

# Release Notes

---

## PD4 Information Model Version 1.A.0.0

### Build 8b Release

March 30, 2018

These notes detail the changes made to the PDS4 Information Model and contained in Release 1.A.0.0. These changes include those approved by the CCB since Version 1.9.0.0 and bug fixes since Version 1.9.0.0. The released documents include:

1. index\_1910.html – Information Model Specification
2. PDS4\_PDS\_1910.xsd – Common Schema
3. PDS4\_PDS\_1910.sch – Common Schematron
4. PDS4\_PDS\_1910.xml – Label for Common Schema and Schematron
5. PDS4\_PDS\_DD\_1910.html – Data Dictionary (html)
6. PDS4\_PDS\_DD\_1910.pdf – Data Dictionary (pdf)
7. PDS4\_PDS\_JSON\_1910\_DOM.JSON – Information Model (JSON)
8. PDS4\_PDS\_OWL\_1910.rdf – Information Model (OWL-DL)
9. PDS4\_DISP\_1910.xsd – Display LDD Schema
10. PDS4\_DISP\_1910.sch – Display LDD Schematron
11. PDS4\_DISP\_1910.xml – Label for Display Schema and Schematron

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

1. CCB-153 - SR Needs Additional Description of Packed\_Data\_Fields
  - a. Change attributes <start\_bit> and <stop\_bit> to <start\_bit\_location> and <stop\_bit\_location>, which establishes a better parallel with <field\_location>.
  - b. Make the definitions of the new attributes more explicit.
  - c. Update the schematron rule.
2. CCB-174 - Add the Composite\_Structure class
  - a. Defined the <Composite\_Structure> class as a member of the <File\_Area\_Observational> and <File\_Area\_Observational\_Supplemental> classes.
  - b. Defined the Local\_ID\_Reference class  
Added the following values and their value meanings
    - has\_component

- has\_primary\_component
  - c. Defined the Local\_ID\_Relation class
    - Added the following values and their value meanings
    - has\_axis\_values
    - has\_backplane
    - has\_column\_headers
    - has\_display\_settings
    - has\_spectral\_characteristics
  - d. Added the following terms and their definitions to the Glossary
    - component
    - primary component
    - composite structure
- 3. CCB-189 - Implement Query Model for PDS4 Mission Science Data Bundles
  - a. Implement a schematron rule that validates that a Mission Science Archive Product\_Bundle contains the attributes necessary for the bundle to be found via the PDS4 search services.
- 4. CCB-201 - Add enumerated values to <reference\_type> for investigations at facilities using telescopes.
  - a. Added values and value meanings for <Internal\_Referencere.reference\_type>
    - i. Used in pds:Product\_Context/pds:Reference\_List/pds:Internal\_Reference;
  - b. investigation\_to\_facility - The investigation is associated to a facility
  - c. investigation\_to\_telescope - The investigation is associated to a telescope

### Bug Fixes

1. Removed pds:Context\_Area from the XPath pds:Product\_Bundle/pds:Context\_Area for Bundle query model.
2. Removed null pattern from data type ASCII\_Date\_Time\_UTC
3. Fixed Bundle Query Model Schematron Rule - <sch:rule context="pds:Product\_Bundle">

### Other Significant Updates External to the Common Dictionary

1. The version identifier of the Information Model is used for many purposes, including being inserted as part of the file name for almost all system files that are auto-generated for the release. To be inserted into the filename, the version identifier must have the dots "." removed, for example "1900" is derived from "1.9.0.0". However for this release the insert "11000" results from "1.10.0.0". This insert causes problems with ordering as well as being ambiguous. After some consultation it was decided to use the insert "1.A.0.0" for this release. For example PDS4\_PDS\_1A00.xsd is the name of the XML Schema file for this release. System programmers

will immediately identify the change from the decimal to the hexadecimal numbering system.  
(base-10 to base-16).