Goals

- Determine the outcomes of partial measurements
- Describe teleportation

Partial Measurement

- $|\psi\rangle = \frac{1}{\sqrt{2}}\left(|00\rangle_{AB} + |11\rangle_{AB}\right)$
- Measure A in $\{|+\rangle, |-\rangle\}$ basis.
- What is the probability of each outcome?
- What happens to the B system in each case?

Partial Measurement

- $|\beta_{00}\rangle\langle\beta_{00}|_{A_1 A_2} \otimes I_B$

$$\frac{1}{\sqrt{2}}(a|000\rangle + a|011\rangle + b|100\rangle + b|111\rangle)$$