

Correlation between N/O nebular ratio and central star mass: distances to galactic PN

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In the planetary nebulae (PNe) studies, their distance determination remains a confusing issue. The statistical distance scales cannot be regarded as reliable, and there are few PNe with individual distance determinations. In this work, we present a distance scale based on the method of individual distance determination by Méndez *et al.* (1988, A&A 190, 113).

The distance can be written as a function of the central star parameters: $F(\lambda 5480)$, g , M_v and M_c . There is a large uncertainty in the prediction of the core mass M_c . We propose a relationship between M_c and N/O nebular ratio which allows us to obtain a new distance scale for PNe. (FAPESP, CNPq)