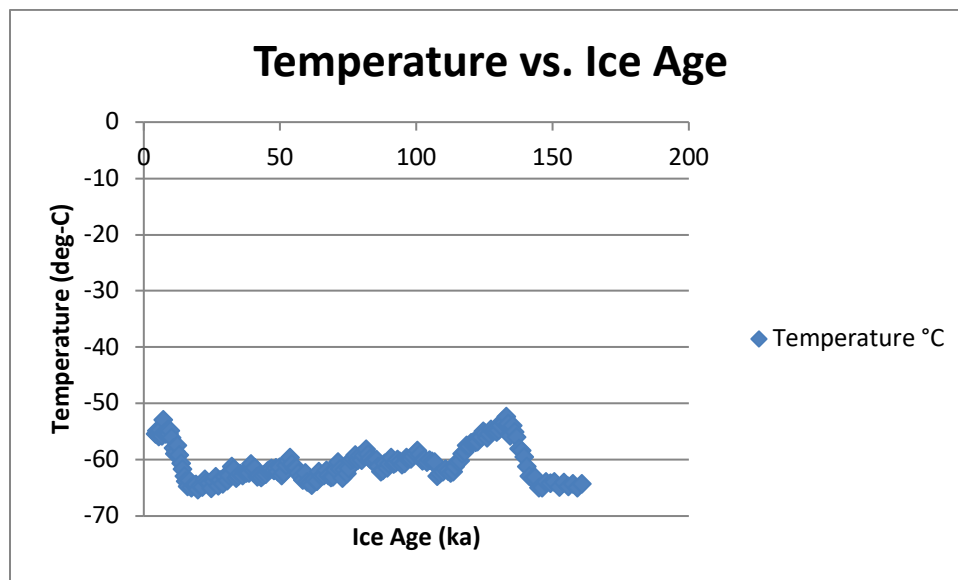


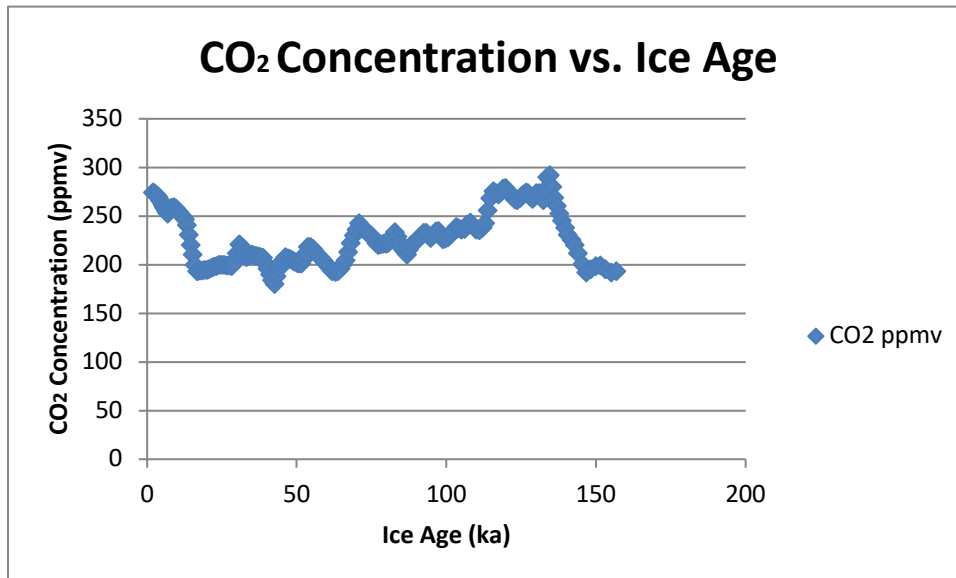
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EAS 10601 – 5EF
04/04/14
Lab: Ice Core Records

Summary of the Ice Core Records

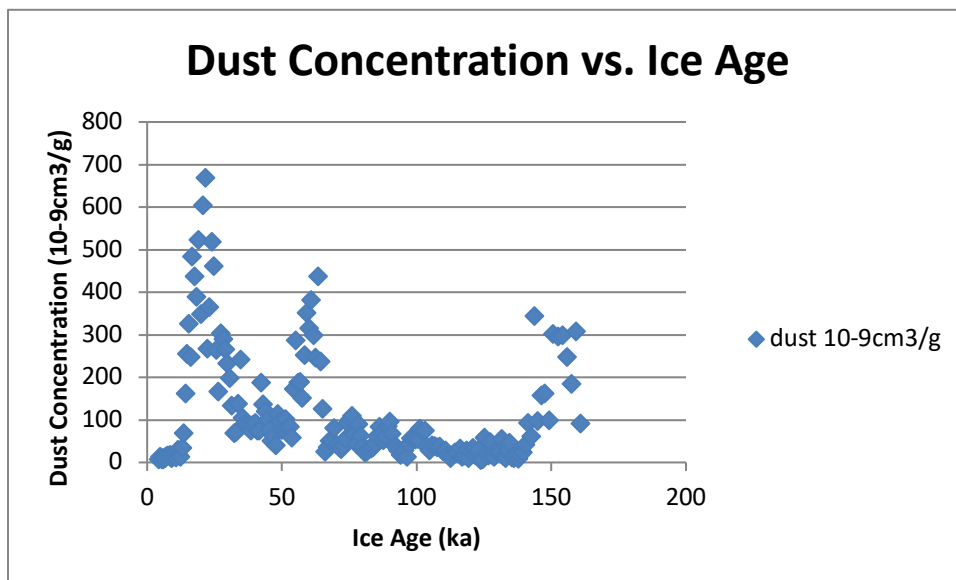
In this lab, we used the wonders of Microsoft Excel in order to understand the relationships between the atmospheric temperature and other variables available in the atmosphere. Interestingly enough, this information can be found in ice cores- which are layers of ice that record the history of events. We learned that ice age increases the deeper we go into the ice- from the youngest on top, to the oldest layer on the bottom. Gas can actually be trapped in the ice because snow provides a maze of pores for gases to enter from the atmosphere. Eventually the snow packs into slabs of ice and gases become trapped in between each slab. This phenomenon actually describes carbon dioxide and dust levels in the atmosphere during their respective times. In conclusion, ice cores provide useful information about past fluctuations in the climate.



