1014-65-798   **Bjorn Engquist**, **Richard Sharp** and **Richard Tsai*** (`ytsai@math.utexas.edu`), 2515 Speedway, RLM 8.100, Austin, TX 78712. *Computing The Effective Behavior of Stiff Oscillatory Dynamical Systems.*

We study a class of numerical schemes that use time filtering strategies and operate in two separated time scales. We discuss, for a class of problems, how resonances in the fast time scale generate slowly varying variables, how such types of systems can be appropriately closed by adding auxiliary slow variables, and the interaction between the two time scales. We demonstrate the resulting algorithms by some model problems. (Received September 24, 2005)