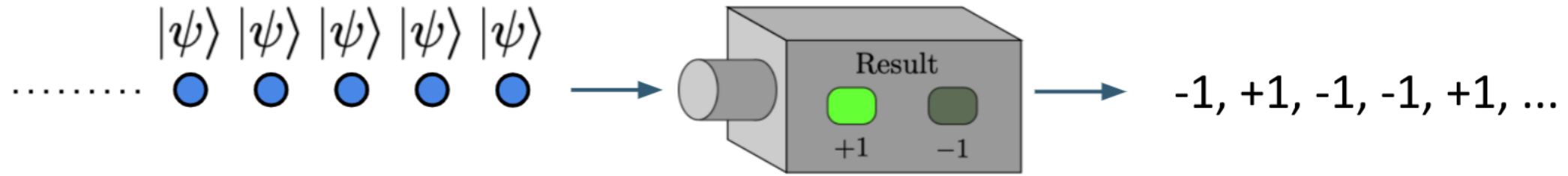


To obtain information about the probabilities,
prepare **many copies** of the state and measure them.



Number of +1 outcomes: $N(+1)$

$$\frac{N(+1)}{N(+1) + N(-1)} \approx |\alpha|^2$$

Number of -1 outcomes: $N(-1)$

$$\frac{N(-1)}{N(+1) + N(-1)} \approx |\beta|^2$$