V&V Reference Report
L2 ASCDS Version : 8.5.1.1

Observation 15012 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Dec 1 2014

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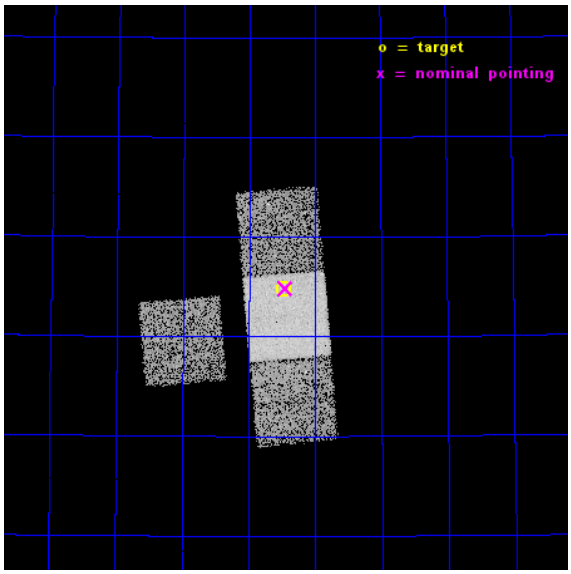
1 Front

seq_num	702820	Sequence number
obs_id	15012	Observation id
title	The Herschel Legacy of powerful 3C radio galaxies and quasars II: observing Proposal.	Proposal title
observer	Dr Joanna Kuraszkiewicz	Principal investigator
object	3C343.1	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	249.6175	Observer's specified target RA [deg]
dec_targ	62.578972	Observer's specified target Dec [deg]
ra_nom	249.61221791056	Nominal RA [deg]
dec_nom	62.580788480991	Nominal Dec [deg]
roll_nom	84.989150442976	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10074.261382043	Sum of GTIs [s]
livetime	9942.6337405236	Livetime [s]
ontime3	10074.179302037	Sum of GTIs [s]
ontime6	10074.22034204	Sum of GTIs [s]
ontime7	10074.261382043	Sum of GTIs [s]
ontime8	10070.997241855	Sum of GTIs [s]
l2events	50046	Number of level 2 events

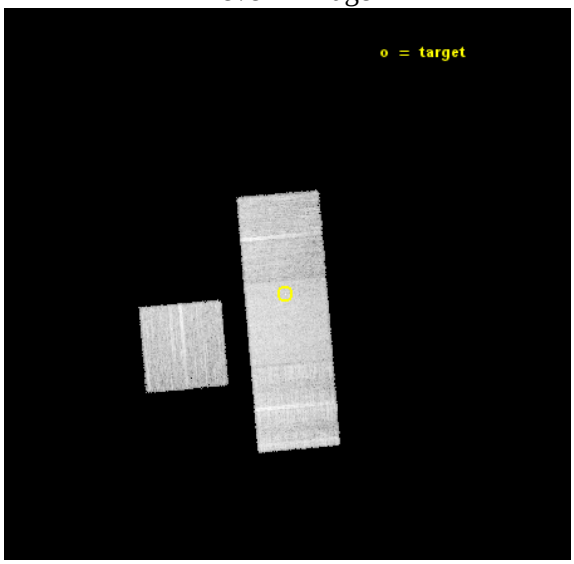


2 OBI

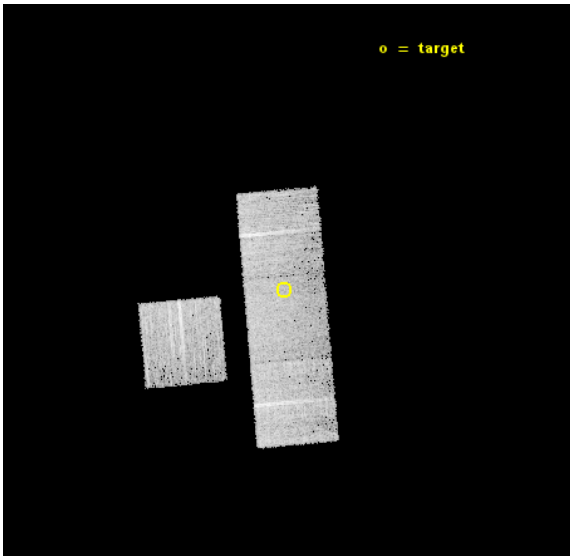
2.1 OBI

2.1.1 Images

Level 1 Image

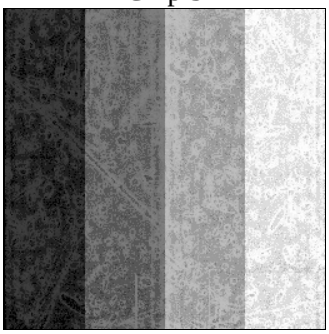


Level 1 Bad Events

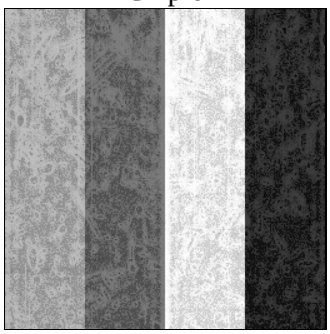


2.1.2 Bias

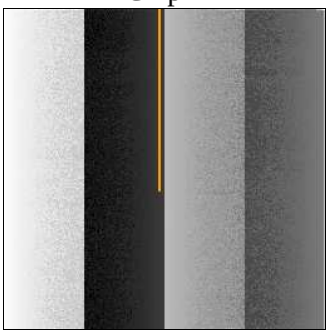
Chip 3



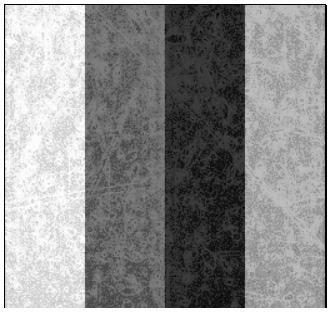
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	10.3	Processing system revision
caldbver	4.6.4	
date	2014-12-01T17:29:22	Date and time of file creation
revision	2	Processing version of data

sched_exp_time	10000.030000	[s] Scheduled observation exposure time
ontime	10074.261382043	Sum of GTIs [s]
ontime3	10074.179302037	Sum of GTIs [s]
ontime6	10074.22034204	Sum of GTIs [s]
ontime7	10074.261382043	Sum of GTIs [s]
ontime8	10070.997241855	Sum of GTIs [s]
l1events	258664	Number of level 1 events

2.1.4 Events

	ccd 3	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	53126	56710	75194	73634
rejected events	46859	50014	42604	53486
rejected %	88%	88%	56%	72%

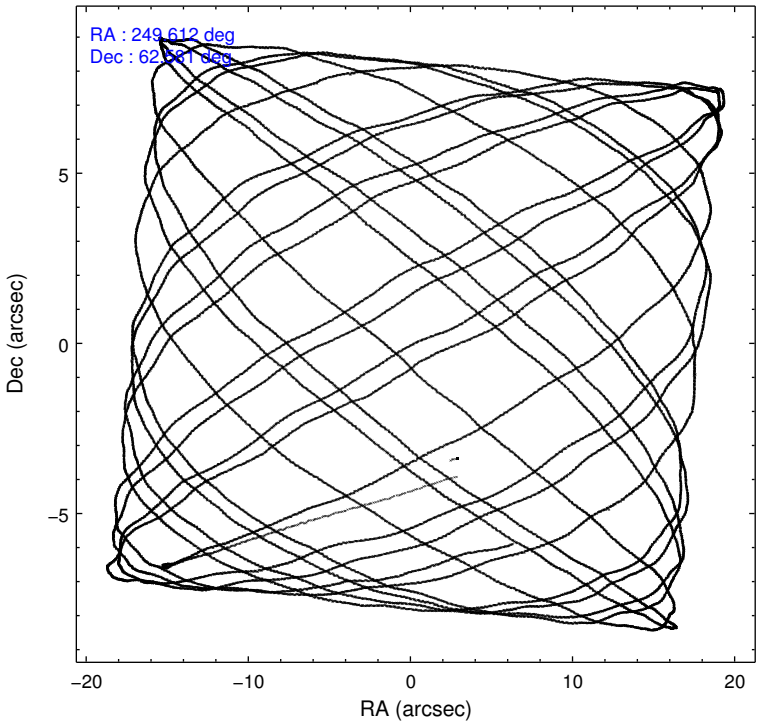
	ccd 3	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	2203	2317	2911	5782
	4%	4%	3%	7%
grade 1 events	23	27	86	60
	0%	0%	0%	0%
grade 2 events	1344	1519	6626	4725
	2%	2%	8%	6%
grade 3 events	697	669	2829	2140
	1%	1%	3%	2%
grade 4 events	693	668	2789	2157
	1%	1%	3%	2%
grade 5 events	2849	2901	7827	4254
	5%	5%	10%	5%
grade 6 events	1333	1527	17457	5351
	2%	2%	23%	7%
grade 7 events	43984	47082	34669	49165
	82%	83%	46%	66%

