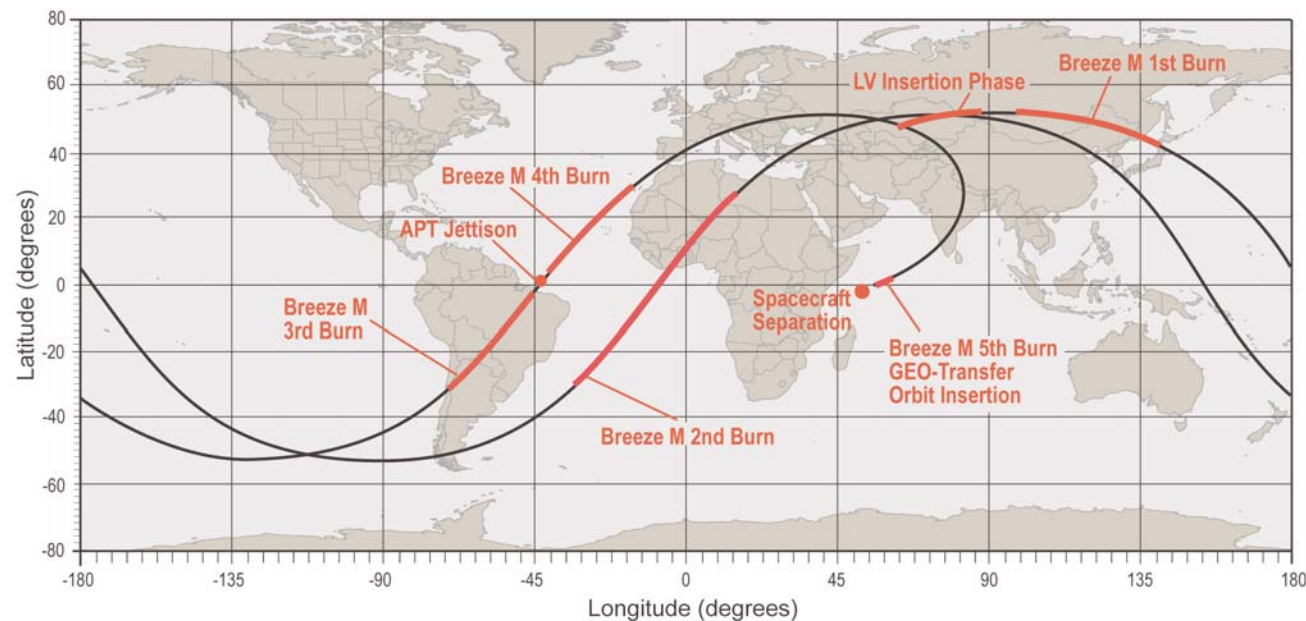


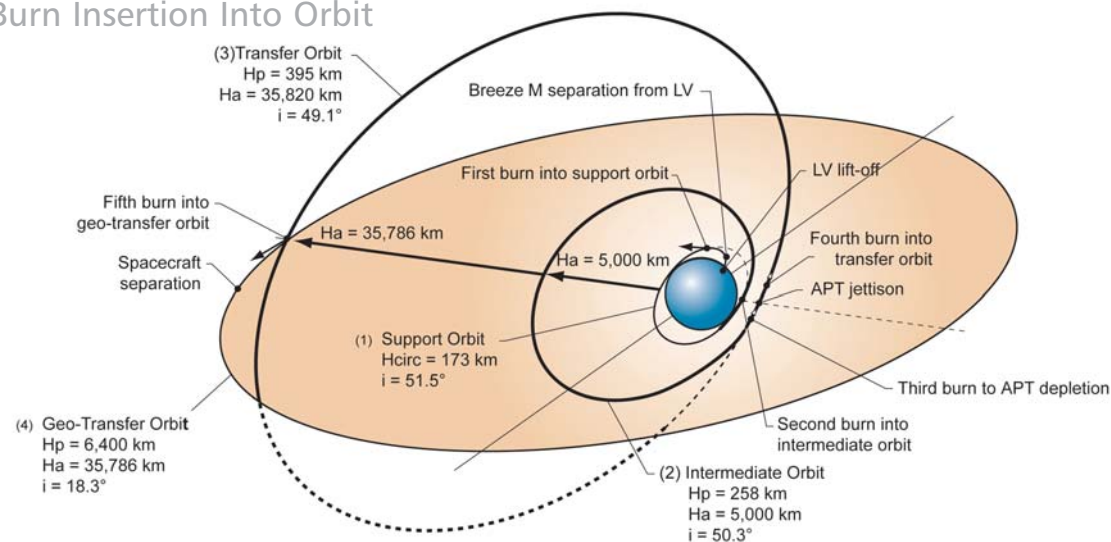
MISSION PROFILE

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 AMC-23 satellite on board. The first three stages of the Proton will use a standard ascent trajectory to place the Breeze M fourth stage and the AMC-23 satellite into a sub-orbital trajectory, from which the Breeze M will place itself and the spacecraft into a circular reference orbit. Once AMC-23 is in the reference orbit, it will be propelled into its transfer orbit by a series of additional burns of the Breeze M. Separation occurs approximately nine hours and 20 minutes after liftoff.

Typical 5-Burn Proton Ascent Ground Track



