

Development of the first Kanazawa University Microsatellite

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1. Kanazawa University

At Kanazawa University, researchers from science and engineering fields have been collaborating to promote the "Kanazawa University Satellite Project (Kanazawa-SAT3: Study and Training in Space Science and Technology for Kanazawa Cube-Satellites)." In this project, we are developing a microsatellite called "Kanazawa-SAT3." The scientific mission of the microsatellite is to detect the direction-of-arrivals of X rays radiated from a gravitational wave source, the possible collision of massive astronomical objects. It should contribute to the investigation of the mechanism of gravitational wave generation by identifying the gravitational wave source. The microsatellite will be put into a solar synchronous orbit at an altitude of 660 km. The size and mass of the microsatellite are 50-cm cubic and 50 kg, which could be launched as a piggyback onboard the HII-A rocket. In association with the project, the "Space Science and Engineering Course" is scheduled to be newly established in the Graduate School of Natural Science and Technology, Kanazawa University in April 2018. The curriculum of the course is based on education on space science and engineering through the development of scientific micro- and/or nano-satellites by students. The course aims at developing the human resources that will meet the needs of space industry and academia. The structural and thermal model of Kanazawa-SAT3 has been developed and evaluated by vibration and thermal-vacuum tests. We are now developing the flight model. In the presentation, we will report the details of the satellite development.

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