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Spectropolarimetry with SALT: New Observations of Wolf-Rayet Binaries ANDREW G. FULLARD, JENNIFER L. HOFFMAN, University of Denver, KENNETH H. NORDSIECK, University of Wisconsin-Madison — Mass loss from massive stars is an important yet poorly understood factor in shaping their evolution. Wolf-Rayet (WR) stars are of particular interest due to their stellar winds, which create large regions of circumstellar material (CSM). They are also supernova progenitors and possible gamma-ray burst (GRB) progenitors. Like other massive stars, WR stars often occur in binaries, where interaction can affect the mass loss rate and provide the rapid rotation thought to be required for GRBs. The diagnostic tool of spectropolarimetry, along with the potentially eclipsing nature of a binary system, help us to better characterize the CSM created by the stars colliding winds. Thus, we can determine mass loss rates and identify rapid rotation. We present early spectropolarimetric results for the WR+O binary systems WR 30 and WR 47, from the Robert Stobie Spectrograph at the South African Large Telescope (SALT), between April and August 2017. The data allows us to map both continuum and emission line polarization variations with phase, which constrains where different CSM components scatter light. We discuss our initial findings and interpretations of the polarimetric variability.

Andrew Fullard
Univ of Denver

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