EARTH RESOURCES PAYLOAD PACKAGE (APP-B)

OBJECTIVES

- ESTABLISH FEASIBILITY OF OBTAINING USEFUL DATA FROM ACTIVE AND PASSIVE REMOTE SENSORS.
- DEVELOP TECHNIQUES FOR EXTRAPOLATION AND CORRELATION OF DATA OBTAINED SIMULTANEOUSLY FROM SEVERAL REMOTE SENSORS.
- VERIFY METHODS FOR TRANSMISSION AND ANALYSIS OF LARGE AMOUNTS OF DATA.
- DETERMINE USEFULNESS OF MAN IN EARTH ORBITAL APPLICATIONS SPACECRAFT.
- OBTAIN EVIDENCE ON THE NEED FOR OPERATIONAL EARTH RESOURCES SPACE MISSION.
- UTILIZE PAYLOAD CAPACITY OF AAP MISSION.

PRINCIPAL EXPERIMENTS

- MULTIBAND CAMERA
- METRIC CAMERA
- PANORAMIC CAMERA
- TRACKING TELESCOPE
- WIDE-RANGE IMAGER
- RADAR IMAGER
- RADAR ALTIMETER AND SCATTEROMETER
- LASER ALTIMETER
- IR SPECTROMETER AND RADIOMETER
- PASSIVE MICROWAVE IMAGER AND RADIOMETER
- ABSORPTION SPECTROSCOPE
- UV SPECTROMETER

EXPECTED FLIGHT READINESS DATE: MID 1970

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FIGURE 26

missions and we will establish the kind of equipment that is useful and the limitations and they will be flexible enough to permit adjustment so as to modify them while in flight and to get the maximum amount of information.

These are the kind of experiments that are being planned in the Apollo Applications program. Funding for both of these programs is included in the budget.

A further extension of the Apollo telescope mount has interesting possibilities (ML 66-9875, fig. 27). I do believe that the combination of the workshop and the Apollo telescope mount represent a major step forward in our capability and our ability for man to operate in space, a major step forward that can be taken with a relatively small expenditure of funds and yet which will lay the foundation for future space operations. I personally am convinced that this program provides an opportunity that is of incalculable value in the long term to our progress in space flight.

In particular, the same basic equipment that is used for the solar observations can be used to mount a telescope, a telescope that might be some 40 inches in diameter, but also be associated with a visible light telescope and probably would be associated with some X-ray telescopes as well. This array could be used for carrying out stellar observations. One of the basic requirements for this kind of a system is the ability to take long exposures of film so that you can photograph faint stars.

The combination of time of exposure plus the aperture provides you with the faintness of the star that you can identify and in particular,