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## ARF: Auxiliary Response File

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Contains the combined telescope/filter/detector areas ("effective area") and the quantum efficiency (QE) as a function of energy averaged over time (and therefore, aspect). The effective area is [ $\text{cm}^2$ ] and the QE is [counts/photon]; they are multiplied together to create the ARF, resulting in [ $\text{cm}^2$  counts/photon].

When the input spectrum is multiplied by the ARF, the result is the distribution of counts that would be seen by a detector with perfect (i.e. infinite) energy resolution. The RMF is then needed to produce the final observed spectrum.

There are three CIAO tools to create Chandra ARFs, depending on the application. They are:

mkarf

for general applications

mkwarf

for a weighted ARF

mkgarf

for grating ARFs

The ARF is a standard OGIP file format.

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

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