

## Impact of the Global Correlated Magnetic Noise on Phase Transition SGWB Searches

*Tuesday, 7 November 2023 17:00 (1 hour)*

A stochastic gravitational wave background (SGWB) is a weak and persistent background of gravitational waves (GWs) and can provide valuable insights into the origins and evolution of the universe. To detect the SGWB with ground-based interferometric detectors, cross-correlations between multiple GW detectors are calculated and local noise is canceled; however, global coherent noises, such as the Schumann resonance, remain and affect the observation. We evaluate its effect on phase transition SGWB searches based on the Fisher matrix formalism.

**Presenter:** WASHIMI, Tatsuki (NAOJ)

**Session Classification:** Poster Session