



Contribution ID: 121

Type: **Poster**

## Numerical study of MHD modes in coronal loops

*Wednesday, 8 September 2021 09:00 (13 minutes)*

In order to infer the properties of the coronal plasma, coronal seismology combines the measurement of temporal and spatial signals of oscillations and magnetohydrodynamic waves of different magnetic structures with their theoretical modeling. In the particular case of coronal loops, fast sausage modes and standing slow modes are the most studied oscillation modes, because their compressibility makes them susceptible to being observed. By performing magnetohydrodynamic numerical simulations, we analyze the capability of different types of disturbances, associated with typical solar corona energy fluctuations, to generate these types of modes. We found that confined energy deposition excites slow modes, while global perturbations, capable of instantly modifying the loop temperature, excite fast sausage modes.

### Student poster?

**Primary authors:** CÉCERE, Mariana (Instituto de Astronomía Teórica y Experimental (CONICET/UNC)); CAPETTINI, Hilario; COSTA, Andrea; KRAUSE, Gustavo; REULA, Oscar

**Presenter:** CÉCERE, Mariana (Instituto de Astronomía Teórica y Experimental (CONICET/UNC))

**Session Classification:** Poster Session 5.4

**Track Classification:** Session 3 - Fundamental Plasma Processes in the Solar Atmosphere: Magnetic Reconnection, Waves, Emission, Particle Acceleration