

Wormholes can be made traversable via the presence of a Casimir-like energy. String theory provides interesting systems (e.g., the D1D5 CFT) in which such Casimir energies become large at large central charge. We explore the extent to which such ingredients can shorten travel through wormholes and stabilize traversable wormholes. While this can provide notable improvements over other models, effects related to geometric transitions prevent violations of the GSL and cherished principles of causality. These effects also show that the concept of “wormhole” is not sharp, but is best viewed as an effective notion valid at some given scale.