The Ultraviolet Spectra of the WELS

Wagner L. F. Marcolino[1,2] Francisco X. Araujo[1] Helson B. M. Junior[1,3] Eduardo S. Duarte[3]

(1) Observatorio Nacional/Brazil (2) Laboratoire d'Astrophysique de Marseille/France
(3) Centro Federal de Educacao Tecnologica/Brazil

The ultraviolet spectra of all "weak emission line central stars of planetary nebulae" (WELS) with available *IUE* data is presented and discussed. We performed line identifications, equivalent width and flux measurements for several features in their spectra. We found that the WELS can be divided in three different groups regarding their UV: (1) Strong P-Cygni profiles (mainly in C IV 1549); (2) Weak P-Cygni features and (3) Absence of P-Cygni profiles. The last group encompasses stars with a featureless UV spectrum or with intense emission lines and a weak continuum, which are most likely of nebular origin. We have measured wind terminal velocities for all objects presenting P-Cygni profiles in N V 1238 and/or C IV 1549. The results obtained were compared to the UV data of the two prototype stars of the [WC]-PG 1159 class, namely, A30 and A78. They indicate that WELS are distinct from the [WC]-PG 1159 stars, in contrast to previous claims in the literature. In order to gain a better understanding about the WELS, we clearly need to determine their physical parameters and chemical abundances. First non LTE expanding atmosphere models (using CMFGEN) for the star Hen 2-12 are presented.