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Ryan Karr* (karr@uwp.edu), University of Wisconsin-Parkside, 330 Greenquist Hall, Kenosha, WI 53141. *Torsion-free cancellation for subrings of $\mathbb{Z} \oplus \cdots \oplus \mathbb{Z}$* . Preliminary report.

In 1983, L. Levy published some results concerning subrings of $\mathbb{Z} \oplus \cdots \oplus \mathbb{Z}$. In this talk, we'll look into direct-sum cancellation of torsion-free modules, with respect to a large class of these subrings. Whereas all of Levy's examples of failure of cancellation involved ideals, our examples will show that higher-rank modules must be considered, even for subrings of $\mathbb{Z} \oplus \mathbb{Z} \oplus \mathbb{Z}$. (Received August 23, 2012)