

**Space Science Seminar
Tuesday, 2022 August 23
10:30 a.m.
NSSTC Room 2096 and NASA/MSFC TEAMS**

**New Observations of Transients and Small Flares throughout the Solar
Atmosphere with ALMA**

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Host: Dr. Alphonse Sterling (Sponsored by NASA/MSFC/ST13)

The connection between the photosphere, chromosphere, and corona is essential for understanding energy flow throughout the solar atmosphere. New instrumentation provides a new and unique window with which to study the solar chromosphere. Here in particular we will highlight the Atacama Large Millimeter Array (ALMA), an interferometric array in Chile, which can observe from ~100 GHz - 1 THz. Solar observing with ALMA was first offered in 2016/2017, and after a large and diverse effort, interesting and notable science is now being published using ALMA solar observations. Here I will provide an overview of this unique instrument and some of the recent results from using ALMA to understand the flow of energy in the solar chromosphere. I will also provide an example of using ALMA in combination with the NASA Heliophysics Fleet and ground-based instruments enables a more complete picture of transient events and small microflares in the lower solar atmosphere.