

Talk at Splinter Meeting

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SOLAR CHEMICAL ABUNDANCES FROM THREE-DIMENSIONAL
MAGNETOCONVECTION MODELS AND VTT OBSERVATIONS

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Magnetic fields in the solar photosphere are known to modify the profiles of spectral lines. I present a comparison between synthetic spectra from 3D MHD numerical simulations and observed high-quality spectra obtained at the Vacuum Tower Telescope (VTT). Differences between disc-centre spectra for quiet Sun and magnetic network regions are significantly above the noise level of the observations. By fitting the VTT observational data, the 3D MHD synthetic intensity profiles allow us to derive accurate and precise values of the solar chemical composition.