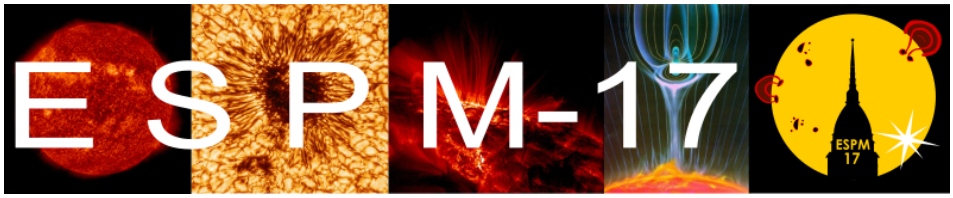

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Is the sub-flaring activity of a solar active region a good whistleblower for impending eruption?

Our Sun is a dynamic star, home to a wide range of activities, from subtle, short-duration events to large coronal mass ejections (CMEs) and strong flares. CMEs and flares can overlap; distinguishing between "eruptive" and "confined"flare magnetic configurations is essential. Understanding the intricacies of these solar eruptions and their connections to preceding activity is crucial in heliophysics research. Our goal is to determine whether the small-scale activity of an active region (AR) contains information about its potential for eruptions and could provide insight into future events. To achieve this, we monitor transient activity using data from the Atmospheric Imaging Assembly (AIA) instrument onboard the Solar Dynamics Observatory (SDO). Our primary goal is to discern disparities in AR transient brightenings of various magnitudes and understand their relevance to eruptive configurations. By comparing the spatial distribution of detected transient brightenings to the polarity inversion line (PIL) area derived from the SDO Helioseismic and Magnetic Imager (HMI) line-of-sight magnetograms, we observe significant differences between the pre-eruptive and non-eruptive situations of our sample ARs. The temporal evolution of observations derived from the brightenings, such as their number detected through time, their associated intensity and magnetic unsigned flux, shows significant differences in their order of magnitude and behaviour, and by using multiple wavelengths, we also observe the evolution of the transient activity through the Sun's atmosphere. Over comparative analysis, we seek insights into the pre-eruptive activity of ARs, which could contribute meaningfully to advancing solar event predictive capabilities and our understanding of solar dynamics.

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