

Abstract Submitted
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Study of interfaces in an Axisymmetric Supersonic Jet using Background Oriented Schlieren (BOS)¹ CARLOS ECHEVERRÍA, DAVID PORTA, ALEJANDRO AGUAYO, HIROKI CARDOSO, CATALINA STERN, UNAM — We have used several techniques to study a small axisymmetric supersonic jet: Rayleigh scattering, Schlieren Toepler and PIV. Each technique gives different kind of information. In this paper, a BOS set-up is used to study the structure of the shock pattern. A shadowgraph of a dot matrix is obtained with and without a flow. The displacement field of the dots is related to changes in the index of refraction, which can be related, through the Gladstone-Dale equation, to changes in density. Previous results with this technique were not conclusive because of the relative size of the dots compared to the diameter of the nozzle. Measurements have been taken for three different exit speeds.

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