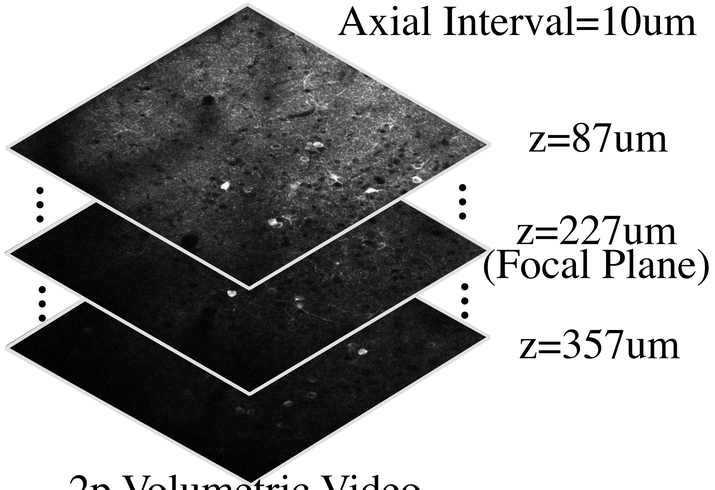
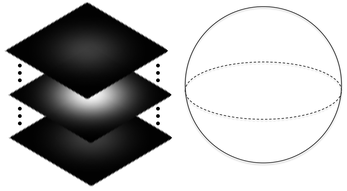
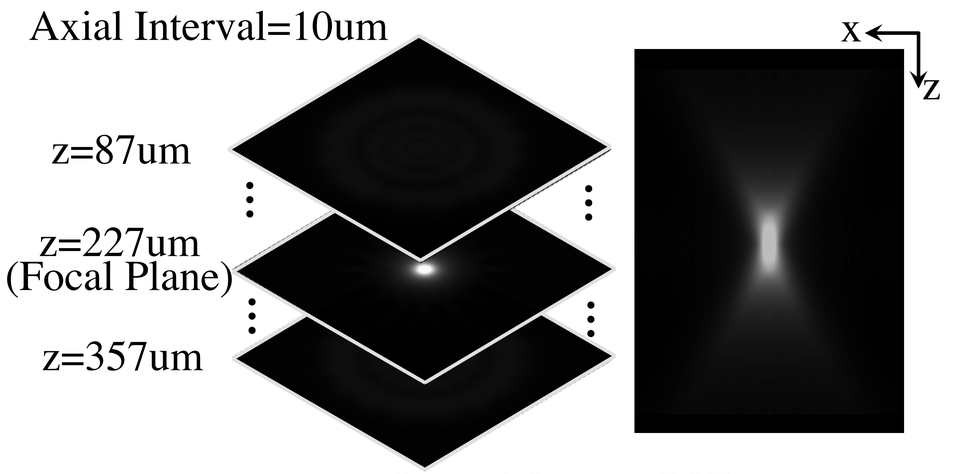


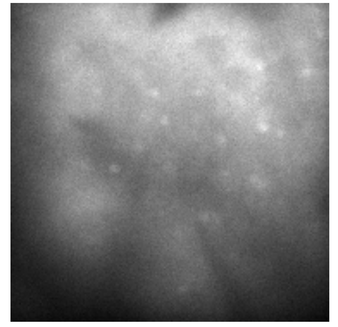

2p Volumetric Video
$f(x,y,z,t)$



Scattering PSF
$k_1(x,y,z)$




Optical System PSF
$k_2(x,y,z)$



Simulated 1p Video
$s(m,n,p)$

$$g(x,y,z,t)=f(x,y,z,t)\underset{x,y,z}{\otimes}k_1(x,y,z)$$

Step 1, Tissue Scattering Modeling

$$h(x,y,t)=\int g(x,y,z,t)\underset{x,y}{\otimes}k_2(x,y,z)dz$$

Step 2, Optical System Modeling

$$s(m,n,p)=h(mT_x,nT_y,pT_t)+n(m,n,p)$$

Step 3, Camera Sampling Modeling