

DEBris Data Acquisition System (DEBDAS)  
of  
International Center for Space Weather  
Science and Education (ICSWSE)  
Of  
Kyushu University



ICSWSE, Kyushu University, JAPAN

# Project Overview

- The ICSWSE is willing to establish a measurement network for space debris using small-aperture optical telescopes and a small satellite constellation, being named DEBris Data Acquisition System (DEBDAS).
  - ✓ The telescopes are well organized to be robotically and remotely controlled , including sophisticated image processing techniques and orbit estimation software.
  - ✓ The satellites are conducting in-situ measurements of micron-size debris using an easy-to-operate new sensor developed at JAXA.
  - ✓ Data acquired from the systems will be analyzed and modeled in a manner coupled with space weather science to provide a better understanding of the present and future space environment.
- The ICSWSE also aims at education for practical astronomy and space engineering at Kyushu University, collaborative measurements in combination between robotic telescopes and small satellites, space environmental awareness and space science, including debris generation and resulting environment.



# Practical Education through DEBDAS

- ❁ DEBDAS
  - ❁ Collaborative measurements in combination of robotic telescopes and small satellites
  - ❁ Space environmental awareness and space science
- ❁ Practical Astronomy
  - ❁ Planning and observation, processing and detection, and origin identification
- ❁ Space Engineering
  - ❁ Small satellite design, production, and operation