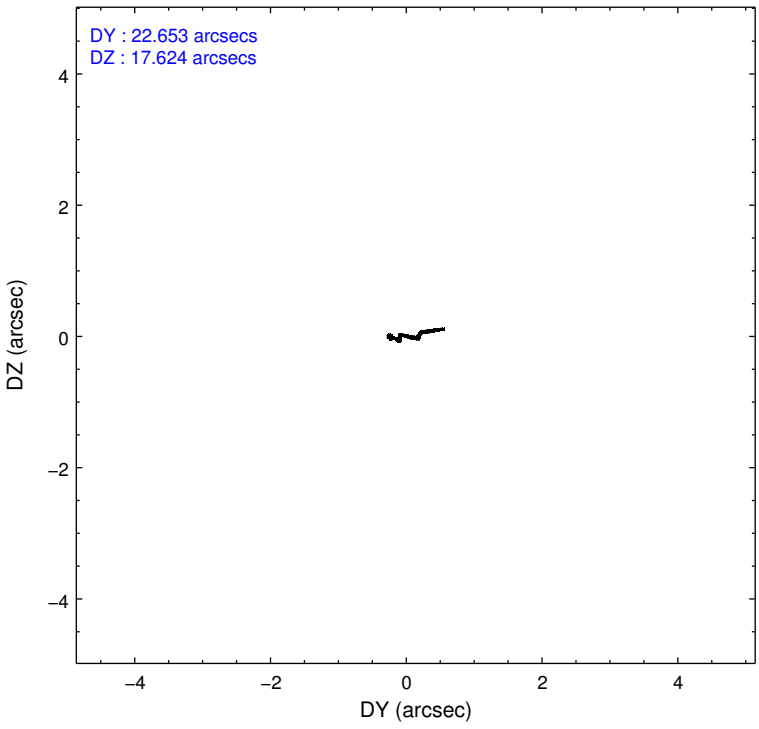
2.2 Compared Parameters

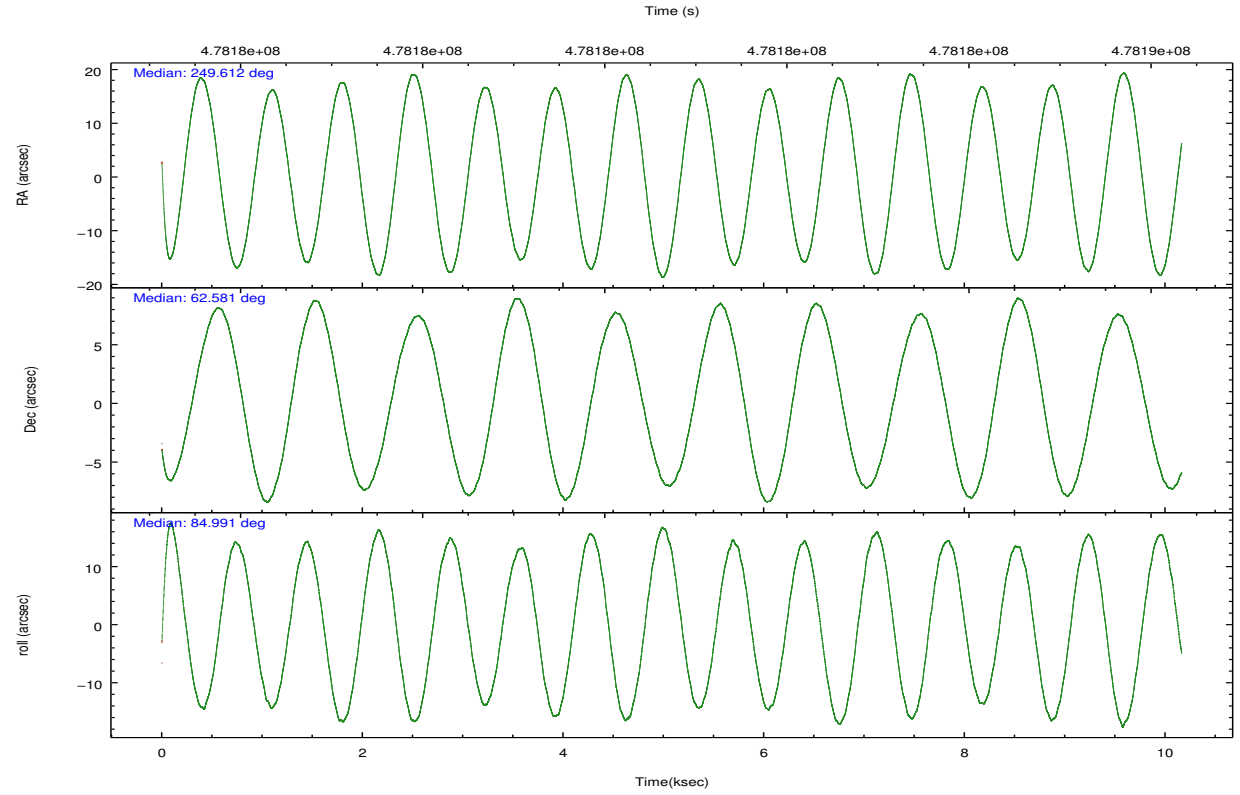
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-3678	ACIS-3678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	249.638095	249.6122179105551
[deg] Pointing Dec	62.556189	62.58078848099061
[deg] Pointing Roll	84.809567	84.98915044297631
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	478175815.184000	478174774.87472
Observation start date	2013-02-25T10:35:48	2013-02-25T10:19:34
[s] Observation end time (MET)	478185815.184000	478186041.16283
Observation end date	2013-02-25T13:22:28	2013-02-25T13:27:21
Read mode	TIMED	TIMED

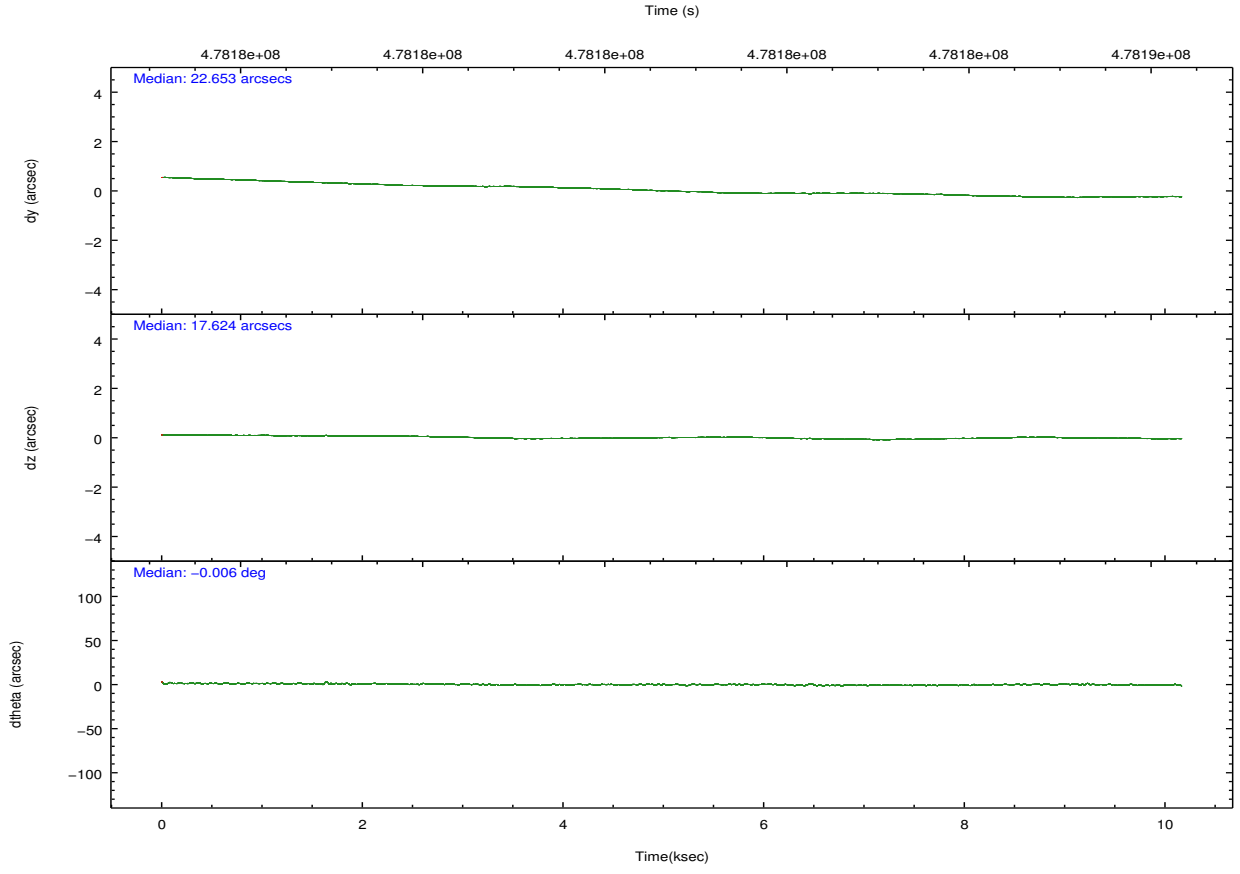
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	O1	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O3	Y
CCD S3 on	Y	Y
CCD S4 on	O2	Y
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect


