## V&V Summary Report L2 ASCDS Version: 10.7.1

Observation 20916 - L2 Version 2 Chandra X-Ray Center

L2 Processing Date: Apr 13 2019

See axaff20916N002\_VV001\_vvref2.pdf for the full report

| V&V Scientist              | Beth Sundheim |
|----------------------------|---------------|
| V&V Date (YYYY-MM-DD)      | 2019.04.15    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 40.0549774369 |

## Comments

A spatial region of the original bias map for CCD = 2 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $^{\sim}20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 2 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (238.72663,66.42932), (238.71848,66.42642), (238.82360,66.37883), (238.82837,66.38325).

| seq_num  | 801762  | Sequence number                          |
|----------|---|--|
| obs_id   | 20916   | Observation id                           |
| title    | Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146 | Proposal title                           |
| observer | Helen Russell   | Principal investigator                   |
| object   | Abell 2146  | Source name                              |
| dtycycle | 0   | <b>&amp;</b> #160                        |
| cycle    | P   | events from which exps? Prim/Second/Both |
| ra_targ  | 239.06125   | Observer's specified target RA [deg]     |
| dec_targ | 66.346917   | Observer's specified target Dec [deg]    |
| ra_nom   | 239.02893827418   | Nominal RA [deg]                         |
| dec_nom  | 66.405965053783   | Nominal Dec [deg]                        |
| roll_nom | 131.2382867566  | Nominal Roll [deg]                       |
| revision | 2   | Processing version of data               |
| ontime   | 40054.9774369   | Sum of GTIs [s]                          |
| livetime | 39531.629668642   | Livetime [s]                             |
| ontime0  | 40061.259337902   | Sum of GTIs [s]                          |
| ontime1  | 40064.400308251   | Sum of GTIs [s]                          |
| ontime2  | 40064.400308251   | Sum of GTIs [s]                          |
| ontime3  | 40054.9774369   | Sum of GTIs [s]                          |
| ontime6  | 40064.400308251   | Sum of GTIs [s]                          |
| 12events | 166353  | Number of level 2 events                 |

