

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8551 - L2 Version 3  
Chandra X-Ray Center

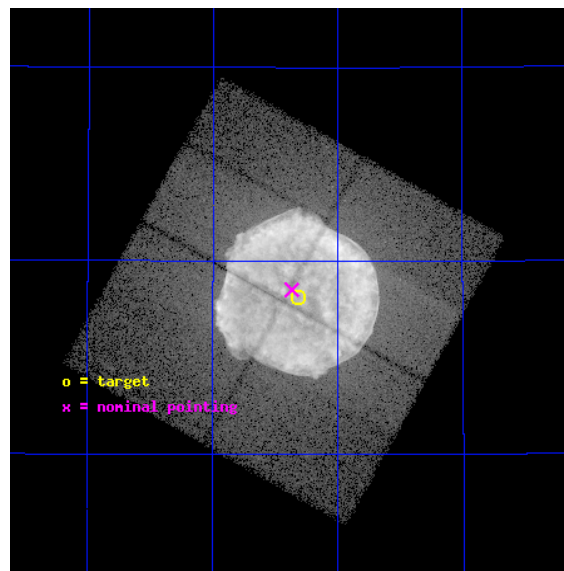
L2 Processing Date : Apr 23 2012

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# 1 Front

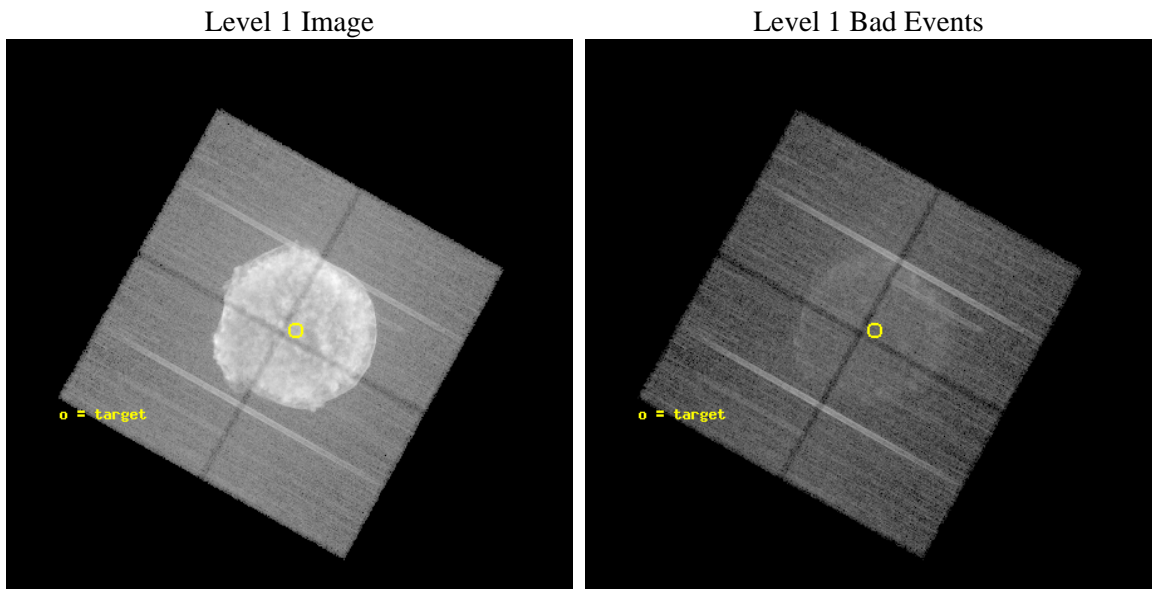
seq_num	500768	Sequence number
obs_id	8551	Observation id
title	A Deep Chandra Observation of the Tycho Supernova Remnant	Proposal
observer	Prof. John Hughes	Principal investigator
object	Tycho's SNR	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	6.329167	Observer's specified target RA [deg]
dec_targ	64.136111	Observer's specified target Dec [deg]
ra_nom	6.3419417890199	Nominal RA [deg]
dec_nom	64.141963865412	Nominal Dec [deg]
roll_nom	29.19719303156	Nominal Roll [deg]
revision	3	Processing version of data
ontime	33709.400259256	Sum of GTIs [s]
livetime	33268.96212837	Livetime [s]
ontime0	33706.259298921	Sum of GTIs [s]
ontime1	33709.400259256	Sum of GTIs [s]
ontime2	33709.400259256	Sum of GTIs [s]
ontime3	33709.400259256	Sum of GTIs [s]
l2events	2308942	Number of level 2 events



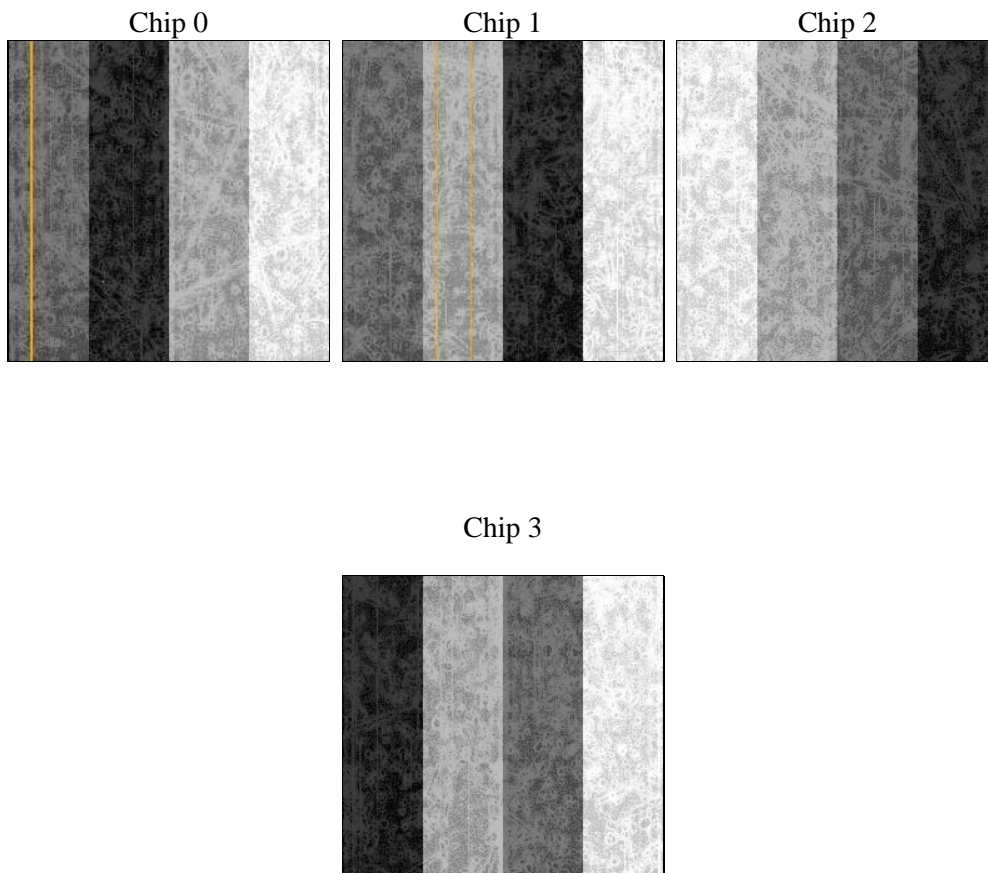
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	33571.754000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	33709.400259256	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime0	33706.259298921	Sum of GTIs [s]
date	2012-04-23T21:36:56	Date and time of file creation	ontime1	33709.400259256	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	33709.400259256	Sum of GTIs [s]
			ontime3	33709.400259256	Sum of GTIs [s]
			l1events	3461721	Number of level 1 events

