

Date 7/11/2025
Secm I, Unit IV

First integral of motion $\rightarrow$ First integral of motions
of are in the theory of Hamiltonian system.
The first integrals are called constants of motion and some of them corresponds to conservation law of physically relevant quantities.
The first time integral features prominently in classical mechanics, since it corresponds to the important concept of linear momentum P . The first order time integral gives that the total linear momentum is a constant of motion when the sum of the integral over is zero.