RA : 249.612 deg
Dec : 62.981 deg
Dec (arcsec)
RA (arcsec)
5
0
−5
−20
−10
0
10
20


DY : 22.653 arcsecs
DZ : 17.624 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
4.7818e+08
4.7818e+08
4.7818e+08
4.7818e+08
4.7818e+08
4.7819e+08
Median: 249.612 deg
RA (arcsec)
Median: 62.581 deg
Dec (arcsec)
Median: 84.991 deg
roll (arcsec)
Time(ksec)

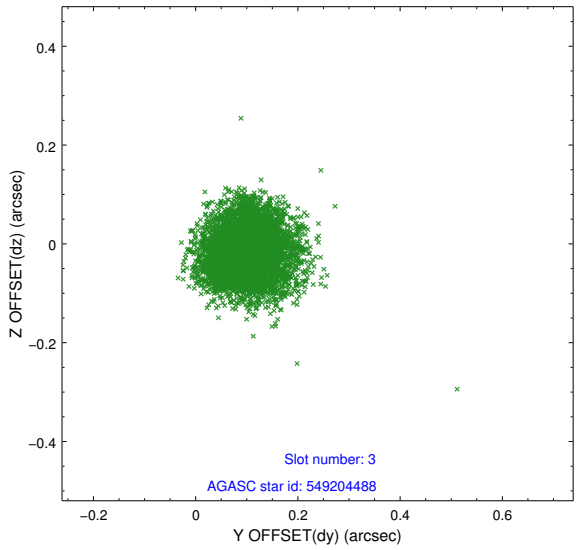

Time (s)
4.7818e+08
4.7818e+08
4.7818e+08
4.7818e+08
4.7818e+08
4.7819e+08
Median: 22.653 arcsecs
dy (arcsec)
Median: 17.624 arcsecs
dz (arcsec)
Median: −0.006 deg
dtheta (arcsec)
Time(ksec)

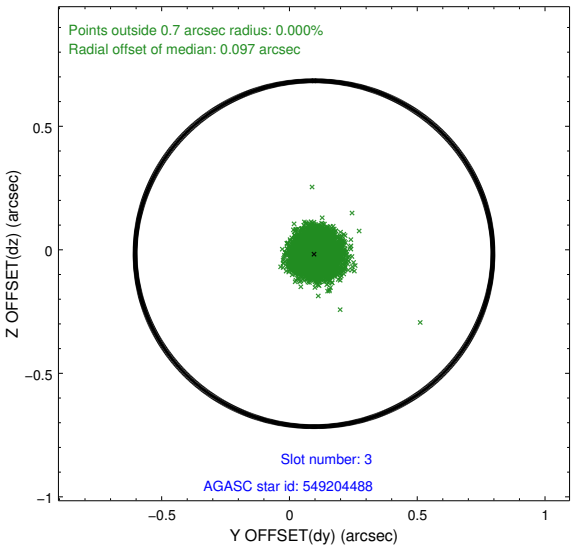
Slot Statistics

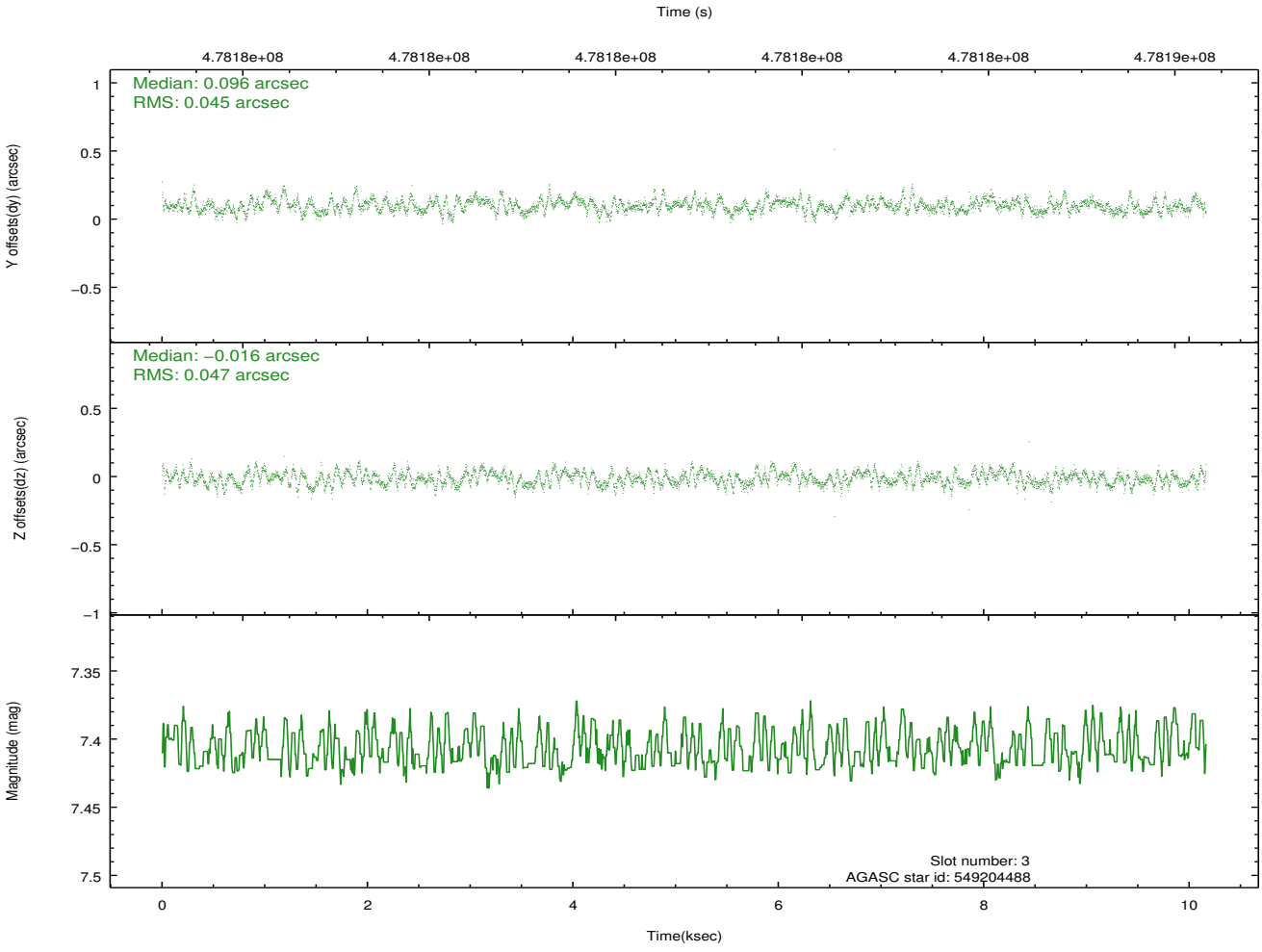
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.08	2480	0.117	-0.064	0.009	0.019	0.000000	0.000000	920.29	-1734.77
1	FID		ACIS-S-5	7.11	2478	-0.210	0.069	0.016	0.027	0.000000	0.000000	-1828.77	162.35
2	FID		ACIS-S-6	7.21	2480	0.074	0.007	0.016	0.025	0.000000	0.000000	385.21	806.86
3	GUIDE	used	549204488	7.41	4959	0.096	-0.016	0.069	0.110	250.276223	62.307988	-787.57	-1143.59
4	GUIDE	used	549205160	8.54	4953	0.157	0.171	0.074	0.122	249.902653	62.322080	-797.54	-516.75
5	GUIDE	used	549205848	8.80	4926	0.167	0.126	0.103	0.156	250.506974	62.267561	-892.88	-1542.83
6	GUIDE	used	549586616	8.24	4954	-0.048	0.127	0.078	0.127	250.806574	62.875165	1334.56	-1804.60
7	GUIDE	used	549604152	7.35	4958	-0.376	-0.406	0.081	0.132	248.648678	63.258957	2388.26	1827.01

