# Work Item H

## Data Life Cycle

**Report to CSBWG16**

**NIWA, Wellington, NZ**

**27 March 2025**

Brian Calder

CCOM/JHC, University of New Hampshire

IHO International Hydrographic Organization

# Work Item Team Members

- Brian Calder (CCOM/JHC)
- Clint Campbell (NCEI)
- Knut Hartmann (EOMAP)
- Brian Jensen (Raymarine)
- Giuseppe Masetti (GST)
- Brian Miles (CCOM/JHC)
- Guillaume Morissette (CIDCO)
- Mathieu Rondeau (CHS)
- Thierry Schmitt (SHOM)
- Shaul Solomon
- Colin Thomson (OFM)
- Emma Wise (Teledyne Marine)

IHO

International Hydrographic Organization

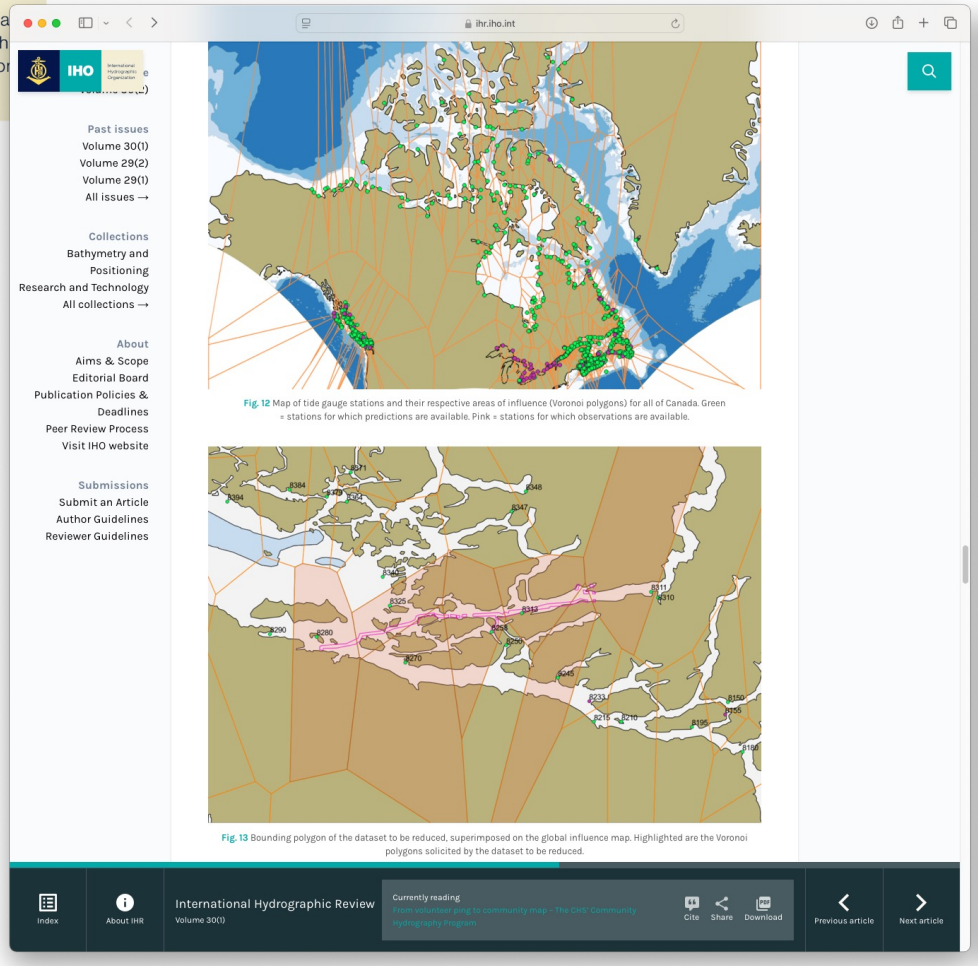
# Work Item Background & Purpose

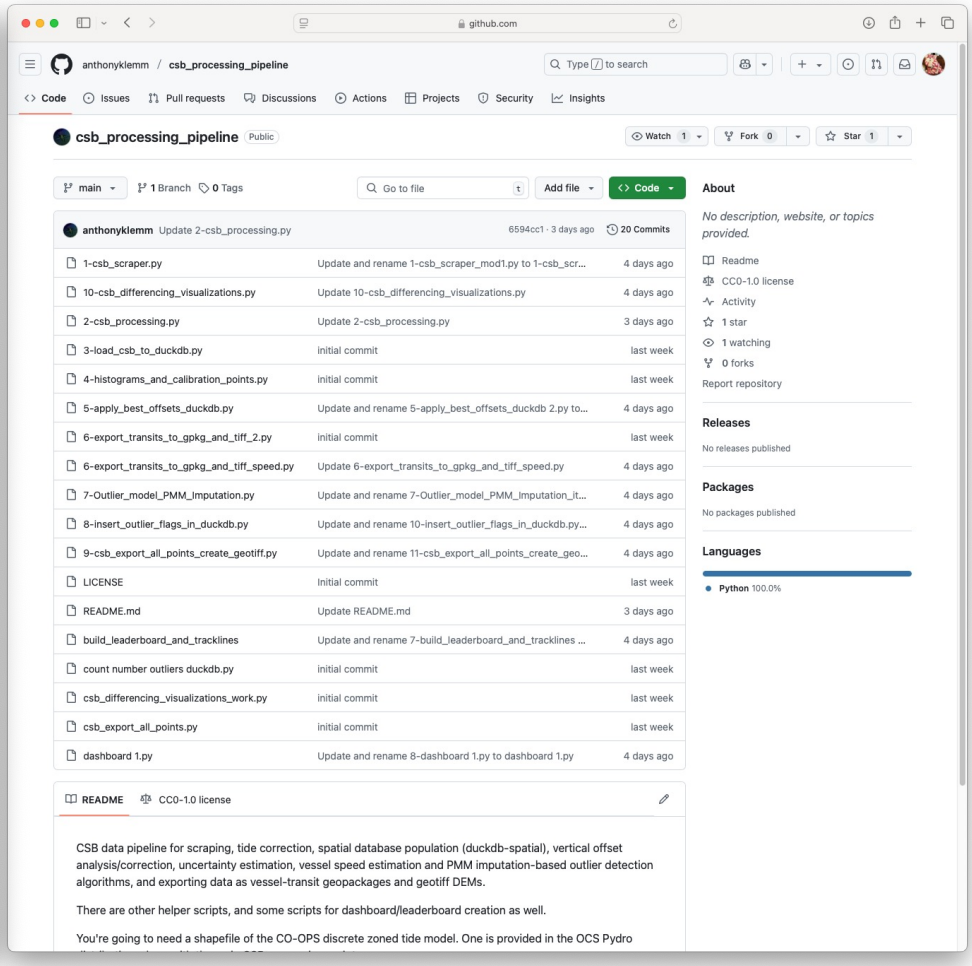
This work item is intended to provide input on [details of data treatment, processing, and management], essentially **providing clarification** to the high-level description of the process in B-12. The work item is **not intended to modify or update B-12**, but rather to provide input to this process, **making recommendations** for required updates, and providing specific solutions for problems encountered in practice where possible.

# Progress Since CSBWG15

| Work Item | Title | Priority | Next milestone | Start Date | End Date | Status |
|---|---|---|---|---|---|---|
| 1 | Recommendations for DCDB data access | H | CSBWG15 Intersessional | 2024-06-01 | 2024-08-28 | C |
| 2 | Consensus on workflow for developers | M | CSBWG16 | 2024-04-26 | N/A | O |
| 3 | Consensus on workflow for end-users | M | CSBWG16 | 2024-04-26 | 2025-06-30 | O |
| 4 | OpenVBI code review and development | H | CSBWG16 | 2024-04-26 | 2025-03-30 | O |
| 5 | Vertical bias corrections in OpenVBI | L | CSBWG16 | 2024-04-26 | 2025-06-30 | O |
| 6 | Uncertainty estimation in OpenVBI | L | CSBWG16 | 2024-04-26 | N/A | O |
| 7 | Merge activities of sub-group (work item) F. | M | CSBWG16 | 2024-08-01 | N/A | O |

