The PDS4 Metadata Management System. Anne C. Raugh[1] and John S. Hughes[2], [1]University of Maryland, College Park, MD, *araugh@umd.edu*, [2]Jet Propulsion Laboratory, Pasadena, CA, *John.S.Hughes@jpl.nasa.gov.*

Introduction: The Planetary Data System (PDS) was established 30 years ago[1] as a permanent and living archive for the data returned by and relevant to NASA's planetary exploration program. The charge of the PDS was and is not merely to curate the data, but to maintain it in a usable state and make it available to contemporary scientists and researchers.

Metadata is the core element supporting all PDS activities. Structural metadata describes the physical format of the data, science metadata provides the analytical characteristics of the data, and provenance metadata established the history of the data. The essential problem of metadata is ensuring completeness and consistency among sources over time, while also allowing for contextual customization – so that data preparers can provide new metadata to document their specific circumstances.

The PDS system redesign known as **PDS4** has as its foundation the PDS4 Information Model – a codification of metadata for planetary data generally that also includes structures that can be used for the orderly and consistent extension of the IM into local data preparer contexts. We present the theory and methodology underlying the development of the PDS4 Information Model, the codification of metadata of different types into the PDS label structures, and the extension of that methodology into local contexts that can be defined by data preparers.

References:

[1] Lee, S. W. (1991) *The Planetary Data System, Revies of Geophysics Supplement, U.S. National Report to the International Union of Geodesy and Geophysics, 1987-1990*, 29, 337-340.