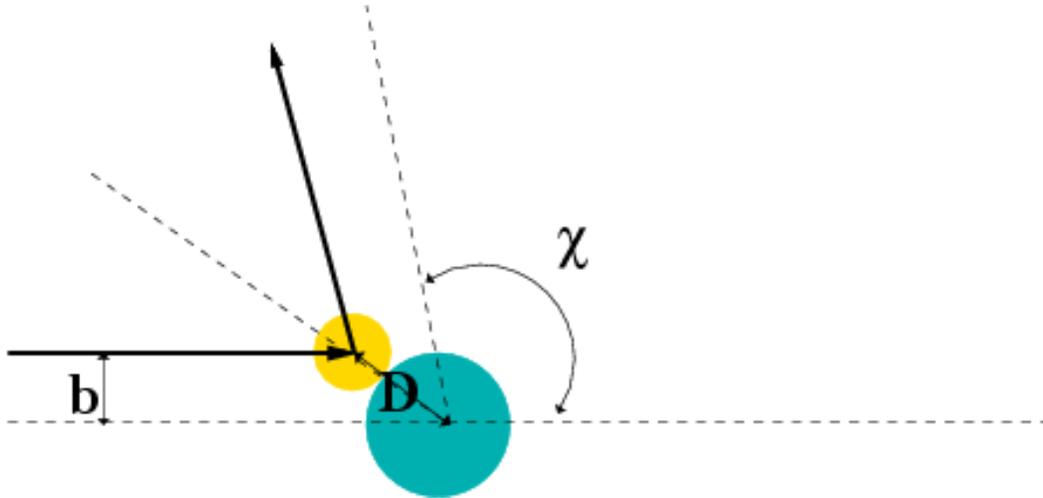


PHY 711 – Assignment #2

8/30/2013



1. In class, we showed that the relationship between the impact parameter b and the scattering angle χ for elastic scattering between two hard spheres has the form:

$$b = D \cos\left(\frac{\chi}{2}\right).$$

Using the above diagram which shows the geometry of two hard spheres at the moment of impact, derive this formula.