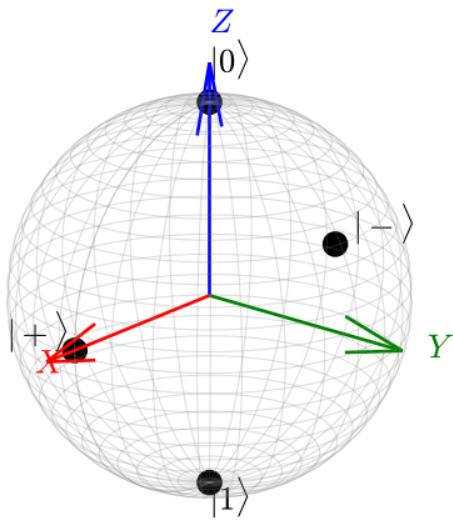
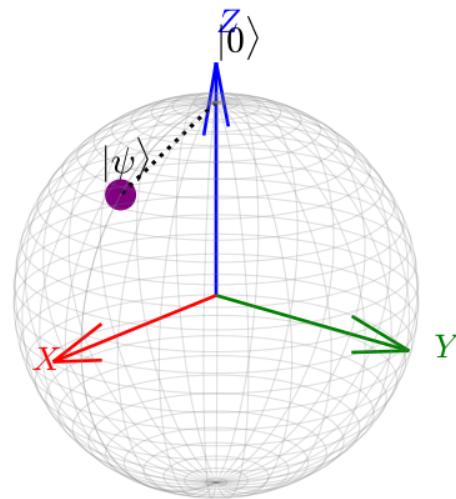


Bloch Sphere Representation of Quantum State Evolution in BB84

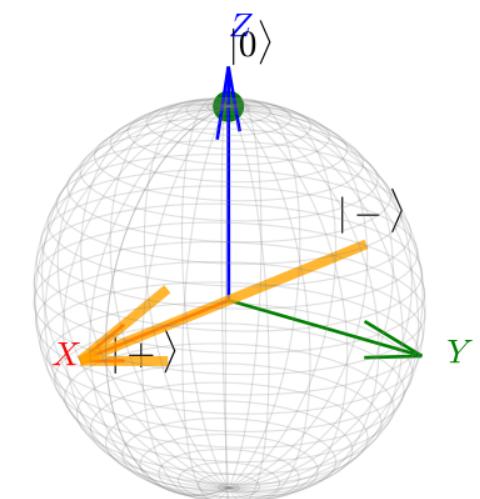
**(a) Alice: State Preparation
Z or X Basis**



**(b) Eve: Measurement Disturbance
State Collapse**



**(c) Bob: Measurement Outcome
Random Result ($p = 0.5$)**



$$P(|+\rangle) = P(|-\rangle) = 0.5$$