



STATE RESEARCH AND PRODUCTION SPACE-ROCKET CENTER "TsSKB-PROGRESS"



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The Federal State Unitary Enterprise State Research and Production Space-Rocket Center "TsSKB-Progress" (Samara Space Centre) is one of the world leaders and the leading Russian enterprise in the field of development, production and operation of the rocket-and-space equipment.

Samara Space Centre was established in 1996 as a result of a merger of the Central specialized design bureau (CSDB) (established in 1959) and Samara Progress factory (established in 1894).

At present FSUE Scientific and Production Association OPTEKS (Moscow) and FSUE Experimental Design Bureau Spektr (Ryazan) have been also incorporated into FSUE State Research and Production Space-Rocket Center "TsSKB-Progress" as a result of reorganization. Apart from this, the structure of the enterprise includes the Baikonursky and Krasnoznamensky affiliates as well as Moscow and Plesetsk representation offices.

Samara Space Centre develops and produces the launch vehicles (LV) for launching the piloted space vehicles and transport spaceships to the International



Alexander N. Kirylin, Director General

The load on the Center TsSKB-Progress increased in 2012 significantly in the field of ensuring launches of the space vehicles: it was planned to launch 23 launch vehicles manufactured by the enterprise.

It was planned to manufacture and launch in 2012 the first flight specimen of the new light-class launch vehicle "Soyuz-2-1v". This two-stage launch vehicle will be used to ensure injection of the space vehicles featuring mass up to 2,800 kg from cosmodrome Plesetsk to the low circular orbits. The space-mission vehicle will comprise a new orbital injection package "Volga" also developed by TsSKB-Progress. Its application in conjunction with LV "Soyuz-2-1v" will make it possible to insert the space vehicles weighing up to 1,400 kg to the sun-synchronous orbits.

Last year the new launching complex for the launch vehicle "Soyuz-ST" was put into operation at Guiana space center. The launch vehicle "Soyuz-ST" is a modification of the launch vehicle "Soyuz-2" updated according to the requirements of the



SV "Bion-M" No. 1

space station as well as the automatic space vehicles (SV) for the Earth remote sensing, the scientific-purpose space vehicles and the national-security space vehicles.

The enterprise has developed and commissioned 9 versions of the medium-class launch vehicles and 27 types of various-purpose space vehicles. The rockets manufactured by TsSKB-Progress have been used to inject more than 1,780 space vehicles into orbit, more than 900 vehicles of this number have been developed in house.



SV "Resurs-P"

European partners in the context of safety, telemasurements system and operational conditions.

The launch vehicles of Russia and the European Union will shape a cooperating range of LV comprising the heavy-class "Ariane-5" (France), light-class LV "Vega" and medium-class "Soyuz-ST" (Russia).

The first two launches took place in 2011 from the South-American cosmodrome. On October 21 two European navigation satellites "Galileo-IOV" were inserted into orbit, while on December 17 the space vehicles "Pleyads/Eliza/SsoT" were inserted. The new launching site will be used to ensure not less than 50 launches of the launch vehicles "Soyuz-ST" within 15 years. Presently, 2 "Soyuz-ST" rockets stay in Guiana. The TsSKB-Progress experts perform the annual maintenance of the ground equipment, launch and technical complexes as well as the launch vehicles present at the Guiana space center on

storage. Two launch campaigns have been scheduled for 2012 from South America.

Two new space vehicles developed by TsSKB-Progress will be inserted into orbit in 2012. These are the SV of the Earth remote sensing "Resurs-P" and the scientific SV "Bion-M". The work with respect to these vehicles is being carried out according to the contracts with the Federal space agency (Roskosmos) and within a framework of the Federal space program.

The launch of SV "Resurs-P" will help commence shaping the orbital grouping of the Russian Earth remote sensing vehicles. The SV "Resurs-DK" was launched on June 15, 2006. The SV "Resurs-P" features improved performance characteristics as compared with the SV "Resurs-DK". Apart from the optical and electronic equipment for high-resolution observation the hyper-spectrum wide-span equipment will be installed at the SV "Resurs-P". A presence of this equipment will help solve the essentially new tasks related to the topical decoding,

i.e. ensure better informational support for searching oil, natural gas, ore and other deposits of natural resources, etc.

The scientific satellite "Bion-M" No. 1 is intended for conducting a wide spectrum of investigations in the field of space biology, physiology and radiation biology for the sake of solving the fundamental and applied problems relating to the durable space flights of man and extremal conditions of vital activity. During 30 days of flight more than 70 experiments will take place on board the SV, where the European companies will participate apart from the Russian organizations. The launches of both vehicles are scheduled for the 3-rd quarter of 2012 from cosmodrome Baikonur.

An active incorporation of the new technologies, inviting the talented specialists to join its team, participation in the up-to-date developments of the rocket-and-space industry are the main components of the enterprise successful activity. 🚀



Guiana space center.
Assembly of Soyuz flight VS01

