The ESA Planetary Science Archive

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WHAT is the PSA?

→ Repository of ESA’s missions for exploration of the Solar System
→ Contains science as well as engineering datasets of instruments
→ Uses the Planetary Data System (PDS) common format
→ 76 instruments (44 coming), 45 TB of data and 10 millions products

The Main role of the PSA is:

**PPP**: Preserving, Presenting and Promoting
Common standards and services for a cross-mission and cross-instrument archive

Follow and encourage recommendations from IPDA (International Planetary Data Alliance)
- PDS4 and PDS3 standards
- SPICE

Feedback from scientists to develop the archive
- Multiple interactions with space missions, conferences
- PSA User-Group provides regular feedback.

Towards a unification of keywords and technics
- Encourage the use of similar metadata
- Develop a global geometrical/GIS approach
Step 1 – Arrive at PSA (psa.esa.int)
### Step 2 – Result of initial query, refine query

**Planetary Science Archive**

**PSA 5.0.2**

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Step 3 – visualisation, download
If you need more than few data...

→ FTP
Everything is here

→ Machine access protocols
  - PDAP
  - EPN-TAP
1. Image Gallery (summer 2017)
   - Same search criteria, returns browse products only
   - Towards the scientific community
   - Towards the rest of the world
Upcoming improvements

2. Geographical Information functionalities (Spring 2018)
   → Projection of products, retrieval of products from surface
   → Needs uniformed geometry information, interoperability protocols
   → Major functionality for planetary science
psa.esa.int

- Different functionalities for retrieving datasets (User interface, Machine access, FTP)

- Gather common infrastructures (e.g., PDS, SPICE, GIS, etc.) and experiences (e.g., astronomy, heliophysic, etc.) to optimize science usage of planetary science missions

PSA is one generic tool that offers and will offer different ways to search and visualize datasets for the benefit of science