CB (parallel) parameter estimation using ROUKF (sequential) with Nstate =  $10^6$ , Nobs =  $10^3$  and Nsp = 3. 150 Forward **ROUKF** ROUKF\_Forward ROUKF\_Analyze 100 CPU time (s) 50 0 1.5 2 2.5 3 3.5 4.5 5 5.5 4 6 **Nprocess**