

## On the nature of the transient gamma-ray source associated with a protostar

*Thursday 5 September 2024 15:20 (15 minutes)*

Very recently, gamma-ray emission detected by *Fermi*-LAT was reported from a star forming region NGC 2071. The high-energy radiation was claimed to be associated with occasional mega-flares thought to occur in T Tauri stars. The source, detected at energies  $E \sim 100\text{ GeV}$ , appears to be transient, and was only detectable during the first two years of observation. In this work, we investigate the nature of the *Fermi* source, assuming that it was produced by particles accelerated in a protostar within NGC 2071. We discuss different scenarios capable of reproducing the detected peculiar spectral energy distribution and the time scale reported for the gamma-ray source.

**Primary author:** DEL VALLE, María Victoria

**Presenter:** DEL VALLE, María Victoria

**Session Classification:** Parallel 1