

PHYS 222 Classical Mechanics II (Spring 2019)
Quiz #3

The H_2D^+ molecular ion is a planar molecule that has the shape of an equilateral triangle, as shown in the picture below. To a good approximation the mass of the D atom (known as deuterium, or heavy hydrogen) is twice that of the H atom. Given that the mass of the H atom is m and the interatomic distance is a , compute the principal moments of inertia of this molecule in the center-of-mass frame. Assume that all atoms are point-like.

