

## **Mass Beyond Measure: Eccentric Searches for Black Hole Populations**

Stellar mass binary black holes of unknown formation mechanism have been observed and inspire new methods for distinguishing distinct black hole populations. This work explores how the orbital eccentricity of stellar mass binary black holes is a viable conduit for making such distinctions. Four different production mechanisms, and their corresponding eccentricity distributions, are studied in the context of an experimental landscape composed of mHz (LISA), dHz (DECIGO), and Hz (LIGO) range gravitational wave detectors.

**Monday, January 22nd**

3:30 - 4:30 p.m.

CAS 502

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