

3+1 Representation of Maxwell Equation on Riemannian Manifold

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3+1 representation of Maxwell equations on Riemannian manifold have been carefully obtained using geometrical methods including decomposition of differential forms and operators. Natural definitions of *rot* and *div* are recovered by the dimensional reduction of the duality operator and the external derivative. As a result the time derivative for the electric and magnetic fields is turns out to be a bit complicated. In addition our 3+1 representation is a generalization for the case of noninertial reference frames.

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