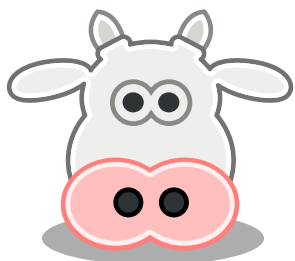
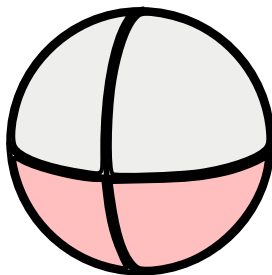


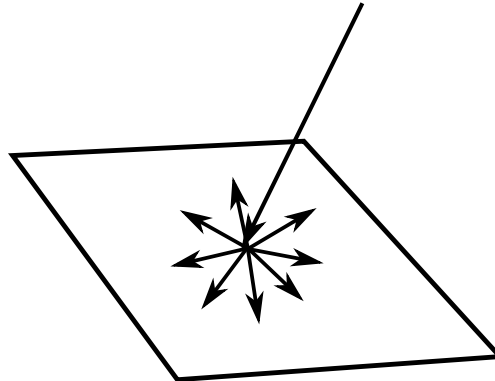
Classical Assumptions:



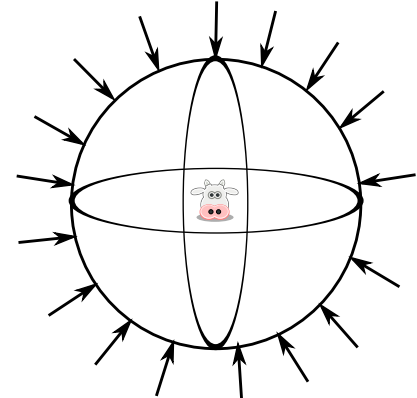
=



convex object

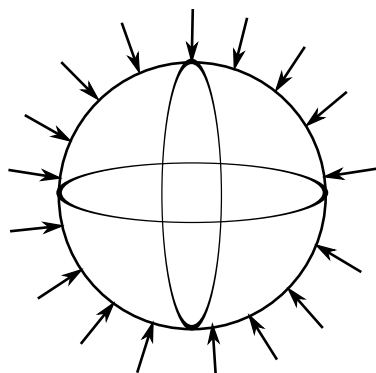


Lambertian surface



distant lighting

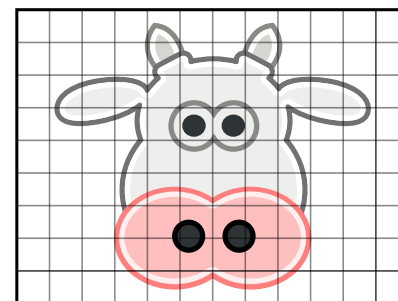
→ Low Dimensional Linear Model



Space of all
illuminations



Linear transformation



Space of all images.
About 9 Dimensional!

Basri and Jacobs showed that about 99.2% of the energy of this linear filter lies in the first nine components.