### 2.1.4 Events

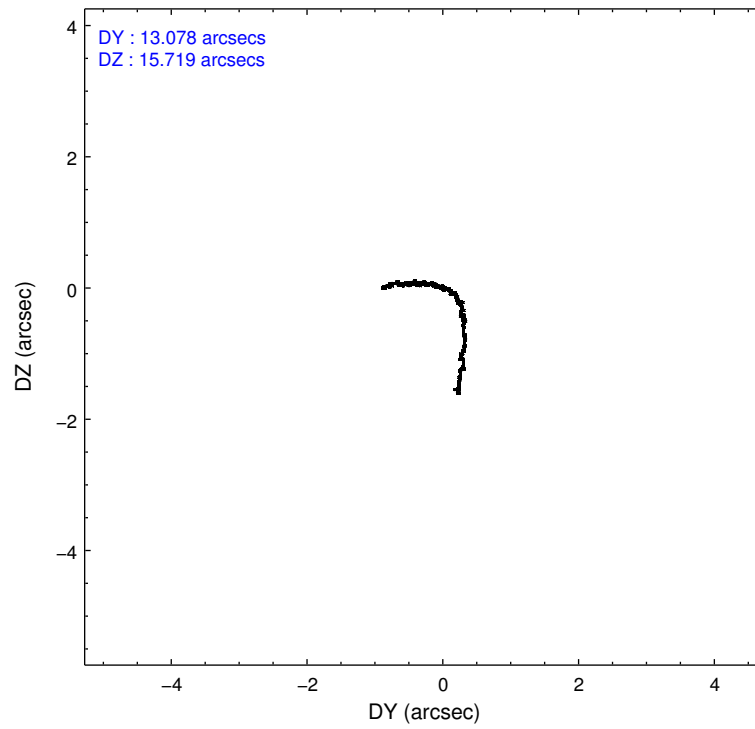
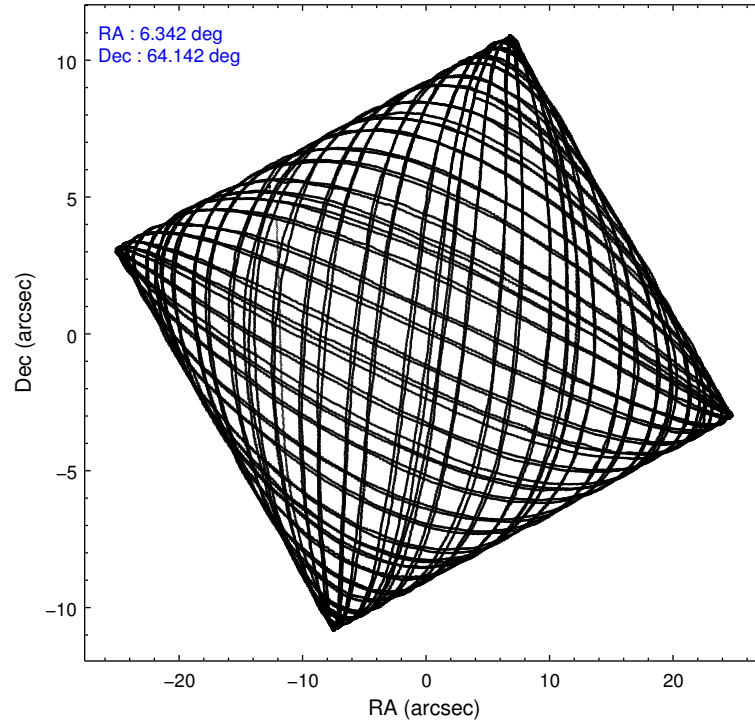
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	573069	711007	950361	1227284
rejected events	240720	234192	284114	271197
rejected %	42%	32%	29%	22%

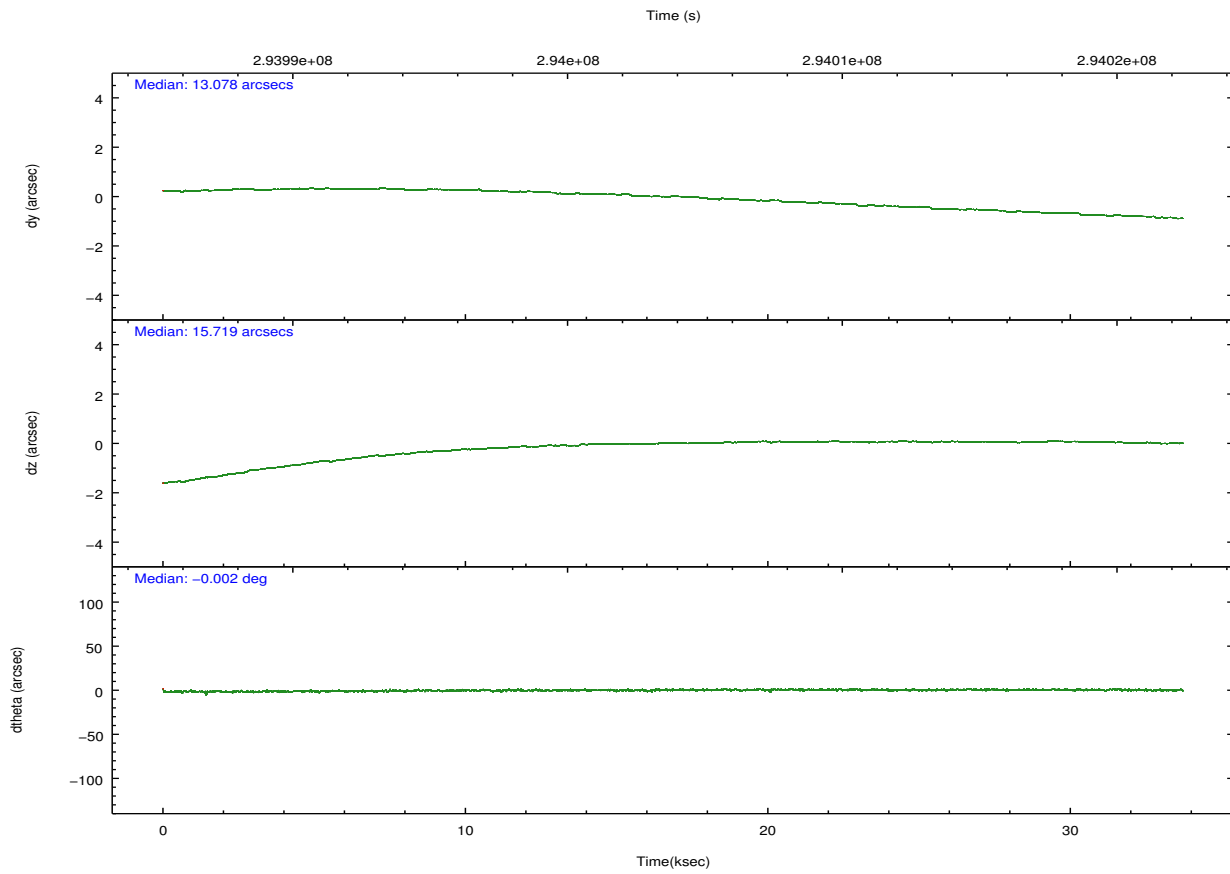
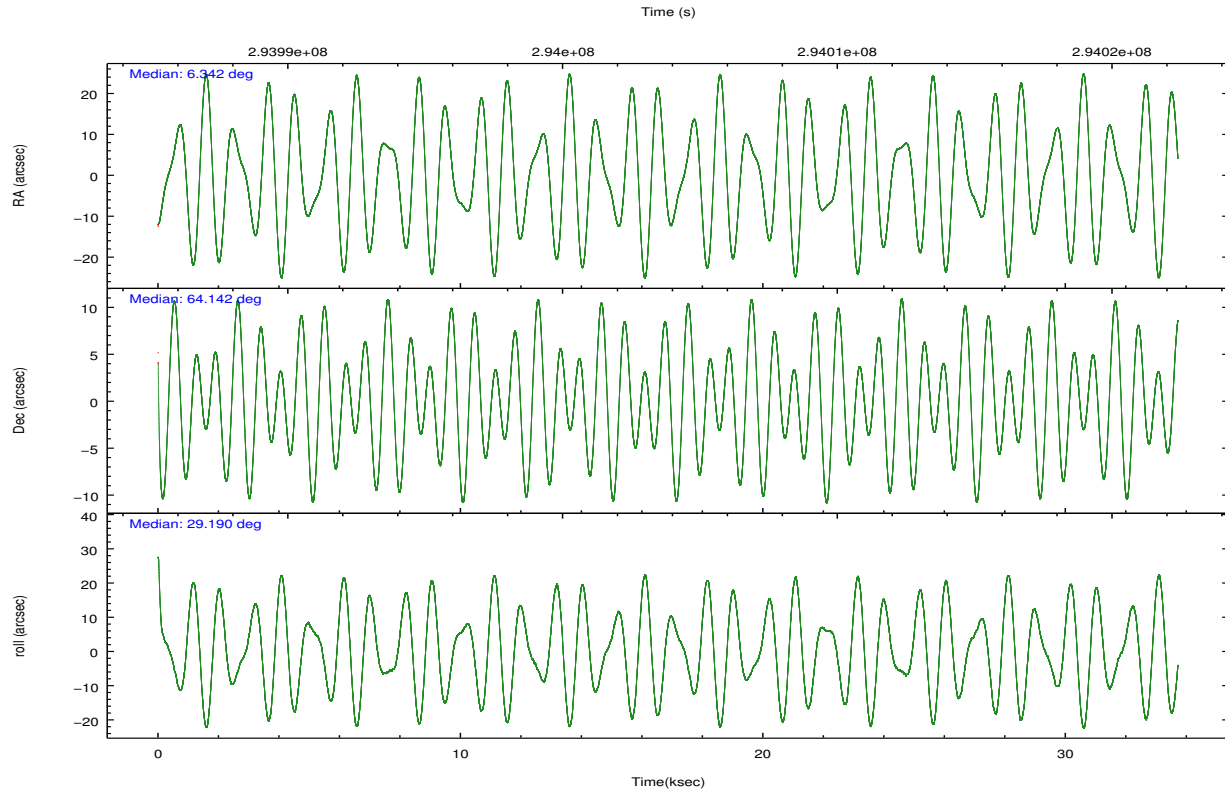
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	268116	387950	556830	802755
	46%	54%	58%	65%
grade 1 events	1913	2375	4766	6359
	0%	0%	0%	0%
grade 2 events	35022	49426	61285	88179
	6%	6%	6%	7%
grade 3 events	11170	15604	19343	26788
	1%	2%	2%	2%
grade 4 events	11067	15293	19079	26613
	1%	2%	2%	2%
grade 5 events	8911	10432	9882	13340
	1%	1%	1%	1%
grade 6 events	9916	13327	13656	18456
	1%	1%	1%	1%
grade 7 events	226954	216600	265520	244794
	39%	30%	27%	19%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	6.309882	6.34194178901987	Subarray requested	NONE	NONE
[deg] Pointing Dec	64.118291	64.14196386541161	Alternating exposures requested	N	N
[deg] Pointing Roll	29.017354	29.19719303155984	[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	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	293987129.184000	293985170.66734			
Observation start date	2007-04-26T15:04:24	2007-04-26T14:32:50			
[s] Observation end time (MET)	294020701.184000	294020938.55654			
Observation end date	2007-04-27T00:23:56	2007-04-27T00:28:58			
Read mode	TIMED	TIMED			

