

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Partial reconstruction of a mid-anaphase I spindle from a *C. elegans* oocyte. 3D projection of the segmented chromosomes (magenta) and traced microtubules (green), followed by dual axis rotations, and a recapitulation of the microtubules contained in the poles (dark grey) as well as chromosome proximal (yellow and orange) and central spindle (teal) arrays.

File Name: Supplementary Movie 2

Description: Partial reconstruction of a late anaphase I spindle from a *C. elegans* oocyte. 3D projection of the segmented chromosomes (magenta) and traced microtubules (green), followed by dual axis rotations, and a recapitulation of the microtubules contained in the poles (dark grey) as well as chromosome proximal (yellow and orange) and central spindle (teal) arrays.

File Name: Supplementary Movie 3

Description: Movie montage of anaphase I in GFP:: α -tubulin (green) and mCherry::H2B (magenta) expressing fertilized oocytes in control (top), *aspm-1Asp(RNAi)* (second from top), *aspm-1Asp+lin-5NuMA(RNAi)* (second from bottom), or *aspm-1Asp+dhc-1dynein(RNAi)*(bottom). Images, which are the maximum projection of 4 z-sections, were collected every 20 seconds and played back at 120x real time (12 images per second) with time 0 corresponding to anaphase onset. Scale bar, 5 μ m.

File Name: Supplementary Movie 4

Description: Movie montage of anaphase I in DHC-1dynein::GFP (cyan) and mCherry::H2B (magenta) expressing fertilized oocytes in control (top) or *aspm-1Asp+lin-5NuMA(RNAi)* (bottom). Images, which are the maximum projection of 4 z-sections, were collected every 20 seconds and played back at 120x real time (12 images per second) with time 0 corresponding to anaphase onset. Scale bar, 5 μ m.

File Name: Supplementary Movie 5

Description: Movie montage of anaphase I in GFP:: α -tubulin (green) and mCherry::H2B (magenta) expressing fertilized oocytes in control (top), *zwl-1ZWILCH(RNAi)* (middle), or *spdl-1Spindly(RNAi)*(bottom). Images, which are the maximum projection of 4 z-sections, were collected every 20 seconds and played back at 120x real time (12 images per second) with time 0 corresponding to anaphase onset. Scale bar, 5 μ m.

File Name: Supplementary Movie 6

Description: Movie montage of anaphase I in GFP:: β -tubulin (green) and mCherry::H2B (magenta) expressing fertilized oocytes in control embryos at 26°C (top), *dhc-1(or195ts)* at 16°C (second from top), *dhc-1(or195ts)* at 26°C (second from bottom), or *aspm-1Asp+lin-5NuMA(RNAi)* in *dhc-1(or195ts)* at 26°C (bottom). Images, which are the maximum projection of 4 z-sections, were collected every 20 seconds and played back at 120x real time (12 images per second) with time 0 corresponding to anaphase onset. Scale bar, 5 μ m.

File Name: Supplementary Movie 7

Description: Movie montage of anaphase I in GFP:: α -tubulin (green) and mCherry::H2B (magenta) expressing fertilized oocytes in control (top), *cls-2CLASP (RNAi)* (middle), and GFP:: α -Tubulin (green), *CLS-2CLASP 3A::GFP* (green) and mCherry::H2B (magenta) expressing fertilized oocyte with *cls-2CLASP(RNAi)* (bottom). Images, which are the maximum projection of 4 z-sections, were collected every 15 seconds and played back at 90x real time (12 images per second) with time 0 corresponding to anaphase onset. Scale bar, 5 μ m.

File Name: Supplementary Movie 8

Description: Movie montage of anaphase I in GFP:: α -Tubulin (green) and mCherry::H2B (magenta) expressing fertilized oocytes in control (top), *bmk-1Eg5* Δ mutant (middle) or *spd-1PRC1+zen-4MKLP1(RNAi)* (bottom). Images, which are the maximum projection of 4 z-sections, were collected every 20 seconds and played back at 120x real time (12 images per second) with time 0 corresponding to anaphase onset. Scale bar, 5 μ m.