



400 800 1200 z-stack range (nm) 1600

С

summary of model for axial detection range measurements  $\tau$ : time in frames

 $\tau_{MIN}$ : minimal trajectory length (10 or 15 frames)

 $\begin{array}{l} \underset{k_{\text{BLEACH}}}{\text{Min}} \text{ for bit blockby long rate constant} \\ A_{\text{z:}} \text{ axial detection range (Gaussian CDF mean)} \\ \sigma_z \cdot \text{ Gaussian CDF sigma} \end{array}$ 

major model assumptions:

1. photobleaching is a Poisson process

2. axial detection range can be modeled as a Gaussian CDF

