
Airborne Data Management Group

Progress and Collaborations

— Deborah Smith (ADMG) —

NASA's Airborne Data Management Group (ADMG)

The **Airborne Data Management Group** (ADMG) was established in 2018 to respond to the need for better stewardship and support for airborne and field data at NASA. ADMG is part of IMPACT at NASA MSFC

ADMG Primary Tasks:

- Take a **full assessment** of NASA Airborne and Field Earth Science data
- Construct a public, centralized, **metadata-rich inventory** of airborne and field investigations, platforms, instruments, and data product access
- Maintain a **knowledge center** containing important information and document access, and simplified access to **airborne tools** and **use cases**
- Develop systematic **approaches and best practices** that bring **consistency and expediency** to airborne and field data stewardship
- **Improve communication and understanding** between DAACs, campaign investigators, and other stakeholders



Organizing Isn't Easy

NASA airborne and field data have historically suffered from less attention than NASA satellite data

Our primary goals are to:

- **Bring more consistency** to how scientists find and obtain airborne and field data from NASA (processes and procedures)
- **Provide and make available important contextual details** of the data collection environment (inventory and knowledge center)
- Ensure the **discovery of and access to** these valuable NASA data (inventory and data recovery)



Photo by [Samet Kurtkus](#) on [Unsplash](#)

Assessment of NASA Airborne and Field Data

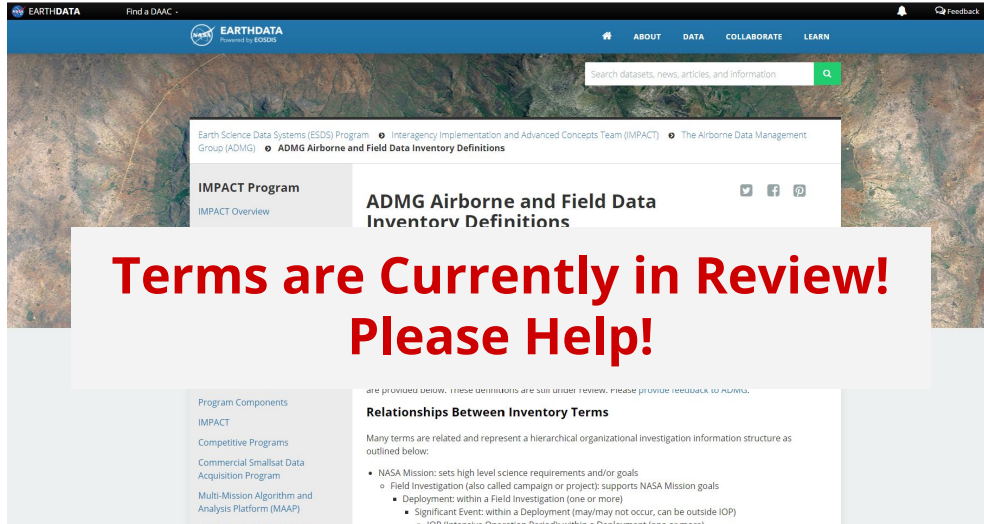
Assessment Goals:

- Identify and **locate all** NASA airborne Earth science activities and data
- **Assign detailed metadata** to improve future use
- **Identify and work to fix issues** with airborne data archival, discovery and access

To date, ADMG has found more than **160** airborne and field activities that belong in the inventory

