



Longitudinal structure of the magnetic field originated in the tachocline zone.

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Text of Abstract

Longitudinal structure of the photospheric magnetic field over last tree solar cycles has been studied. The dependence on the latitude, on the hemisphere, phase of cycle and on the cycle itself was analyzed.

The reconstruction of the longitudinal structure in the heliographic system rotating like the photospheric field (latitude and time dependent) has been performed as well as in different rigidly rotating systems.

. A longitudinal structure exceptionally regular and symmetric in the both hemispheres has been found without any assumption about the rotation of the Sun. This structure is originated from the tachocline zone under the convective envelope.