

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13686 - L2 Version 2  
Chandra X-Ray Center

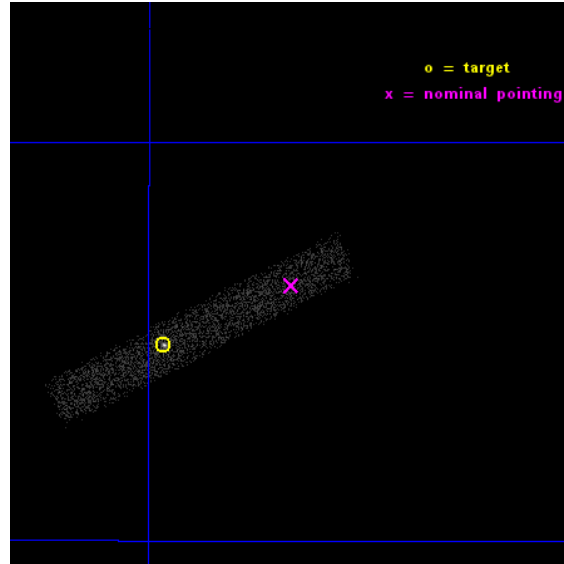
L2 Processing Date : Nov 29 2014

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# 1 Front

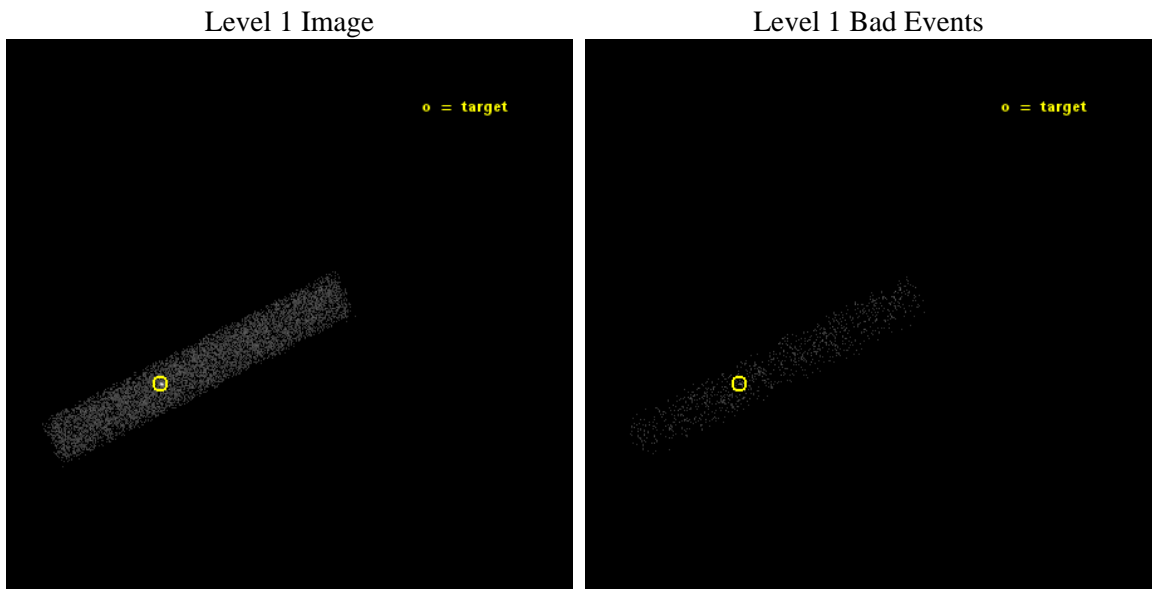
seq_num	401372	Sequence number
obs_id	13686	Observation id
title	Constraining the mass of the black hole in IC 342 X-1 with simultaneous X-ray and radio observations	Proposal title
observer	Prof. Philip Kaaret	Principal investigator
object	IC 342 X-1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	56.482083	Observer's specified target RA [deg]
dec_targ	68.081889	Observer's specified target Dec [deg]
ra_nom	56.332544115796	Nominal RA [deg]
dec_nom	68.106979363305	Nominal Dec [deg]
roll_nom	153.58266698389	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10071.026374519	Sum of GTIs [s]
livetime	9133.8893293297	Livetime [s]
ontime7	10071.026374519	Sum of GTIs [s]
l2events	6827	Number of level 2 events



## 2 OBI

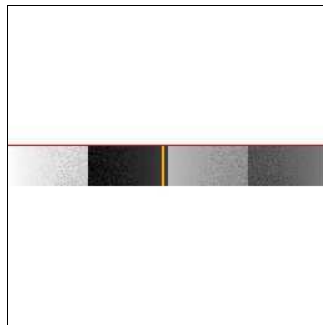
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10071.026374519	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime7	10071.026374519	Sum of GTIs [s]
date	2014-11-29T08:49:17	Date and time of file creation	l1events	11937	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

	<b>ccd 7</b>
level 1 events	11937
rejected events	4936
rejected %	41%

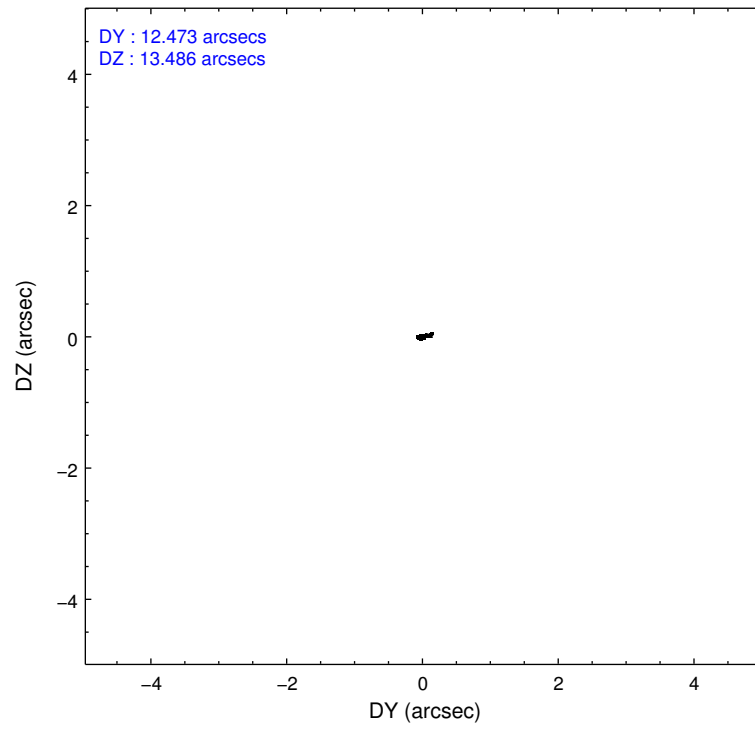
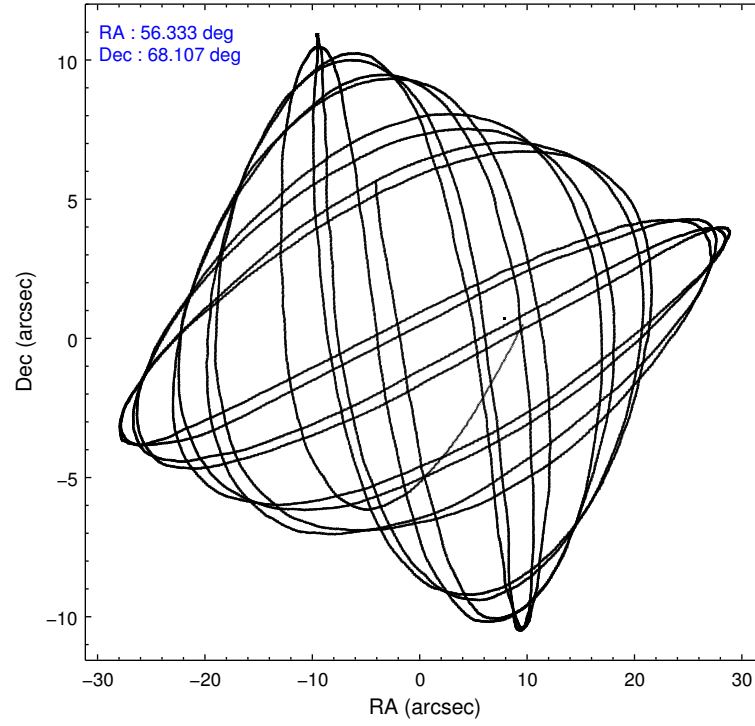
	<b>ccd 7</b>
grade 0 events	1184
	9%
grade 1 events	24
	0%
grade 2 events	1512
	12%
grade 3 events	878
	7%
grade 4 events	858
	7%
grade 5 events	1049
	8%
grade 6 events	2569
	21%
grade 7 events	3863
	32%