2.4 Star Slots

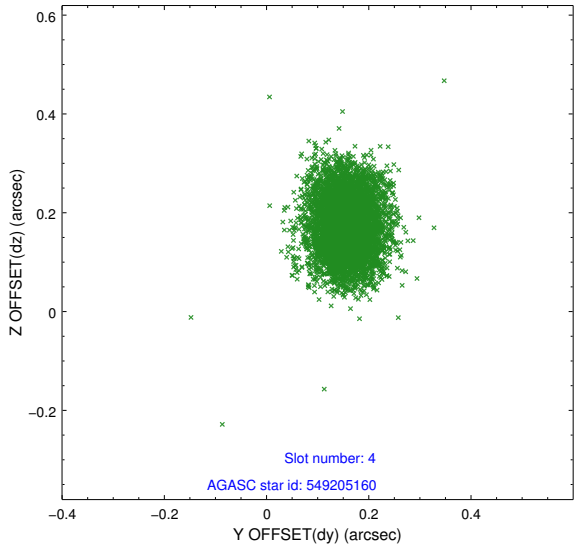
2.4.1 Slot 3

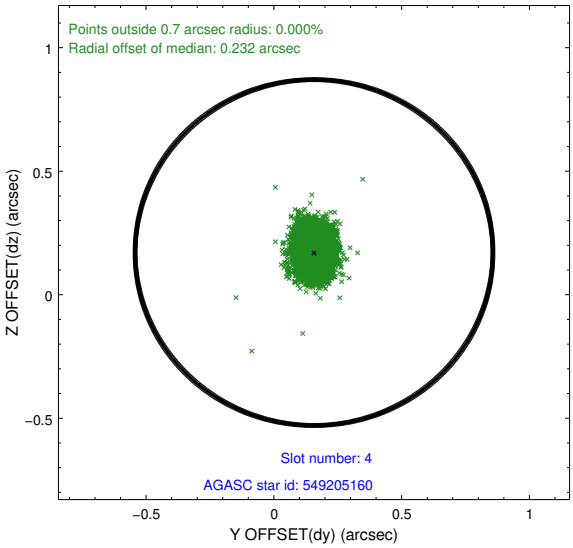


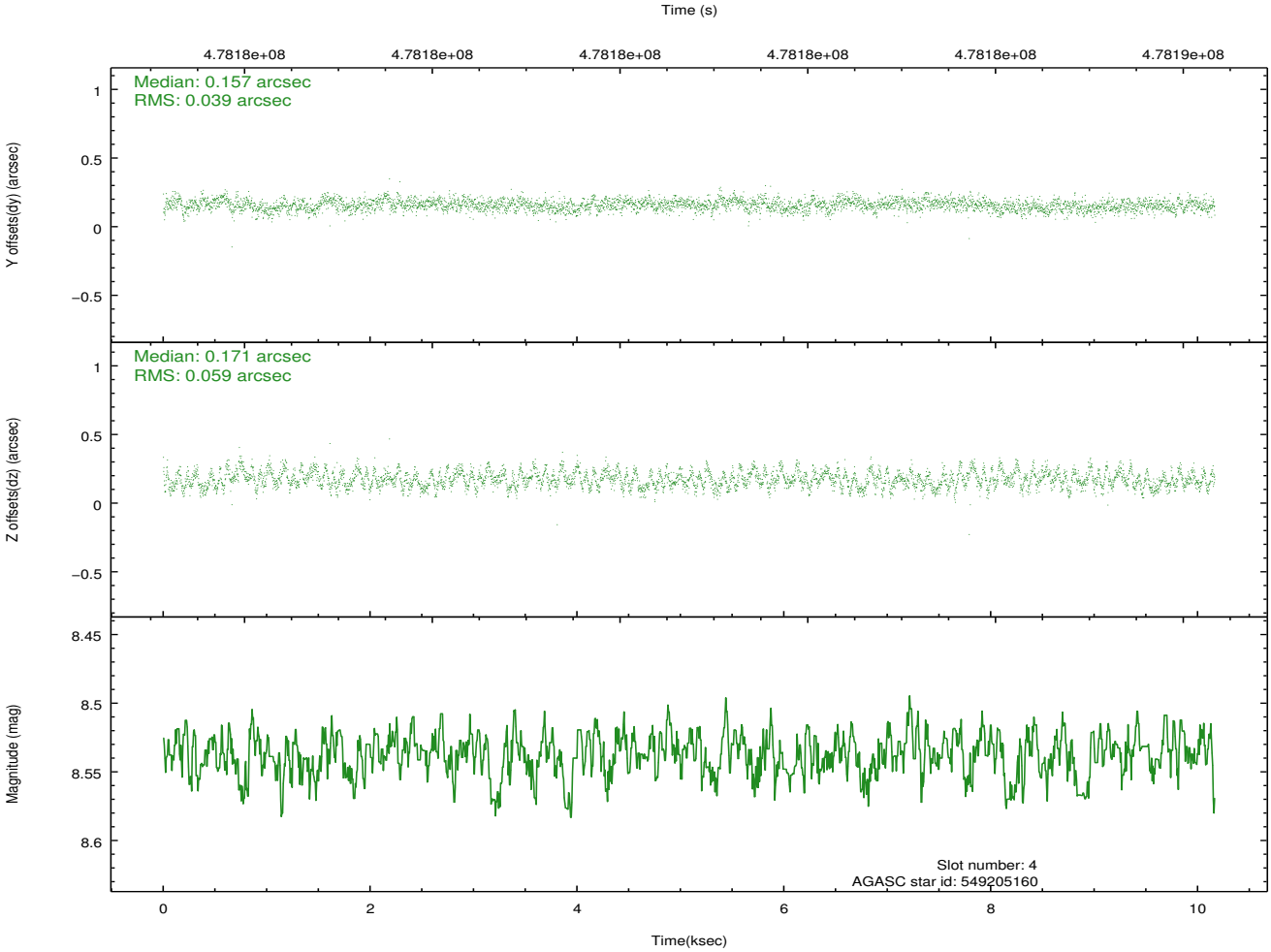




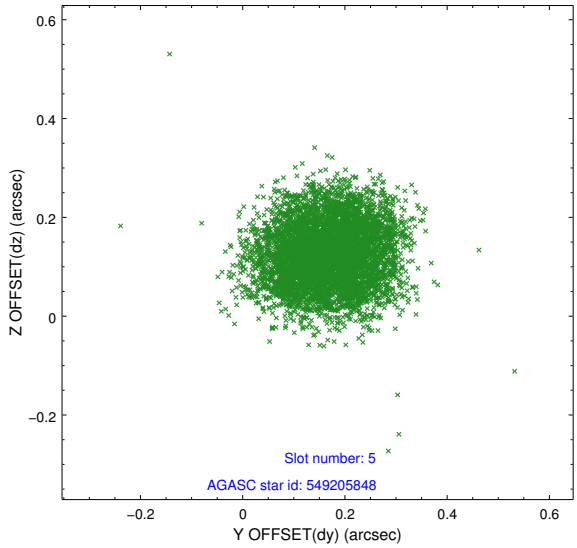
2.4.2 Slot 4

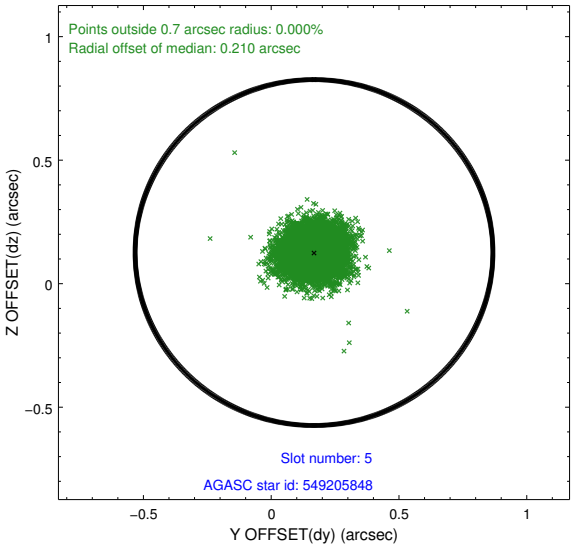

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 549205160

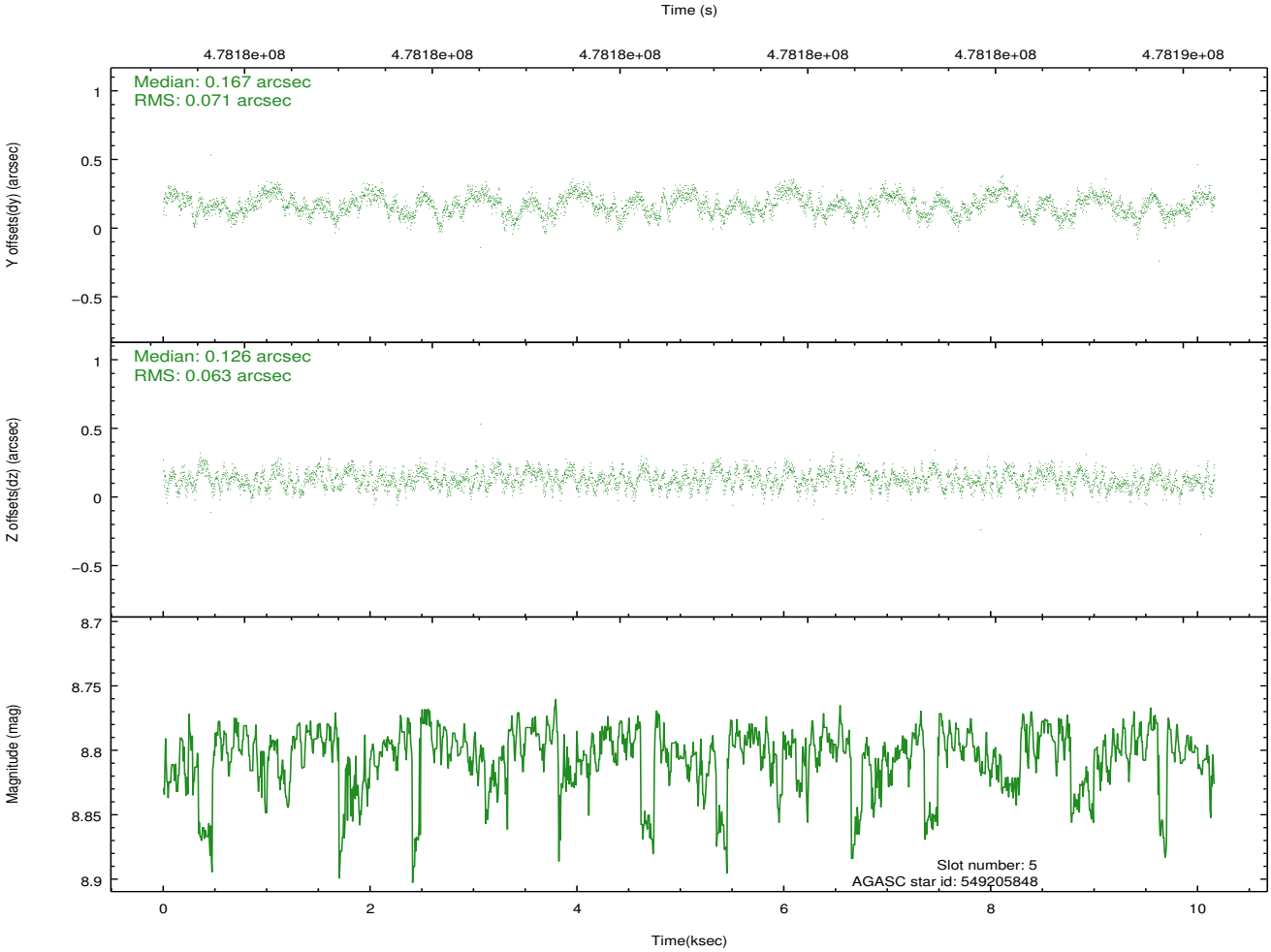

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.232 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 549205160


Time (s)
