



Scan for our social media



NATION | P5

**CRITICAL DESIGN REVIEW OF MBZ-SAT COMPLETED**  
UAE-Bahrain joint nanosatellite Light-1 arrives at the International Space Station

50  
عام الخمسين  
YEAR OF THE FIFTIETH  
٢٠٢١ UAE

© All rights reserved 2021

NATION | P6  
**Dubai Culture and KHDA launch book on Hatta**

THE VIEWS | P8  
**How Trump may ruin a Red Wave in America**



BUSINESS | P15  
**Qatar Airways sues Airbus over A350 paint job**

# Light-1 arrives at space station

UAE-BAHRAIN NANOSATELLITE TO STUDY GAMMA-RAYS

ABU DHABI

Gulf News Report

**T**he UAE-Bahrain joint nanosatellite Light-1 successfully arrived yesterday at the International Space Station (ISS).

It was carried aboard a Falcon 9 rocket which launched the SpaceX CRS-24 commercial resupply mission from the Kennedy Space Centre in Florida, US, at 14:06 UAE time.

Its successful arrival at the ISS is the culmination of a trailblazing partnership between the UAE and Bahrain and an achievement of cooperation between the UAE Space Agency, Bahrain's National Space Science Agency (NSSA), Khalifa University of Science and Research and New York University Abu Dhabi, according to a press statement.

Light-1 will be subsequently relaunched into orbit around Earth during the first quarter of 2022 in cooperation with the Japan Aerospace Exploration Agency. It will then start the region's first scientific mission to monitor and study terrestrial gamma-ray flashes (TGFs) from lightning storms and cumulus clouds. The data will be made available to the global scientific community.

**'Scintillating' crystals**

Light-1 makes use of 'scintillating' crystals – a scintillator being a material that emits light when crossed by a subatomic particle and some crystals are



■ Light-1 will be subsequently relaunched into orbit around Earth during the first quarter of 2022.

very good scintillators. The light emitted by the crystals is collected by sensors called photomultipliers and then processed by a dedicated electronic system. Although the single components can be sourced from specialised companies, the assembled detection system is unique to Light-1.

The impact of high-energy gamma-ray emissions on atmosphere, air traffic and human health, especially flight crews, will be studied. These rays can penetrate aircraft

structures, and therefore the data of Light-1 will improve understanding related to radiation exposure.

Sarah bint Youssef Al Amiri, UAE Minister of State for Advanced Technology and Chairwoman of the UAE Space Agency, said: "Light-1 is a milestone for Emirati-Bahraini ties and a new chapter for our nation's history in space. It reflects our efforts to exchange knowledge and expertise to stimulate cutting-edge research, scientific discoveries and human progress."

## MBRSC to make MBZ-SAT model

Satellite one of the largest and most advanced to be developed in UAE

DUBAI

Gulf News Report

**T**he Mohammed Bin Rashid Space Centre (MBRSC) yesterday announced that it has completed the critical design review of MBZ-SAT, the most advanced satellite in the region in the field of high-resolution satellite imagery. The team will now begin preparations to develop and manufacture the flight model of MBZ-SAT.

The Critical Design Review (CDR) is the final multi-disciplined technical review to ensure that the satellite can proceed into fabrication, demonstration, and test and can meet stated performance requirements within cost, schedule, and risk. The final satellite design weighs over

800kg and is one of the largest and most advanced satellites to be developed in the UAE.

MBZ-SAT has been pivotal in supporting the local space industry, with 90 per cent of the mechanical structure and 50 per cent of the electronic modules being built in the UAE. MBRSC has actively engaged with regional companies in an effort to build a local hub for space-related manufacturers. It has also partnered with local companies to manufacture and supply the components of MBZ-SAT.

Salem AlMarri, Director General, MBRSC, said: "The successful completion of the critical review design of the MBZ-SAT, marks yet another milestone in our journey towards the launch of the most advanced satellite from the region in 2023. The team has done a remarkable job, illustrating the expertise, skill and capabilities of Emirati scientists and engineers."



Photo credit

■ The team will now begin preparations to develop and manufacture the flight model of MBZ-SAT.