**pH/pCO2 header units and metadata:**

doy\_utc: Day of year in UTC time

co2\_ppm: CO2 value in parts per million

co2\_abs: CO2 absorbance in Licor detector in volts

h2o\_ppt: water vapor correction in licor may contribute to CO2 value

h2o\_abs:water vapor voltage value equivalent

valve:CO2 input determined by this number, 1)sample, 2)atmosphere, 3)200ppm Standard gas, 4)800ppm Standard gas, 5)1500ppm Standard gas

cell\_t: Licor cell temp used in calculation

cell\_p:Licor cell pressure used in calculation

820pwrV: Instrument power monitored by SuperCO2

eq\_t: equilibrator temp ?(inside Licor)

eq\_p:equilibrator pressure (also Licor related)Missing, listed as NaN Winter 2016

temp1:Durafet temperature

ph1:Durafet pH

temp2:additional temp in durafet housing sensor

cond2: conductivity associated with durafet housing sensor(Problem here value ~10X)

sfromc: salinity from Durafet housing sensor

tsg\_t: temperature from Seabird CTD

tsg\_c: conductivity from Seabird CTD

tsg\_s: salinity from Seabird CTD(calculated)

bottle sample: DIC standard bottle, 1=sample taken, 0=none taken

bottle\_number: DIC sample bottle reference number

cpu\_date:YYYYMMDD

cpu\_time:HHMMSS

north: North Latitude, compressed decimal minutes from serial feed or USB GPS

west:West Longitude, compressed decimal minutes from serial feed or USB GPS

speed: GPS speed of ship