

Abstract Submitted
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Dynamic changes in cortical tensions in multiple cell types during germband retraction¹ M. SHANE HUTSON, MONICA E. LACY, W. TYLER MCCLEERY, Vanderbilt University — The process of germband retraction in *Drosophila* embryogenesis involves the coordinated mechanics of both germband and amnioserosa cells. These two tissues simultaneously and coordinately uncurl from their interlocking U-like shapes. As tissue-level retraction proceeds, individual cells change shape in stereotypical ways. Using time-lapse confocal images, analysis of dynamic cellular triple-junction angles, and whole-embryo finite-element models, we have quantified dynamic changes in cortical tensions - including their anisotropy - in both germband and amnioserosa cells. We find a strong transition midway through the two-hour course of retraction at which point tensions and anisotropies undergo a near step change. These changes take place among amnioserosa cells, in multiple segments of the germband, and at the interface between these two tissues.

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