



Contribution ID: 58

Type: Poster

## Understanding Hanle effect in Ca I 4227 Å line using magnetohydrodynamic simulations of the Solar atmosphere

Scattering polarization in strong resonance lines such as the Ca I 4227 Å, formed in the chromosphere, can probe the chromospheric magnetic fields via the Hanle effect. Predominantly one-dimensional (1D) semi-empirical model atmospheres were used to study the linear polarization in this line. Recently, Harsh et al. (2024) studied the resonance scattering polarization in Ca I 4227 Å using magnetohydrodynamic (MHD) simulations of the solar atmosphere from the Bifrost code, along a slanted ray with heliocentric angle  $\mu = 0.3$ . In this work, we include the effect of weak magnetic fields (Hanle effect) on the polarization profiles and compare them with the non-magnetic cases.

### Contribution Type

Poster

### Theme

Solar - Stellar Connections

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