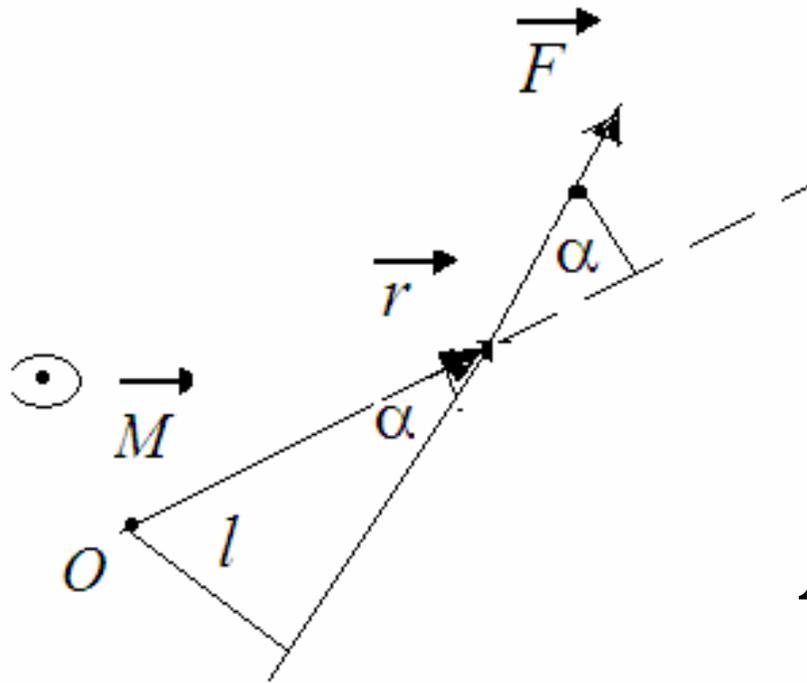


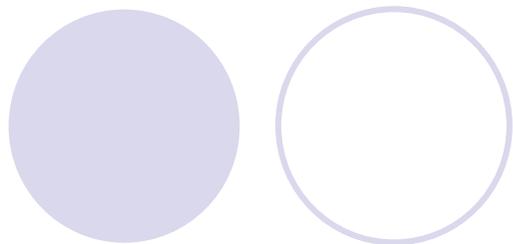
*Лекция № 7*  
*Классическая механика*  
*(Для студентов элитного*  
*отделения ЭТО – I)*

