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## GW signal from transient astronomical events

*Thursday, 24 October 2019 10:00 (30 minutes)*

In this talk I will describe the gravitational wave (GW) signal from tidal disruption events (TDEs). First of all, I will determine the GW emission from a hot rotating accretion torus, formed after a TDE, that is subject to a specific hydrodynamical instability, called the Papaloizou-Pringle instability (Toscani et al, 2019). This study is performed both through an analytical and a numerical study, using the Smoothed Particle Hydrodynamics (SPH) code PHANTOM (Price et al, 2018). Then, I will talk about the new feature for the calculation of GWs that I have implemented in PHANTOM and that is soon to be released. Finally, I will talk about our new investigation of the GW background associated to TDEs.

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