

ATMOSPHERIC SCIENCE DATA CENTER

NASA ASDC Distributed Active Archive Center (DAAC)

Earth Venture Sub-Orbital Support Team

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ACTIVATE Science Team Meeting

ASDC's Role in ACTIVATE

- Sole post project data portal for distribution of data products
 - Active stewardship
 - High public visibility to broad user communities
 - User support
- Responsible for long-term preservation and stewardship
- ACTIVATE data holdings
 - Archive the latest versions of publication quality data, including observational, derived, and value-added data products
 - Contextual information to facilitate data use by research community at large
 - Documentation to maintain reprocessing capability and openness
- Assign DOIs to data products tailored to support manuscript and presentation development

Data Archival Update

- ASDC has completed ingest, archival, and distribution of all currently available publication quality data for all deployments
- Data is available through all the ASDC's search mechanisms (which will be highlighted later in the presentation)
- Complete periodic checks of field repository for newly updated or publication quality data

Data Organization and DOIs

- DOIs are assigned at the project level and collection level
- Project level DOI (all ACTIVATE observational, derived and value-added data products): [10.5067/SUBORBITAL/ACTIVATE/DATA001](https://doi.org/10.5067/SUBORBITAL/ACTIVATE/DATA001)

Data Organization and DOIs

- Data collections and associated DOIs:
 - ACTIVATE_Aerosol_AircraftInSitu_Falcon_Data_1 Collection:
 - In-situ observations of aerosol microphysical, optical, and chemical properties
 - DOI: [10.5067/ASDC/ACTIVATE_Aerosol_AircraftInSitu_Falcon_Data_1](https://doi.org/10.5067/ASDC/ACTIVATE_Aerosol_AircraftInSitu_Falcon_Data_1)
 - ACTIVATE_Cloud_AircraftInSitu_Falcon_Data_1 Collection:
 - In-situ observations of cloud physical, optical, and chemical properties
 - DOI: [10.5067/ASDC/ACTIVATE_Cloud_AircraftInSitu_Falcon_Data_1](https://doi.org/10.5067/ASDC/ACTIVATE_Cloud_AircraftInSitu_Falcon_Data_1)
 - ACTIVATE_TraceGas_AircraftInSitu_Falcon_Data_1 Collection:
 - In-situ observations of O3, CH4, CO, and CO2
 - DOI: [10.5067/ASDC/ACTIVATE_TraceGas_AircraftInSitu_Falcon_Data_1](https://doi.org/10.5067/ASDC/ACTIVATE_TraceGas_AircraftInSitu_Falcon_Data_1)
 - ACTIVATE_MetNav_AircraftInSitu_Falcon_Data_1 Collection:
 - Navigational parameters, temperature, water vapor, and 3-D winds
 - DOI: [10.5067/ASDC/ACTIVATE_MetNav_AircraftInSitu_Falcon_Data_1](https://doi.org/10.5067/ASDC/ACTIVATE_MetNav_AircraftInSitu_Falcon_Data_1)

