



Contribution ID: 251

Type: **Poster**

Shedding light on the brightest supernovae

Monday 16 September 2024 12:50 (1 minute)

Superluminous supernovae are a class of exceedingly bright transients whose luminosity cannot be comfortably explained by the standard ^{56}Ni -decay picture. The quest for an alternative scenario has pointed at the contribution of a nascent millisecond magnetar and/or at the interaction of the supernova ejecta with a circumstellar medium surrounding the progenitor star; however, some of the observed photometric and spectroscopic features of many superluminous supernovae are seemingly reminiscent of a ^{56}Ni -decay contribution. I present the results of the spectrophotometric observational campaigns of three superluminous supernovae and discuss the observational data in the framework of the magnetar and the circumstellar-interaction scenario, and I suggest that some superluminous supernovae might be the UV-optical-NIR counterpart of a magnetorotational instability-driven core collapse.

Primary author: FIORE, Achille (Goethe Universität Frankfurt am Main)

Presenter: FIORE, Achille (Goethe Universität Frankfurt am Main)

Session Classification: Poster Flashes