V&V Reference Report
L2 ASCDS Version : 10.6

Observation 19032 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Oct 1 2017

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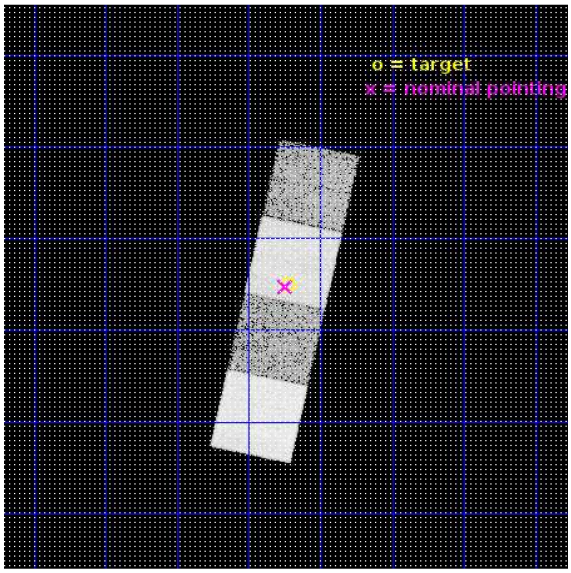
1 Front

seq_num	502682	Sequence number
obs_id	19032	Observation id
title	Chandra Observations of Extreme Mass Loss from the Progenitors of Luminous Type IIn SNe	Proposal title
observer	Maria Drout	Principal investigator
object	PS13byi	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	333.180833	Observer's specified target RA [deg]
dec_targ	-0.085417	Observer's specified target Dec [deg]
ra_nom	333.18599804343	Nominal RA [deg]
dec_nom	-0.088388444419952	Nominal Dec [deg]
roll_nom	282.15667102867	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15062.196953535	Sum of GTIs [s]
livetime	14865.398261709	Livetime [s]
ontime5	15062.155913591	Sum of GTIs [s]
ontime6	15062.114873528	Sum of GTIs [s]
ontime7	15062.196953535	Sum of GTIs [s]
ontime8	15058.932743311	Sum of GTIs [s]
l2events	144061	Number of level 2 events

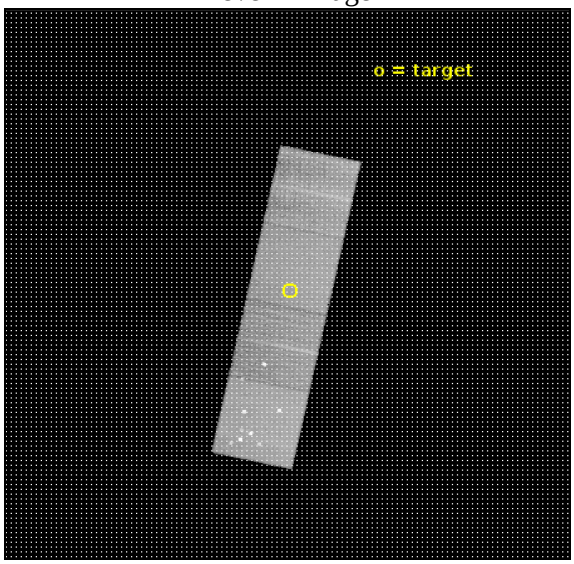


2 OBI

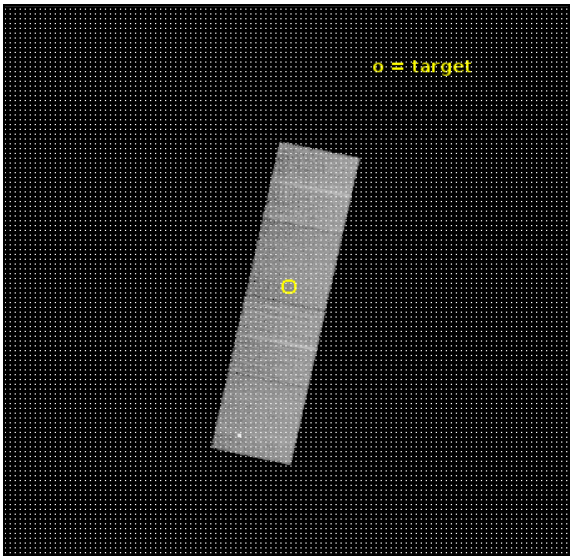
2.1 OBI

2.1.1 Images

Level 1 Image

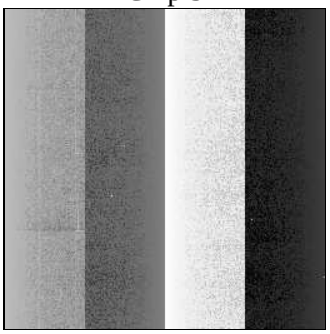


Level 1 Bad Events

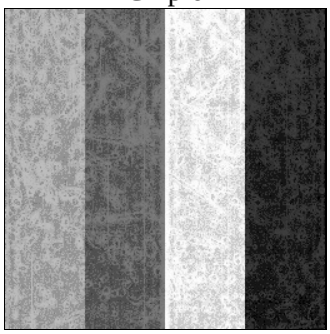


2.1.2 Bias

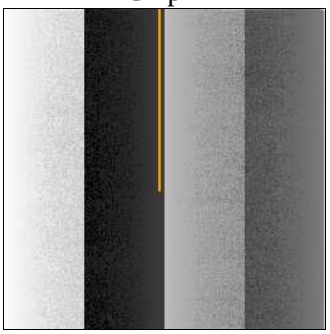
Chip 5



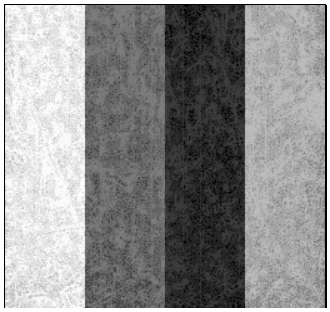
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	10.6	Processing system revision
caldbver	4.7.6	
date	2017-10-01T03:41:04	Date and time of file creation
revision	1	Processing version of data

sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ontime	15062.196953535	Sum of GTIs [s]
ontime5	15062.155913591	Sum of GTIs [s]
ontime6	15062.114873528	Sum of GTIs [s]
ontime7	15062.196953535	Sum of GTIs [s]
ontime8	15058.932743311	Sum of GTIs [s]
l1events	529083	Number of level 1 events

2.1.4 Events

	ccd 5	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	177433	99978	126858	124814
rejected events	84313	84248	72519	92199
rejected %	47%	84%	57%	73%

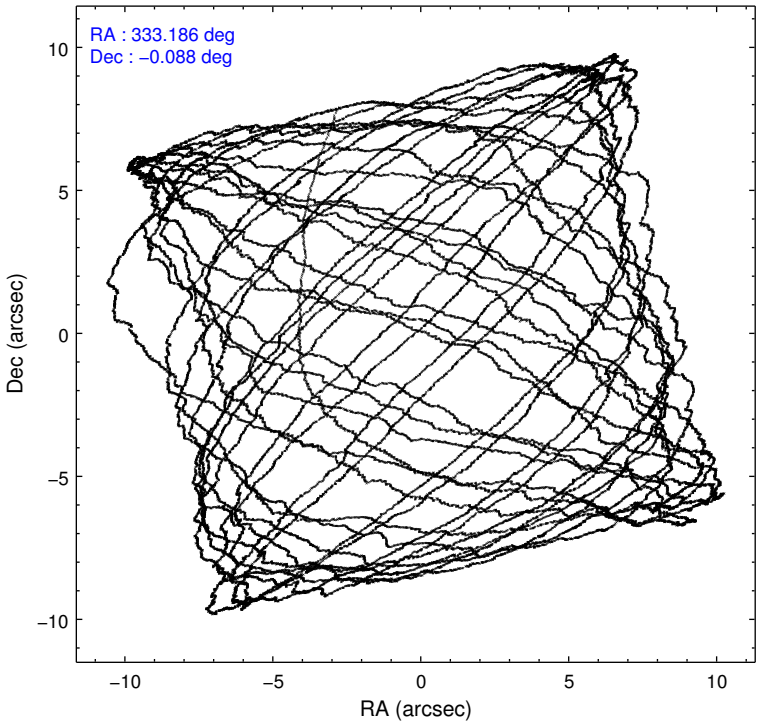
	ccd 5	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	19985	8284	4526	8822
	11%	8%	3%	7%
grade 1 events	386	91	175	75
	0%	0%	0%	0%
grade 2 events	26544	2650	11493	8030
	14%	2%	9%	6%
grade 3 events	2878	1093	4304	3324
	1%	1%	3%	2%
grade 4 events	2424	1061	4217	3229
	1%	1%	3%	2%
grade 5 events	10659	4755	12516	6984
	6%	4%	9%	5%
grade 6 events	41332	2646	29824	9251
	23%	2%	23%	7%
grade 7 events	73225	79398	59803	85099
	41%	79%	47%	68%