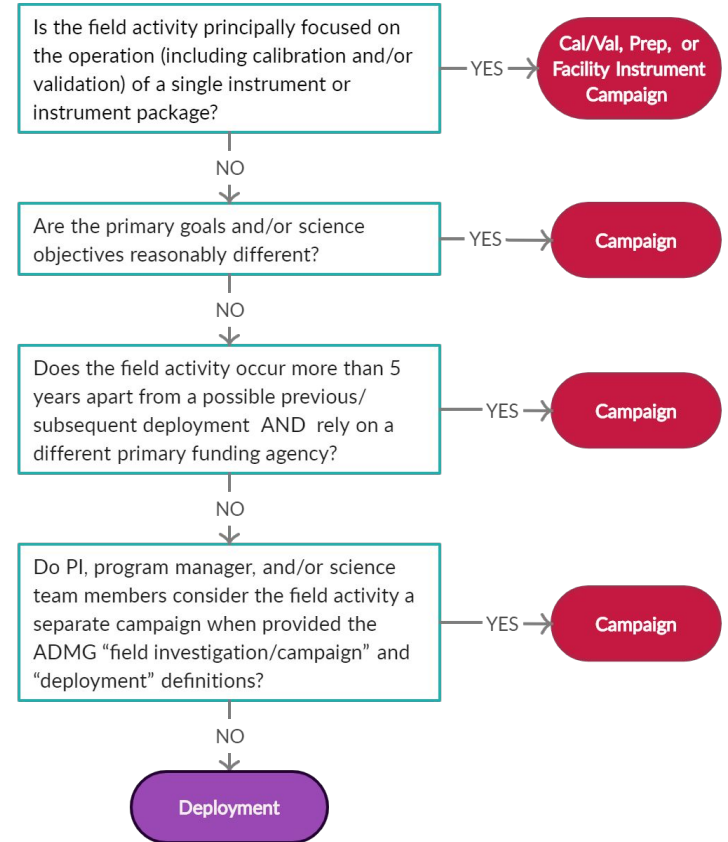


ADMG Terms and Decision Trees



ADMG Definitions for Inventory Construction

ADMG Decision Trees (available online soon!)



CASEI: The Catalog of Archived Suborbital Earth Science Investigations

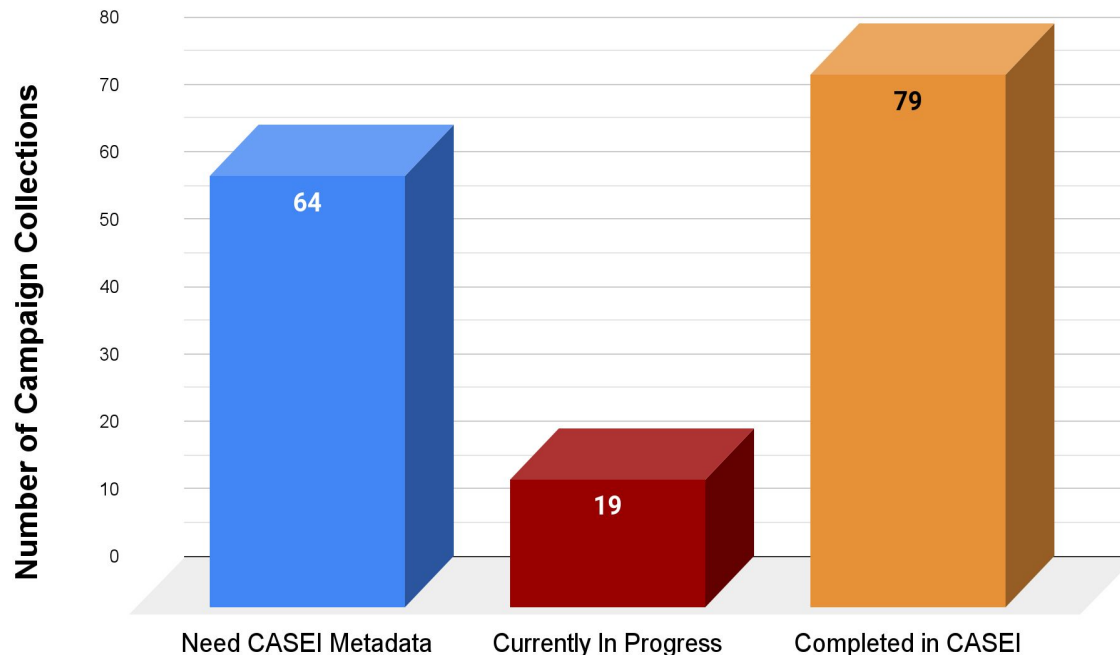
- CASEI contains **detailed information** of airborne and field campaigns and access to data products using DOIs
- Additional contextual details provide users with **flexible discovery** and a greater understanding of campaigns, platforms, and instruments
- Users can explore and discover the inventory via the **highly-linked web-based user interface** to find information across all campaigns, data centers, people, topics, etc.
- Filters provide users with **many different ways to search** through the linked information



CASEI is developed by ADMG with help from Development Seed and other IMPACT team members

