

Abstract Submitted
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The Classical Electromagnetic Field: Covariant Definition and Novel Symmetries¹ WILLIAM BAYLIS, University of Windsor — A simple classical electromagnetic field F can be viewed as a plane (2-form or bivector) in spacetime. An inertial observer naturally splits F into electric and magnetic components, which are usually defined separately. However in a classical eigenspinor approach, the covariant field F can be defined operationally by the spacetime rotation rate it induces in a moving charge. This simple geometric view leads to novel symmetries that will be explored in the talk.

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