

**STATUS AND PLANS FOR THE EXOMARS 2016 DATA ARCHIVE WITHIN THE PSA**

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**Introduction:** The ExoMars (Exobiology on Mars) programme is a joint programme of the European Space Agency and Roscosmos with a contribution from NASA. It is comprised of two missions. The first mission ExoMars 2016, was launched in March 2016. Its primary component is a Trace Gas Orbiter (TGO) which is aimed both at studying trace gasses in the Mars atmosphere and as a relay spacecraft for landed assets. To achieve this, the mission has a science payload comprised of four instruments, ACS and NOMAD are spectrometers operating in the UV to IR range optimised for studying the Martian atmosphere, CaSSIS is a four colour camera with capability to produce stereo images within a single orbit and FRENDD is a neutron spectrometer and dosimeter.

Exomars 2016 arrived at Mars in October 2016 and in January 2017 the TGO transitioned to its aerobraking phase. In March 2018 it reached a final 400 Km, circular, 2 hour, science orbit inclined at around 74 degrees. Since April 2018 the TGO has been in normal science operations with both science and relay operations ongoing.

**ExoMars in the PSA:** The ESA Planetary Science Archive (PSA) at the European Space Astronomy Centre (ESAC) in Spain currently hosts two PDS4 archives comprising of ExoMars 2016 data and early mission Bepi Colombo data. The new PSA, which serves both PDS3 and PDS4 data through common interfaces, was released publicly in January 2017. It currently has two connected data views sharing a common filter and script search interface, plus an FTP interface allowing users to browse public data. The filter and script search enables menu-guided cross-mission searches of both proprietary and public data. The results may be displayed either in a table or an image browser interface aimed primarily at a more general user. Data can be downloaded either directly from these interfaces or via a download manager where additional ancillary data may be added. A login is required for proprietary data download. The PSA also supports machine interfaces using the PDAP and EPN-TAP protocols.

The ExoMars 2016 TGO archive is hosted within the PSA under ESA responsibility. A copy of all the data is also housed at Space Research Institute of the Russian Academy of Sciences (IKI). At the end of 2019 the first calibrated data was delivered from the pay-

load teams to the PSA. Additionally the first release of archived SPICE kernels was made in August 2019. These deliveries are forming the basis for the first scientific reviews of the data and the first public release is expected to take place following these reviews in spring 2020. This milestone will transition instruments onto a rolling release of data six months after receipt. More details on the status of the data deliveries will be given in this presentation along with plans to enhance the PSA over the next few years to support better access to the data.

**Summary:** This presentation will describe the status of ExoMars 2016 calibrated data deliveries and the plans the PSA to support these data.