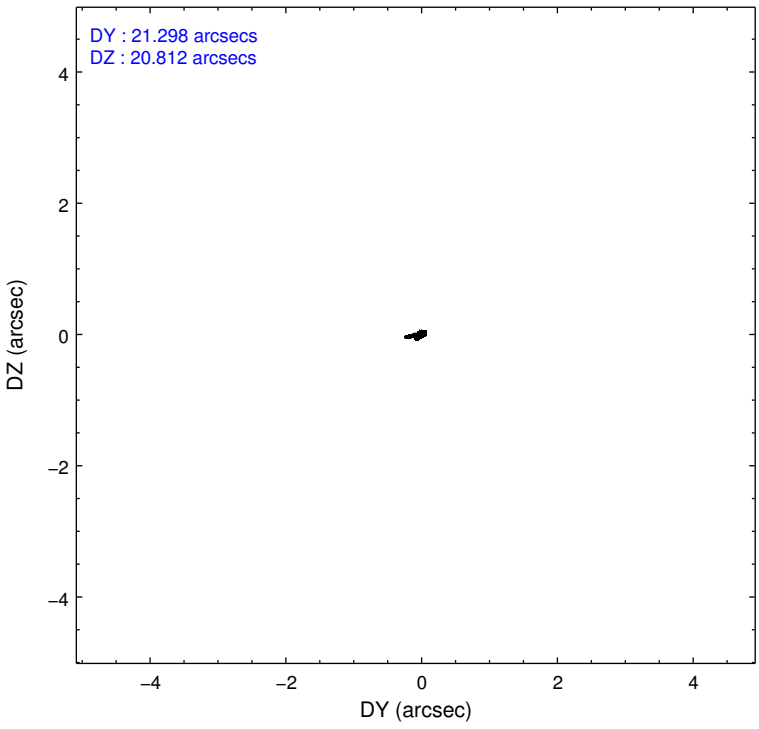
2.2 Compared Parameters

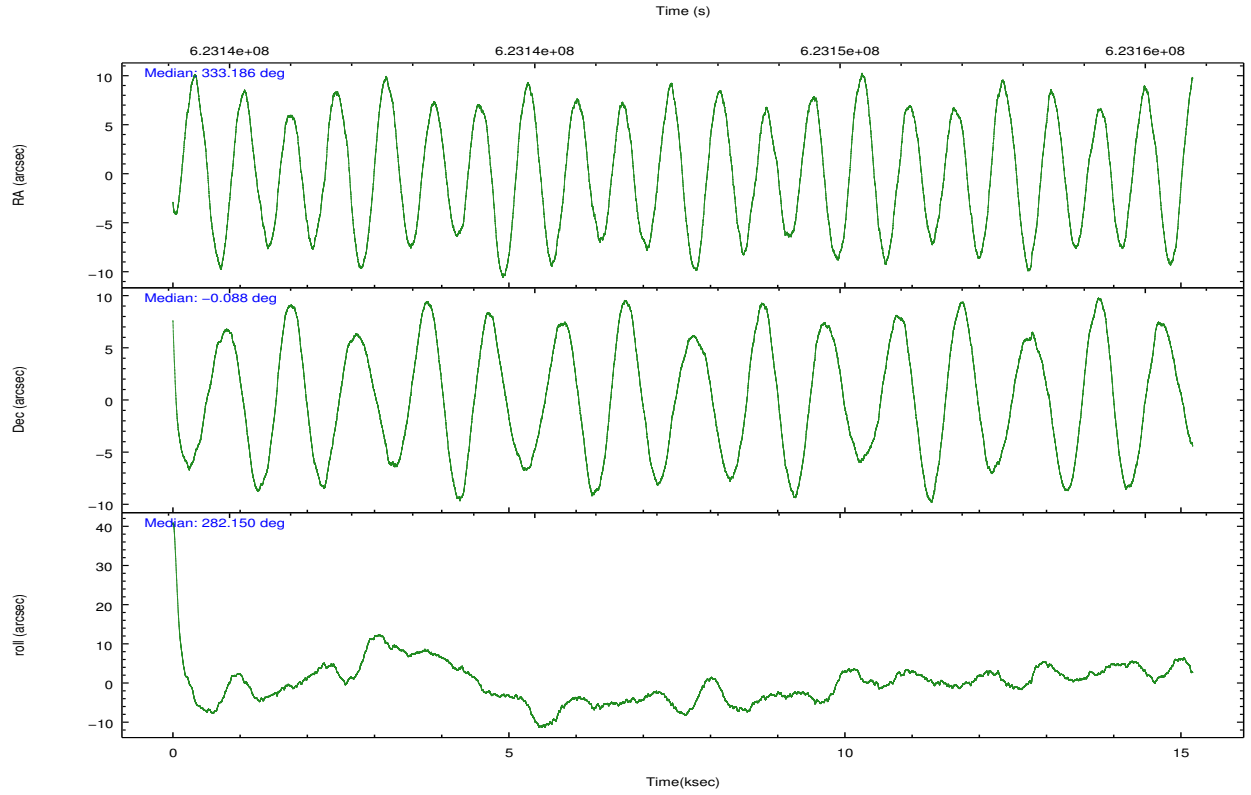
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5678	ACIS-5678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	333.167290	333.1859980434293
[deg] Pointing Dec	-0.068286	-0.0883884444199515
[deg] Pointing Roll	281.999983	282.1566710286667
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	623140030.184000	623138707.20689
Observation start date	2017-09-30T06:26:01	2017-09-30T06:05:07
[s] Observation end time (MET)	623155030.184000	623155729.38289
Observation end date	2017-09-30T10:36:01	2017-09-30T10:48:49
Read mode	TIMED	TIMED

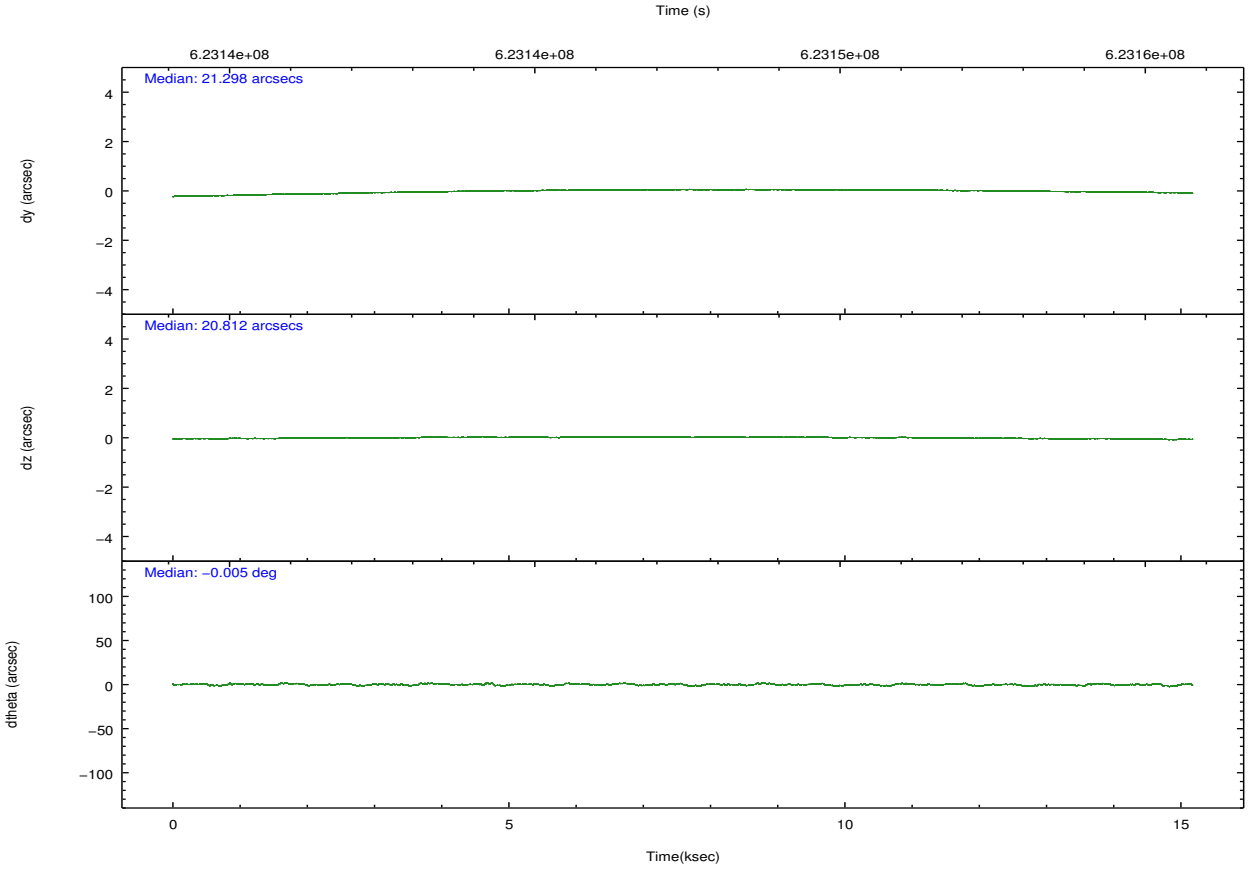
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	O1	N
CCD S0 on	N	N
CCD S1 on	Y	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	N	N
Number of optional ACIS chips dropped	1	1
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 : 333.186 deg
Dec : −0.088 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 21.298 arcsecs
DZ : 20.812 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
6.2314e+08
6.2314e+08
6.2315e+08
6.2316e+08
Median: 333.186 deg
RA (arcsec)
Median: −0.088 deg
Dec (arcsec)
Median: 282.150 deg
roll (arcsec)
Time(ksec)

