

## THE TEMPERATURE STRUCTURE OF NGC 7027

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ABSTRACT. Radio maps of the free-free radio continuum flux (angular resolution  $\approx 1.3$  arcseconds) from NGC 7027 were made with the VLA operating at 20-cm, 6-cm, and 2-cm wavelengths which are near and straddle unit optical depth. Mean line-of-sight electron temperature and emission measure distributions were calculated by pairing the 2-cm and 6-cm maps, and the electron temperature distribution on the near side of the nebula was then obtained from the 20-cm map. The results suggest that the energy balance is complex in this planetary. For example, mean line-of-sight temperatures are higher than average in the direction of one of the bright lobes but not in the direction of the other. Especially noteworthy is an apparent "hot spot" on the near side of the nebula which has no apparent relation to either of the bright lobes, but it is approximately coincident with the brightest portion of the optical image.