

Tidal disruption event rates under the magnifying glass

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A tidal disruption event (TDE) occurs when a star is destroyed by the strong tidal shear of a massive black hole (MBH). TDE detections can unveil otherwise dormant MBHs, and they constitute unique probes for constraining the MBH demographics, especially towards the low-mass end of the MBH mass function. In order to do so, it is fundamental to theoretically constrain the expected TDE rates across different environments, MBH masses, stellar properties. In this talk, I will review the main formation mechanisms of TDEs and I will present new advances that allow for more precise estimates of their rates. Finally, I will stress the importance of combining upcoming observations by wide-field transient surveys with theoretical estimates of TDE rates to shed new light on the demographics of the lightest MBHs.

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