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OPPORTUNITIES OF SSAU SPACE SCIENTIFIC-EDUCATIONAL PROGRAMS FOR DEVELOPING
COUNTRIES

Abstract

Samara State Aerospace University (SSAU) is the Russian national research university, leading in the field of aerospace technology. Now students from 52 countries are studying at SSAU. SSAU implements technology project-based education "teaching through research" in which students are involved in the educational process via participation in real projects. Over the past five years in SSAU actively developing directions designing and creating of scientific and educational micro/nanosatellites and GNSS technologies. Now in orbit there are two scientific micro satellites AIST-1, launched in 2013 by Samara carrier rocket "Soyuz". SSAU has ground control center that operates the group of micro satellites by students and young researchers. In SSAU designed CubeSat 3U platform, complete with its own on-board subsystems, created the first nanosatellite SamSat-218D, which will be orbited in April this year during the first launch from the new Russian cosmodrome Vostochny. At present, work on the second nanosatellite SamSat-QB50 in the framework of the international project QB50 is being completed. In the future will be designed nanosatellite for Earth observation and constellation of nanosatellites for monitoring of the Earth's ionosphere, maneuvering unit for implementation of formation flight mission. With the support of the Samara Region Government established a Center for testing and developing of nanosatellites. This activity is supported by a two-year master's program "Space Information Systems and Nanosatellites" and the International Summer Space School "Future Space Technologies and Experiments in Space" in which involved young people from developing countries. Since 2005 SSAU carried out space experiments in the field of GNSS technologies. Currently implemented two GNSS master's programs in the English language, as well as PhD training mainly for students from developing countries. In February, at the session of the Scientific and Technical Subcommittee of UNOOSA in Vienna SSAU has made some proposals to expand the opportunities for students from developing countries to participate in research and educational activities in the field of GNSS technologies and nanosatellites.