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## First Results of the MURaM Chromospheric Extension

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The MURaM radiation-magnetohydrodynamics code has long been applied to simulate near-surface magnetoconvection, ranging from quiet sun conditions to complex active regions. The code includes the physics required to treat the convection zone, and the solar atmosphere from the photosphere to the corona. Until now, these simulations have been limited to a local-thermodynamic equilibrium treatment of the chromosphere, limiting its realism. We have extended the MURaM code to include NLTE effects following the prescriptions used in the Bifrost code. In this work, we summarize the improvements made to the code. We study an initial model of the chromosphere, representing an enhanced network region. Comparing synthetic Mg II h&k spectra to IRIS observations we discuss the implications of the new model towards understanding the physics necessary to model the chromosphere.

**Primary author:** PRZYBYLSKI, Damien (Max Planck Institute for Solar System Research)

**Co-authors:** ONDRATSCHEK, Patrick (Max Planck Institute for Solar System Research); CAMERON, Robert (Max Planck Institute for Solar System Research); NARAYANAMURTHY, Smitha (Max Planck Institute for Solar System Research); SOLANKI, Sami (Max Planck Institute for Solar System Research); LEENAARTS, Jorrit (Stockholm University); REMPEL, Matthias (High Altitude Observatory, National Center for Atmospheric Research); DANILOVIC, Sanja (Stockholm University)

**Presenter:** PRZYBYLSKI, Damien (Max Planck Institute for Solar System Research)

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