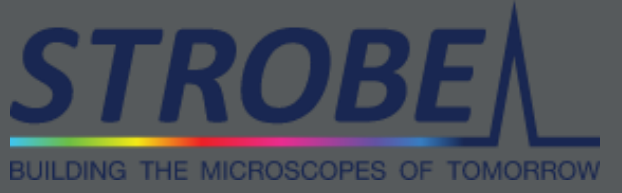
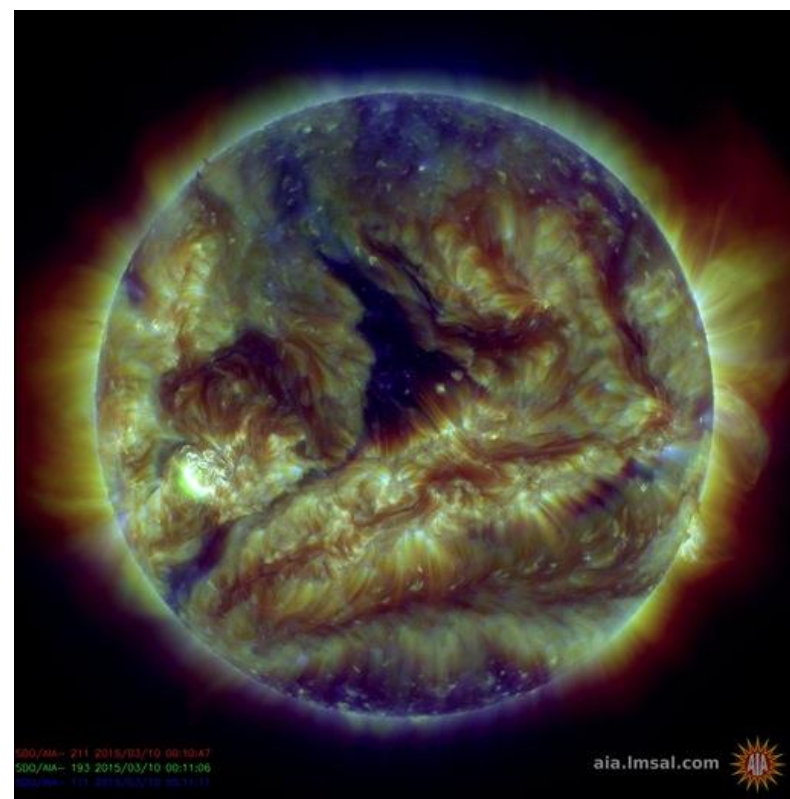


