



Introduction to the CoastWatch Utilities

Long Island Sound Training Course
March 31 – April 4, 2025

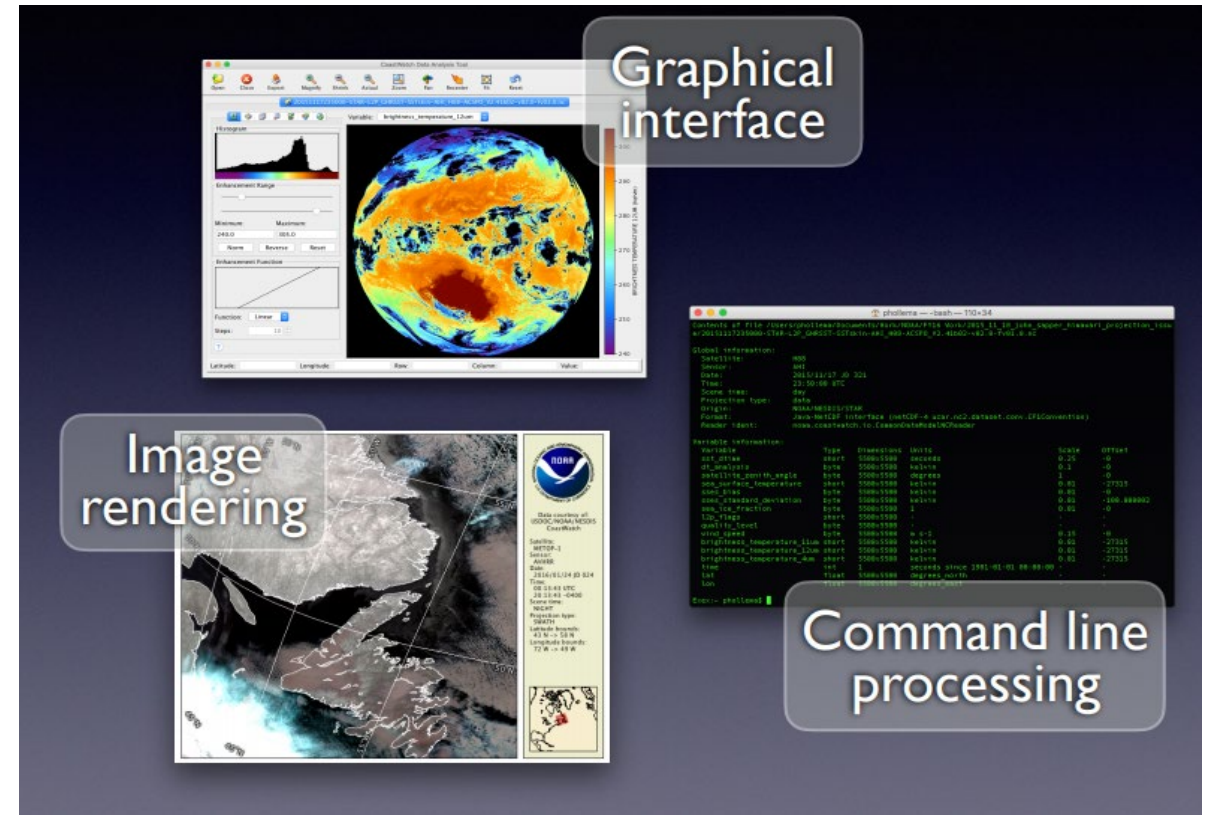
Versioning:
2022, M. Soracco
2025, R. Vogel



CoastWatch Utilities Software

- Reads data files in scientific data formats
 - NetCDF, HDF
- Graphical tools for interactive data viewing
- Command line tools for data processing
- Linux, Windows, and Mac compatible versions
- Available at:

