

## RECENT DEVELOPMENTS IN THE YOUNG PLANETARY NEBULA HEN-1357

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Observations over the past four decades have revealed significant changes in the spectrum of Hen-1357. Here we present HST images and spectra showing the most recent developments. In 1950, Henize saw only  $H\alpha$  in emission; but more recent observations by Parthasarathy *et al.* in 1992 showed strong forbidden lines consistent with a young planetary nebula. The spherically aberrated 1992 HST images, in which Bobrowsky first optically resolved the nebula, showed a compact nebula surrounding the central star. Nebular gas appeared most strongly concentrated in an ellipse with its major axis subtending  $1''.6$  from NW to SE. If this ellipse is actually a circular ring viewed obliquely, then our line of sight is inclined from the symmetry axis by  $5^\circ$ . Above and below the ring of gas are two bubbles containing lower-density gas. At the tip of each bubble, there is a hole where the gas inside the bubbles has broken through and is now escaping. The windblown appearance is consistent with the blueshifted Si IV (1394-1403Å) and Al III (1855-1863Å) doublets observed by Parthasarathy *et al.* that indicated the presence of a strong stellar wind. The N V (1239-1243Å) to C IV (1548-1551Å) ratio has increased in recent years, consistent with a young nebula becoming increasingly ionized. Our recent (1996) spectra reveal additional developments that show the real-time development of this young nebula. Finally, the new HST Planetary Camera images of the nebula show detailed structure indicating a much more complex object than previously known, including the presence of a companion star  $0''.3$  from the central star.