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Kenichi Maruno* (kmaruno@utpa.edu) and **Jarmo Hietarinta**. *The pentagram map and the discrete Boussinesq equation*. Preliminary report.

The pentagram map that associates to a projective polygon a new one formed by intersections of short diagonals was introduced by R. Schwartz in 1992. Recently, it has attracted much attention. In this talk, we investigate the pentagram map from the point of view of discrete integrable systems. We derive the pentagram map as a 3-reduction of the Hirota-Miwa equation and construct the N-soliton solution. We compare the pentagram map with other discrete Boussinesq equations. (Received September 17, 2013)