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Comparison of "homologous" solar eruptive events from two different solar rotations

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With March 2022 we entered a new era of complex solar eruptions in the wake of solar cycle 25. Several of these so-called Big Solar Storms were observed in the past years in remote sensing image data and measured in-situ. Some of them even caused aurorae in low latitudes, repeatedly confirming that the interaction between multiple CMEs, as well as CIRs, lead to extreme conditions in near-Earth space. For the enhanced solar activity period at the end of 2023, we study a set of "homologous" eruptive events on the Sun. The two episodes of enhanced solar activity involve similar (active) regions and the same coronal hole but are separated by a full solar rotation. We point out the complexity for each set of events and aim to understand their similarities and differences as they arrive at Earth.

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