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1003-15-1590 **In-Jae Kim*** (injaekim89@hotmail.com), Department of Mathematics, Dept. 3036, 1000 E. University, Laramie, WY 82071, and **Bryan L. Shader** (bshader@uwyo.edu), Department of Mathematics, Dept. 3036, 1000 E. University, Laramie, WY 82071. *On the $2n$ conjecture for Spectrally Arbitrary Patterns.*

A sign pattern is a matrix whose entries are $+$, $-$, or 0 . An $n \times n$ sign pattern is called spectrally arbitrary if any self-conjugate spectrum can be achieved by a matrix in the pattern as its spectrum. In 2004, T. Britz et al. conjectured that an $n \times n$ spectrally arbitrary pattern has at least $2n$ nonzero entries for $n \geq 2$. In this paper, we present an affirmative result towards this conjecture, and we show that the Jacobian method introduced by J.H. Drew et al. does not work for $n \times n$ sign patterns with $2n - 1$ nonzero entries. (Received October 05, 2004)