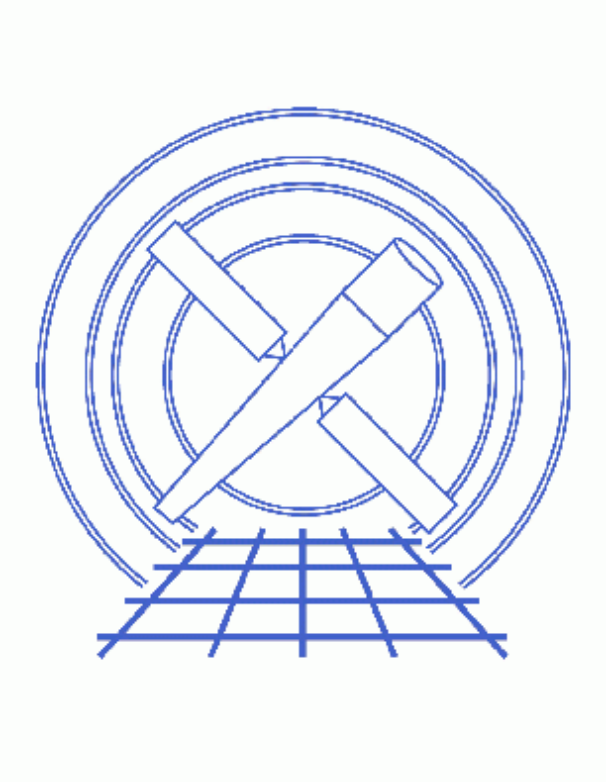
Introduction to Peg



CIAO 3.4 Science Threads

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Introduction to Peg

CIAO 3.4 Science Threads

Overview

Last Update: 1 Dec 2006 − updated for CIAO 3.4: minor correction to screen output

Synopsis:

The Parameter Editor GUI (*peg*) is an application which allows the user to easily view and modify the values in a parameter file. The tool may then be run from *peg*, or the values can simply be saved for a future analysis session.

Proceed to the HTML or hardcopy (PDF: A4 | letter) version of the thread.

Getting Started

For illustration, this thread utilizes the ObsID 1843 (ACIS−I, G21.5−0.9) data that was downloaded in the How to Download Chandra Data from the Archive thread.

If this is your first time using CIAO, please read the Starting CIAO thread to ensure that your environment is configured properly.

Like many other CIAO tools, *peg* has a parameter file that allows the user to set several preferences which are then used as the default value each time the tool is invoked. The file may be viewed with plist peg and the options are described in the ahelp file. All of these options may also be altered via the "Edit −> Preferences" menu; changes made in this menu are also updated in the parameter file.

Launching peg

There are several options for starting up *peg*, both from the command line and from the GUI itself:

- Do not give any arguments:

```
unix% peg &
```

The editor is launched without any file loaded, as shown in Figure 1 . Open the desired parameter file via the "Open" dialog box from the "File" menu. A list of recently accessed files is maintained by *peg* and

can be found in the "File −> Open List" submenu. This displays a list of (up to) the last 10 files viewed; selecting any of the files reloads it. Note that the path is considered part of the filename.

- Specify a tool name:

```
unix% peg dmlist &
```

This loads the parameter file `dmlist.par` that is in the `$PFILES` path, either the user's local copy or, if that does not exist, the system default. The Parameter Files section of the Introduction to CIAO thread has information on this environment variable.

- Specify a parameter file and (optional) path:

```
unix% peg /some/directory/dmlist.par &
```

This loads a specific copy of `dmlist.par`.

Once a file is loaded, the GUI will look like Figure 2 . Notice that the full path to the active parameter file − `/soft/ciao/param/dmlist.par` − is given just below the main window.

The Basic Display

The GUI contains three main sections: the parameter file window, the command execution panel, and a status window.

The top window shows all the parameters in the chosen parameter file; the names of the hidden parameters are shown in yellow. Any parameter that can take a file as input will have a "Browse" button next to the field, so that the desired file (and optional path) may be entered. Any parameters values currently set in the file will be loaded into the appropriate fields.

The command execution panel contains the "Command Line" box (described below) and six buttons:

- ***Run & Exit***: run the tool and exit *peg*.
- ***Run***: run the tool, but do not exit *peg*.
- ***Save***: save the updated parameter values.
- ***Punlearn***: reset all the entries to the default values; see `ahelp punlearn` for more information.
- ***Tool Help***: opens an xterm window and displays the help file for the current tool. Other help options are available from the "Help" menu.
- ***Quit***: exit *peg*.

The status window across the bottom of the application provides various feedback messages.