Median: 0.157 arcsec
RMS: 0.039 arcsec
Y offsets(dy) (arcsec)
Median: 0.171 arcsec
RMS: 0.059 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 549205160
Time(ksec)

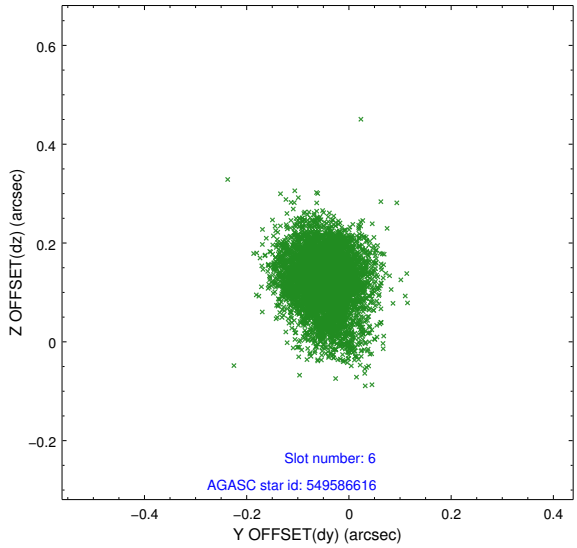
2.4.3 Slot 5

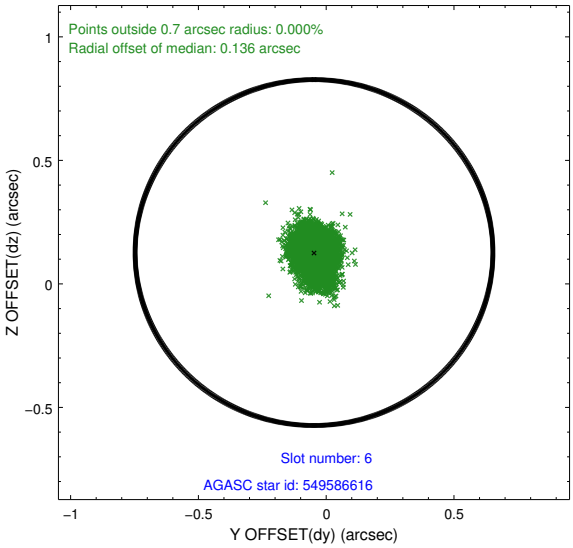

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 549205848

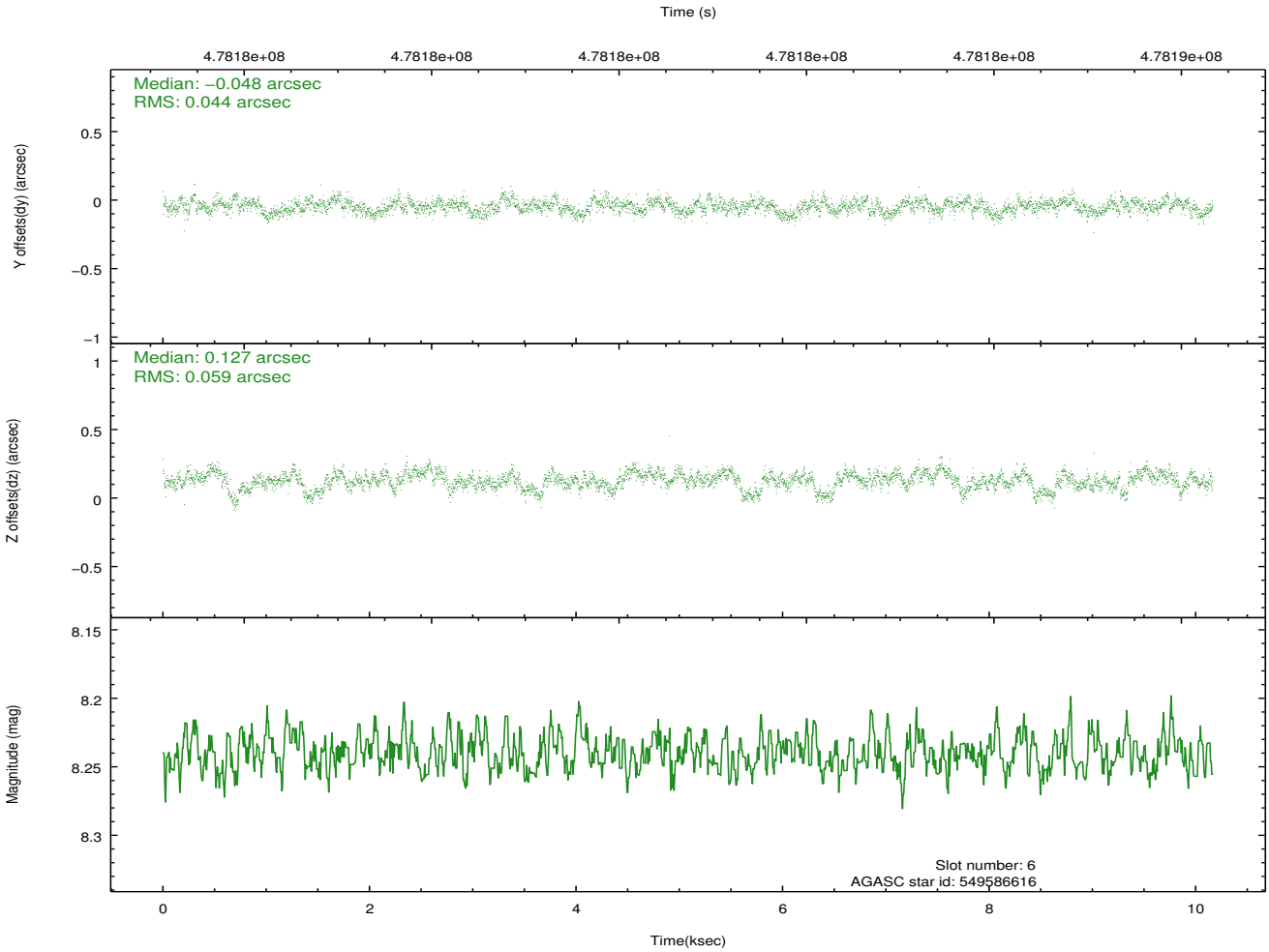

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.210 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 549205848


