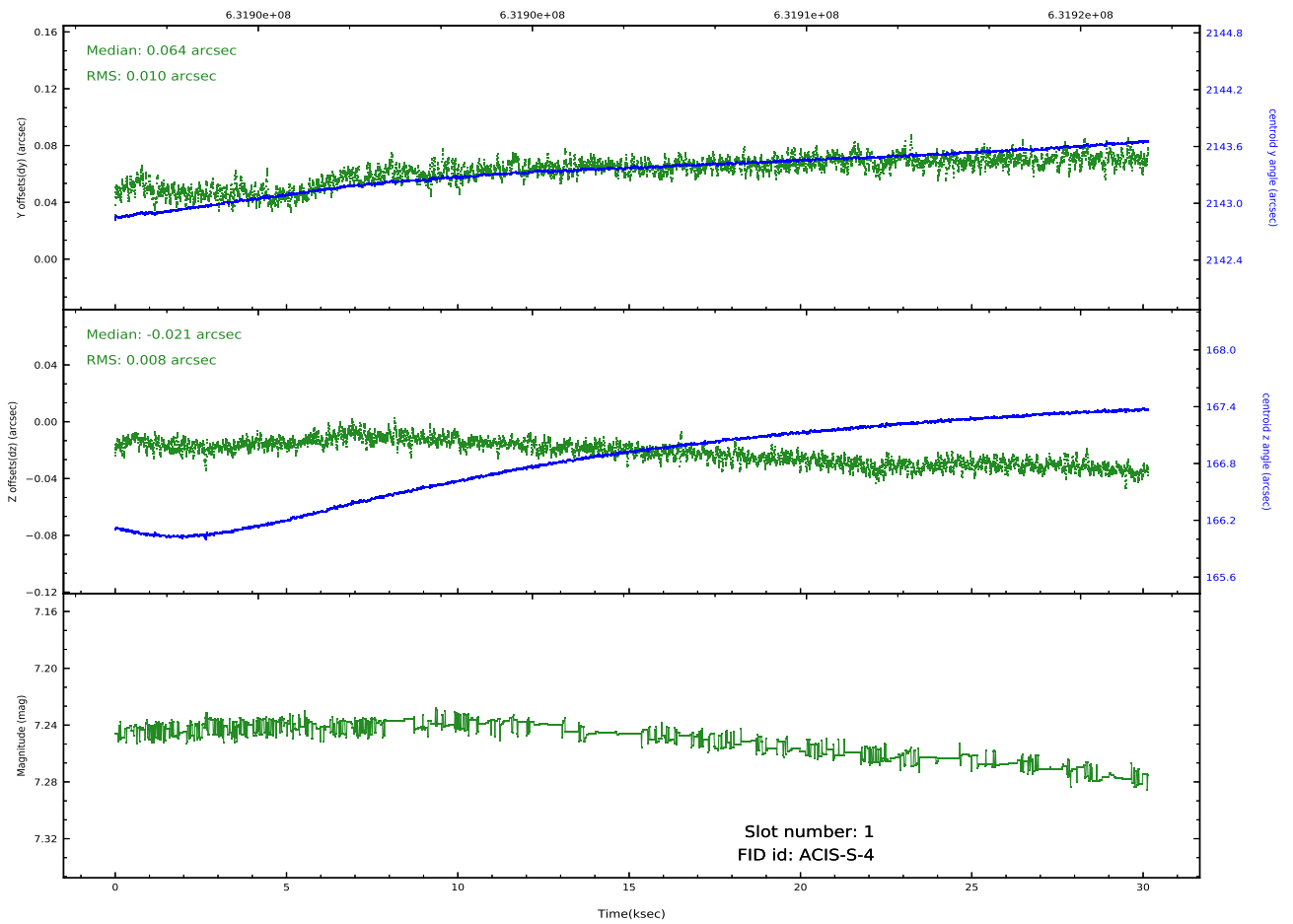
### 2.5.1 Slot 0



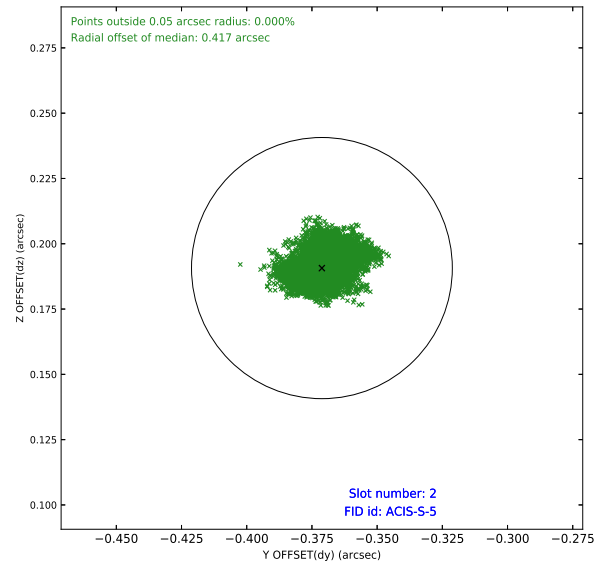
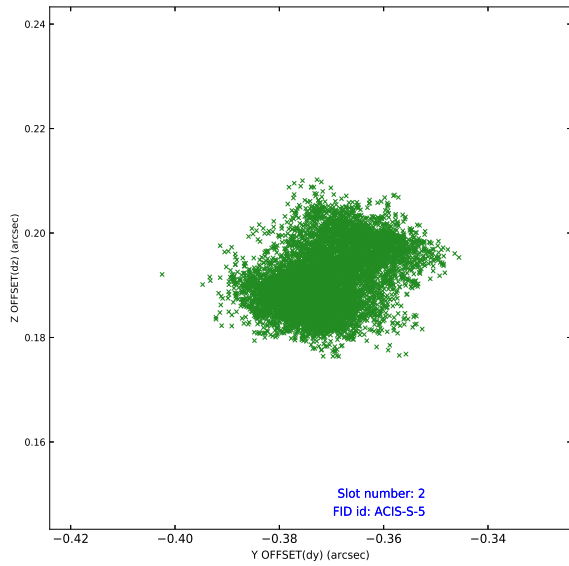
## 2.5.2 Slot 1



