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Spontaneous Symmetry Breaking Via Gravitation

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Abstract

We consider a Georgi-Glashow model conformally coupled to gravity. Due to conformal invariance the usual mass term is absent and spontaneous symmetry breaking occurs via gravitation. Far from the source, the spherically symmetric solution is Schwarzschild-AdS while localized soliton solutions correspond to magnetic monopoles in asymptotically anti-de-Sitter space-time. The resulting effective action in the broken sector gives rise to Einstein gravity at large distances.