



CIAO 1.1.1 Release Notes

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1. *Introduction*

A well-configured CXCDS environment should be all that is required to use the analysis applications. Please check the notes from previous releases for information on features not explicitly covered below.

Supported Platforms:

Solaris 2.6, 7

Redhat 5.2, 6.0

2. *CIAO 1.1.1 tool list*

The following is a list of software tools with bugfixes included in CIAO1.1.1:

Detect	celldetect
TCD	csmooth
Response	mkexpmap mkgarf asp_apply_sim asp_calc_offsets

3. *Tools with modified Parameter files*

The following tools have had their parameter files modified in CIAO1.1.1. This means that when using CIAO1.1.1 the parameter files a user may have around from CIAO1.1 must be deleted in order for the new version to be accessed by the software.

- ◆ celldetect – Changed default of EEfrac in the parameter file from 0.8 to 0.9

4. *Tool/Application Notes*

Bugfixes to Existing Tools:

- 1) asp_apply_sim - Fix bug in ROLL_OFFSET (sign error)

For small roll offsets this error was minor problem; however, observations with a large roll offset would suffer more. This was particularly an issue for

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observations broken into multiple observation intervals where the roll angle between the multiple parts was considerably different and the roll_offset of the subsequent observation intervals were registered back to the first observation interval.

- 2) csmooth - Fixes bug with user supplied scale map. Current work around to use "sliding" convolution is no longer needed.

User's can now use a scale map from a previous run of csmooth to smooth another image -- for example to smooth multiple energy band images all at the same scale (say from the broad-band image).

- 3) celldetect

- Fixes minor header problems
- Fixes bug when aim-point is not in field
- Fixes bug when PSF size is not monotonically increasing.
- Changed default of EEfrac in the parameter file from 0.8 to 0.9
- Cleanup of error codes and messages a bit.

If celldetect was run on an image that did not include the aimpoint the detection would typically fail to find sources if the variable cell size option was enabled. This has been fixed.

For grating data where the size of the zeroth order does not monotonically increase with off-axis angle, celldetect would not correctly select the proper cell sizes. This has been fixed.

The calibration data (psfsize.fits) is from ground calibration data and seems to underestimate the PSF size. By setting the EEfraction to 0.9 this more accurately represent the 80% EEfrac. This is a stop-gap measure pending the availability of flight derived calibration data.

- 4) mkexpmap - Fixes sign problem in WCS

The sign error manifested itself only when viewed as an image in RA/Dec coordinates. In particular, RA was increasing in the wrong direction. The image was ok when viewed in tangent plane coordinates.

- 5) mkgarf - Fixes problem with zeros in data column

When used with the HRC-S, it produced a grating ARF with all zeros in the effective area column. Correct results were produced for ACIS.

- o New Tool added to CIAO

- 1) asp_calc_offsets - new tool added to CIAO release

This tool will enable the user to produce the appropriate exposure maps and arfs for a dithered MARX simulation. Moreover, it will enable the user to run tg_resolve_events and other grating processing tools on the MARX simulated events.

5. *Known Bugs/Know Limitations*

See: <http://asc.harvard.edu/whatsnew.html>