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Non-supersymmetric Extremal RN-AdS Black Holes in N=2 Gauged Supergravity

We investigate extremal Reissner-Nordstrom-AdS black holes in four-dimensional N=2 abelian gauged supergravity. We find a new attractor equation which is not reduced to the one in the asymptotically flat spacetime. We also argue a formula which is available even in the presence of the scalar potential. We apply them to the T^3-model and the STU-model in generic black hole charge distributions. In addition, focusing on the so-called T^3-model with a single neutral vector multiplet, we obtain non-supersymmetric extremal Reissner-Nordstrom-AdS black hole solutions with regular event horizons in the D0-D4 and the D2-D6 black hole charge configurations. The negative cosmological constant emerges even without the Fayet-Iliopoulos parameters.

Primary author: Dr KIMURA, Tetsuji (KEK)

Presenter: Dr KIMURA, Tetsuji (KEK)