

V&V Summary Report

L2 ASCDS Version : 10.9.2

Observation 20162 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Oct 25 2020

See [axaff20162N002_VV001_vvref2.pdf](#) for the full report

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	22.617600174069

Comments

The ACA has the capability to devote one or more of the eight image slots to "monitor" particular sky locations. This allows simultaneous optical photometry of one or more targets in the ACA field of view. These optical sources can be slightly fainter than the ACA guide star limit of $m_{ACA} = 10.2$ mag. The bright-end limit for monitor star photometry is $m_{ACA}=6.2$ mag. However, since there are a fixed number of image slots, devoting a slot to photometry instead of tracking a guide star results in a degradation of the image reconstruction and celestial location accuracy (Section 5.4). Using one monitor slot represents a 15 - 25% increase in the aspect image reconstruction RMS diameter, depending on the particular guide star configuration. Two monitor slots would increase the diameter by about 50 - 60%, but this configuration is not operationally allowed under normal circumstances. The photometric accuracy which can be achieved depends primarily on the star magnitude, integration time, CCD dark current, CCD read noise, sky background, and the CCD dark current uncertainty.

seq_num	201179	Sequence number
obs_id	20162	Observation id
title	Beyond Proxima b: Characterizing the X-ray Environments of the Next Three Nearest Potentially Habitable Exoplanets	Proposal title
observer	Edward Guinan	Principal investigator
object	Kapteyn's Star	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	77.966363	Observer's specified target RA [deg]
dec_targ	-45.047864	Observer's specified target Dec [deg]
ra_nom	77.964974930469	Nominal RA [deg]
dec_nom	-45.046667617814	Nominal Dec [deg]
roll_nom	245.15071813237	Nominal Roll [deg]
revision	2	Processing version of data
ontime	22617.600174069	Sum of GTIs [s]
livetime	22322.08457696	Livetime [s]
ontime5	22617.600174069	Sum of GTIs [s]
ontime6	22617.600174069	Sum of GTIs [s]
ontime7	22617.600174069	Sum of GTIs [s]
ontime8	22617.600174069	Sum of GTIs [s]
l2events	249905	Number of level 2 events

