



Optical Measurement Methods used in Calibration and Validation of Modeled Injection Spray Characteristics

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Poster Location **P-7**

Spray Characterization Tools: WHAT they are, HOW and WHY we use them

- **PDA (Phase Doppler Anemometry)**

- Measurement of droplet size and velocity distributions.

- **LIF (Laser Induced Fluorescence)**

- LIF provides a map of the different density regions within the spray envelope.

- **Mie-LIF (Proportion of LIF intensity to Mie (scattering of light by particles) intensity)**

- Mie-LIF provides SMD* (Sauter Mean Diameter) distribution within the spray envelope

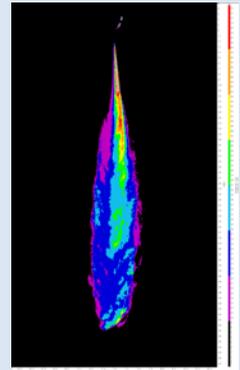
- *when combined with PDA data

- **Shadow Imaging**

- Measurements include spray penetration, cone angle and cone separation angle.

- **Test Bench with IFR (Injection Flow and Rate)**

- Allows for the simultaneous measurement of the injection rate shape and quantity.



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