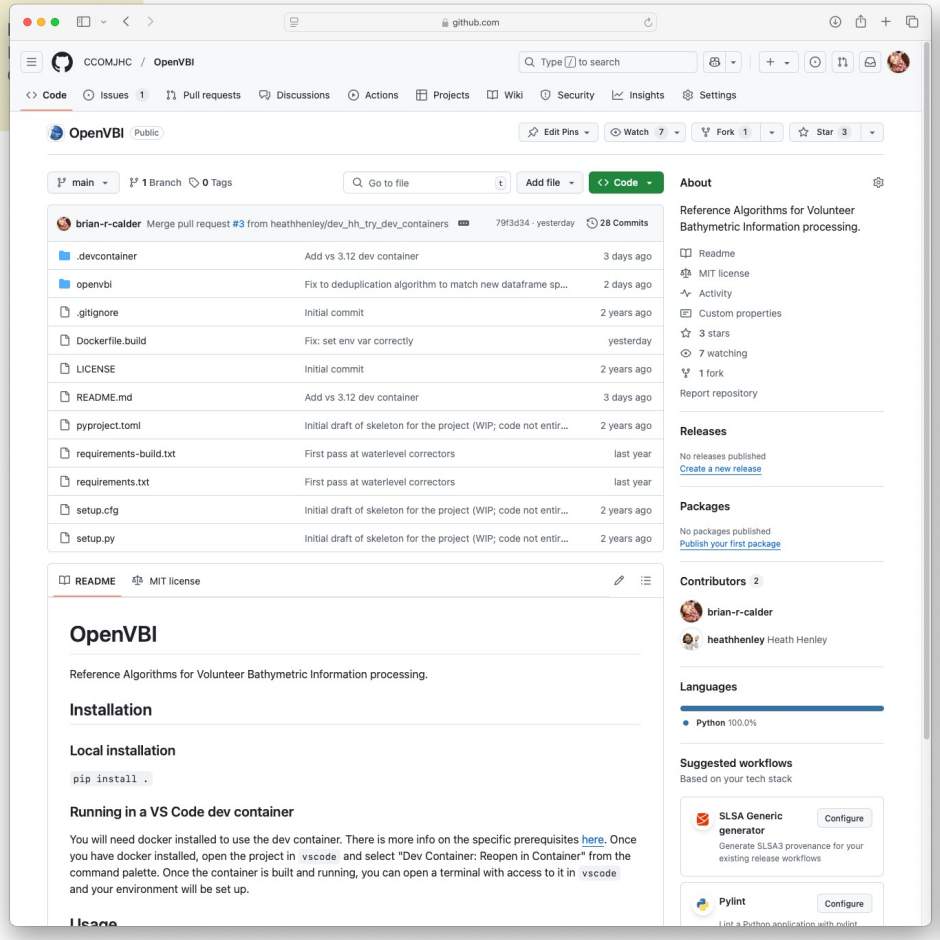
# 2&3: Consensus on Workflow

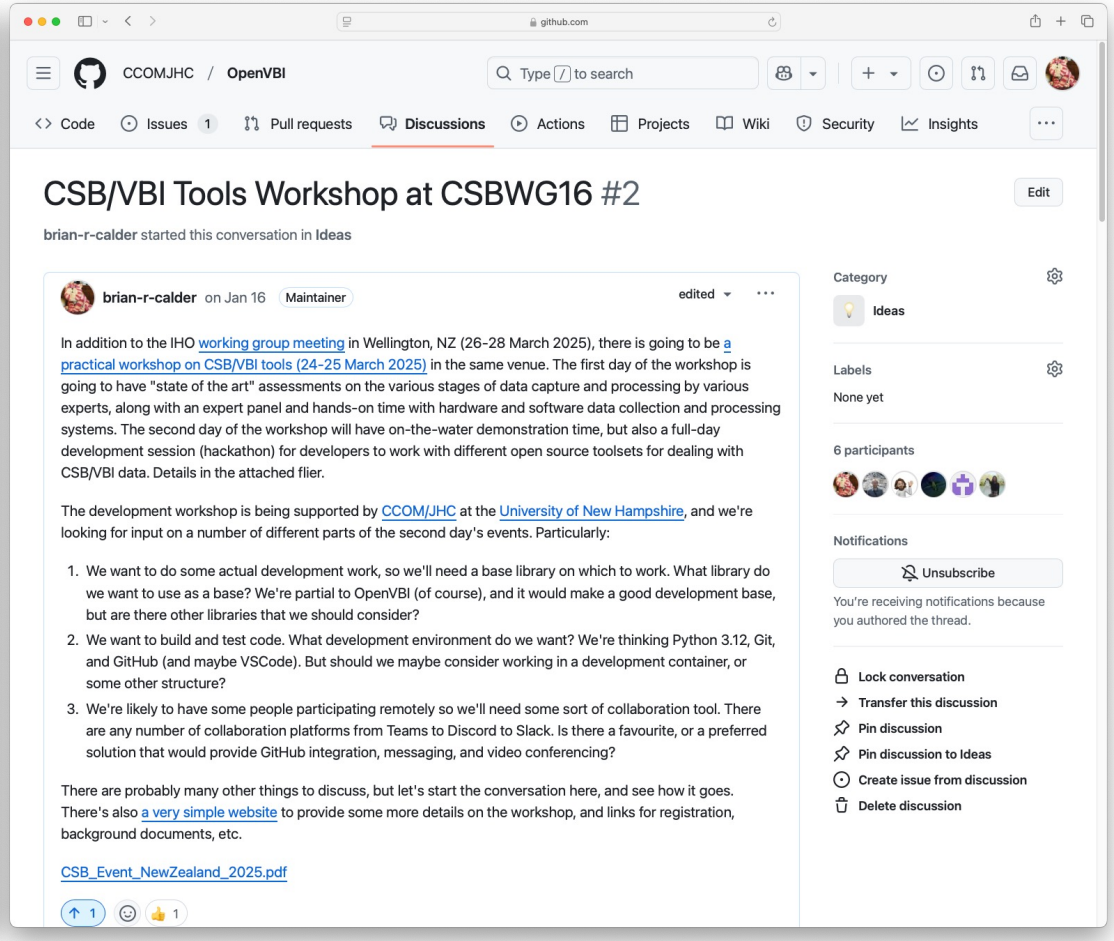



Rondeau et al., From Volunteer Ping to Community Map: The CHS' Community Hydrography Program, IHR 30(1), 2024 (https://doi.org/10.58440/ihr-30-1-a07)

