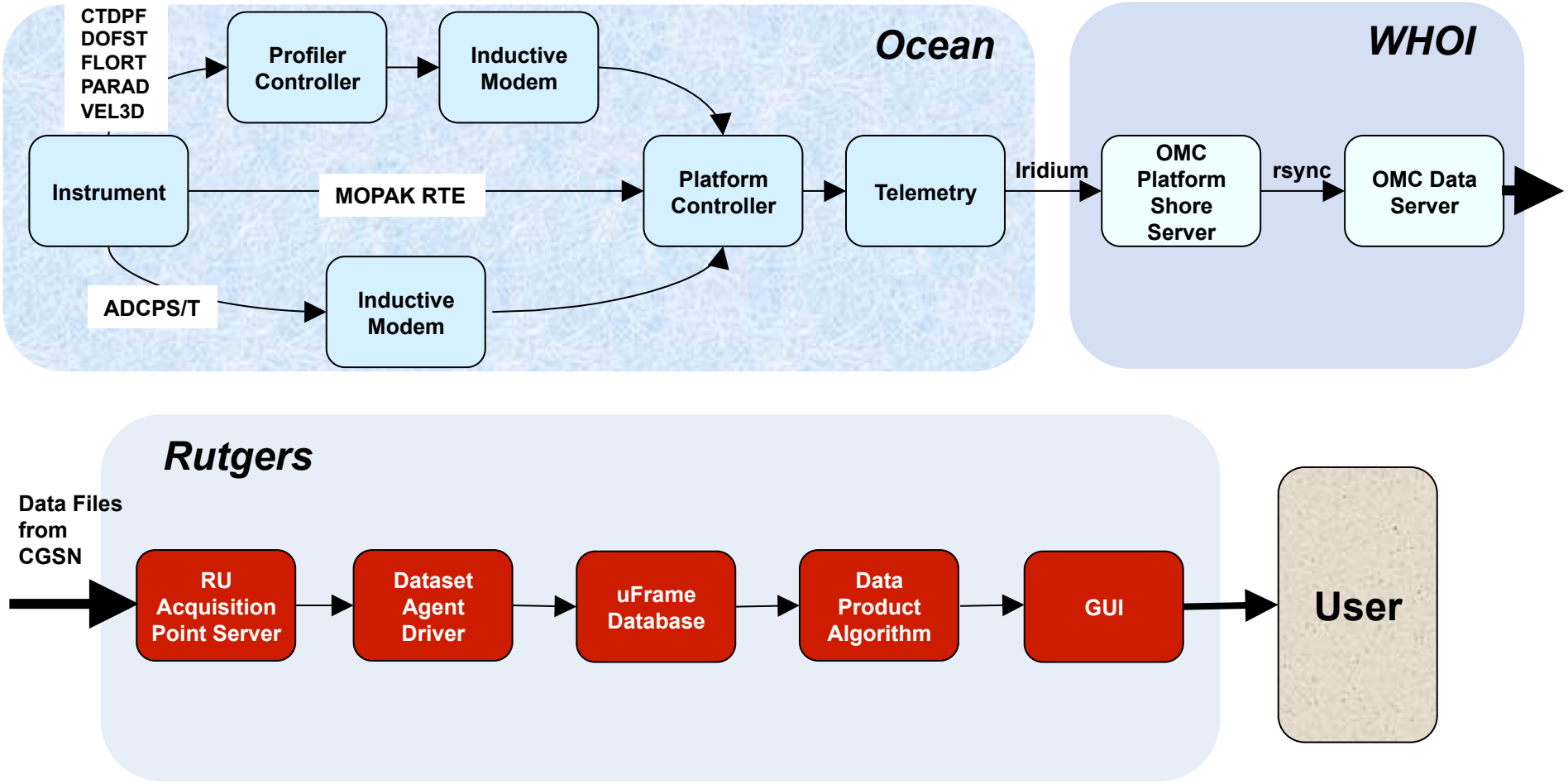
