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# FUTURE OF THE RUSSIAN GEOSTATIONARY SATELLITE SYSTEM

Summary and purpose of the WP

Future Russian geostationary meteorological constellation should consist of 3 Electro-L series satellites. Those should be placed on 14,5W, 76E and 166E points. It is also planned to complement this constellation with two Electro-L – type satellites on high-elliptical orbits to cover the Arctic region (Arctica project).

Action proposed: none

# FUTURE OF THE RUSSIAN GEOSTATIONARY SATELLITE SYSTEM

## PERSPECTIVES OF ELECTRO-L GEOSTATIONARY CONSTELLATION

According to the Russian Federal Space Program 2006-2015 the geostationary meteorological constellation Electro-L should consist of three similar satellites.

The satellites are being manufactured by Lavochkin Association and have a three-axis stabilized platform.

The “Electro-L” №2 is now in the development stage and is scheduled for launch to 14,5W in 2013. The “Electro-L” №3 (166E) is to launched in 2015.

The payload of all planned satellites is similar to the first “Electro-L” №1 but with improved performance characteristics. It consists of imager MSU-GS, standard meteorological communication package (the DCS and the re-transmitters) , data retransmission channel for hydrometeorological data exchange between ROSHYDROMET centers, and heliogeophysical complex GGAK.

## HIGH-ELLIPTICAL ORBIT “ARCTICA” PROJECT

At the CGMS 34 it was firstly reported about the Russian project of Arctic region monitoring from the “Molnya” high elliptical orbit. Now this project evolved into multifunctional mission called Arctica.

Main purposes of the mission are meteorology, oceanography, including ice cover monitoring and disaster monitoring in the Arctic region.

To perform operational monitoring of the region of interest 24 hours a day each satellite will be covering the area for 6,4 hours and then step back for the next one. The cycle time for each satellite is exactly 12 hours.

The payload and design of the satellites is similar to the ones in the Electro-L series.

An essential feature of the spacecrafts of the Arctica system is their mass and power reserves allowing us to add different types of complementary payload and instruments, including international ones if considered necessary.

The first Arctica satellite launch is scheduled for 2014 - 2015.

The ground segment for the Arctica constellation will be based on SRC Planeta/ROSHYDROMET facilities in Moscow, Novosibirsk and Khabarovsk. Also it is planned to deploy the network of small data acquisition centers in the costal area along Northern Sea Route.