



On the charge-to-mass ratio for self-gravitating systems of scalar and electromagnetic fields

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Abstract. We prove that in the family of static, asymptotically flat, spherically symmetric scalar hairy black holes with the central electric charge, the set of the charge-to-mass ratios has the exact upper bound $3\sqrt{2}/4 \approx 1.06$.

Keywords: scalar hairy black hole, charge-to-mass ratio

MSC numbers: 83C22, 83C57

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