The Relative Spectral Response Calibration of the ISO-SWS

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The Relative Spectral Response Function (RSRF) characterises the wavelength dependent response of a spectrometer. The grating section of the Short-Wavelength Spectrometer (SWS) covers its wavelength range in 15 spectral bands for each of which the RSRF has to be determined.

We will discuss how the RSRF was measured during the Instrument Level Tests and how it was corrected based on in-orbit measurements of stellar calibration sources. Uncertainties in synthetic spectra and noise in the calibration observations can result in the introduction of erroneous spectral features in the RSRF. We will show how this can be avoided by a careful selection of calibration sources across different spectral types and the use of spline smoothing correction curves.