## 2.3 Aspect



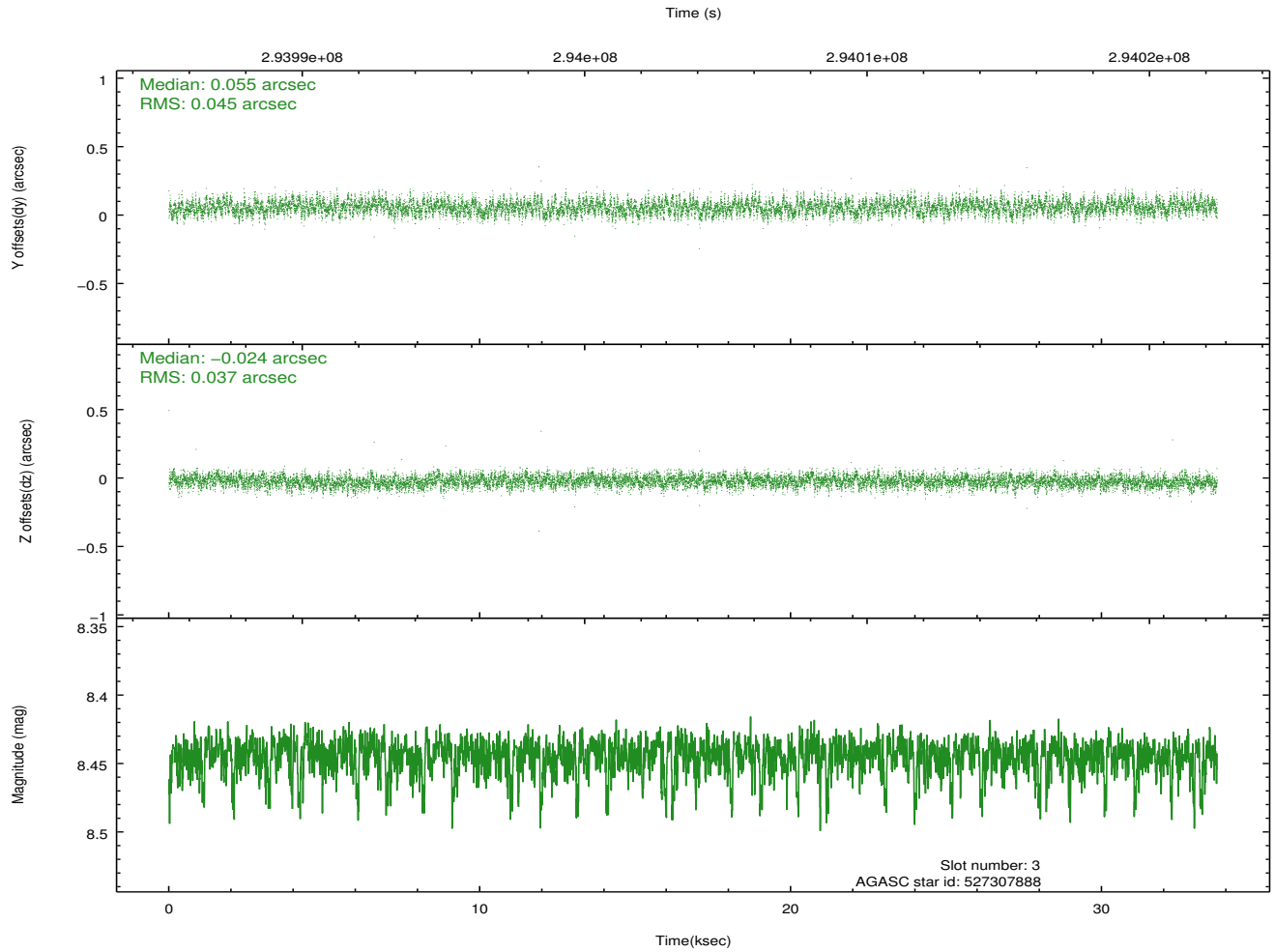
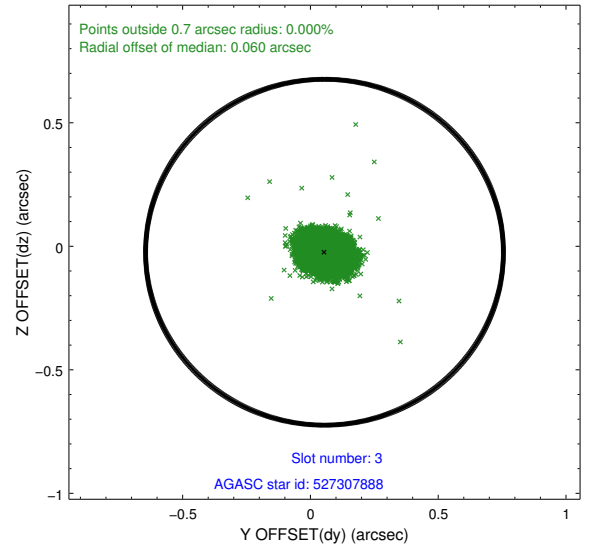
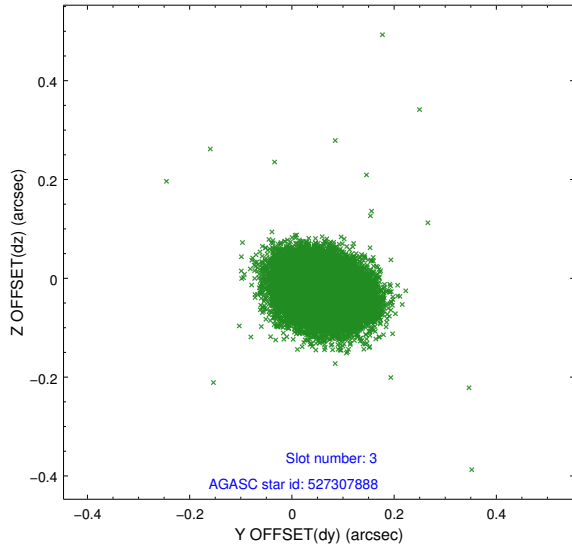


