# NASA TECH BRIEF

## Digital Simulation Program Improved

The Modified Integration Digital Analog Simulation (MIDAS) program, which provides time-oriented solutions to equations from system block-diagram descriptions, has now been given greater speed, accuracy, flexibility, and applicability. The program was originated for the purpose of checking equation solutions provided by analog computers.

The improved program incorporates a Stromberg-Carlson 4020 plotting capability suitable for report presentations, and additional elements for extended solution capability not readily obtainable from analog computers.

The input to the program includes: a job card (called the MIDAS card) for each run; block-diagram description cards; number-data cards; and plotting-control cards. The computer output appears in several forms: a simple listing; a sorted listing; a data listing; a printed output after each time increment; maximum-minimum information; and plotting graphs from the Stromberg-Carlson unit. A binary punched-card deck of the translated wiring diagram, which can be used for subsequent jobs with the same structure, is also provided.

**Notes:**

1. This program is written in FORTRAN IV and MAP for the IBM-7094 computer.
2. Inquires may be directed to:
   COSMIC
   Barrow Hall
   University of Georgia
   Athens, Georgia 30601

**Patent status:**

No patent action is contemplated by NASA.

Source: E. K. Bramblett of
North American Rockwell Corp.
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Marshall Space Flight Center
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