

Session 1

Early laboratory testing of a photonic magnetograph

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We present early laboratory test results on the performance of a photonic magnetograph. This new class of magnetographs dispenses with traditional telescopes and mechanisms — replacing them with lasers and integrated circuits. We achieve this by using a patented combination of interferometric imaging, tunable lasers, and digital processing. Photonic magnetographs could scale from 2cm in diameter to 30cm on a single silicon wafer, with resolutions varying from 16 to 1 arc seconds respectively while retaining an essentially wafer-like profile that can easily be hosted on a variety of mission concepts.