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## A Computer Program for Calculating Design and Off-Design Performance for Turbojet and Turbofan Engines

A digital computer program, GENENG, has been developed which calculates steady-state design and offdesign performance for turbofan and one- and two-spool turbojet engines. The program uses component performance maps to enable the user to do analytical engine cycle calculations. Through a scaling procedure, each of the component maps can be used to represent a family of maps (different design values of pressure ratios, efficiency, weight flow, etc.). Either convergent or convergentdivergent nozzles may be used.

## Notes:

- 1. The program is written in FORTRAN IV for the IBM 7094 Mod 2 computer. With modifications, the program can be used on all machines that have a FORTRAN compiler.
- 2. A derivative program, GENENG II, calculates design and off-design performance of two- or three-spool front- or aft-fan turbofan engines with as many as three nozzles (or airstreams), Reference: LEW-12011.
- 3. Inquiries concerning these programs should be directed to:

COSMIC Information Services 112 Barrow Hall University of Georgia Athens, Georgia 30602 Reference: LEW-12010

> Source: R.W. Koenig and L.H. Fishbach Lewis Research Center (LEW-12010)

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