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Henri Schurz* (hschurz@math.siu.edu), Department of Mathematics, MC4408, Southern Illinois University (SIU-C), 1245 Lincoln Drive, Carbondale, IL 62901. *Qualitative Analysis of Stochastic Theta Methods for SDEs.*

The families of balanced inner and outer Theta methods for the numerical integration of stochastic differential equations are presented. We review several qualitative features of those numerical methods: consistency, stability, convergence, positivity, oscillations, contractivity and its correct replication of total energy. (Received September 15, 2011)