

# Twists for positroids varieties

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A reduced bipartite graph in the disc determines a positroid cell in a Grassmannian, as well as two maps:

1. Postnikov’s boundary measurement map from an algebraic torus to the positroid cell. This map encodes all the ‘perfect matchings’ of the bipartite graph.
2. A system of cluster coordinates: a rational map from the positroid cell to an algebraic torus. This is given by a collection of ‘weakly separated’ Plücker coordinates. In this talk, I will clarify the long-murky relationship between these two constructions.

D. Speyer and I have defined a simple automorphism of each positroid cell called the twist, which takes the image of the boundary measurement map to the domain of definition of the cluster coordinates. I will review this theory, as well as several applications.

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