# Закон сохранения момента импульса

Момент силы относительно точки  $O$

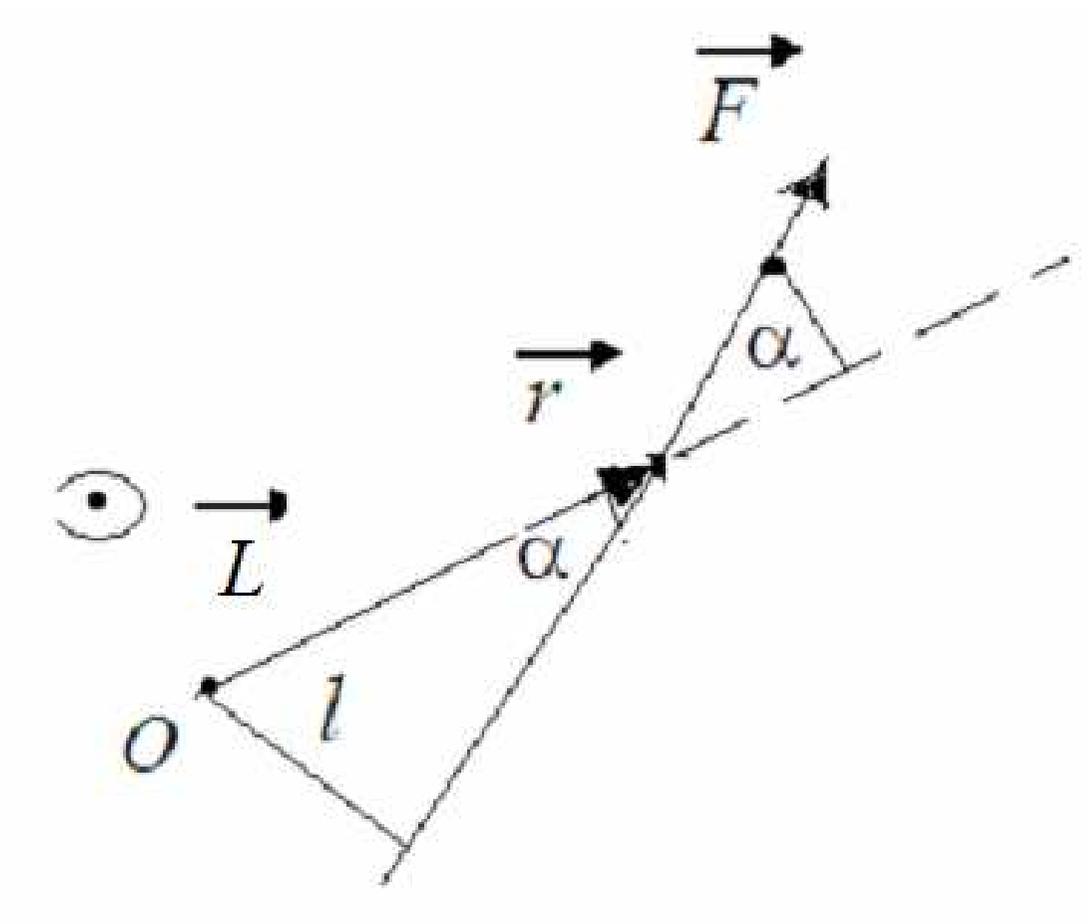
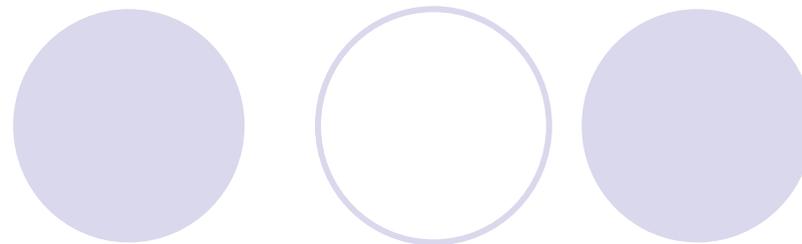