### Slot Statistics

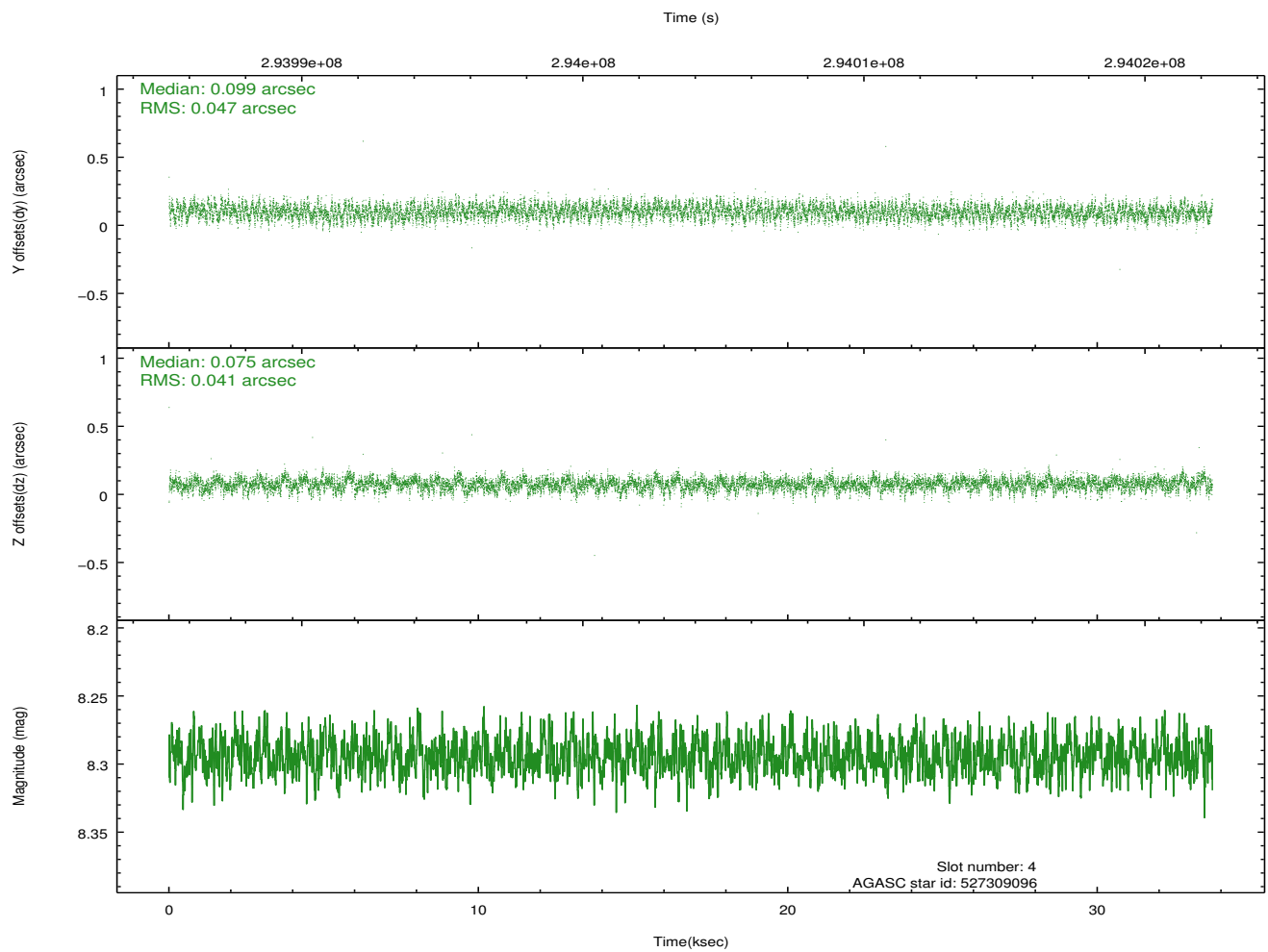
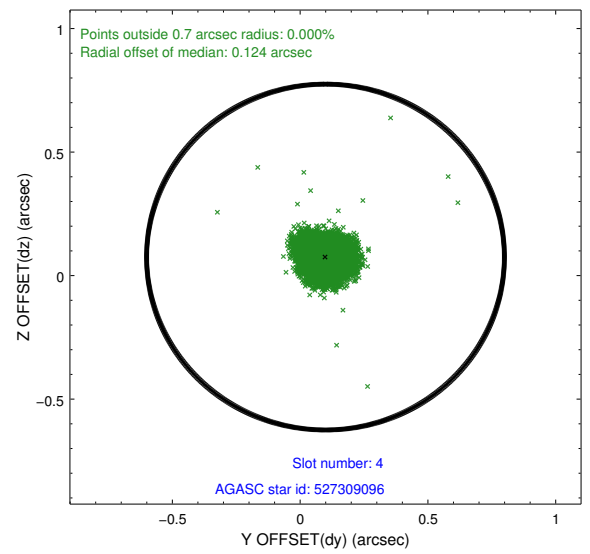
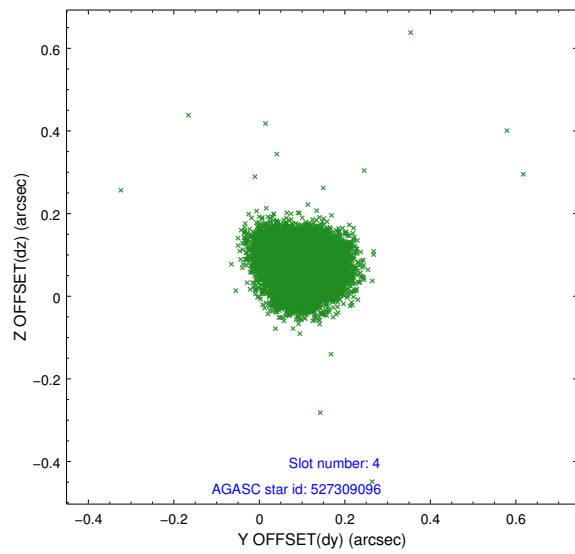
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.22	8224	-0.014	-0.058	0.018	0.072	0.000000	0.000000	926.53	-839.14
1	FID	ACIS-I-4	7.16	8221	0.183	0.070	0.025	0.051	0.000000	0.000000	2146.81	1060.74
2	FID	ACIS-I-5	7.22	8223	-0.267	0.058	0.020	0.036	0.000000	0.000000	-1821.64	1058.67
3	GUIDE	527307888	8.44	16441	0.055	-0.024	0.062	0.100	4.965121	64.287990	-1529.34	1572.38
4	GUIDE	527309096	8.29	16438	0.099	0.075	0.067	0.106	7.726277	64.064373	1868.34	-1229.16
5	GUIDE	527310400	7.74	16448	-0.049	-0.182	0.062	0.100	6.292387	64.638680	885.29	1651.40
6	GUIDE	526789120	8.88	16436	-0.029	0.020	0.078	0.129	5.233481	63.667511	-2282.85	-572.65
7	GUIDE	526791328	8.61	16439	-0.079	0.108	0.068	0.109	7.600207	63.681314	1048.30	-2355.99

