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Action Principle for Relativistic Magnetohydrodynamics ERIC D'AVIGNON, PHILIP MORRISON, University of Texas at Austin, FRANCESCO PEGORARO, Dipartimento di Fisica, Universita di Pisa — A covariant action principle for ideal relativistic magnetohydrodynamics in terms of natural Eulerian field variables is given. This is done by generalizing the covariant Poisson bracket theory of Marsden et al., which uses a noncanonical bracket to implement constrained variations of an action functional. Various implications and extensions of this action principle are also discussed.

Eric D'Avignon
University of Texas at Austin

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