# 4: OpenVBI Code Review and Development

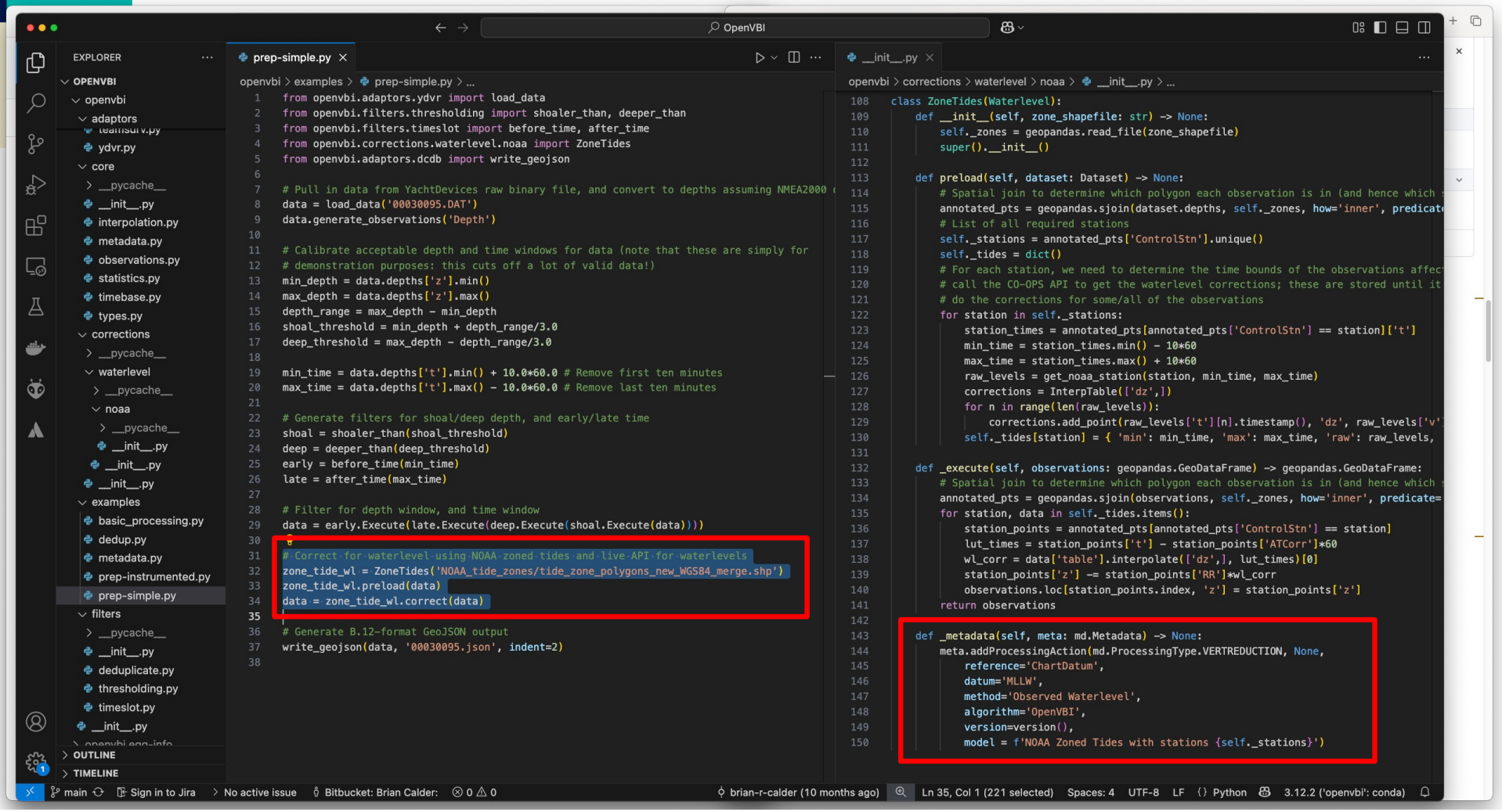


International Hydrographic Organization

IHO

# 5: Vertical Bias Corrections in OpenVBI

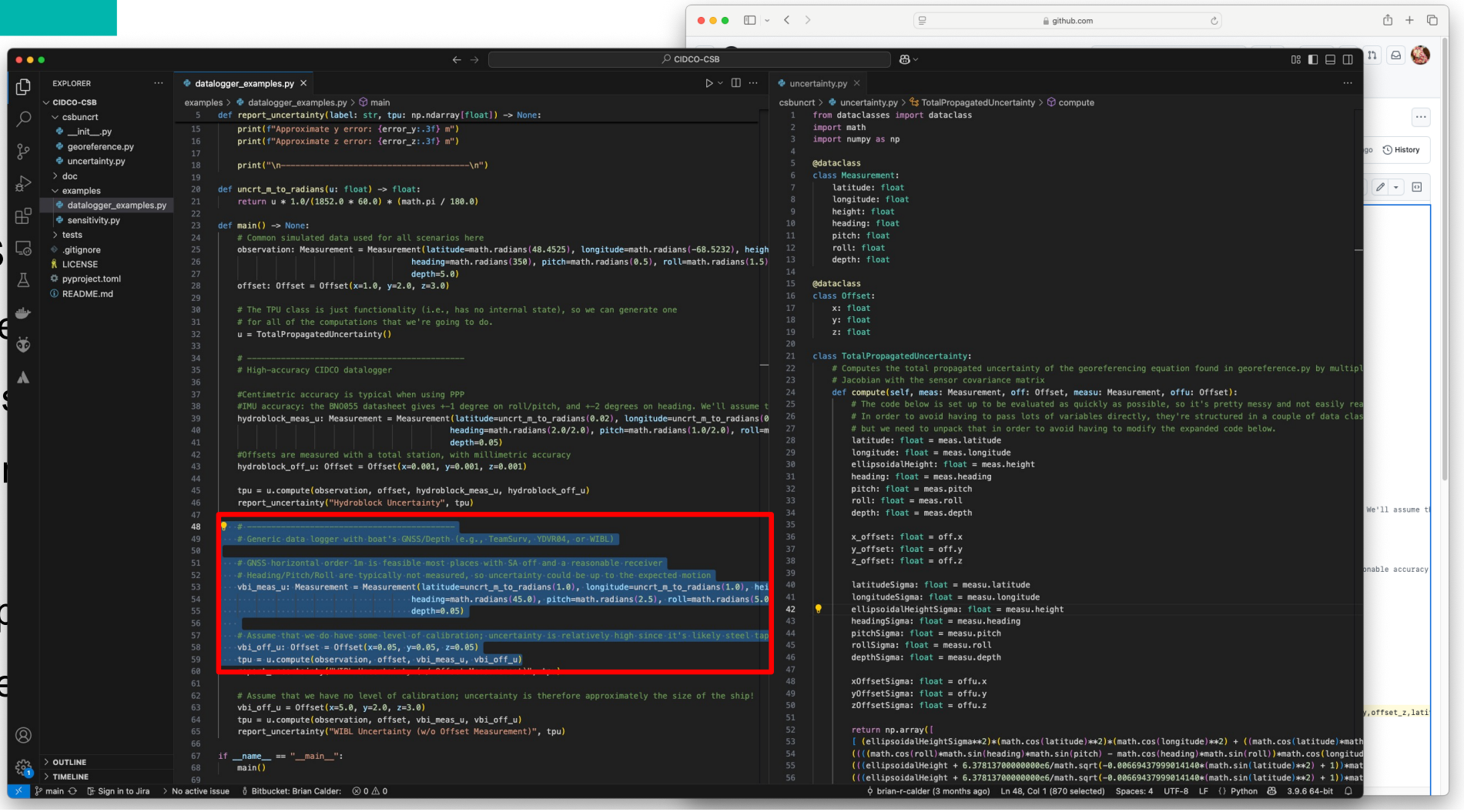


International Hydrographic Organization

IHO

# 6: Uncertainty Estimates in OpenVBI

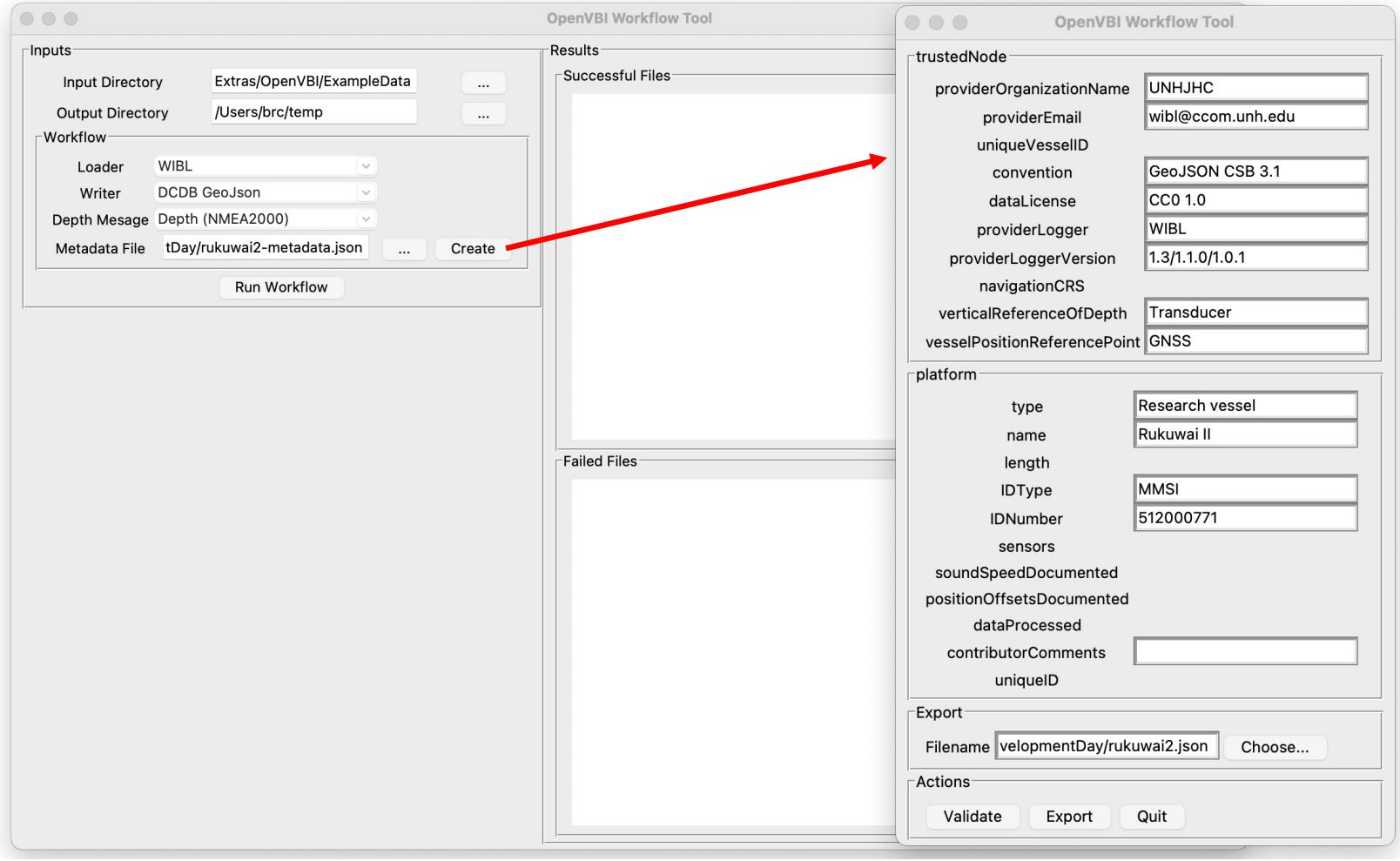
- CS
- The
- Res
- Co
- Imp
- Inte



IHO

International Hydrographic Organization

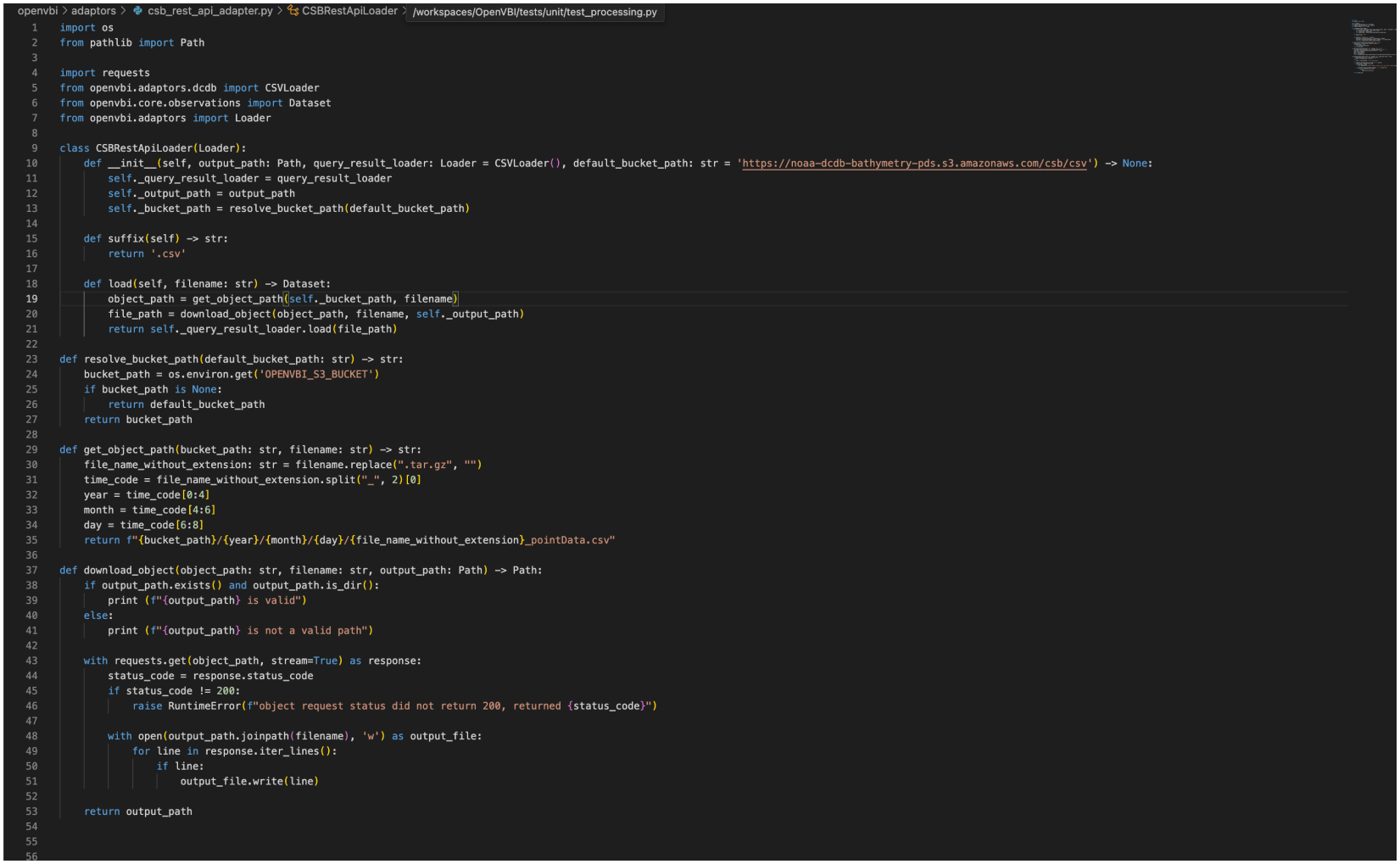
