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# New Surprises from Radio Observations of TDE Outflows

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Within the past decade, it has become clear that tidal disruption events (TDEs) can power a variety of jets and outflows, cementing their status as premier probes of accretion processes in supermassive black holes (SMBHs). Radio observations have been central to characterizing the properties of out- flowing material from TDEs, as they reveal synchrotron radiation produced in the shock formed between fast-moving outflows and the ambient interstellar medium. Sustained radio monitoring thus allows us to (1) determine the properties of outflowing material (energy, size, expansion velocity) and (2) trace the ambient density profile around previously-dormant SMBHs on scales of a few light years. In this talk, I will discuss exciting recent radio observations of TDEs. For the past three years, we have been carrying out a large observing program on the Very Large Array to characterize the full diversity of radio emission in TDEs in the local Universe. I will present an update on the status of the program and reveal some of the new surprises we have uncovered, including radio (re)brightenings that can occur years post-disruption. It is clear that TDEs display an even wider diversity of radio behaviors than previously realized, which may ultimately provide new insights into the complex physics governing these extreme transients. The increased sample size now being realized by new wide-field multi-wavelength (and multi-messenger) surveys will shed further light on the physical conditions required for jet and outflow formation in TDEs.

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