

About the Cover:

The photo on the cover shows Horton Graduate Student Fellow Robert Henchen aligning the all-reflective imaging Thomson-scattering telescope (lower right). The Schwarzschild objective (shown near the middle of the front cover) images scattered light from an OMEGA ten-inch manipulator to a Pfund objective to provide diffraction-limited imaging across all reflected wavelengths (190 nm to 700 nm). In his thesis work, the system collected light scattered from electron plasma waves, which were spectrally and temporally resolved using a ROSS streak camera (top right). The three streaked images (bottom left) show the collective Thomson-scattering spectrum from three locations in the plasma. The wavelength separation between the electron plasma wave features provides a measurement of the electron density, while their width provides a measurement of the electron temperature. In the novel work conducted by Mr. Henchen, the relative amplitudes of these spectrum were used to measure the heat flux in the plasma and to make the first direct measurements of nonlocal thermal transport.

The photograph on the right shows Mechanical Engineering graduate student Robert Henchen. Mr. Henchen is currently preparing to defend his Ph.D. thesis, "Direct Measurements of Nonlocal Heat Flux in Laser-Produced Coronal Plasmas using Thomson Scattering from Electron-Plasma Waves."



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