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## Host Galaxies of Tidal Disruption Events

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# Abstract

Tidal disruption events (TDEs) occur when a star passes close to a super-massive black hole, resulting in the partial or complete disruption of the star. More than 50 such TDEs (or TDE-like events) have been discovered so far. Observationally it has been found that TDEs prefer galaxies with peculiar characteristics. The galaxies that harbour such events have low star formation rates and strong Balmer absorption lines that indicate a recent burst of star formation that has now ended. However, this may also be an observational bias. In this work, we have analysed the spectra of the host galaxies of TDEs, to understand their bulk properties using pPXF (penalized pixel fitting method), a Python-based code. We have separately analysed the stellar and galaxy components of the host galaxy spectra to obtain its black hole mass, stellar age, stellar mass and metallicity. Classification based on emission line flux ratios using the BPT diagram has also been done.