## 2.4 Star Slots

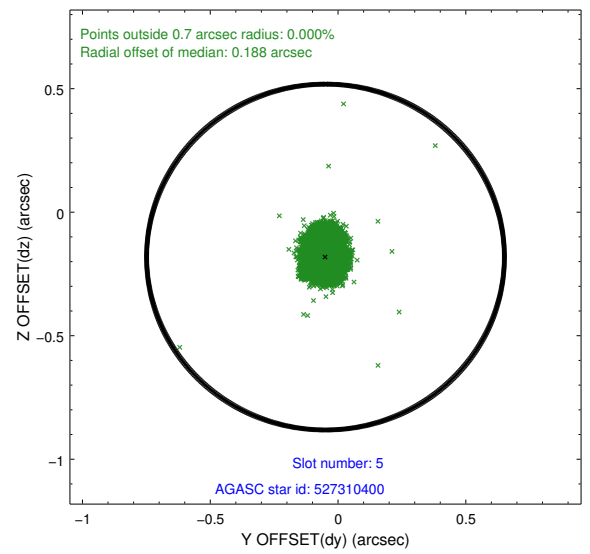
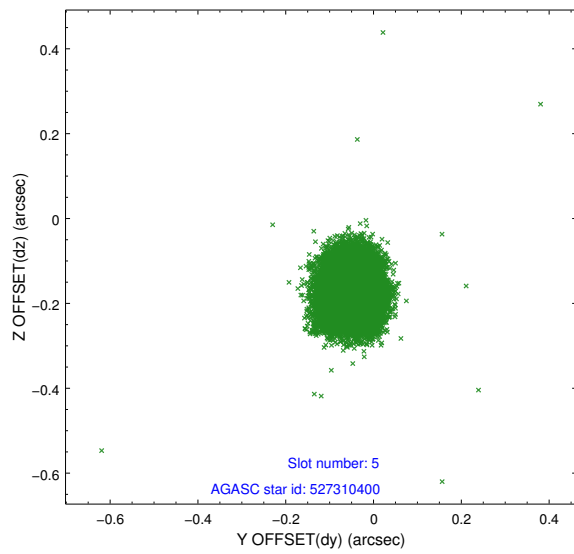
### 2.4.1 Slot 3