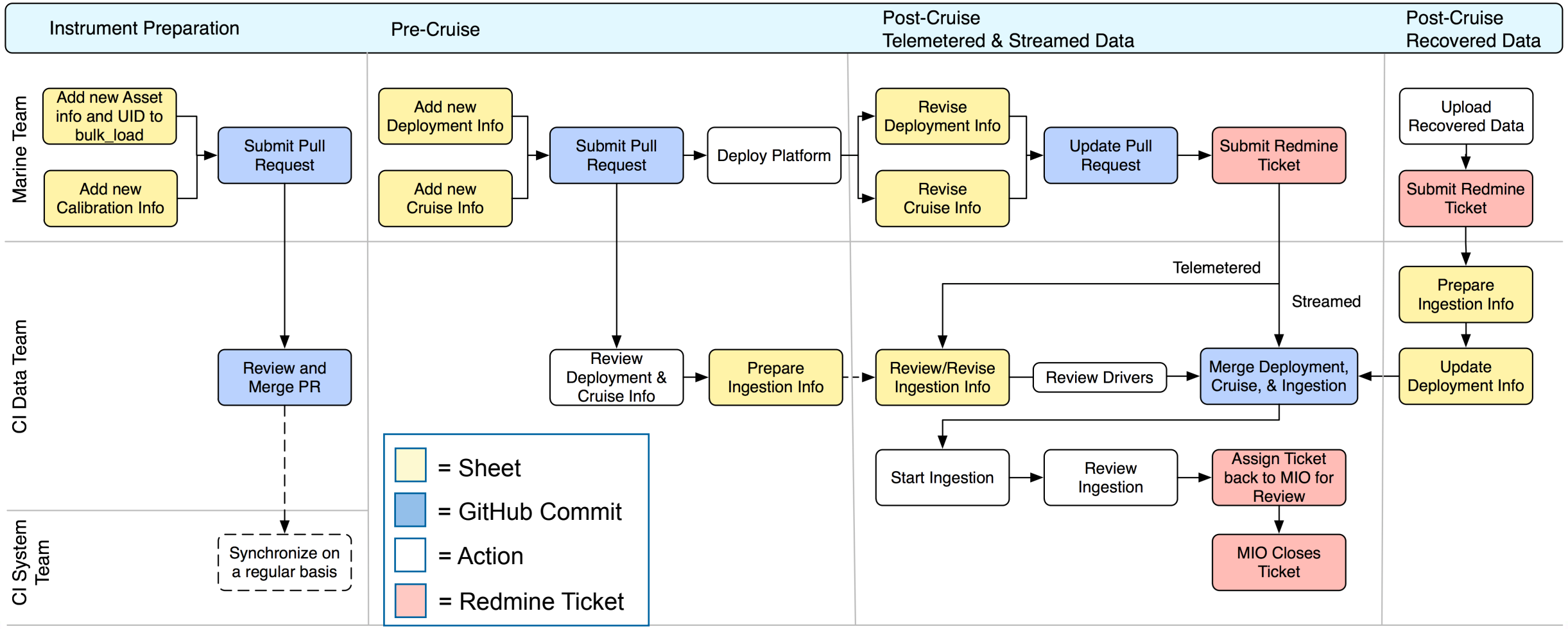
Overview

