It turned out that for some PN the abundance of C and, probably, N is higher than in the Sun.

1. Seaton, M.J.: 1980, Q.J.R.A.S., vol.21, 229.
2. Nikitin, A.A., Rudzikas, Z.B.: 1983, Foundations of the theory of the spectra of atoms and ions, Nauka, Moscow (in press).
3. Kaler, J.B.: 1976, Ap. J. Suppl., vol.31, 517.
4. Nikitin, A.A., Sapar, A.A., Feklistova, T.H., Kholtygin, A.F.: 1981, Astron. Journ. (USSR), vol.58, 101.

RADIATIVE TRANSFER EFFECTS DUE TO CURVATURE AND EXPANSION IN A DUSTY PLANETARY NEBULA

A. Peraiah
Indian Institute of Astrophysics, Bangalore, India

We have investigated the effects due to curvature and radial expansion in a planetary nebula, with hydrogen and helium. We have solved the radiative transfer equation with spherically symmetric approximation in the rest frame. We have included dust in static as well as in expanding media. The effects on the internal sources and the mean intensities at the internal points have been calculated. It is found that the effect due to the presence of dust is to reduce the mean intensities, and curvature effects on the internal sources are more pronounced than the effects due to radial expansion of the gas.

PROFILES AND INTENSITY RATIOS OF THE C IV λ1548, 1550 EMISSION LINES IN PLANETARY NEBULAE

W.A. Feibelman
Laboratory for Astronomy & Solar Physics, NASA-Goddard Space Flight Center, Greenbelt, Maryland 20771, USA

The C IV resonance doublet at λ1548, 1550 is an important diagnostic tool in the study of planetary nebulae. The predicted theoretical intensity ratio of 2 : 1 is, however, rarely observed in high dispersion