

POLARIMETRIC SHAPES OF SPECTRAL LINES IN SOLAR OBSERVATIONS

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A century has elapsed since the first observation of the polarimetric profile of a line of the solar spectrum. Since then, dramatic progress has been made in the instrumentation, which is now reaching unprecedented levels of sensitivity in the measurement of polarization signals in solar spectral lines. At the same time, the theoretical framework needed for the interpretation of polarimetric observations has steadily evolved from the pioneering methods, based on simple formulae, to the sophisticated structure that is nowadays used with success in the interpretation of solar observations. The present paper is intended to give an historical perspective of the evolution of this research field and of its major achievements, with particular emphasis on the role played by the magnetic field and by other physical agents in determining the polarimetric shapes of spectral lines.