

**ROSHYDROMET/SRC PLANETA TRAINING ACTIVITIES
ON SATELLITE DATA APPLICATION**

Summary and purpose of the WP

The document contains information on Roshydromet and SRC Planeta activities on training and education in meteorological data application to hydrometeorology and environmental monitoring.

Action proposed: no action required.

ROSHYDROMET/SRC PLANETA TRAINING ACTIVITIES ON SATELLITE DATA APPLICATION

1. Training Course for NMHSs of CIS and Baltic States

From October 28 till November 2, 2002 SRC Planeta on behalf of Roshydromet conducted and hosted an advanced training course for CIS and Baltic countries NMHS staff on methods of satellite data processing, interpretation and use for operational forecasting and research activities in hydrometeorology and environmental monitoring.

Training was co-organized by the Russian WMO Regional Meteorological Training Center (RMTC).

In total 45 participants took part to the training course including 10 representatives from CIS and Baltic NMHSs (Belarus, Ukraine, Moldova, Kazakhstan, Uzbekistan, Latvia, Lithuania), 10 specialists of Roshydromet regional departments (from Murmansk, Nizhnij Novgorod, Novosibirsk, Khabarovsk, Jakutsk, Petropavlovsk-Kamchatka and others), 3 participants from Russian State Hydrometeorological University St.-Petersburg and its branch in Rostov-Don city, representatives of a number Roshydromet Science and Research institutions and organizations of Rosaviakosmos and Russian Academy of Sciences.

Extensive training programme has been developed and fulfilled. The programme comprised 36 hours of lectures and presentations, 12 hours of practical sessions and master classes, visits to Roshydromet leading organizations facilities (SRC Planeta, Hydrometeocenter of Russia, Main Radiometric Center, Main Computing Center, Moscow Meteo Bureau), general and thematic discussions.

Presentations have been made by Dr. D. Hinsman (WMO), Mr. J. Prieto and V. Gärtner (EUMETSAT), Dr. P. Romanov (NOAA/NESDIS) and 12 Russian professors and leading specialists in satellite application matters.

The following topics have been covered during the course:

- WMO Satellite Activities. The Strategy to Improve Satellite System Utilization. Virtual Laboratory. Space-Based Global Observing System;
- Roshydromet Satellite Activities (space-based observing system, receiving centers and processing facilities, main fields of satellite data utilization);
- European geostationary system MSG. SEVIRI radiometer characteristics, application and data dissemination;
- European polar system EPS, instruments description and data dissemination;
- Satellite application facilities;
- Computer Assisted Learning: concepts, libraries, modular concepts. The Virtual Laboratory. Eumetcal;
- Basic theory of remote sensing from satellites. Methodology of satellite data utilization to retrieve quantitative parameters of the atmosphere and the Earth surface;
- SRC Planeta program tools and technologies for satellite data applied processing and output products;
- Methodology and technology for maps of nefanalysis generation and forecast of cloud features evolution;
- Methodology and technology for sea ice cover interpretation and mapping using satellite radiometric (optical and infrared) and radar information;

- Retrieval of intensive atmospheric whirlwinds parameters using satellite microwave soundings data;
- Polar orbiting meteorological satellites data processing and output products;
- Satellite monitoring of natural and industrial disasters: basic approach and examples of output products utilization;
- Satellite monitoring of snow cover;
- Satellite monitoring of floods: methods, operational technology and examples of satellite data utilization in floods management;
- Satellite monitoring of environment pollution;
- Satellite monitoring of long term environment changes.

This training event mainly addressed to NMHSs of Russia speaking WMO countries demonstrated high interest and appreciation of the participants to the programme compiled on the basis of up to date international experience in the subject of the course.

Participants were handed the certificates and CD-ROM disks with all the presentations and the course materials.

2. Satellite Data User Directory

In 2002 SRC Planeta prepared and published the Satellite Data Users Directory. The Directory prepared and published by the SRC Planeta provides reference and information material on operational satellite data and archives (including Russian State Data Found of Satellite Data), the SRC Planeta thematic products, description of Russian meteorological, oceanographic and earth resources satellite systems and ground facilities of Roshydromet and SR Planeta (main acquisition centers). Numerous samples (about 60) of satellite products illustrate wide range of satellite data application areas.

3. Internet Training Facilities

Recently opened SRC Planeta Internet site <http://planet.iitp.ru> represents a prototype of Russian virtual laboratory. This electronic directory comprises examples of satellite thematic products together with methodological information on data processing and application; results of application projects in different areas of hydrometeorology, climate and environmental monitoring; on-line demonstration version of satellite data processing tool, reference information including main publications, links to related organizations.

English translation of the site contents is planned.