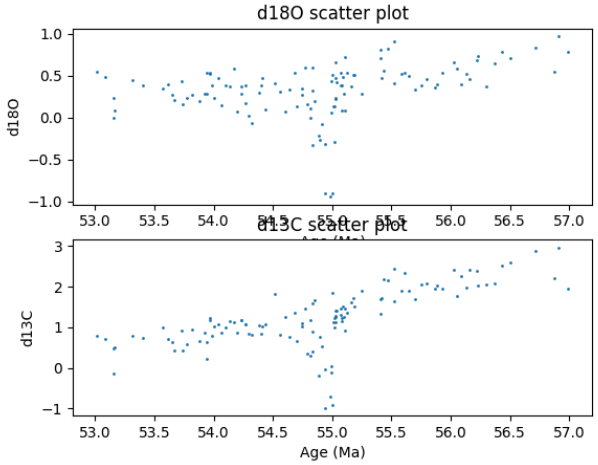
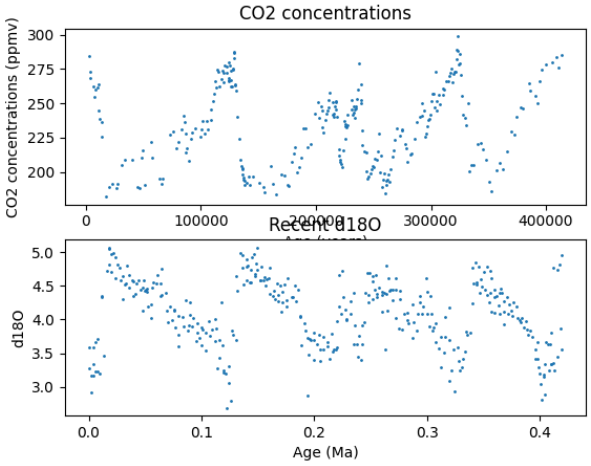
1. Answer the 3 questions 7.1.1, 7.1.2, and 7.1.3 from project7.1.pdf.
Question 7.1.1 What do you notice? What do your plots imply about the relationship between carbon and temperature?



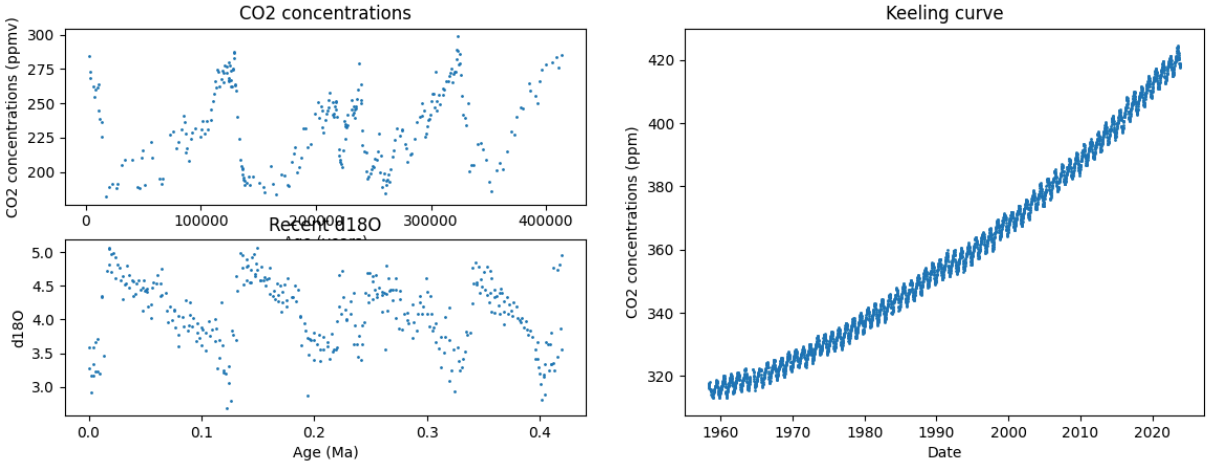
We noticed that there was a rapid decrease in d18O and d13C around 55 Ma.
Lower values of d18O represent higher temperatures and the value of d13C can decrease if there is a sudden injection of 12C-rich (i.e., 13C-depleted) carbon, which would likely cause an increase in warming due to the increase in greenhouse gases. As such, our plots imply a strong positive correlation between carbon and temperature.

Question 7.1.2 What do you notice? What is the maximum CO2 concentration during this period?



The plot of recent d18O readings from sites 607, 659, and 849 for the last 420,000 years and the plot of CO2 concentrations illustrate four distinct, stable cycles.
The maximum CO2 concentration during this period was 298.7 ppmv.

Question 7.1.3 How do these levels compare with the maximum level from the previous 420,000 years? Is your plot consistent with the pattern of “natural” CO2 concentrations from the previous 420,000 years? Based on these results, what conclusions can we draw about the human impact on atmospheric CO2 concentrations?



Modern levels of CO2 are much higher than the maximum level of CO2 from the previous 420,000 years. Our plot is consistent with the pattern of "natural" CO2 concentrations, as we can see that there is a similar pattern of increase in CO2 concentrations over time for recent years. Thus, we can conclude that humans have had a significant impact on current atmospheric CO2 concentrations, given the additional impact of increased maximum levels of CO2 concentrations compared to the natural pattern.

2. Explain how you worked together as a group. For example: When did you work together? How did you share code? Who took the lead (if anyone)? What worked well in your group dynamics and what did not?

We shared our code through Google Drive and met a few times in order to discuss the code. Daniel took the lead, Derek and Will assisted. Our group dynamics were totally fine, we had no issues meeting or getting the work done.