1. Team Structure & Responsibilities
2. Data Flow & Products
3. Data Review
4. Communications
5. Improvements
6. Conclusions

Data Flow Example: Pioneer Profiler

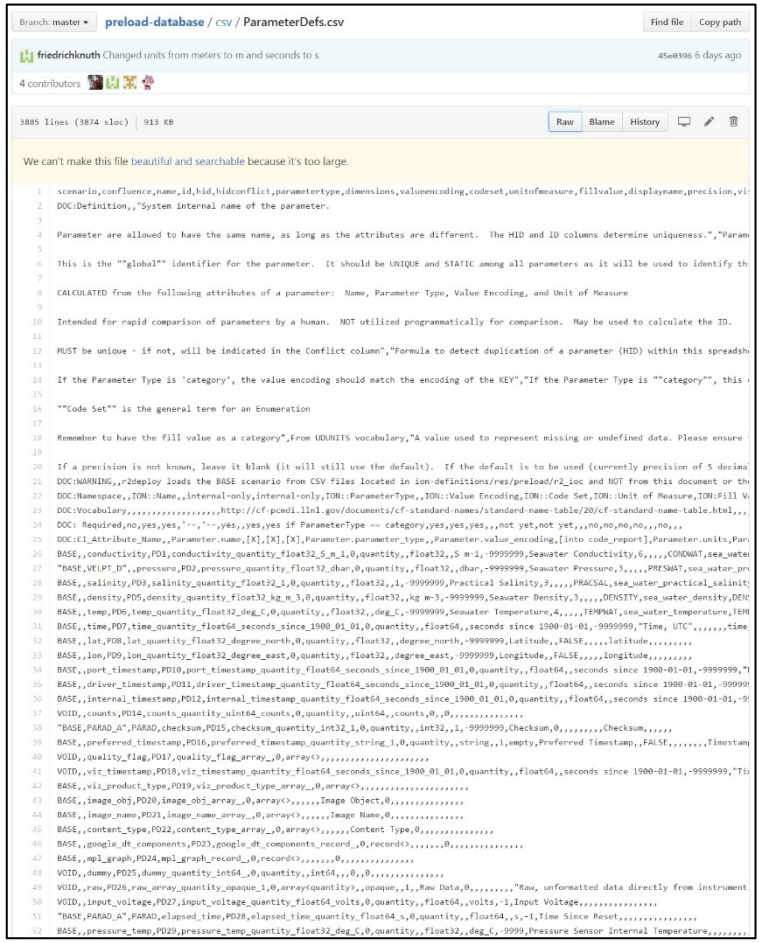


Current Data Processing Flow

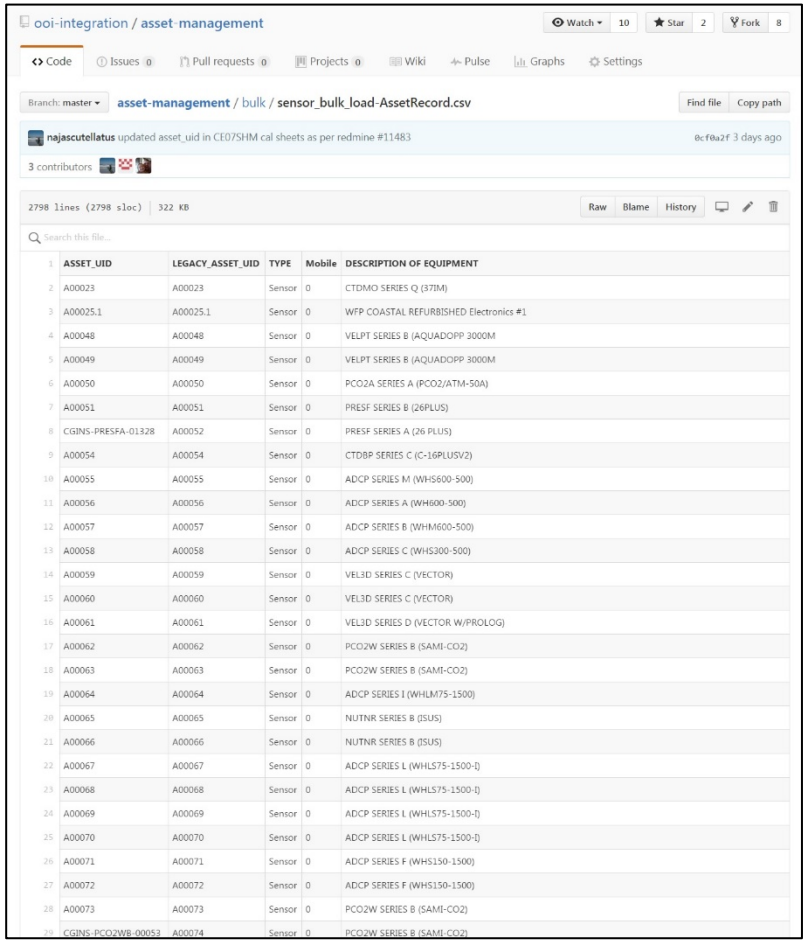


OOI Data Sheets (Preload, Bulk Load)

Preload Database (streams, parameters, units, etc.)

