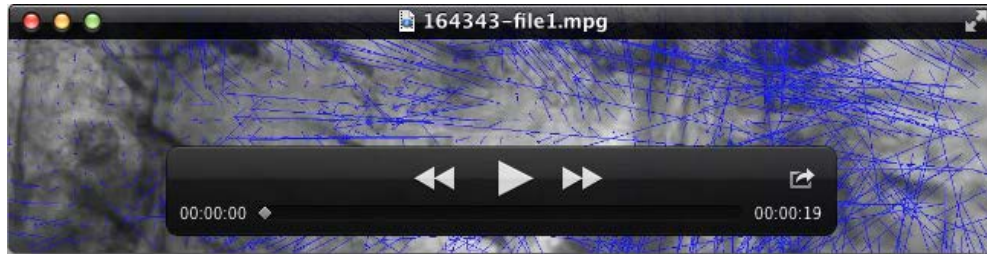


Supplementary Movies



Movie 1: Slow motion video of a beating *Drosophila* heart illustrating coherent movement vectors. Genotype: wild type Canton-S. The original video was captured at 207 fps.



Movie 2: Slow motion video of a beating *Drosophila* heart illustrating “shallow” contractions of a RyR-knocked down heart. Genotype: hand>UAS-RyR-KD. The original video was captured at 207 fps.



Movie 3: Slow motion video of a beating *Drosophila* heart illustrating “inclined” contractions of a hypertrophied heart. Genotype: hand>UAS-Ras85D^{V12}. The original video was captured at 207 fps.