

CSIR lends a hand to Sweden's SIRIUS 4 satellite in orbit

It's the season for launch supports at the CSIR Satellite Applications Centre. Having seen the Skynet 5B satellite safely into orbit recently, the centre's tracking, telemetry and command team was called upon again to support the launch of a new Swedish telecommunications satellite, SIRIUS 4.

The SIRIUS 4 satellite was launched successfully from the Baikonur Cosmodrome in the Republic of Kazakhstan. Lift-off occurred aboard a Proton/Breeze M launch vehicle provided by International Launch Services. The satellite reached its final geostationary orbit 35 786 km above the earth on 18 November 2008.

However, the CSIR and SIRIUS 4 had not seen the last of each other. Satellite-builder Lockheed Martin contracted the CSIR for the transfer orbit support (moving from one circular orbit to another) via the Intelsat ground network for a duration of five days in November 2007. The CSIR will also do in-orbit tests (IOTs) for the SIRIUS spacecraft between 3 and 28 December 2007 to verify that the payload and antenna platform are operational and performing according to specifications. The IOTs need to be performed prior to release of the satellite to the satellite operator.

Built by Lockheed Martin for the Sweden-based telecommunications provider SES SIRIUS, the SIRIUS 4 satellite will provide direct-to-home television and other services to customers across Europe, Africa and the Baltic/Nordic region. It features 46 active Ku-band high-power transponders in the broadcasting satellite service and the fixed service satellite (FSS) frequency band. It is equipped with an active Ka-band transponder for interactive applications such as internet and TV in the Nordic and Baltic regions. The spacecraft has a sub-Sahara African beam to complement existing coverage of Africa, which is accomplished using six additional active Ku-band FSS transponders. An interconnect payload connects Africa and Europe by means of a second Ka-band transponder. At 4 385 kg, SIRIUS 4 is designed for a 15-year service lifetime.

SES SIRIUS AB, which owns and operates the SIRIUS satellite system (SIRIUS 2 and 3), is a leading satellite system in the Nordic countries, the Baltic States and Central and Eastern Europe. It offers cost-effective solutions for TV and radio broadcasts and broadband services in these regions. The SIRIUS satellites are positioned at 5° east and offer reliable communication links across Europe.



A 18-storey Russian-built Proton rocket lifts off in heavy fog from the Baikonur Cosmodrome in Kazakhstan (Photo: Business Wire)