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This year marks the 50th anniversary of the detection of Coronal Mass Ejections (CMEs) from space. The discovery and subsequent observations of thousands of events from a stream of coronagraph telescopes marked a paradigm shift of our view of the corona, from a physical system changing gradually over a solar cycle, to a system marked with explosive transient activity on timescales from seconds to days to months. The study of CMEs, in particular, has been a major force behind the creation of the LWS and, more recently, the SWxSA programs within the NASA Heliophysics Division.

As solar max and the PUNCH launch approach, I take the opportunity to review the lessons learned from the first half century of CME observations, identify the remaining open questions, and ponder on how PUNCH could help move the field forward. In this scene-setting talk.

Presentation file

[vourlidas-2021.pdf](#)

YouTube link

<https://youtu.be/Sr3bZxDOVW8?t=3000>

Meeting name

PUNCH 2 Science Meeting

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