

AMMOS-PDS Pipeline Service (APPS) – A Data Archive Pipeline for Mission Operations. C. Radulescu¹, S. R. Levoe², S. S. Algermissen³, E. D. Rye⁴, S. H. Hardman⁵, J. S. Hughes⁶, M. D. Cayanan⁷, E. M. Sayfi⁸, ¹Jet Propulsion Laboratory, California Institute of Technology, 4800 Oak Grove Dr, Pasadena, CA 91109, Costin.Radulescu@jpl.nasa.gov, ²same, Steven.R.Levoe@jpl.nasa.gov, ³same, Stirling.S.Algermissen@jpl.nasa.gov, ⁴same, Elizabeth.D.Rye@jpl.nasa.gov, ⁵same, Sean.H.Hardman@jpl.nasa.gov, ⁶same, John.S.Hughes@jpl.nasa.gov, ⁷same, Michael.D.Cayanan@jpl.nasa.gov, ⁸same, Elias.M.Sayfi@jpl.nasa.gov.

Introduction: The AMMOS-PDS Pipeline Service (APPS) [1][4] is a multi-mission science data (instrument data + metadata/label) transformation service, which connects product generation pipelines and the PDS [2] archive, therefore streamlining the delivery of science data to the PDS. The APPS pipeline is designed to run in parallel with a science data generation system, and ensure early data compliance to PDS4 Standards [3]. APPS was developed as a partnership between PDS and the AMMOS aiming to integrate the existing PDS4 tools and standards, and infuse them into the missions early, from concept to product delivery into PDS archive(s).

APPS consists of five major components:

- Label Design Tool (LDT) – create mission labels, and generate SIS documents.
- Transformation – Velocity-based product transformation.
- Validation – PDS validation (VTool).
- Reporting – PDS4 compliance reporting.
- Bundle Builder – PDS4 bundle creation using BPMN [5].

The presentation will describe in detail each component and its use case(s).

References:

- [1]<https://ammos.jpl.nasa.gov/toolsandservices/dowlink/instrumentdataprocessing/appsammospdspipeline/service/>
- [2] <http://pds.jpl.nasa.gov/>
- [3] <http://pds.jpl.nasa.gov/pds4>
- [4] Radulescu, C., Spohn, S., et al “ AMMOS-PDS Pipeline Service (APPS)”, NASA-Planetary Data System Management Council Meeting, Berkeley, CA 2014(http://mgmt.pds.nasa.gov/meetings/2014/Nov/presentations/NASA-PDS_Management_Council-APPS_Pres.pdf).
- [5] Object Management Group (OMG) Business Process Model and Notation (BPMN) <http://www.bpmn.org/>

