

# NASA TECH BRIEF

## *Lewis Research Center*



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### Computer Program to Determine the Irrotational Nozzle Admittance

A computer program has been developed for calculating the irrotational nozzle admittance which is the boundary condition that must be satisfied by combustor flow oscillations at a nozzle entrance. Defined as the ratio of the axial velocity perturbation to the pressure perturbation at the nozzle entrance, the nozzle admittance can also be used to determine whether wave motion in the nozzle under consideration adds or removes energy from the combustor oscillations. Furthermore, this boundary condition influences the structures and resonant frequencies of the natural modes of the combustor under investigation.

#### Notes:

1. The program is written in FORTRAN V interpretive language compatible with the UNIVAC 1108 machine language compiler.
2. Inquiries concerning this program should be directed to:

COSMIC  
Information Services  
112 Barrow Hall  
University of Georgia  
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Reference: LEW-12019

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