

Polytopality of Bier Spheres

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Abstract. Extending the author's previous work on the polytopality of Bier spheres associated to threshold complexes, we establish that a simplicial complex is a threshold complex if and only if its associated canonical fan is polytopal. Furthermore, utilising experimental techniques, we show that all Bier spheres on up to 11 vertices are polytopal.

Keywords: Polytopes, Bier spheres, Threshold complexes.