



Variations of Solar Activity and Irradiance (Julius Bartels Medal Lecture)

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Variations in solar activity and its fluctuating irradiance have been invoked as drivers of the Earth's space environment and its climate. Although, such variations and fluctuations have been followed for decades, partly even centuries, a number of important and basic questions surrounding them remain unanswered, or controversial. This also leads to significant uncertainties in the role played by the Sun in, e.g., driving climate change. In this lecture I provide an overview of our present knowledge and understanding of solar variability, covering both, commonly accepted and some of the more controversial aspects.