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Sarah K Mason* (masonsk@wfu.edu) and **Robert Jason Parsley**. *A geometric interpretation of the weighted games poset*. Preliminary report.

A weighted game is a situation in which each player carries a certain amount of weight, and a coalition can pass a motion once their combined weight meets or exceeds a certain quota. We introduce a polytope associated to the partially ordered set of weighted games and show that vertical lines in the polytope correspond to saturated chains in the partially ordered set. We use properties of the poset to prove geometric results (such as facet enumerations) about the polytope. (Received September 13, 2013)