donde:

$$\mathcal{P}(p) = \left| \phi(p,t) \right|^2$$

$$= \frac{1}{\hbar\beta^2}\left[\frac{1}{3}\left(\varphi_0\left(\frac{p}{\hbar\beta^2}\right)\right)^2 + \frac{2}{3}\left(\varphi_1\left(\frac{p}{\hbar\beta^2}\right)\right)^2 \right.$$

$$\left. + \frac{2\sqrt{2}}{3}\, \mathrm{Im}\left(e^{\frac{i}{\hbar}(\varepsilon_1-\varepsilon_0)t}\, \varphi_1^*\left(\frac{p}{\hbar\beta^2}\right)\varphi_0\left(\frac{p}{\hbar\beta^2}\right)\right)\right]$$

$$= \frac{1}{3\hbar\beta^2}\left[\left(\varphi_0\left(\frac{p}{\hbar\beta^2}\right)\right)^2 + 2\left(\varphi_1\left(\frac{p}{\hbar\beta^2}\right)\right)^2 \right.$$

$$\left. - 2\sqrt{2}\,\varphi_1\left(\frac{p}{\hbar\beta^2}\right)\varphi_0\left(\frac{p}{\hbar\beta^2}\right)\cos(\Omega t)\right]$$

La probabilidad de que el momentum medido esté en el intervalo $\left[p_0-\frac{\Delta}{2}, p_0+\frac{\Delta}{2}\right]$ es:

$$\mathcal{P}_\Delta(p_0) \equiv \int_{p_0-\frac{\Delta}{2}}^{p_0+\frac{\Delta}{2}} \mathcal{P}(p)\,dp = \frac{1}{3\hbar\beta^2}\left[\int_{p_0-\Delta/2}^{p_0+\Delta/2} dp\, \varphi_0^2\left(\frac{p}{\hbar\beta^2}\right)\right.$$

$$\left. +2\int_{p_0-\Delta/2}^{p_0+\Delta/2} dp\,\varphi_1^2\left(\frac{p}{\hbar\beta^2}\right) - 2\sqrt{2}\cos(\Omega t)\int_{p_0-\Delta/2}^{p_0+\Delta/2} dp\,\varphi_1\left(\frac{p}{\hbar\beta^2}\right)\varphi_0\left(\frac{p}{\hbar\beta^2}\right)\right]$$