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## Gravitational wave echos from physical black holes

*Tuesday, 9 July 2024 17:20 (20 minutes)*

In this talk I will show that the theoretical model of physical black holes predict that gravitational wave echos accompany with all the black hole merger events in real world. The first part of my talk will be introducing the concept of physical black holes, highlighting that all the black holes in observed in astronomy should be described by dynamical, horizonless and singular free metric. Then I will introduce the how gravitational wave echos in physical black models and demonstrate its characters. At last I will compare our model with other mechanisms also predicting gravitational wave echos and show the echo signals predicted by our model has distinctive character over other models.

**Primary author:** CAO, Yu-Song (Beijing University of Technology)

**Presenter:** CAO, Yu-Song (Beijing University of Technology)

**Session Classification:** Black hole formation, evolution and the black hole mass gap

**Track Classification:** Black Holes: Classical and Beyond (BH): Black hole formation, evolution and the black hole mass gap