

## Data Processing and Archive System of Muses-C AMICA (Multi-band spectroscopic camera)

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Muses-C is the first Japanese asteroid exploration mission which will be launched in May 2003. This project primarily aims mastering fundamental technology such as autonomous navigation and electronic propulsion that are essential for future planetary missions. On the other hand, in the scientific point of view, this mission has also the important scientific objectives that approaches closely to the asteroid and collect a sample from the surface of the asteroid. In Muses-C we also target the clarification of the nature of asteroid surface such as mineral composition and grain size distribution.

To accomplish these goals, the Muses-C explorer has a spectroscopic camera, AMICA (Asteroid Multiband Imaging Camera) on board. The camera has seven filters to observe asteroid surface remotely.

AMICA will produce several tens of gigabytes of data throughout the mission duration. This amount is relatively small compared to the data production rate of current planetary missions, however, our archive system should be designed to satisfy the special characteristics of the mission (long duration, wide application of data). Moreover, we should store past experimental data in the archive for data calibration and comparison. Our archive system should be planned to search and extract the desired data quickly.

In this lecture, we present the characteristics and concept of the AMICA data archive system. This concept includes the DPLEX (Desktop Lunar Exploration) concept, the architecture that any researcher and even the public can obtain planetary data through the network, and the author will touch on these implementation and realization in this archive system.