
Detection of partial ionization effects in prominences with observed Doppler velocities

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Abstract

Prominences are a very strong candidate to display non-MHD effects due to partial ionization, since they are dense and relatively cool objects, in which the ionisation degree is not fully known but it is assumed to be around 50%. To measure observationally the diffusion velocity between different species we need to measure simultaneously the velocities of ionised and neutral atoms in approximately the same position. In prominences the dense material is accumulated in filamentary structures called threads, whose width is under 0.3" (from observations with space telescopes in H α). *Since prominence plasma properties are very similar high-cadence simultaneous observations of a Ca II and He I lines. The Doppler velocity shows a high correlation between both*

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