

GIST-NASA, MOU signed to respond to climate change with global research cooperation based on satellite data begins in earnest

- GIST participates as a joint research partner in the soil moisture measurement project for climate change prediction and response... In charge of precision adjustment and verification of the East Asia Soil Moisture Measurement Satellite (SMAP) mission
- NASA researchers and engineers are scheduled to visit GIST around March next year to install research equipment... Regularization of seminars inviting NASA and JPL scientists, etc. to solidify GIST-NASA cooperation



▲ On Tuesday, October 8, the GIST School of Environment and Energy Engineering invited four scientists from NASA (National Aeronautics and Space Administration)/JPL (Jet Propulsion Laboratory) to Oryong Hall to hold a seminar introducing NASA's soil moisture observation satellite-related research and missions, and took a commemorative photo.

Understanding the moisture distribution of the Earth's ecosystem and predicting natural disasters such as droughts and floods can have a direct impact on understanding the Earth's energy cycle and enhancing food security through improved agricultural productivity.

The Gwangju Institute of Science and Technology (GIST, President Kichul Lim) announced on Friday the 15th that it signed a business agreement (MOU) with NASA to conduct joint research to grasp the moisture distribution in soil in East Asia at a glance.

The main contents of the agreement include: ▲ Establishment of a partnership for the calibration (precision adjustment) of NASA's Soil Moisture Active Passive (SMAP) satellite mission and the satellite image preprocessing system (CAL/VAL Processor) and ▲ GIST participation in data verification, joint research, and training programs required for the SMAP satellite mission.

* Soil Moisture Active Passive (SMAP): A satellite built to help predict droughts, floods, etc., and to aid in the Earth's energy cycle and agriculture. Its 6m diameter rotating antenna rotates 15 times per minute and sends microwaves to the surface of the Earth to obtain data on the amount of moisture held by the top 5cm of the ground. This data is updated every 2-3 days, and can help farmers draw water from reservoirs or decide when to transplant crops.

Under this agreement, GIST will ▲ install and operate equipment provided by NASA, ▲ transfer data collected in East Asia to NASA for the next five years, and conduct related research. NASA plans to send related researchers and technicians to GIST around March of next year to install the research equipment.

The School of Environment and Energy Engineering (Dean Yunho Lee), which led the MOU signing with NASA, has been in close contact with NASA to conduct research to correct and verify data sent by the SMAP satellite launched by NASA in 2015 to measure soil moisture across the entire Earth.

In addition, on October 8, four scientists from NASA and the Jet Propulsion Laboratory (JPL) were invited to a seminar introducing NASA's soil moisture observation satellite-related research and missions, and the plan to hold regular seminars at GIST in the future was discussed.

