

NEAR-INFRARED SPECTROSCOPY OF PROTO-PLANETARY NEBULAE

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Sixteen candidates for proto-planetary nebulae have been observed with low-resolution infrared spectroscopy in the H and K bands, and 6 in the L band, using the United Kingdom Infrared Telescope. In the H band, the objects show hydrogen Brackett lines in absorption. In the K band, absorption bands ($\Delta v=2$) of CO were observed, and in three cases the CO bands are in emission. The CO spectrum of IRAS 22272+5435 was found to change from emission to absorption over a three-month interval. This CO emission can be interpreted as an indication of some recent episodes of mass loss in these objects. Four of the objects were found to possess an emission feature at 3.3 μm , usually associated with PAHs, and two of these show an unusually strong 3.4 μm emission feature (Geballe, Tielens, Kwok, & Hrivnak 1992, *ApJ*, 387, L89).