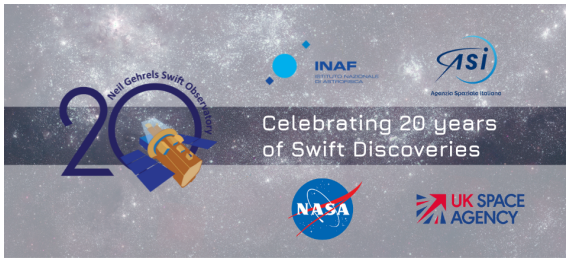

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AT2024wpp and Luminous Fast Blue Optical Transients: New Developments from Swift and HST

Thursday 27 March 2025 14:50 (15 minutes)

The rare and mysterious class of events sometimes known as luminous fast blue optical transients (LFBOTs), typefied by the event AT2018cow, has provided a steady stream of surprises over the past seven years. LFBOTs radiate primarily in the UV, are extremely radio-luminous, are highly X-ray variable, and at least in some cases they produce ultra-fast optical flares for months and leave behind a hot remnant. Their origins remain unclear: they may originate from the direct collapse of a massive star to a black hole, or from the disruption of a star by an intermediate mass black hole. Swift has proven to be critical for the study of these events: its flexible scheduling and simultaneous UV and X-ray capabilities make it ideal for confirming the discovery of a new LFBOT and for studying its early-phase evolution. I will briefly review what we have learned about this class of events to date, with particular emphasis on the newly-discovered AT2024wpp, the nearest and best-studied LFBOT since AT2018cow. Results from our multi-wavelength campaign on this object (spanning from radio to X-ray wavelengths, and including HST FUV spectroscopy) will be discussed, with implications for the nature of LFBOTs.

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