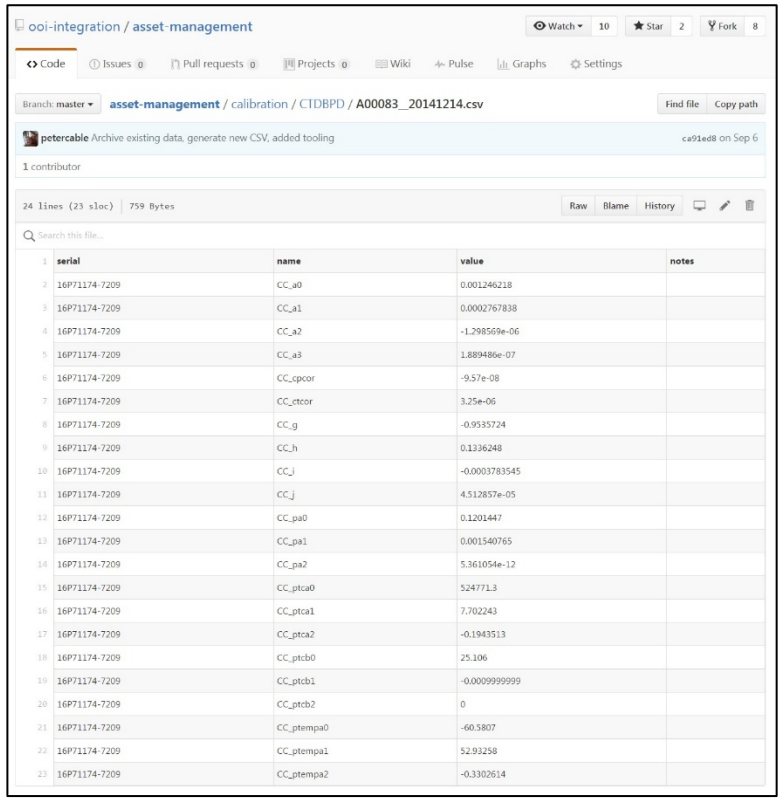


Bulk Load (Asset Management)



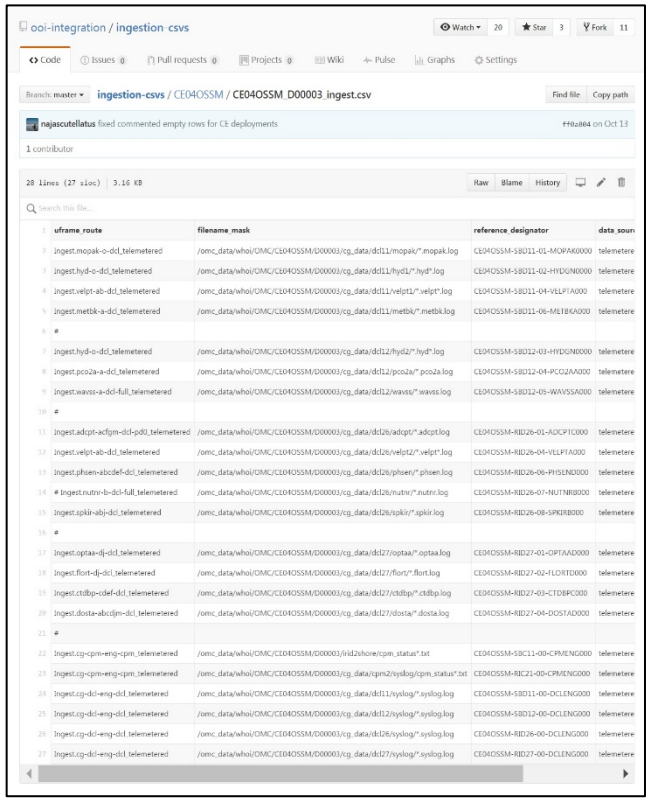
OOI Data Sheets (Calibration, Ingestion, Deployment)