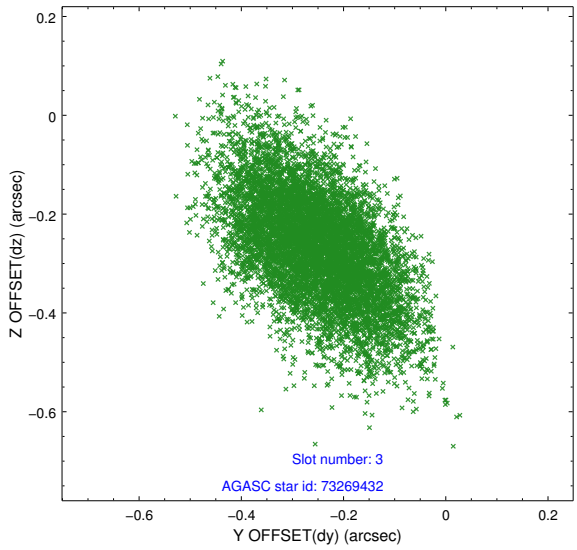

Time (s)
6.2314e+08
6.2314e+08
6.2315e+08
6.2316e+08
Median: 21.298 arcsecs
dy (arcsec)
Median: 20.812 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

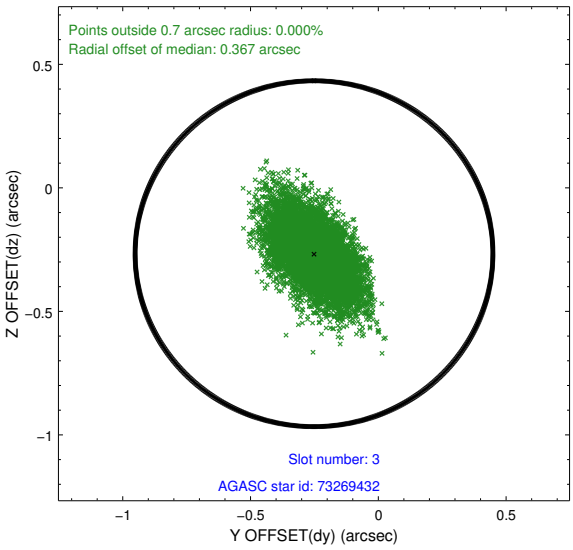
Slot Statistics

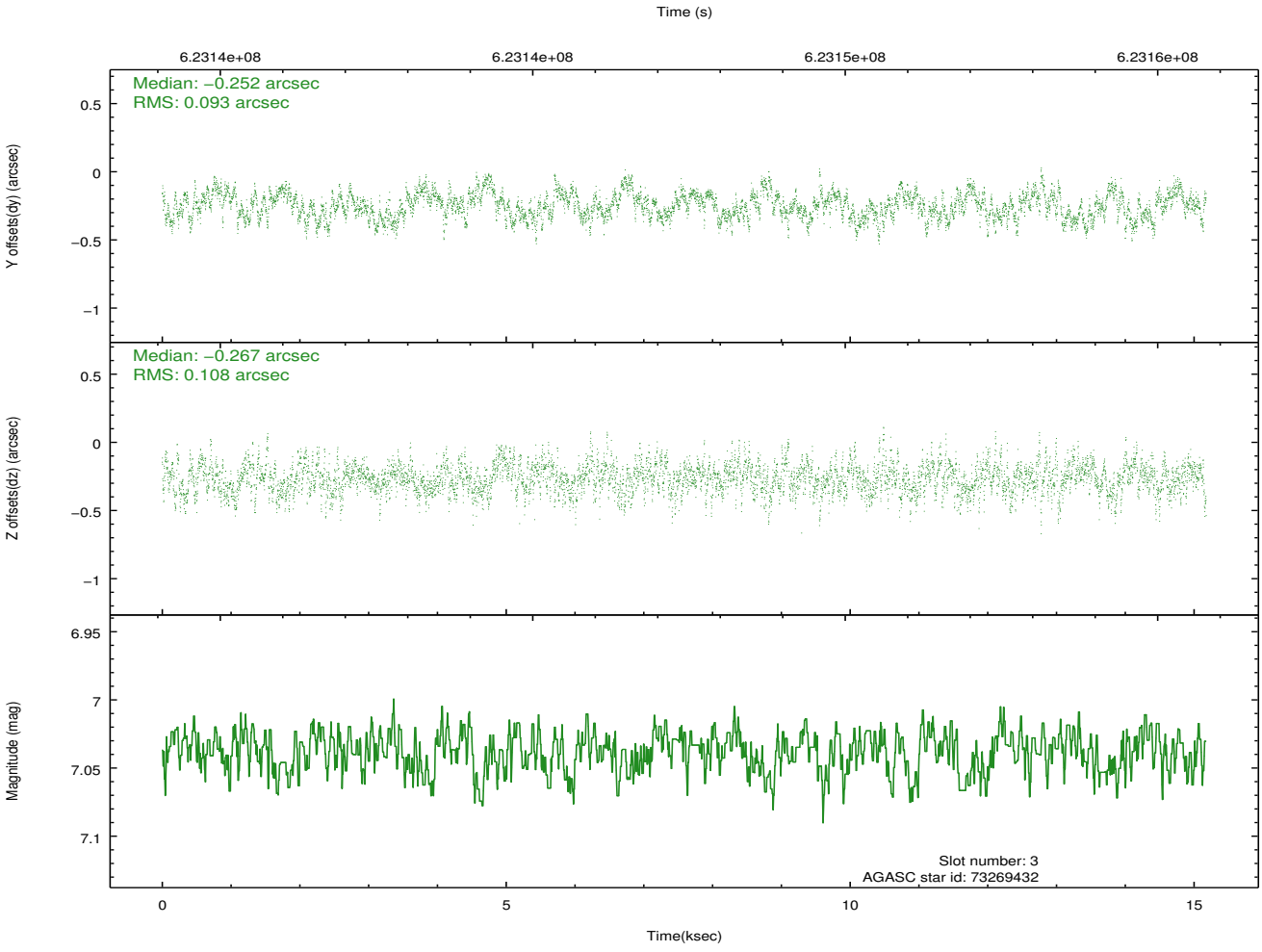
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.06	3702	-0.244	-0.120	0.010	0.017	0.000000	0.000000	-774.62	-1742.43
1	FID		ACIS-S-4	7.18	3701	0.513	0.150	0.008	0.015	0.000000	0.000000	2139.23	166.08
2	FID		ACIS-S-5	7.17	3702	-0.301	-0.020	0.010	0.017	0.000000	0.000000	-1827.18	159.83
3	GUIDE	used	73269432	7.04	7404	-0.252	-0.267	0.148	0.254	333.592004	0.048891	-94.61	1583.17
4	GUIDE	used	73270200	7.18	7403	-0.161	-0.069	0.122	0.208	333.334593	0.242320	-968.39	822.48
5	GUIDE	used	73271976	9.19	7401	0.311	0.402	0.165	0.289	332.814040	0.450746	-2091.46	-855.08
6	GUIDE	used	684853288	8.64	7400	0.080	0.016	0.136	0.241	332.966406	-0.362664	886.98	-927.79
7	GUIDE	used	684854312	8.77	7401	0.017	-0.080	0.159	0.271	332.971303	-0.720822	2152.11	-1177.53