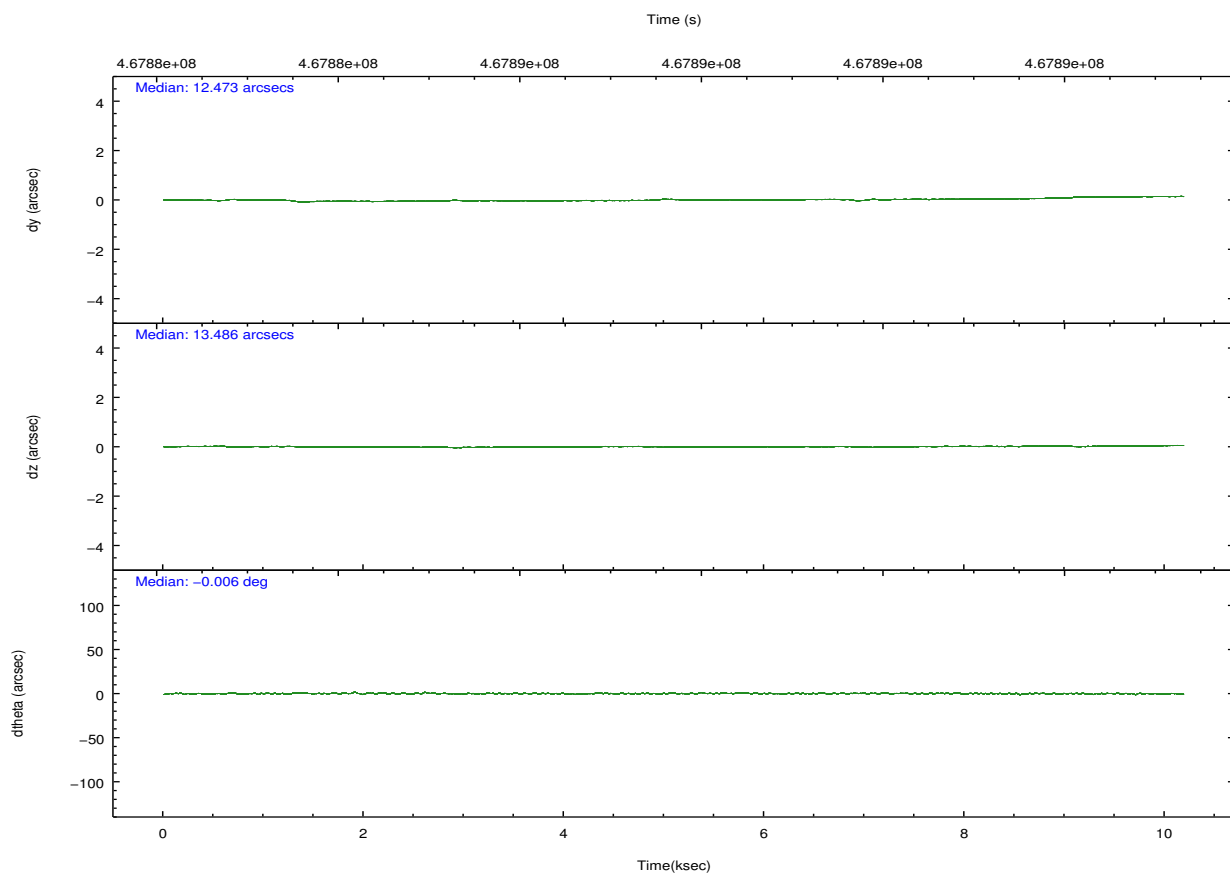
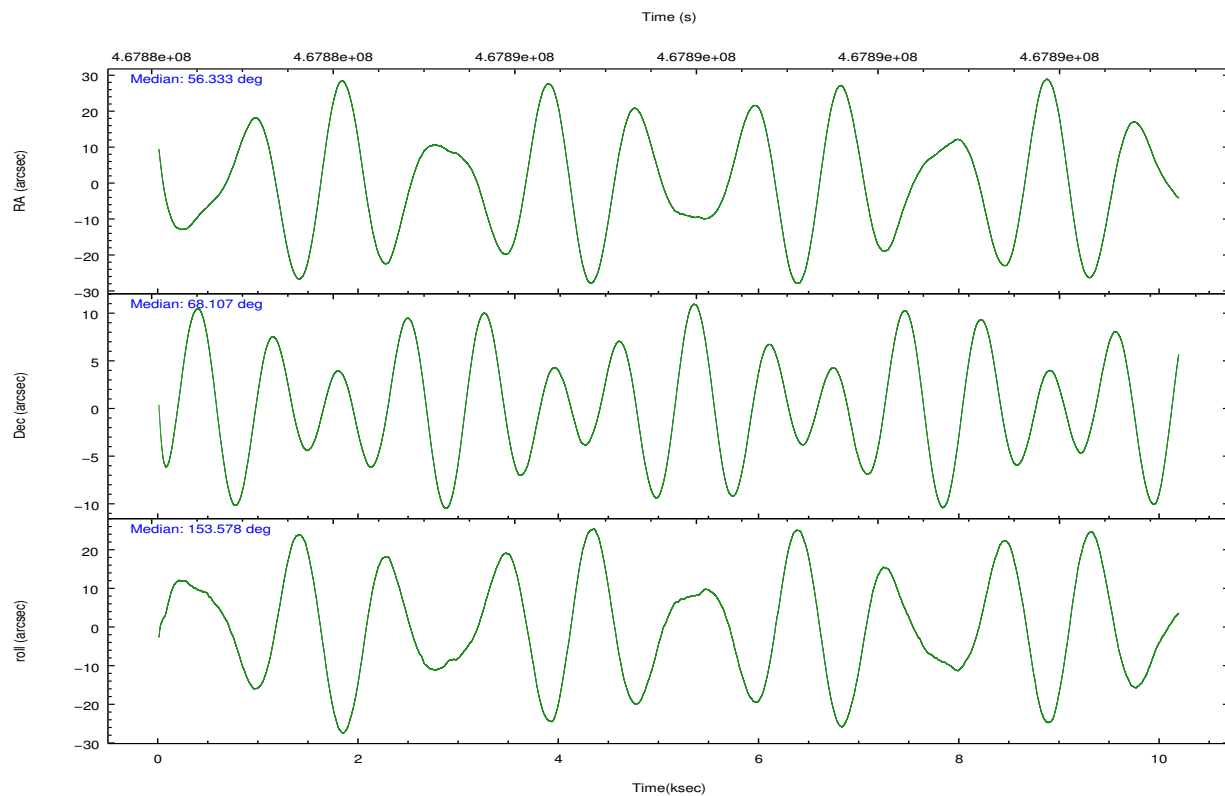


