



NanoRacks Completes Largest ISS CubeSat Deployment Cycle To Date

Houston, TX - May 26, 2017 – Early in the morning of May 26, 2017, NanoRacks successfully deployed the company's 171st CubeSat via the NanoRacks CubeSat Deployer (NRCSD) on the International Space Station (ISS), and the company's 182nd space station CubeSat deployed overall. This cycle completes the NRCSD-11 and NRCSD-12 missions.

NRCSD-11 and NRCSD-12 were brought to the ISS on the Orbital ATK-7 mission, which launched on April 18, 2017 from the Kennedy Space Center in Cape Canaveral, Florida. This launch was NanoRacks' largest CubeSat mission to date, bringing 34 satellites into the Space Station, plus four CubeSats mounted externally on the Cygnus spacecraft.

"The last two weeks marked yet another important milestone for NanoRacks as we continue to not only demonstrate the commercial value of the International Space Station, but also show that the Space Station is truly a platform for commercial international collaboration," says NanoRacks CEO Jeffrey Manber. "Every day at NanoRacks we are taking steps towards commercial space stations, and running a successful satellite deployment program will be a key aspect of our future non-government platforms."

These NRCSD missions consisted of satellites from over 15 countries, including universities across 5 continents, US government organizations, and commercial companies, such as Millennium Space System.

Notably on board was the ISS portion of the QB50 Mission, which totaled to 28 CubeSats. The QB50 Mission included satellites from Israel, Canada, Australia, Korea, Spain, Germany, France and more. Coordinated by the [von Karman Institute](#) and sponsored by the European Commission, the QB50 CubeSats will take advantage of the space station orbit to study the lower thermosphere (200-380 kilometers) collecting scientific climate data, in what is considered by experts a relatively unexplored part of Earth's atmosphere.

NanoRacks was also pleased to be the launch services provider for the CubeSats selected through the NASA CubeSat Launch Initiative (CSLI) as part of the seventeenth installment of the Educational Launch of Nanosatellites (ELaNa).

NanoRacks offers this CubeSat deployment opportunity via the Company's Space Act Agreement with NASA as part of the ISS National Lab in coordination with CASIS. The program is commercially funded, meaning there is no government funding and it is sustained by customer's revenue.

NanoRacks is very thankful to all the ISS partners for allowing our CubeSat Program to grow, especially from NASA's ISS Program office and the Space Station team at JAXA – and congratulations to all of the CubeSat teams!

For further media inquiries, please contact Abby Dickes at adickes@nanoracks.com
For continued updates, please follow [@NanoRacks](#) on twitter

QB50 Mission

The QB50 Mission consists of dozens of universities located around the world – including Israel, Canada, Australia, Korea, Spain, Germany, France and more. Coordinated by the [von Karman Institute](#) and sponsored by the European Commission, the QB50 CubeSats will take advantage of the space station orbit to study the lower thermosphere (200-380 kilometers) collecting scientific climate data, in what is considered by experts a relatively unexplored part of Earth's atmosphere.

The ISS portion of the QB50 Mission involves over 300 students and 50 professionals, which brings the program together.

The QB50 CubeSats deployed in this airlock cycle:

SOMP2 – TU Dresden, Germany
HAVELSAT – Havelsan, Turkey
Columbia – University of Michigan, USA
PHOENIX – National Cheng Kung University, Taiwan
X-CubeSat – École Polytechnique, France
QBEE – Open Cosmos Ltd. & University of Lulea, Sweden
ZA-AEROSAT – Stellenbosch University, South Africa
LINK – Korea Advanced Institute of Science and Technology, South Korea
UPSat – University of Patras and Libre Space Foundation, Greece
SpaceCube – École des Mines Paristech, France
Hoopoe – Herzliya Science Center, Israel
Challenger – University of Colorado, USA
UNSW-ECO – University of New South Wales, Australia
NJUST-1 – Nanjing University of Science and Technology, Host country: Belgium
DUTHSat – Democritus University of Thrace, Greece
nSIGHT-1, SCS Space, South Africa
LilacSat-1 – Harbin Institute of Technology, Host country: Belgium
QBITO – E-USOC, ETSIA, Universidad Politecnica de Madrid, Spain
Aalto-2 – Aalto University, Finland
SUSat – University of Adelaide, Australia
SNUSAT-1b – Seoul National University, South Korea
Ex-Alta-1 --- University of Alberta, Canada
BEEAGLESAT – Istanbul Technical University, Turkey
Atlantis – University of Michigan, USA
AoXiang1 – Northwestern Polytechnical University, Host Country, Belgium
INSPIRE2 – University of Sydney, Australia
PolyTAN2-SAU – National Technical University of Ukraine, Ukraine
SNUSAT-1 – Seoul National University, South Korea

