

$$P_{LZ} = P_{ns \rightarrow (n-1)p} = 1 - \exp \left(\frac{-2\pi}{\hbar} \frac{W^2}{\frac{\partial(E_1 - E_2)}{\partial \mathcal{F}}} \mathcal{F}' \Big|_{\mathcal{F}_r} \right)$$