

1167-05-197

Federico Castillo* (castillo@mis.mpg.de), **J P Labbe**, **A Padrol** and **E Philippe**. *Lineup polytopes*.

Motivated by an instance of the quantum marginal problem in physics, we define the r -lineup polytope of P as a polytope parametrizing all possible linear orders on the vertices of P . We focus on the concrete case when P is a hypersimplex. This example sits in between the sweep polytopes of A.Padrol and E.Philippe and the theory of symmetric polytopes. This is based on joint work with JP. Labbe, J.Liebert, A.Padrol, E.Philippe and C.Schilling. (Received March 07, 2021)