



Contribution ID: 67

Type: **not specified**

A blind search for millimeter transients in ACT data

Monday 5 June 2023 18:25 (10 minutes)

Until now, the millimeter transient sky has been largely unobserved. CMB surveys now have sufficient resolution, sensitivity, and sky coverage to study these events. Synchrotron radiation associated with strong magnetic fields is the likely source of many millimeter flares. Studying these flares can provide insight into the mechanisms behind this radiation as well as constraints on statistical properties of the transients. In this talk, I will present the current state of millimeter transient astronomy and its possible applications to studying gamma ray bursts, fast radio bursts, flaring stars, and other synchrotron transient events. In particular, I will focus on my work completing a blind search of millimeter transients in data from the recently decommissioned Atacama Cosmology Telescope (ACT). I will also demonstrate the importance of building a millimeter transient alert system for all-sky CMB surveys, highlighting how ACT data will help prepare us to do millimeter transient science with upcoming CMB surveys such as Simons Observatory, CCAT-Prime, and CMB-S4.

Presenter: BIERMANN, Emily

Session Classification: Student talks