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J. David Brown* (david_brown@ncsu.edu), Department of Physics, North Carolina State University, Box 8202, Raleigh, NC 27695. *Modifying the Einstein equations off the constraint hypersurface.*

A new technique is presented for modifying the Einstein evolution equations off the constraint hypersurface. With this approach the evolution equations for the constraints can be specified freely. The equations of motion for the gravitational field variables are modified by the addition of terms that are linear and nonlocal in the constraints. These terms are obtained from solutions of the linearized Einstein constraints. (Received September 26, 2006)