

The Hourglass as seen with HST/WFPC2

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Abstract

We present a multi-filter HST/WFPC2 UV-optical study of the Hourglass region in M8. We have extracted the stellar photometry of the sources in the area and obtained the separations and position angles of the Herschel 36 multiple system: for Herschel 36 D we detect a possible orbital motion between 1995 and 2009. We have combined our data with archival IUE spectroscopy and measured the Herschel 36 extinction law, obtaining a different result from that of Cardelli et al. (1989) due to the improvement in the quality of the optical-NIR data, in agreement with the results of Maíz Apellániz et al. (2014). A large fraction of the UV flux around Herschel 36 arises from the Hourglass and not directly from the star itself. In the UV the Hourglass appears to act as a reflection nebula located behind Herschel 36 along the line of sight. Finally, we also detect three new Herbig-Haro objects and the possible anisotropic expansion of the Hourglass Nebula.