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NASA News

National Aeronautics and
Space Administration

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

P81-10189

For Release:

IMMEDIATE

Ken Senstad
Headquarters, Washington, D.C.
(Phone: 202/755-8330)

Linda Ellis
Lewis Research Center, Cleveland, Ohio
(Phone: 216/433-4000, Ext. 415)

RELEASE NO: 81-185

THIRD INTELSAT V SATELLITE SCHEDULED FOR LAUNCH

Intelsat V-C the third in a series of nine advanced international telecommunications satellites owned and operated by the 106-nation International Telecommunications Satellite Organization (Intelsat), is scheduled to be launched by the NASA Kennedy Space Center on board an Atlas Centaur launch vehicle no earlier than Dec. 9, 1981, from Cape Canaveral Air Force Station, Fla.

The first two Intelsat Vs were successfully launched by NASA on Dec. 6, 1980 and May 23, 1981.

Intelsat V-C weighs 1,870 kilograms (4,110 pounds) at launch and has almost double the communications capability of satellites in the earlier Intelsat IV series -- 12,000 simultaneous two-way voice circuits and two color television channels.

November 27, 1981

Physically it is 15.9 meters (52 feet) long and 6.4 m (21 ft.) wide in orbit. It will be positioned initially in geosynchronous orbit at 15 degrees east longitude while it undergoes extensive in-orbit checkout.

The Intelsat V series of communications satellites are built by the Ford Aerospace and Communications Corp., Palo Alto, Calif., using system components developed by firms in the United Kingdom, France, the Federal Republic of Germany, Italy and Japan.

The International Telecommunications Satellite Organization is headquartered in Washington, D.C. NASA is reimbursed for all costs of the Atlas Centaur and launch services under the provisions of a launch services agreement signed in May last year.

The Atlas Centaur (AC-55) will place the Intelsat V-C into a planned elliptical transfer orbit ranging from 166.6 to 35,964 kilometers (103 to 22,347 miles). It is from this orbit at apogee that a solid propellant rocket motor attached to the satellite will be fired on command from the Intelsat launch control center in Washington, D.C., to circularize the orbit at geosynchronous altitude over the equator. At that altitude, because the speed of the satellite in orbit matches the rotational speed of the Earth, the satellite remains in position over one spot.

NASA's Lewis Research Center, Cleveland, has management responsibility for Atlas Centaur development and operation. NASA's Kennedy Space Center, Fla., is responsible for launch vehicle checkout and launch.

Overall direction of the NASA expendable launch vehicle program is vested in the Office of Space Transportation Operations in Washington, D.C.

(END OF GENERAL RELEASE; BACKGROUND INFORMATION FOLLOWS.)

ATLAS CENTAUR LAUNCH VEHICLE STATISTICS

Intelsat V-C will be launched by the Atlas Centaur, NASA's standard launch vehicle for intermediate weight payloads. The launch vehicle has the following general characteristics:

Height: 40.8 meters (134 feet) including nose fairing

Diameter: 3.05 m (10 ft.)

Total Liftoff Weight: 147,926 kg (326,120 lb.) including spacecraft

Liftoff Thrust: 1,917,088 newtons (431,000 lb.) sea level

Atlas Stage

The Atlas stage consists of the booster section (one-half stage) and the sustainer/vernier section (first stage). The Atlas is manufactured by General Dynamics/Convair, San Diego, Calif., using the MA-5 engine system supplied by Rocketdyne Division of Rockwell International, Canoga Park, Calif. The MA-5 system consists of two booster engines, one sustainer engine and two vernier engines. The Atlas stage has the following characteristics:

Height: 21.1 m (69.5 ft.)

Diameter: 3.05 m (10 ft.)

Propellants: RP-1 kerosene for fuel and liquid oxygen (LOX) as the oxidizer

Thrust: Total Booster: 1,645,750 N (370,000 lb.) sea level
Sustainer: 266,880 N (60,000 lb.)
Total Vernier: 4,448 N (1,000 lb.)

Total Liftoff Thrust: 1,917,088 N (431,000 lb.)

Centaur Stage

The Centaur (second stage) is manufactured by General Dynamics/Convair, using the RL-10 engines built by Pratt and Whitney Aircraft Group, West Palm Beach, Fla. This stage has the following characteristics:

Height: 9.1 m (30 ft.)