2.4 Star Slots

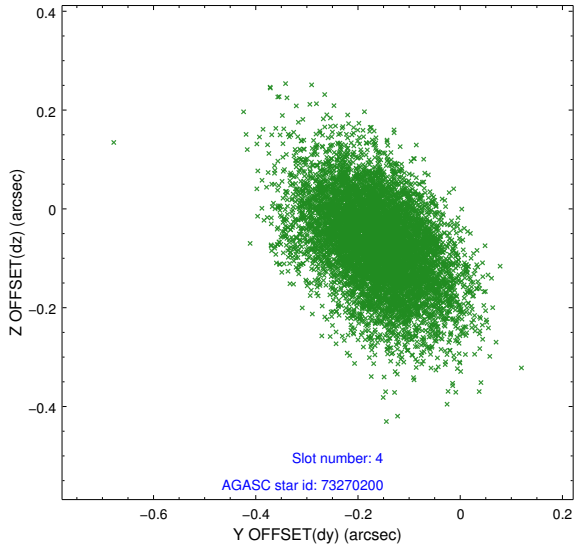
2.4.1 Slot 3

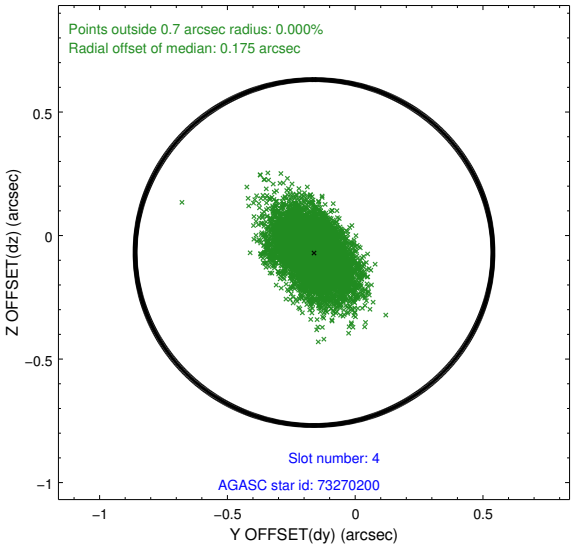


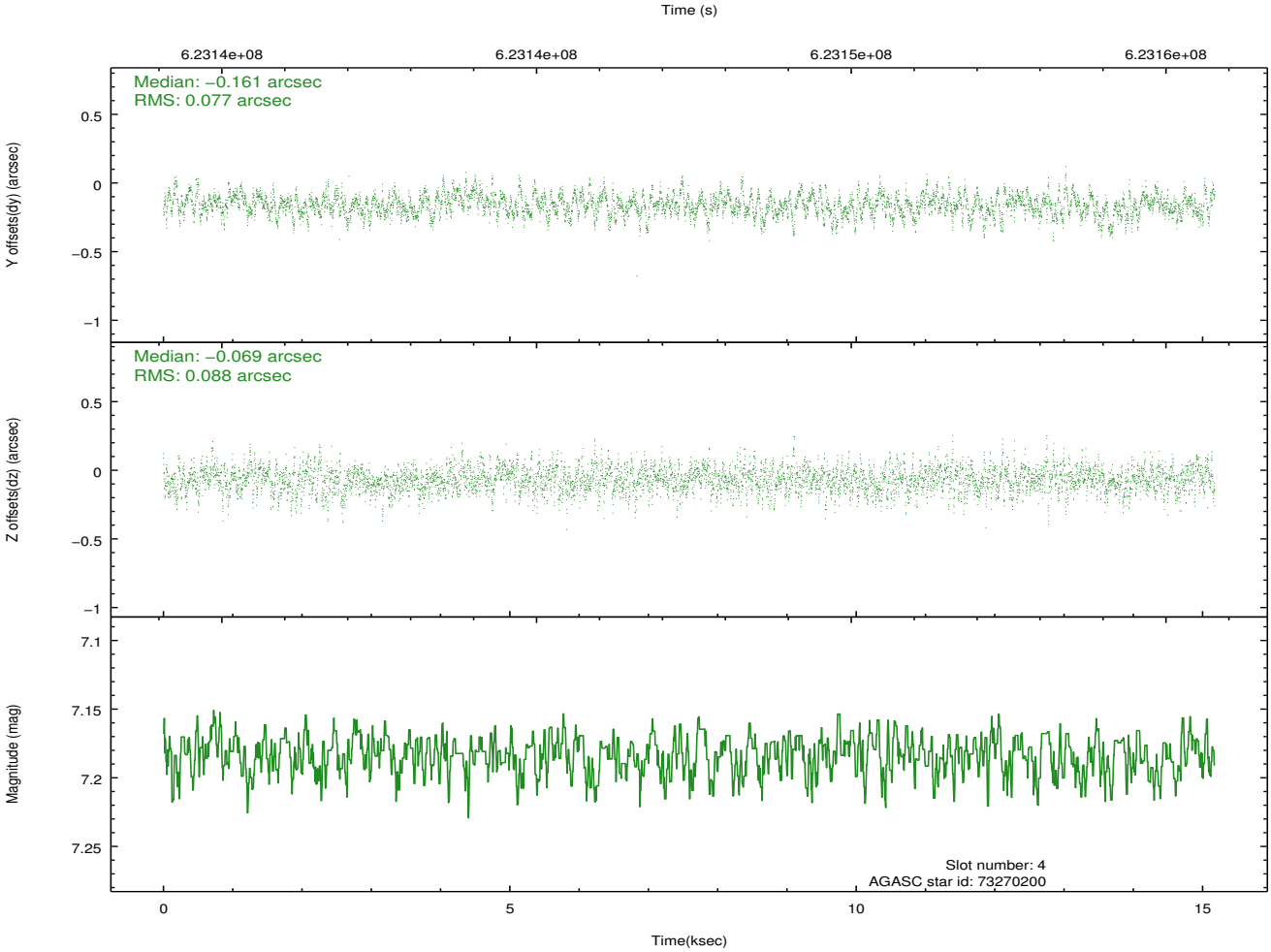




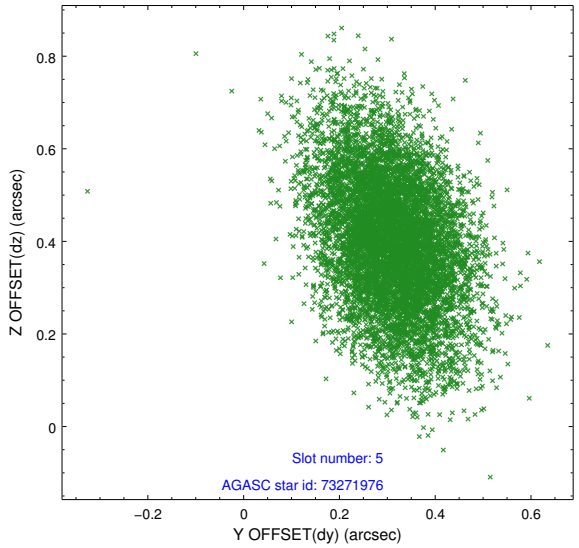
2.4.2 Slot 4

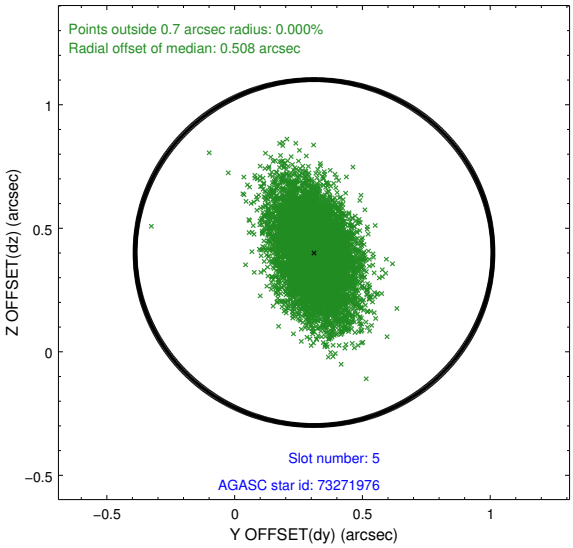

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 73270200

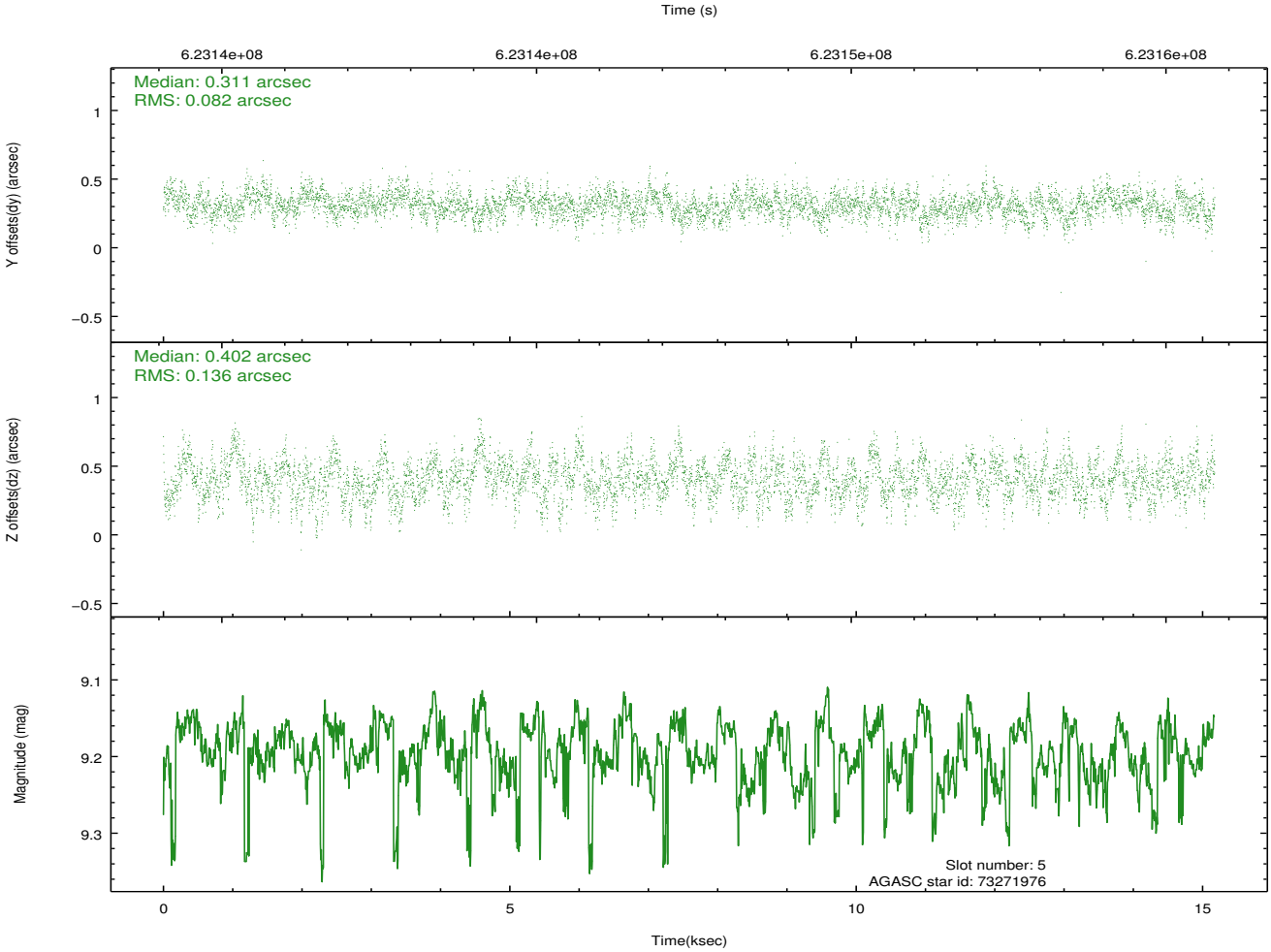

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.175 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 73270200


Time (s)
