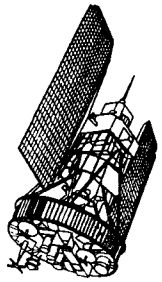
LANDSAT 3

Land Satellite 3

Spacecraft Sketch	Mission Objective
	The Land Satellite 3 (Landsat 3) is the third mission in a continuing series to develop and maintain global satellite coverage in the Earth resources disciplines for a variety of users. The specific primary objectives of the Landsat 3 mission are to: 1) provide the capability to experiment with improved remote sensors over those on the Landsat 1 & 2; and 2) provide continuity of experimentation and verification testing to more precisely determine a full range of applications that can be achieved with remote sensing systems.

TYPE OF MISSION	PROGRAM OFFICE	PROJECT LEAD CENTER	MANAGEMENT APPROACH	S/C CONTRACTOR	I&T CONTRACTOR
EARTH SCIENCES & APPLICATIONS	APPLICATIONS	GSFC	OUT-OF-HOUSE	GE	GE

Payload Description
The Landsat 3 payload includes: I) a five-band radiometeric Multispectral Scanner (MSS); 2) a Return Beam Vidicon (RBV) multispectral television camera system: 3) a data collection system (DCS) for relaying data to earth locations; and 4) two wideband video tape recorders for operational flexibility. The Landsat 3 spacecraft is a follow-on to the Landsats 1&2. An earthoriented, stabilized platform is used to provide mapping images of the earth's surface - the near-polar orbiting spacecraft consists of a two-body configuration. The lower body houses electronic equipment for battery modules, communications, data handling and accessory functions. The upper body includes an attitude control package - which is a self-contained module that houses electronics, sensors, and actuators for the stabilization and control of the spacecraft. Two solar arrays are attached to a solar array drive mechanism which is also housed in the upper body. The command antenna is mounted to the attitude control package.

INSTRUMENT NAME	ACRONYM	PI AFFILIATION	PRINCIPAL INVESTIGATOR	I&T CONTRACTOR
MULTISPECTRAL SCANNER	MSS	GSFC	S. C. FREDEN	HAC/SBRC
RETURN BEAM VIDICON	RBV	GSFC	O. WEINSTEIN	RCA

Instrument Descriptions
The Landsat 3 Multispectral Scanner (MSS), Data Point 515, includes the same four reflected energy bands as the Landsat 1 and 2 MSS, plus a fifth radiated infrared thermal energy band. The ground resolution for the fifth band is 240 x 240 meters. The Landsat 3 MSS has a total of 26 detectors - six for each of the rellected energy bands and two for the radiated thermal energy band. The scan mirror accepts data in only one direction of scan. Hughes Aircraft Corporation (HAC) is the prime contractor and Santa Barbara Research Center (SBRC) is responsible for the basic instrument.
The Landsat 3 Return Beam Vidicon (RBV) is a 3-camera color system designed and built by RCA to transmit video pictures in three spectral ranges. Camera operation is controlled by a camera controller and video combiner. The 2-inch return beam vidicon tubes used in the cameras combine features of vidicon and orthicon tubes.

Launch
3/5/78