Diameter: 3.05 m (10 ft.)

Propellants: Liquid hydrogen for fuel and liquid oxygen for the oxidizer

Thrust: 133,440 N (30,000 lb.) vacuum

LAUNCH OPERATIONS

NASA's John F. Kennedy Space Center is responsible for the preparation and launch of Atlas Centaur AC-55, which will carry Intelsat V-C into orbit.

The Atlas and Centaur stages of Atlas Centaur 55 arrived at the Cape Canaveral Air Force Station on May 27, 1981. The Atlas was erected on Pad B of Launch Complex 36 on July 16, 1981, and the Centaur stage on July 18, 1981. A Terminal Countdown Demonstration Test was carried out on Sept. 30, 1981.

The Intelsat V-C satellite arrived on Oct. 24, 1981, and was checked out in Hangar AO at Cape Canaveral. It was moved on Nov. 16, 1981 to the Explosive Safe Area for final servicing and capsulation. There, the satellite's attitude control system was fueled with hydrazine, the apogee kick motor was installed and the protective shroud was put in place.

The satellite and the launch vehicle were scheduled for mating on Pad B on Dec. 1, 1981.

LAUNCH SEQUENCE FOR INTELSAT V-C

Flight Events	Time (seconds)	Velocity (km/hr	mph)	Range (kilometers/miles)		Altitude (kilometers/miles)	
Liftoff	.0	0	0	.0	.0	.0	.0
BECO	139.4	8,832.	5,488.	80.4	50.0	56.3	35.0
Booster Pack Jettison	142.5	8,925.	5,546.	87.4	54.3	59.3	36.8
Insulation Pack Jettison	164.4	9,476.	5,888.	139.0	86.4	79.2	49.2
Nose Fairing Jettison	209.2	10,994.	6,831.	259.2	161.1	113.6	70.6
SECO	254.6	13,197.	8,200.	405.4	251.9	141.8	88.1
Atlas/Centaur Separation	256.6	13,202.	8,203.	412.3	256.3	142.9	88.8
MES-1	263.1	13,171.	8,184.	435.5	270.6	146.4	91.0
MECO-1	574.2	26,788.	16,645.	2,015.6	1,252.4	164.2	102.0
MES-2	1,421.6	26,832.	16,673.	8,183.8	5,085.1	159.7	99.2
MECO-2	1,515.6	35,366.	21,976.	8,962.0	5,568.7	176.3	109.6
Spacecraft Separation	1,650.6	35,008.	21,753.	10,230.0	6,356.6	286.7	178.2
Reorient Centaur	1,665.6						
Start Blowdown	1,830.6						
End Blowdown	2,080.6						

THE NASA INTELSAT TEAM

NASA Headquarters

Dr. Stanley I. Weiss	Associate Administrator for Space Transportation Operations
Joseph B. Mahon	Director, Expendable Launch Vehicles
F. R. Schmidt	Manager, Atlas Centaur Launch Vehicle

Lewis Research Center

Dr. John F. McCarthy Jr.	Director
Dr. John Klineberg	Associate Director
Lawrence J. Ross	Director, Space Directorate
J. E. Patterson	Chief, Launch Vehicles Division
S. V. Szabo Jr.	Deputy Chief, Launch Vehicles Division
Richard E. Orzechowski	Intelsat Mission Project Engineer

Kennedy Space Center

Richard G. Smith	Director
Thomas S. Walton	Director, Cargo Operations
Charles D. Gay	Director, Deployable Payloads Operations
John Gossett	Chief, Centaur Operations
Lawrence F. Kruse	Spacecraft Coordinator

ATLAS CENTAUR CONTRACTORS

General Dynamics/Convair San Diego, Calif.	Atlas Centaur launch vehicle
Honeywell Aerospace Division St. Petersburg, Fla.	Centaur guidance inertial measurement group
Pratt and Whitney Aircraft Group West Palm Beach, Fla.	Centaur RL-10 engines
Teledyne Industries, Inc. Northridge, Calif.	Digital computer unit/PCM telemetry
Rocketdyne Division Rockwell International Corp. Canoga Park, Calif.	MA-5 propulsion systems

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