Median: −0.161 arcsec
RMS: 0.077 arcsec
Y offsets(dy) (arcsec)
Median: −0.069 arcsec
RMS: 0.088 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 73270200
Time(ksec)

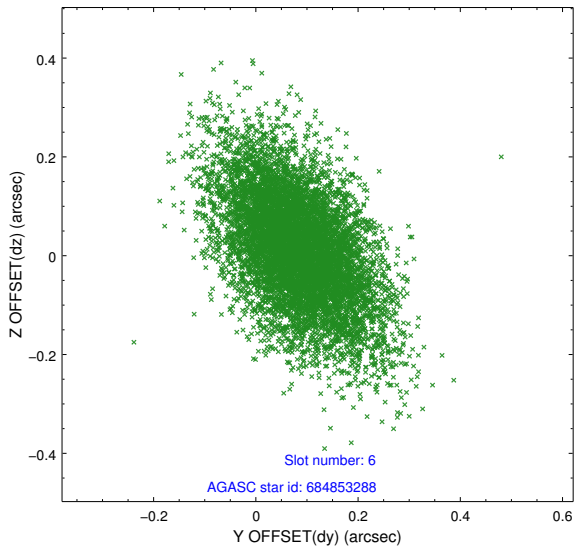
2.4.3 Slot 5

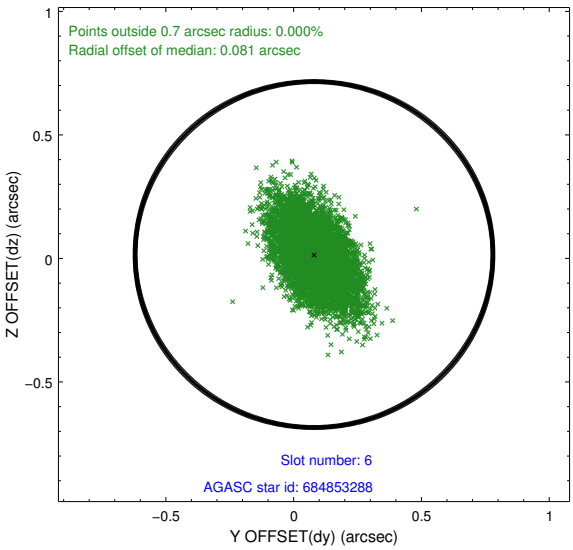

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 73271976

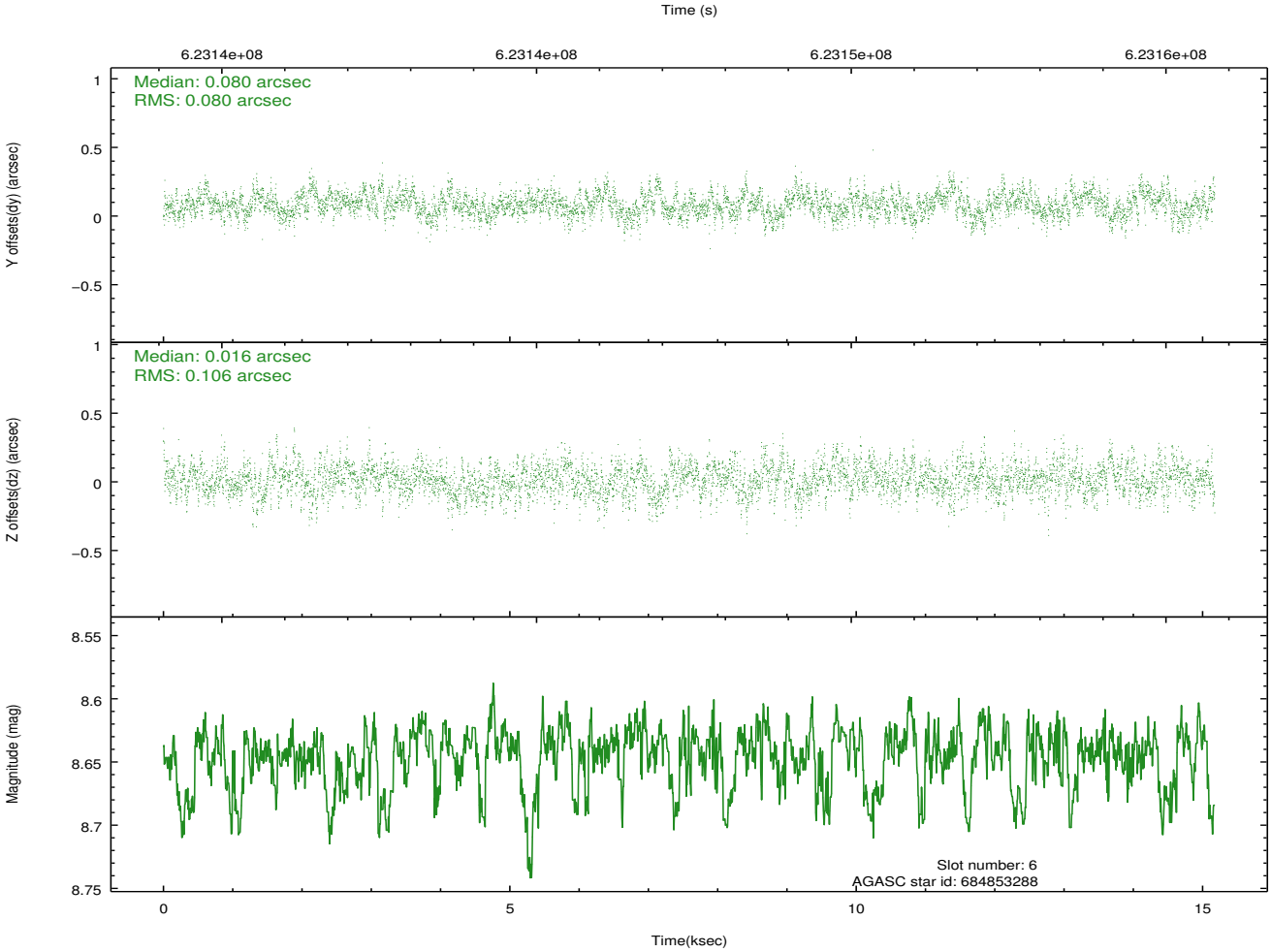

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.508 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 73271976


