# 11/09/17 - TBK

Went through the unusable EIMS data files (txt) and pulled out the parts I thought were usable. I saved those as TBK and ran the EIMS script again (2 min avg for valve 1 and 60 min avg for cal). Also filtering O2/Ar results for ratios between 15 and 35.

# 11/08/17 – Meeting

* FRRF productivity in the ML vs C14PP and NCP
* V. important to get definition of MLD right
* Compare NCP results with
  + C14
  + Dillution
  + Etc
* Extract vertical profiles for visual comparison of MLD and CTD
* Make sure the data we have fills in the gaps (make sure gaps are real)

**Model**

Vertical profiles and the 1 D box model for oxygen production and flux balance. Use to determine “best” MLD or otherwise as a comparison to see how crappy our simple model assumptions really are.

# 11/2/17 – Meeting

**Model Changes**

* ~~Make sure variables are clear: e.g. temp\_S to scaled.T~~
* Oxygen comparisons
  + Compare ship O2 concentration to optode concentration
  + Compare (solubility equation) \* (optode sat) = optode conc.
  + Compare with winkler
* ~~Double check 1 minute edge removal from EIMS~~
* EIMS diagnostics to ensure everything is in range
* ~~Master plot of Total Pressure color coded by file~~
* Compare inlet and ship temperature
* Add dates to outliers
* ~~Density calculations: do it right~~
* ~~Check units~~
* ~~Plot with FLAGS consistently~~

**General Remarks**

* Model framework to integrate with other data / traditional NCP calculations
* Still need to develop the raw data processing aspect (read xlh, MIMS, etc)
* Think about how to take the code as is and make it more use friendly without loosing flexibiligy
  + Better commends and mark up
  + Split apart Main Data Compilation into respective scripts

# 10/26/17 – Meeting

Wind and wind correction:

* Check if Seaver is doing correction on Wind NCEP and ship and how he is applying it!
* Tom’s correlation: Slope 0.783 \*truewind \*1.53
* Go with the NCEP wind data corrected by the ship measured data as Tom did!

O2/Ar calibration:

* Cali: -1min before/after each valve change
* Measurement -1min after change

If data looks off, check:

* Flow rate
* Total pressure (TP)
* Check O2 m32 and optode O2 correlation ->outliers likely will indicate issues with the measurement.
* temp correlation

k estimate:

* Use the weighted analysis according to literature for first NCP estimate!
* Check K value and correlate to temp, p, and wind speed

Data and calibration:

* Fill in gaps during calibration using O2 optode data! Use correlation from O2/Ar and O2 optode from 1hour before and after calibration. OR - Compare NCP/ O2 optode data and apply a similar correlation to fill in gaps .

Outliers during cycles:

* Use proximity to sediment trap / buoy to check if we left the station!

Data output:

* 1file with all data
* separate files according to Seasoar, transects, cycles , 4and potentially others.
  + Timestamps (Sven)
* Add flags to data (e.g. 1, 2, 3, 4, etc) to identify and add notes to values (Tom)

Plots and Figures

* Automatically generate more plots (with good names, labels, etc) in order to look at data and model critically.