<https://coastwatch.noaa.gov/cwn/data-access-tools/coastwatch-utilities.html>



Training Goals

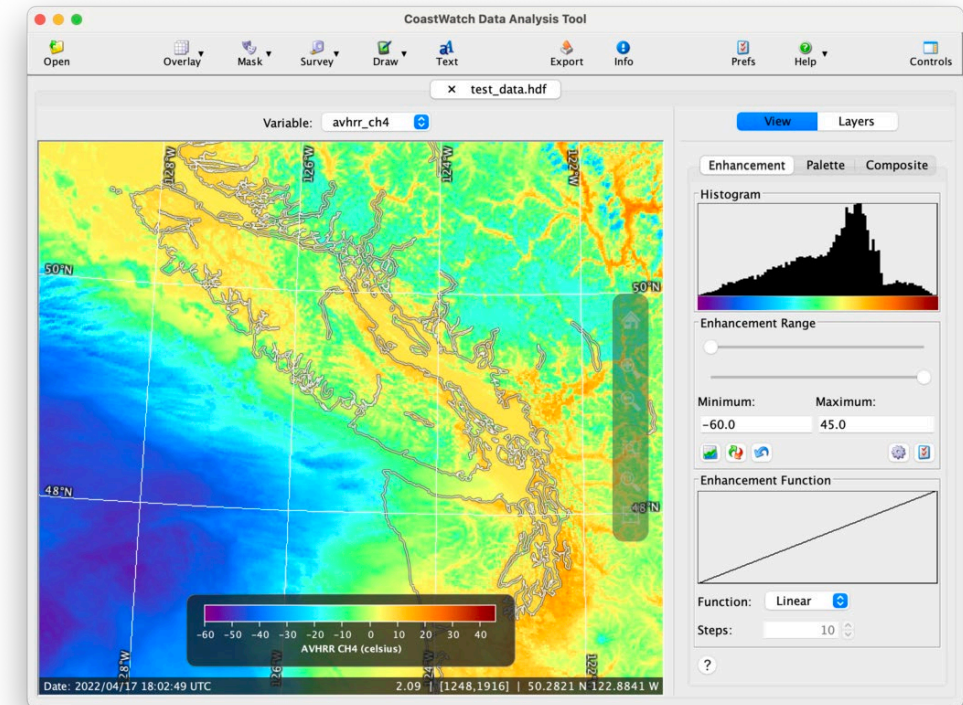
- Introduce the Graphical User Interface (GUI) tool: CoastWatch Data Analysis Tool
 - Open and visualize data
 - Manipulate the image and add visual elements
 - Export image to various file formats
- Learn about compatible input datasets/formats
- Know where to go for Help and documentation resources
- Understand the Command Line Interface (CLI) toolset



CoastWatch Data Analysis Tool (CDAT)

