

COSPAR

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PROGRAM / ABSTRACTS

k.11 EL-BAZ F. (Lunar Exploration Department, Bellcomm, Inc., Washington, D.C., USA). Orbital Photography and Visual Observations on Apollo 15.

The Panoramic and Metric Camera Systems, which were flown for the first time on Apollo 15, were housed in the Scientific Instrument Module (SIM) bay. The Panoramic Camera obtained high resolution (1-3m) photographs of nearly 12% of the lunar surface. This stereo-strip photography provides new insight into the nature of lunar surface features and their origins.

The Mapping Camera System consisted of a Terrain Camera (which took stereo photographs of the surface at about 25m resolution), a Stellar Camera (which simultaneously took photographs of star fields for orientation), and a Laser Altimeter (which made simultaneous measurements of the spacecraft altitude with 2m accuracy). This combination of data allows mapping the overflow areas to a heighting accuracy of about 15m.

To complement SIM bay photography, the astronauts took oblique photographs with the Hasselblad Camera and made visual observation of particular lunar surface features and processes. These observations of subtle color-tone and textural variations, as well as other characteristics which are hard to record on film, yielded significant results.