



Contribution ID: 31

Type: **not specified**

## Classical Firewalls in General Relativity

*Friday, 7 June 2019 11:30 (45 minutes)*

We construct spherically symmetric solutions in GR with a thin shell of matter approaching Planckian densities. We show such constructions can replace the interior of charged (and potentially rotating) black holes by replacing the inner Cauchy horizon with a singular surface. We also show a shell can be placed a Planck distance away from the outer horizon of a Schwarzschild (or charged) black hole. Such a surface would appear to have enough degrees of freedom to give the expected entropy of a black hole. We speculate how ‘normal’ black holes could evolve into this state.

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**Session Classification:** JHW