



**Report**  
**of the Federal Space Agency**  
**for the 34<sup>th</sup> meeting of the**  
**ISO/TC20/SC13**  
**October 13, 2008**  
**Berlin, Germany**





*Roscosmos report to ISO/TC20/SC13  
34<sup>th</sup> Meeting  
October 2008, Berlin, Germany*



Since the 33rd ISO/TC20/SC13 Meeting in Tsukuba, Japan on June 17<sup>th</sup>, 2008 the experts of the Russia's Federal Space Agency had considered and approved of the ISO/DIS 22643 Data Entity Dictionary Specification Language (DEDSL)—XML/DTD Syntax (CCSD0013).

The Federal Space Agency is continuing implementation of the space exploration projects and creating of the new spacecraft as defined by the by the Federal Space Program of Russia for 2006-2015. As a rule, the requirements of the ISO/TC20/SC13 international standards and standards Recommended by CCSDS are observed during the new space data transmission systems development.

For your information, we announce reassigning of the Federal Space Agency's manager of the head body on the rocket and space technology national and international standardization. Mr.Gennady Taraskin is replaced by Mr.Vyacheslav Murzin. His contact information is as follows:

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We kindly request the Secretariat to make the necessary corrections.





**REPORT**  
**of the Federal Space Agency of**  
**Russia to the CCSDS Management**  
**Council Meeting**  
**October 2008**  
**Berlin, Germany**



## *Roscosmos report to CCSDS Management Council*

Since the latest CCSDS Management Council Meeting Russia's Federal Space Agency and its subordinated enterprises had been continuing their activities in space exploration and space capabilities' development as defined by the Federal Space Program of Russia for 2006-2015.

As it had been stated in the Roscosmos Report to the CCSDS Management Council in June 2008, the major efforts in the unmanned spacecraft field were concentrated at the following projects:

**Electro-L** spacecraft for the large-scale atmosphere processes and dangerous weather events monitoring in the equatorial and middle latitudes as well as solar weather monitoring in the near-Earth space

- **Radioastron** mission including Spectr-R spacecraft for the high resolution radio physical observations of the extragalactic objects

- **Fobos-Grunt** mission including the base spacecraft and additional international payloads for the Fobos samples' return as well as Mars satellites' origin investigation, Mars atmosphere and surface research, spacecraft launch is now planned for 2009.

- Advanced spacecraft control means.

## *Roscosmos report to CCSDS Management Council*

Representatives of leading enterprises of the space-rocket industry have taken part at meetings of Working group in Berlin.

In particular, we are interested in the CCSDS Voice Working Group activity results. The Federal Space Agency suggests Mr.Ivan Antonov, TsNIIMash, who is a recognized expert in this field, to act as a co-chairman for this Working Group. We are sure he would be able to provide the useful input.

In addition we provide the materials on Roscosmos projects, including Fobos-Grunt, Spectr-R (Radioastron), Spectr-RG, Spectr-UF and Luna-Glob. The CCSDS Recommended standards are considered during these projects' R&D's.

## FOBOS-GRUNT



### MAIN FACTS:

Launch.....2009

Launcher.....Zenit SLB/Fregat SB

Spacecraft mass:

On flight.....~ 3600 kg

In an orbit of Mars..... ~ 1983 kg

Start from a Fobos.....The end July – August 2011

Returning to the Earth...June- July 2012

**SPECTR-R**



**MAIN FACTS:**

Launch.....December 2009

Launcher.....Zenit SLB/Fregat SB

Spacecraft mass:

On flight.....~ 3600 kg

Antenna diameter..... 10 m

Focal length..... 4,3 m

Orbit:

Apogee..... 330000 km

Perigee..... 400 km



## SPECTR – RG

The “Spectr – RG” space laboratory is being developed to study gamma-bursts in universe. Its operational spectrum ranges are the x-ray and extreme ultra-violet

### MAIN FACTS:

Launch.....	2011-2012
Launcher.....	Souyz-2 /Fregat SB
Spacecraft mass:	
On flight.....	~ 2200 kg
Antenna diameter.....	10 m
Focal length.....	4,3 m
Orbit about a point L2:	
Apogee.....	200000 km
Perigee.....	500 km



