

TITLE: Sensor Studies and Space Flight Opportunities

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SIGNIFICANT ACCOMPLISHMENTS TO DATE IN FY-84:

Science issues, definition, instrument design studies, and hardware procurement for the Multispectral Atmospheric Mapping Sensor (MAMS) aircraft prototype, were all started and partially completed.

The science issues for a Shuttle Atmospheric Science Experiment (SASE) were defined around the precipitation processes question and results submitted and accepted for publication.

Mission science objectives and payload definitions studies for the Shuttle Earth Observation Experiment (EOM) mission series were begun.

FOCUS OF CURRENT RESEARCH ACTIVITIES:

The SASE concept is being refined for final publication in the AMS Bulletin.

EOM science/mission definition studies are underway between MSFC and headquarters personnel.

MAMS aircraft hardware is under construction.

PLANS FOR FY-85:

MAMS engineering flights are anticipated in the fall of 1984 with science flights scheduled for the spring of 1985.

EOM science document will be prepared.

SASE instrument definitions studies will begin.

RECOMMENDATIONS FOR NEW RESEARCH:

The EOM Shuttle series should have a significant focus upon lower atmospheric as well as upper atmospheric and solar science issues. A lower atmospheric portion of the EOM series must be defined.

PUBLICATIONS:

Robertson, F. R., G. S. Wilson, H. J. Christian, S. J. Goodman,
G. H. Fichtl, W. W. Vaughan, 1984: Atmospheric Sciences Experiments
Applicable to Space Shuttle/Spacelab Missions (to be published in the
AMS Bulletin)