Data Organization and DOIs

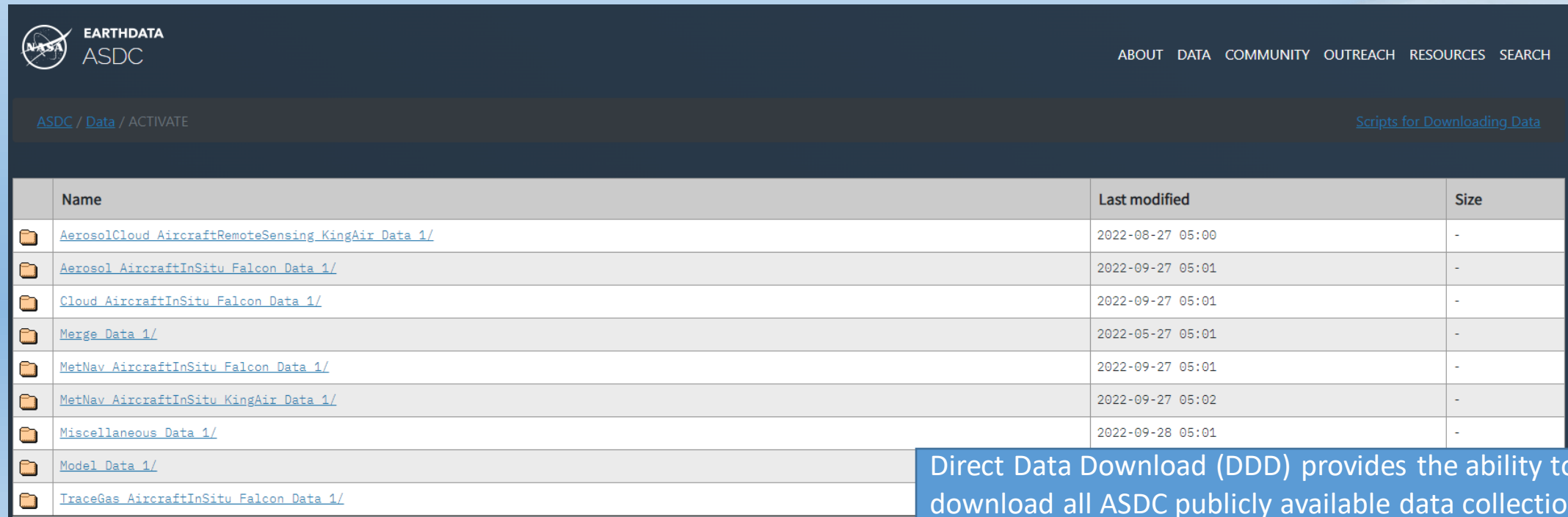
- Data collections and associated DOIs:
 - ACTIVATE_MetNav_AircraftInSitu_KingAir_Data_1 Collection:
 - Navigational Parameters, dropsondes
 - DOI: [10.5067/ASDC/ACTIVATE Aerosol AircraftInSitu Falcon Data 1](https://doi.org/10.5067/ASDC/ACTIVATE_Aerosol_AircraftInSitu_Falcon_Data_1)
 - ACTIVATE_AerosolCloud_AircraftRemoteSensing_Falcon_KingAir_1 Collection:
 - RSP and HSRL remote sensing of cloud and aerosol properties
 - DOI: [10.5067/ASDC/ACTIVATE AerosolCloud AircraftRemoteSensing KingAir Data 1](https://doi.org/10.5067/ASDC/ACTIVATE_AerosolCloud_AircraftRemoteSensing_KingAir_Data_1)

Data Organizations and DOIs

- Data collections and associated DOIs:
 - ACTIVATE_Miscellaneous_Data_1 Collection:
 - Camera forward cloud masks
 - DOI: [10.5067/ASDC/SUBORBITAL/ACTIVATE_Miscellaneous_Data_1](https://doi.org/10.5067/ASDC/SUBORBITAL/ACTIVATE_Miscellaneous_Data_1)
 - ACTIVATE_Merge_Data_1 Collection:
 - Project generated merge files
 - DOI: [10.5067/ASDC/ACTIVATE_Merge_Data_1](https://doi.org/10.5067/ASDC/ACTIVATE_Merge_Data_1)
 - ACTIVATE_Model_Data_1 Collection:
 - MERRA-2 Reanalysis Model Data
 - DOI: [10.5067/ASDC/SUBORBITAL/ACTIVATE_Model_Data_1](https://doi.org/10.5067/ASDC/SUBORBITAL/ACTIVATE_Model_Data_1)

Data Distribution Options: ASDC Website/DDD

- [ACTIVATE Direct Data Download](#)



The screenshot shows the ASDC website interface. At the top left is the NASA EarthData ASDC logo. To the right are navigation links: ABOUT, DATA, COMMUNITY, OUTREACH, RESOURCES, and SEARCH. Below the navigation is a breadcrumb trail: ASDC / Data / ACTIVATE. On the right side of the breadcrumb trail is a link: [Scripts for Downloading Data](#). The main content area is a table with three columns: Name, Last modified, and Size. The table lists various data collections with their respective last modified dates and sizes.

Name	Last modified	Size
AerosolCloud AircraftRemoteSensing KingAir Data 1/	2022-08-27 05:00	-
Aerosol AircraftInSitu Falcon Data 1/	2022-09-27 05:01	-
Cloud AircraftInSitu Falcon Data 1/	2022-09-27 05:01	-
Merge Data 1/	2022-05-27 05:01	-
MetNav AircraftInSitu Falcon Data 1/	2022-09-27 05:01	-
MetNav AircraftInSitu KingAir Data 1/	2022-09-27 05:02	-
Miscellaneous Data 1/	2022-09-28 05:01	-
Model Data 1/		
TraceGas AircraftInSitu Falcon Data 1/		

Direct Data Download (DDD) provides the ability to access and download all ASDC publicly available data collections via https; Scripts for downloading data are available

Data Distribution Options: Earthdata Search

Explore and retrieve data via collections

9 Matching Collections

Showing 9 of 9 matching collections

ACTIVATE King Air Aerosol and Cloud Remotely Sensed Data
761 Granules 2020-02-10 ongoing
ACTIVATE_AerosolCloud_AircraftRemoteSensing_KingAir_Data is the aerosol and cloud data collected onboard the B-200 King Air aircraft via remote...
GEOSS • ACTIVATE AerosolCloud_AircraftRemoteSensing_KingAir_Data v1 - NASA/LARC/SD/AS...

