



## **The Rosetta Science Archive: Status and Plans for Enhancing the Archive Content**

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On 30 September 2016, Rosetta completed its incredible mission by landing on the surface of Comet 67P/Churyumov-Gerasimenko. Although this marked an end to the spacecraft's active operations, intensive work is still ongoing with instrument teams preparing their final science data deliveries for ingestion into ESA's Planetary Science Archive (PSA). In addition, ESA is establishing contracts with some instrument teams to enhance their data and documentation in an effort to provide the best long-term archive possible for the Rosetta mission.

Currently, the majority of teams have delivered all of their data from the nominal mission (end of 2015), and are working on their remaining increments from the 1-year mission extension. The aim is to complete the nominal archiving with data from the complete mission by the end of this year, when a full mission archive review will be held. This review will assess the complete data holdings from Rosetta and ensure that the archive is ready for the long-term.

With the resources from the operational mission coming to an end, ESA has established a number of 'enhanced archiving' contracts to ensure that the best possible data are delivered to the archive before instrument teams disband. Updates are focused on key aspects of an instrument's calibration or the production of higher level data / information, and are therefore specific to each instrument's needs. These contracts are currently being kicked off, and will run for various lengths depending upon the activities to be undertaken. The full 'archive enhancement' process will run until September 2019, when the post operations activities for Rosetta will end.

Within these contracts, most instrument teams will work on providing a Science User Guide for their data, as well as updating calibrations. Several teams will also be delivering higher level and derived products. For example, the VIRTIS team will be updating both their spectral and geometrical calibrations, and will aim to deliver mapping products to the final archive. Similarly, the OSIRIS team will be improving their calibrations and delivering data additionally in FITS format. The Rosetta Plasma Consortium (RPC) instruments will complete cross-calibrations and a number of activities individual to each instrument. The MIDAS team will also be working on cross-calibrations and will produce a dust particle catalog from the comet coma. GIADA will be producing dust environment maps, with products in 3D plus time. A contract also exists to produce and deliver data set(s) containing sup-porting ground-based observations from amateur astronomers.

In addition to these contracts, the Rosetta ESA archiving team will produce calibrated data sets for the NAVCAM instrument, and will work to include the latest shape models from the comet into the final Rosetta archive. Work is also underway to provide a centralized solution to the problem of geometry on the comet.

This presentation will outline the current status of the Rosetta archive, as well as highlighting some of the 'enhanced archiving' activities planned with the various instrument teams on Rosetta.