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Runrun Liu, VA, and **Martin Rolek** and **Gexin Yu*** (gyu@wm.edu), Department of Mathematics, College of William and Mary, Williamsburg, VA 23185. *Connectivity of contraction-critical graphs*. Preliminary report.

A graph is k -contraction-critical if it is k -chromatic, but any proper minor is $(k - 1)$ -colorable. A classical result of Mader (1968) states that k -contraction-critical graphs are 7-connected for $k \geq 7$. It has been shown by Kawarabayashi and Yu (2013) that k -contraction-critical graphs are $\lfloor k/9 \rfloor$ -connected, which provides an improvement of Mader's result for large values of k . In this talk, we provided the first improvement of Mader's result for small values of k , specifically that k -contraction-critical graphs are 8-connected for $k \geq 15$, 9-connected for $k \geq 27$, and 10-connected for $k \geq 43$. As a corollary of one of our intermediate results, we also prove that each 28-connected graph is 4-linked. (Received January 21, 2019)