

## **Temporally and spectrally resolved measurements of the optical reflectivity of HED materials on OMEGA-EP**

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Optical diagnostics play critical roles in the dynamic compression experiments regularly carried out on OMEGA-EP by providing time-resolved information about a sample's temperature, pressure, and reflectivity. Most often, these properties have been inferred from measurements made at a single probe wavelength, or without spectral resolution. A new capability was recently brought online to measure time-resolved optical spectra in the 450-750 nm range, allowing the first spectrally-resolved broadband measurements of laser compressed materials on EP. New platforms to measure broadband emissivity and reflectivity have been developed. Design of these new platforms and initial physics data collected from materials commonly used for ICF implosions will be presented. Outlook for the future development of broadband probes and diagnostics will be discussed.

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