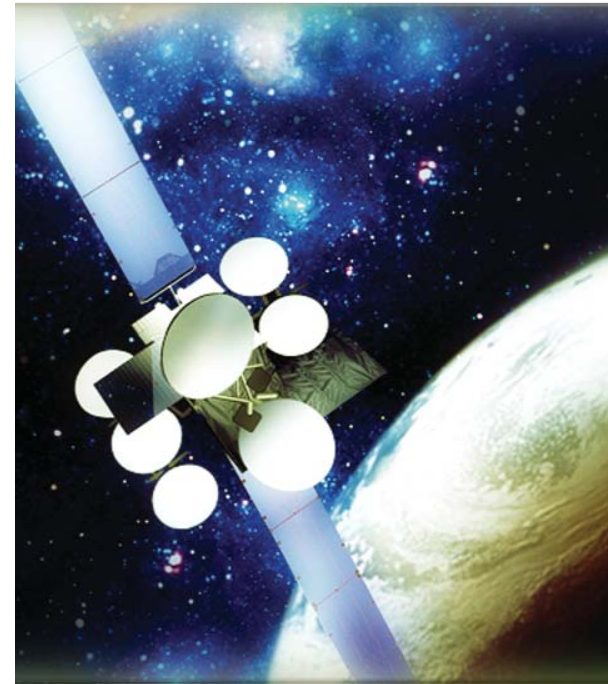


MISSION PROFILE

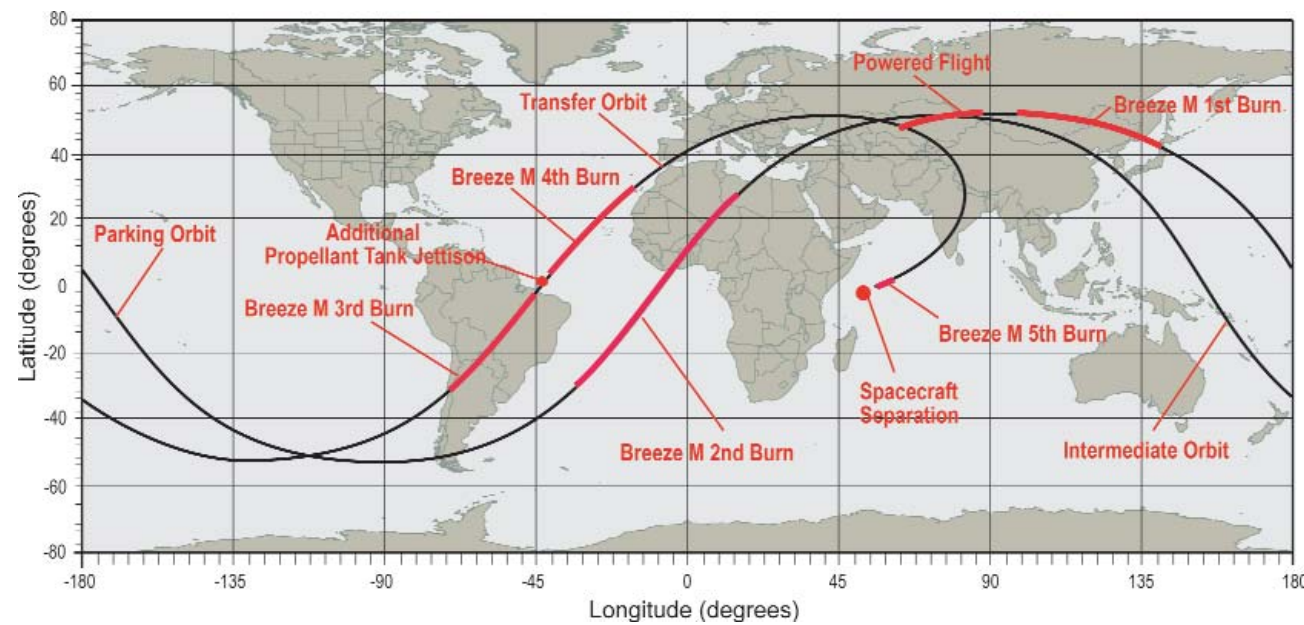
The Proton Breeze M launch vehicle, utilizing a 5-burn Breeze M mission design, will lift off from Pad 39 at the Baikonur Cosmodrome, Kazakhstan, with the DIRECTV 10 satellite on board. This will be the debut of the Enhanced Proton Breeze M, which is capable of launching spacecraft over 6000 kg into Geosynchronous Transfer Orbit (GTO). The first three stages of the Proton will use a standard ascent trajectory to place the Breeze M fourth stage and the DIRECTV 10 satellite into a sub-orbital trajectory, from which the Breeze M will place itself and the spacecraft into a circular parking orbit. Once DIRECTV 10 is in the parking orbit, it will be propelled into its transfer orbit by a series of additional burns of the Breeze M. Separation occurs approximately 9 hours, 8 minutes and 40 seconds after liftoff.

