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Shockwaves in Spin-Orbit Coupled BECs[1] EDWARD DELIKATNY, MICHAEL FORBES, Washington State Univ — Spin-Orbit Coupling (SOC) allows for a great deal of control over BECs. For example, you can experimentally engineer the dispersion relationship to realize regions of negative effective mass. In this presentation, I will discuss how the shape of the dispersion affects the structure and behavior of dispersive shockwaves and how a time-dependent dispersion is analogous to motion in a moving reference frame. The time-dependent dispersion is compared to simulations of a BEC in a moving optical bucket.

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