Typical 5-Burn Insertion Into Orbit



THE SATELLITE



International Launch Services

Satellite Operator:
SES AMERICOM
www.ses-amicom.com

Satellite Manufacturer:
Alcatel Alenia Space
www.alcatel.com/space

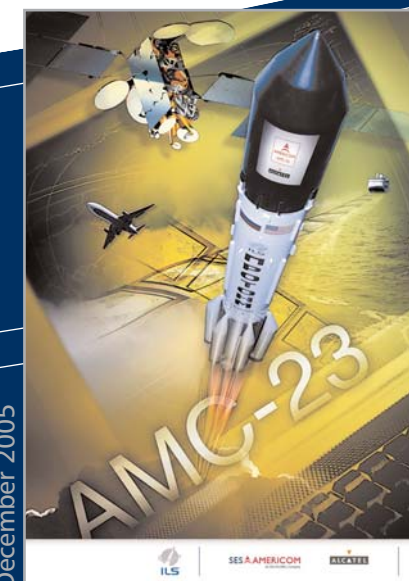
Platform:
Spacebus-4000C3

Separated Mass:
4,981Kg

Design Life:
16 years

Mission:

This highly-advanced hybrid C/Ku-band satellite will serve local, transcontinental and transoceanic customers throughout the Pacific Region, including North America, Asia, Australia, New Zealand, Indonesia and the islands of the South Pacific. High-powered and state-of-the-art, AMC-23 will offer superior coverage and unprecedented levels of performance.



