

D76-10129

NASA News

National Aeronautics and
Space Administration

Washington, D.C. 20546
AC 202 755-8370

For Release IMMEDIATE

Press Kit

Project ITOS-H

RELEASE NO: 76-130

Contents

GENERAL RELEASE.....	1-2
DELTA LAUNCH VEHICLE CONFIGURATION.....	3
TYPICAL LAUNCH SEQUENCE FOR ITOS.....	4
DELTA MODEL 2310.....	5-6
LAUNCH OPERATIONS.....	7
NASA PROGRAM/PROJECT MANAGEMENT.....	7-8

NASA News

National Aeronautics and
Space Administration

Washington, D C 20546
AC 202 755-8370

Richard McCormack
Headquarters, Washington, D.C.
(Phone: (202/755-8487)

For Release:
IMMEDIATE

Joseph McRoberts
Goddard Space Flight Center, Greenbelt, Md.
(Phone: 301/982-4955)

RELEASE NO: 76-130

NASA TO LAUNCH SEVENTH ITOS FOR NOAA

NASA has scheduled launch of the seventh ITOS operational weather satellite, ITOS-H, for the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce July 29 from the Western Test Range at Vandenberg Air Force Base, Lompoc, Calif.

Launch window for the date opens at 1:07 and closes at 1:17 p.m., EDT. A NASA Delta launch will lift the 340-kilogram (749-pound) weather satellite into a 1,450-kilometer (790-mile) circular polar orbit with a period of 115 minutes.

- more -

-2-

ITOS was designed and developed by NASA for NOAA. It will be designated NOAA-5 after it successfully enters orbit.

Instruments aboard the satellite will provide visible and infrared images of cloud cover, snow, ice, the sea surface and gather information on temperatures and moisture in the atmosphere.

NOAA will reimburse NASA for the launch vehicle and launch costs.

(END OF GENERAL RELEASE. BACKGROUND INFORMATION FOLLOWS.)

DELTA LAUNCH VEHICLE CONFIGURATION

First Stage

The first stage is a McDonnell Douglas Extended-Long-Tank Thor booster, incorporating three strap-on Thiokol Castor II solid-fuel rocket motors. The booster is powered by a Rocketdyne RS-27 engine using liquid oxygen and liquid hydrocarbon propellants. The main engine is gimbal-mounted to provide pitch and yaw control from liftoff to main engine cutoff (MECO).

Second Stage

The McDonnell Douglas second stage is powered by a TRW TR-201 liquid-fuel, pressure-fed engine that also is gimbal-mounted to provide pitch and yaw control through the two second stage burns. A nitrogen gas system uses eight fixed nozzles for roll control during powered and coast flight, as well as pitch and yaw control during coast and after second stage cutoffs. Two fixed nozzles, fed by the propellant tank helium pressurization system, provide retrothrust after spacecraft separation.

TYPICAL LAUNCH SEQUENCE FOR ITOS

<u>EVENT</u>	<u>TIME</u>
Liftoff	0 sec.
Three Solid Motor Burnout	38.190
Three Solid Motor Jettison	1 min. 45 sec.
Main Engine Cutoff (MECO)	3 min. 48 sec.
First/Second Stage Separation	3 min. 56 sec.
Second Stage Ignition	4 min. 3 sec.
Fairing Jettison	4 min. 42 sec.
Second Stage Cutoff (SECO I)	8 min. 45 sec.
Second Stage Restart	39 min. 48 sec.
Second Stage Cutoff (SECO II)	1 hour
Spacecraft Separation	1 hour 4 min. 41 sec.

- 4 -

| MORE |

DELTA MODEL 2310

Height: 35.4 meters (116 feet)
including shroud.

Maximum Diameter: 2.4 m (8 ft.), without attached
solid-propellant boosters.

Liftoff Weight: 106,000 kilograms (230,250
pounds or about 116 tons)

Liftoff Thrust: 1,278,000 newtons (286,500
pounds), includes strap-on solids.

FIRST STAGE: Liquid-fuel engines only,
extended long-tank Thor
produced by McDonnell Douglas
Astronautics Co.; RS-27 engine
produced by Rocketdyne Division
of Rockwell International.

Diameter: 2.4 m (8 ft.)

Height: 21.3 m (70 ft.)

Propellants: RJ-1 kerosene as the fuel and
liquid oxygen (LOX) as the
oxidizer.

Thrust: 912,000 newtons (205,000 lb.)

Burning Time: About 228 seconds

Weight: Approximately 84,700 kg
(186,340 lb. or 93 tons),
excluding strap-on solids.

Strap-on Solids: Three solid-propellant CASTOR-II
(TX354-5) rockets produced by
the Thiokol Chemical Corp.

Diameter: 0.8 m (31 in.)

Height: 6.0 m (19.8 ft.)

Total Weight: 13,410 kg (29,568 lb. or about 15 tons)
4,470 kg (9,850 lb.) each

Thrust: 693,950 newtons (156,000 lb.) total for three
231,317 newtons (52,000 lb.) each

SECOND STAGE: Produced by McDonnell Douglas Astronautics Co., utilizing a TRW TR-201 engine. Major subcontractors for the vehicle inertial guidance system located on the second stage are Hamilton Standard, Teledyne, and Delco.

Propellants: Liquid--Aerozene 50 for the fuel, nitrogen tetroxide (N₂O₄) for the oxidizer.

Diameter: 1.5 m (5 ft.) with 2.4 m (8 ft.) attachment ring

Height: 5.2 m (21 ft.)

Weight: 6,210 kg (13,662 lb. or 6.8 tons)

Thrust: About 42,300 newtons (9,500 lb.)

Total Burning Time: 335 seconds

LAUNCH OPERATIONS

The Expendable Launch Vehicle Program Office of the Office of Space Flight at NASA Headquarters is responsible for the Delta program management. Project management and technical direction of Delta is the responsibility of the Goddard Space Flight Center, Greenbelt, Md.

NASA launch operations from its West Coast facility are the responsibility of the Kennedy Space Center's Expendable Vehicles Directorate, Western Launch Operations Division (WLOD) located at Vandenberg Air Force Base near Lompoc, Calif. The prime contractor for Delta hardware production and launch operations is the McDonnell Douglas Corporation, Huntington Beach, Calif.

ITOS-H will be launched by Delta 126 from Space Launch Complex 2 West (SLC 2 W).

NASA PROGRAM/PROJECT MANAGEMENT

NASA Headquarters

John F. Yardley	Associate Administrator for Space Flight
Joseph B. Mahon	Director of Expendable Launch Vehicle Programs
Peter T. Eaton	Manager, Delta Program

Goddard Space Flight Center

Robert S. Cooper	Director
Robert Lindley	Director of Projects
Tecwyn Roberts	Director of Networks
Albert G. Ferris	Director of Mission and Data Operations
Charles R. Gunn	Delta Project Manager

William R. Russell	Deputy Delta Project Manager, Technical
Robert Goss	Chief, Mission Analysis and Integration Branch, Delta Project Office
Frank Lawrence	Delta Mission Integration Engineer
Gilbert Branchflower	TIROS Project Manager
Gerald L. Burdett	Deputy for Technical
William M. Peacock	Spacecraft Manager
<u>Kennedy Space Center</u>	
Lee R. Scherer	Director
George F. Page	Director, Expendable Vehicles
Henry R. Van Goey	Manager, KSC Western Launch Operations Division
Wilmer "Bud" Thacker	Chief, Delta Operations, Launch Vehicle Engineering Branch, WLCD
Carl Latham	ITOS H Spacecraft Coordinator



July 16, 1976