

# Data



The Unidata Program Center provides geoscience data from a variety of sources to researchers and educators at no cost.

A sampling of the data available:

- ❖ GOES satellite imagery
- ❖ Model output
- ❖ Lightning observations
- ❖ Level II and Level III radar imagery
- ❖ WMO observations

Data can be accessed by either “push” (event driven) or “pull” (select what you want when you want it) technologies. The “push” system uses Unidata’s Local Data Manager (LDM) and the Internet Data Distribution (IDD) system to deliver data as it becomes available. The “pull” system uses the THREDDs Data Server (TDS), ADDE servers, and RAMADDA servers, and allows you to select the data you want when you want it.

<https://www.unidata.ucar.edu/data>

## Local Data Manager and Internet Data Distribution

The Unidata Local Data Manager (LDM) is a collection of cooperating programs that select, capture, manage, and distribute arbitrary data products. The system is designed for event-driven (“push”) data dis-



tribution, and is used in the Unidata Internet Data Distribution (IDD) project to ensure that data needed by universities, research centers, and other organizations is available in near real time. The LDM system includes network client and server programs and their shared protocols, and is designed to support flexible, site-specific configuration.

For example, suppose you are interested in collecting and studying radar imagery from a specific radar installation. Using Unidata’s LDM, you can arrange to automatically copy the products you are interested from a site participating in the IDD network to your local system in near real time. You can also make data at your site available to other sites participating in the IDD.

<https://www.unidata.ucar.edu/software/ldm>  
<https://www.unidata.ucar.edu/projects/#idd>

## THREDDs and TDS

The THREDDs (Thematic Real-time Environmental Distributed Data Services) project is developing middleware to bridge the gap between data providers and data users. The goal is to simplify the discovery and use of scientific data and to allow scientific publications and educational materials to reference scientific data.



The THREDDS Data Server (TDS) provides catalog and data access services for scientific data using OPeNDAP, OGC WCS and WMS, HTTP, and other remote data access protocols. Just as the World Wide Web and digital-library technologies have simplified the process of publishing and accessing multimedia documents, TDS aims to create infrastructure needed for publishing and accessing scientific data.

<https://www.unidata.ucar.edu/software/tds>

Check out a demonstration TDS with a selection of observational data and model output running at the Unidata Program Center by visiting:

<https://thredds.ucar.edu/thredds/catalog.html>

## Unidata's RAMADDA Community

RAMADDA — the Repository for Archiving, Managing, and Accessing Diverse DAta — is a

full-featured scientific data management system, allowing you to store virtually any type of scientific data, manage access to and sharing of the data, and generate quick visualizations of many data types. Originally developed at the Unidata Program Center, RAMADDA is now an Open Source project managed by developers at Geode Systems, LLC. Unidata continues to play a significant role in the RAMADDA community, integrating the technology with the Integrated Data Viewer (IDV), providing technical support, and operating a demonstration server at the Unidata Program Center.

The Program Center's "motherlode" server is publicly available at:

<https://motherlode.ucar.edu/repository>

If you're using the IDV, you're looking at data served by the Program Center's RAMADDA by default.

## Need Help Getting Set Up?

If you want to start serving some data — either for local users at your university or institution or for the wider Unidata community — Unidata is here to help you. We provide software training covering all of the server technologies we support, and can help you install and configure the software. For support write to [support@unidata.ucar.edu](mailto:support@unidata.ucar.edu). For information about training, visit:

<https://www.unidata.ucar.edu/support>

## Need Equipment?

Every year Unidata awards up to \$100,000 in community equipment grants to university programs who need help purchasing equipment to participate in Unidata programs. For details on the requirements and how to apply for a community equipment award grant, visit:

<https://www.unidata.ucar.edu/community/equipaward>