**Caption List - Movies**

**Movie 1**: The $Q=0$ iso-surfaces are colored by $S\_{x}$ to illustrate the spatial evolution of stretching over the *x*-axis.

**Movie 2**: The $Q=0$ iso-surfaces are colored by $T\_{x}$ to illustrate the spatial evolution of tilting over the *x*-axis.

**Movie 3**: The time averaged field and POD reconstruction are overlaid, showing that the legs of the full loop structures bend back along the poles of the time-averaged quadrupole.