

## ALMA2019: Science Results and Cross-Facility Synergies



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# ALMA Studies the Origin and Impact of Flares in Planetary Systems

*Thursday, October 17, 2019 3:55 PM (15 minutes)*

Contributed talk

Abstract:

The unanticipated detection of mm flaring in Proxima Cen by ALMA has spurred follow-on observations to understand the origin and nature of stellar flaring and its impact in planetary systems. In April through June of 2019, a coordinated observing campaign took place to further these investigations and learn more about the relationship between particle acceleration and plasma heating and their impacts on nearby planets. At the core of the simultaneous campaign was ALMA's superb sub-mm capabilities, supplemented by numerous ground-based radio, optical, and space-based optical, ultraviolet and high energy recordings: ALMA, TESS, HST, Swift, Chandra, the DuPont Echelle, Evryscope, LCOGT, ANU 2.3m, Parkes, and the MWA. We report on initial results from the campaign and use this as a means to discuss the synergies of ALMA in multi-wavelength time-domain science.

**Presenter:** Dr OSTEN, Rachel

**Session Classification:** Circumstellar Disks