Running Tools

To run a tool from *peg*, simply set the desired parameters. In this case, shown in Figure 3 , we have set the following:

- infile − acisf01843N001_evt2.fits
- opt − data

- rows − 1:5 (the first five rows)
- verbose − 1

Click "Run" to launch the tool in the background. The status bar records the action:

```
Thu 01−Dec 14:06:16 executing tool− dmlist  verbose=1 infile="peg_intro/acisf01843N001_evt2.fits"
opt="data" outfile="" rows="1:5" cells="" mode="ql"
```

The *taskmonitor* GUI will be launched, displaying the command and any output from the tool. As seen in Figure 4, the results of the run are given in the "Output" window. The "Status" window indicates that the tool finished successfully. Click "Exit" to close *taskmonitor*.

To run the same task on the command line:

```
unix% dmlist peg_intro/acisf01843N001_evt2.fits data rows=1:5 verbose=1
```

The Command Line Box

The "Command Line" box is part of the the command execution panel. Any text entered in this field is appended to the command that is being executed. It may be used to conveniently change hidden parameters, especially in long parameter files (e.g. `acis_process_events`).

For example, if you would like to re−run a command, changing only the `clobber` parameter, simply add "`cl+`" (or "`clobber+`" or "`clobber=yes`") to the Command Line box. The alternative is to check the "Show Hidden Parameters" box under "Edit −> Preferences", scroll down in the parameter window to the `clobber` entry, and set the value to "`yes`". The former option is clearly more convenient and efficient.

The Analysis Menu

The "Analysis" menu allows you to launch other CIAO tools from within *peg*; see the Introduction to the Analysis Menu thread for more information.

Closing peg

Peg may be closed by choosing "Exit" from the "File" menu or by clicking the "Quit" button.

```
Parameters for /home/username/cxcds_param/peg.par


#−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−
#        peg.par −  Parameter Editor Gui Application Preferences File
#−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−−
```

```
    prompt = yes             Display parameter prompts as tooltips
showhidden = yes             Display hidden parameters
  savewarn = yes             Prompt to save changes before exiting/opening other file
    browse = yes             Display Browse button for filename parameters
   pattern = *.fits          Browse dialog's default filter pattern
     delay = 1000            Length of time (ms) count before displaying prompts
  duration = 5000            Length of time (ms) to display prompts
 textwidth = 40              Width of parameter text fields
   spacing = 10              Spacing offset (pixels) between entries
   verbose = 1               Detail level of status messages
     (mode = ql)
```

History

22 Dec 2004	reviewed for CIAO 3.2: no changes
01 Dec 2005	reviewed for CIAO 3.3: no changes
01 Dec 2006	updated for CIAO 3.4: minor correction to screen output

