THE PLANETARY NEBULA IN THE FORNAX DWARF GALAXY

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A planetary nebula has been identified near the center of the Fornax dwarf elliptical galaxy. Quantitative spectrophotometry reveals that it is slightly reddened, and belongs to an intermediate-excitation class, with a normal helium abundance. Since the abundances of all 2 to 3 times lower than in the Orion nebula, the material in the nebula which has a mass $\geq$ 0.1 $M_\odot$ probably represents at least a second generation of processed matter. The implications of this conclusion are briefly discussed from the point of view of heavy element enrichment in low mass systems such as Fornax whose mass is 2×10^7 $M_\odot$. (Paper will appear in The Astrophysical Journal.)

DISCUSSION

Cohen: Does the object contain a central star? Your spectrum showed a blue continuum.
Danziger: The whole nebula is a star-like object. Models indicate that the continuum is probably too strong for the star, and indeed the continuum that we see may come from a star nearby which would be included under bad seeing conditions. We have found, in fact, that the continuum varies depending upon the seeing. I think it's another star.
Field: Is it possible to resolve the [OII] doublet in the future, and therefore get an estimate of the mass of the nebula and not just an upper limit?
Danziger: Yes, but we don't have good enough resolution to do that.
Aller: Did you get any [SII] density? Or is the feature so weak that there is no chance of getting it?
Danziger: We didn't see any [SII].

Yervant Terzian (ed.),Planetary Nebulae, Observations and Theory, 63-69.