Talk at Splinter Meeting

Splinter K

Hunt for magnetic cycles in solar-type stars

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Magnetic cycles in solar-type stars detected using spectropolarimetric observations together with chromospheric activity monitoring provide important insights into magnetic field regeneration and amplification in stars other than the Sun. We investigate the variability of the large-scale magnetic field of two solar-type stars 61 Cyg A and HN Peg using spectropolarimetric observations. Zeeman Doppler imaging is used to reconstruct the large-scale magnetic field over multiple epochs to investigate how the large-scale field varies with chromospheric activity cycle. We report the first detection of polarity reversals of the large-scale field in phase with its chromospheric activity cycle for the K5V dwarf 61 Cyg A. The magnetic geometry of the G0V dwarf HN Peg however do not exhibit any polarity reversal, but exhibits a rapidly varying magnetic field with strong azimuthal component.