**The Monte Carlo method in Radiation Transport.**

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**Assigment #1**

Develop a subroutine in your language of preference to sample de position and direction of photons on a phantom surface after coming out from a radiation source according to the following geometries:

1. Isotropic source that defines a conical radiation field of radius **R** at a distance **d**.
2. Isotropic source that defines a squared radiation field of side **a** at a distance **d**.
3. Photons normally impact on a phantom, defining a circular beam with radius **R**.
4. Photons normally impact on a phantom, defining a rectangular beam with sides **a** and **b**.
5. A linear source with length **L** emitting photons isotropically.