Time (s)
Median: 0.167 arcsec
RMS: 0.071 arcsec
Y offsets(dy) (arcsec)
Median: 0.126 arcsec
RMS: 0.063 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 549205848
Time(ksec)

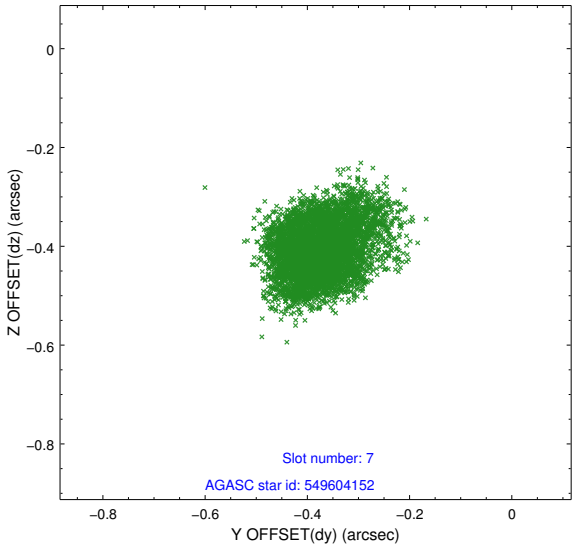
2.4.4 Slot 6

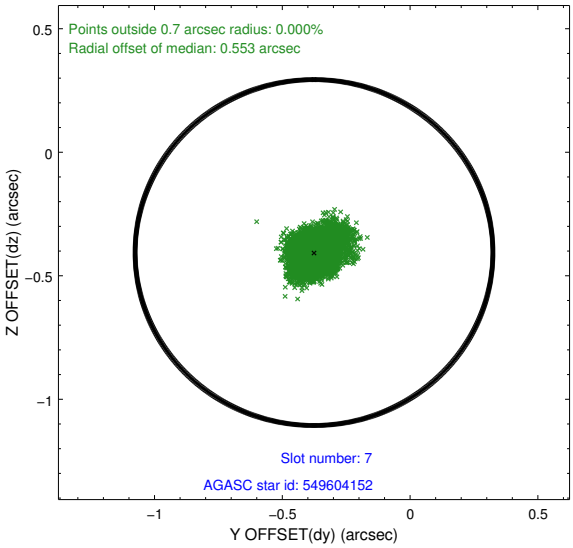

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 549586616

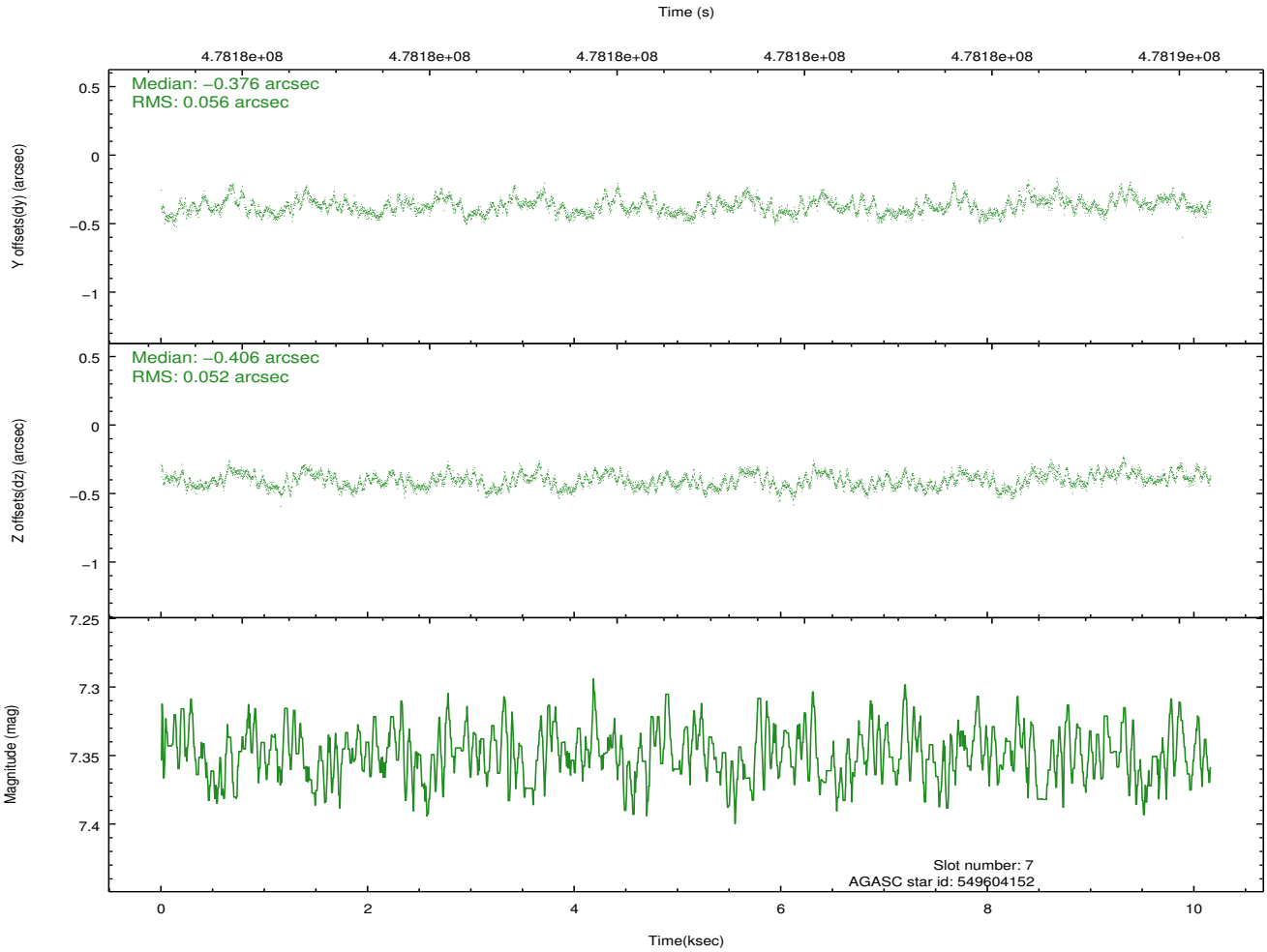

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.136 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 549586616


Time (s)
Median: −0.048 arcsec
RMS: 0.044 arcsec
Y offsets(dy) (arcsec)
Median: 0.127 arcsec
RMS: 0.059 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 549586616
Time(ksec)

