



Caveats about ACIS Pipeline–Processed Mask Files

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This document describes potential problems or concerns about ACIS mask files processed using the standard pipeline.

CHIPY

1. For continuous–clocking mode mask files produced with a software version lower than DS 7.3.0 (before about June 24, 2004), only the bottom half of a CCD (i.e. $1 \leq \text{CHIPY} \leq 512$) is identified as active in the observation–specific mask file. As a result, the tools mkarf, mkgarf, mkinstmap and mkwarf assume the top half of the CCD is inactive if the mask file is used as input to the tool. Sources (or grating arms) on the top half of the CCD have an ARF of zero. Instrument maps are also zero for the top half of the CCD.

To check if your CC–mode ACIS mask has only half the array:

```
unix% dmlist acis_msk1.fits"[cols chip]" data
-----
Data for Table Block MASK4
-----
ROW      CHIP(CHIPX,CHIPY)[2]
-----
1          [(1,1) (1024,512)]
```

This indicates that the valid range of CHIPY is 1–512, which is wrong for an observation that did not use a subarray or window. The valid range is typically 2–1023.

To avoid this problem,

1. exclude the observation–specific mask file when using the tools mkarf, mkgarf, mkinstmap and mkwarf.
2. manually change the CHIPY range in the mask file from (1,512) to (2,1023).
3. request a new mask file for your observation. This is only necessary if a subarray or windows were used.

Continuous–clocking mode mask files produced on and after June 24, 2004 (i.e. with version 7.3.0 or greater of the processing code) and timed–exposure mode mask files do not suffer from this problem.

ACIS caveats – CIAO 3.4

Correct versions of the older continuous–clocking mode mask files will be created when those observations are reprocessed. Please contact [the HelpDesk](#) for more information or assistance.

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URL:
http://cxc.harvard.edu/ciao3.4/caveats/acis_mask.html
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