

# The first gamma-ray flare of the peculiar source PKS 2004-447

*Tuesday, 13 April 2021 07:00 (3 minutes)*

While blazars are abundant in the gamma-ray sky, there is only a handful of narrow-line Seyfert 1 galaxies that Fermi/LAT detected in more than 10 years of observation. Flares from this elusive source class are among the rarest events that Fermi has seen so far.

One of them is the radio- and gamma-ray loud source PKS 2004-447. It exhibits blazar-like features, i.e., a flat featureless X-ray spectrum and a core-dominated, one-sided parsec-scale jet with indications for relativistic beaming.

However, the spectrum also shows properties atypical for blazars, such as a steep radio spectrum and large-scale size consistent with compact-steep-spectrum objects, which are usually associated with young radio galaxies. Such characteristics are unique among all gamma-loud NLS1s and extremely rare among gamma-loud AGN.

Very recently, PKS 2004-447 showed its first bright gamma-ray flare since the beginning of the Fermi Mission, for which optical/UV, X-ray and radio follow-up observations took place.

We will present results on the multi-wavelength analysis, focusing on the source classification based on the X-ray spectra and the construction of the spectral energy distribution with a quasi-simultaneous dataset.

**Primary author:** GOKUS, Andrea

**Presenter:** GOKUS, Andrea

**Session Classification:** AGN-1

**Track Classification:** AGN