Engaging in research in an introductory physics laboratory class

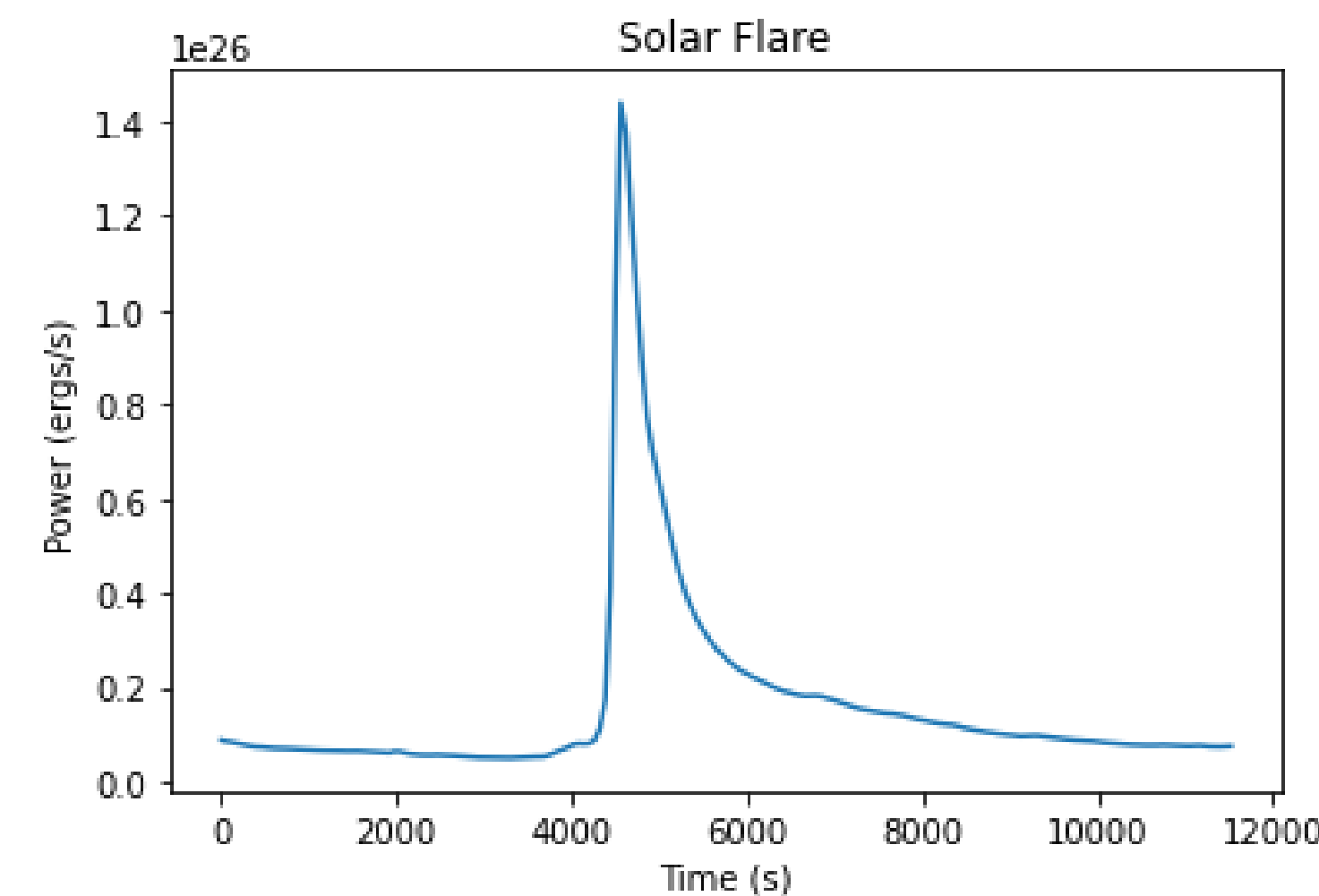
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Solar flare research in a large intro physics lab