ADMG Inventory Progress

Total Known Campaigns as of October 2022: 162



Contains **50%**
of known NASA
airborne campaigns

Includes **50%**
more contextual
metadata than CMR

Roughly **500**
instrument
descriptions

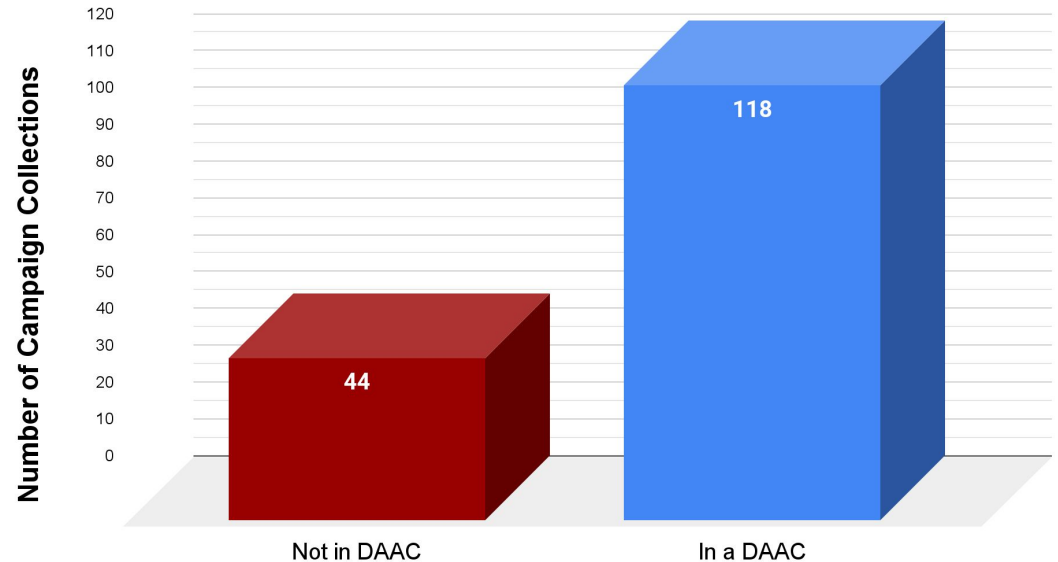
3 sets of eyes
on every bit of
added metadata

The above numbers include campaigns that have DAAC data as well as those campaigns for which data is not yet at a DAAC for various reasons

Data Archeology / Data Recovery

ADMG works to help place historical airborne and field data at NASA DAACs to make the data discoverable for all users

Total Known Campaigns as of October 2022: 162



Data Archeology

ADMG aids in providing open access to **all** NASA airborne and field data. This includes finding data never published.

Latest efforts:

- 30 years of **ER-2 air photos** recovered from NASA Ames. Currently at Johnson Space Center for digitization
- NASA **DC-8 onboard videos** (nadir, forward, sideview) from GTE campaigns (1979-1988) to be recovered and digitized
- Right here at Marshall, data from previous campaign instrument flights will find a new home at a NASA DAAC



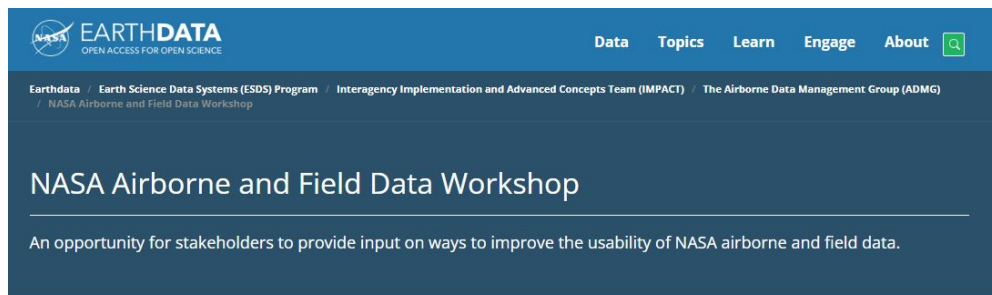
Identify Needed Changes and Improvements

ADMGM worked with ESDIS and DAACs to carry out the a 2-day Airborne and Field Data Workshop designed to collect data producer and data user feedback

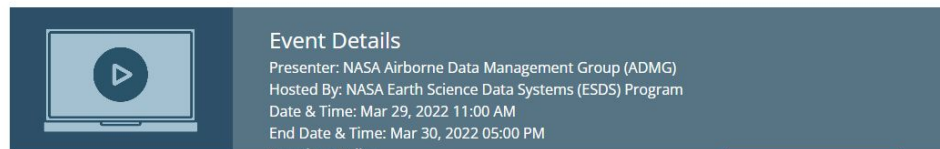
[Recordings Available](#) online!

