1086-05-2100   **Eric Fairchild*** (`fairchildeg1@gcc.edu`), **Robin Mabe** and **Emma Polaski**. *Duoprisms:*
Polytope Numbers and Multiplication. Preliminary report.

Polytope numbers are a non-negative number sequence constructed from the geometry of a polytope. In this talk we will focus on the duoprism polytopes. A duoprism is a polytope resulting from the Cartesian product of two polytopes each of dimension two or higher. Using the ideas of H.K. Kim, we found the decomposition of simplex-simplex duoprism numbers into simplex numbers of the same dimension. This can be generalized so that if one knows the decomposition of two polytope numbers sequences into simplex numbers in the same dimensions, the decomposition of their duoprism polytope numbers is quickly determined. (Received September 24, 2012)

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