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NANOSATELLITES: ACTUAL MISSION THAT CAN PERFORM

Abstract

Today, thanks to the miniaturization of various electronic systems, one was developing small crafts called nano-satellite, which can be launched into space and complete the basic functions of a standard size satellite. During some years, it has been observed that the popularity of nano-satellites has grown considerably. Already several countries and institutions have developed and currently are developing nano-satellites with different primary objectives, but with one purpose: access to space. Given this emerging technology, there are some questions that still open: Does serve a nano-satellite? Is it functional? What is its primary contribution? Most of the nano-satellites have a purely educational purpose since its development is looking to venture into the research and application of aerospace technologies, establishing the basis for implementing major projects in the future. On the other hand, the nano-satellite development serves as an introduction and training of new professionals in the aerospace field. A nano-satellite is a tool for demonstrating scale development of a spatial element that can be placed into an orbit and can communicate with the Earth, at least with a simple "beep" transmitted on its waves. But, on the other hand, there are much more complex nanosatellite missions oriented to different complex tasks. These tasks could be remote sensing missions, communication, physical characteristics monitoring, magnetic field, radiation monitoring, climate change, meteorology, agriculture, deforestation, communication, astronomy, planetary sciences, etc. Due to this wide range of possibilities at the engineering level, this paper aims to analyze the actual capabilities of a nano-satellite to perform the different missions giving today. One analyze different nanosatellite missions, their goals, and successes. Based on this information, the idea is to present a series of conclusions about what we can realistically expect of a nanosatellite mission today.