Preliminary report in the May-June 2022 edition of [The Earth Observer](#) (see page 19)

Analysis of workshop feedback complete and final report now in preparation for submission to HQ with recommendations for improvements



The screenshot shows the top navigation bar of the NASA EarthData website with links for Data, Topics, Learn, Engage, and About. Below the navigation bar, the breadcrumb trail reads: Earthdata > Earth Science Data Systems (ESDS) Program > Interagency Implementation and Advanced Concepts Team (IMPACT) > The Airborne Data Management Group (ADMGM) > NASA Airborne and Field Data Workshop. The main heading is "NASA Airborne and Field Data Workshop" with a sub-heading: "An opportunity for stakeholders to provide input on ways to improve the usability of NASA airborne and field data."



The Event Details section features a play button icon on a laptop screen. The text provides the following information: Presenter: NASA Airborne Data Management Group (ADMGM); Hosted By: NASA Earth Science Data Systems (ESDS) Program; Date & Time: Mar 29, 2022 11:00 AM; End Date & Time: Mar 30, 2022 05:00 PM; Location: Online.



The purpose of this workshop is to gather information to improve the usability of NASA airborne and related field data. The first day of the workshop will focus on input from data users, and the second day will focus on input from data producers.

The workshop format will include some brief plenary speakers, who will highlight their perspectives on what's working well and opportunities for improvement; panel discussions;

View Event Recording

Data Archives

ASDC OB.DAAC

ORNL DAAC

Technologies

Airborne and Field Data

Data Analysis, Discovery,

<https://www.earthdata.nasa.gov/esds/impact/admgnasa-airborne-and-field-data-workshop>

Improved Policies and Practices

ADMG works with ESDIS / DAACs to

- Use consistent terms
- Utilize more consistent organization and data archival
- Improve communication with science teams
- Follow defined responsibilities and requirements
- Listen to and meet the needs of data producers and users

FY22 Activities:

- Preservation documents now contain airborne and field information and guidance
- Improved GCMD keywords for platforms that result in enhanced Earthdata Search filters
- High level best practices guide released for airborne and field data/information stewardship
- Added to the Data Producer's Development Guide (DPDG) to improve guidance for airborne and field data producers

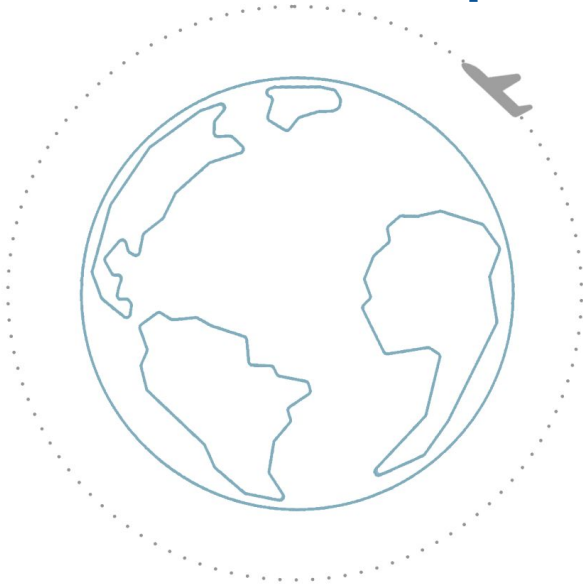


Image source: Ross Findon, Unsplash



NASA | CASEI

Explore CASEI: <https://impact.earthdata.nasa.gov/casei/>



Thank you!

