

# Liouville-ren teoremaren ondorioak (1)

$$\frac{d\rho}{dt} = \frac{\partial \rho}{\partial t} + [\rho, H]$$

$$\frac{\partial \rho}{\partial t} + [\rho, H] = 0 \quad \left( \equiv \frac{d\rho}{dt} = 0 \right) \text{ orekoma!}$$

$$\frac{\partial \rho}{\partial t} = 0$$

multzo geldikorra, orekako sistema  
zenbait baldintzatan

$$\left. \begin{array}{l} [\rho, H] = 0 \\ \frac{d\rho}{dt} = 0 \end{array} \right\}$$

BI HORIEK BETEZ GERO

$$\frac{\partial \rho}{\partial t} = 0$$

ZURJATZEN DA OREKA!!

$$\bullet [\rho, H] = 0 \rightarrow \frac{\partial \rho}{\partial t} = 0 \quad \begin{array}{l} \text{Multzo Geldikorra} \\ \text{Orekako sistema} \end{array}$$

• Zer modutan lor daiteke  $[\rho, H]$  ?

!!