Time (s)
Median: 0.311 arcsec
RMS: 0.082 arcsec
Y offsets(dy) (arcsec)
Median: 0.402 arcsec
RMS: 0.136 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 73271976
Time(ksec)

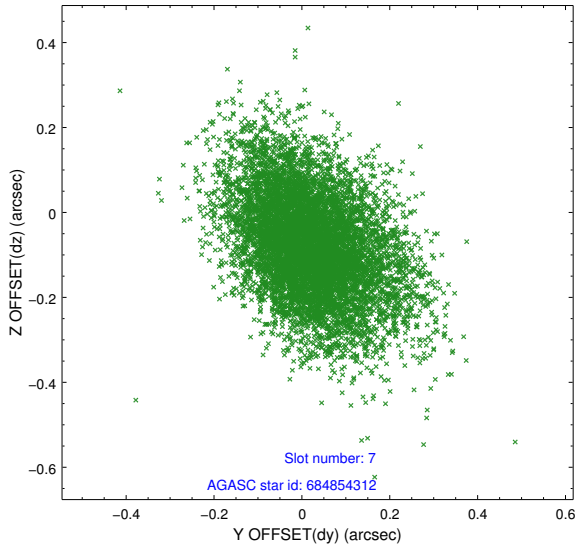
2.4.4 Slot 6

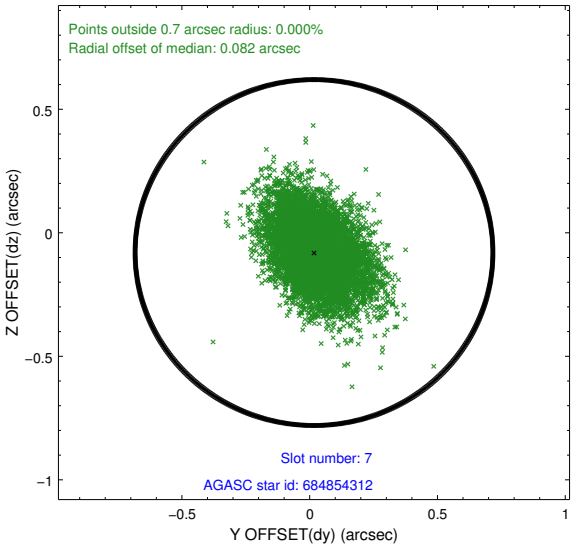

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 684853288

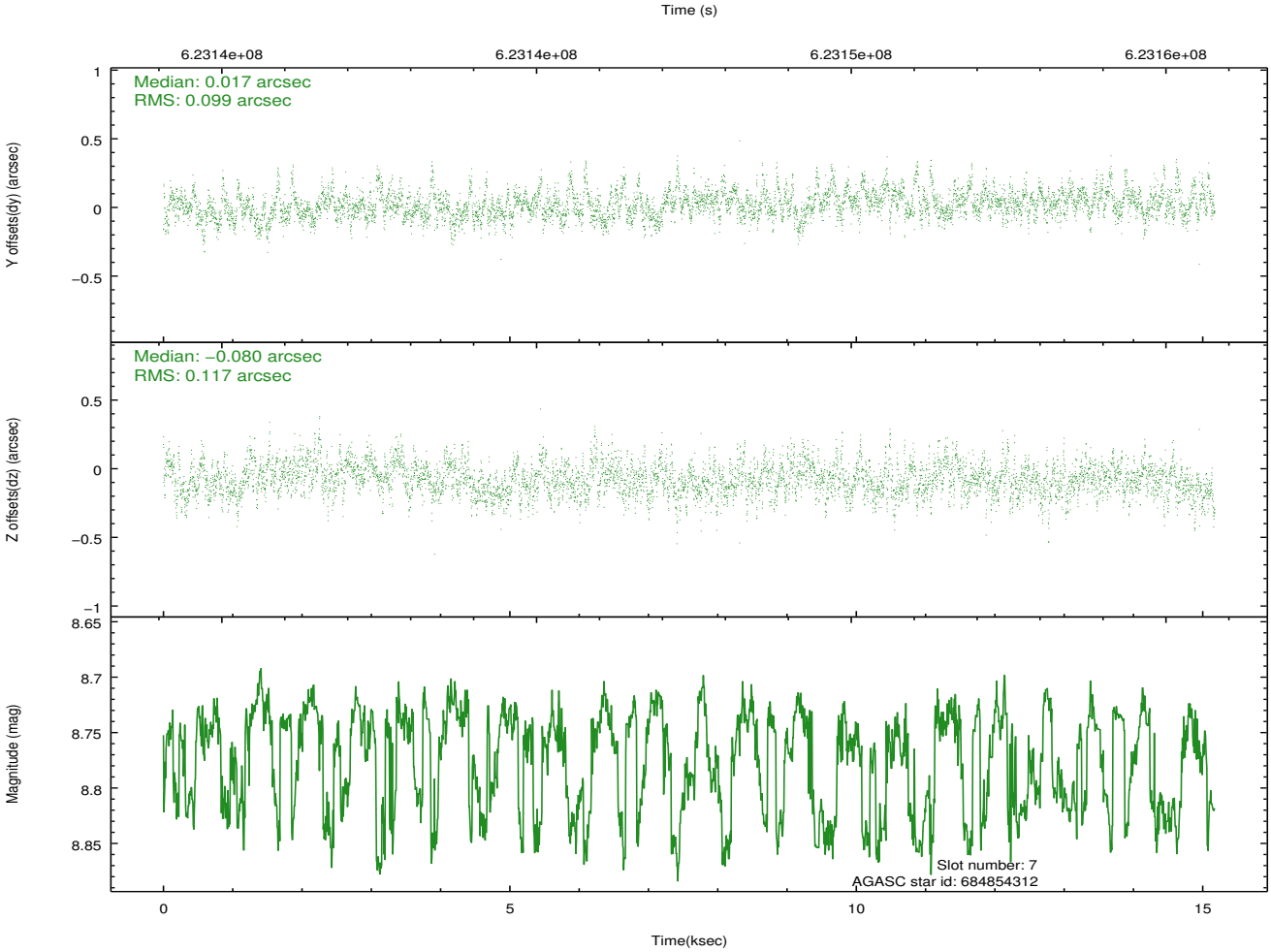

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.081 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 684853288


Time (s)
6.2314e+08
6.2314e+08
6.2315e+08
6.2316e+08
Median: 0.080 arcsec
RMS: 0.080 arcsec
Y offsets(dy) (arcsec)
Median: 0.016 arcsec
RMS: 0.106 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 684853288
Time(ksec)

2.4.5 Slot 7

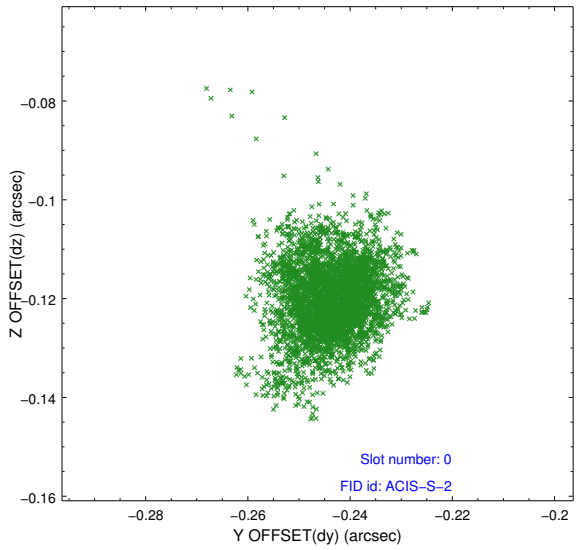

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 684854312

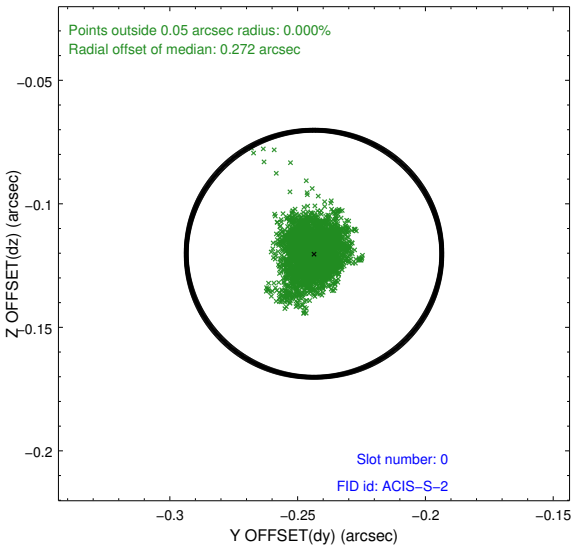

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.082 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 684854312

