

**FUTURE POLAR ORBITING METEOROLOGICAL SATELLITES
METEOR-3M**

Summary and purpose of the WP

In 2002 the original Meteor -3M satellite sketching design was seriously revised. At present it is planned to develop and to launch in 2005, 2007 two Meteor-3M series satellites on the base of "Resurs" type unified heavy platform.

Action proposed: no action required.

FUTURE POLAR ORBITING METEOROLOGICAL SATELLITES METEOR-3M

Russia is now developing new series of polar orbiting meteorological satellites Meteor-3M. Meteor-3M series is designed for operational providing of hydrometeorological and heliogeophysical information on the atmosphere, Earth surface and the World Ocean.

The first satellite of this series (Meteor –3M N1) has been successfully launched from Baikonur by Zenit – 2 launcher on 10 December 2001.

It was planned to develop the next satellite Meteor –3M N2 on the base of light platform and to launch this spacecraft in 2005.

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The Meteor –3M spacecrafts will be launched on sun-synchronized orbit. The orbital parameters are clarified and will be coordinated with CGMS later.

It is planned that Meteor –3M satellites will provide imaging in visible, infrared and microwave channels as well as atmospheric sounding in IR and MW range.

The major Meteor –3M N2 payloads includes:

- multichannel scanning radiometer (MSU-MR) (six channels in visible and IR, similar to AVHRR/3, spatial resolution is close to 1 km);
- MW conical scanning radiometer MTVZA (26 channels in the range 18.7-183.3 GHz);
- advanced IR atmospheric sounder (IKFS-2) based on Fourier transform spectrometer (spectral range of 5.0–15 μm ; spectral resolution is equal or better than 0.5 cm^{-1});
- radio occultation sounding instrument Radiomet;
- multichannel imaging instrument KMSS (4 VIS channels in the range 0.45-0.9 μm , swath band 1200 km, spatial resolution 100 m);
- radar “Severjanin” (frequency range 9500-9700 MHz, swath band about 450 km, two modes of spatial resolution $0.7 \times 1.0 \text{ km}$ and $0.4 \times 0.5 \text{ km}$);
- complex of heliogeophysical instruments GGAK-M.

Instruments characteristics will be precised.