



Smithsonian

National Air and Space Museum

Shuttle Radar Topography Mission (SRTM) Drawings

Patti Williams

2020

National Air and Space Museum Archives
14390 Air & Space Museum Parkway
Chantilly, VA 20151
NASMRefDesk@si.edu
<https://airandspace.si.edu/archives>

Table of Contents

Collection Overview	1
Administrative Information	1
Biographical / Historical.....	1
Scope and Contents.....	2
Arrangement.....	2
Names and Subjects	2
Container Listing	

Collection Overview

Repository:	National Air and Space Museum Archives
Title:	Shuttle Radar Topography Mission (SRTM) Drawings
Identifier:	NASM.2019.0051
Date:	1999
Creator:	Jet Propulsion Laboratory (U.S.) United States. National Imagery and Mapping Agency. Geodesy & Geophysics
Extent:	0.79 Cubic feet (Two letter boxes.)
Language:	English .
Summary:	This collection consists of drawings, inspection report sheets, and a manual relating to the Shuttle Radar Topography Mission.

Administrative Information

Acquisition Information

Transfer from NASM Space History Department, 2019, NASM.2019.0051

Processing Information

Arranged, described, and encoded by Patti Williams, 2020.

Preferred Citation

Shuttle Radar Topography Mission (SRTM) Drawings, NASM.2019.0051, National Air and Space Museum, Smithsonian Institution.

Restrictions

No restrictions on access

Conditions Governing Use

Material is subject to Smithsonian Terms of Use. Should you wish to use NASM material in any medium, please submit an Application for Permission to Reproduce NASM Material, available at [Permissions Requests](#) .

Biographical / Historical

In 2000, the Space Shuttle Endeavour carried the Shuttle Radar Topography Mission (SRTM) payload into orbit. Shuttle astronauts used the payload, manufactured by the AEC-Able Engineering Co., to map in high detail and three dimensions more than 70 percent of the Earth's surface--the most complete and accurate rendering of the planet's land masses ever attempted. To acquire this data, the SRTM used a novel hardware system that featured a main antenna located in the Shuttle payload bay, a folding mast (in the mast canister) that extended 60 meters from the Shuttle, and then another antenna system that was positioned at the end of the mast (the outboard structure). It was this dual antenna system — the largest rigid structure then flown

in space — that produced, through interferometry (a technique for combining the information obtained from the two, separate antennas), a three-dimensional mapping of the Earth. The mission was a joint undertaking of NASA's Jet Propulsion Laboratory (JPL) and the Department of Defense's National Imagery and Mapping Agency. The military will use the highest resolution data from SRTM for terrain navigation for planes and cruise missiles. A lower resolution data set will be made available to civilian scientists and other users.

Scope and Contents

This collection consists the following relating to the Shuttle Radar Topography Mission: JPL inspection report sheets; the manual, "Cargo Systems Manual (CSM): Shuttle Radar Topography Mission (SRTM)," which includes technical drawings of the antennas; and nineteen J size drawings of the SRTM.

Arrangement

Arrangement by type.

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Astronautics, Military
- Space Shuttle Program (U.S.)
- Topographical surveying

Types of Materials:

- Technical drawings
- Technical manuals -- 20th century

Names:

- Shuttle Radar Topography Mission