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**Jian Cheng, You Lu, Rong Luo\*** (rluo@math.wvu.edu) and **Cun-Quan Zhang**. *Signed circuit covers of signed graphs*. Preliminary report.

It is known that a signed graph  $G$  has a signed circuit cover if and only if it is s-bridgeless where a signed circuit cover of  $G$  is a family  $\mathcal{F}$  of signed circuits such that each edge of  $G$  belongs to at least one member of  $\mathcal{F}$ . Recently, Máčajová et al. proved that every s-bridgeless signed graph  $G$  has a signed circuit cover with length at most  $11|E(G)|$  [JGT2015]. Recently we improve the result of Máčajová et al. and prove that every s-bridgeless signed graph  $G$  has a signed circuit cover with length at most  $\frac{14}{3}|E(G)| - \frac{5}{3}\epsilon_N(G) - 2$ , where  $\epsilon_N(G)$  is the negativeness of  $G$ . In particular, if  $G$  is a g-bridgeless signed graph (and thus 2-edge-connected signed graph) with even negativeness, the coefficient  $\frac{14}{3}$  can be reduced to  $\frac{11}{3}$ . (Received August 08, 2015)