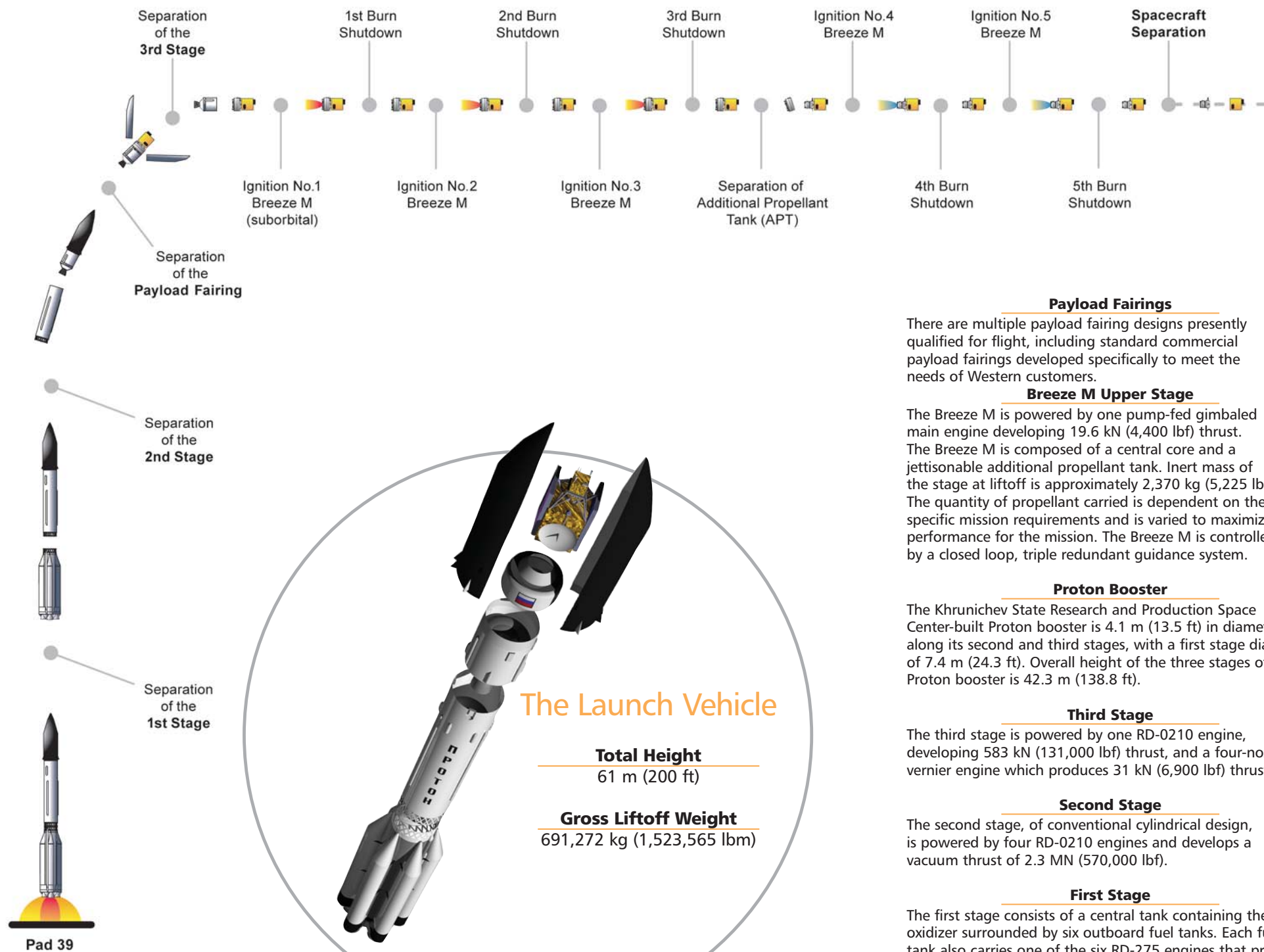
December 2005

AMC-23

Mission Overview

- 11th ILS launch for SES AMERICOM fleet
- 4th ILS Proton launch of 2005
- 317th Proton launch

MISSION ASCENT PROFILE



The Launch Vehicle

Total Height
61 m (200 ft)

Gross Liftoff Weight
691,272 kg (1,523,565 lbm)

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 lbm). 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 (570,000 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-275 engines that provide first-stage power. Total first stage sea-level thrust is approximately 9.5 MN (2,140,000 lbf) with a vacuum-rated level thrust of 10.5 MN (2,360,000 lbf). The first stage engines are flown at a 107% thrust level.

Countdown and Flight Events Summary

EVENT	HR:MIN:SEC
Ignition sequence start	-00:00:02.5
Stage one ignition, 40% thrust	-00:00:01.6
Command stage one thrust to 100%	-00:00:00.9
Liftoff	.00:00:00.0
Maximum dynamic pressure	.00:01:06.0
Stage one/two separation	.00:02:04.0
Stage two/three separation	.00:05:31.0
Payload fairing jettison	.00:05:45.2
Stage three upper stage separation from Breeze M	.00:09:40.9
Breeze M first burn ignition	.00:11:19.0
Breeze M first burn shutdown	.00:19:14.0
Breeze M second burn ignition	.01:08:46.7
Breeze M second burn shutdown	.01:25:26.7
Breeze M third burn ignition	.03:29:03.0
Breeze M third burn shutdown	.03:40:22.0
Breeze M fourth burn ignition	.03:42:08.0
Breeze M fourth burn shutdown	.03:47:53.3
Breeze M fifth burn ignition	.08:49:23.3
Breeze M fifth burn shutdown	.08:56:07.0
Breeze M/spacecraft separation	.09:19:33.3