

## Supplemental material

Baumgart et al., <https://doi.org/10.1083/jcb.201902069>

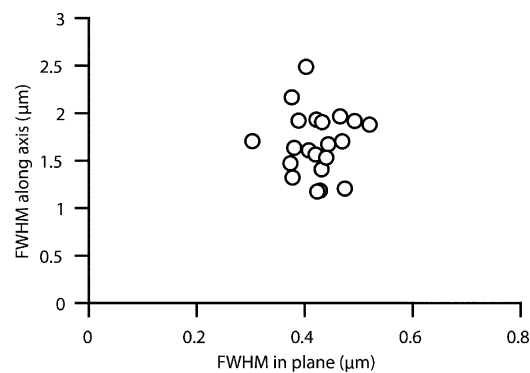


Figure S1. **Size of point spread function.** Individual SAS-4 spots ( $n = 21$ ) recorded in embryos were fitted with an axis-symmetric gaussian intensity profile. Plot of the full-width at half maximum (FWHM) values in the plane normal to the optical axis with respect to along the axis.

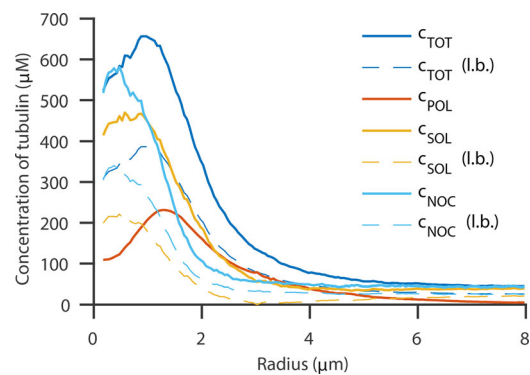


Figure S2. **Lower bound of concentration profiles.** Density curves corresponding to Fig. 2 A and Fig. 3 C (solid lines) replotted together with the lower bound calibration of the LM data (l.b., dashed lines). The lower bound of the calibration coefficient for the light microscopy is obtained by imposing that all concentrations must be positive (see Materials and methods). The datasets are the same as for the Fig. 2 A and Fig. 3 C, but only the mean is shown.

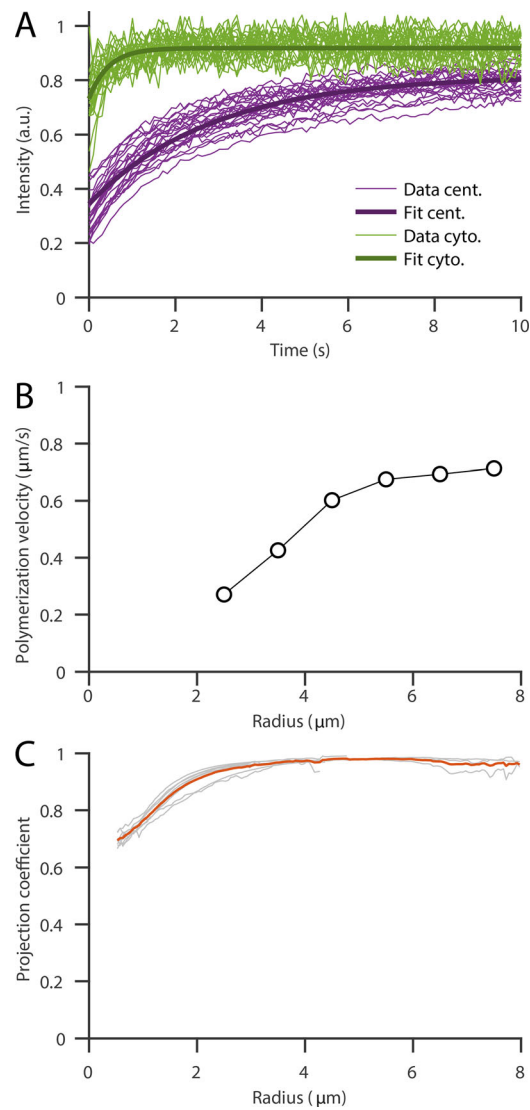


Figure S3. **FRAP in the cell and local polymerization velocity.** **(A)** Recovery curves of FRAP measurements normalized with respect to the prebleach intensity and fitted with a single exponential with an offset (data  $n = 25$  thin lines, fit thick lines). Measurement in the centrosome (purple) and in the cytosol (green). cent., centrosome; cyto., cytoplasm. **(B)** Spatial dependence of polymerization velocity measured from EB2 as a function of radial distance from the centrosome. Data are mean values based on measurements from five different cells. **(C)** Projection coefficient cosine of the local microtubule orientation and radial direction of all datasets ( $n = 8$ ) of Fig. 1 D (gray) and mean (orange).