

Prepared by Roshydromet and Roscosmos
of RUSSIA
Agenda Item: C.2

Future Geostationary Meteorological Satellite Systems

RUSSIAN GEOSTATIONARY METEOROLOGICAL SATELLITE ELECTRO-L

Summary and purpose of the WP

This document reports on design, main characteristics, onboard devices, development status and planned launch time of the future Russian geostationary meteorological satellite Electro-L. In addition to that the corresponding ground station composition and peculiarities are given.

Action proposed: none.

RUSSIAN GEOSTATIONARY METEOROLOGICAL SATELLITE ELECTRO-L

In order to fulfill the demand of Roshydromet and in accordance with Roscosmos plan, Lavochkin Association has been developing a second-generation geostationary meteorological satellite Electro-L since 2001. The international name of this Russian satellite is GOMS 2.

The geostationary position of the satellite is 76° eastern longitudes. This localization proves the best observation of a large part of Russia in addition to view of the Indian Ocean region.

The main remote sensing device of Electro-L is a multi-channel (10 channels) scanning radiometer MSU-GS. Its characteristics are rather similar to SEVIRI scanner parameters, including spectral channels and spatial resolution.

This scanner is developing by Russian Institute of Space Device Engineering. The scanner will give several multi-spectral images of the Earth visual disk every 30 minutes. The spatial resolution of the images in the visible channels (3 channels) is 1 km. In the infrared channels (7 channels) the resolution is approximately 4 km.

There are seven additional payload sensors on the board of Electro-L. They are for measuring and registration of solar activity and geomagnetic and radiation parameters in the near Earth space.

Electro-L must fulfill definite data collection and retranslation functions. The satellite will relay various information between Russian ground meteorological centers and receive and transmit the data from the net of Russian Data Collection Platforms. Electro-L will also retransmit signals from the Search and Rescue beacons of COSPAS-SARSAT system.

The full meteorological data from Electro-L will be received and processed in the main Roshydromet Scientific Center Planeta and the two Regional Centers in Novosibirsk and Khabarovsk. Some part of these data (after processing and retransmission) will be received on the small local user ground stations.

Roscosmos intends to launch the first satellite of Electro-L type in 2009 and the second one in 2010.

At the moment Lavochkin Association is performing the satellite Electric Engineering Testing.