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Super-flaring stars¹

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Magnetic reconnection events in the atmospheres of stars similar to and smaller than the Sun can last seconds to many hours and release copious amounts of energy. Such energetic flares could influence the atmosphere of any planetary bodies surrounding these stars, and thus could impact the potential habitability of these planets. In this talk, I will discuss how multi-wavelength, multi-epoch observations of flaring stars is informing our understanding of both the energetics and underlying physics of stellar flares, and the impact that both the duration and sampling of observations play in extracting flare properties. I will overview the role current large ground- and space-based time domain surveys (e.g. Kepler/K2, PTF, ZTF, DES) and future (e.g. TESS, LSST) are playing in improving our understanding of the fundamental physics that drive stellar flares.

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