

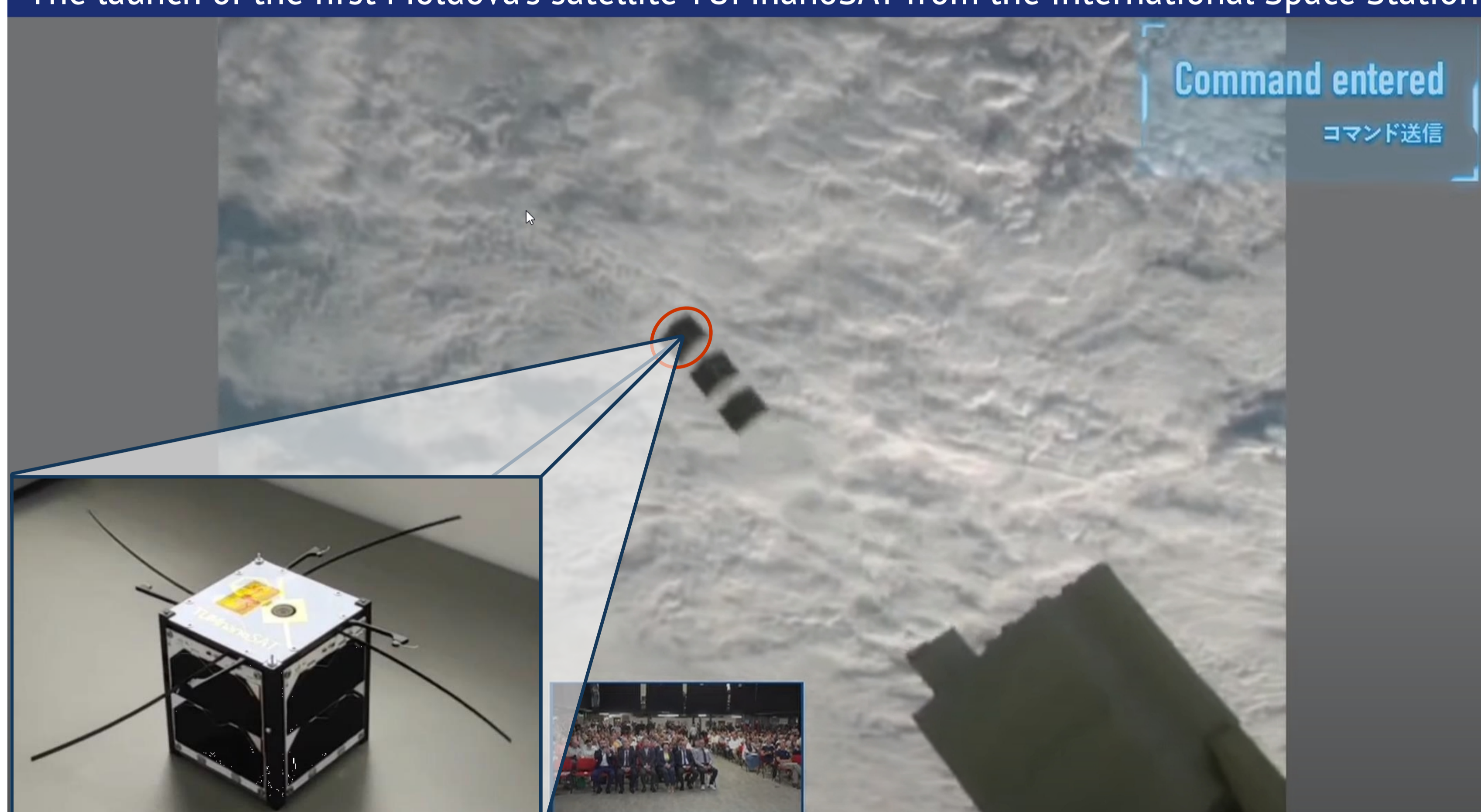
TUMnanoSAT flight model nanosatellite

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Product: TUMnanoSAT 53464

Scope: Development of a CubeSat in order to improve the quality of engineering studies and to attract young students to the space technologies development process. Research into the functionality and reliability of nanostructure sensors in space radiation conditions.

The launch of the first Moldova's satellite TUMnanoSAT from the International Space Station



Description: The TUMnanoSAT nanosatellite was developed and manufactured by the Space Technology Center of the Technical University of Moldova and it was selected in the 4th round of the KiboCUBE program promoted by UNOOSA and JAXA. This nanosatellite has several technology missions in order to verify the functionality of satellite subsystems. Also, there is one research mission - to study the functionality and reliability of nanostructure sensors in space radiation conditions. TUMnanoSAT was delivered to the International Space Station (ISS) by SpaceX CRS-25, which is an ISS Supply Service mission, was transported to the ISS in July 2022 by Cargo Dragon and launched into orbit on August 12, 2022 from the KiboCUBE module.

- Missions:**
- ✓ development of efficient "satellite-ground station" communication;
 - ✓ testing the solar energy subsystem for optimal energy distribution;
 - ✓ testing the attitude determination sensors in order to optimize attitude control algorithms;
 - ✓ studying the functionality and reliability of nanostructure sensors in conditions of space radiation.

Stage: Complete



The space launch event of TUMnanoSAT from the International Space Station (August 12, 2022, 12⁴⁵, TUM): YOSHIHIRO KATAYAMA, extraordinary and plenipotentiary ambassador of Japan in the Republic of Moldova; NATALIA GAVRILIȚA, Prime Minister of the Republic of Moldova; VIOREL BOSTAN, Rector of the Technical University of Moldova.



August 12, 2022

Launched into orbit by the KiboCUBE module

July, 2022

Transporting the TUMnanoSAT satellite to the ISS:

USA → ISS (July 15, 2022)

Japan → USA (March, 2022)

Republic of Moldova → Japan (February, 2022)

June-July, 2021

Assembly and final testing of the TUMnanoSAT nanosatellite within the ISS, Bucharest, Romania

September 9, 2019

Kick-off meeting TUM/JAXA

June 10, 2019

KiboCUBE: Team from the Republic of Moldova selected for fourth round submit

February 28, 2019

KiboCUBE fourth round submit

May 3, 2018

First model of satellite

