1023-15-840   **Russell L Carden*** (`rcarden@kestrel.tamucc.edu`), 3120 Santa Fe St # 2005, Corpus Christi, TX 78404, and **Pablo Tarazaga** (`Pablo.Tarazaga@tamucc.edu`). *Extension and Acceleration of Diagonal Preconditioners.*

We present generalizations of the diagonal preconsditioners introduced by Tarazaga and Cuellar. These new preconditioners are the corresponding sequential versions. We determine sufficient conditions for convergence of the associated algorithms. Numerical simulations show a very good behavior; these methods compete very well with the Gauss-Seidel iteration. (Received September 22, 2006)