Wavelength calibration and instrumental profiles of the ISO-LWS grating

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The in-flight wavelength calibration of the LWS grating is described, including the basic principles and calibration strategy, the calibration sources and observations, the unexpected time variation and the achieved accuracy (a 1/4 of a resolution element).
The study carried out to characterize the grating line profiles is presented. The line profiles are shown and compared to their Gaussian fits. The measured full width at half maximum (i.e. the grating resolution) are a few % higher than the pre-launch values (0.29 μm for SW detectors and 0.6 μm for LW detectors), but this difference is expected to be eliminated by the transient correction when available.