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The Peculiar Emission-line Object Tololo 26 STEVEN HAWLEY, Dept. of Physics and Astronomy, University of Kansas, HOWARD BOND, Space Telescope Science Institute, REGINALD DUFOUR, Dept. of Physics and Astronomy, Rice University — Tololo 26 was identified in 1976 as a planetary nebula (PN) with peculiar line ratios, in particular [O III] λ4363/Hγ estimated >1. Hawley (1981) obtained a detailed spectrum, which showed no [O II] or [N II] and a λ4363/Hγ ratio of >2.0, all unusual for PN and indicative of high electron density. Hawley suggested that Tol 26 could show spectral changes over time. In 2011 spectra were obtained confirming a change in [O III]/Hβ. Analysis of the original spectrum implied a small amount of high-density ionized gas, occupying a region smaller than the solar system. Estimates from the 2011 spectrum are consistent with a decrease in density and temperature. BVRI colors obtained in 2012, combined with GALEX and 2MASS observations, describe an SED that can be fitted with contributions from a 100,000K WD, a G2 V companion and dust components at 1350K and 200K. This makes Tol 26 the second object, along with EGB 6, proposed to be a PN with emission lines coming from a small amount of ionized gas associated with a cool companion to the white dwarf. We propose that an accretion disk is formed around the companion during the PN formation phase. Tol 26 and EGB 6 could be precursors to barium stars and certain PN central stars with rapidly rotating companions.

Steven Hawley
Dept. of Physics and Astronomy, University of Kansas

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