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Testing General Relativity with Continuous Gravitational Wave Polarizations MAXIMILIANO ISI, ALAN WEINSTEIN, CARVER MEAD, California Institute of Technology, MATTHEW PITKIN, University of Glasgow, LIGO COLLABORATION — The direct detection of gravitational waves with the next generation detectors, like Advanced LIGO, provides the opportunity to measure deviations from the predictions of General Relativity. One such departure would be the existence of alternative polarizations. To measure these, we study a single detector measurement of a continuous gravitational wave from a triaxial pulsar source. We develop methods to detect signals of any polarization content and distinguish between them in a model independent way.

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