Calibration Sheet



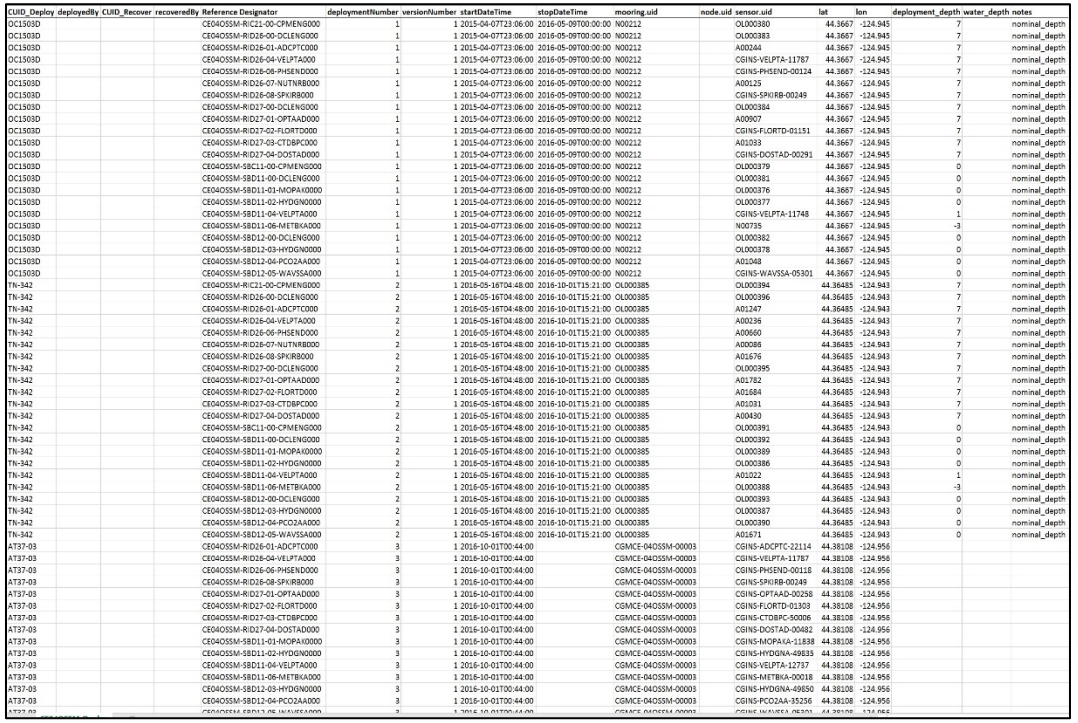
1 per instrument

Ingestion Sheet



0-2 per platform

Deployment Sheet



1 per deployment

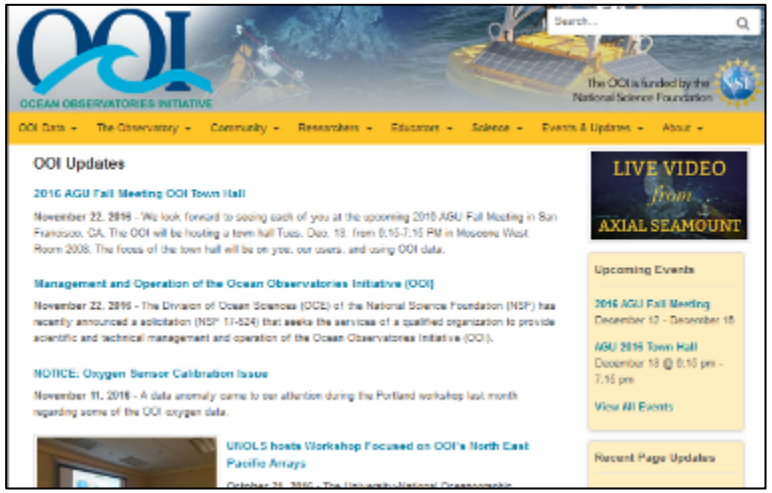
Data Types

- Telemetered Data
  - Data received through a transmission medium over distance (e.g. surface buoy to satellite, glider to satellite, acoustic modem); may be decimated
- Recovered Data
  - Data downloaded directly from a recovered instrument or data logger after the instrument has been recovered.
- Streamed Data
  - Data received via transmission over electro-optical cable. Streaming data are provided at full temporal resolution and near-real time.
- Shipboard Data
  - Shipboard data and water samples collected during OOI expeditions.
- Metadata
  - Info about the data record (e.g., time & location of collection, unique source & record description identifier, instrument serial #, etc.). OOI metadata follows the CF1.6 standard, with additional types and fields specific to OOI as necessary.

