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Relativistic Velocity Space, Wigner Rotation and Thomas Precession MARK SEMON, JOHN RHODES, Bates College
— We develop a relativistic velocity space called *rapidity space* from the single assumption of Lorentz invariance, and use it to visualize and calculate effects resulting from the successive application of non-collinear Lorentz boosts. In particular, we show how rapidity space provides a geometric approach to the Wigner Rotation and the Thomas Precession in the same way that spacetime provides a geometrical approach to kinematic effects in Special Relativity.

Prefer Oral Session
 Prefer Poster Session

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