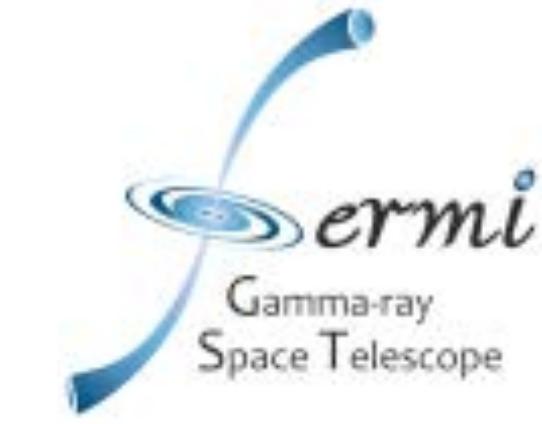




Fermi.

Gamma-ray Space Telescope



High-Energy Emission from a Magnetar Giant Flare in the Sculptor Galaxy

Nicola Omodei,
Stanford University and KIPAC

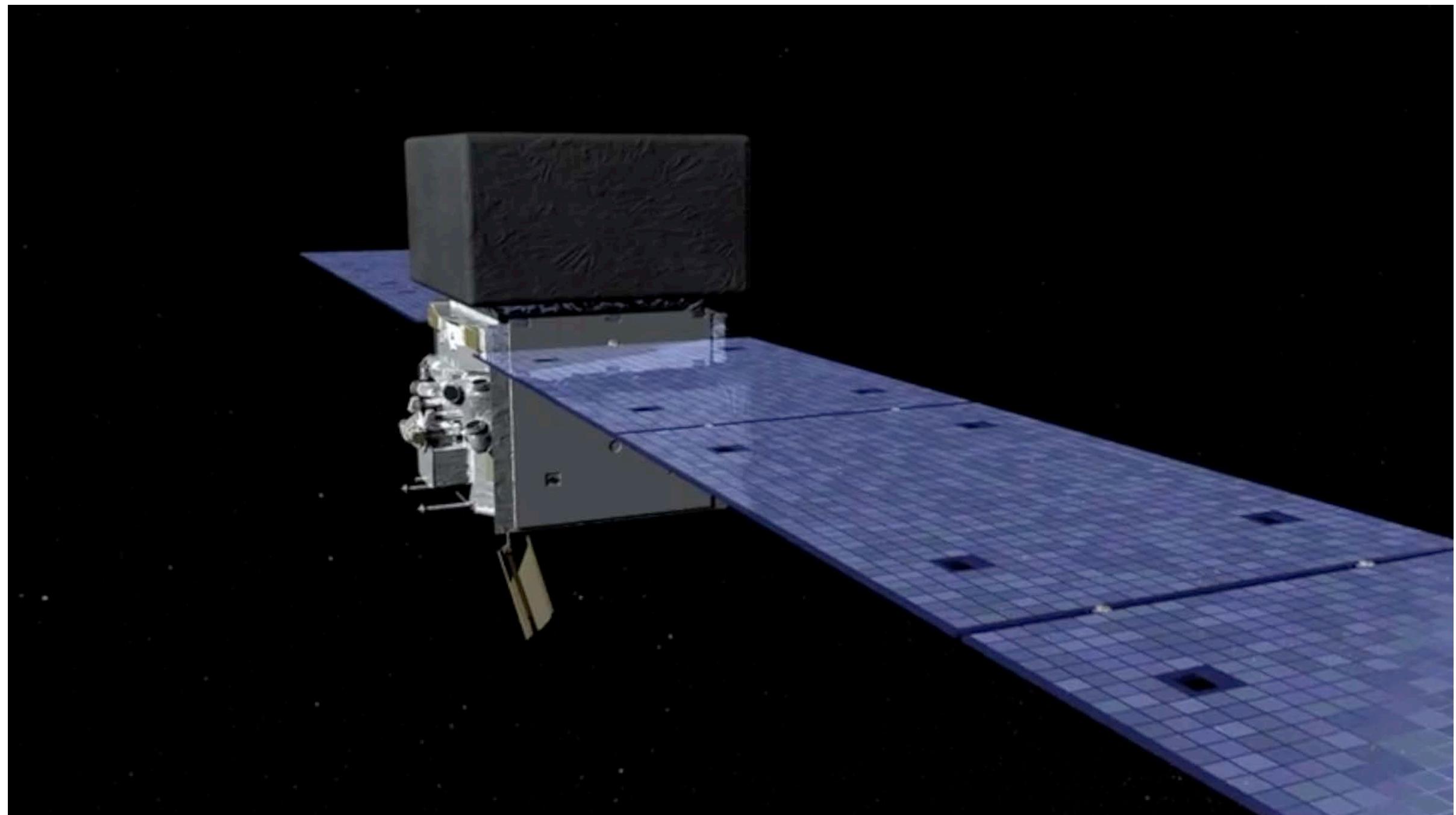
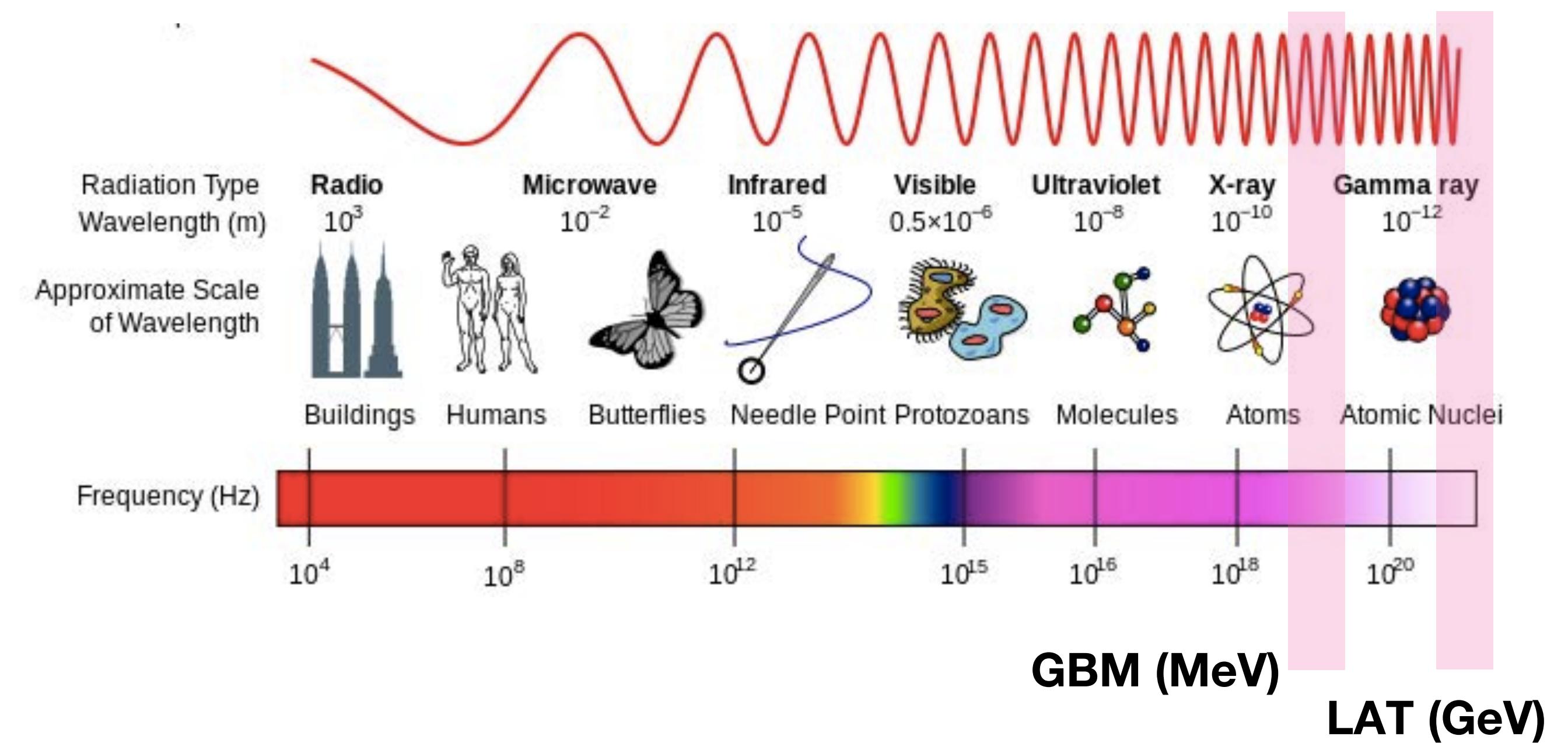
Alessandra Beretta, Niccolò Di Lalla, Fred Piron, Soeb Razzaque
for the *Fermi* LAT Collaboration