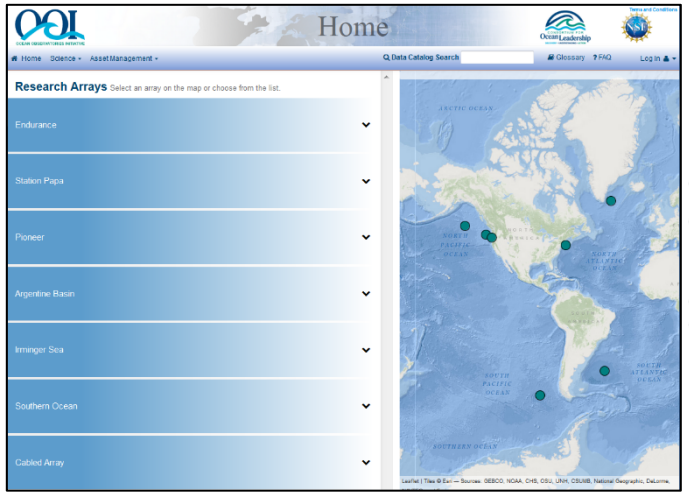
OOI Data Product Levels

- **Raw data**: The datasets as they are received from the instrument
  - May contain multiple L0, L1, or L2 parameters, data for multiple sensors, and be in native sensor units
  - Always persisted and archived by the OOI
  - Example: format 0 binary file from an SBE-37IM on a Global Flanking Mooring.
- **Level 0 (L0)**: Unprocessed, parsed data parameter that is in instrument/sensor units and resolution
  - Sensor by sensor (unpacked and/or de-interleaved) and available in OOI supported formats (e.g., NetCDF)
  - Always persisted and archived by the OOI
  - Example: SBE-37IM Temperature portion of the hex string
- **Level 1 (L1)**: Data parameter that has been calibrated and is in scientific units
  - QC may be applied at this level, utilizing simple automated techniques or human inspection
  - Actions to transform Level 0 to Level 1 data are captured and presented in the metadata of the Level 1 data
  - Example: SBE-37IM Temperature converted from hex to binary and scaled to produce degrees C
- **Level 2 (L2):** Derived data parameter created via an algorithm that draws on multiple L1 data products
  - Products may come from the same or from separate instruments
  - Data from all relevant instruments will be provided during download
  - Example: SBE-37IM Density and Salinity

OOI: Web Portals

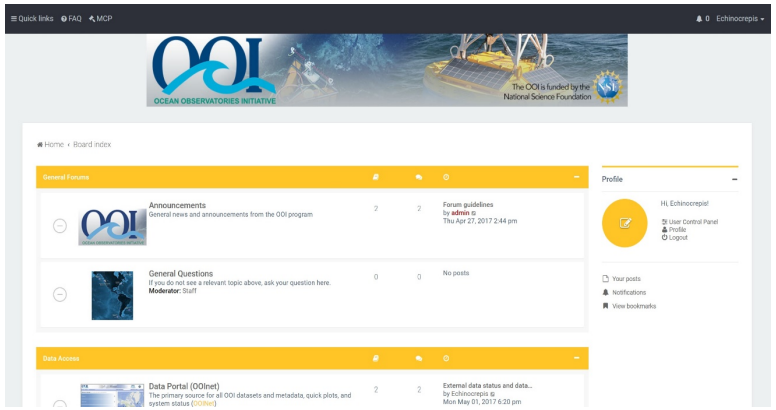


Main

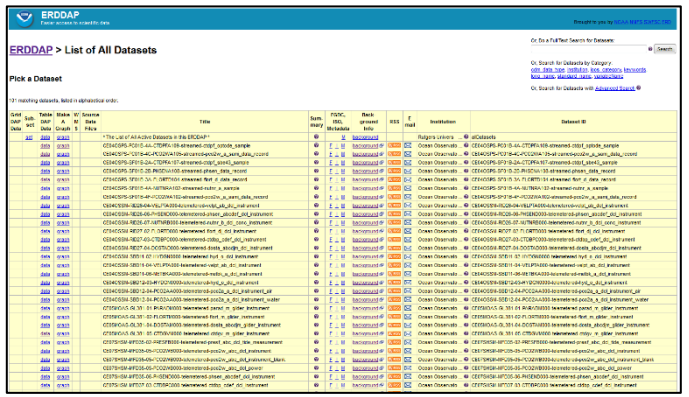


OOINet

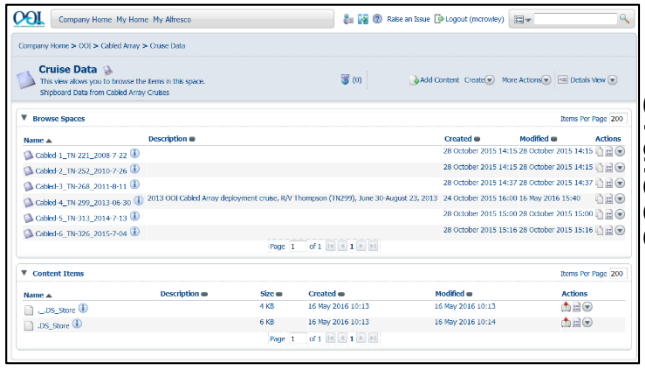
Education



Forum



ERDDAP



Cruises