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## Danuri succeeds in 1st lunar flyby maneuver

*Lunar orbiter to perform five LOI maneuvers until Dec. 28*

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The Danuri lunar orbiter, Korea's domestically developed lunar orbiter, succeeded in the first of five planned maneuvers for a lunar orbit flyby on Saturday, the Korea Aerospace Research Institute (KARI) said Monday.

"The KARI carried out the Danuri's first lunar orbit insertion (LOI) maneuver as planned at 2:45 a.m., Dec. 17," the space agency said.

"The first maneuver was the most important one to ensure that the Danuri is stably captured by the moon's gravity and does not overshoot the moon," it added.

The space agency previously said the LOI process was carried out by automatically executing commands sent to the Danuri in advance at a set time. But the process before and after the LOI was monitored in real time on the ground.

After the first LOI, the KARI analyzed orbit information for about two days and confirmed Monday that the Danuri reduced its speed from about 8,000 kilometers per hour to 7,500 kilometers per hour.

The Danuri is scheduled to perform five LOI maneuvers until Dec. 28 to settle into orbit 100 kilometers above the moon. Whether the space vehicle has entered lunar orbit properly will be confirmed on Dec. 29.

"The Danuri was captured by lunar gravity and now we can say it truly became a lunar orbiter that orbits the moon," the KARI said. The lunar orbiter's next four LOIs will be carried out on Dec. 21, 24, 26 and 28.

Carried by SpaceX's Falcon 9 rocket, the unmanned Danuri was launched from Cape Canaveral Space Force Station in Florida on Aug. 5.

After being launched into space, it headed to the moon using a ballistic lunar transfer trajectory method that uses the gravities of the Earth, the moon and the sun to enter lunar orbit.

Once the lunar orbiter is confirmed to successfully settle into the moon's orbit, it will conduct the initial operation of the payload and the function test in January. From February, it will carry out scientific observation, the KARI said.

The Danuri is equipped with five pieces of observation equipment developed in Korea and a ShadowCam device from the U.S. National Aeronautics and Space Administration (NASA) that can observe the darkest parts of the moon's surface.

## Science minister distances himself from KARI restructuring controversy

By Lee Kyung-min  
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Minister of Science and ICT Lee Jong-ho expressed hope, Monday, that an internal dispute over the organizational restructuring of Korea Aerospace Research Institute (KARI), the developer of the Nuri space rocket or KSLV-II, would be resolved soon. Nuri is a three-stage launch vehicle, and the second rocket after Naro-1.

Whether six senior KARI researchers, including Ko Jeong-hwan, head of KARI's Korea Space Launch Vehicle II R&D directorate, who offered to resign, would return to work with full commitment remains to be seen. Observers say this is an unlikely scenario since the government has yet to revise early plans to split the 243-strong department overseeing the launch vehicle to one led by Ko left with five non-research officials.

"The recent offer of resignation was a process that came from academic integrity and pride in technological research as a scientist," Lee said during a press conference with a group of reporters at the Sejong administrative city. "I hope the figures who led the success of Korea's space programs would continue discussions within KARI and the ministry for the greater good and objectives. The government will provide consultation if need be," he added.

Not every decision leads to an agreement, especially when it concerns government policy directives, a reason why Lee called for an open mindset seeking a common ground.

"Ko will not altogether leave



Minister of Science and ICT Lee Jong-ho speaks during a press conference with a group of reporters in Sejong.

Courtesy of Ministry of Science and ICT

KARI and serve as key researcher. I hope he will continue to take senior positions within the state-run research institute to fortify the country's science and ICT capabilities."

Meanwhile, the leadership of the envisioned government organization, which Korea seeks to establish as the Korean version of the U.S. National Aeronautics and Space Administration (NASA), will be filled with figures with a deep understanding of scientific and aerospace programs as well as administrative management expertise, he added.

The organization separate from KARI will be launched next year, a campaign pledge of President Yoon Suk-yeol. The launch will be overseen by the interior, industry, finance, defense ministries. How effectively the ministry manages conflicts over the makeup of the organization will determine the success of Korea's ability to establish space programs, aeronautics and space research projects similar to NASA.

"The envisioned entity will need someone with an equal priority on science and administrative directives," Lee said.