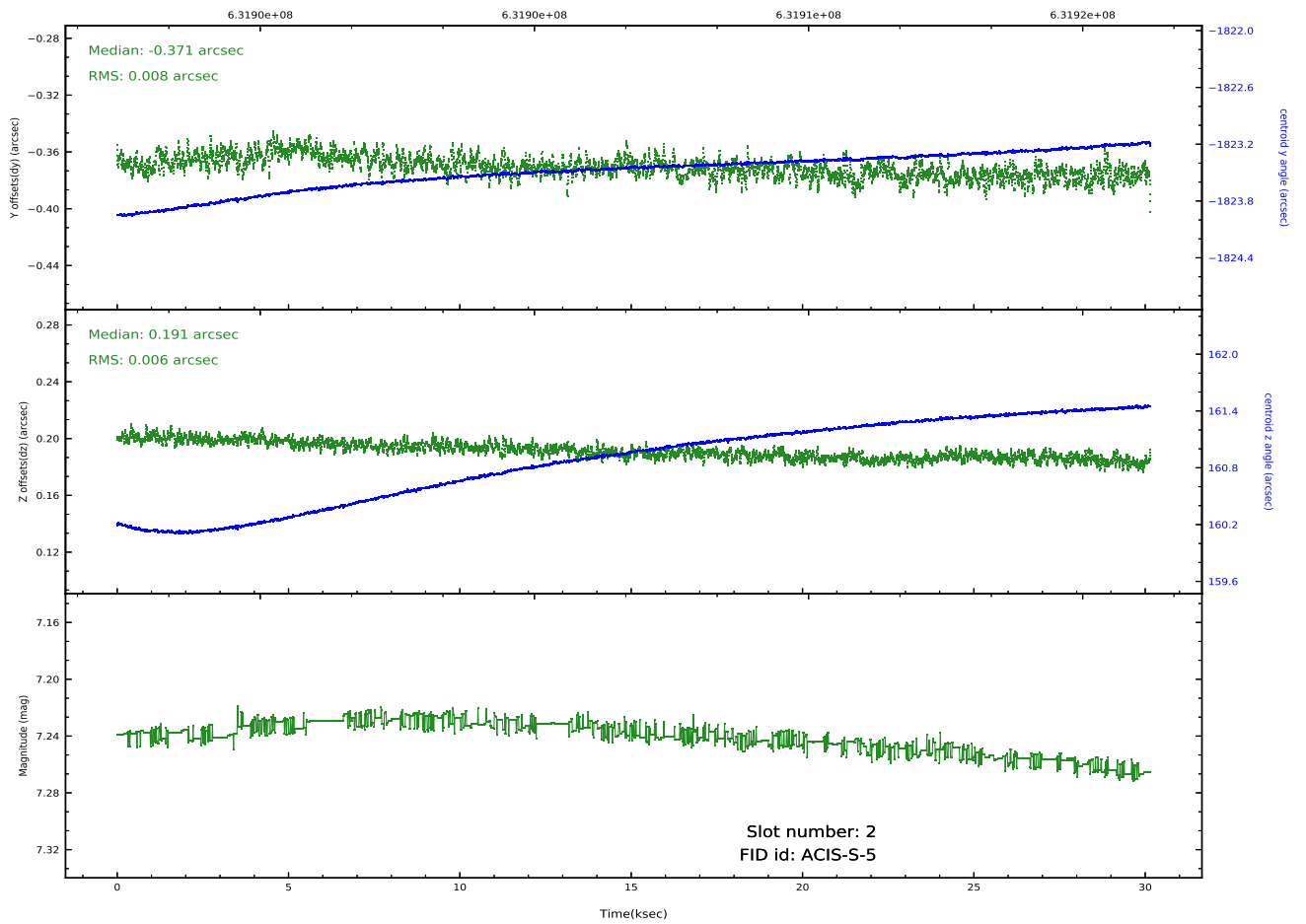
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.066310243607

## A.2 Comments

Two optional chips were dropped.