This repository includes code (python & matlab):

* Pre-process the raw data received from the vessels (pre-process-AVO.py)
* Make EV files for scrutinizing from the pre-processed raw files (make\_EVFiles\_AVO.m)
* Export data from the EV files (export\_EVfiles\_AVO.m)
* Load exported data into avobase2 (load-AVO.py)
* Compute the index for a single new year (compute\_AVO\_index\_for\_a\_single\_year.m)
* Append the new index and associated data to the time series and make figures (update\_data.m)
* (compute\_AVO\_indices.m was the code run in 2023 to compute all indices from 2009-2023, but won’t need to be used unless something needs to be updated for the whole time series)

In order to run code in python for this project, open Eric IDE.exe in the G:\AVO\Code\WPy64-3850\. Then you can open the pre-process.py script in Eric. After adjusting the paths and other settings at the top which are all described, you can click F2, then Enter to run the code. The same process will work for the load-AVO.py script.

Built in this WinPython environment are the following packages:

Dependencies include:

numpy

pandas

pyecholab.echolab2

matplotlib

cartopy

shapefile

geopy

astral

shapely

datetime

cx\_Oracle

tempfile

scipy

logging

sys

os

csv

glob