For questions, contact deborah.smith@uah.edu

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APT Introduction

October 2022
Deborah Smith
APT Lead



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- Facilitates the governance process and ensures document maintenance
- Provides a public, centralized discovery repository for ATBD access

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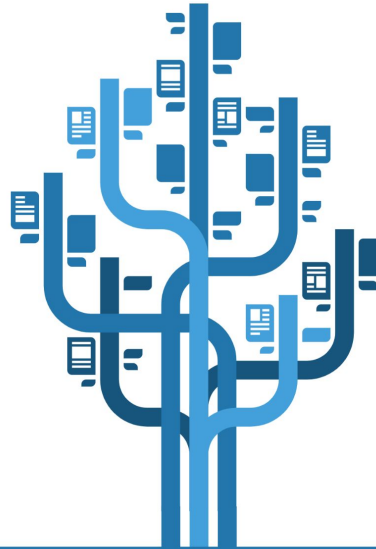
Visually appealing documents

Preview a selected ATBD as an HTML webpage or a PDF document.



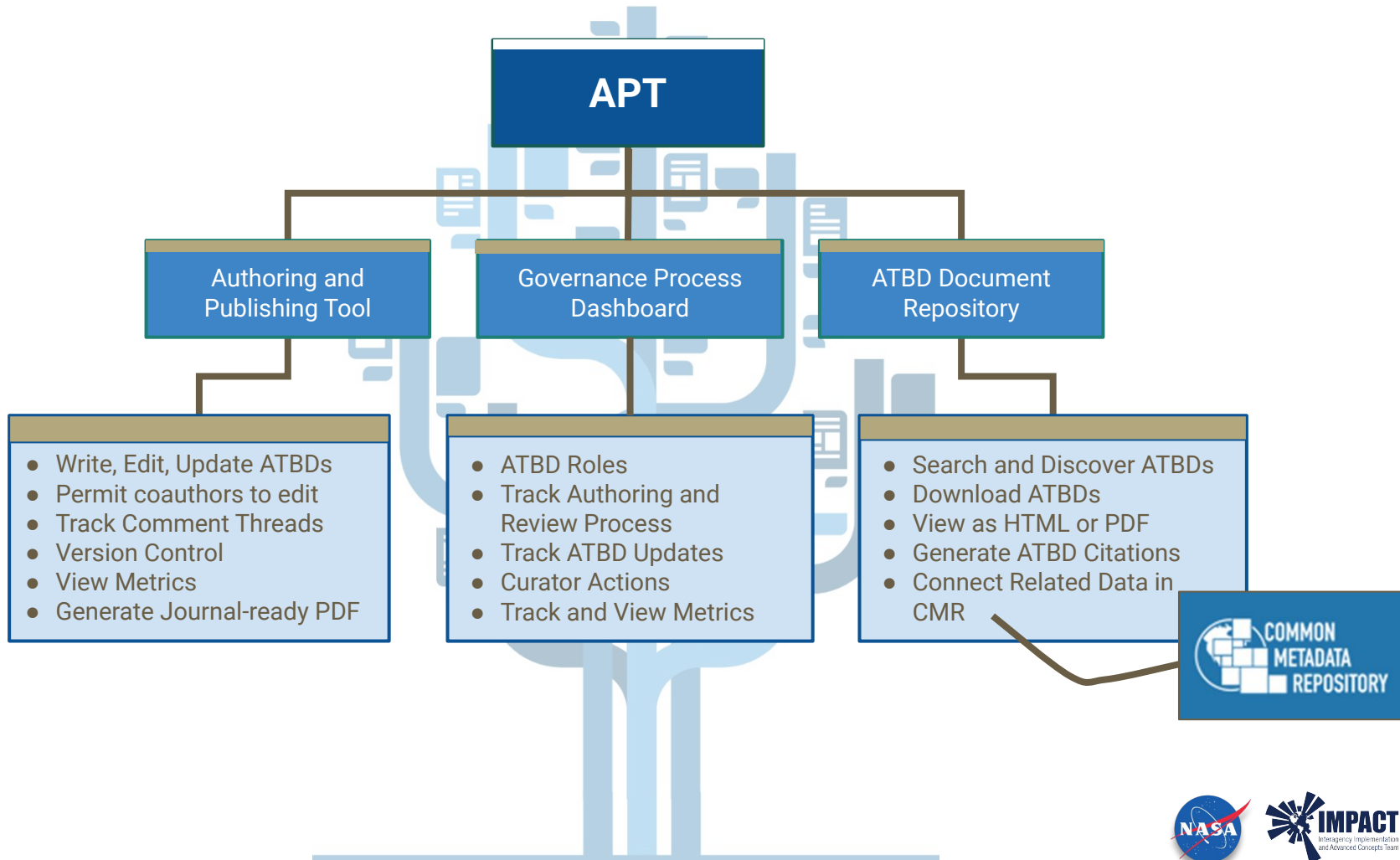
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Use a streamlined ATBD journal submission process with AGU's Earth and Space Science, a gold open access journal.



