

## THE TEMPERATURES OF CENTRAL STARS OF PLANETARY NEBULAE: THE ENERGY-BALANCE METHOD

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We present a method for determining the colour temperature of the ionizing continuum of the central star photoionizing a surrounding nebula. The method is based on the assumption that energy-balance holds in the photoionized nebula, and it is a generalization of Stoy's first derivation (Stoy, 1934) to a variety of possible situations in actual nebulae, namely to optically thin (Case I), partially thick (Case II), and completely optically thick nebulae (Case III).

## FABRY-PÉROT RADIAL VELOCITIES OF S274: A PLANETARY NEBULA

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The bright nebula S274 (YM29), 8' across has been classified as a planetary by Abell (1966) although it has been considered a SNR by other authors. We have determined radial velocities at 173 points on this nebula from four Fabry-Pérot interferograms. The velocity field exhibits a great deal of structure. The average expansion velocity is  $+ 31.5 \pm 8 \text{ km s}^{-1}$ . The mean radial velocity of S274 is not well determined due to the nature of the velocity field, while the overall velocity (173 points) is  $+ 33 \pm 21 \text{ km s}^{-1}$ . Points at the outer boundary yield an average of  $22 \pm 14 \text{ km s}^{-1}$  while the average of the double points is  $25 \text{ km s}^{-1}$ . The age of expansion of the nebula is estimated at  $6.8 \times 10^3 \text{ yr}$ . The physical parameters of this object are consistent with those of a planetary nebula.