ACTIVATE Falcon In Situ Aerosol Data
921 Granules 2020-02-14 ongoing
ACTIVATE_Aerosol_AircraftInSitu_Falcon_Data is the aerosol data collected onboard the HU-25 Falcon aircraft via in-situ instrumentation during the...
GEOSS • ACTIVATE_Aerosol_AircraftInSitu_Falcon_Data v1 - NASA/LARC/SD/ASDC

ACTIVATE Falcon In Situ Cloud Data
886 Granules 2020-02-14 ongoing
ACTIVATE_Cloud_AircraftInSitu_Falcon_Data is the cloud data collected onboard the HU-25 Falcon aircraft via in-situ instrumentation during the...
GEOSS • ACTIVATE Cloud_AircraftInSitu_Falcon_Data v1 - NASA/LARC/SD/ASDC

ACTIVATE Falcon Aircraft Merge Data Files
173 Granules 2020-02-14 ongoing
ACTIVATE_Merge_Data is the pre-generated merge data files created from data collected onboard the HU-25 Falcon aircraft during the ACTIVATE project...
GEOSS • ACTIVATE Merge Data v1 - NASA/LARC/SD/ASDC

ACTIVATE Falcon In-Situ Meteorological and Navigational Data
694 Granules 2020-02-14 ongoing
ACTIVATE_MetNav_AircraftInSitu_Falcon_Data is the meteorological and navigational data collected onboard the HU-25 Falcon aircraft via in-situ...
GEOSS • ACTIVATE MetNav_AircraftInSitu_Falcon_Data v1 - NASA/LARC/SD/ASDC

Search Results (9 Collections)

ACTIVATE King Air Aerosol and Cloud Remotely Sensed Data

Showing 20 of 761 matching granules

ACTIVATE-RSP-WTRCLD_KINGAIR_20220618_R1.ict	START 2022-06-18 12:11:18 END 2022-06-18 15:22:06	ACTIVATE-RSP-CLD_KINGAIR_20220618_R1.zip	START 2022-06-18 00:22:36 END 2022-06-19 05:56:10
ACTIVATE-RSP-L1C_KINGAIR_20220618_R1.zip	START 2022-06-18 00:22:36 END 2022-06-19 05:56:10	ACTIVATE-RSP-WTRCLD_KINGAIR_20220617_R1.ict	START 2022-06-17 14:19:28 END 2022-06-17 16:17:21
ACTIVATE-RSP-L1C_KINGAIR_20220617_R1.zip	START 2022-06-17 02:24:04 END 2022-06-18 07:47:35	ACTIVATE-RSP-CLD_KINGAIR_20220617_R1.zip	START 2022-06-17 02:24:04 END 2022-06-18 07:47:35
ACTIVATE-RSP-WTRCLD_KINGAIR_20220616_R1.ict	START 2022-06-16 12:34:56 END 2022-06-16 12:38:46	ACTIVATE-RSP-L1C_KINGAIR_20220616_R1.zip	START 2022-06-16 00:05:52 END 2022-06-17 01:13:43

Search Time: 0.2s


[Add](#) [Download All 761](#)



NASA Langley Research Center
Hampton, VA

Data Distribution Options: SOOT

[View all campaigns](#)



ACTIVATE

Support Documentation

2020 2021 2022

Platforms:

HU25 MERGE

MODEL SATELLITE

TRAJECTORY UC12

Principal Investigators:

ANDREA CORRAL	GLENN DISKIN
RICHARD MOORE	LEE THORNHILL
CHRISTIANE VOIGT	LUKE ZIEMBA

Data IDs: [Select All](#)

