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Poster
The magnesium II core-to-wing ratio has been measured on a daily basis since 1978. It is a widely used proxy for solar chromospheric activity, essential for satellite drag calculations as well as the model that is the NOAA Climate Data Record for solar spectral irradiance. In 2017, this measurement became available operationally from GOES-16/EXIS at three-second cadence with high signal-to-noise. While the Earth's atmosphere may not respond to ultraviolet irradiance changes on such short timescales, it does respond to the time-integrated irradiance variation. Using a once-a-day measurement as was available before GOES-16 introduces a systematic bias in the estimated facular brightening that gets worse as solar activity increases. Using data from solar cycle 24, we can estimate a correction factor for the daily magnesium II index for previous solar cycles. In this presentation, we will discuss the magnesium II index and provide details of the instrumentation as well as how to retrieve the data from the NOAA web page.

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