URL: http://cxc.harvard.edu/ciao/threads/peg_intro/ Last modified: 1 Dec 2006

Image 1: Peg GUI before loading a file

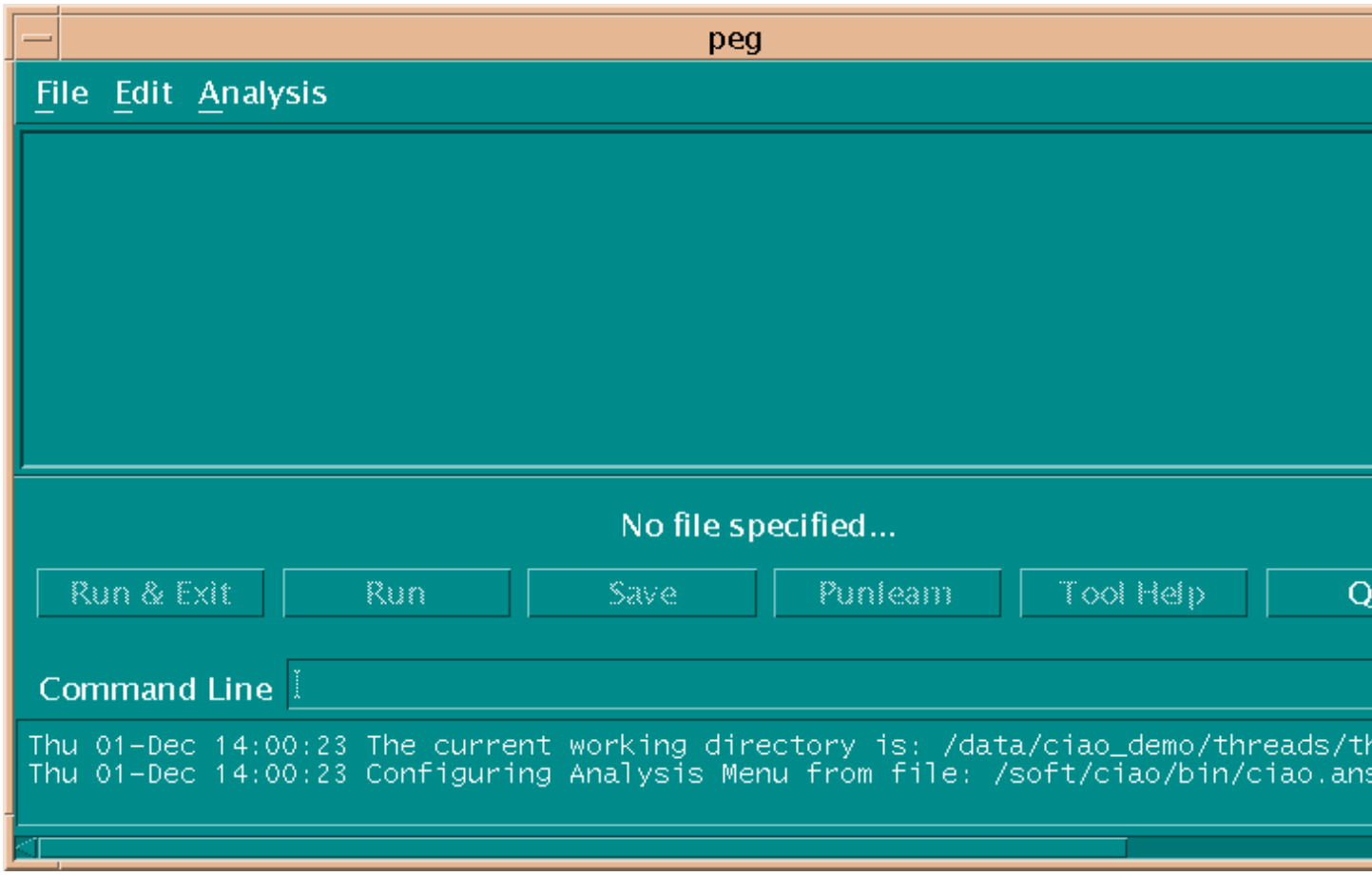