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	56.405705	56.33254411579637	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	68.109071	68.10697936330541	Subarray start row	449	449
[deg] Pointing Roll	153.358141	153.5826669838924	Subarray row count	128	128
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.4
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	467882787.184000	467881892.42014			
Observation start date	2012-10-29T07:25:20	2012-10-29T07:11:32			
[s] Observation end time (MET)	467892787.184000	467894100.1708			
Observation end date	2012-10-29T10:12:00	2012-10-29T10:35:00			
Read mode	TIMED	TIMED			

## 2.3 Aspect



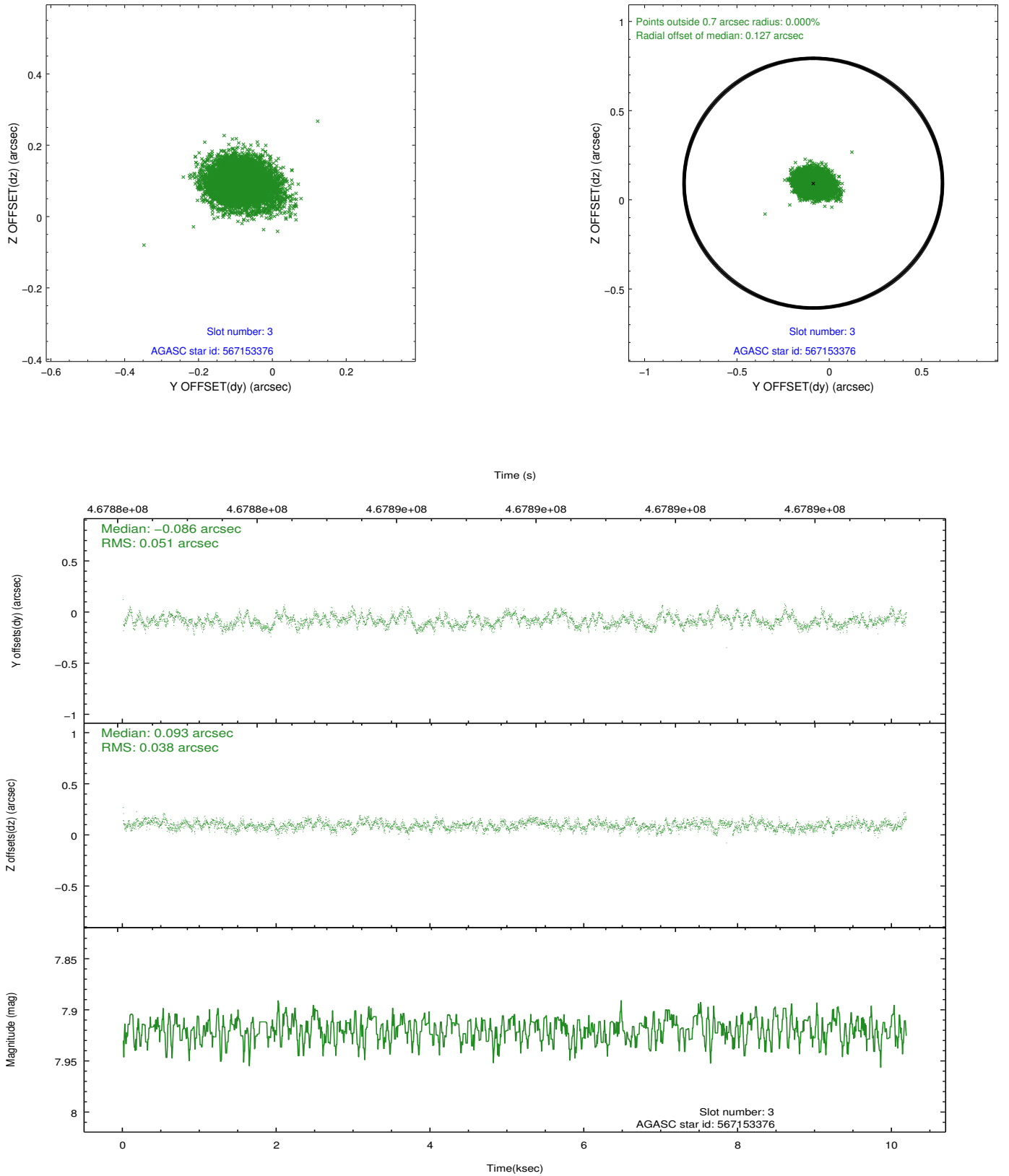


### Slot Statistics

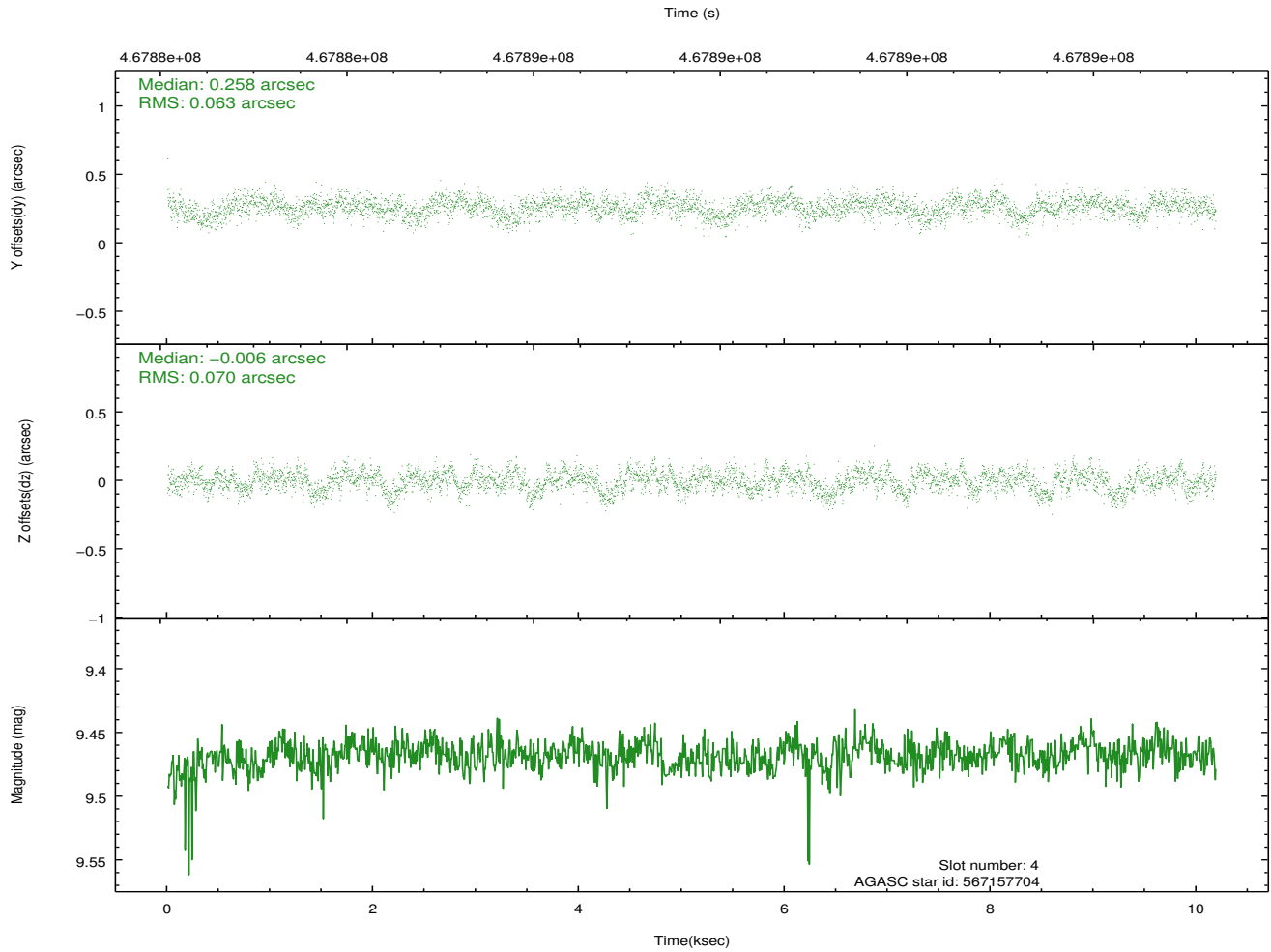
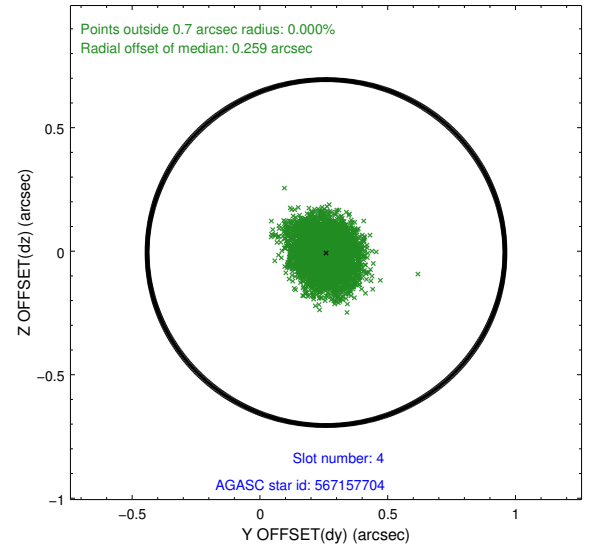
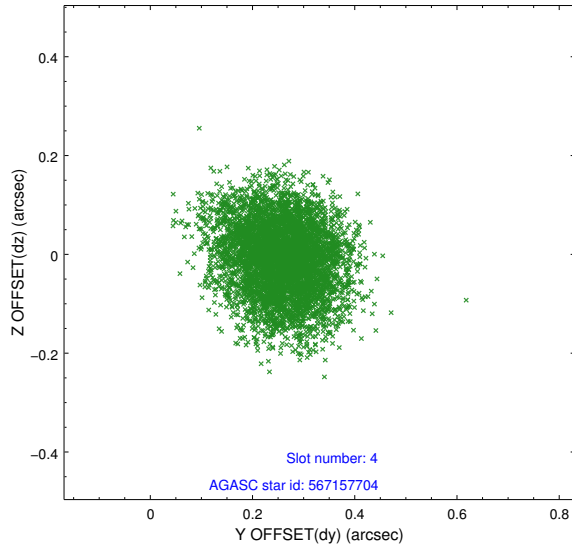
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.14	2484	0.125	-0.072	0.006	0.011	0.000000	0.000000	930.80	-1730.52
1	FID		ACIS-S-5	7.18	2484	-0.171	0.089	0.006	0.010	0.000000	0.000000	-1818.22	166.63
2	FID		ACIS-S-6	7.27	2484	0.025	-0.005	0.007	0.011	0.000000	0.000000	395.67	811.11
3	GUIDE	used	567153376	7.92	4968	-0.086	0.093	0.068	0.108	56.211030	68.820690	1375.78	-2176.26
4	GUIDE	used	567157704	9.47	4967	0.258	-0.006	0.101	0.162	57.433719	67.718717	-1878.22	616.08
5	GUIDE	used	567161720	9.01	4968	0.281	0.017	0.095	0.149	56.857441	68.376202	-103.31	-1129.67
6	GUIDE	used	567164688	9.01	4966	-0.238	0.081	0.086	0.141	55.209386	68.614739	2226.92	-936.38
7	GUIDE	used	567170464	8.01	4968	-0.208	-0.177	0.068	0.105	54.496546	67.994557	2134.99	1487.58