- ACTIVATE-2DS-H-ARM [*variables]
- ACTIVATE-2DS-V-ARM [*variables]
- ACTIVATE-DLH-H2O [*variables]
- ACTIVATE-FCDP [*variables]
- ACTIVATE-LARGE-AMS [*variables]
- ACTIVATE-LARGE-AMS-CVI [*variables]
- ACTIVATE-LARGE-CAS [*variables]
- ACTIVATE-LARGE-CCN [*variables]
- ACTIVATE-LARGE-CDP [*variables]
- ACTIVATE-LARGE-CLOUDWATER [*variables]
- ACTIVATE-LARGE-INLETFLAG [*variables]
- ACTIVATE-LARGE-LAS [*variables]
- ACTIVATE-LARGE-MICROPHYSICAL [*variables]
- ACTIVATE-LARGE-OPTICAL [*variables]
- ACTIVATE-LARGE-PILS [*variables]

SOOT Power User Interface: ACTIVATE

Marine boundary layer clouds play a critical role in Earth's energy balance and water cycle. These clouds cover more than 45% of the ocean surface and exert a net cooling effect. The Aerosol Cloud Meteorology Interactions Over the western Atlantic Experiment (ACTIVATE) project is a five-year project (January 2019-December 2023) that will provide important globally-relevant data about changes in marine boundary layer cloud systems, atmospheric aerosols and multiple feedbacks that warm or cool the climate. ACTIVATE studies the atmosphere over the western North Atlantic and samples its broad range of aerosol, cloud and meteorological conditions using two aircraft, the UC-12 King Air and HU-25 Falcon. The UC-12 King Air will primarily be used for remote sensing measurements while the HU-25 Falcon will contain a comprehensive instrument payload for detailed in-situ measurements of aerosol, cloud properties, and atmospheric state. A few trace gas measurements will also be onboard the HU-25 Falcon for the measurements of pollution traces, which will contribute to air mass classification analysis. A total of 150 coordinated flights over the western North Atlantic are planned through 6 deployments from 2020-2022. The ACTIVATE science observing strategy intensively targets the shallow cumulus cloud regime and aims to collect sufficient statistics over a broad range of aerosol and weather conditions which enables robust characterization of aerosol-cloud-meteorology interactions. This strategy is implemented by two nominal flight patterns: Statistical Survey and Process Study. The statistical survey pattern involves close coordination between the remote sensing and in-situ aircraft to conduct near coincident sampling at and below cloud base as well as above and within cloud top. The process study pattern involves extensive vertical profiling to characterize the target cloud and surrounding aerosol and meteorological conditions.

[Open All](#)

- ANDREA CORRAL** (0 / 34 files)
- GLENN DISKIN** (0 / 200 files)
- RICHARD MOORE** (0 / 106 files)
- LEE THORNHILL** (0 / 84 files)
- CHRISTIANE VOIGT** (0 / 119 files)
- LUKE ZIEMBA** (0 / 343 files)

Outreach Materials

- ASDC creates outreach materials to support the discovery of ACTIVATE data
- Materials include:
 - ACTIVATE Microarticle (campaign overview)
 - Armin Sorooshian Researcher Profile
 - Hosting materials for ACTIVATE data webinars: [ACTIVATE Webinar Materials](#)
- Documenting ACTIVATE Publications

ACTIVATE Data Webinars

- Support ACTIVATE Data Webinars
- Host data webinar materials: [ACTIVATE Webinar Materials](#)

ACTIVATE DATA WEBINAR MATERIALS

Oct. 11, 2022, 11:09 a.m.

Project: [ACTIVATE](#)

Here you will find resources and material from ACTIVATE's Data Webinars and Workshops

September 2022

The Aerosol Cloud meTeorology Interactions oVer the western ATLantic Experiment (ACTIVATE) team led an open data workshop webinar hosted by the National Association of Geoscience Teachers (NAGT) for anyone interested to learn how to access and visualize airborne data. This webinar went over the science motivation of ACTIVATE, as well as included activities to expose participants to Python. The webinar aimed to motivate the study of aerosol-cloud interactions and the importance of airborne measurements as well as use the Google Colaboratory (Google Colab) environment to examine atmospheric properties derived from both in situ and remote sensing products.

Materials

[Webinar Recording Webpage](#)

July 2022

The Aerosol Cloud meTeorology Interactions oVer the western ATLantic Experiment (ACTIVATE) team hosted a free open data workshop webinar series for anyone interested to learn how to use the airborne data and to promote dialogue about data analysis ideas and collaborative projects in the area of aerosol-cloud-meteorology interactions. This particular session trained interested attendees to use a Google Colaboratory (i.e., Google Colab) environment for data visualization and to examine atmospheric properties derived from both in situ and remote sensing products.

Contact Us

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[Earthdata Forum](#)