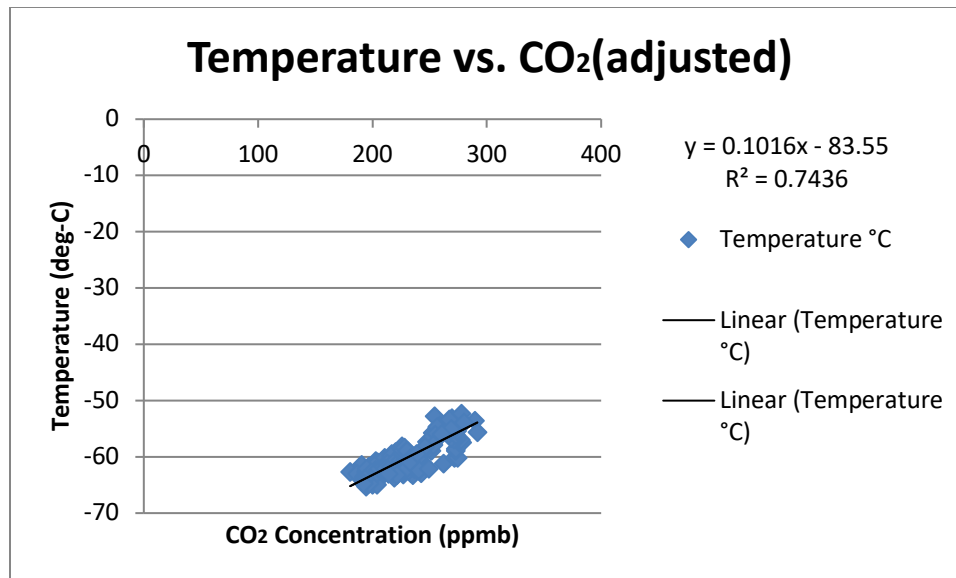
Graph A: As the ice age increases, the temperature fluctuates but generally follows a certain path.



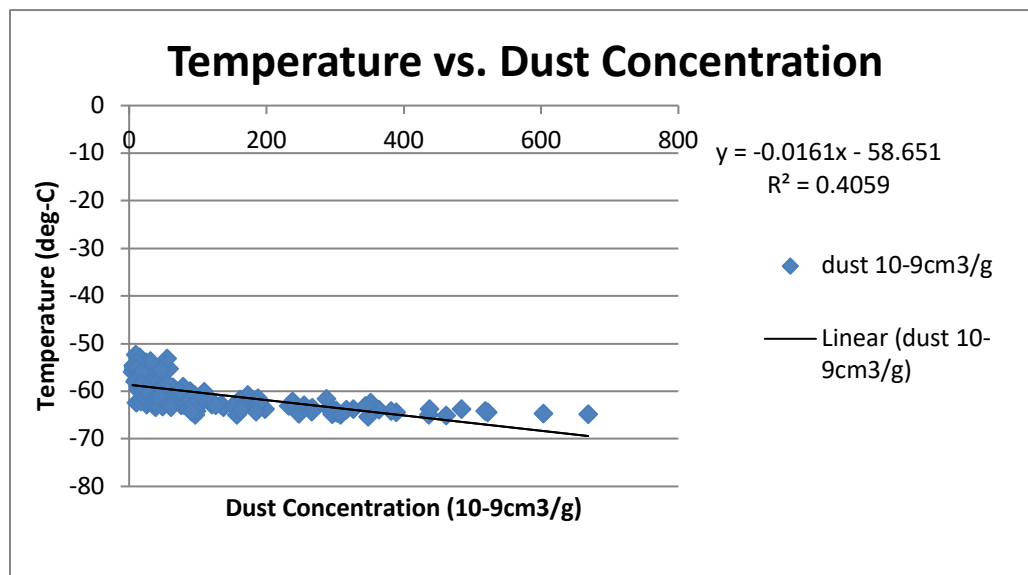
Graph B: Similar to the path in Graph B, carbon dioxide levels also follow a similar path. However, the carbon dioxide levels have a lot more variations compared to the temperature graph.



Graph C: The dust concentration is not related to the ice age at all. The variations in the ice age can only be explained by the time period itself. Dust concentration variation could possibly occur because of increases in volcanic eruptions or more recently, human impact on the environment.



Graph D: As temperature increases, the carbon dioxide levels adjusted to the ice age increases as well.



Graph E: The linear trend shows that as the temperature decreases, so does the dust concentration. However, this is not a good fit to observe the data because the correlation is a lot closer to 0. Therefore it is better to observe the dust concentration as a separate variable from the temperature rather than correlated variables.