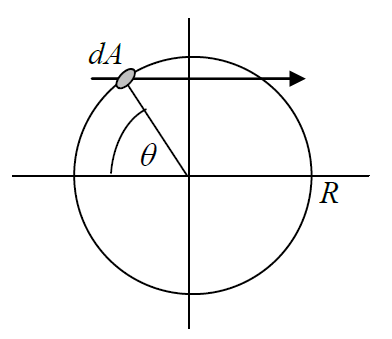
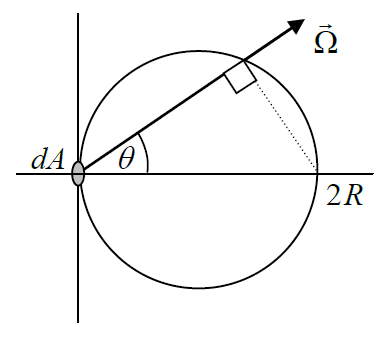
NUCL 510 HMWK 4

1. Sphere immersed in flux I

For Monoenergetic Beam Case:



For Isotropic Flux Case:



So, because the angular flux is equal in the two different cases, the reaction rate is exactly the same if the isotope and sphere size is the same between the cases.

1. Eigenfunction of Operator A
2. Legendre Polynomial Representation
3. Spherical Harmonic Representation
4. Angular flux of Mono-Energetic Neutrons
   1. Compute scalar flux
   2. Compute current
   3. Compute current in positive z direction

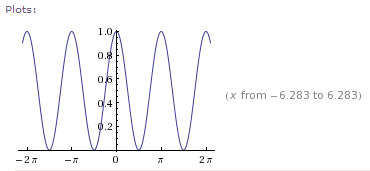


Figure 1 Plot of Cos^2 Theta through Two Periods

* 1. Compute current in negative z direction

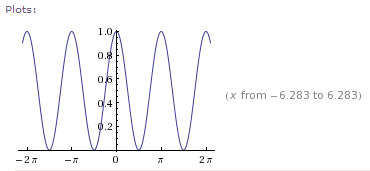


Figure 1 Plot of Cos^2 Theta through Two Periods