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Supersymmetry Properties of AdS Supergravity Backgrounds SAMUEL BECK, Kings College London, JAN GUTOWSKI, University of Surrey, GEORGE PAPADOPOULOS, King's College London — Anti-de Sitter supergravity backgrounds are of particular interest in light of the AdS/CFT correspondence, which relates them to dual conformal field theories on the boundary of the anti-de Sitter space. We have investigated the forms of the supersymmetries these backgrounds preserve by solving the Killing spinor equations on the anti-de Sitter components of these spaces. We have found that a supersymmetric AdS_n background necessarily preserves $2^{\lfloor \frac{n}{2} \rfloor} k$ supersymmetries for $n \leq 4$ and $2^{\lfloor \frac{n}{2} \rfloor + 1} k$ supersymmetries for $4 < n \leq 7$, $k \in N_{>0}$. Additionally, we have found that the Killing spinors of each background are exactly the zeroes of a Dirac-like operator constructed from the Killing spinor equations.

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