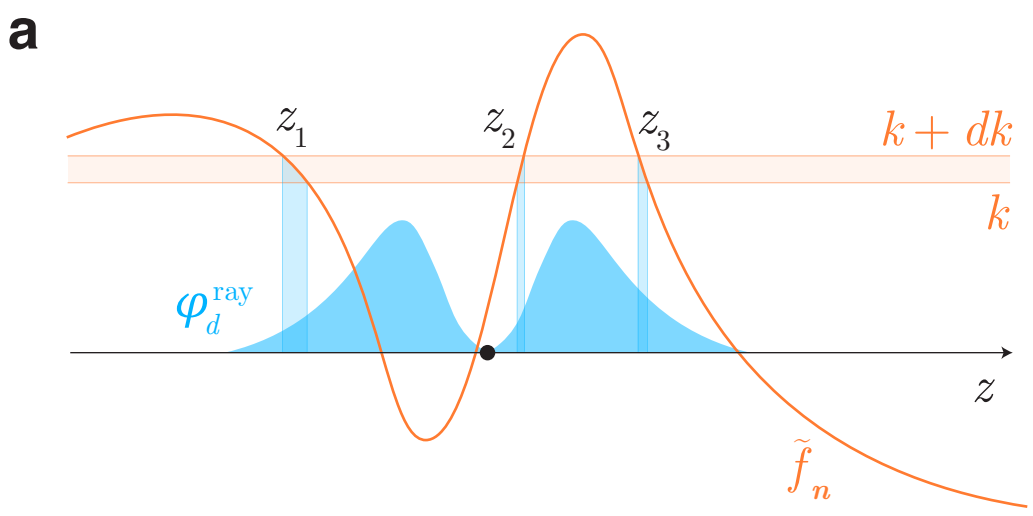
a
z_1
z_2
z_3
$k + dk$
k
φ_d^{ray}
z
$\tilde{f}_n$