



## External Platform Customers Prepping for ISS

**August 24, 2015 – Houston, TX** – The fifth Japanese H-II Transfer Vehicle (HTV-5) successfully berthed with the International Space Station (ISS) this morning at 6:28 a.m. EST. On board is the NanoRacks [External Payload Platform](#) (NREP) that will be externally mounted to the Station on the JEM facility, and expected to be permanently open for business in spring 2016.

The NREP customers are gearing up for the launch of their payloads and learning from exposure to the extreme environment in space. The platform's first customers, sponsored by the Center for Advancement in Space (CASIS) include: Yosemite Space, Florida Institute of Technology, A-76 Technologies, and Honeywell Aerospace/Morehead State University.

### **Yosemite Space – Gumstix Solar Cells:**

Yosemite Space is evaluating radiation effects on ARM System on Chip (SoC) processors (similar to those used in today's cell phones) in the Gumstix payload. During a 6 month space exposure in the NREP, data on radiation effects will be compiled and compared to previously gathered ground based radiation testing. This will provide information on how best to integrate these SoCs into resilient, powerful computers for use in next generation CubeSats, small satellites and space robotics.

### **Florida Institute of Technology- Charge Injection Device (CID):**

Charge Injection Device (CID) technologies have enabled intrinsic contrast ratios of one part in a billion to be achieved. These are the same kinds of contrast ratios between Earth-like planets and their host stars. CIDs may solve the "candle next to a lighthouse" problem and could be responsible for that first image of Earth 2.0.. This technology also has many commercial applications, including those with environmental and defense interests. The next technology development step for CIDs is to demonstrate their functionality in low-Earth-orbit while exposed to the radiation environment of space.

"The NREP offers the ideal opportunity to get CIDs ready for future missions, and so the CID has been redesigned into the 2U payload form by a ThermoFisher Scientific team out of Liverpool, NY." Says Daniel Head, Physics and Space Sciences at Florida Institute of Technology. "After 6 months in the vacuum of space, the CID will be returned to Earth for final analysis, and then be added to the list of imaging detectors qualified for flight. "

### **A-76 Technologies – A76**

A-76 Technologies will test their A-76 preservation coatings and lubricants in the high stress space environment in order to determine how it would fare in certain on-earth applications. The Company's plan is to test two of their A-76 product lines during this experiment. These products are A-76 Super, their longest lasting version, and A-76 Green, the variation with no volatile organic compounds (or VOCs).

"We are excited to see the results of the A-76 test in space and the culmination of the joint efforts of CASIS, NanoRacks, and A-76 Technologies," said Lauren Thompson Miller, CEO of A-76

Technologies, Inc. "In addition to learning more about how our products will fare in certain on-earth applications, these tests will allow us greater visibility into the aerospace sector, which is a long term area of interest to us as we expand beyond the industrial manufacturing market."

### **Honeywell Aerospace/Morehead State University- DM7:**

The designation of DM7 (Dependable Multiprocessing 7) is significant because the NREP-hosted ISS flight experiment provides DM CubeSat technology with the opportunity to achieve the critical TRL7 level of technology validation (the space environment). The benefits of flying COTS in space are the ability to fly 10x - 100x the processing capability of state-of-the-art radiation hardened processors for much lower cost and to allow space applications to keep pace with COTS development instead of being 2 or 3 generations behind terrestrial high performance processing.

Michael D. Johnson, the chief designer of NanoRacks, explained that the Platform is the first step in the Company moving with its customers into the void of outer space. "We expect to be able to soon offer opportunities to fly away from the ISS in the coming years. The Platform is the first step for us in gaining this sort of expertise."

For further information regarding the first NREP payloads, or other media inquiries, please contact Abby Dickes at [adickes@nanoracks.com](mailto:adickes@nanoracks.com)

### **About NanoRacks**

NanoRacks LLC was formed in 2009 to provide commercial hardware and services for the U.S. National Laboratory onboard the International Space Station via a Space Act Agreement with NASA. NanoRacks' main office is in Houston, Texas, right alongside the NASA Johnson Space Center. The Business Development office is in Washington, DC., and NanoRacks' now has a new office in Silicon Valley, California.

NanoRacks has recently signed a teaming agreement with Blue Origin to offer integration services on their New Shepard space vehicle. The Company has grown into the Operating System for Space Utilization by having the tools, the hardware and the services to allow other companies, organizations and governments to realize their own space plans.

To date over 200 payloads have been deployed by the Company on the International Space Station and our customer base includes the European Space Agency (ESA) the German Space Agency (DLR,) the American space agency (NASA,) US Government Agencies, Planet Labs, Urthecast, Space Florida, NCESSSE, Virgin Galactic, pharmaceutical drug companies, and organizations in Vietnam, UK, Romania and Israel. Our customer base has propelled NanoRacks into a leadership position in understanding the emerging commercial market for low-earth orbit utilization.