

# Long-standing, Unsolved Problems in Solar and Magnetospheric Physics in Terms of Space Weather Prediction

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In both solar physics and magnetospheric physics, we have several long-standing problems, which are not understood even at the basic level. Undoubtedly, they are difficult problems. However, in some cases, the difficulties are likely due to inappropriate common premises shared by all involved, namely the present paradigms, not our ability to solve the problems. The talk will examine some of them from the point of view that:

Both solar and magnetospheric transient phenomena arise primarily from various manifestations of electromagnetic energy dissipation processes. Thus, there must be a dynamo process that supplies the power for the processes involved and drives field-aligned currents.