

Technical Comments

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Reply by the Author to W. H. Heiser and D. T. Pratt

J. Wilson

WingCo, Ltd., Cleveland, Ohio 44120

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IT IS certainly true that any comparison of different systems for propulsion must take all considerations into account. Thus, if the use of ejectors to increase the thrust for pulsed devices is proposed, it should be weighed against a steady-state system using an ejector. However, steady-state ejectors achieve large thrust augmentation at very large ratios of ejector-to-jet diameter, and also long ejector lengths, which may make them impractical. Pulsed ejectors, on the

other hand, having an optimum diameter approximately equal to the diameter of the vortex rings produced, are much smaller, and shorter, and therefore more likely to be practical. Higher thrust augmentations also seem possible, with thrust augmentation as high as 2.5 having been observed from an ejector on a pulsed detonation device [1].

References

- [1] Wilson, J., Sgondea, A., Paxson, D., and Rosenthal, B., "Parametric Investigation of Thrust Augmentation by Ejectors on a Pulsed Detonation Tube," *Journal of Propulsion and Power*, Vol. 23, No. 1, 2007, pp. 108–115.

J. Powers
Associate Editor