2.4.5 Slot 7

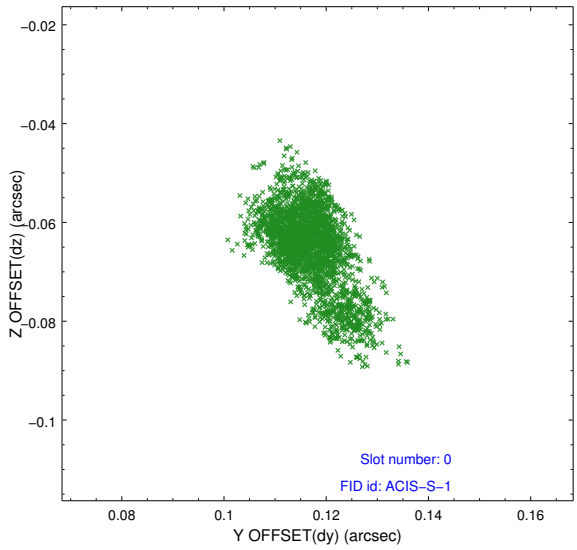

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 549604152

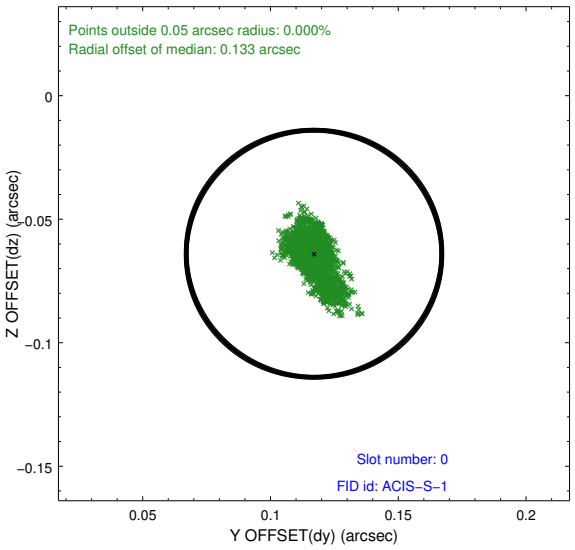

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.553 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 549604152

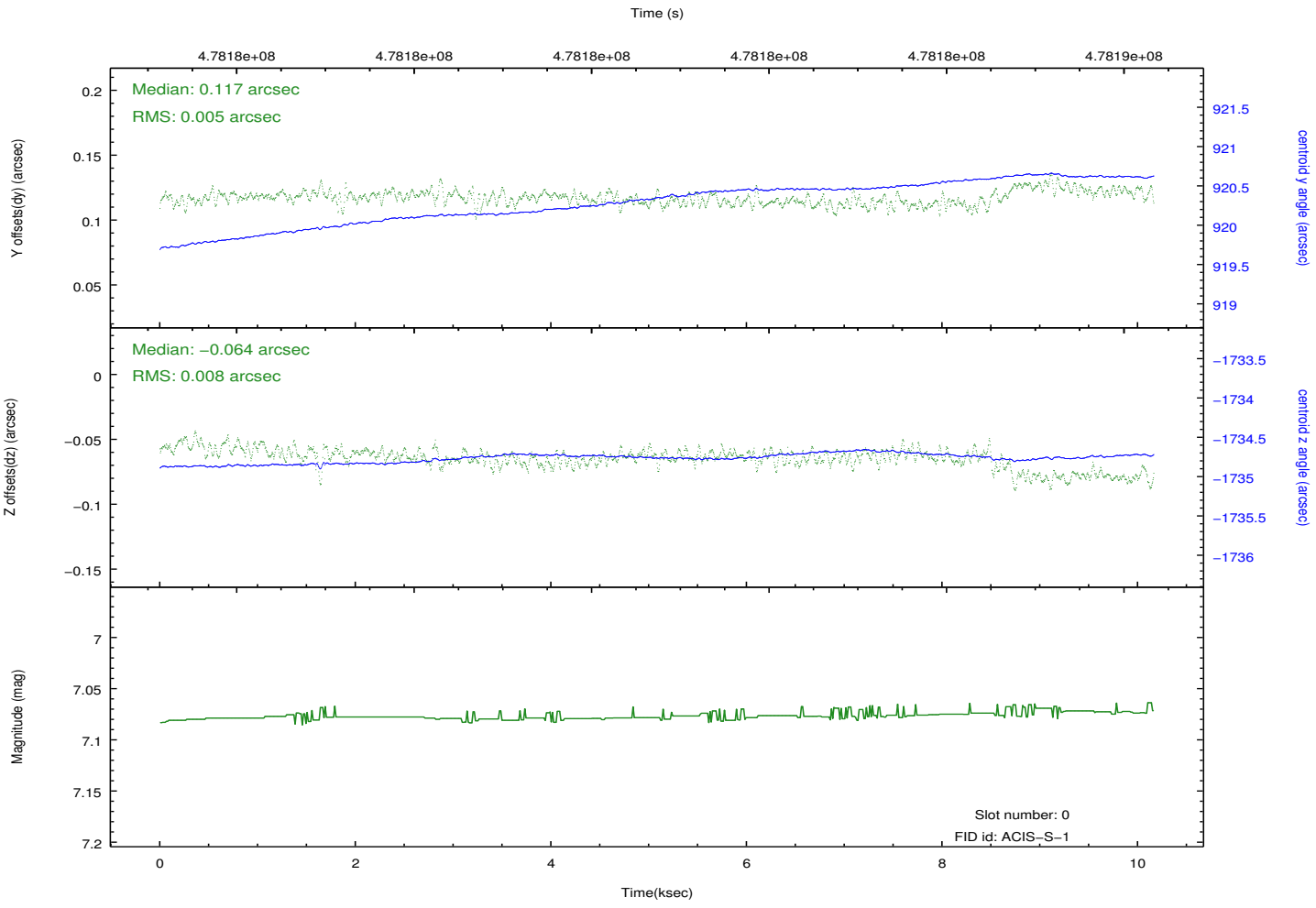

Time (s)
Median: −0.376 arcsec
RMS: 0.056 arcsec
Y offsets(dy) (arcsec)
Median: −0.406 arcsec
RMS: 0.052 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 549604152
Time(ksec)