Nature Astronomy DOI: 10.1038/s41550-020-01287-8

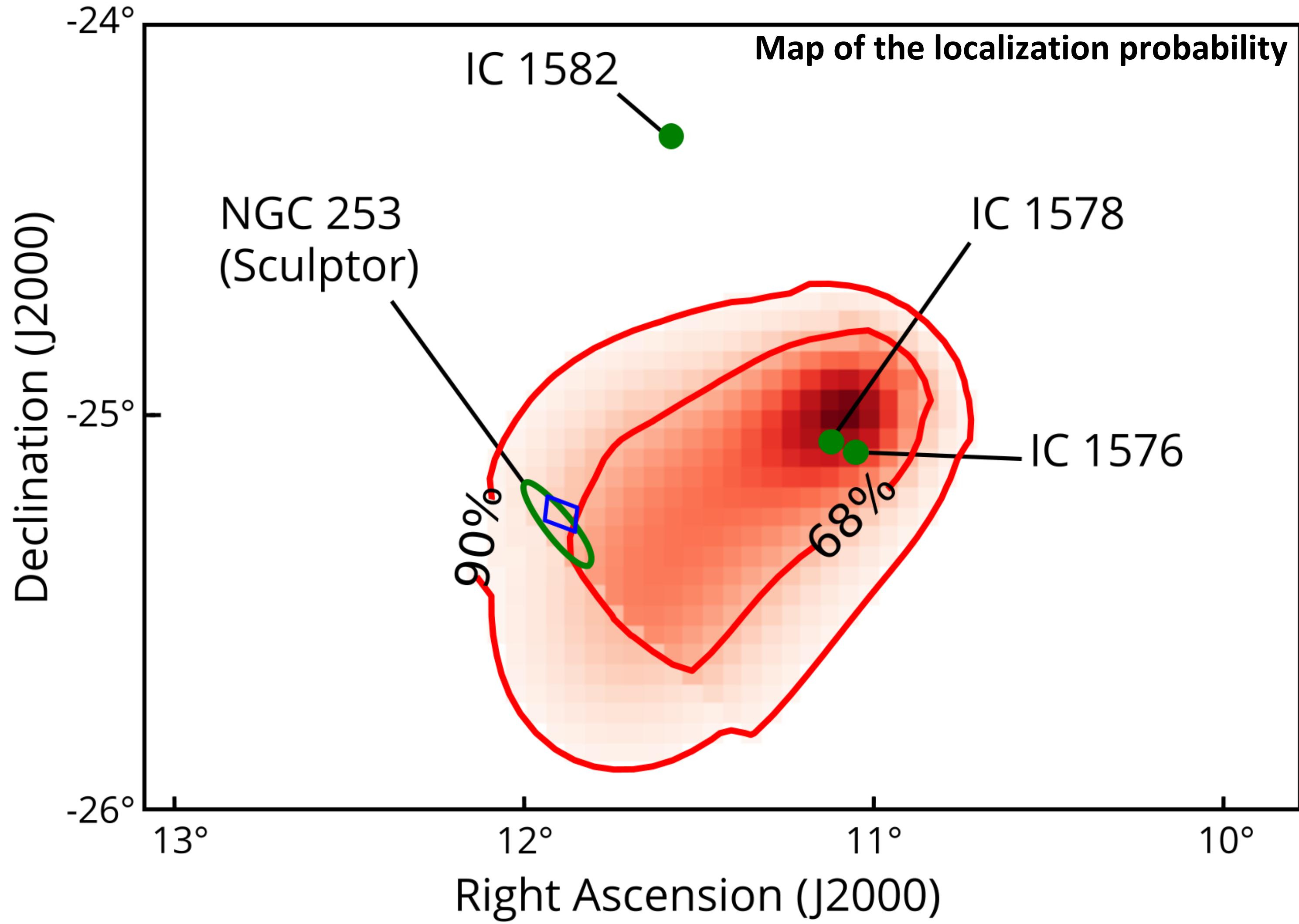
An Unexpected Discovery



- For the first time, we've detected GeV gamma rays from a magnetar!