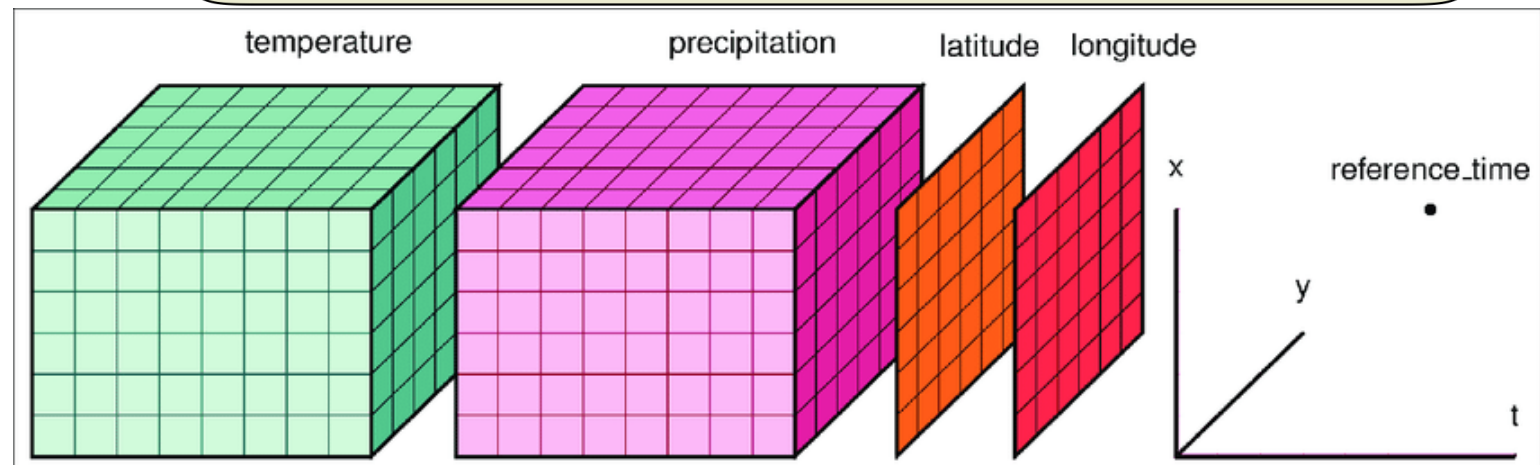
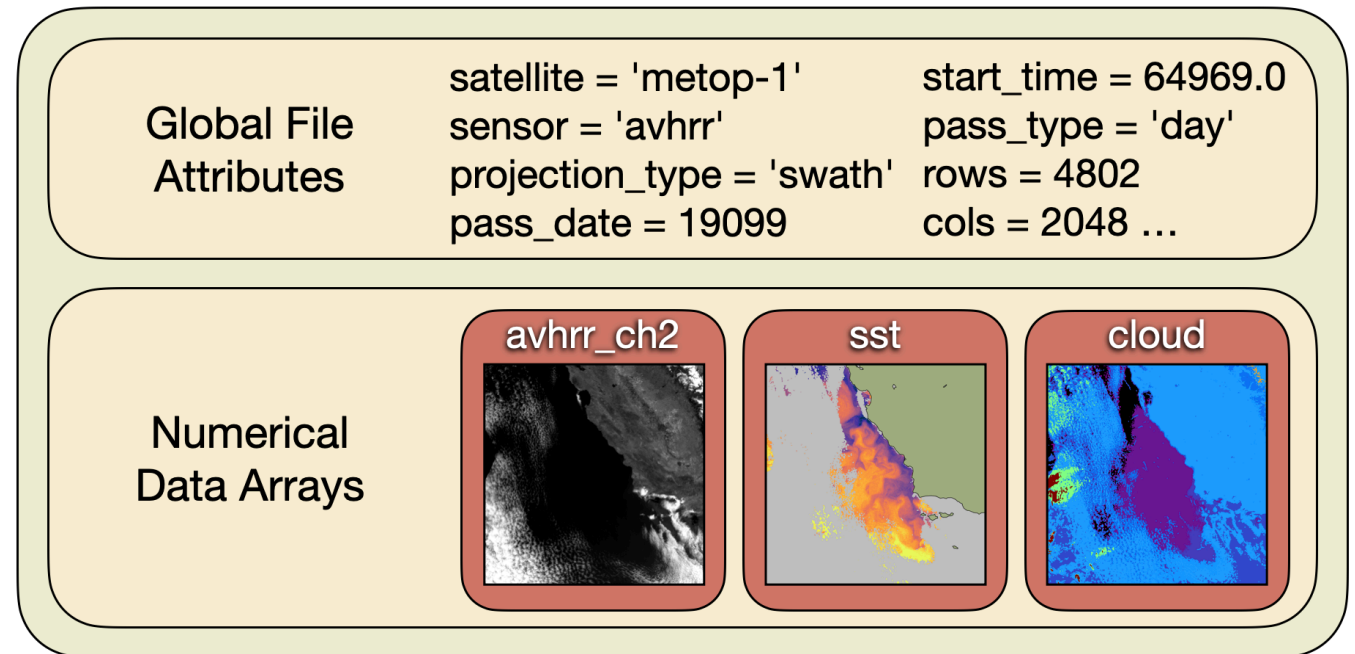
Scenarios:

1. Visualize environmental parameters, e.g. temperature, chlorophyll, in a range of color values from a color palette
2. Create a true color composite image from separate red, green and blue wavelength data (smile, your region is on camera!)
3. Zoom to your region; survey the data values along transects
4. Calculate statistics for a region of interest
5. Render a GeoTIFF data file for GIS application
6. Save the image you created in image formats (png, jpeg) or data formats (netCDF, Text, ArcGIS binary grid)



Input data must be in a supported Scientific Data Format

- Hierarchical Data Format (HDF)
- Network Common Data Format (NetCDF)
 - NetCDF-3
 - NetCDF-4
 - Climate & Forecast (CF) metadata standard



Hoyer & Hamman 2017

CoastWatch Software Help & Documentation

- User Guide (PDF)
 - describes CDAT and CLI
- CDAT help menu within GUI
- Linux/Unix man pages
 - CLI commands
- YouTube videos (CDAT)
- CoastWatch Utilities Tutorial (CDAT, CLI)

