IMAGING SPECTROPHOTOMETRY OF THE RING NEBULA

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We present new results from a program of emission-line imaging spectrophotometry of planetary nebulae using the Ohio State University Imaging Fabry-Perot Spectrograph (IFPS). High-quality emission-line maps of the important diagnostic lines [NII]$\lambda\lambda$5755,6583, [SII]$\lambda\lambda$6717,6731, [OI]λ6300, [OIII]λ5007, Hα, and Hβ have been obtained. Maps of the ionization structure ([S II]/Hα, [N II]/Hα, [O III]/Hβ, and [O I]/[O III]), temperature in the N^+ region, density in the S^+ region, and Balmer decrement across the nebula are presented. These show considerable variation in ionization state, temperature and density. This detailed information will provide powerful constraints on photoionization models for the Ring Nebula.

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