PDS ATMOSPHERES NODE NEWSLETTER

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Welcome to the Spring 2023 issue of the NASA Planetary Data System (PDS) Planetary Atmospheres Node (ATM) Archiving Newsletter. These newsletters are intended to serve as your definitive source for all archiving news related to planetary atmospheres, and to keep you informed of PDS ATM activities. We want to strike the right balance between providing open and transparent communications to our user community without overdoing it. *If there are topics that you would like to see addressed in future newsletters, please let us know!* As always, for data access, usability, and proposal assistance, please visit our website: https://pds-atmospheres.nmsu.edu/.

ATMOSPHERIC MODELING ANNEX

ATM has begun work on a new initiative to provide a PDS-equivalent archive/repository for atmospheric modeling output through the Atmospheric Modeling Annex (AMA), which will be developed as a cloud-based repository for planetary atmospheric modeling outputs and simulation results. Because of the short lifespan of many models and non-supported file formats typically used in modeling, many model output files are not appropriate for full PDS archiving. However, we recognize that atmospheric modeling is a vital tool for analysis and processing of mission observational data, and we wish to serve our user community by providing a repository for atmospheric modeling outputs, to which Digital Object Identifiers can be assigned.

POLICY UPDATES/REMINDERS

Note for new data providers/proposers: Requests for letters of support should be submitted to the appropriate nodes no later than a week before the submission deadline as required by PDS policy. (Effective October 2019). See the adopted policy text for more information:
https://pds.nasa.gov/datastandards/documents/policy/FINAL_PDS_Policy_Letters_of_Support_2019_10_08.pdf
We recognize that many of the ROSES programs have moved to a No Due Date format; for those programs, please submit requests for letters no later than one week before they are needed for internal deadlines.

RESOURCES FOR DATA PROVIDERS

The PDS web pages were designed to provide a comprehensive set of resources for R & A proposers who are considering archiving their data in the PDS: https://pds.nasa.gov/home/proposers/. These pages cover the how and why of archiving in the PDS, from requesting letters of support for proposals to the entire archiving process. Proposers are encouraged to consult these pages as a first stop for seeking information about data archiving; ATM personnel are also available and eager to answer your archiving questions!
Contact us at pds-atm@nmsu.edu.

NEW MISSION RELEASES

ATM is involved in archiving data from five active missions. This involves working closely with the instrument teams and mission archiving teams to ensure that the data are delivered, validated, and released to the public on a predetermined schedule available from: https://pds.nasa.gov/datasearch/subscription-service/data-release-calendar.shtml. *Here, we provide a status report of recent data releases from these missions at ATM:*

MARS

InSight 1st through 15th data release is available and certified including atmospheric data from the Temperature and Wind Sensors (TWINS) and Pressure Sensors (PS).
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/INSIGHT/insight.html

Entry, Descent, and Landing (EDL) data is also now available.
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/INSIGHT/insight_edl.html

Mars Atmospheres and Volatile Evolution (MAVEN) 1st through 32nd data release is available for Accelerometer (ACC), Neutral Gas and Ion Mass Spectrometer (NGIMS), and Imaging Ultraviolet Spectrograph (IUVS).
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/MAVEN/maven_main.html

Mars Reconnaissance Orbiter (MRO) 1st through 64th data release is available including data from the Mars Climate Sounder (MCS).
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/MARS/mars_reconnaissance_orbiter.html

Mars Science Laboratory (MSL) Curiosity 1st through 31st data release is now available for the Rover Environmental Monitoring Station (REMS).
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/MARS/curiosity/curiosity.html

Mars 2020 Rover (M2020) Perseverance 1st through 5th data release is available for Mars OXygen In-situ resource utilization Experiment (MOXIE) & Mars Environmental Dynamics Analyzer (MEDA).
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/PERSEVERANCE/perseverance_rover.html

JUPITER

Juno PDS3/PDS4 data are available for
Microwave Radiometer (MWR) including the recalibrated 2.0 cruise data, through perijove 44
Ultraviolet Imager/Spectrograph (UVS), through perijove 44
Jovian Infrared Auroral Mapper (JIRAM), through perijove 44
Gravity Science Experiment (GRAV), through perijove 44 data.
https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/JUNO/juno.html

NEW DERIVED DATA RELEASES (BY PROGRAM)

In addition to archiving mission data, ATM is also involved in hosting and archiving derived data, which are typically provided by individual data providers. These data are a valuable complement to the ATM mission data because they represent the results of investigations involving the analysis of mission data or the acquisition of field, laboratory, or ground-based data that support NASA's planetary missions. Below is a listing of derived data (by program) that have recently completed the archiving process and are now available online at ATM (since last issue – for past issues see: https://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/newsletter/newsletter.html).

PLANETARY DATA ARCHIVING, RESTORATION & TOOLS (PDART)
PLANETARY DATA ARCHIVING & RESTORATION (PDAR)

Laboratory Study of Hydrocarbon IR Spectra. This laboratory atmospheric chemistry data set has added corrected and new cross section spectra for neopentane and propene for Jupiter, Saturn, and Titan upper atmospheres.

Bernath, P. (2021), Laboratory Study of Hydrocarbon IR Spectra, NASA PDS Atmospheres (ATM) Node, https://doi.org/10.17189/1518949.

PDS4 TOOL DEVELOPMENT NEWS

The Atmospheres Node is in the progress of developing a PDS4 tool for helping users plan and design labels for simple bundles of data that they wish to archive in the PDS. The Educational Labeling System at Atmospheres (ELSA) is well on its way to being a functional guide for putting archive bundles together. ELSA aims to allow easy access to tailoring PDS4-compliant label templates for your needs. ELSA will allow persistent editing through a free account and step-by-step tutoring for building your bundles. Stay tuned to this section for future updates.

We are closing in on opening ELSA to external beta-testing, hopefully in the Summer 2023 timeframe. For more information or to volunteer as a beta-tester for the online tool, contact: elsa@atmos.nmsu.edu.

NEW PAPER ABOUT GIANT PLANETS DATA IN THE PDS

We recently published a paper about giant planets data in the PDS in a special Giant Planets issue of *Remote Sensing.* You can access the paper here: https://doi.org/10.3390/rs14236112. This paper contains a summary of the kinds of giant planets data that are archived in the PDS, ways in which these data can be discovered and used, and a future outlook of giant planets data and new initiatives that the PDS is undertaking. We encourage you to check it out!

ATM ADVISORY GROUP

The Atmospheres Node has reconstituted its Advisory Group, which is designed to provide input and feedback to us on issues of importance to our user base. We adjusted the AG membership to better reflect our current user community, and we anticipate that the members will serve as a sounding board for new ideas about ways we can better serve the planetary atmospheres community, as well as a conduit for ideas and feedback from our user community. Please join us in thanking the current AG members for their service:

Natasha Batalha (NASA/ARC)	Kevin McGouldrick (CU/LASP)
Don Banfield (Cornell)	Conor Nixon (NASA/GSFC)
Ashley Davies (JPL)	Paul Withers (Boston University)
Melinda Kahre (NASA/ARC)	Mike Wong (UC Berkeley)
Ralph Lorenz (JHU/APL)	

CONTACT US

We want to hear from you! We value your feedback and are committed to improving the archiving process as well as the usability and discoverability of data at ATM. If you have a derived data set that fits our archiving mission, please contact us to start a dialog. Also please contact us at: pds-atm@nmsu.edu if you have any questions or concerns. There is also a feedback widget on our web site that you can use if you are having trouble finding something on our web site.