

Microsatellite Development and Education of Space Science and Technology at Kanazawa University

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At Kanazawa University, researchers from engineering and science are cooperating to promote the "Kanazawa University Satellite Project (Kanazawa-SAT3: Study and Training in Space Science and Technology for Kanazawa Cube-Satellites)". In this project, a microsatellite is being developed by staff and students of Kanazawa University. It is a scientific satellite which will contribute to the elucidation of the mechanism of gravitational wave generation by identifying the source of gravitational wave by detecting the arrival direction of gamma rays and X rays radiated at the same time when a gravitational waves are generated by collision of astronomical objects. The satellite will be inserted into a solar synchronous orbit at about 660 km altitude. It is a microsatellite with a total weight of 50 kg or less, and its size is cubic with a side of 50 cm, and it is designed to be a piggyback on an HII-A rocket.

Also related to this project, a space science and engineering course has been newly established in the Graduate School of Natural Sciences in April 2018. This course is based on the 'satellite development by students', and students are actually involved in the design, fabrication, ground tests, and operation of scientific satellites, aiming to train personnel who are familiar with space science and space engineering, with satellite-development skills.

Ground tests with the thermal and structural model of Kanazawa-SAT3 have been completed, and the unit tests for almost all components are being conducted. Currently, we are completing the design of the flight model. In the presentation, we will report the details of Kanazawa-SAT3 and its development status.

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