

Overview

This group after importing their data from the website, immediately converted to the correct time units and graphed the raw data. After that, they graphed the data “zoomed in” so that there was a flat looking area for a while before the flare that was uninterrupted, the flare, then a short flat area after the flare. Once they had zoomed in on the flare, the group took the period of the time before the flare that looked flat and found the average energy of that period of time, that was their baseline. Then the baseline value was subtracted from the y value of the full graph. Now they had a full graph that was baseline corrected. From that they used basic python code to take the integral of the flare data, which gives the total energy of the flare. Their total flare energy came out to 5.54×10^{29} ergs making it an x class flare.

Merits

Merits for this group include well commented code that makes sense and is easy to follow and understand. The group also wrote out a detailed and easy to understand plan on how they would complete the task. The results are also backed up with an explanation on how they got the data, and why the numbers add up to the total energy that they do.

Critiques

In this group's experiment the data used for the baseline was very short. A longer baseline would provide more accurate total energy measurement. Although the short baseline data could have been due to a smaller preflare or different anomaly, it should be avoided.

Overall recommendations

Other than using longer pre flare data so that the baseline measurement can be more accurate, this group did an extremely good job.

Conclusions

Overall this group did a very good job and most likely got a very accurate measurement on the total energy of the flare. The baseline correction could use a little work, but the code was neat, well commented and easy to read and understand.