

ESA's Planetary Science Archive, presenting and preserving your research

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Abstract

With new missions being selected, missions moving to post-operations, and missions starting their journey to various targets in the Solar System, the European Space Agency's Planetary Science Archive [1] (<http://psa.esa.int>) is in constant evolution to support the needs of the projects and of the scientific community.

1. What happened in 2019, and what are the challenges for 2020

The past year has been particularly successful for European Space Agency (ESA) Solar System missions, with the launch of the BepiColombo mission to Mercury, and the start of the science phase for the ExoMars 2016 Trace Gas Orbiter (TGO). Scientific observations from BepiColombo and ExoMars 2016 TGO are stored in the archive a few days after reception on the ground. The PSA therefore provides the scientists with almost real time access to the data. As is common for ESA missions, access to the data is protected and reserved to members of the science team during the first months of the mission. The development of such archives is a new concept that requires a very strong support from each mission's Science Ground Segment (SGS) and the instrument teams. The development of this concept in the framework of the new Planetary Data System standard V4 (PDS4) used for the two new missions is particularly challenging.

In 2020 ESA will face challenges such as the expected start of the ExoMars 2020 Rover and Surface Platform (RSP), and the flybys of planets by BepiColombo. Rosetta will also soon end its journey by completing its archive. The content of the Rosetta archive will continue to be curated, like other missions in legacy such as Venus Express or

SMART-1. By 2020, users of the Planetary Science Archive (PSA) will have access to new services based on Geographical Information Systems and new geometrical search capabilities.

2. You can contribute to the PSA!

At the PSA we constantly interact with our users to ensure that our services are in line with the expectations and needs of the community. We encourage feedback from community scientists through:

- PSA Users Group: A group of scientific experts advising the PSA on strategic development;
- Direct interactions: Scientists from the PSA are present at the EPSC-DPS and eager to receive your comments and suggestions;
- ESA missions: If you are part of a mission archiving its data at the PSA, you are the expert that can tell us how your data should best be searched and used.

Please, help us improve the missions' legacy.

Acknowledgement

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References

[1] Besse, S. et al. (2017) *Planetary and Space Science*,
[10.1016/j.pss.2017.07.013](https://doi.org/10.1016/j.pss.2017.07.013), ESA's Planetary Science
Archive: Preserve and present reliable scientific data sets.