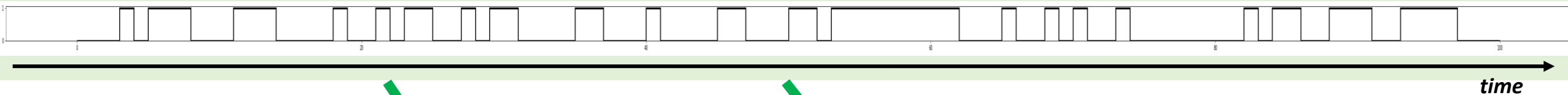
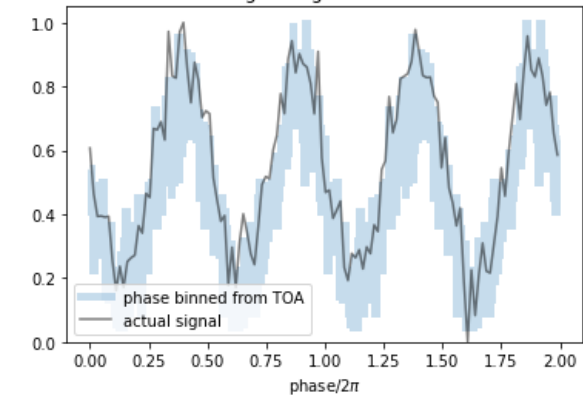


# single photon time of arrival (ToA)

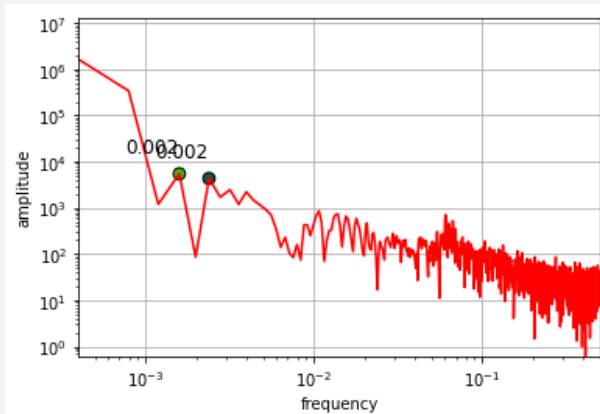


**S/N = 100**

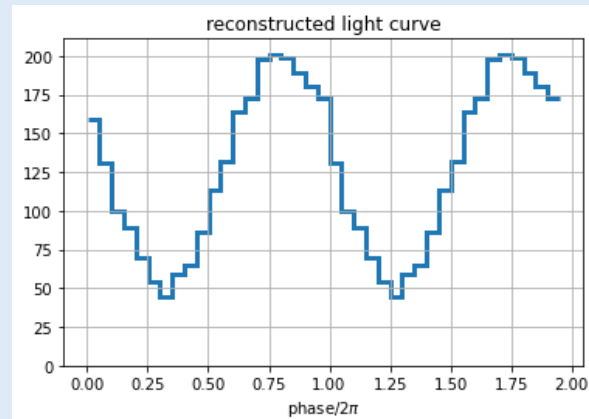
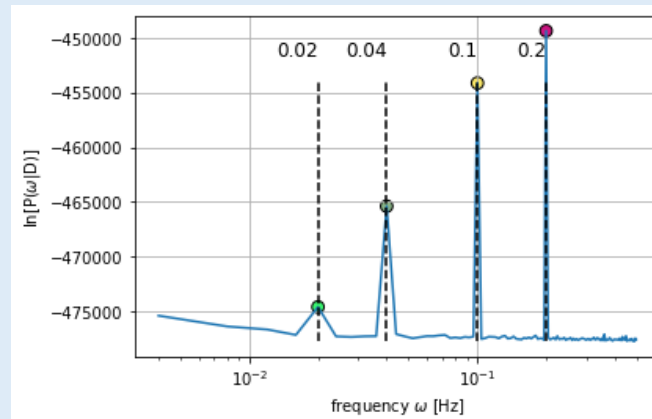
original signal  $\omega = 0.1$



**FFT**



$$P(M_i|D) = \int P(D|M_i, \{Z\}) \prod_k P(Z_k) d\Omega_{\{Z\}} P(M_i)$$



**S/N = 2**

original signal  $\omega = 0.44$