THE SATELLITE

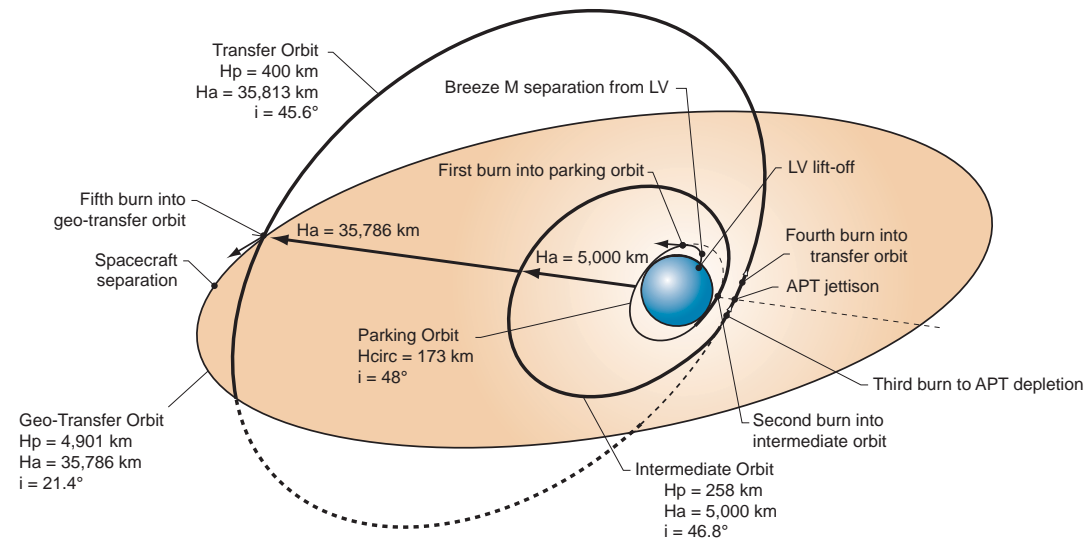


International Launch Services

Typical 5-Burn Proton Ascent Ground Track



Typical 5-Burn Insertion Into Orbit



Satellite Operator:
DIRECTV, Inc.
www.directv.com

Satellite Manufacturer:
The Boeing Company
www.boeing.com

Platform:
Boeing 702

Separated Mass:
5,893 kg

Design Life:
15 years

Mission:

DIRECTV's next-generation satellite features state-of-the-art antenna and payload subsystems that will provide customers with unparalleled national and local HDTV (High Definition Television) service. The powerful 131-transponder payload integrates 32 active and 12 spare TWTAs at Ka-band for national service and 55 active and 15 spare TWTAs for spot beams. The payload is powered by a gallium arsenide solar array that spans more than 48 meters. DIRECTV 10 will receive and transmit programming throughout the United States with two large Ka-band reflectors, each measuring 2.8 meters in diameter, and nine other Ka-band reflectors.



