

Future Geostationary Meteorological Satellite Systems

NEW RUSSIAN GEOSTATIONARY OPERATIONAL METEOROLOGICAL SATELLITE ELECTRO-L / GOMS N2

Summary and purpose of the WP

In 2006 a new Russian geostationary operational meteorological satellite ELECTRO-L / GOMS N2 is planned to be launched into 76° eastern longitude point.

The satellite will be equipped with a multi-zonal scanner with the parameters closed to those of SEVIRI-scanner. ELECTRO-L will also relay the data between the weather centres, poll the autonomous meteorological stations, pick up and retransmit signals from the Search and Rescue beacons of COSPAS/SARSAT system.

In addition to that, the satellite will carry 7 helio-geophysical sensors.

Action proposed: no action required.

**NEW RUSSIAN GEOSTATIONARY OPERATIONAL METEOROLOGICAL
SATELLITE ELECTRO-L / GOMS N2**

Geostationary operational satellites are the most important instruments of modern meteorology.

In 2006 a new Russian meteorological satellite should be component of the international geostationary satellite network.

The satellite has international name GOMS N2 (GOMS — Geostationary Operative Meteorological Satellite). In Russia the geostationary space system naming ELEKTRO.

In 2001, on orders from Rosaviacosmos and Rosgidromet the Lavochkin Association started to design the second-generation geostationary meteorological satellite Electro-L (ELECTRO/GOMS N1 - operated up to 1998).

Electro-L (Lavochkin) satellite will be inserted into 76° eastern longitude point, which is above the Indian Ocean and offers the best view of the Russian territory.

Every half-an-hour Electro-L will transmit from orbit the multi-spectral images of the entire eastern hemisphere, its cloud cover and terrain features with 1 km resolution in optical band and 4 km resolution in infrared.

Electro-L will be equipped with MSU-GS multi-zonal scanner, now under development at the Russian Institute of Space Device Engineering (RNII KP). The scanner will be taking images in 3 optical and 7 infrared bands. In full accordance with Rosgidromet's specifications, MSU-GS' parameters will be close to those of SEVIRI scanner now working onboard the MSG satellite belonging to EUMETSAT.

Electro-L will also relay the data between the different weather centres, poll the autonomous meteorological stations, pick up and retransmit signals from the Search and Rescue beacons of COSPAS-SARSAT system.

In addition, Electro-L will carry 7 helio-geophysical sensors providing data on solar activity and radiation levels needed for the prognosis of conditions in near-earth environment.

The data streaming from Electro-L will be received and processed at Rosgidromet's Scientific Research Center PLANETA, which is to be its operator, as well as at the Regional Data Reception & Processing Centers in Novosibirsk and Khabarovsk and at the local user terminals.

ELECTRO-L satellite will have high-precision three-axis stabilization subsystem. Satellite orbital mass is about 1500 kg. Its power supply system will generate 1700W (end of 10-year lifetime). Payload power consumption is under 800 W.

Launching Electro-L will be performed from Baykonur by Zenit launcher and Fregate booster designed by the Lavochkin Association.