BEHR Project Log Summary – Spring 2019 Semester in Review

Feb 1-8 – Was introduced to the BEHR project, Gained access to databases and servers with model data, Learned a lot more about the BEHR project data in greater detail, Planned how we were going to align OMI and WRF-Chem data.

Feb 15 – Read the documentation for the BEHR code, set up pseudocode, Began coding work for geolocation alignment between OMI and WRF-Chem pixels

Feb 22 – Familiarized with documentation for opening and reading in HDF5 and NetCDF files, Planned out how we were going to convert WRF-Chem pixels into an "OMI matrix", allowing for easier data training and correlation, Walked through the differences between WRF-Chem and OMI file data, Planned the creation of dataframes

Mar 4-15 – Trying to align the WRF-Chem and OMI pixel data by date, Extracted DateTime object data from file names, Familiarized with HDF 5 file format; Discovered that BEHR HDF5 files contained insufficient data and switched directories to use the BEHR MATLAB files instead!

Between Mar 15 and Apr 12 – Took a break due to midterm season and Spring Break

Apr 12 – Reviewed past work, Planned the details for OMI and WRF-Chem file alignment, Accessed needed attributes in BEHR Matlab files

Apr 26 – Successfully calculated the hour for OMI records, Able to access the DateTime and GeoLocation from WRF-Chem and BEHR files for future alignment, Currently trying to work out how to "flatten" BEHR files so that data can be accessed easily from nested Swath arrays