

Four-dimensional conformal supergravity from N=4 gauged supergravity on asymptotically AdS₅

We consider N=4 $SU(2) \otimes U(1)$ gauged supergravity on asymptotically AdS₅ backgrounds. By a near-boundary analysis we determine the boundary-dominant components of the bulk fields from their partially gauge-fixed field equations. The residual bulk symmetries are found to act on the boundary fields as four-dimensional diffeomorphisms, N=2 supersymmetry and (super-)Weyl transformations. This shows that, asymptotically, the N=4 supergravity multiplet yields the N=2 Weyl multiplet on the boundary.

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