

# Release Notes

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## PD4 Information Model Version 1.B.1.0

### Build 9a Release

May 4, 2019

These notes detail the changes made to the PDS4 Information Model and contained in Release 1.B.1.0. These changes include those approved by the CCB since Version 1.B.0.0 and bug fixes since Version 1.B.0.0.

\*\*\* This point build is essentially the same as 1.C.0.0 but released as 1.B.1.0 for use by the InSight mission. The rationale was to make a bugfix available while 1.C.0.0, formally released March 31, was supporting System Integration and Test. The change required was to “expose” the attribute “local\_idenfifer” in the “pds” namespace so that it could be referenced in an LDD. \*\*\*

The released documents include:

1. index\_1C00.html – Information Model Specification
2. PDS4\_PDS\_1C00.xsd – Common Schema
3. PDS4\_PDS\_1C00.sch – Common Schematron
4. PDS4\_PDS\_1C00.xml – Label for Common Schema and Schematron
5. PDS4\_PDS\_DD\_1C00.html – Data Dictionary (html)
6. PDS4\_PDS\_DD\_1C00.pdf – Data Dictionary (pdf)
7. PDS4\_PDS\_JSON\_1C00.JSON – Information Model (JSON)

### CCB approved changes made since the release of the prior version of the Information Model

1. CCB-195 - Update Information Model to Improve International Interoperability
2. CCB-202 - Amend the Instrument class context product
3. CCB-203 - Define and enforce constraints on local dictionaries to avoid confusion with key pds: namespace attributes.
4. CCB-214 - Optional trailing zeroes in ASCII\_Real for Table\_Character
5. CCB-227 - Missing Requirements in Source\_Product\_External
6. CCB-235 - Add data type ASCII\_BibCode
7. CCB-238 - Need the capability to associate Thumbnail products to other types of products

8. CCB-240 - Add Units\_of\_Energy as a unit of measure.
9. CCB-242 - Add 'Field Campaign' to Investigation Type
10. CCB-243 - Consolidate Context Target Types for Samples
11. CCB-245 - Deprecate 'Airborne' as an independent host type
12. CCB-246 - Deprecate 'Sun' as a separate context target.
13. CCB-247 - Undeprecate "Radio Science" as a Value for Instrument.type
14. CCB-248 - Bundle\_Member\_Entry is missing a reference\_type for miscellaneous collections

### **Bug Fixes and other Changes**

1. Removed the Imaging class <Telemetry\_Parameters> from the IM master database.
2. Removed the Geometry class <Geometry> from the IM master database.
3. Removed the Cartography class <Cartography> from the IM master database.
4. Add Imaging Units\_of\_Pixel\_Scale\_Map to <DD\_Value\_Domain.unit\_of\_measure\_type>
5. Made line endings consistent for XML Schema file.

### **LDDTool Changes**

1. The formation rule for LDDTool output filenames is now "PDS4", namespace\_id, IM version id, and LDD version id.
2. Removed (-s - synchronize) command line option. (subsumed by filename change above)
3. Added the following validation for IngestLDD:
  - a. No local dictionary may define a class called Internal\_Reference.
  - b. No local dictionary may define a class called Local\_Internal\_Reference.
  - c. No local dictionary may define an attribute called logical\_identifier.
  - d. No local dictionary may define an attribute called local\_identifier.
  - e. Attribute titles must begin with a lower case letter.
  - f. Class names must begin with an upper case letter.
  - g. Each LDD must expose one class for external reference (element\_flag = true)
  - h. At least one value for pds:local\_reference\_type must be defined for each Internal\_Reference.
  - i. At least one value for pds:local\_reference\_type must be defined for each Local\_Internal\_Reference.
4. Removed data type error for "ANAME".
5. Set the DocBook (DD) team name from the Configuration File.
6. Hide classes that are inactive by setting disposition file to "I".