

**N39a IUE and ISO observations of the bipolar proto-planetary nebula Hen 401 (IRAS 10178-5958)**

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We present ultraviolet (IUE) and infrared (ISO) observations of the bipolar proto-planetary nebula Hen 401 which, with available optical and near-IR data are used to reconstruct the overall spectral energy distribution from 1150Å to 100 microns

The ISO spectrum is dominated by strong PAH emission superimposed on a very cold continuum which is interpreted as thermal emission originating in the C-rich cool dust (106K) present in the circumstellar envelope, the remnant of the previous AGB phase. In addition, a second, hotter component detected in the near-IR is attributed to thermal emission from hot dust (640 K), suggesting that mass loss and dust grain formation is still on-going during the current post-AGB phase.

The ultraviolet (IUE) spectrum shows a stellar continuum in the wavelength interval 2400Å to 3200Å which corresponds to a moderately reddened B8-type central star. Unexpectedly, the UV flux in the wavelength interval 1150Å to 1900Å is very weak or absent with no evidence of a hotter binary companion which could explain the detection of the nebular emission lines observed in the optical spectra of Hen 401. HST WFPC2 high resolution images also show no indication of a hot companion to the B8-type central star observed both in the optical and in the UV. The evolutionary implications of a possible single nature for the central star of Hen 401 are discussed.