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Yezhou Wu, Zhejiang University, Hangzhou, Zhejiang 310027, Peoples Rep of China, and **Dong Ye*** (dong.ye@mtsu.edu), Department of Mathematical Sciences, Middle Tennessee State University, Murfreesboro, TN 37132. *Circuit Covers of Cubic Signed Graphs.*

A signed graph is a graph G associated with a mapping $\sigma : E(G) \rightarrow \{-1, +1\}$, denoted by (G, σ) . A cycle of (G, σ) is a connected 2-regular subgraph. A cycle C is *positive* if it has an even number of negative edges, and negative otherwise. A *circuit* of of a signed graph (G, σ) is a positive cycle or a barbell consisting of two edge-disjoint negative cycles joined by a path. A circuit cover of (G, σ) is a family of circuits covering all edges of (G, σ) . A shortest circuit cover of (G, σ) is a circuit cover with the shortest length which is denoted by $\text{scc}(G, \sigma)$. Bouchet proved that a signed graph with a circuit cover if and only if it is flow-admissible (i.e., has a nowhere-zero integer flow). We show that every 2-edge-connected cubic signed graph has $\text{scc}(G, \sigma) \leq 26|E(G)|/9$ if it is flow-admissible. (Received September 14, 2016)