Lecture # 21 11-5-2007

Poisson brackets: $[F,g] = \sum_\mu \left(\frac{\partial f}{\partial p_\mu}\frac{\partial g}{\partial q_\mu} - \frac{\partial f}{\partial q_\mu}\frac{\partial g}{\partial p_\mu} \right)$

$[H,f] = 0$ if f is conserved

Hamilton's principle

$$S = \int_{t_1}^{t_2 \in q(t)} L\,dt \qquad p = \frac{\delta S}{\delta q}$$

$$S = \int \Sigma p_i\,dq_i - H\,dt$$

Hamilton $\delta S = 0$

Today VII a) Maupertuis principle $\delta \int$

VII c) Canonical transformation $\delta \int =$