2.5 FID Slots

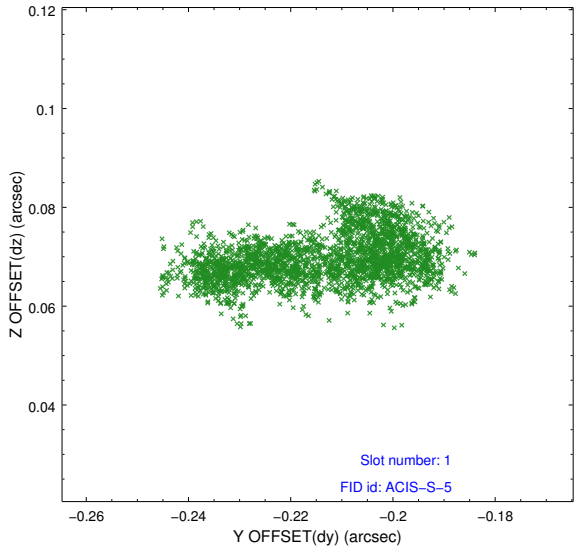
2.5.1 Slot 0

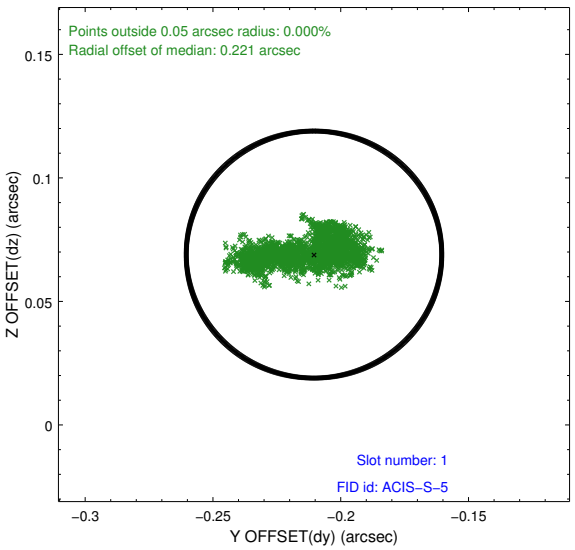


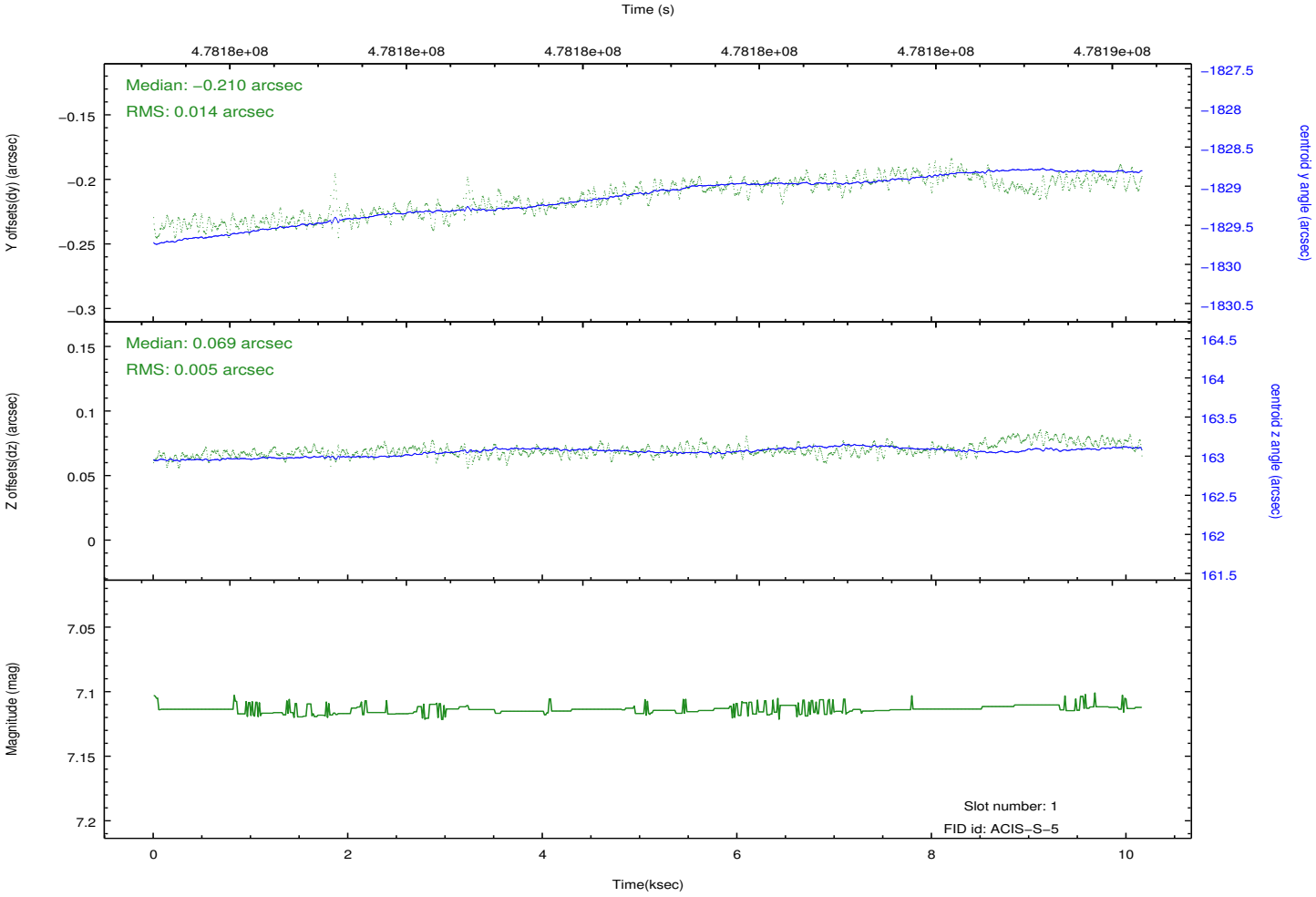




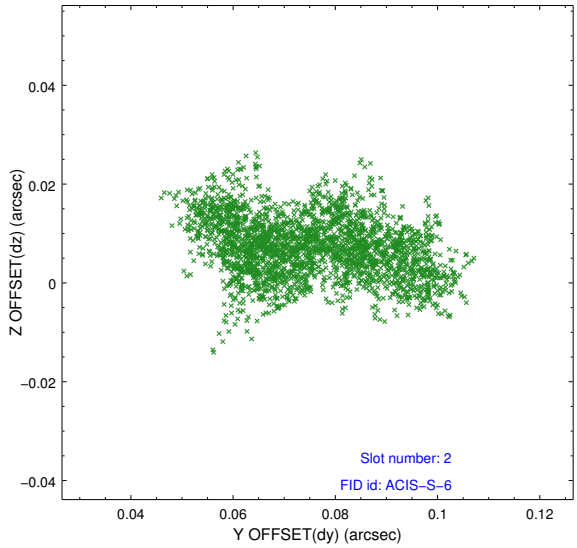
2.5.2 Slot 1

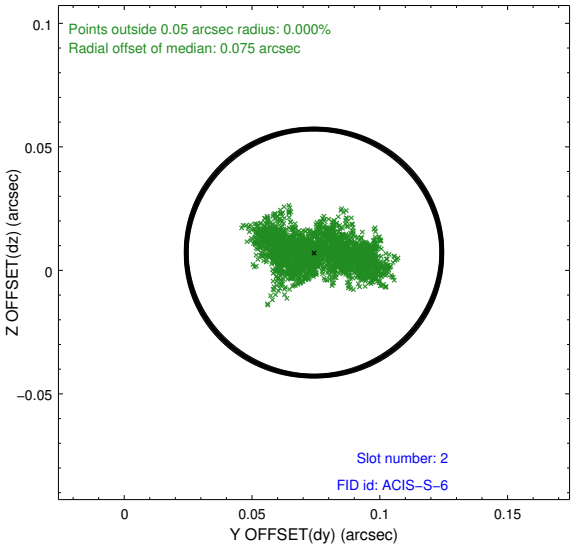

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5

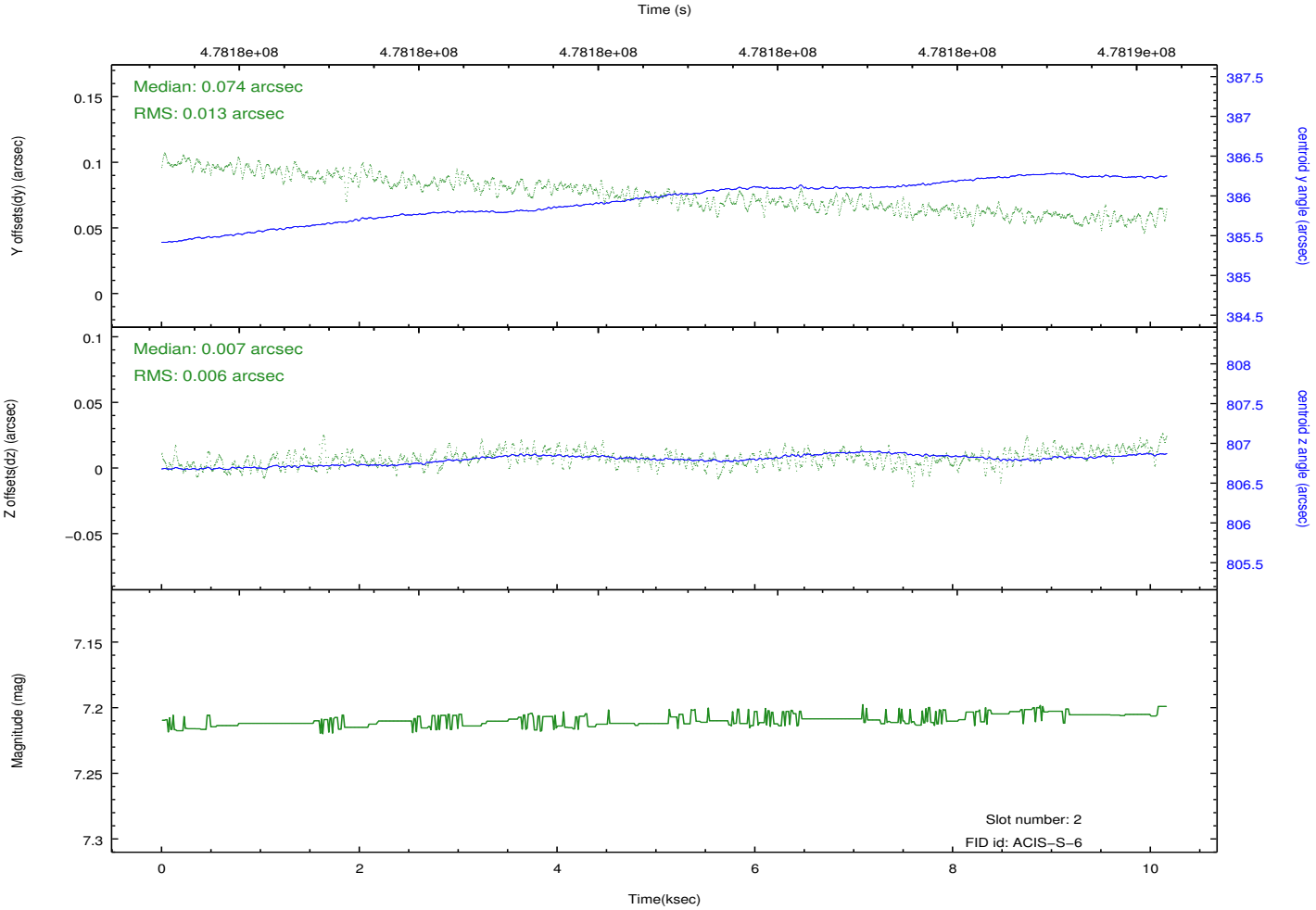

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.221 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5


Time (s)
Median: −0.210 arcsec
RMS: 0.014 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.069 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−S−5
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.075 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Time (s)
Median: 0.074 arcsec
RMS: 0.013 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.007 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS−S−6
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.074261382043

A.2 Comments

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.