

EXTREME STARSPOTS

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For Guest Observer Cycle 4, we propose observations of 21 Kepler targets with rapidly changing intensities indicating extreme starspot activity. Many of our targets are suitable for ground-based follow-up and include young solar analogs as well as spotted giants rotating near their break-up velocity. With a well-tested light-curve inversion algorithm, we will model the stellar surfaces in order to measure spot geometry, longevity, and differential rotation. The unique Kepler dataset will allow us to detail how magnetic geometries change on both rotational and long-term timescales, offering unprecedented clues into the nature of the stellar dynamo for active stars and hope to detect long-term magnetic cycles with continued monitoring.