## 2.4 Star Slots

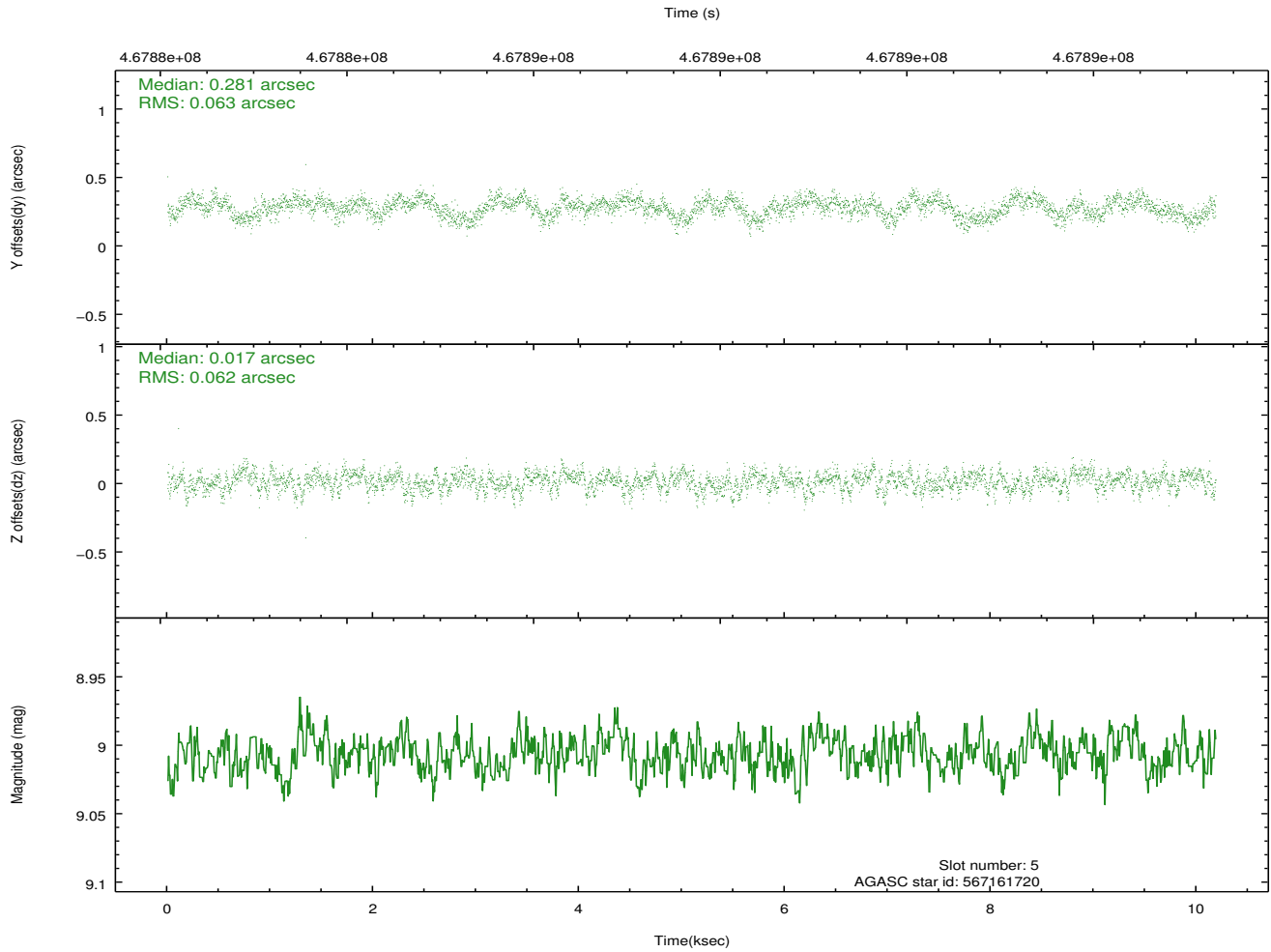
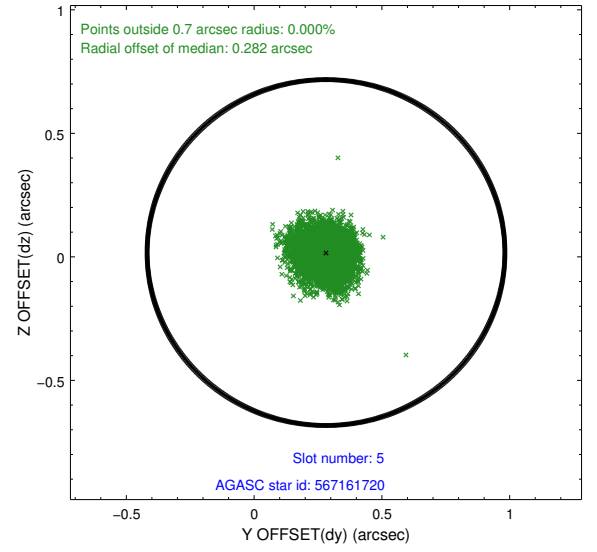
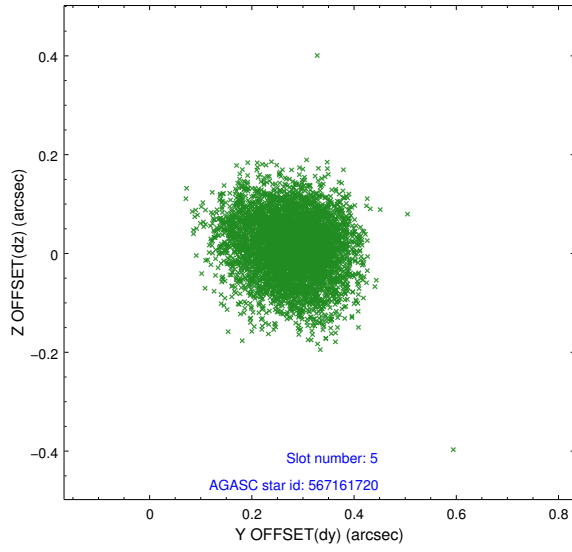
### 2.4.1 Slot 3



