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CASIS and United Nations Join Forces for Research and Development of a Hyperspectral Imaging System on the International Space Station

KENNEDY SPACE CENTER, FLORIDA, USA / GENEVA, SWITZERLAND (July 8, 2014) – The Center for the Advancement of Science in Space (CASIS) and the United Nations Institute for Training and Research (UNITAR) today announced a collaboration on technology applications that will aim to develop and deploy a next-generation high-resolution, multi-band hyperspectral imaging system onboard the International Space Station (ISS). The system will be used to support a variety of applications, including water and forest management, humanitarian relief, recovery after disaster, disaster risk reduction, disaster prevention, as well as in-country planning and development. Portions of the data stream will be made available to academic institutions, United Nations (U.N.), other government agencies, and not-for-profit organizations to develop new hyperspectral applications.

The ISS U.S. National Laboratory, managed by CASIS, provides a premier vantage point from which to observe and analyze events on Earth. Its specific location in low-Earth orbit makes this platform particularly advantageous over traditional satellite configurations; it covers 90% of Earth's population and provides much more powerful and impactful imagery in near-real time, when compared with many traditional Earth observation platforms.

The mission of UNITAR is to deliver innovative, executive-type training and conduct research on knowledge systems to develop the capacity of beneficiaries of the U.N. member states. Part of UNITAR's research department is the United Nations Operational Satellite Applications Programme (UNOSAT), a center of excellence program dedicated to satellite image analysis and geospatial applications for use by U.N. member states. Since 2000, UNOSAT has provided the U.N. family, including its member states, with access to satellite imagery and satellite derived analysis through the development and provision of Earth observation and geographic information system applications. As part of the agreement, CASIS and UNITAR will work together to develop outreach and educational projects with a specific focus on activities implemented by the UNOSAT programme.

CASIS will manage the efforts to design, launch, and operate the hyperspectral sensor onboard the ISS, soliciting innovative proposals from both the academic/not-for-profit sectors as well as the commercial market. UNOSAT will serve as the lead capacity development and applications and training entity for the imaging system, working in close collaboration with implementation partners and beneficiaries.

"CASIS is honored to be partnering with the United Nations to create this powerful technological platform that will have a meaningful impact on global efforts," said CASIS President and Executive Director Gregory H. Johnson. "This initiative will provide U.N. partners the ability to leverage the vantage point of the ISS to improve humanitarian relief and recovery capabilities in real time."

"In addition to the timely delivery of data and ready-to-use products during and following natural disasters, we are encouraged by the wide range of new applications that hyperspectral imaging will allow us to

provide to U.N. member states and sister agencies. For example, these images would allow better natural resource management and disaster response, allowing national actors relevant and timely data at no or low cost," said manager of UNITAR's UNOSAT program Einar Bjorgo.

"NASA is pleased that CASIS and the U.N. are collaborating on identifying and developing use of the ISS for meeting global humanitarian needs. We believe significant value can be contributed to the many industries and Earth-based solutions that may be derived from hyperspectral imaging and the unique perspective of the ISS," said NASA International Space Station Program Manager Michael T. Suffredini.

The ISS provides a unique environment for researchers to conduct investigations, for entrepreneurs to develop new business models, and for educators to inspire the next generation of scientists and engineers. To learn more about opportunities to utilize the ISS National Laboratory, please visit: http://www.iss-casis.org/Opportunities.aspx

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About CASIS: The Center for the Advancement of Science in Space (CASIS) was selected by NASA in July 2011 to maximize use of the International Space Station (ISS) U.S. National Laboratory through 2020. CASIS is dedicated to supporting and accelerating innovations and new discoveries that will enhance the health and wellbeing of people and our planet. For more information, visit www.iss-casis.org.

About the ISS National Laboratory: In 2005, Congress designated the U.S. portion of the International Space Station as the nation's newest national laboratory to maximize its use for improving life on Earth, promoting collaboration among diverse users, and advancing STEM (Science, Technology, Engineering and Mathematics) education. This unique laboratory environment is available for use by other U.S. government agencies and by academic and private institutions, providing access to the permanent microgravity setting, a unique vantage point in low-Earth orbit, and varied environments of space.

About UNITAR: The United Nations Institute for Training and Research (UNITAR) was established with the purpose of enhancing the effectiveness of the United Nations in achieving the major objectives of the Organization. Since its establishment in 1963, UNITAR has grown to become not only a recognized and respected service provider in professional, executive-type training, but also in the broader realm of capacity development. Today, the scope of UNITAR programming is truly global with an outreach spanning the entire membership of the United Nations and with over 25,000 individuals benefitting from the delivery of some 400 training and related events yearly. For more information, visit www.unitar.org.

About UNOSAT: UNOSAT is a Programme of UNITAR recognized as a Centre of Excellence within the United Nations for satellite image analysis and geospatial applications. Since 2000 UNOSAT provides the UN family and Member States with access to satellite imagery and satellite derived analysis through the development and provision of Earth Observation and Geographic Information System applications for humanitarian relief, crisis management and prevention, recovery and development (www.unitar.org/unosat). In addition, UNITAR-UNOSAT provides solutions for satellite telecommunications, satellite navigation and capacity development in the field of geo-information. UNITAR's outlook for the future relies on innovation as an enabler of change and on constant work to research advanced solutions and break new ground. New technological solutions will help UNITAR continue to provide the United Nations and its Member States with independent, dependable, timely, impartial, and accountable data and analytical capacity.

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