Title: Ames Research Center C-130

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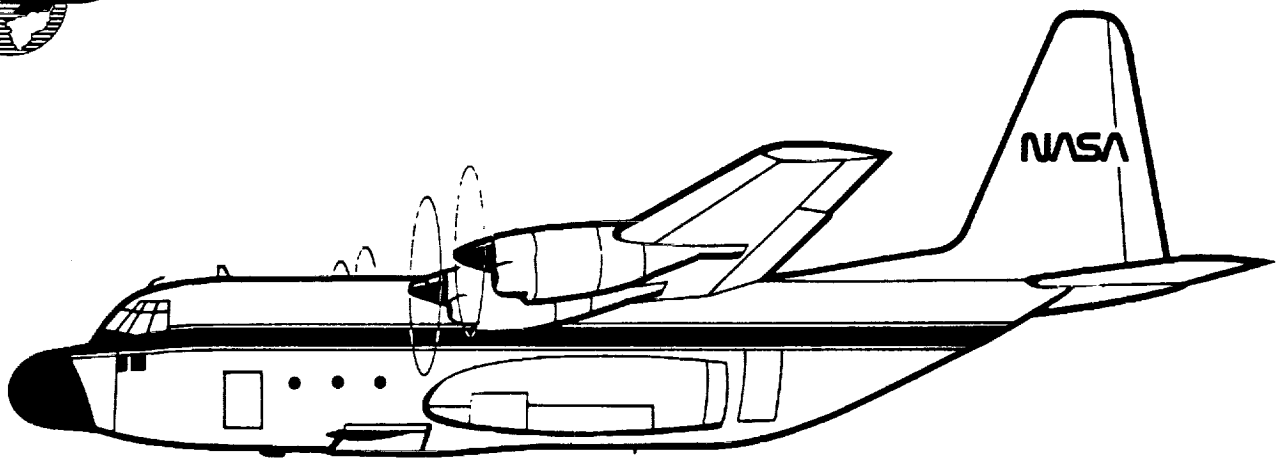
Discipline: Atmosphere, Land, and Oceans

The C130 Earth Resources Aircraft is based at Ames Research Center, Moffett Field, California. The aircraft provides a platform for a variety of sensors that collect data in support of terrestrial and atmospheric projects sponsored by NASA in coordination with federal, state, university, and industry investigators. This data is applied to research in the areas of forestry, agriculture, land use and land cover analysis, hydrology, geology, photogrammetry, oceanography, meteorology, and other earth science disciplines.

The C130 is a platform aircraft flying up to 25,000 feet above sea level at speeds between 150 and 330 knots True Air Speed. The aircraft is capable of precise flight line navigation by means of an optical borescope from which line guidance is provided to the pilots. The aircraft and its complement of on-board sensors provide a readily deployable remote sensing platform that supports scientific research throughout the conterminous United States, Alaska, and Hawaii. Additionally, the aircraft has been deployed in support of research in Australia, Bermuda, France, Germany, Austria, and Italy.

Sensors regularly carried on board are the NS001 Thematic Mapper Simulator (TMS); the Thermal Infrared Multispectral Scanner (TIMS); the Advanced Solid State Array Spectroradiometer (ASAS); the Pushbroom Microwave Radiometer (PBMR); the C-Band Radar Scatterometer (CSCAT); the K-Band Radar Scatterometer (NUSCAT); the Precision Thermal Radiometer (PRT-5); two Zeiss 9 inch format cameras; a Frost-Dew Point Hygrometer; and a C130 Aircraft Data Distribution System (CADDS) which distributes real time navigation and environmental data to experimenter and other stations throughout the aircraft. TIMS, ASAS, PBMR, CSCAT, and NUSCAT are experimenter provided instruments. The rest are a standard part of the aircraft.



