1011-15-175 Zhongshan Li* (zli@gsu.edu), Department of Mathematics & Statistics, Georgia State University, Atlanta, GA 30303-3083, and Marina Arav, Yubin Gao, Frank Hall and Selcuk Koyuncu. Sign patterns that almost require a unique rank.

A sign pattern matrix is a matrix whose entries are from the set $\{+, -, 0\}$. The minimum rank (respectively, the maximum rank) of a sign pattern matrix A is the minimum (respectively, maximum) of the ranks of the real matrices whose entries have signs equal to the corresponding entries of A. We say that a sign pattern matrix A almost requires a unique rank if its maximum rank and minimum rank differ by one. We investigate the structure of sign patterns that almost require a unique rank. In particular, it is shown that for such a sign pattern, the minimum rank can be achieved by an integer matrix. (Received August 24, 2005)