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

Surface flux transport modeling: including the tilt angle of active regions

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Abstract. We investigate the evolution of the Sun's magnetic field using the surface flux transport model. Motivated by the recent results of Dasi-Espuig et al, we incorporate the observed tilt angle into the construction of the sources. We find that the model is able to reproduce many of the observed properties of the solar cycle record.