# CSB Tools Workshop Development Day



IHO

International Hydrographic Organization

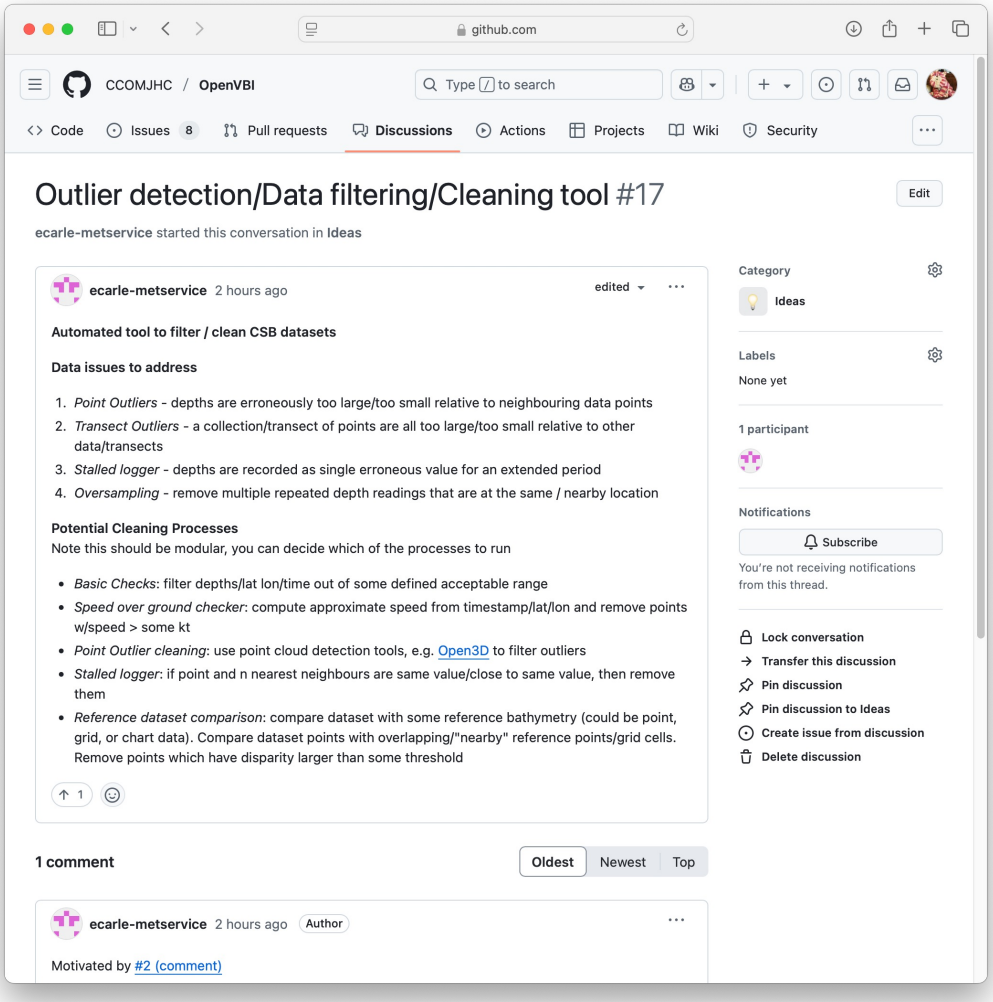
# CSB Tools Workshop Development Day

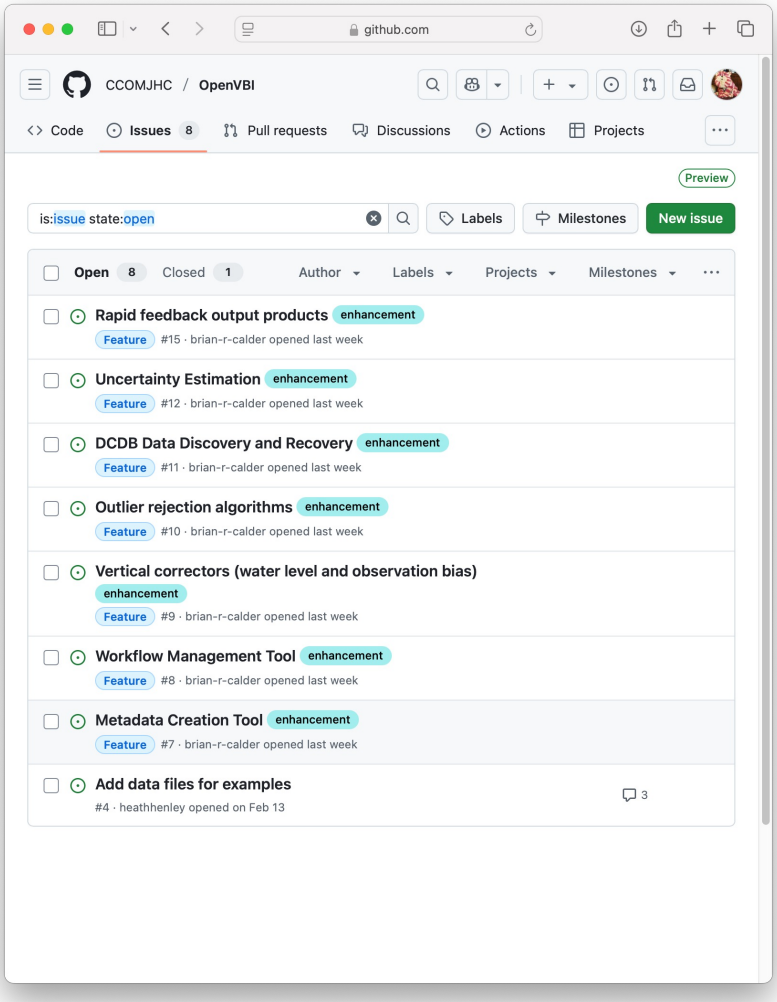


IHO

International Hydrographic Organization

# CSB Tools Workshop Development Day



# Planned Activities

- [x] Updates to code in OpenVBI as consequence of CSB Tools Workshop development day (see separate report)
- [x] Architecture review of OpenVBI base