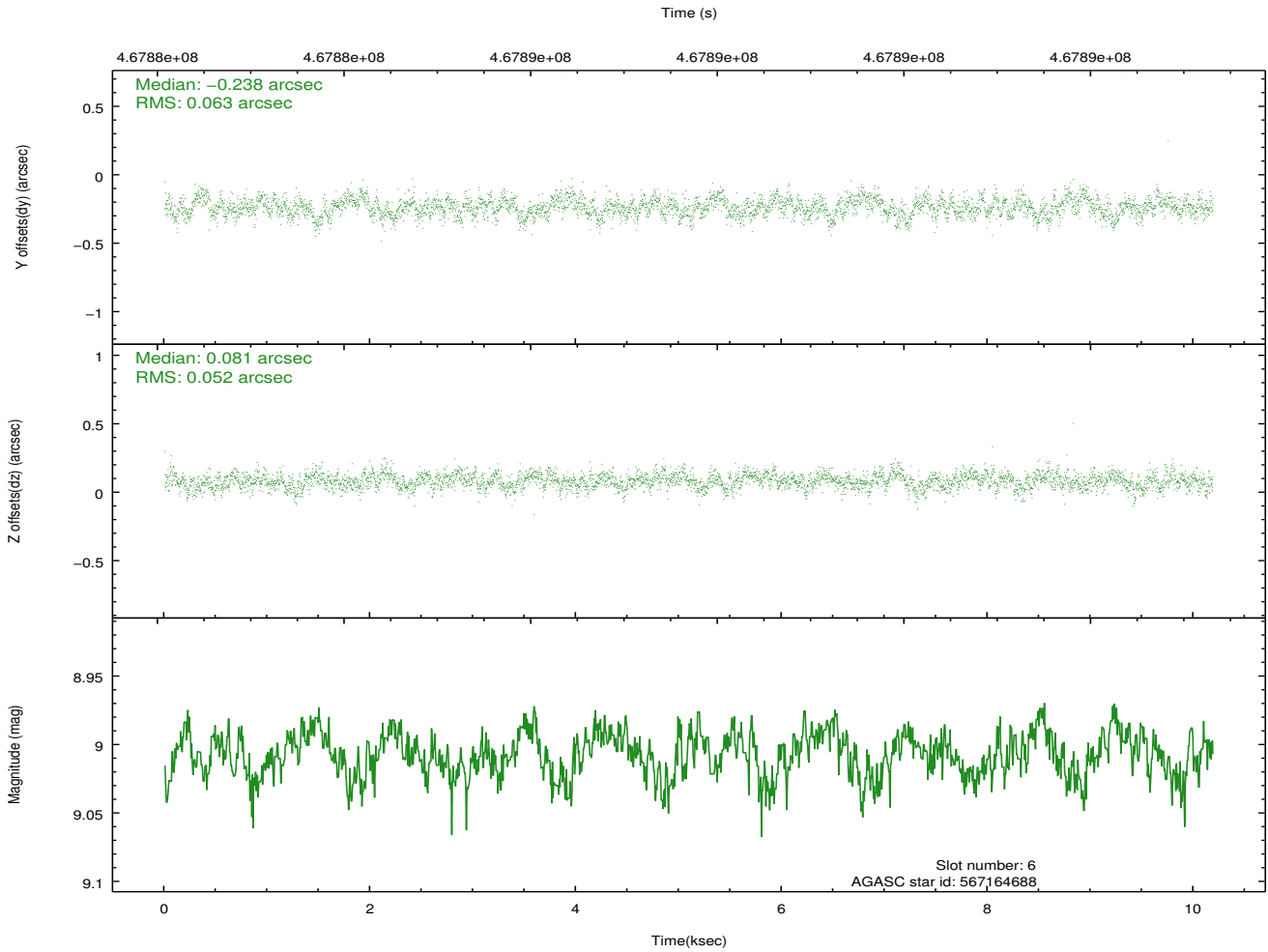
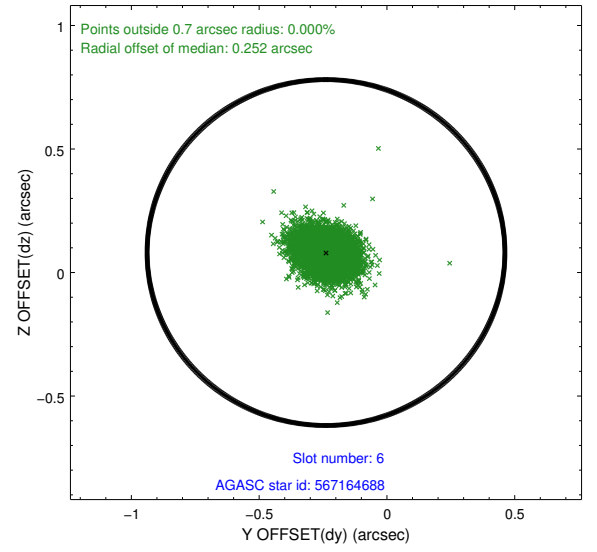
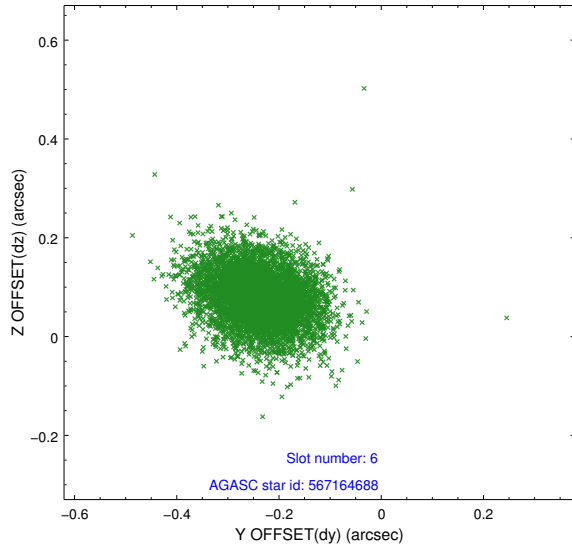
