# 3D solar magneto-convection simulations extended to the corona with the MANCHA3D code

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Language  Undefined
**Description:**
Proyecto asignado a través de la Red Española de Supercomputación (RES)

The aim of our research project is to investigate via numerical modeling one of the fundamental unsolved problems in solar physics - the heating mechanisms of the solar chromosphere. It will be done by a thorough examination of the most important non-ideal effects derived by the low ionization degree of the plasma using the single and two-fluid (plasma-neutral) frameworks.
As an intermediate step, here we perform 3D realistic magneto-convection models extended to the corona in the one-fluid approximation. For the first time, we will examine the chromospheric heating due to joint action of the thermal conduction and ambipolar diffusion in a large span of magnetic field topologies and field strengths in a self-consistent coupled model from the upper convection zone to the solar corona.

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