

## **Description of Additional Supplementary Files**

**Supplementary Movie 1:** RNAP elongation complex. The movie shows a 360° rotation of the EC.

**Supplementary Movie 2:** RNAP-HeID complex. The movies shows a 360° rotation of the RNAP-HeID complex, and highlights the Clamp and Secondary Channel arms of HeID.

**Supplementary Movie 3:** RNAP remodelling by HeID. The movie shows the conformational changes induced in RNAP by HeID.

**Supplementary Movie 4:** 3D variability analysis of the RNAP-HeID complex. The movie shows the results of 3D variability analysis of the RNAP-HeID complex which highlights how secondary channel arm anchoring provides a platform for primary channel opening by movement of the clamp arm.