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Louis Deaett* (deaett@math.uvic.ca), Dept of Mathematics and Statistics, University of Victoria, P.O. Box 3060 STN CSC, Victoria, BC V8W 3R4, Canada. *The incidence graph of a Steiner triple system and its minimum semidefinite rank.* Preliminary report.

Given a finite incidence structure, consider the problem of assigning a vector in \mathbb{C}^k to each point and to each block in such a way that a point and a block are incident if and only if their corresponding vectors are *not* orthogonal. For how small a k is this possible? This is equivalent to asking for the minimum semidefinite rank of the incidence graph. In this talk, we consider this question for Steiner triple systems. (Received September 14, 2010)