ALTAIR – Millennium Space Systems

Millennium Space Systems' NanoRacks-ALTAIR™ Pathfinder spacecraft establishes flight heritage for the majority of the ALTAIR Core product line spacecraft design and for payload support technologies. ALTAIR is the next generation affordable resilient space platform for low-Earth orbit (LEO), Geosynchronous Earth Orbit (GEO) and deep space missions. The key ALTAIR Core hardware designs are demonstrated and flown in their objective design configurations to retire technical risks, increase Technology Readiness Levels (TRLs) and gain flight heritage for future Department of Defense (DoD) and NASA space programs.

SHARC – Air Force Research Laboratory

The Air Force Research Laboratory's SHARC CubeSat will demonstrate the capability for a CubeSat to perform critical calibration of over 120 Tri-Service C-Bad radars. These calibrations are needed to meet tracking requirements of orbital objects. This CubeSat demonstrates two technologies developed at AFRL/RV under the SBIR program: MMA HaWK deployable solar array and the BCT XACT ADCS System.

SG-Sat – University of Kentucky

The University of Kentucky's [SG-SAT](#) (Stellar Gyroscope Satellite) captures images of star fields to orient a small satellite and test new software that predicts the satellite's path as it experiences atmospheric drag. This CubeSat was developed from the work of students in the University of Kentucky College of Engineering Space Systems Lab under a Cooperative Agreement between NASA KY, NASA EPSCoR and the NASA International Space Station Research Program. This will be the third cubesat developed for launch by UK Engineering Space Systems

The SGSat project is supported by NASA EPSCoR (Established Program to Stimulate Competitive Research), a program through the NASA Office of Education that develops U.S. aerospace research and the aerospace STEM (science, technology, engineering and math) workforce. The project is administered by NASA Kentucky, hosted at UK to advance aerospace research and education across Kentucky. PI: Dr. James Lumpp, Professor, University of Kentucky College of Engineering

NASA ELaNa XVII Sponsored CubeSats

The following CubeSat missions were selected through the CubeSat Launch Initiative (CSLI) as part of the seventeenth installment of the Educational Launch of Nanosatellites (ELaNa) missions.

Over the past three years, more than 100 students have been involved in the design, development and construction of these CubeSats that will be deployed from the space station via the commercially-developed NanoRacks CubeSat Deployer program.

CXBN-2 – Morehead State University

The Cosmic X-Ray Background NanoSat-2 ([CXBN-2](#)) CubeSat Mission developed by Morehead State University and its partners the Keldysh Institute (Moscow, Russia), the Maysville Community and Technical College (Morehead, KY) and KYSpace LLC (Lexington, KY) will increase the precision of measurements of the Cosmic X-Ray Background in the 30-50 keV range to a precision of <5%, thereby constraining models that attempt to explain the relative contribution of proposed sources lending insight into the underlying physics of the early universe. The mission addresses a fundamental science question that is central to our understanding of the structure, origin, and evolution of the universe by potentially lending insight into both the high-energy background radiation and into the evolution of primordial galaxies.

IceCube – NASA Goddard Spaceflight Center

[IceCube's](#) mission is to demonstrate the technology of a sub-millimeter-wave radiometer for future cloud ice sensing. This technology will enable cloud ice measurements to be taken in the intermediate altitudes (5 km – 15 km), where no measurements currently exist. It will perform first-of-a-kind measurements of ice particles embedded within clouds. These measurements will advance atmospheric monitoring technology and also fill in critical gaps in understanding how cloud ice affects the weather and how cloud formations process atmospheric radiation.

CSUNSat1 – California State University Northridge, NASA JPL

The primary mission of [CSUNSat1](#) is to space test an innovative low temperature-capable energy storage system, developed by JPL, raising its TRL level to 7 from 4 to 5. The success of this energy storage system will enable future missions, especially those in deep space to do more science while requiring less energy, mass and volume. This CubeSat was designed, built, programmed, and tested by a team of over 70 engineering and computer science students at California State University (CSUN). The primary source of funding for CSUNSat1 is NASA's Small Spacecraft Technology Partnership program. For more information see <http://www.csun.edu/cubesat>.

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