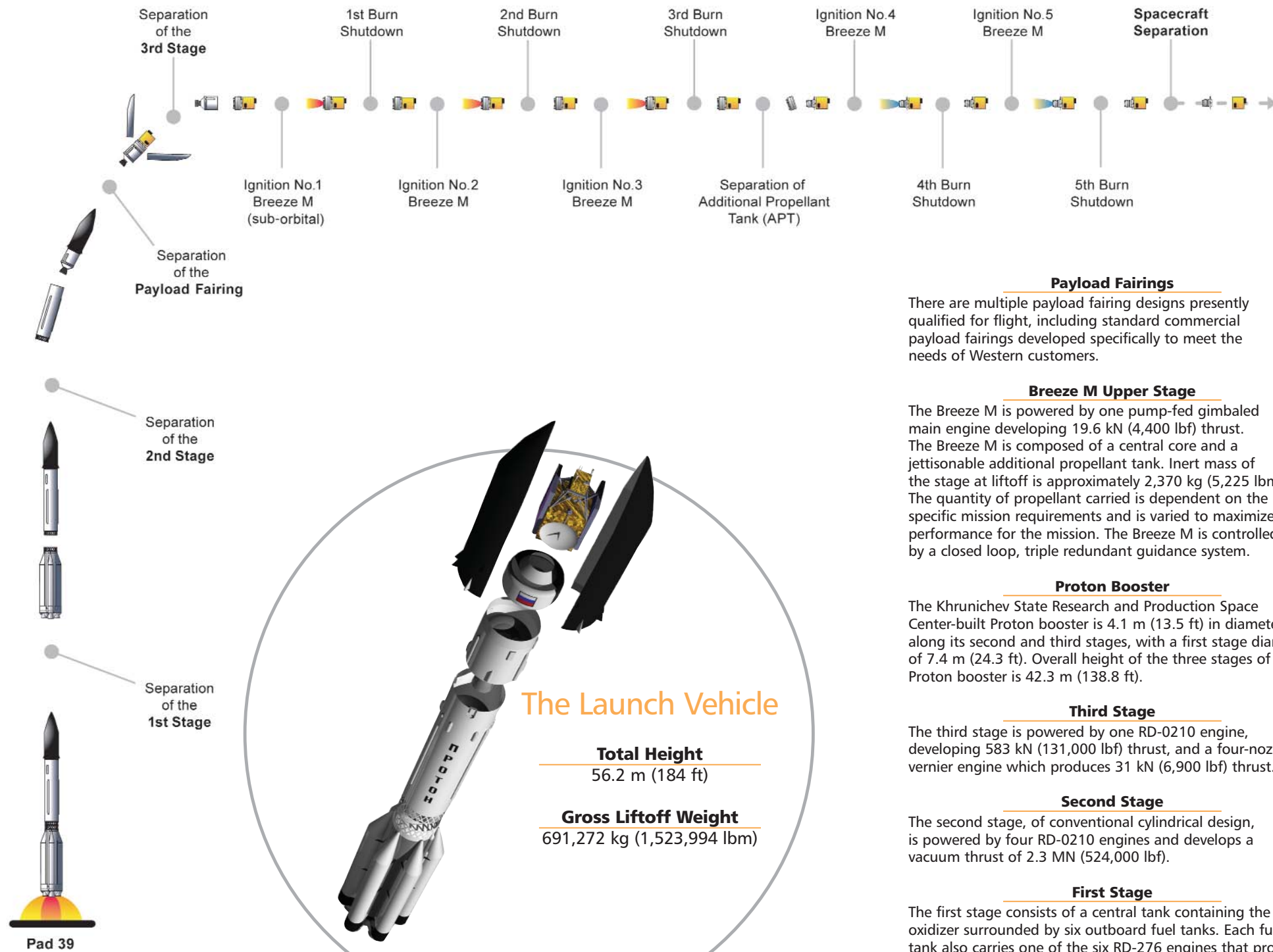
July 2007

DIRECTV 10

Mission Overview

- 1st flight of Enhanced Proton Breeze M
- 1st Boeing 702 spacecraft on Proton
- 2nd ILS Proton in 2007
- 3rd DIRECTV launch on Proton
- 326th Proton launch

MISSION ASCENT PROFILE



Countdown and Flight Events Summary

EVENT	HR:MIN:SEC
Ignition sequence start	...00:00:02.5
Stage one ignition, 40 percent thrust	...00:00:01.6
Command stage one thrust to 100 percent	...00:00:00.9
Liftoff	...00:00:00.0
Maximum dynamic pressure	...00:01:02
Stage one/two separation	...00:02:00
Stage two/three separation	...00:05:27
Payload fairing jettison	...00:05:44
Stage three upper stage separation from Breeze M	...00:09:41
Breeze M first burn ignition	...00:11:46
Breeze M first burn shutdown	...00:16:04
Breeze M second burn ignition	...01:05:37
Breeze M second burn shutdown	...01:23:09
Breeze M third burn ignition	...03:26:19
Breeze M third burn shutdown	...03:37:03
Breeze M fourth burn ignition	...03:39:20
Breeze M fourth burn shutdown	...03:45:44
Breeze M fifth burn ignition	...08:48:37
Breeze M fifth burn shutdown	...08:54:40
Breeze M/spacecraft separation	...09:08:40

Payload Fairings
 There are multiple payload fairing designs presently qualified for flight, including standard commercial payload fairings developed specifically to meet the needs of Western customers.

Breeze M Upper Stage
 The Breeze M is powered by one pump-fed gimbaled main engine developing 19.6 kN (4,400 lbf) thrust. The Breeze M is composed of a central core and a jettisonable additional propellant tank. Inert mass of the stage at liftoff is approximately 2,370 kg (5,225 lbf). The quantity of propellant carried is dependent on the specific mission requirements and is varied to maximize performance for the mission. The Breeze M is controlled by a closed loop, triple redundant guidance system.

Proton Booster
 The Khrunichev State Research and Production Space Center-built Proton booster is 4.1 m (13.5 ft) in diameter along its second and third stages, with a first stage diameter of 7.4 m (24.3 ft). Overall height of the three stages of the Proton booster is 42.3 m (138.8 ft).

Third Stage
 The third stage is powered by one RD-0210 engine, developing 583 kN (131,000 lbf) thrust, and a four-nozzle vernier engine which produces 31 kN (6,900 lbf) thrust.

Second Stage
 The second stage, of conventional cylindrical design, is powered by four RD-0210 engines and develops a vacuum thrust of 2.3 MN (524,000 lbf).

First Stage
 The first stage consists of a central tank containing the oxidizer surrounded by six outboard fuel tanks. Each fuel tank also carries one of the six RD-276 engines that provide first-stage power. Total first stage sea-level thrust is approximately 9.9 MN (2,240,000 lbf) with a vacuum-rated level thrust of 11 MN (2,470,000 lbf). The first stage engines are flown at a 112% thrust level.