



AHELP for CIAO 3.4

mdl

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Synopsis

A Model Descriptor List (MDL) file stores a collection of datasets and model(s) in a structured format that can be read or written by Sherpa.

Syntax

```
sherpa> write mdl "mdl_filename.fits"  
sherpa> read mdl "mdl_filename.fits"
```

where `mdl_filename.fits` is the filename for the output (input) MDL file.

Description

The MDL is a FITS file that stores (or restores) the results a user has created during an analysis session with Sherpa. This means the following information is available in an MDL file:

- All data files in use
- Instrument responses
- Background data
- All Sherpa "sources" (Models for individual regions of the data)
- Line/Feature Identifications

Sherpa can write an MDL file based on the current data and models using the command `write mdl "mdl_filename.fits"`. Restoring from an MDL file is done using the `read mdl "mdl_filename.fits"` command (the `"`s are required for both read and write), the previous sessions data files, instrument responses, and source models are restored.

MDL files can serve a purpose similar to the `JOURNAL` command, since a journal file can be used to write all Sherpa commands to a file. For some uses, a `JOURNAL` file may be more useful, as not all relevant information is currently stored in the MDL file; for example, data filters are not stored. However, an MDL file is a structured version of the data, which means it is easier to analyze a collection of MDL files, especially using `S-lang`.

The "Accessing MDLs from S-Lang" section of "ahelp sherpa" describes how you can create a MDL structure within a Sherpa session, without having to use an external file.

Example 1

```
Write the current Sherpa state to an MDL file:
```

```
sherpa> write mdl "my_mdl_file.fits"
```

Example 2

```
Recover a Sherpa session from an MDL file:
```

```
sherpa> read mdl "my_mdl_file.fits"
```

Bugs

See the [Sherpa bug pages](#) online for an up-to-date listing of known bugs.

See Also

sherpa

[autoest](#), [background](#), [create](#), [create_model](#), [createparamset](#), [fit](#), [freeze](#), [get_defined_models](#),
[get_model_params](#), [get_models](#), [get_num_par](#), [get_par](#), [get_stackexpr](#), [getx](#), [gety](#), [guess](#), [instrument](#),
[integrate](#), [is_paramset](#), [jointmode](#), [kernel](#), [lineid](#), [linkparam](#), [modelexpr](#), [modelstack](#), [nestedmodel](#),
[noise](#), [paramprompt](#), [paramset](#), [pileup](#), [rename](#), [run_fit](#), [set_par](#), [set_paramset](#), [set_stackexpr](#), [source](#),
[thaw](#), [truncate](#), [unlink](#)

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URL:
<http://cxc.harvard.edu/ciao3.4/mdl.html>
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