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Fermi Large Area Telescope observations of high-energy gamma-ray emission from the X-class solar flares of 2012 March 7

On March 7 2012 two bright X-class flares originating from the active region NOAA AR 11429 erupted within an hour of each other, marking one of the most active days of Solar Cycle 24. The Large Area Telescope (LAT) onboard the Fermi observatory observed both the impulsive and the long duration phases of these two bright flares detecting gamma-rays up to 4 GeV and

100 MeV emission for approximately 20 hours. Thanks to the increased sensitivity of the LAT we were able to accurately localize the high-energy gamma-ray emission to the same active region from which the X-ray emissions associated with these flares originated. In this presentation I will discuss the Fermi LAT detections of these bright solar flares and its implications on the emission processes tied to these explosive phenomena.

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