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Philip Chodrow, Cole Franks and Brian Lins* (blins@hsc.edu), Box 131, Hampden-Sydney College, Hampden-Sydney, VA 23112. *Iterates of Order-Preserving Homogeneous Maps and the Perron-Frobenius Theorem*. Preliminary report.

Let C be a closed cone in R^n , and suppose that $T : C \rightarrow C$ is homogeneous of degree one and order-preserving with respect to the partial ordering induced by C . If C is the positive orthant in R^n , we prove bounds on the iterates of T that restrict the location of accumulation points of the discrete dynamical system $x^{k+1} = T(x^k)/\|T(x^k)\|$. For other closed cones C , we establish similar bounds when T is linear. Certain other special bounds are also established for general T . Applications of these results to linear and nonlinear maps are discussed. (Received July 26, 2010)