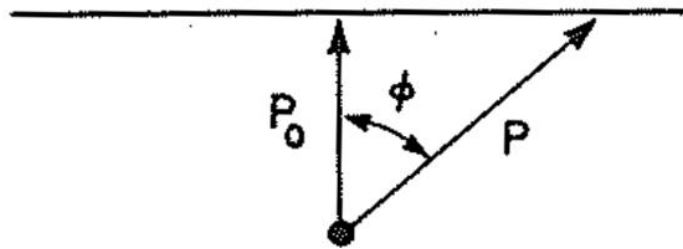


This BSE cosine distribution could also be easily understood by using below schematic diagram. For a primary electron arrives underneath a specimen surface with depth of P_0 and becomes scattered. This BSE escaping to surface through P at an angle Φ with a relationship as,

$$\cos \Phi = P_0 / P \longrightarrow P = P_0 / \cos \Phi$$



As increasing P distance, there are more possibilities to have inelastic scatterings, which decrease kinetic energy to make BSE hard to escaping to surface. So the BSE coefficient as,

$$N \propto \frac{1}{P} \Rightarrow N \propto \cos \phi$$