

Application of Rainbow Schlieren Deflectometry in turbulent and multi-phase environments

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Optical measurement techniques are often required in environments that have fast time scales, harsh ambient conditions, and/or sensitivity to intrusive probes. Of the several available optical diagnostics, rainbow schlieren deflectometry (RSD) - a line-of-sight technique - offers several benefits such as versatility in the scope of applications, use of off-the-shelf-parts, and ease of implementation that make it an attractive option when full-field thermodynamic data is needed. The work presented covers an introduction and basic background/applications of RSD including recent progress achieved in both turbulent and multi-phase environments.