Contribution ID: **91**   Type: **Talk in a parallel session**

Prompt GRB recognition through waterfalls and deep learning

Friday, 12 July 2024 15:00 (20 minutes)

Gamma-ray Bursts (GRBs) are one of the most energetic phenomena in the cosmos, whose study probes physics beyond the reach of laboratories on Earth. Yet, our quest to fully unravel the origin of these events and comprehend their underlying physics is far from complete. Central to this pursuit is the rapid classification of GRBs to guide follow-up observations and analysis across the electromagnetic spectrum and beyond.

In this talk I will present a compelling approach which lays the groundwork for a new and robust GRB prompt classification. Leveraging self-supervised deep learning, we pioneer a novel and previously unexplored data product: GRB *waterfalls*.

Primary authors: BURNS, Eric; NEGRO, Michela (Louisiana State University); Mr CIBRARIO, Nicolò (Università degli Studi di Torino / INFN-To)

Presenter: BURNS, Eric

Session Classification: Machine learning in astronomy: AGN, transient events, cosmology and others

Track Classification: Artificial Intelligence Methods (AI): Machine learning in astronomy: AGN, transient events, cosmology and others