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The *Fermi* Masterclass is an international program offered to high-school students to study cosmic objects by performing basic analyses of *Fermi*-LAT data using professional software and direct guidance of scientists from the Fermi Collaboration. Since 2017, *Fermi* Masterclasses are being organized in Italy by the Italian National Institute for Nuclear Physics (INFN) in several cities



Due to the Covid-19 pandemic, the Fermi Masterclass Edition 2020 at the beginning of March 2020 was canceled

Was it a good idea to propose another online event for high school students “saturated” with this form of involvement?

Finally, we decided to go for a national online edition, involving students from all Italy.

As a platform we used Zoom in webinar mode, allowing us to manage a large number of participants very well without “interference”. We set no limit on the number of students per school/class and in the end we had ~550 participants! Moreover, the Zoom events could be easily broadcasted on Facebook and is also available on YouTube (QR code in the bottom right box)

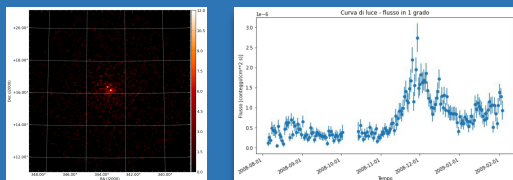
The event lasted ~3 hours and included:

- 2 general talks and 2 interactive exercises
- a final quiz «competition» (Kahoot) among students

The best 3 students got a *Fermi* plate as a reward.



To allow the students manage Fermi data, we created an interactive path on a dedicated INFN outreach website called ScienzaXTutti (“Science for all”) that guided the students in the discovery of gamma-ray astronomy and Fermi experiment and in the performance of easy interactive exercises on Google Colab platform based on Python and on public Fermi fits files.



One of the interactive exercises performed by students:
 create maps and lightcurves of a portion of the sky around the blazar 3C 279 during a bright flaring phase between December 2008 and January 2009



Our experience with the Online Fermi Masterclass 2020 proved to be very successful. We received very positive feedback from students and teachers.

Outlook for 2021: planning a Fall 2021 Edition to take place by December (virtual ?)