

The CubeSats: small satellites for big ideas

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CubeSats are miniaturized satellites with size 10x10x10 cm³ that are primarily designed for educational and technology demonstration purposes as they allow student to design, build, and launch their own small satellites into orbit. Around the world, many countries are working for the promotion and development of these satellites as it is low cost alternate to bigger satellites and provide ample experience. The significance of CubeSats in education lies in their ability to provide hands-on learning opportunities for students in a variety of STEM (Science, Technology, Engineering, and Mathematics) fields. In addition, CubeSats development is a multidisciplinary approach which provide real-world experience with low cost.

In Pakistan, development of educational satellites was launched through CubeSat development Program and the first ever cubesat of Pakistan named ICUBE-1 was launched by Institute of Space Technology in 2013. Small Satellite Technology and Research Lab (SSTRL) is the only lab in Pakistan working for the development of small satellites for academic and research purposes. It is developing a 3U CubeSat, ICUBE-N, National CubeSat of Pakistan. The lab is also encouraging the active involvement of students in the development of satellites.

Keywords: CubeSats; ICUBE-N