

Curation Facility for the Canadian Portion of the Bennu Sample from the OSIRIS-REx Mission

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On October 20th, 2020, the OSIRIS-REx mission collected a sample from the asteroid Bennu, which will be delivered to Earth in September 2023. Study of the sample will make it possible to tackle some fundamental questions about the early composition of the solar system and its organic content. In exchange for contributing the OSIRIS-REx Laser Altimeter (OLA) instrument, the data from which produced a 3D model of the asteroid that helped identify the sampling site, Canada will receive a portion of the Bennu sample. This portion of the sample is scheduled to be transferred to Canada within a year of its arrival on Earth. The Canadian Space Agency is currently planning its Curation Facility, which will be the first laboratory of its kind in Canada. The facility will allow us to keep the sample in a contamination-free environment, under nitrogen, to avoid degradation due to its interaction with Earth's atmosphere. Samples prepared using different techniques (e.g., thick and thin sections, polished grain-mount, etc.) will be available for study. Information collected through early observations and subsequent studies will be catalogued to record the analytical history as well as the growing knowledge of the sample. The catalogue will facilitate sample requests from researchers around the world.