

SPECTROSCOPY OF THE PLANETARY NEBULA IN THE FORNAX GALAXY WITH THE INTERNATIONAL ULTRAVIOLET EXPLORER

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The planetary nebula in the Fornax dwarf galaxy has been detected with the short wavelength spectrograph of the International Ultraviolet Explorer (IUE). At an estimated distance of 150 kpc, this nebula is probably the furthest planetary that can be observed with IUE. The object is the only known planetary nebula in the Fornax galaxy, which is a system of lower metallicity than the Small Magellanic Cloud. Individual exposures of 5 to 7 hours reveal continuum in the wavelength range from Lyman alpha to  $1900 \text{ \AA}$  and C III)  $\lambda 1909 \text{ \AA}$ , the strongest emission line in this spectral region. Four such exposures have been coadded with the PDP 11/44 computer at the IUE Regional Data Analysis Facility at NASA-GSFC. The results, compared with the ground-based spectral measurements of Danziger et al. (1978), indicate that locally synthesized carbon was dredged to the envelope of the progenitor star of this nebula.

A NEW PLANETARY NEBULA WITH INDEPENDENTLY DETERMINED DISTANCE AND MASS

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A low surface brightness planetary nebula with weak ring structure and a diameter 22 arcsec has been discovered in the southwest edge of the open cluster NGC 6067. A calibrated spectrum shows strong He II 4686 (80% H $\beta$ ) and an H $\alpha$ /H $\beta$  ratio of 5.8. The H $\alpha$ /H $\beta$  ratio yields  $c = 0.88$  which corresponds to  $A_V = 1.88$ . This is significantly greater than  $A_V$  for the cluster (1.17) and leads to a distance for the nebula of 3370 pc assuming extinction to be uniform with distance. This leads to a radius of 0.18 pc and a mass of 0.07 solar masses (assuming  $\epsilon = 0.5$ ).