

Stationary solution of non-relativistic Vlasov equation with potential force

$$\vec{F} = -\nabla U$$

$$E = E_k + E_p = \frac{p^2}{2m} + U$$

$f(\mathcal{E})$ je stacionární řešení

$$\frac{\partial f}{\partial t} + \frac{\vec{p}}{m} \cdot \nabla f - \nabla U \frac{\partial f}{\partial \vec{p}} = 0$$

$$\frac{\vec{p}}{m} \cdot \frac{df}{d\mathcal{E}} \nabla U - \nabla U \frac{df}{d\mathcal{E}} \cdot \frac{\vec{p}}{m} = 0$$