1161-39-17 Johnny Henderson\* (johnny\_henderson@baylor.edu), Department of Mathematics, Baylor University, Waco, TX 76798-7328, and Jeffrey T. Neugebauer (jeffrey.neugebauer@eku.edu), Department of Mathematics and Statistics, Eastern Kentucky University, Richmond, KY 40475-3133. Existence of local solutions for fractional difference equations with left focal boundary conditions.

For  $1 < \nu \leq 2$  a real number and  $T \geq 3$  a natural number, conditions are given for the existence of solutions of the  $\nu$ th order Atıcı-Eloe fractional difference equation,  $\Delta^{\nu} y(t) + f(t + \nu - 1, y(t + \nu - 1)) = 0, t \in \{0, 1, \dots, T\}$ , and satisfying the left focal boundary conditions  $\Delta y(\nu - 2) = y(\nu + T) = 0$ . (Received July 20, 2020)