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Last modified: 24 January 2007

CIAO 3.4.1 and 3.4.1.1 Release Notes

Return to: Version History

NEW (29 Jan 2007)
CIAO 3.4 for Mac OS X 10.4 on PowerPC has been patched to 3.4.1.
CIAO 3.4 for Mac OS X 10.4 on Intel has been patched to 3.4.1.1.

Solaris and Linux platforms are not affected by these patches.

CIAO 3.4 Release Notes

CIAO 3.4.1: Mac OS X 10.4 on PowerPC

- The CIAO 3.4.1 patch fixes problems running prism and filtwin under ***Mac OS X 10.4 on PowerPC.*** This patch has no effect when installed under Mac OS X 10.2 or 10.3 on PowerPC. The patch file upgrades CIAO 3.4 to CIAO 3.4.1.

Sherpa: using exposure maps when fitting image data

- The Sherpa `fexpmap2d` command does not work under Mac OS X 10.4 on PowerPC or Intel.

  To load an exposure map for use in image fitting, use the `gridmodel` model in its place:

```
gridmodel[thename](emap.fits,1)
source = <source expression> * thename
```

  This is equivalent to the `fexpmap2d` syntax:

```
source = <source expression>
fexpmap2d[thename](emap.fits,1)
instrument = thename
```

CIAO 3.4.1.1: Mac OS X 10.4 on Intel

- The CIAO 3.4.1.1 patch makes it possible to run all tools and UI (e.g. Sherpa and ChIPS) under ***Mac OS X 10.4 on Intel.*** Intel Mac users do not need to install the CIAO 3.4.1 patch; the CIAO 3.4.1.1 patch file is a direct upgrade to CIAO 3.4.

  The CIAO software for Intel runs under Apple's Rosetta software [http://www.apple.com/rosetta/],

which is included in Mac OS X for Intel machines. A native Intel build of CIAO will be released in 2007.

There are some performance test results of running CIAO on Intel Mac under Rosetta at the end of these release notes.

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Sherpa: user models

- The Sherpa user−model package (`sherpa_user.tar.gz`) has been updated to support the CIAO 3.4.1.1 release. The OS X Makefiles have been changed to allow building on Intel Mac systems.

Performance Tests

- The results of this brief performance testing gives users an idea of how running CIAO on an Intel Mac under Rosetta compares to other platforms.

  The machines used in test 1 and 2 are:

  - Sun Ultra 80 running Solaris 8 with 4 GB memory
  - Sun Java W2100Z running RHEL−4 with 8 GB memory
  - MacBook Pro Core 2 Duo 2.33 GHz with 2 GB memory, running CIAO under Rosetta

  Test 1: binning up a 1.9 million events HRC event list using `dmcopy` and a `[bin x=::8,y=::8]` specification.

  Test 2: running `hrc_process_events` on a 2.9 million events HRC file.

Machine	Test 1 (dmcopy)		Test 2 (hrc_process_events)	
	Total CPU	Elapsed Time	Total CPU	Elapsed Time
Sun Ultra	39.58 sec	47.46 sec	939.70 sec	1026.27 sec
Sun Java	8.709 sec	21.22 sec	143.135 sec	225.05 sec
MacBook Pro	10.785 sec	13.021 sec	246.935 sec	256.463 sec

- The machines used in test 3 are:

  - Macbook Pro laptop with a 2.16 Ghz Intel Core Duo processor, running CIAO under Rosetta

- Mac PowerPC 1.8 Ghz PPC G5 (single core)
- Linux running RHEL−4 with 2 GB memory
- Sun Blade 150 running Solaris 8 with 2.5 GB memory

Test 3: running a 2D fit and projection in *Sherpa* on a 1256^2 image with the beta2d model using cash statistics.

Elapsed time has been rounded to the nearest 15 sec.

Machine	Elapsed Time
Macbook Pro	21:00 min
Mac PowerPC	18:30 min
Linux	17:00 min
Sun Blade	56:15 min

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