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CUBESCOPE, THE FUTURE OF SATELLITE AND OBSERVATIONAL SECTORS IN MEXICO

Abstract

Unfortunately the technology and science creation rates in Mexico are too low in comparison of developed countries, especially at the satellite and telecommunications sector, because of the lacking for technical and economic supports;right now it's not plausible that Mexican researchers explore the present gap that has been lagging, however, these rates don't limit us to launch effectively on these subjects.

The creation of this prototype at a theoretical level (and then in a functional prototype) will allow us to boost scientific and technological development in Aerospace areas of Mexico and developing countries.

The prototype **CubeScope** named like that because of the implementation of two already used on the aerospace sector with good results; a **CubeSat** and a model of an **Orbiting Telescope**, through the most crucial elements of both systems, achieving an efficient system.

The components that were included on the prototype are: solar panels, nickel-nitrogen batteries, the optics of a reflector telescope with small dimensions and based on the Hubble orbiting telescope, system refrigeration and navigation systems; for sending and receiving data, it was included a *fractal antenna type CARPET*, achieving bigger bandwidth than classic antennas because of their stable patterns of radiation and the big amount of frequency bands determined by the fractal iterations making it ideal for the satellite communication; the prototype has a dimension of 0.75 m x 1.5

With the implementation of the CubeScope, we will obtain *educative, academic and researching impact*, promoting the development of national technology, due to Mexico is one of the countries with less contributions in the aerospace sector.

At the same time, the small dimensions of the CubeScope, as its weight and economic accessibility, allow us and other nations to put it into orbit. The data collected by the CubeScope, will increase our knowledge and application of it, creating a huge interest in the young people, in university programs and researchers, so *it can be a full approachment to the wonderful data that the Cosmos gives us, so they can understand it better and model it.*