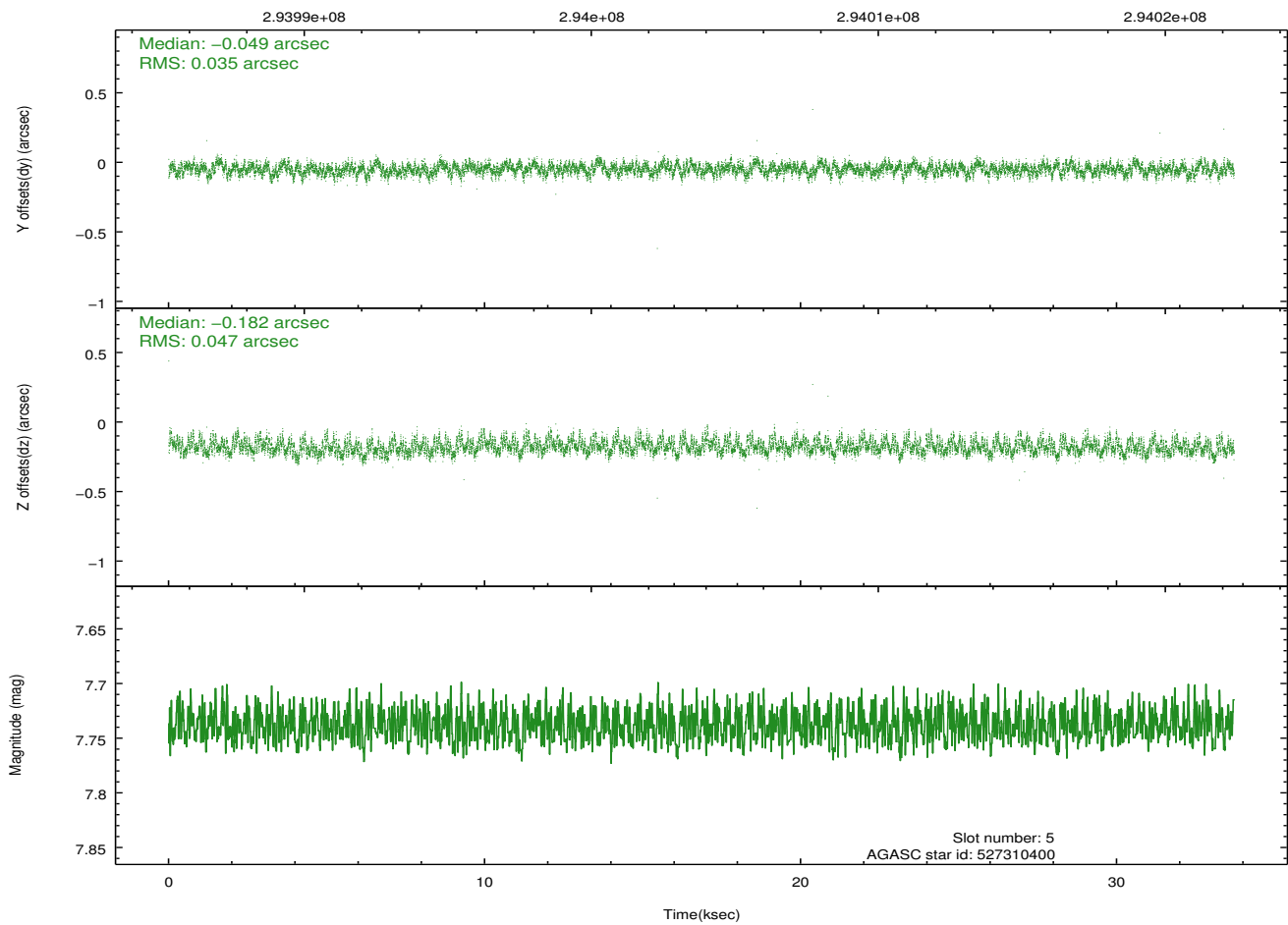
## 2.4.2 Slot 4



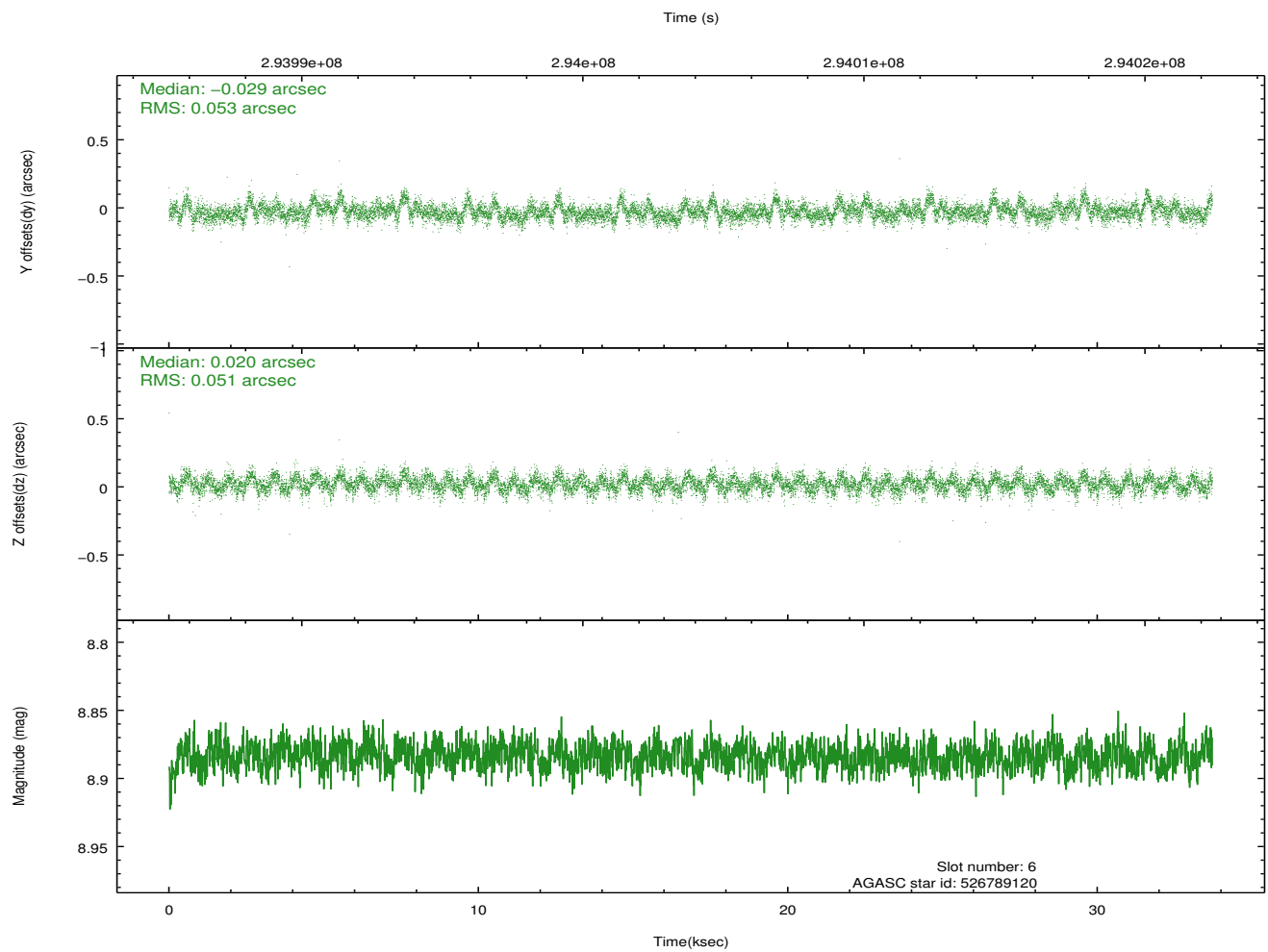
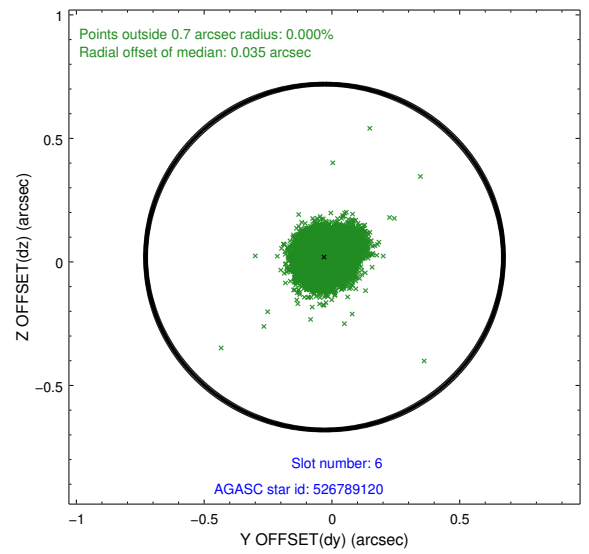
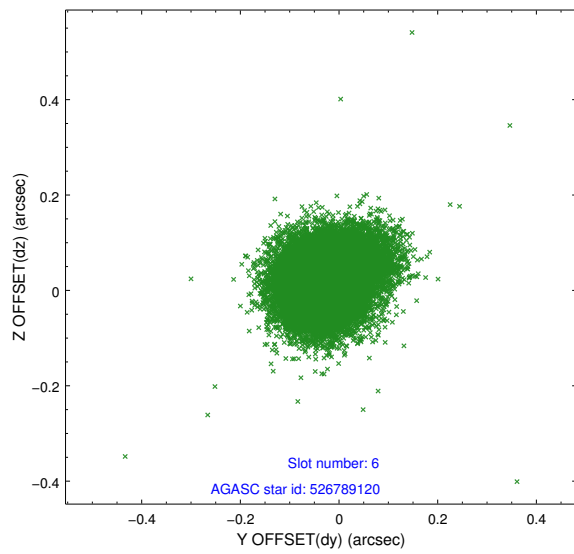
### 2.4.3 Slot 5



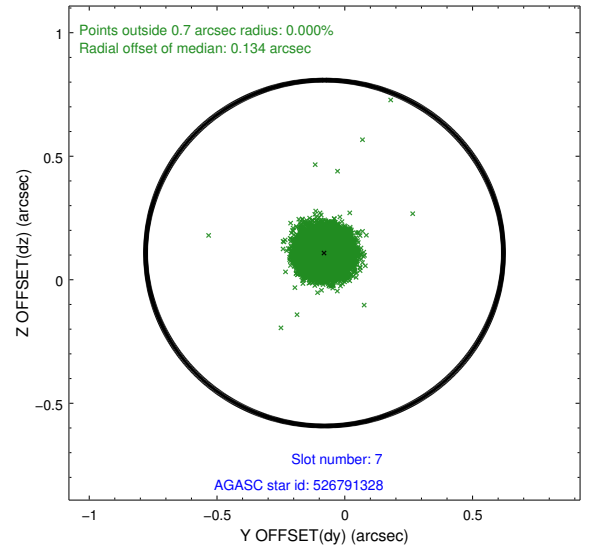
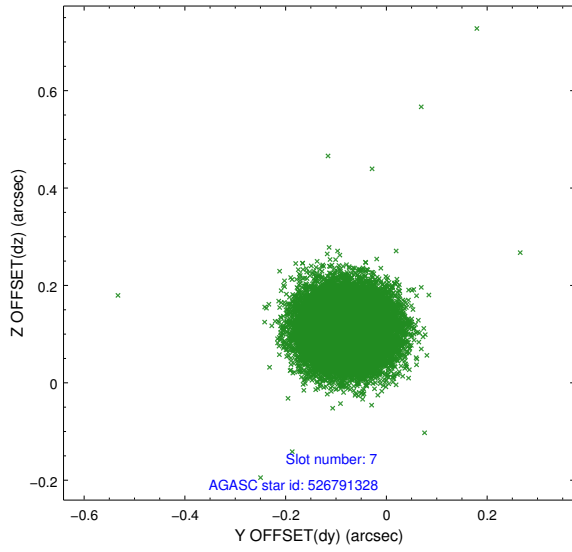
Time (s)



