Sistema klasikoaren fase-espazioa (1)

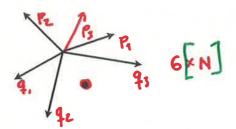
N partikula (V, E, N) + t ALDIUNEA!

partikularen egoera $(\vec{q},\vec{p})=(\vec{q},\vec{p})(t)\equiv(\vec{q}(t),\vec{p}(t))$

PASE-ESPARAGORAL

 3×3

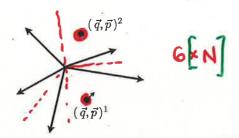
 $(3N, 3N) \rightarrow 6N$ dimentsioko espazioa



DENBOPAKO EBOLUZIONA

$$\begin{vmatrix}
\dot{q}_i &= \frac{\partial H(q_i, p_i)}{\partial p_i} \\
\dot{p}_i &= -\frac{\partial H(q_i, p_i)}{\partial q_i}
\end{vmatrix} i = 1, \dots, 3N$$

 $H = H(q_i, p_i)$



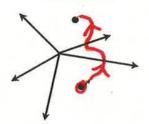
V "finkoa" ezaguna $\rightarrow q_i$ mu E ezaguna $\rightarrow (q_i, p_i)$ mu

murriztuak)
murriztuak)

 $H(q_i, p_i) = E$

Fase-espazioko lotura!!

Puntuen ibilbideak gainazal horretan (inguruan) gertatzen dira



agian , ankers emands...
$$\left(E-\frac{\Delta}{2},E+\frac{\Delta}{2}\right)$$