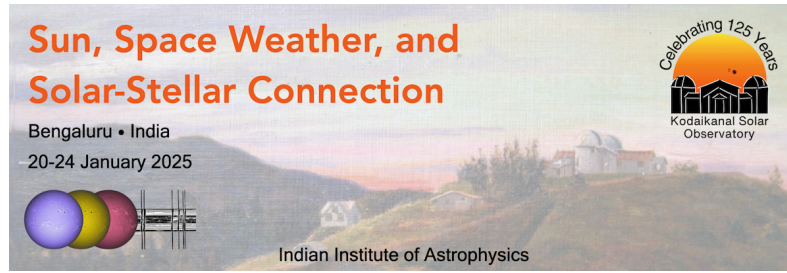


Sun, Space Weather, and Solar-Stellar Connection



Contribution ID: 75

Type: **Contributed talk**

Simulations of the Solar Spicule Forest - Dependence on Magnetic Field Strength and Coronal Temperature

Tuesday, January 21, 2025 11:25 AM (15 minutes)

We perform radiation magneto-hydrodynamic simulations of the solar atmosphere, driven self consistently by sub-surface convection, thereby producing a forest of spicules commensurate with the observed properties (Dey et al, 2022, Nat Phys). By varying the strength of the imposed magnetic field (mimicking the dynamo generated large scale field of the Sun), we show that kinematic properties of the spicules (e.g., height, acceleration) depend on the properties of the magnetic environment. We also present the analysis to understand the physics behind such dependence on the magnetic field (Kesri et al, 2024, ApJ) and coronal temperature.

Contribution Type

Theme

Solar Magnetism in High-Resolution

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Session Classification: Solar Chromospheric Dynamics