
Total magnetic fluxes of active solar analogue stars

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Abstract

Global magnetic fields of many solar-like stars have been detected and characterised with circular polarisation measurements and mapped with ZDI. However, due to cancellation of opposite field polarities, polarimetric techniques capture only a tiny fraction of the total magnetic flux and severely underestimate the local magnetic field strength. To overcome this problem, we developed a new diagnostic method of measuring total magnetic flux based on relative intensification of Zeeman-sensitive atomic absorption lines. In this talk I present foundations of this method and discuss preliminary results of its application to a sample active solar analogue stars previously studied with ZDI.

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