## 2.4.2 Slot 4



### 2.4.3 Slot 5

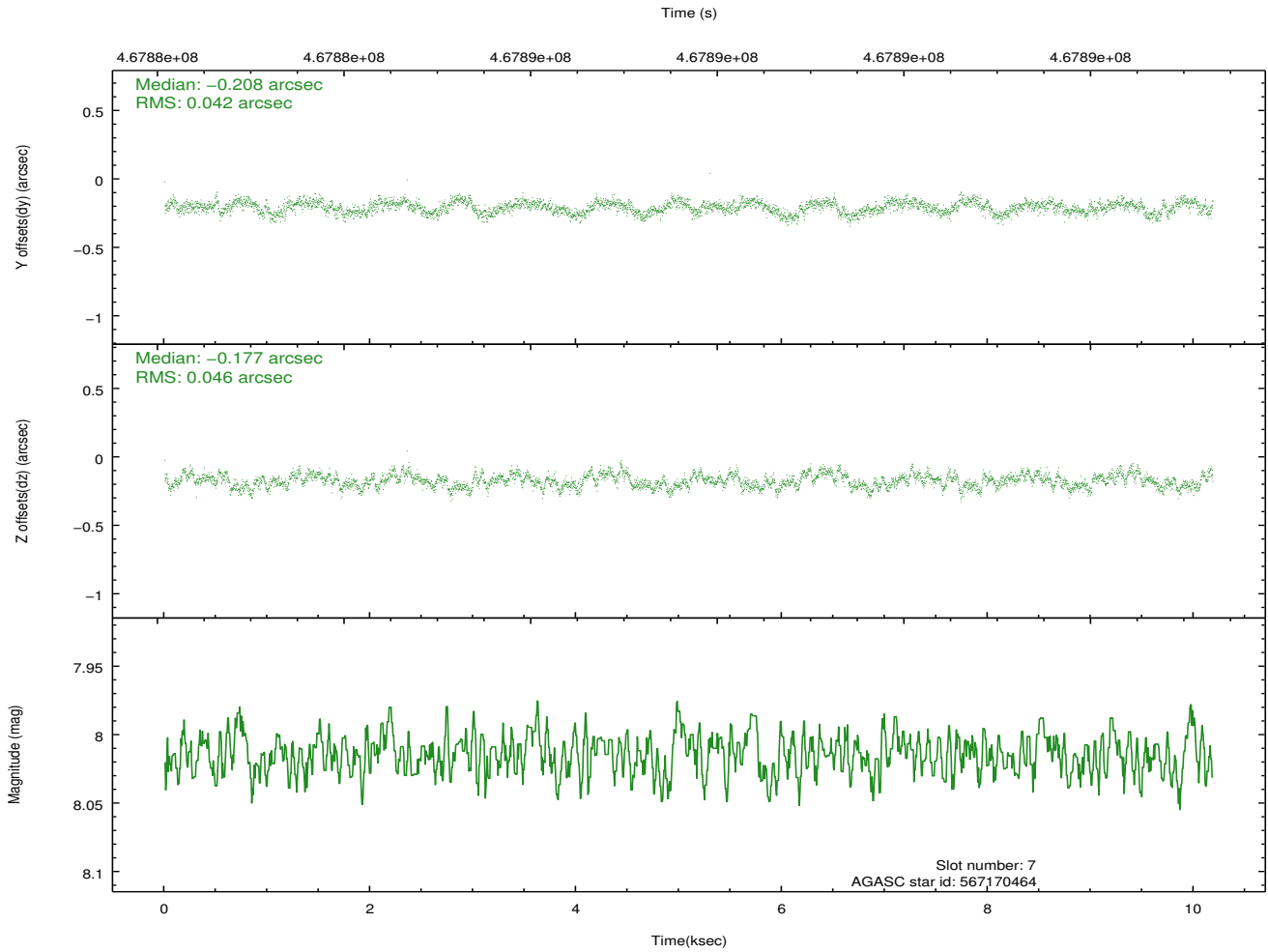
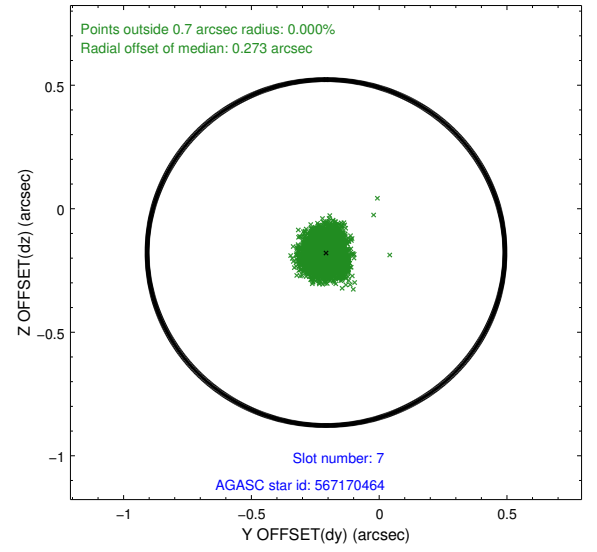
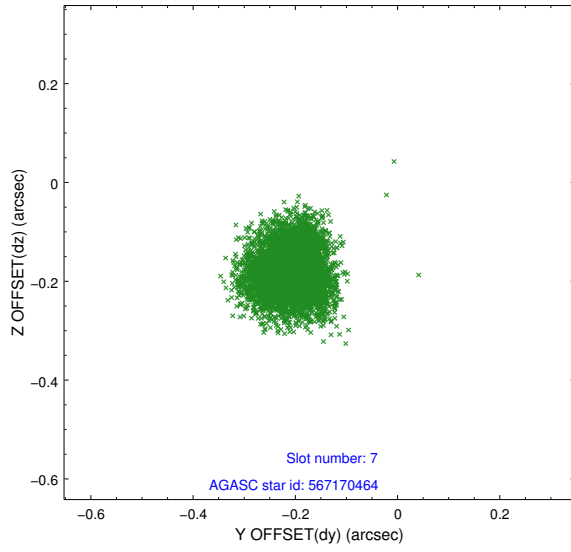