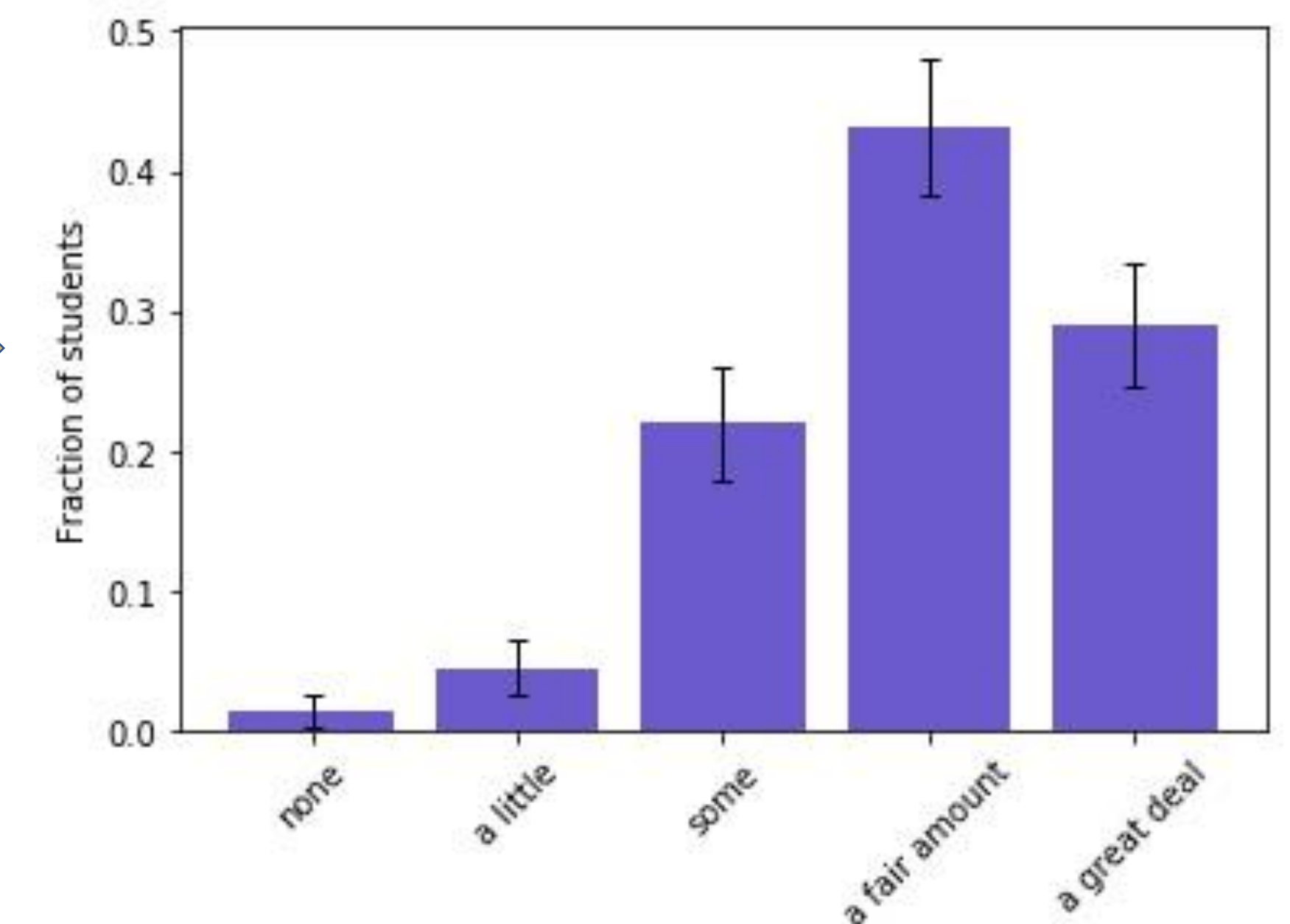
- Created a new remote course in response to the COVID-19 pandemic
- Students' work will be published in a scientific journal



Did students feel like they had done real research?

“How much did you engage in real-world science research?”

Most students did feel like they had done real research



What did students say about their experience with research in the course?

“Finally, the thing that makes this course interesting is the fact that you’re **working on actual data** that was collected from real-life instruments in space. Therefore, the[re] will always be new data to analyze and the more data we collect, the more accurate results and conclusions we can arrive to. Participating in this research **gives you a sense of your contribution to science** and how actual science research [is] conducted.”

“Our research results **will be helpful** in that they will **further improve our ability** to predict when, where and how strong the solar flares will be. This will help us to react in a way that will **protect our power grids and energy**. These results will also **help us learn more about how our sun works** and how this compares to other stars in the universe.”

Students most frequently talked about...

- **Discovering new things** that were meaningful to the scientific community and the world at large
- **Collaborating** with outside scientists
- **Replicating studies** that had been done in the past to confirm or deny their results
- Analyzing Data
- Teamwork
- Computer Programming

Reflections and Conclusions

- Real research **can** be done in the context of an intro course in physics
- Courses such as this one can be a good way to get students involved in research early in their academic career