The eight high-powered Space Systems/Loral (SS/L) spacecraft of the INTELSAT VII/VIIA program, which provide global dissemination of voice, video, and data transmission services, have been launched and are in orbit.

The program, conducted for the more than 140 member nations of the International Telecommunications Satellite Organization (INTELSAT), began with the first launch of the series in October, 1993. This orbital network consists of highly reliable communications satellites, positioned over the Atlantic, Indian, and Pacific Ocean regions. That network is designed to provide flexible interconnection between coverage areas that can be changed to respond to communications needs that develop and change from hour-to-hour and day-to-day.

The geostationary INTELSAT VII and VIIA satellites are designed to provide the radio frequency power, capacity, and coverage to satisfy the burgeoning global appetite for digital services, smaller earth stations, and specialized INTELSAT communications services.

The INTELSAT VII/VIIA communications payload architecture evolved from SS/L’s INTELSAT V series and consists of two independent communications subsystems, which can be cross-strapped and operate at C-band (4/6 GHz) and Ku-band (11/14 GHz). Total end-of-life solar array transmitter power generated by an INTELSAT VII is 3600 watts, while an INTELSAT VIIA generates 4800 watts.

The INTELSAT VII/VIIA spacecraft are based on SS/L’s three-axis, body-stabilized 1300 bus, whose modular design has proven its worth during some 290 years of cumulative on-orbit service, close to one-half of the total of 650 years amassed by SS/L satellites to date.

The INTELSAT VIIA designation identifies the three satellites that were enlarged and fitted with additional communications capacity and power. Four additional, more powerful Ku-band transponders, each with up to 73-watt TWTAs, and a fourth solar-array panel provided the added capacity. INTELSAT VII/VIIA spacecraft were launched on Ariane 4 and Atlas Centaur IIA vehicles. Nine INTELSAT VII/VIIA’s were actually built, but one was destroyed in a failed launch attempt.

SS/L’s team members for the successful INTELSAT V and VII/VIIA programs were Aerospatiale and Alcatel Telcom of France, Alenia, Italy, and Mitsubishi Electric Corporation (MEICO) and NEC of Japan.

SS/L’s 1300 buses are designed to achieve long useful orbital life — in this case 16.5 years — through use of a bipropellant propulsion system and a momentum-bias system for excellent stationkeeping and orbital stability. Solar arrays and nickel-hydrogen batteries provide uninterrupted electrical power.

SS/L satellites have amassed 650 years of cumulative on-orbit service.

Space Systems/Loral, a wholly owned subsidiary of Loral Space & Communications, is a premier provider of a full range of satellite systems and services, including the procurement of insurance and launch services and mission control operations from its Palo Alto, California, headquarters. SS/L is ISO 9001 certified.

SS/L’s product mix comprises the 20.20™, the most powerful geostationary (GEO) commercial spacecraft to fly, 1300 GE0 satellite platform and the 401S low-earth-orbit (LEO) spacecraft.

SS/L’s backlog consists of more than 60 satellites designed for applications such as digital telecommunications, telephony, direct-to-home broadcast, environmental monitoring, or air traffic control.

SS/L’s international customer base includes businesses and government agencies involved in communications and environmental monitoring. Customers for satellites under construction or recently launched include: APSTAR, CD Radio, Chinasat, Globalstar, NASA, INTELSAT, Rocketdyne, KaSTAR, Mabuhay, MTSAT, Loral Orion, PanAmSat, Loral Skynet, and TEMPO. For more information, visit Space Systems/Loral’s web site at http://www.ssloral.com.

Loral Space & Communications (NYSE:LOR) is a high technology company that primarily concentrates on satellite manufacturing and satellite-based services, including broadcast transponder leasing and value-added services, domestic and international corporate data networks, global wireless telephony, broadband data transmission and content services, Internet services, and international direct-to-home satellite services. For more information, visit Loral’s web site at http://www.loral.com.