Contribution ID: **10**   Type: **not specified**

Entanglement detection via entropies in spinor Bose gases

Tuesday, 29 June 2021 16:30 (30 minutes)

Simultaneous measurements of two non-commuting spin observables allows for direct access to a quasi-probability distribution and its associated entropy. In the Gaussian regime, this corresponds to the Husimi Q-distribution and Wehrl entropy, respectively. We analytically and numerically model the system and measure a non-zero Wehrl mutual information—a perfect entanglement witness for pure states. We present a preliminary analysis of experimental data that shows for certain times non-zero Wehrl mutual information is observed.

Presenter: STOCKDALE, Oliver (Heidelberg University)

Session Classification: Tuesday Afternoon