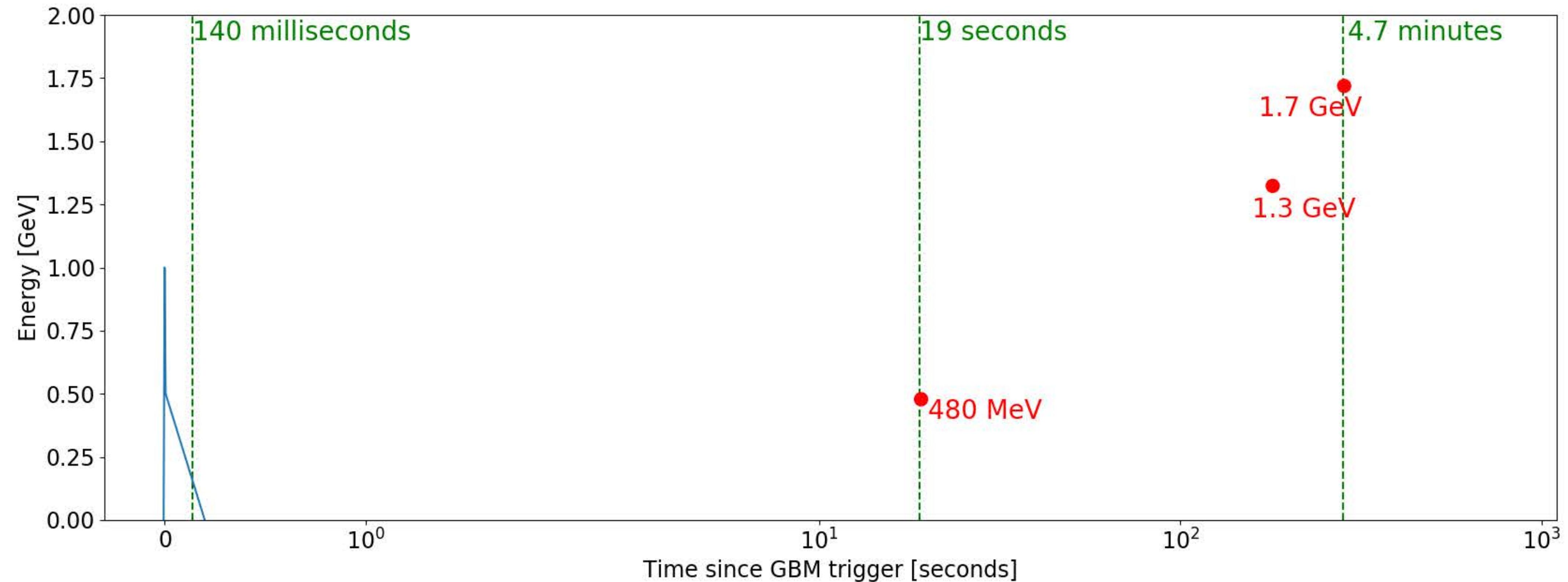
An Unexpected Discovery

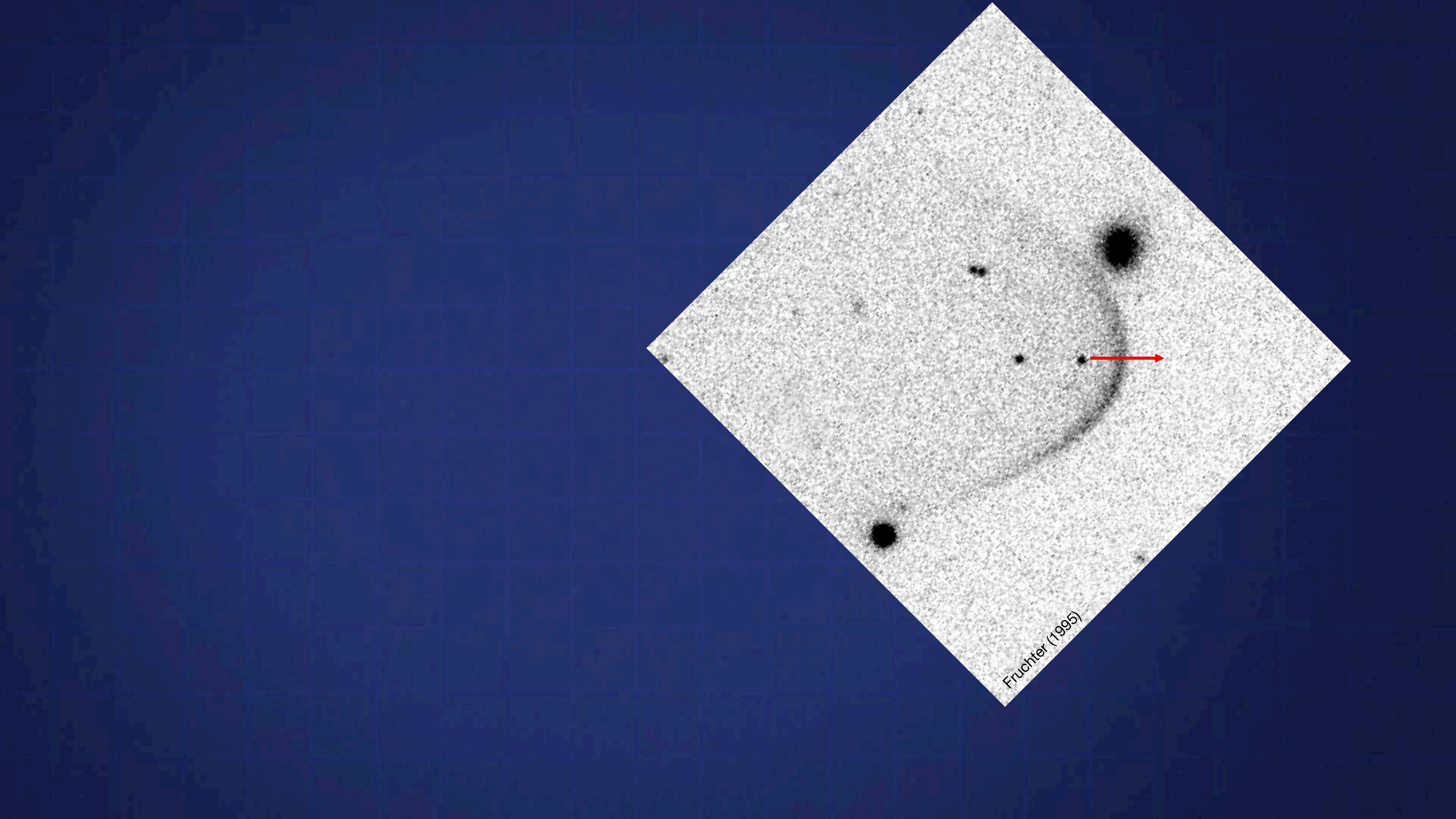


- Was the LAT signal a short GRB far behind Sculptor?
 - Expect 1 event every 200 years at least.
- Chance of such an event coinciding in time with the GBM signal:
 - 1 event in at least 6 million years.