C-130B, Lockheed

Description:

Crew:	Two Pilots, Flight Engineer, Navigator
Length:	97 feet, 9 inches
Wingspan:	132 feet, 7 inches
Engine:	Four Allison T56-A-15 Turboprop
Base:	Ames Research Center, Moffett Field, CA

Performance:

Altitude:	25,000 feet (max)
Range:	2200 nautical miles
Duration:	8 hours at 22,000 feet
Speed:	150-330 knots True Air Speed
Payload:	20,000 lb

Accommodations:

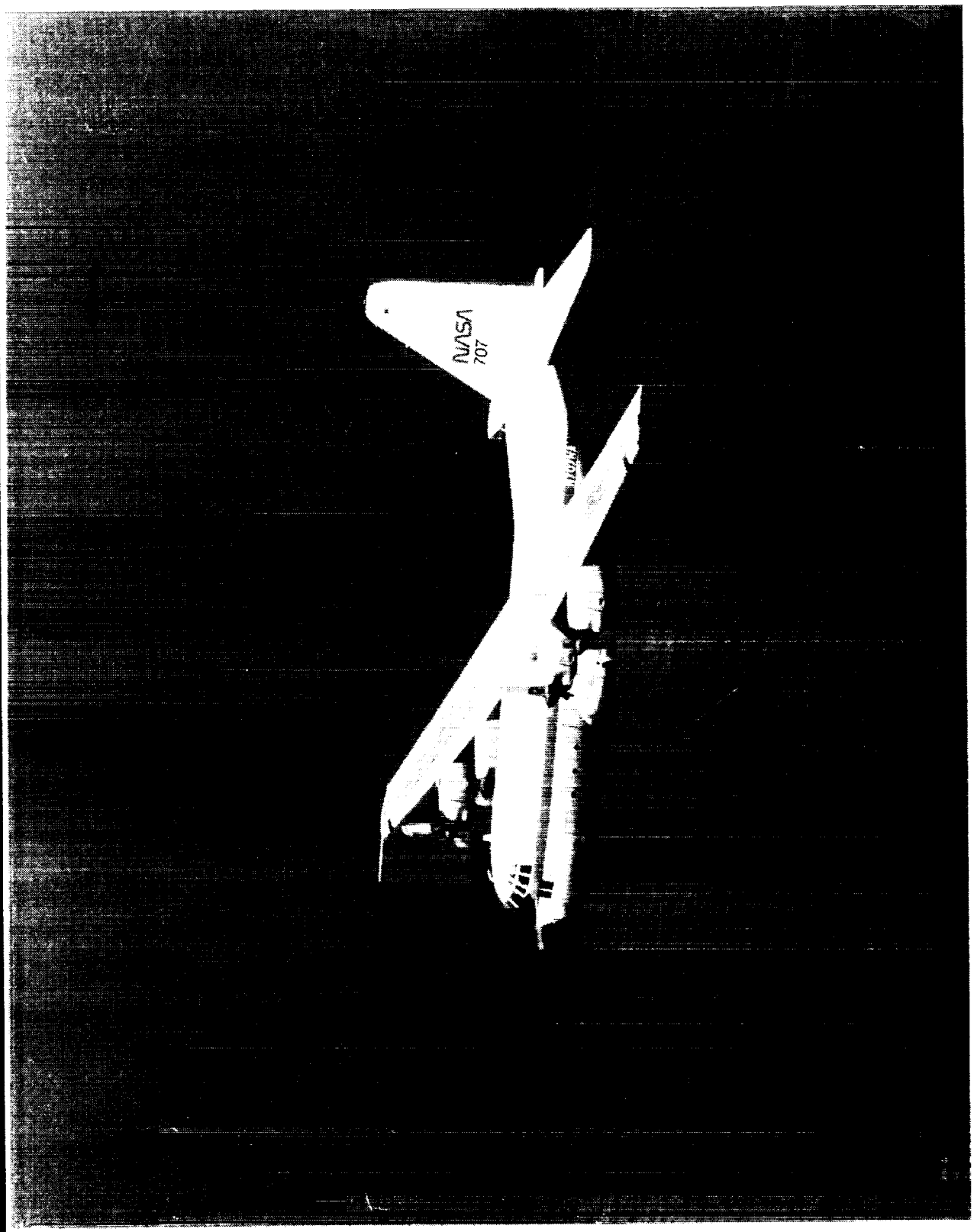
Zenith and Nadir Viewports
External Antenna Attachment Mounts
Optical Windows
19-Inch Panel Equipment Racks

Support:

Navigation Flight and Environmental Data: Recorded Automatically and Available to Investigator
Dew/Frost Point Hygrometer
Radar Altimeter
Weather Radar
Inertial Navigation
Time Code Generator
Housekeeping Distribution

Sensors:

Metric Cameras
Multispectral Scanner
Walk-on: Eight Stations Provided for Investigator Supplied and Operated Sensors



C-130B, Lockheed