

Overview

This team's flare appeared on August 9th, 2015 with its flare happening at around 8:00 am. It was approximated as a C4 class flare with a height of $4.26 \times 10^{-6} \text{ W/m}^2$. Looking at days before and after this flare, this team determined that it was more of an isolated flare which helped them to ultimately choose it. They imported the solar flare data and then converted the units of solar irradiance (W/m^2) to energy per second (ergs/s) and ISO units to seconds. To complete this step, they used previous code. Once they had the right conversions, they plotted the flare using basic plotting python code.

For the baseline correction, the team selected a range of data before the flare hit. They did this by repeating the step of taking the data from zero to an estimated value, then plotting the data to see if any of the flare was included. After they got the range, they took the mean average energy of the data and plotted this value on top of the flare. They then subtracted this average from the rest of the flare to achieve the flare by itself. To zoom in on the data, they team used the python `data.iloc[]` function. To report the total energy of the flare, this team used Trapezoidal Riemann sums (python code `integrate.trapz`). The total energy reported was $3.848369635763776 \times 10^{28}$ ergs.

Merits

Overall, I think this team's solar flare report was done very well. The formatting was easy to follow, and the markdown cells describing each of the processes were straightforward and helpful to read. It was clear what this team was trying to accomplish, and by the way they completed the report, it was obvious that the team carried out what they were set to do. The information in the report all seemed to line up, and the total energy reported seemed reasonable. They also had good comments for their code which is very important to onlookers to try and understand the reasoning behind it.

Critiques

The only thing that I saw that was missing on this report was the name of the flare. In the project's description it asked for the team to make up a creative name for the flare. Other than that, everything else was completed nicely.

Overall Recommendation

<input type="checkbox"/>	No revisions are needed
X	Needs minor revisions
<input type="checkbox"/>	Needs major revisions

Conclusions

Great job in completing the solar flare data report. It was very detailed and easy to follow. My only suggestion is to add a fun name for the flare, so you do not get any points taken off.