1025-30-26   **Beth E. Schaubroeck*** (`beth.schaubroeck@usafa.edu`), 2354 Fairchild Dr, Ste 6D100, USAFA, CO 80840-6252, and **Jane McDougall**. *Minimal Surfaces over Non-Convex Polygonal Domains.*

Minimal graphs over polygonal domains that become infinite in magnitude over arcs of their boundaries were considered by H. Jenkins and J. Serrin. In particular, Jenkins and Serrin completely characterized polygonal regions and infinite boundary conditions that admit minimal graphs. For a 2n-gon in the shape of a symmetric star and for which the boundary data alternates strictly in sign at each of the domain vertices, we obtain an explicit parameterization for the corresponding minimal graph. These surfaces arise from "lifting" a univalent harmonic map from the unit disk to the 2n-gon. In the case that the 2n-gon is non-convex, we obtain a second minimal surface corresponding to boundary data that changes sign only at convex vertices. (Received December 29, 2006)