

## Description of Additional Supplementary Files

**File Name:** Supplementary Movie 1

**Description:** Flexibility analysis of L-ENA fiber segments identifies the L-ENA Ntcs as the hinge points between successive ring segments: visualized output of a 3D variability analysis job run in cryosparc filtered at 3.5Å resolution. The generated volumes for mode 1 were loaded into ChimeraX as a vseries and the resulting movie was saved as an .avi file.