

Dataset Interoperability

Summary

This section contains a series of recommendations made by NASA's Earth Science Data System Working Groups ([ESDSWG](#)) Dataset Interoperability Working Group (DIWG) that are intended to increase and enhance the interoperability of [Earth Science data](#) product files. The DIWG recommendations herein embody best practices to reduce and bridge gaps between geoscience dataset formats widely used at NASA and elsewhere and to help ensure that Earth science datasets smoothly interoperate with each other regardless of their origin.

The first document, [Dataset Interoperability Recommendations for Earth Science](#), was published in July 2016 and contains 12 recommendations. The second, [Dataset Interoperability Recommendations for Earth Science: Part 2](#), was published in April 2019. These are a continuation of the 2016 recommendations with the same goal of improving the interoperability of Earth Science dataset files. Most cover new areas of interoperability while some expand on the 2016 recommendations.

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Dataset Interoperability Recommendations for Earth Science: Part 2 (RFC-036)

- [Adopt Semantically Rich Dataset Release Identifiers](#)

- Character Set for User-Defined Group, Variable, and Attribute Names
- Consistent Units Attribute Value for Variables Across One Data Collection
- Date-Time Information in Granule Filenames
- Ensure Granule's Filename Uniqueness Across Different Dataset Releases
- Include Georeference Information with Geospatial Coordinates
- Include Time Coordinate in Swath Structured Data
- Keep Coordinate Values in Coordinate Variables
- Not-a-Number (NaN) Value
- Standardize File Extensions for HDF5/netCDF Files
- Use the Units Attribute Only for Variables with Physical Units