

Session 3

Depolarization of solar molecular lines by collisions with neutral hydrogen atoms and with electrons

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The topic of scattering molecular polarization and its interpretation in terms of solar magnetic fields faces serious problem due to the lack of collisional data. In fact, rigorous interpretation of scattering molecular polarization requires the calculation of the rates of (de)polarizing collisions occurring during the formation of the polarized molecular lines. In this context, we present our recent results and projects concerned with elastic depolarizing collisions of MgH, CN and C₂ molecules with hydrogen atoms (e.g. Qutub et al., 2021, *The Astrophysical Journal*, Volume 915, Issue 2, id.122). In addition, our quantum polarization transfer rates due to inelastic collisions of CN and C₂ molecules with electrons will be presented and discussed (e.g. Derouich et al., 2020, *Research in Astronomy and Astrophysics*, Volume 20, Issue 12, id.210).