

Project Details

ROSES ID: NNH09ZDA001N

Selection Year: 2010

Program Element: Focused Science Topic

Topic: Plasma Neutral Gas Coupling

Project Title:

Ion-Neutral Coupling in Solar Prominence Structure and Dynamics

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Summary:

The proposed work involves extending and testing previous work conducted by Gilbert et al. (2002, 2008) on cross-field diffusion of neutrals in prominences. Additional modeling of ion-neutral interactions in prominence plasma will be conducted, with the objective of understanding how ion-neutral coupling affects formation, structure, dynamics, longevity, and stability of prominences.

Gaining a better understanding of the ion-neutral coupling in prominences will enhance our more general understanding of ion-neutral coupling in a magnetized medium.

Publication References:

Summary: no summary

Reference: Gilbert, Holly; (2011), Ion-Neutral Coupling in Solar Prominences, PARTIALLY IONIZED PLASMAS THROUGHOUT THE COSMOS-PROCEEDINGS OF THE 2010 HUNTSVILLE WORKSHOP. AIP Conference Proceedings, Volume 1366, pp. 5-12 (2011), doi: 10.1063/1.3625583