1023-39-1131 Boris Belinskiy (Boris-Belinskiy@utc.edu), Department of Mathematics, University of Tennessee at Chattanooga, Chattanooga, TN 37403, John R Graef* (John-Graef@utc.edu), Department of Mathematics, University of Tennessee at Chattanooga, Chattanooga, TN 37403, and Sonja Petrovic (petrovic@ms.uky.edu), Department of Mathematics, University of Kentucky, Lexington, KY 40506. A Nonlinear Sturm-Picone Comparison Theorem for Dynamic Equations on Time Scales.

The authors derive an analog of the well known Picone identity but for nonlinear dynamic equations on time scales. As a consequence, they obtain a nonlinear comparison theorem in the spirit of the classical Sturm-Picone comparison theorem. Comparison results yielding the nonoscillation of all solutions of nonlinear equations are also obtained. (Received September 25, 2006)