Image 2: Peg GUI after loading a parameter file

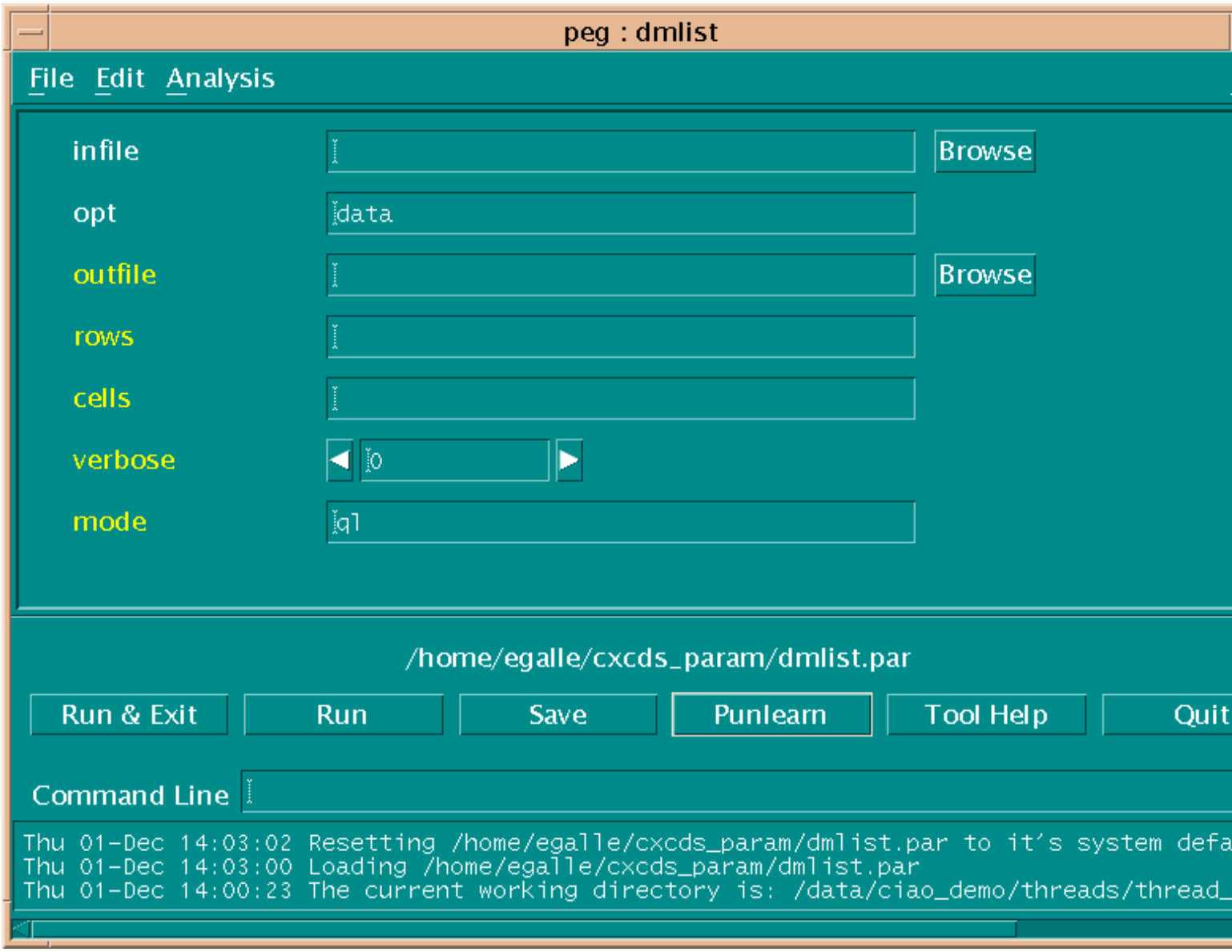

Image 3: Example parameters set

