

## ECHELLE SPECTRA OF A LARGE SAMPLE OF PLANETARY NEBULA NUCLEI

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ABSTRACT. We have undertaken at Palomar Observatory to obtain high resolution spectra of a large sample of planetary nebula nuclei (PNN) in order to systematically investigate their spectral morphologies and then to derive temperatures and surface gravities by comparing absorption line profiles to model atmospheres. We have taken as our sample all those central stars of planetary nebulae within 1.3 kpc of the sun according to the distance determinations of Daub (*Ap. J.*, 260, 612, 1982); of the 94 objects in this unbiased sample, 64 are in the sky visible from Palomar and 33 have central stars bright enough to be observed at a resolution of 5000 with an "echellette" spectrograph on the 5-m Hale telescope, leaving 7 PNN (11% of the northern sample of 64 PNN) which are too faint to be observed at present.

This poster will report on work in progress, presenting representative spectra giving some idea of the quality of the data and also the range of spectral morphologies found among the central stars. Model atmosphere analysis will be performed starting in mid-October 1987 in collaboration with Kudritzki *et al.* in München, West Germany.