APT is one place to create, find, and access ATBDs





APT

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Governance Process Dashboard

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- Track Authoring and Review Process
- Track ATBD Updates
- Curator Actions
- Track and View Metrics

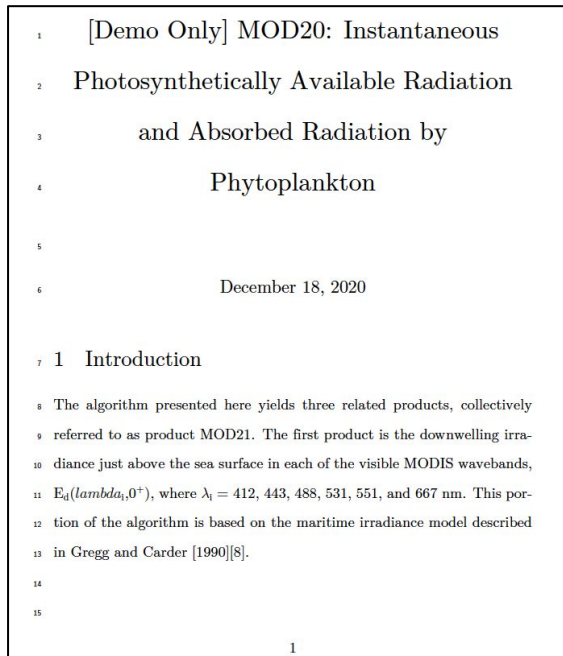
ATBD Document Repository

- Search and Discover ATBDs
- Download ATBDs
- View as HTML or PDF
- Generate ATBD Citations
- Connect Related Data in CMR



Partnership with AGU Journal

- AGU Earth and Space Science Journal
 - Open access journal focused on instruments, data products, algorithms, and demonstrating applications
- APT Submission Support
 - Easily choose journal publication
 - Modifying template to contain required content
 - Exporting review-ready PDF for submission
 - Providing needed information for submission
- GEDI, OPERA test cases underway
 - Using APT to write the GEDI L2 ATBDs
 - Some submitting to the AGU ESS journal



APT automatically generates a PDF **with needed title page** appropriate for journal submission



APT Now Available to Authorized Users

Editing Harmonized Landsat/Sen... x +

nasa-apt.surge.sh/documents/harmonized-landsat-sentinel-2+reflectance-dataset/v1.0/edit/closeout

Harmonized Landsat/Sentinel-2 Reflectance Dataset v1.0 / Editing

DRAFT: 0% 2 minutes ago Claudia Contributor +4

STEP 9 OF 8 Closeout Save

There are unsaved changes

All & Discussion

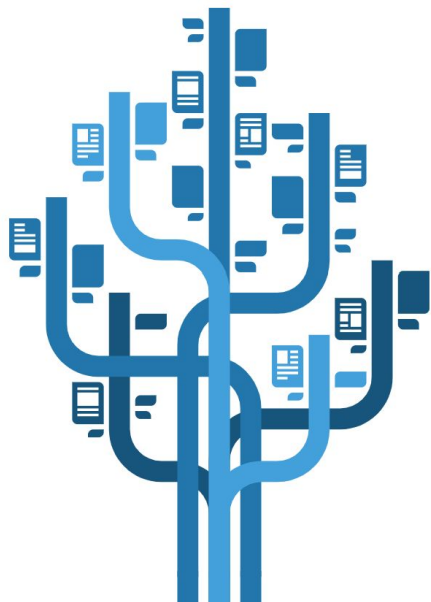
Claudia Contributor less than a minute ago

In Discussion: joe, please fill this section in

Comment under Discussion

Post

NASA EARTHDATA 2021 v2.1.0-beta



<https://www.earthdata.nasa.gov/apt/>

