

## arf: change the efficiency file for a given response

Read in one or more auxiliary response files (ARF). An ARF gives area versus energy and is used to modify the response matrix for a spectrum. The file must be in the OGIP standard format.

**Syntax:**        **arf** [ <filespec>...]

where <filespec> =:: [[source #:]<spectrum num>] <filename>[{ranges}]... and where <spectrum num> is the spectrum number for the first <filename> specified, <spectrum num> plus one is the spectrum number for the next file (or next entry in {ranges} specifier for Type II multi-ARF files), and so on. <filename> is the name of the auxiliary response file to be used with the associated spectrum. The optional source number defaults to 1, and for ARFs stored in OGIP Type II files, {ranges} specifies the row numbers of the desired ARF(s). See the **data** command for allowed range specification.

If no <spectrum num> is given in the first <filespec> it is assumed to be 1. If no file specifications are entered, then none of the spectrum responses are modified. An error message is printed if the spectrum number is greater than the current number of spectra (as determined from the last use of the **data** command). A file name none indicates that no auxiliary response is to be used for that spectrum. If a file is not found or cannot be opened for input, then the user is prompted for a replacement auxiliary response file. An <EOF> at this point is equivalent to none. See the **data** command for ways to completely remove the dataset from consideration.

Note: The ARF command is currently not implemented for data formats which use multiple RMFs per spectrum, such as Integral/SPI data.

Examples:

It is assumed that there are currently three spectra:

```
XSPEC> arf a,b,c
// New files for the auxiliary response are given for all three spectra.
XSPEC> arf 2 none
// No auxiliary response will be used for the second spectrum.
XSPEC> arf ,d.fits
// d.fits becomes the auxiliary response for the second spectrum.
XSPEC> arf 2 e.fits{3-4}
// Rows 3 and 4 of multi-ARF file e.fits become the auxiliary responses for the
second and third spectra.
XSPEC> arf 2:1 f.fits
// f.fits becomes the auxiliary response for the second source of spectrum 1.
```