URL: http://cxc.harvard.edu/ciao3.4/dictionary/rmf.html
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RMF: Redistribution Matrix File

Maps from energy space into detector pulse height (or position) space. Since detectors are not perfect, this involves a spreading of the observed counts by the detector resolution, which is expressed as a matrix multiplication. In high resolution instruments (e.g. diffraction gratings, such as HETG and LETG) the matrix is almost diagonal. In proportional counters the matrix elements are non-zero over a large area. CCD detectors, such as ACIS, are an intermediate case, with most of the response being almost diagonal, but escape peaks and low energy tails adding significant contributions.

The CIAO tool `mkrmf` can be used to generate RMFs for Chandra, as discussed in the Step by Step and Weighted Response threads. An ARF is needed with the RMF to produce the input spectrum weighted by telescope area and detector efficiencies vs. energy.

An RMF is a standard OGIP file format that is compressed to save space (much of the matrix is zero). Although it cannot be directly handled with standard image handling tools, such as ds9, the CIAO `rmfimg` tool can be used to convert the RMF into image format, as can the `readrmf()` command within Sherpa and ChIPS.

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