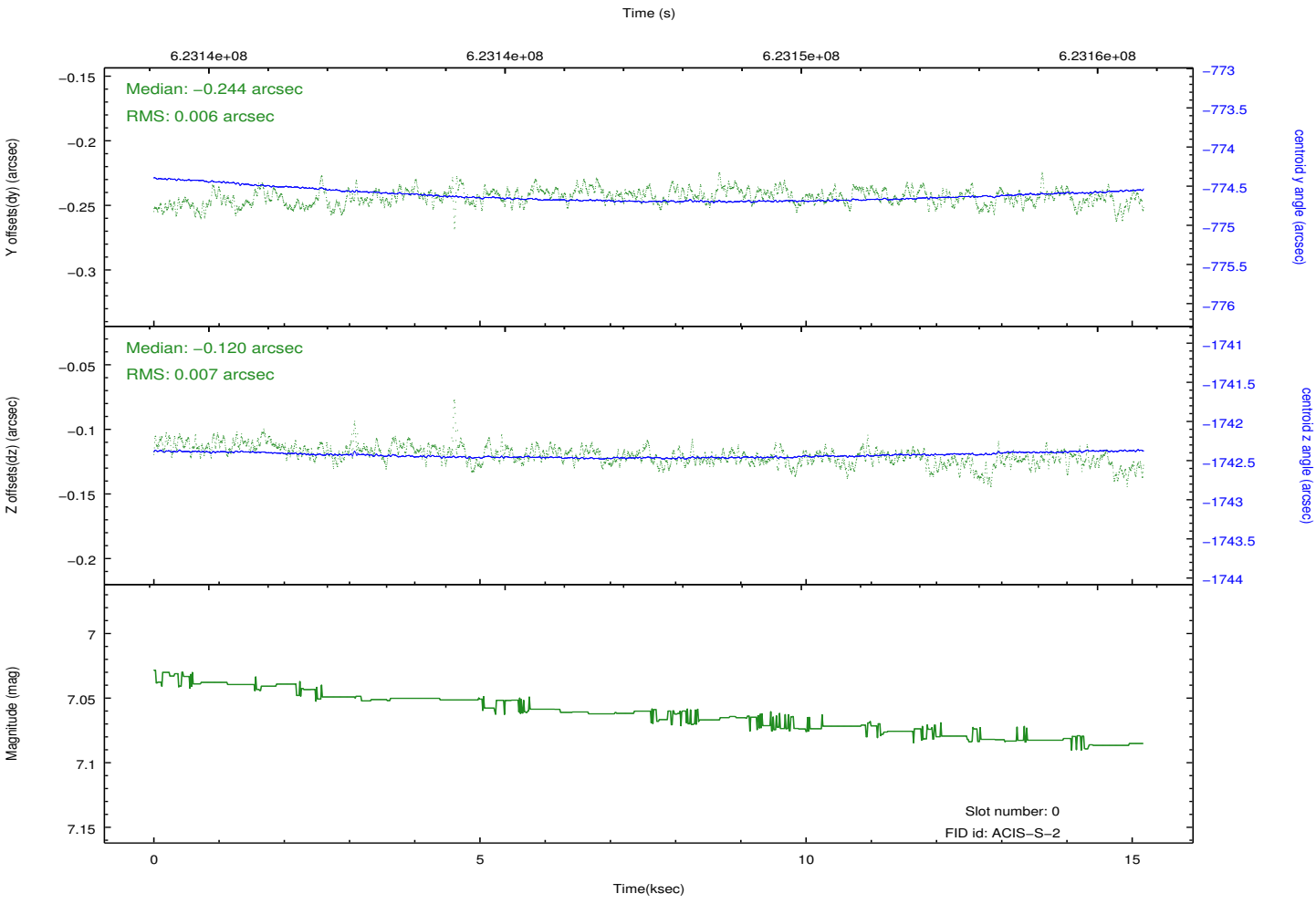

Time (s)
Median: 0.017 arcsec
RMS: 0.099 arcsec
Y offsets(dy) (arcsec)
Median: −0.080 arcsec
RMS: 0.117 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 684854312
Time(ksec)

