

MERAC Prize in Observational Astrophysics - Supernova frontier: beyond standard stellar demises (No 160)

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The last ten years have opened up a new parameter space in time-domain astronomy with the discovery of transients defying our understanding of how stars explode. These extremes of the transient paradigm represent the brightest - called superluminous supernova - and the fastest - known as fast, blue optical transients - of the transient zoo.

The collected dataset and the understanding of such events have surpassed any initial expectation and opened up a future exploding with potential, spanning from novel tools of high-redshift cosmological investigation to new insights into the final stages of massive stars. In this talk, I will review them and provide a sneak-peak into what we expect to observe/discover in the next decade.

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