

# Methods for adjusting THOON WireWalker pH

Wrapper function takes in data filename (file), k2, pressure coefficients (Pcoefs), and savefile (0 or 1).

- readncTHOON: converts the .nc file provided by Jacob Partida into a .mat file with appropriate variable names and adds some necessary variables for canyonB.
- THOONK0Calc: recalculates k0 using estimated insitu pH from the canyonB algorithm. Since the file is quite large, only running CanB on data between 70 to 74 m.
- THOONpH\_adj: recalculates pH using the new k0 (k0\_adj) that is the mean value from the full timeseries at the specified depths. We use the deepest water available because pH is more stable at depth and the canyonB algorithm will likely be more accurate.

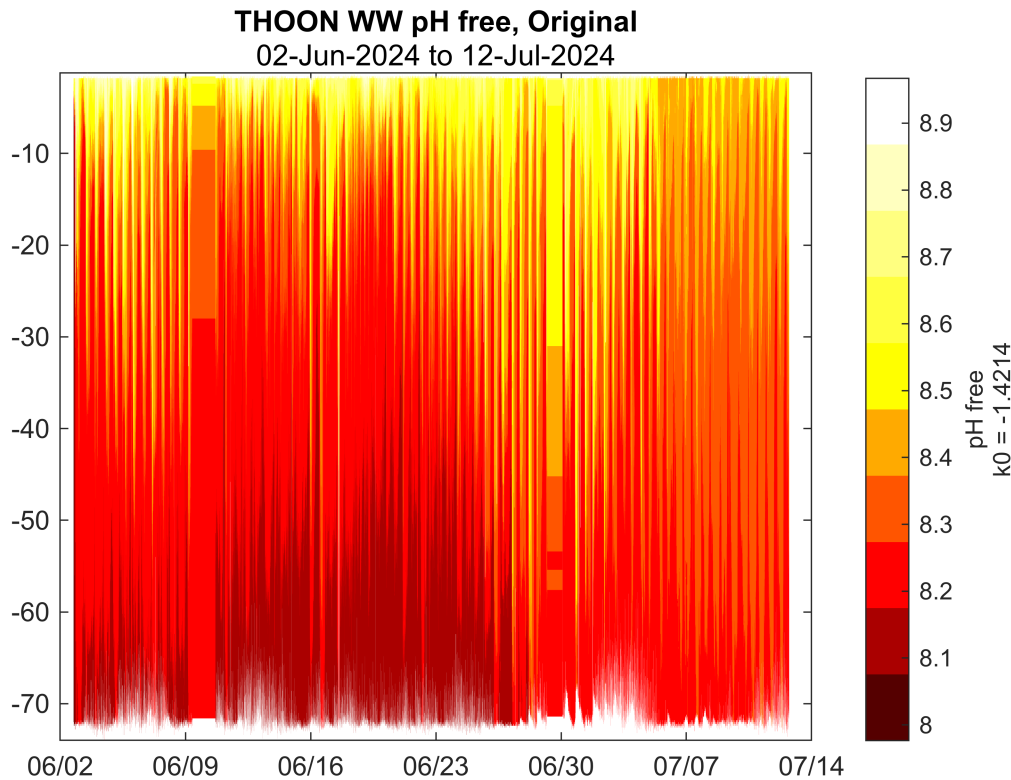
k0\_adj = -1.3984

k0\_adj\_std = 0.00087709

mean pH free before adjusting k0 = 8.2992, Max: 8.9673, Min: 7.9764

mean pH free after adjusting k0 = 7.9209, Max: 8.5862, Min: 7.6005

## Plotting Results



**Thoon WW pH free, adjusted**  
02-Jun-2024 to 12-Jul-2024