A peculiar Short Gamma Ray Burst

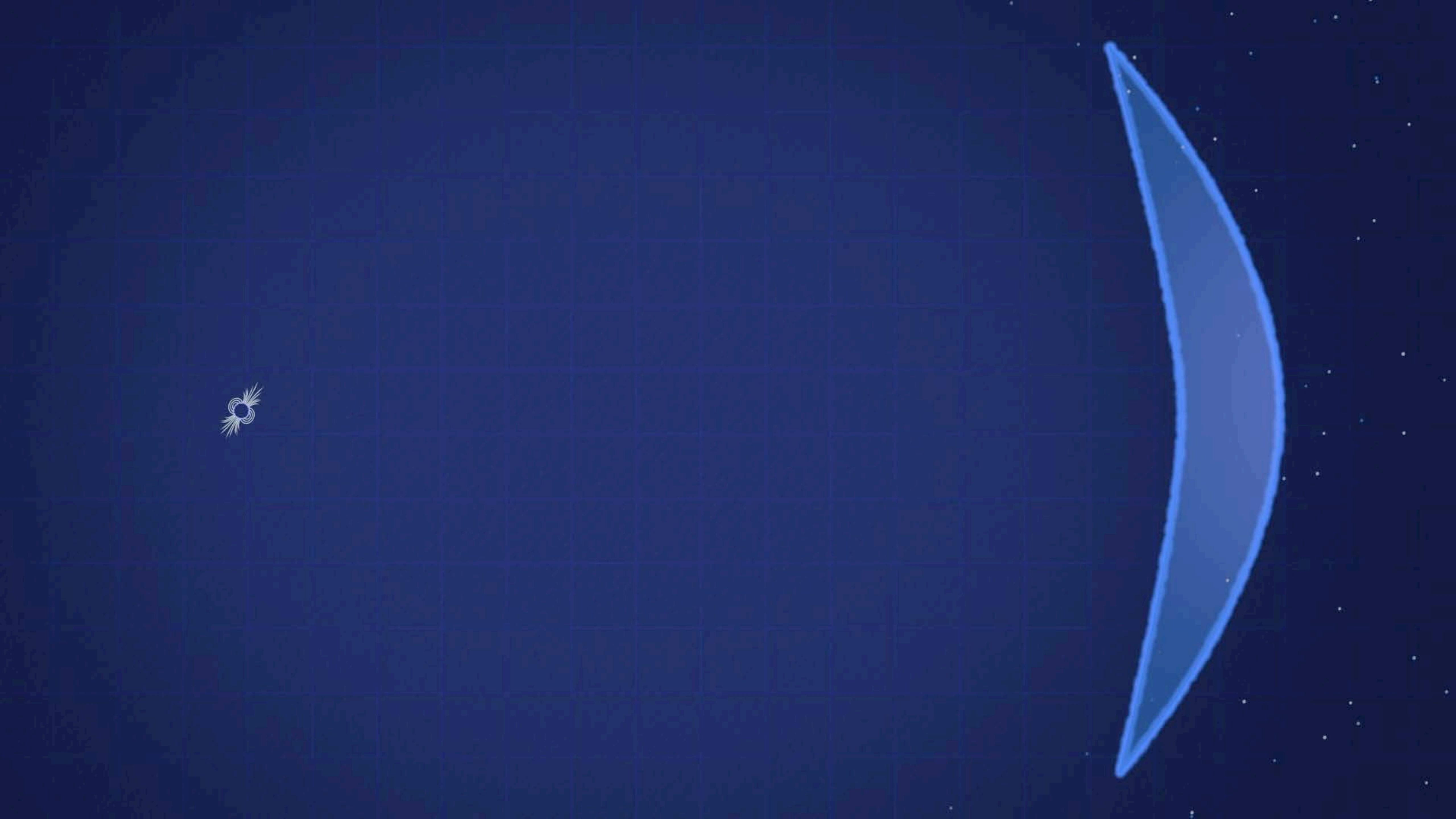


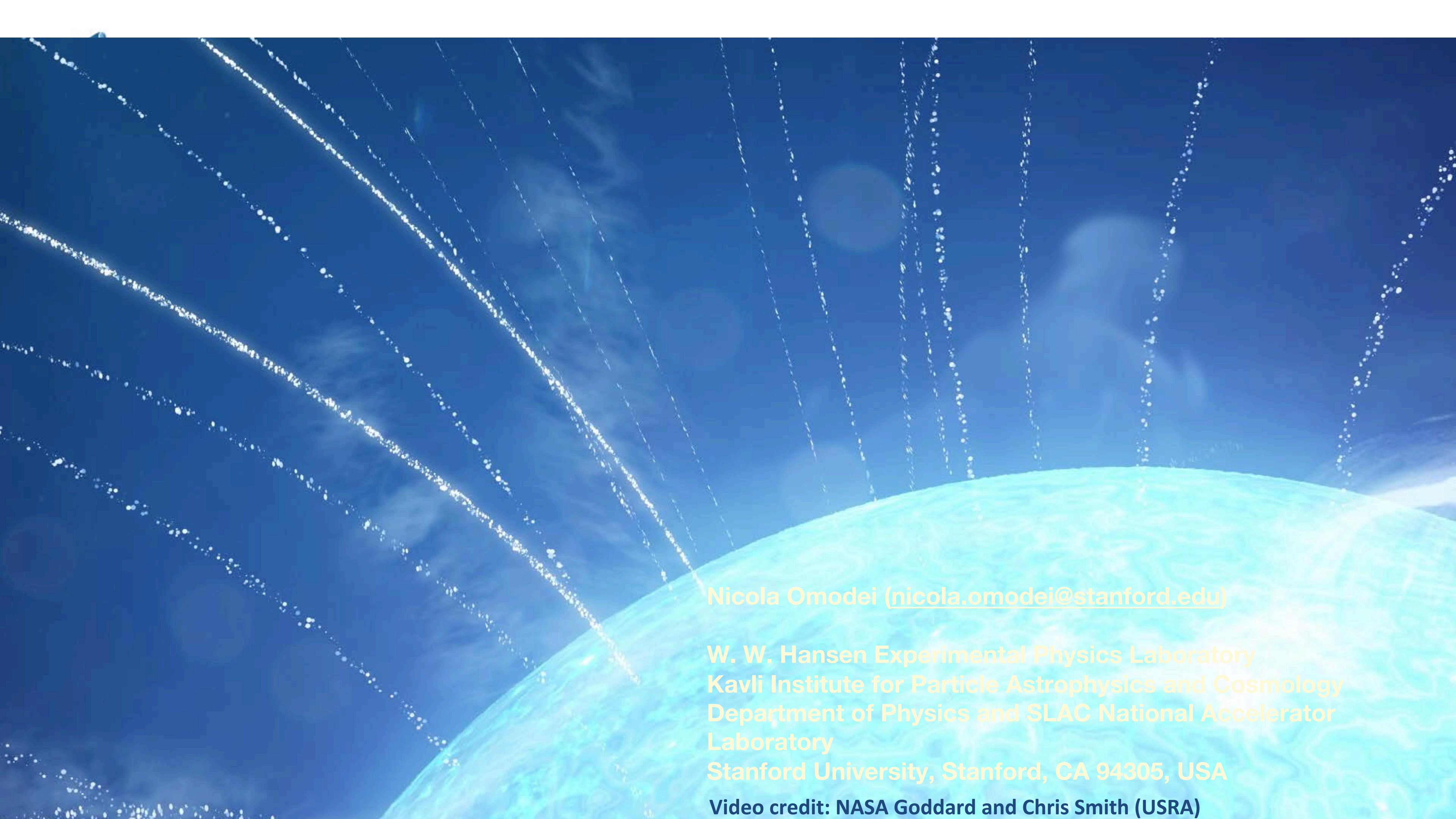


Fruchter (1995)

*2.2 million mph







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Video credit: NASA Goddard and Chris Smith (USRA)