

Symmetry of Brans-Dicke gravity as a novel solution-generating technique

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A little known symmetry group of Brans-Dicke gravity in the presence of conformally invariant matter (including electrovacuo) is used as a solution-generating technique, starting from a known solution as a seed. This novel technique is applied to generate, as examples, new spatially homogeneous and isotropic cosmologies, a 3-parameter family of spherical time-dependent spacetimes conformal to a Campanelli-Lousto geometry, and a family of cylindrically symmetric geometries.

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