2.5 FID Slots

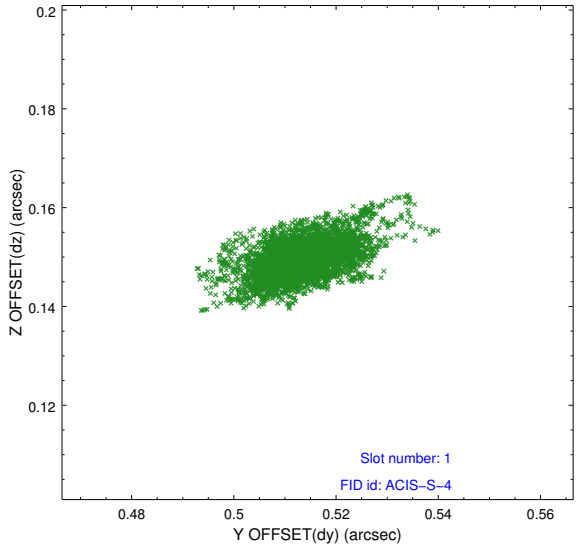
2.5.1 Slot 0

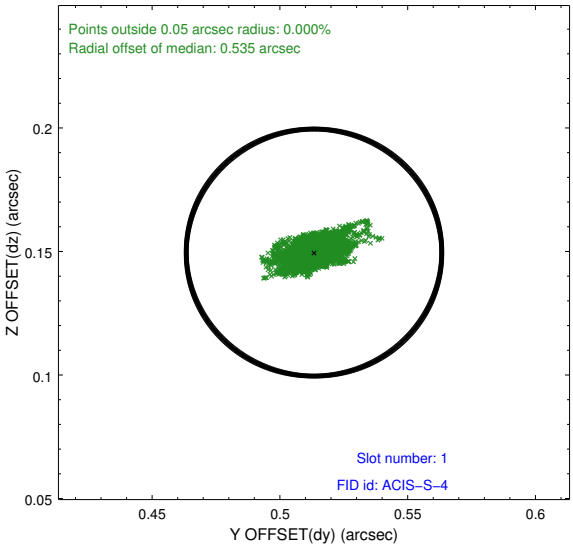


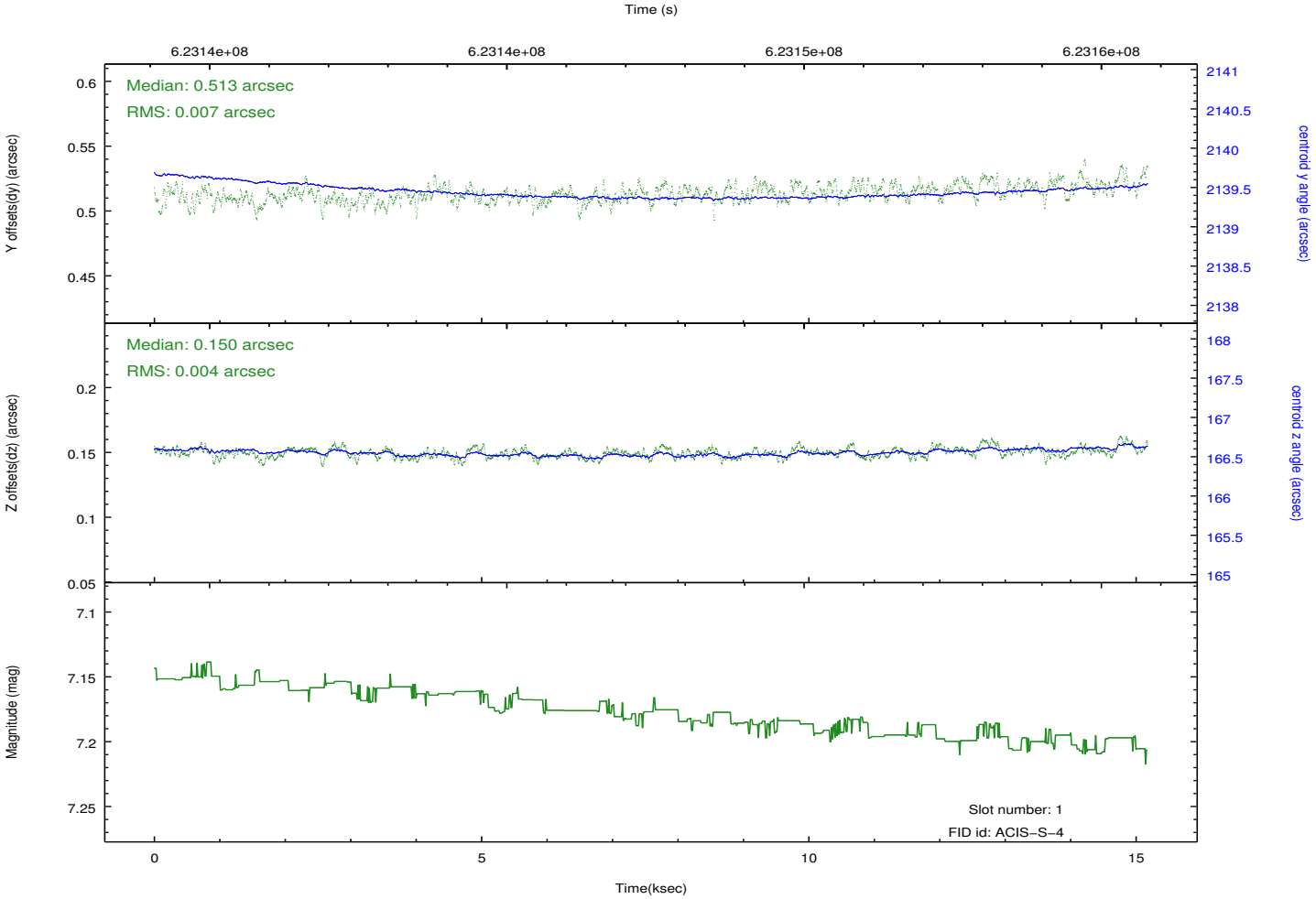




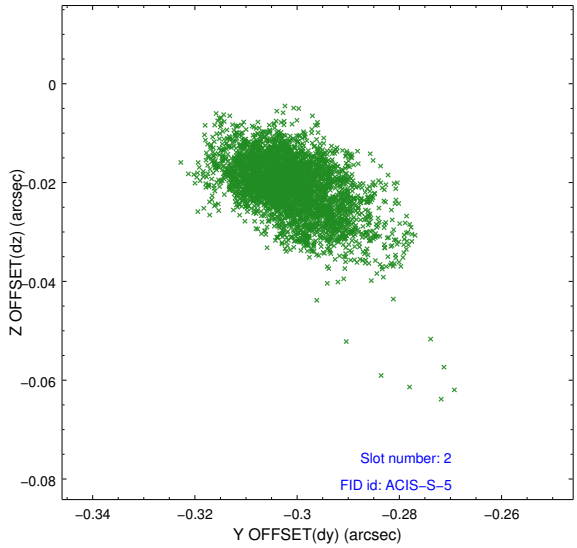
2.5.2 Slot 1

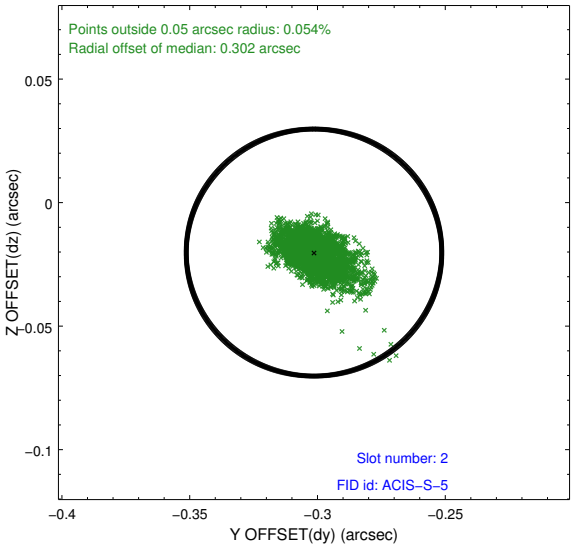

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4

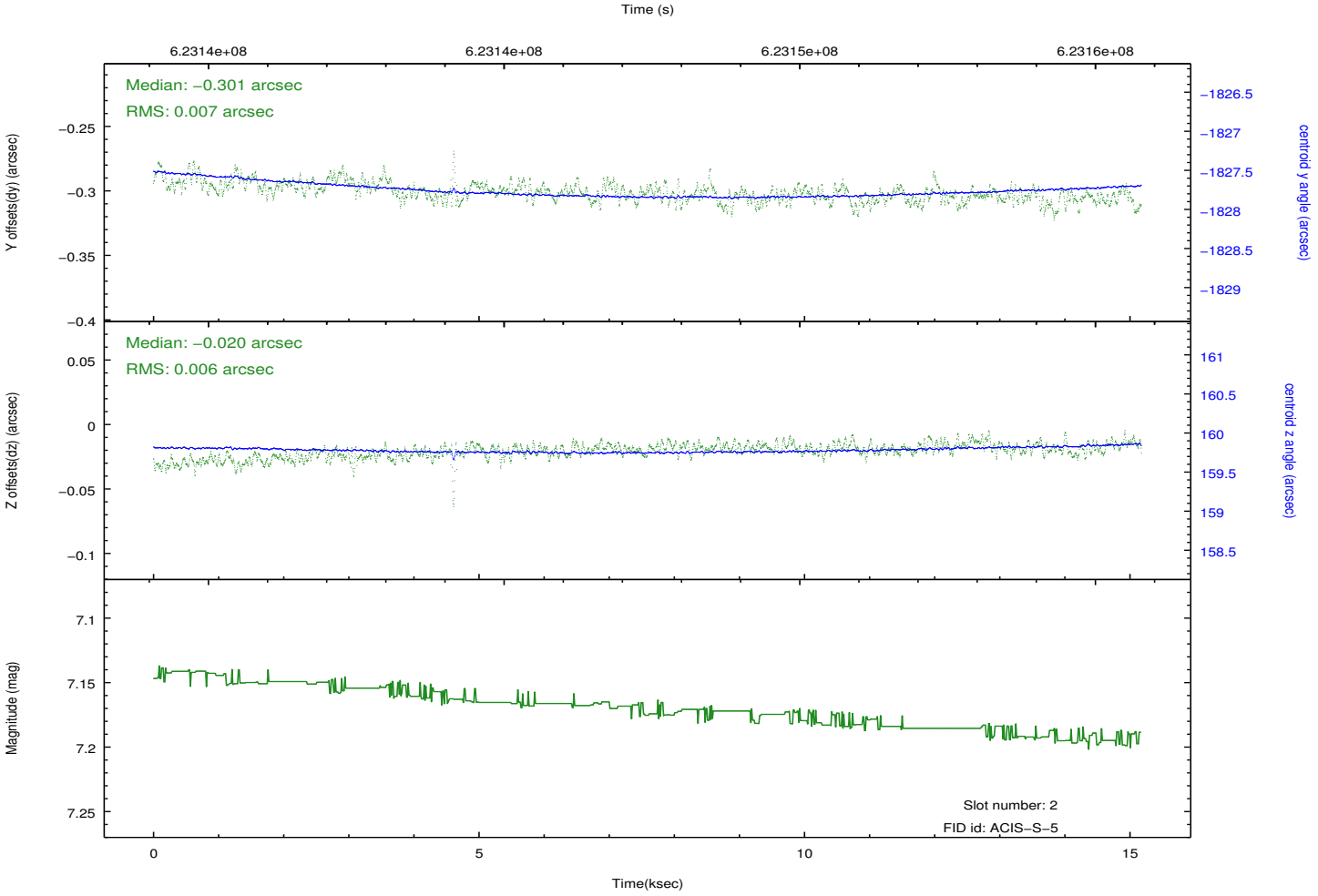

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.535 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−4


Time (s)
Median: 0.513 arcsec
RMS: 0.007 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.150 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−S−4
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−5


Points outside 0.05 arcsec radius: 0.054%
Radial offset of median: 0.302 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−5


Time (s)
Median: −0.301 arcsec
RMS: 0.007 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.020 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS−S−5
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.10.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.062196953535

A.2 Comments