

*Hinode-3: 3rd Hinode Science Meeting
Hitotsubashi Memorial Hall, Tokyo
1-4 December, 2009*

Test of Milne-Eddington inversions using 3D MHD simulations at different heliocentric angles

Lotfi Yelles Chaouche

Instituto de Astrofísica de Canarias

Sami Solanki

Max-Planck institute for solar system research

Fernando Moreno Inertis

Instituto de Astrofísica de Canarias

Andreas Lagg

Max-Planck institute for solar system research

Abstract. Stokes profiles measured away from the solar disk center, exhibit asymmetries causing them to look in some cases different from typical Milne-Eddington (ME) profiles. We would like to test the effect of these asymmetries on the results of ME inversions. To that aim we synthesize Stokes profiles from 3D MHD simulations at different heliocentric angles and invert them using a ME inversion code. The results of the inversion are compared with response-function-waited quantities from the corresponding MHD cube. The magnetic field strength calculated by inversion shows some deviation from the response-function-waited one. This deviation is proportional to the area asymmetry of Stokes-V profiles near the solar disk-center, and proportional to the total area of Stokes-V at all the used heliocentric angles.