

V&V Summary Report

L2 ASCDS Version : 10.9.1

Observation 5417 - L2 Version 4
Chandra X-Ray Center

L2 Processing Date : Oct 5 2020

See axaff05417N004_VV001_vvref2.pdf for the full report

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|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2020.10.06 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 15.227 |

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.

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|-----------|---|---|
| seq_num | 200350 | Sequence number |
| obs_id | 5417 | Observation id |
| title | Untangling the Accretion Spots on Classical T Tauri Stars | Proposal |
| observer | Dr. Andisheh Mahdavi | Principal investigator |
| object | GK Tau | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 68.39375 | Observer's specified target RA [deg] |
| dec_targ | 24.3525 | Observer's specified target Dec [deg] |
| ra_nom | 68.38950930717 | Nominal RA [deg] |
| dec_nom | 24.344397893281 | Nominal Dec [deg] |
| roll_nom | 275.55056945423 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 15227.0 | Sum of GTIs [s] |
| liveltime | 14071.972497412 | Livetime [s] |
| ontime5 | 15227.0 | Sum of GTIs [s] |
| ontime7 | 15227.0 | Sum of GTIs [s] |
| l2events | 19464 | Number of level 2 events |

