

$$\begin{aligned}
 & - \frac{\delta}{\delta p(\tau)} \int dt \frac{\partial f(p(t), t)}{\partial t} \\
 & = \frac{\delta}{\delta p(\tau)} \int dt \left\{ \frac{i\hbar}{\alpha} \frac{1}{2m} [p(t)]^2 + V(t) \right\}
 \end{aligned}$$

~~$$\frac{\partial^2 f(p(t), t)}{\partial p(t) \partial t} = \frac{i\hbar}{\alpha} \frac{1}{2m} p(t)$$~~

$$- \frac{\partial^2 f(p(\tau), \tau)}{\partial p(\tau) \partial \tau} = \frac{i\hbar}{\alpha} \frac{1}{2m} p(\tau)$$

$$- \frac{\partial^2 f(p, t)}{\partial p \partial t} = \frac{i\hbar}{\alpha} \frac{1}{2m} p$$

$$\therefore - \frac{\partial f(p, t)}{\partial t} = \frac{i\hbar}{\alpha} \frac{1}{2m} p^2 + u(t)$$