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A dust-enshrouded tidal disruption event with a resolved radio jet in a galaxy merger.

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We present the discovery of an energetic nuclear transient in the central region of Arp299-B, which together with Arp299-A forms one of the most luminous and
nearby mergers. The nuclear transient radiated at least 1.5E+52 erg in theinfrared but remained elusive at optical and X-ray wavelengths.

We interpret its properties to arise from a stellar tidal disruption event (TDE)of a massive (2-6 solar masses) star that passed close to the supermassive black
hole. Very-long-baseline interferometry monitoring over a decade, using mainly EVN and eEVN observations, shows unambiguous evidence for an evolving jet-like morphology, expanding a subluminal speeds. This is the first case of a confirmed resolved radio jet in a TDE ever, thus validating theoretical predictions.

Our observations indicate that much of the emission from the TDE must have been reprocessed by dense gas, and re-radiated at infrared wavelengths by dust, suggesting a possible way for reducing the tension between theoretical
luminosity predictions and observations of TDEs in galaxies. Such TDEs from relatively massive, newly formed stars could provide a large radiative feedback, especially at higher redshifts where galaxy mergers are more common.