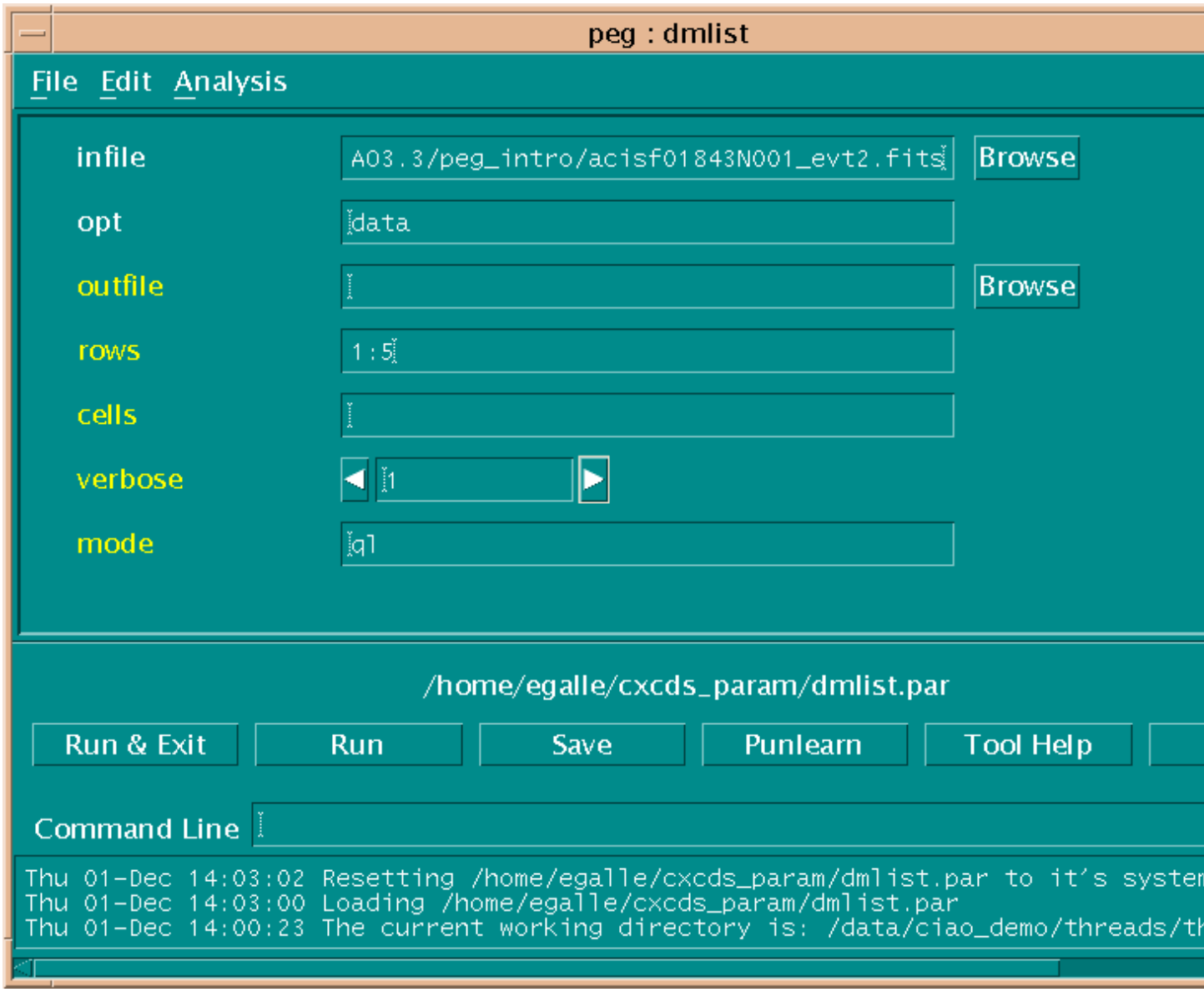
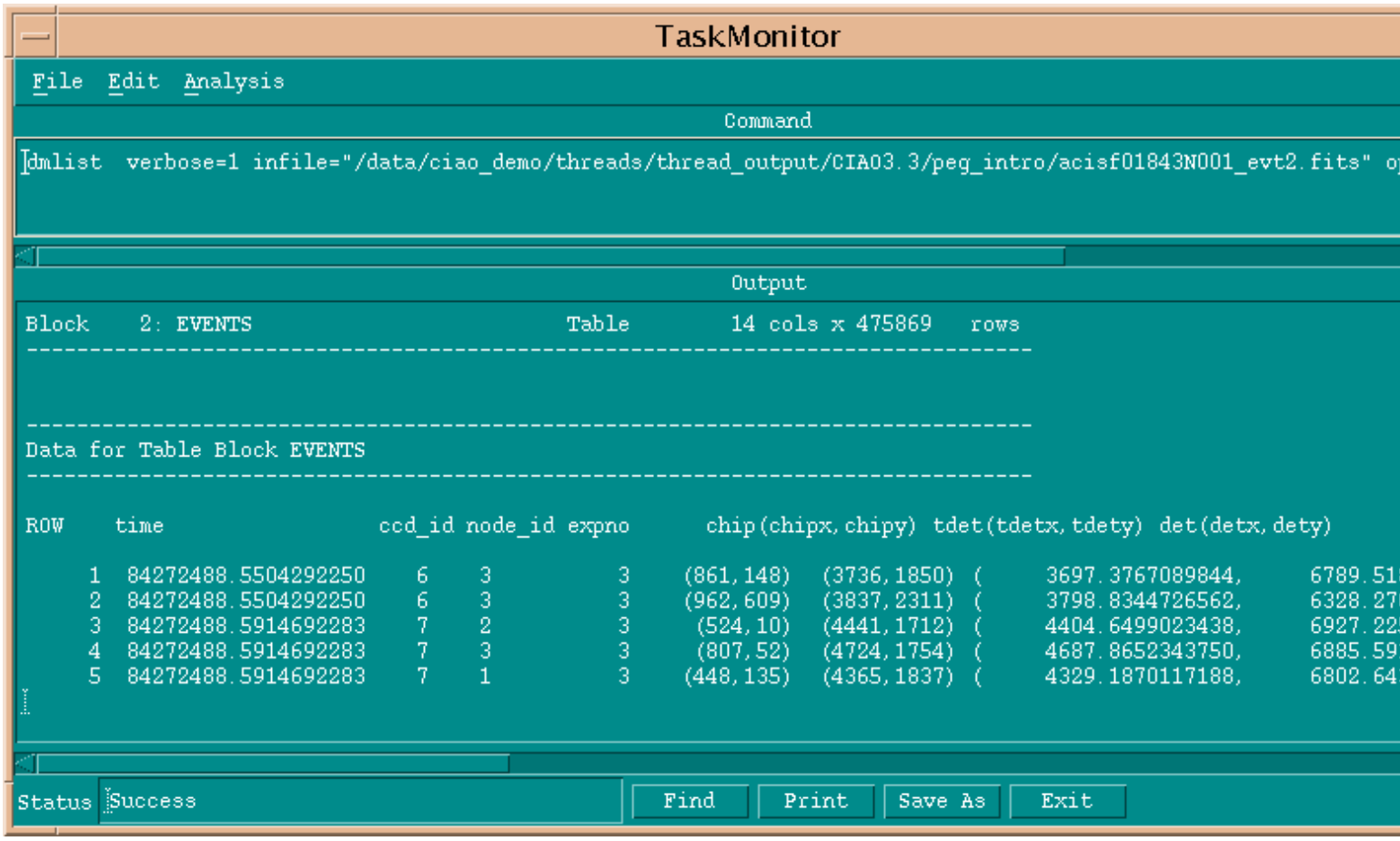
Image 4: Running a tool: viewing output with taskmonitor