## 2.4.4 Slot 6



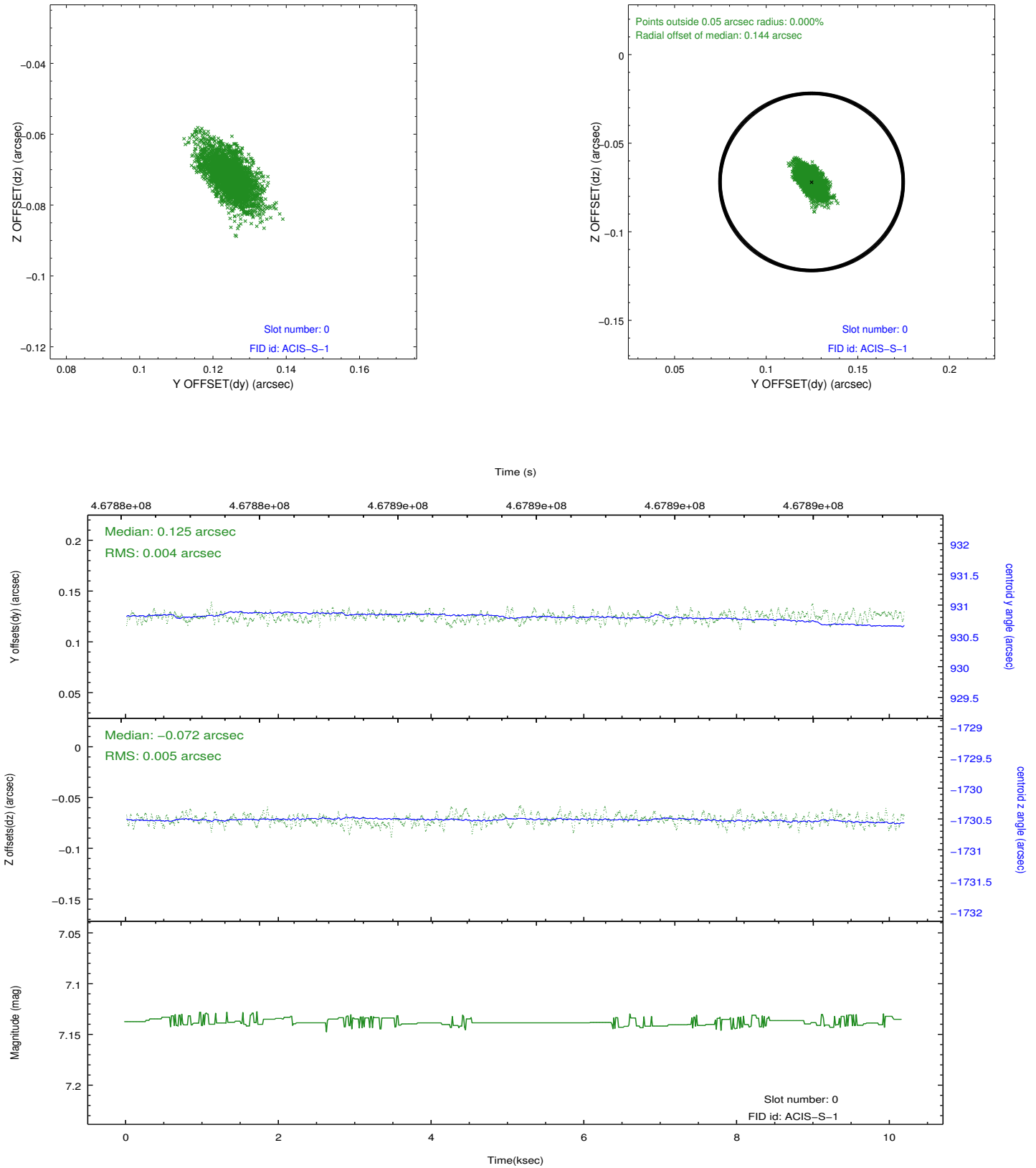


## 2.4.5 Slot 7

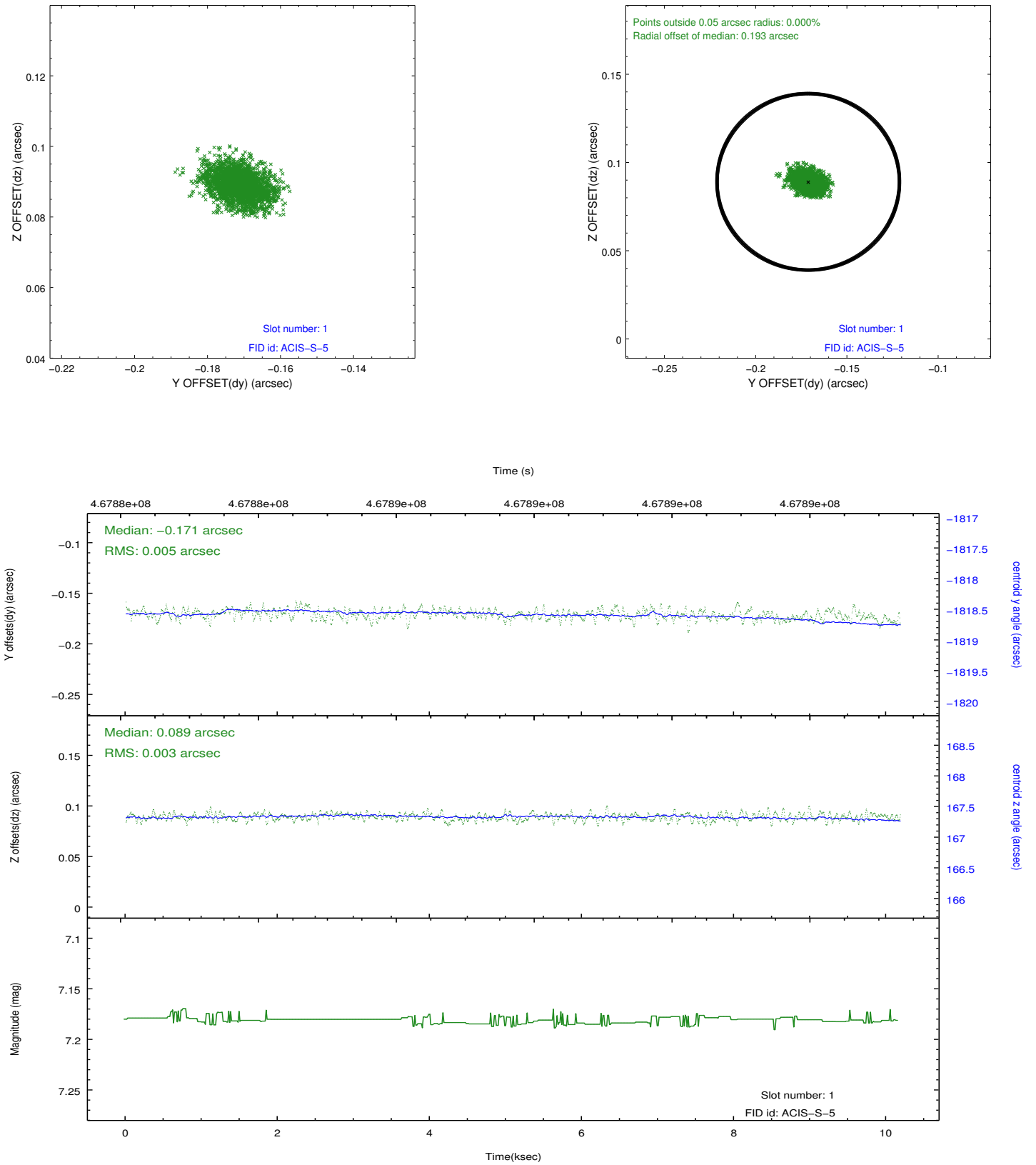


## 2.5 FID Slots

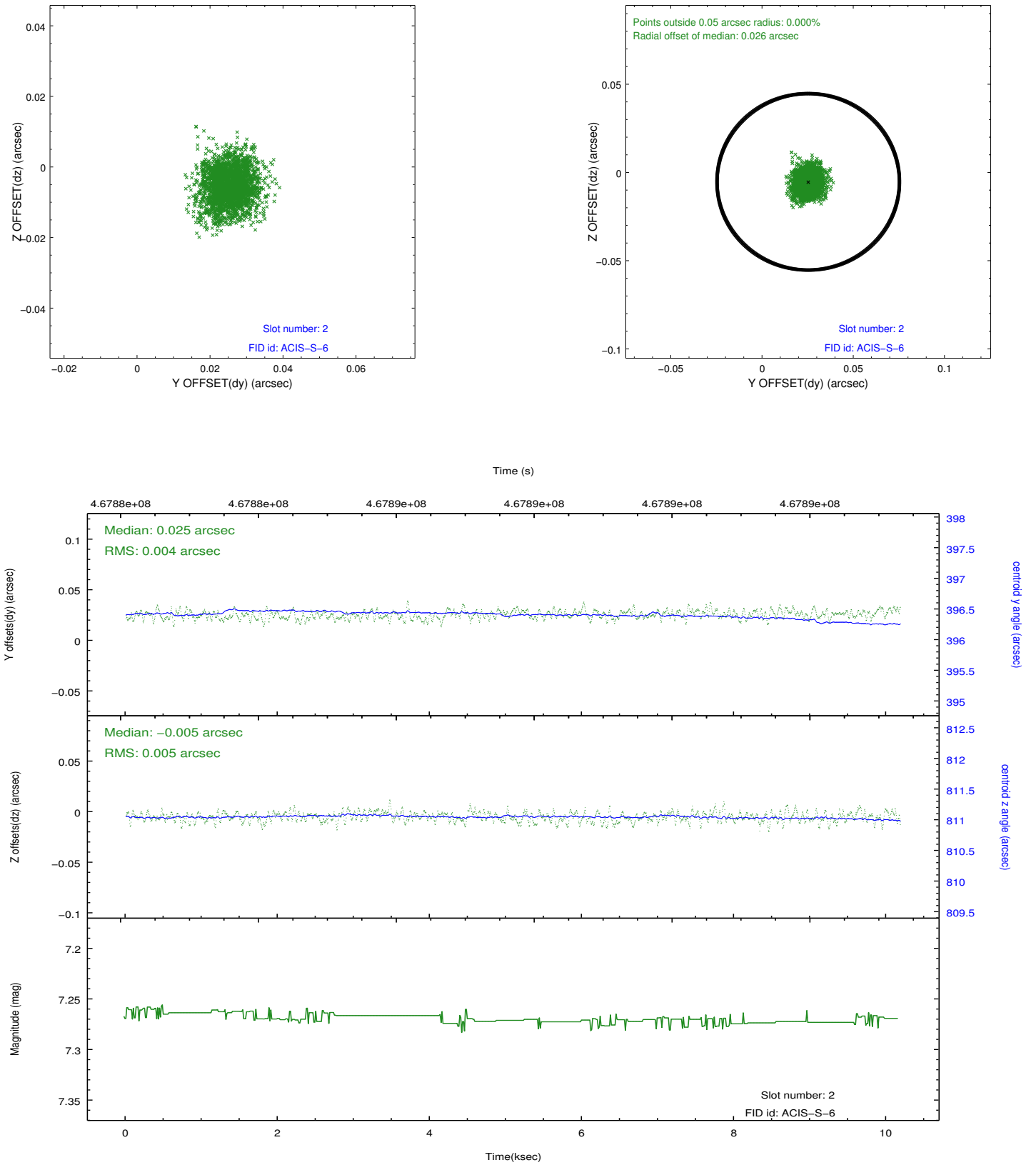
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.071026374519

## A.2 Comments

Joint Proposal: NRAO

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These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.