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State of the Art CubeSat Technology

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The cubesat technology originally was developed by California Polytechnic State University (Cal Poly) and Stanford University in 1999 for more than 20 years became very popular format of small satellites. The cubesat satellite size is measured by units (100x100x113mm). There are a lot of different sizes of cubesat satellites from 1U to 12U and more. Now the most popular size is 3U. This satellite sizes can carry on many useful scientific instruments and allow new opportunities for space science because cubesats missions more cheaper than any other. Depending of the size cubesats can provide up to 50W electric power for payload, point control accuracy up to 0.1° and pointing knowledge up to 0.005°/s. Nowadays is actively researched the deployable structures for cubesat that can increase opportunity for scientific instruments on cubesats. There are two projects: BMSTU-Sail –1U Cubesat demonstrator of solar sailing deployment technology, and "Yareelo"- two 1,5U Cubesat with sun observation and radiation monitoring sensors are developed at the Bauman University Youth space center with russian scientific organizations. More information about project and projects current status posted on the http://bsail.ru

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