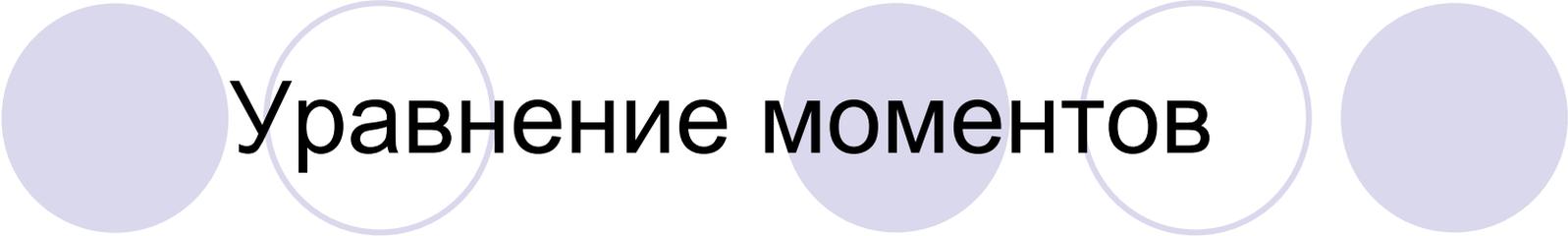
$$\vec{M} = [\vec{r} \vec{F}]$$



**Момент импульса  
относительно  
точки O**

$$\vec{L} = [\vec{r} \vec{p}]$$



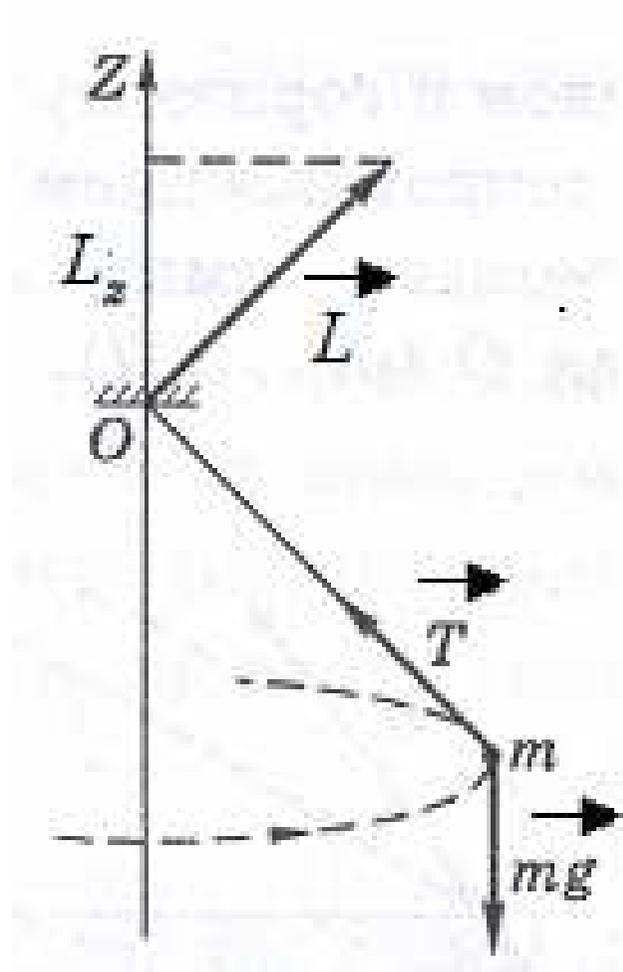
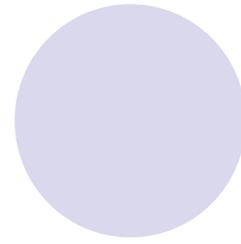
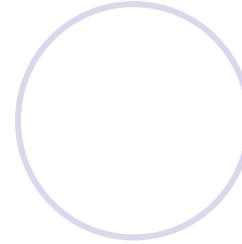
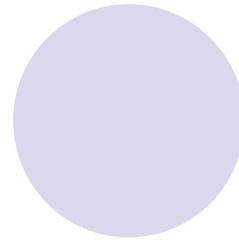
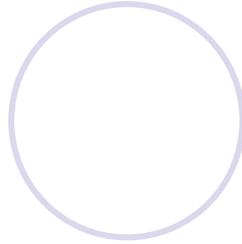
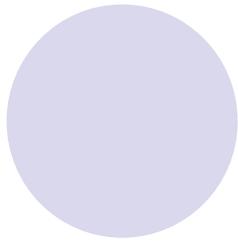
The title is centered between five circles. From left to right: a solid light purple circle, a hollow light purple circle, a solid light purple circle, a hollow light purple circle, and a solid light purple circle.

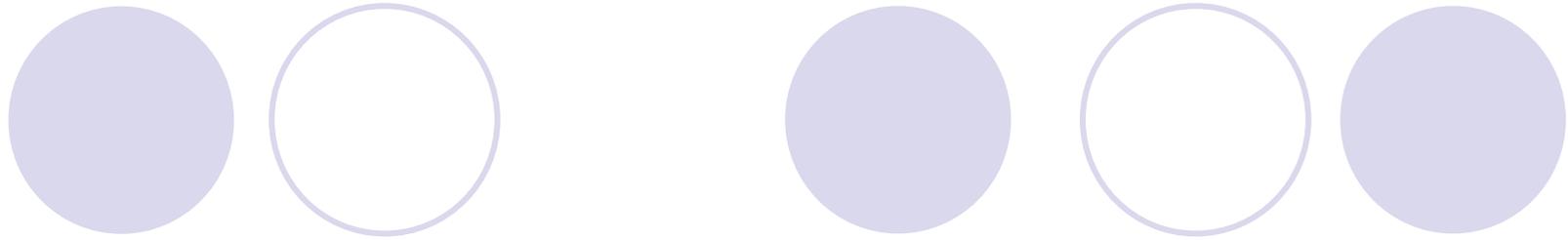
# Уравнение моментов

$$\vec{M} = \frac{d\vec{L}}{dt}$$

$$\frac{dL_x}{dt} = M_x; \quad \frac{dL_y}{dt} = M_y; \quad \frac{dL_z}{dt} = M_z$$

*Если  $M_z = 0$ , то  $L_z = \text{const}$*





- Момент импульса замкнутой системы есть величина постоянная, то есть с течением времени не меняется

$$\sum \vec{L}_i = \text{const}$$

Закон сохранения момента импульса – следствие изотропности пространства