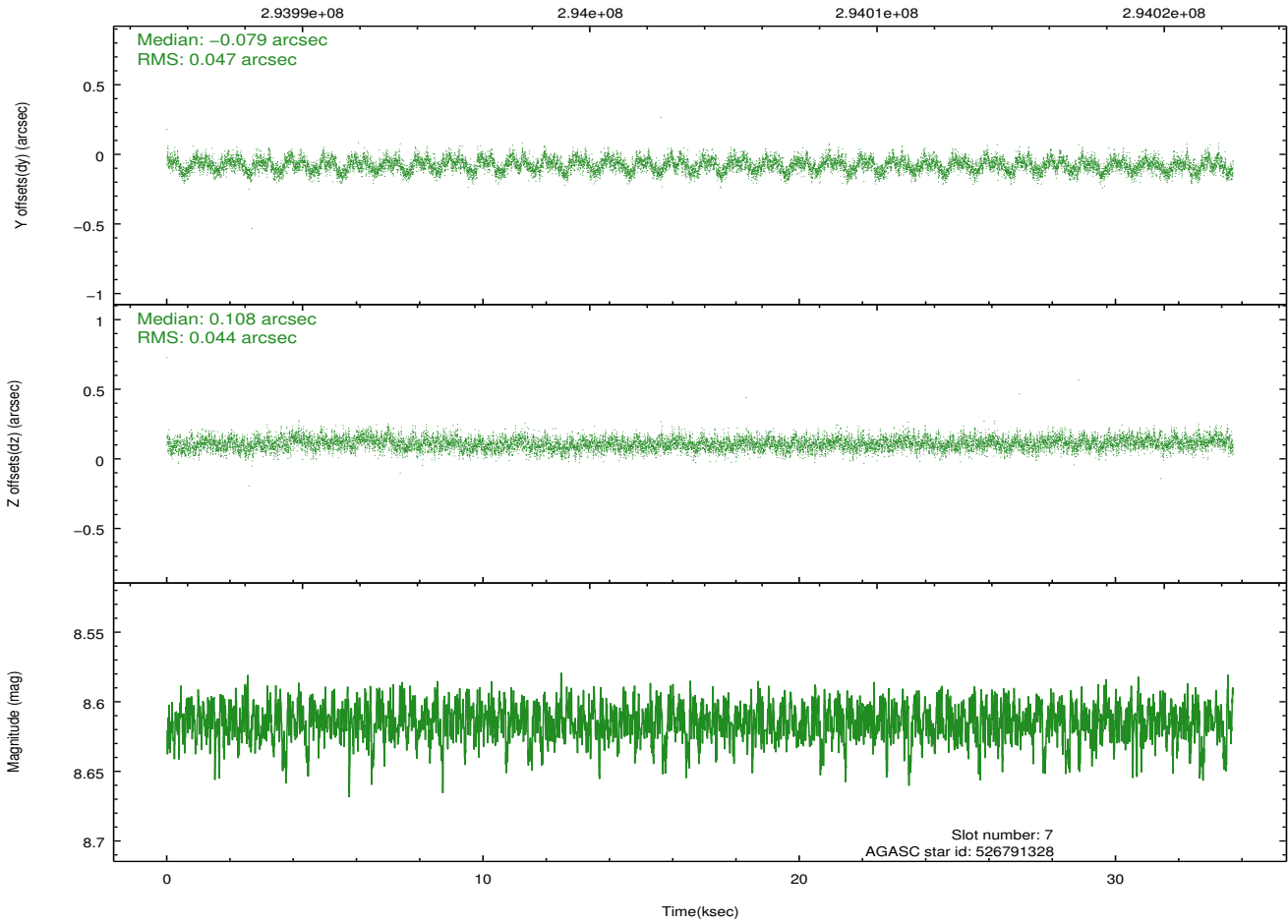
## 2.4.4 Slot 6



### 2.4.5 Slot 7

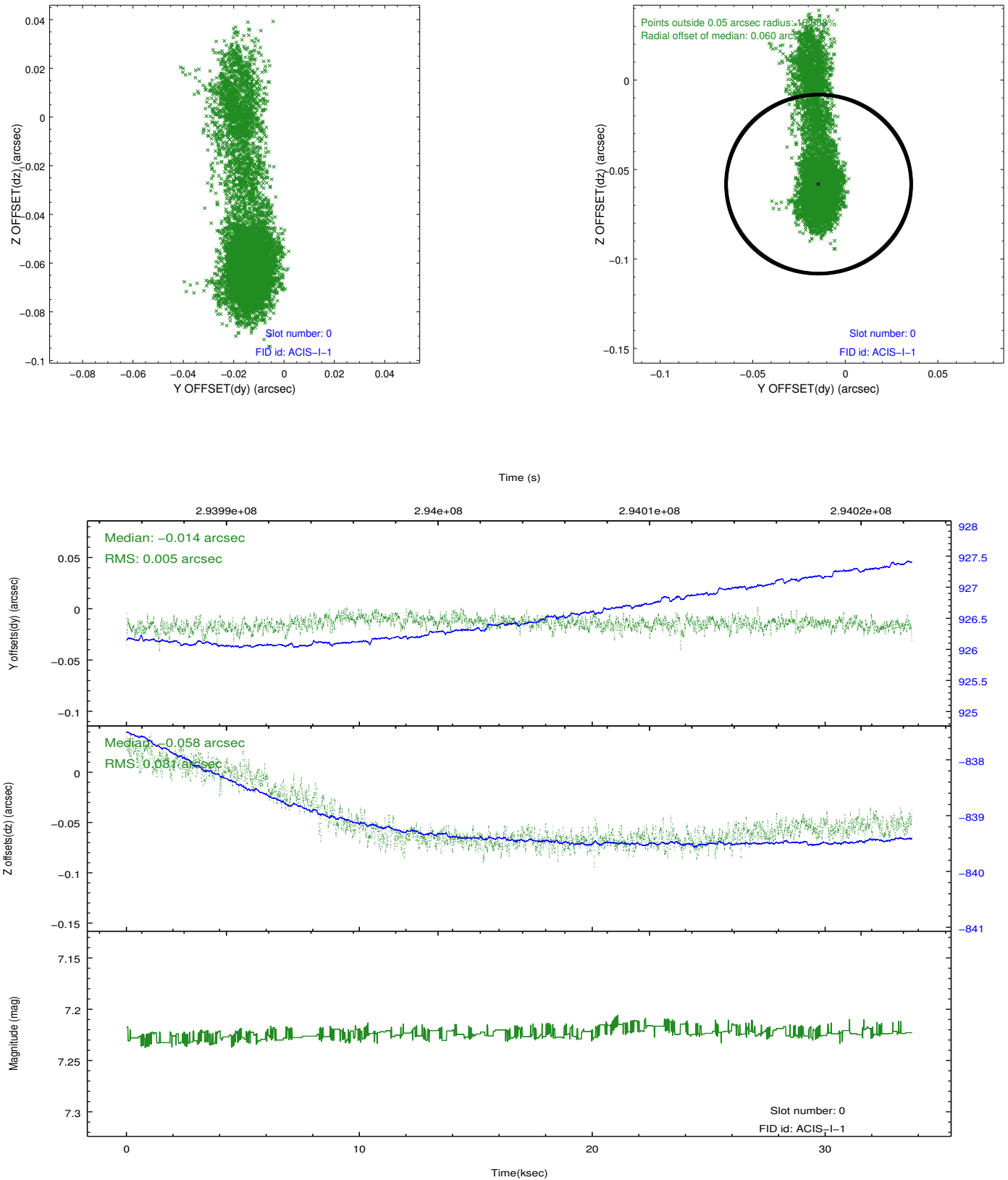


Time (s)

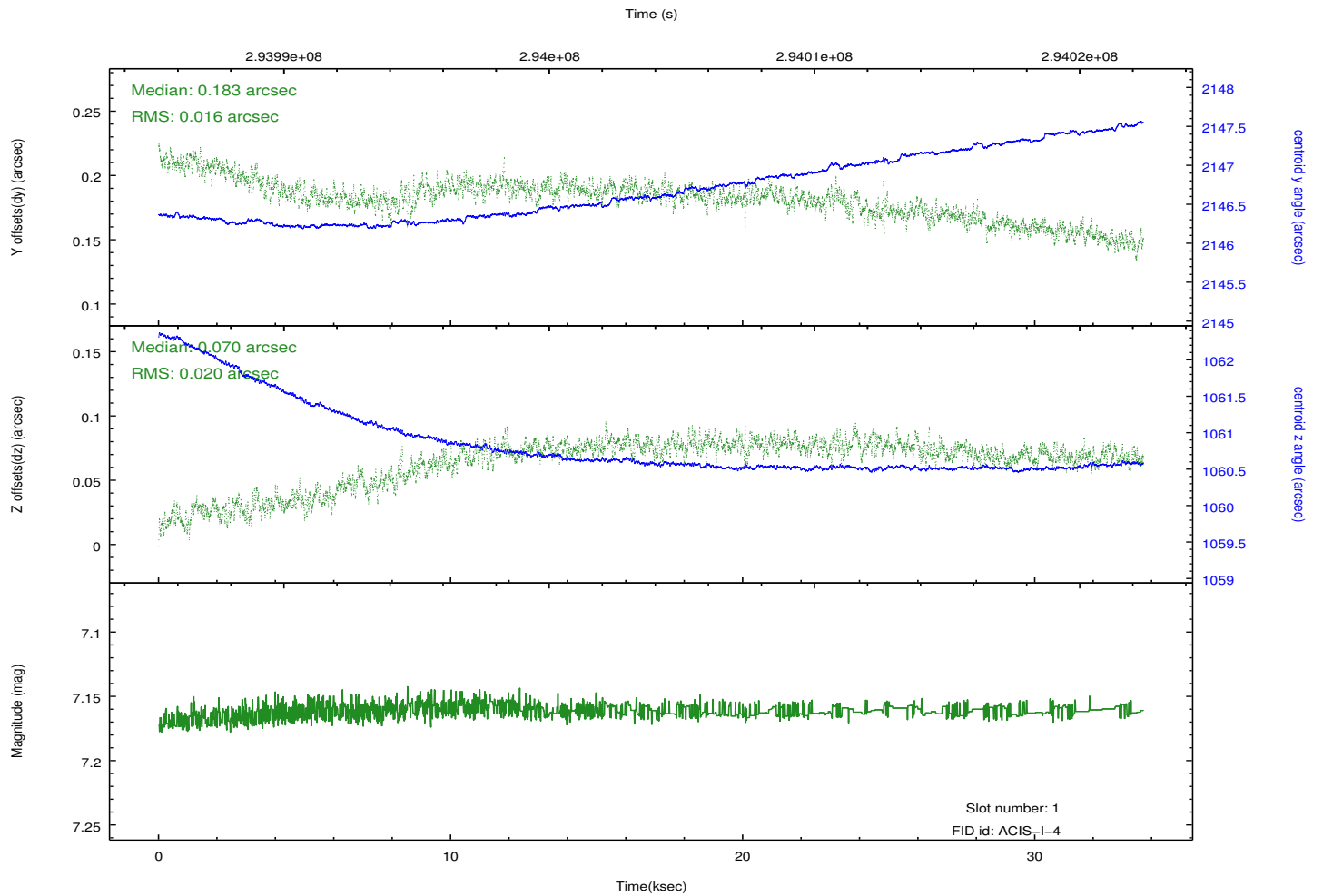
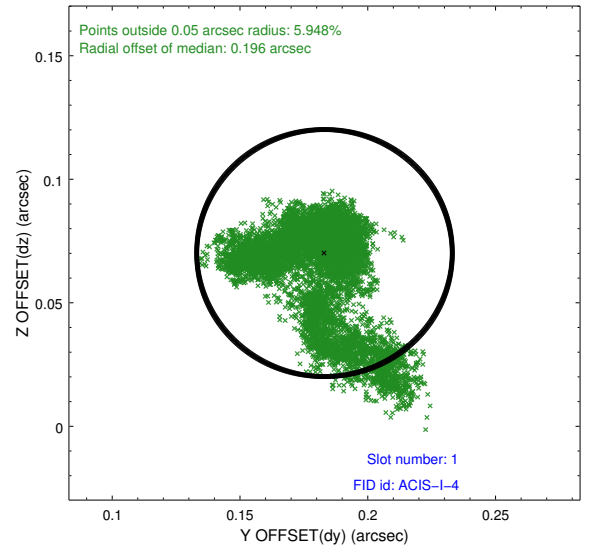
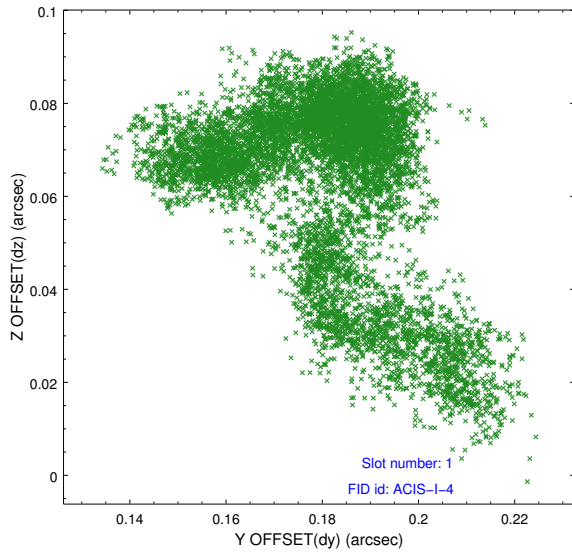