- [x] Capture of development ideas from CSB Tools Workshop
- [ ] Discussion with (former) Work Item F members to update task list for next year (at CSBWG16)

# “Official” Work Item H Tasks

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| H-1 | Review, recommend, and document the data flow of standard processing stages for data capture | M | Present to CSBWG for discussion | 2023 | Dec 2024 | O | CCOM/B Calder | | |
| H-2 | Review current metadata structure for CSB data for completeness, encoding methods, validation mechanisms, and support for end-user database mapping | M | Recommend modifications | 2023 | March 2025 | P | CCOM/B Calder | | |
| H-3 | Consider potential extensions of the current GeoJSON | M | Recommend modifications | 2023 | Dec 2024 | O | CCOM/B Calder | | |
| H-4 | Investigate possible extensions to the DCDB S3 data store and OGC services | H | Consolidate suggestions for future development at DCDB. | 2023 | May 2024 | C | CCOM/B Calder | | |
| H-5 | Establish recommendations for one or more use cases of CSB, and associated guidelines for data products | M | Collaborate with other working groups preparing specialized products (e.g., for HO use) | 2023 | Ongoing | O | CCOM/B Calder | | |

# Requests to CSBWG

- Note the information provided in the written report & here
- Provide feedback on tasks, development direction as necessary