



Two Bahraini Engineers Help Construct And Design Emirati Mini-Satellite 'DhabiSat'

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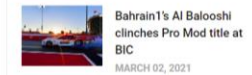
Two members of the Bahrain Space Team of the National Space Science Authority (NSSA) have participated in the construction and designing of the Emirati mini-satellite "DhabiSat", which was launched on February 20, from the Wallops Flight Facility in Virginia, US and arrived at the International Space Station (ISS).

The launch marked another milestone in the UAE's space journey.

Less than two weeks ago, the Emirates made history when its Hope probe successfully entered the orbit of Mars to begin a two-year data-collecting mission. The miniature satellite DhabiSat is the second CubeSat designed and developed by students from Khalifa University of Science and Technology in Abu Dhabi with the support of the Yahsat Satellite Communications Company, "Yahsat" and Northrop Grumman International.

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Bahraini Aerospace Eng.

Ashraf Khater participated in the implementation of a set of structural tests and analyses to ensure the integrity of the miniature satellite's structure and all its electronic devices.

The tests are based on simulating the vibrations that the satellite is exposed to during launch, which are caused by the high pressure and intense vibrations that the carrier rocket is subjected to the satellite while penetrating the layers of the atmosphere surrounding the planet. Eng.

Khater said: "Participation in the DhabiSat project represents a unique opportunity for the Bahrain Space Team to build experiences and gain knowledge of building satellites.

"I have had the opportunity to participate in the implementation of many analyses and tests that were carried out in the laboratories of the Khalifa University for Space and Innovation Center.

During these analyses and tests, the satellite is exposed to various effects that simulate those that the satellite carrier rocket experiences during its launch into space, including vibrations and the effects of linear acceleration.

"We also applied effects that simulate those that rockets are exposed to during their transport to airports and space launch bases, and the tests and analyses that have been carried out have shown that they are in compliance with standard specifications. This is a great achievement for me and I am very happy to represent my country, Bahrain, in this scientific project."

The project aims to conduct tests on a number of technologies for outer space, such as software control systems and satellite guidance, in addition to taking pictures, as well as contributing to building national capabilities in designing, building, operating and managing satellites in the Kingdom of Bahrain and the UAE.

Another Bahrain Space Team member, Eng. Ali Al Qaraan, also participated in designing an algorithm that aims to estimate the values of some variables in the satellite system through statistical operations and without the need for a special sensor for these variables. This algorithm relies mainly on one of the most famous statistical mathematical tools in the science of statistical estimation theories called "Kalman Filter" which is used in many engineering and non-engineering applications in today's world. Eng.

Al Qaraan explained: "The goal of such algorithms is to increase the accuracy and efficiency of control systems and determine the directions in satellites."

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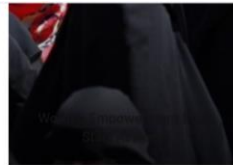


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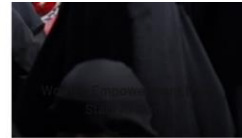
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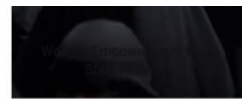
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