

CONCERNING THE TEMPERATURES OF CENTRAL STARS OF PLANETARY NEBULAE

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Recently Pottasch (1981, *Astron. Astrophys.* 94, L13) published extremely high effective temperatures of some central stars of planetary nebulae ($> 200\,000\text{ K}$). Our study of planetary nebulae based on photoelectric photometry does not confirm his results. A histogram of $T_z(\text{HI})$ and $T_z(\text{HeII})$ shows smooth distribution of T_z with the maximum of about $48\,000^\circ\text{K}$ (HI) and $90\,000^\circ\text{K}$ (HeII), respectively; the effective temperature of none of the 62 planetary nuclei exceeds $120\,000^\circ\text{K}$. We believe that the stellar temperatures reported by Pottasch are strongly overestimated due to the unreliable stellar magnitudes used; this conclusion follows from the investigation of the seven objects being common in Pottasch's and our sample:

Name	Design.	$\log T_z$		$\log L/L_\odot$	R/R_\odot
		He II	H I		
IC 2165	221-12 ⁰ 1	5.01	4.78	3.86	0.27
J 900	194+ 2 ⁰ 1	4.97	4.74	3.84	0.32
NGC 2440	234+ 2 ⁰ 1	5.05	4.84	3.05	0.089
NGC 6565	3- 4 ⁰ 5	4.94	4.84	3.14	0.16
NGC 6741	33- 2 ⁰ 1	4.94	4.66	3.46	0.24
NGC 6884	82+ 7 ⁰ 1	4.92	4.75	3.71	0.34
NGC 6886	60- 7 ⁰ 2	4.97	4.74	4.30	0.54

In the H-R diagram these central stars lie in the range of the stellar mass $0.55 - 0.8 M_\odot$ (Fig. 1).

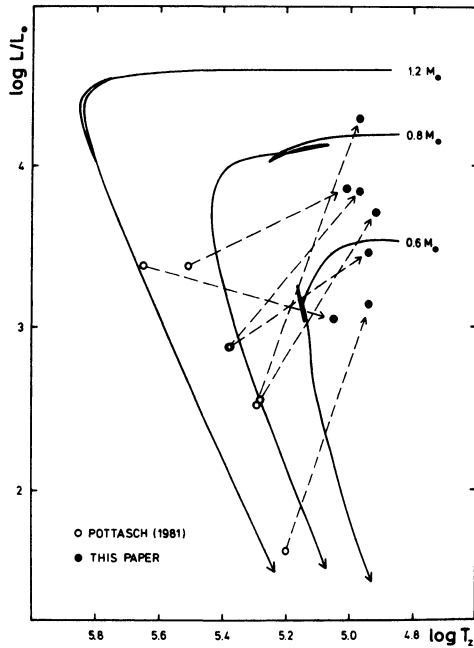


Figure 1. H-R diagram for seven planetary nuclei of our sample: open circles are results of Pottasch, filled circles are results of this paper. Solid curves are the predictions of Paczynski (1971).

UV RADIATION FROM CENTRAL STARS OF PLANETARY NEBULAE

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The flux originating from the central stars of 27 planetary nebulae in the spectral range 1200–2000 Å has been deduced from the analysis of a large number of released IUE low resolution spectra.

The stellar UV continuum has been compared with black-body energy distributions. Preliminary colour temperatures have been derived for