## 2.5 FID Slots

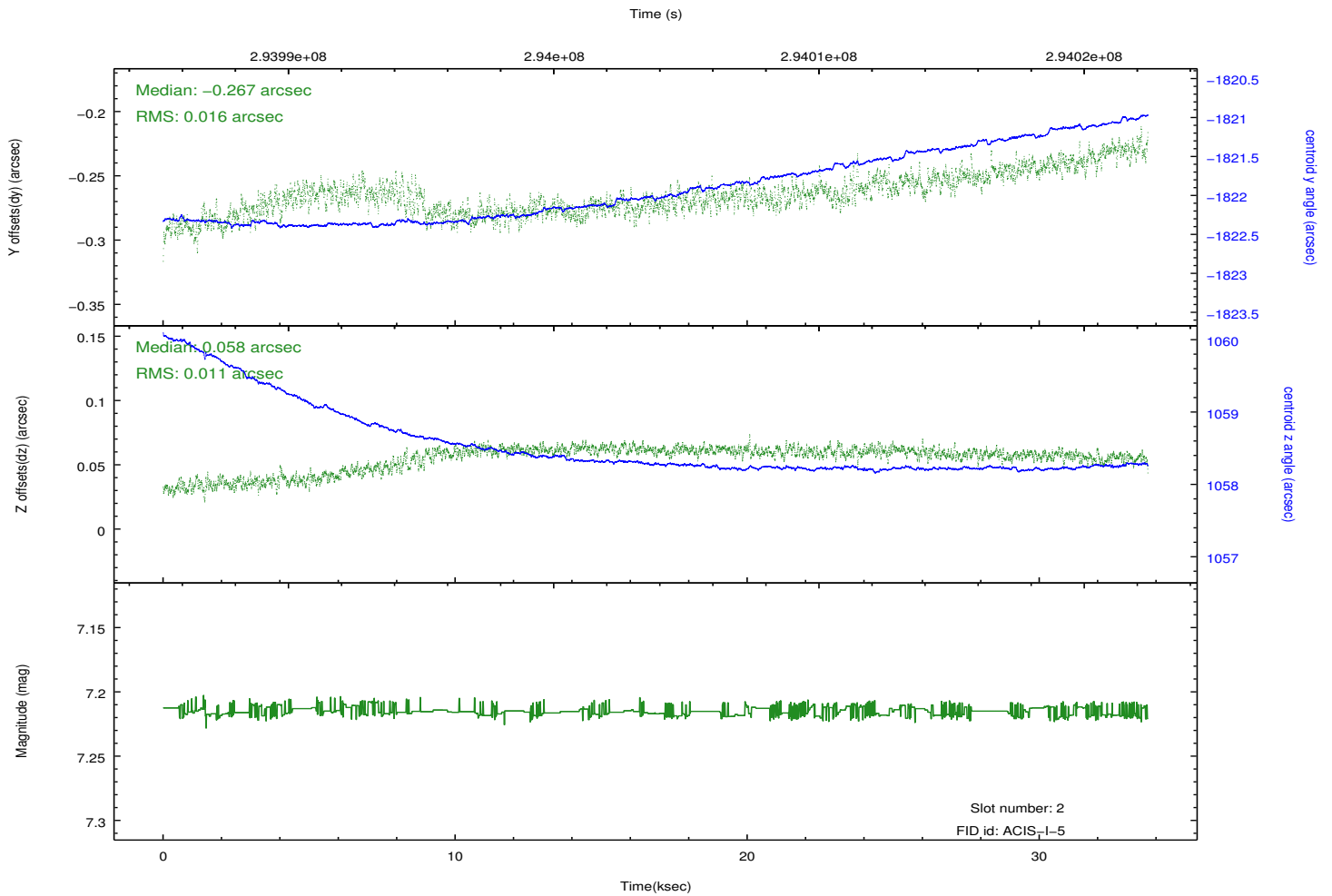
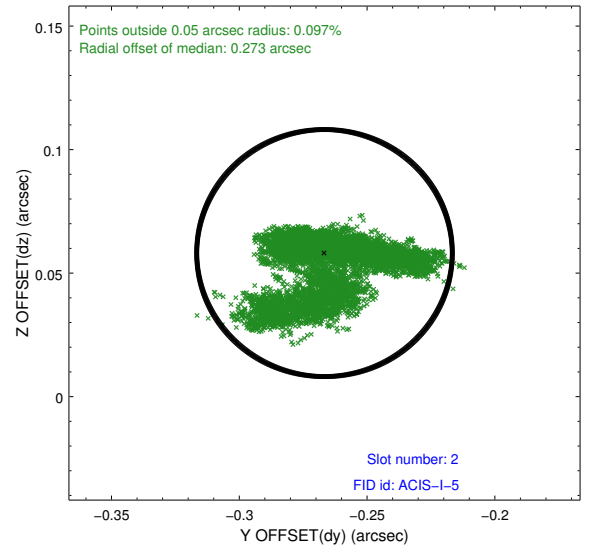
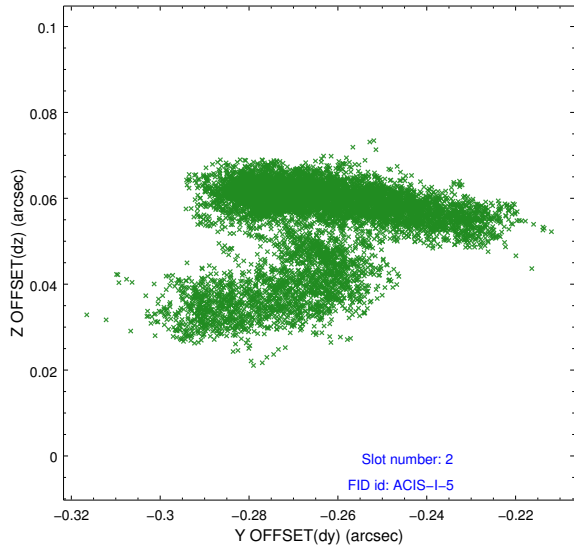
### 2.5.1 Slot 0



## 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)	2012.04.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	33.7094002

## A.2 Comments