brightness temperature in the visual is equal to the effective temperature is a reasonable assumption, with the advantage that even if it is not quite correct, the resultant effective temperature is only affected in a small way.

What criterion does one use to determine whether or not all the hydrogen ionizing photons have been counted? This is done by plotting the ratio of the flux between λ228 - λ912 Å, to the flux with λ > 912 Å (which can be determined observationally) against the effective temperature, and comparing this with the expected value. (Paper will appear in Astronomy and Astrophysics.)

THE POSITION OF CENTRAL STARS IN THE HERTZSPRUNG-RUSSELL DIAGRAM

S.R. Pottasch, P.R. Wesselius, C.-C. Wu, and R.J. Van Duinen
University of Groningen, The Netherlands

The determination of total luminosity and effective temperature recently reported on sometimes (but not always) differ in a substantial way from the determination of these quantities from HeII Zanstra method. For example, differences in luminosity exceeding a factor of 10 have been noted. The resultant effect on the Hertzsprung-Russell diagram is presented and discussed. (Paper will appear in Astronomy and Astrophysics.)

TIME-DEPENDENT EFFECTS IN PLANETARY NEBULAE CAUSED BY THERMAL PULSES IN CENTRAL STARS

R. Tylenda
Nicolaus Copernicus University, Torún, Poland

Nuclei of planetary nebulae are suspected to go through thermal pulses. A time scale of such pulses is of the order of $10\text{-}10^3$ years and so it is comparable with the time of recombination in a typical planetary nebula. Theoretical models have been constructed to study evolution of ionization structure of nebulae in which the spectrum of ionizing radiation varies with time. Resulting intensities of emission lines are compared with those produced by stationary model nebulae.

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