Oblique Shock Interaction with a Gas Cylinder\textsuperscript{1} ROSS WHITE, JOSEPH CONROY, MICHAEL ANDERSON, PETER VOROBIEFF, C. RANDALL TRUMAN, The University of New Mexico, SANJAY KUMAR, University of Texas - Brownsville — In the majority of shock-tube studies of Richtmyer-Meshkov instability, when a planar shock interacts with a perturbed density interface, the orientation of the interface plane or the largest interface feature (e.g., axis of a gaseous column) is parallel to the plane of the shock. Here we experimentally study the flow developing after an interaction of an oblique shock wave with a gravity-stabilized cylindrical heavy gas (SF\textsubscript{6}) column surrounded by less dense gas (air). To introduce an oblique angle into the initial conditions, we tilt the shock tube to an angle of 15\textdegree with respect to the horizontal. Flow visualization in several planes is conducted to highlight the differences between the features characterizing planar and oblique shock-cylinder interaction. Several flow structures peculiar to oblique interaction appear to exist over a range of Mach numbers from 1.2 to 2.1.

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