

The ablation of gas clouds by blazar jets and the long-lasting flare in CTA 102

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The FSRQ CTA 102 ($z=1.032$) has been tremendously active over the last few years. During its peak activity lasting several months in late 2016 and early 2017, the gamma-ray and optical fluxes rose by up to a factor 100 above the quiescence level. We have interpreted the peak activity as the ablation of a gas cloud by the relativistic jet, which can nicely account for the months-long lightcurve in 2016 and 2017. The peak activity was in the middle of a 2-year-long high-state, which was characterized by increased fluxes and increased rms variability compared to the previous low-states, and which was flanked by two bright flares. In this presentation, we put the cloud-ablation scenario into the broader context of the 2-year-long high-state.

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