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Measurements of Droplet Size in Shear-Driven Atomization Using Ultra-Small Angle X-Ray Scattering

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Highlights

- X-ray diagnostics have for the first time been used to probe optically dense shear driven atomization.
- Droplet size measurements indicate a dearth of submicron droplets. This is in conflict with a popular droplet breakup model for diesel sprays.
- Quantitative measurements of the trends in droplet size with injection pressure, ambient pressure, and nozzle diameter in the near-nozzle region have been outlined.

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