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Pressure Feedback in Rotating Detonation Engines¹ DOUGLAS SCHWER, K. KAILASANATH, Naval Research Laboratory — Rotating detonation engines (RDEs) represent a unique method for obtaining propulsion from the high efficiency detonation cycle. In order for the RDE to be a practical propulsive device, engines must be capable of running efficiently at low pressure ratios, however, this type of injection typically results in a large amount of pressure feedback into the injection system. This paper examines different aspects of the pressure feedback phenomena, and investigates approaches to injecting fresh mixture that reduce the amount of feedback.

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