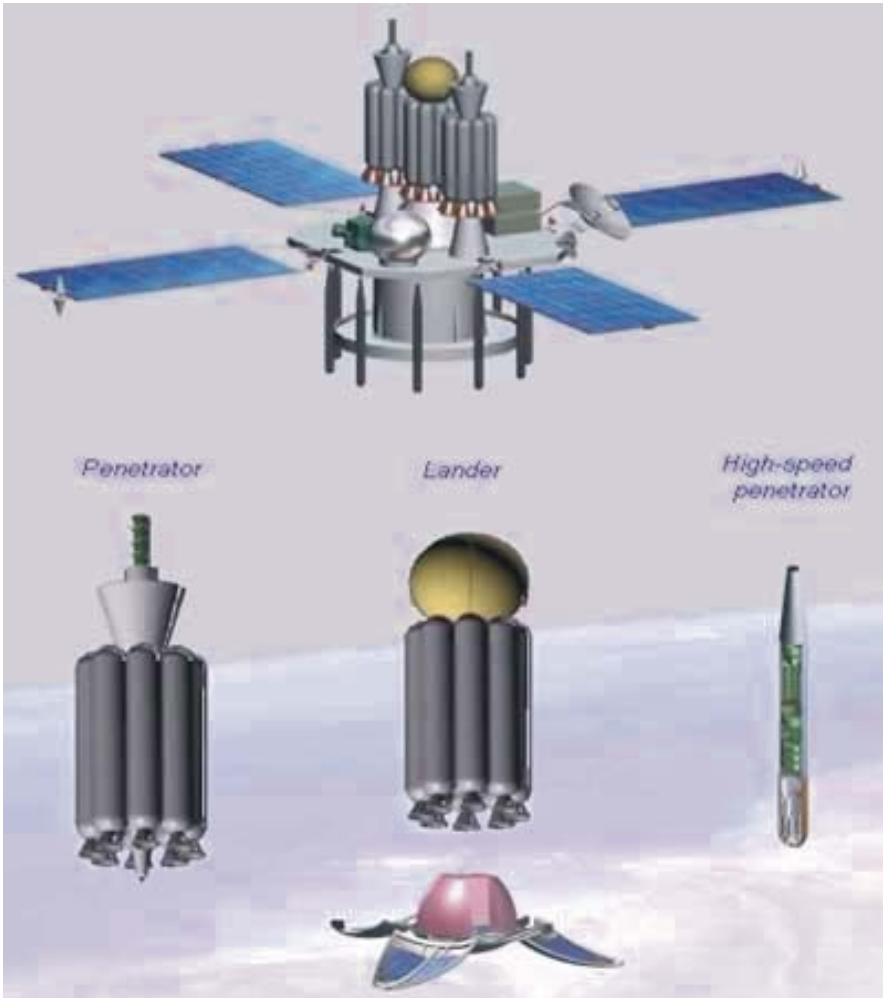


## SPECTR – UF (WSO-UV)

Being equipped with advanced scientific payload, the “Spectr – UF” (WSO-UV) Unique spacecraft is designed studies in ultraviolet range of electromagnetic spectrum.

### MAIN FACTS:

Launch.....October 2009  
 Launcher.....Zenit SLB/Fregat SB  
 Spacecraft mass:  
 On flight.....~ 2750 kg  
 Diameter of main mirror....1,7 m  
 Focal length.....17m  
 About a circular orbit:  
     H = 40000 km  
     Inclination  $i = 51,8^\circ$



## LUNA – GLOB

The “Luna – Glob” mission will bring the Russian scientists back to the Moon with a number of comprehensive experiments, including unique high-speed penetrators.

### MAIN FACTS:

Launch.....	2015
Launcher.....	Soyuz-2/Fregat
Spacecraft mass on flight to the Moon.....	2026 kg
Payload mass:	
Orbit science.....	100 kg
Moon penetrators.....	2x250 kg
Lander.....	250 kg
high-speed penetrators.....	10x250 kg

On June 27<sup>th</sup>, 2008 the Roscosmos-ESA Agreement have been signed in Paris on cooperation for Fobos-Grunt and ExoMars missions. For the time being the consultations are conducted on the possible use of the ESA ground stations New Norcia (Australia) and Cebreros (the Spain) for the Fobos-Grunt spacecraft control and telemetry acquisition.

Simultaneously we continue working on preparing the Russian stations Ussuriisk (Far East of Russia), Medvezhie Oзера and Kalyazin (both Moscow region) for controlling YH-1 satellite of China.

Finally, I would like to inform on changing in the Federal Space Agency management.

Mr. Viktor Selin is assigned Head, the Unmanned Space Complexes and Control Systems Directorate.

The new Directorate is created of the Space Navigation systems, Space Communication and Ground Control Complexes led by Anatoly Shilov.

Mr. Shilov keeps his responsibilities for the cooperation with the international bodies for the space data and information standardization, including CCSDS and ISO.