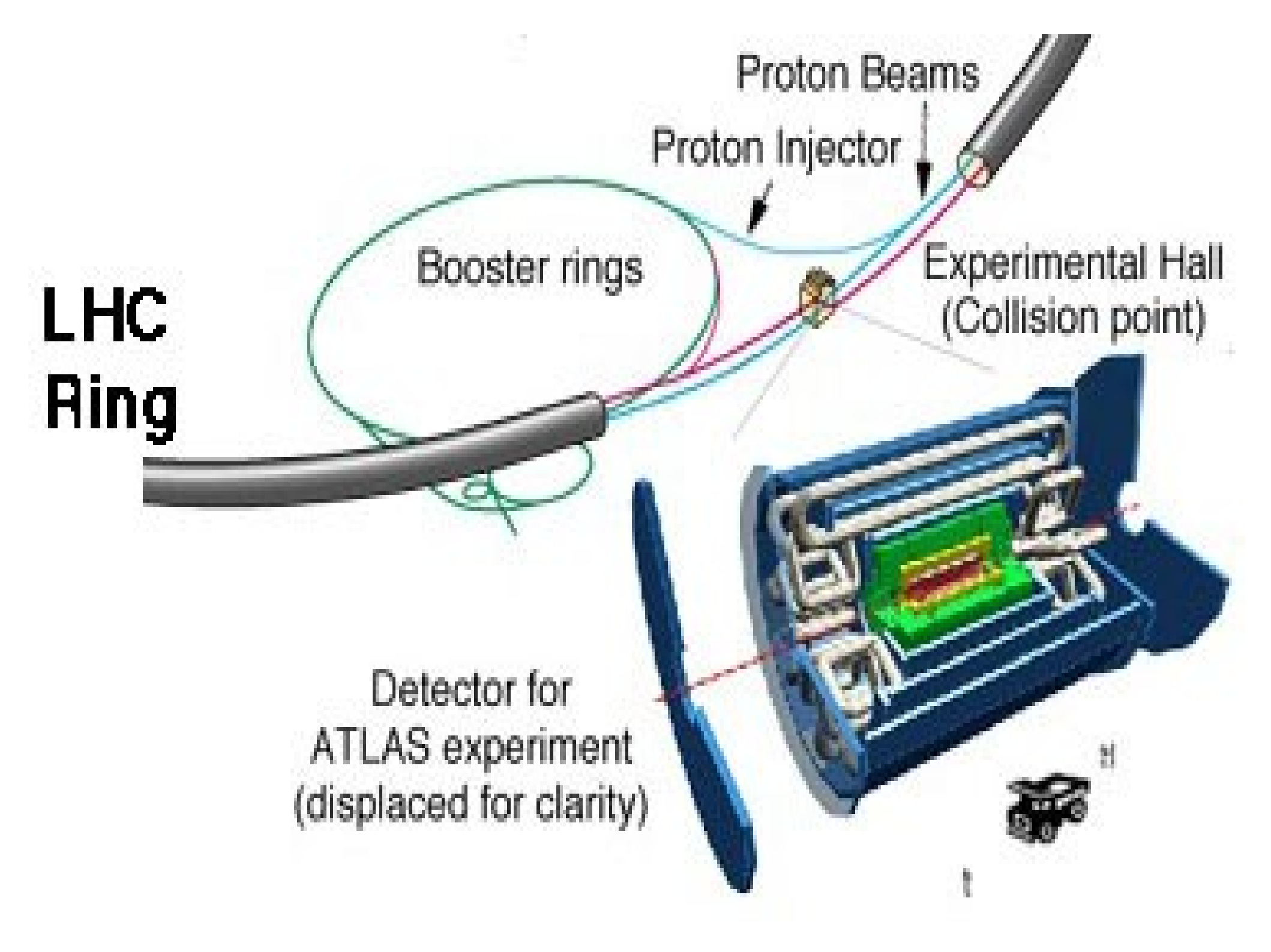
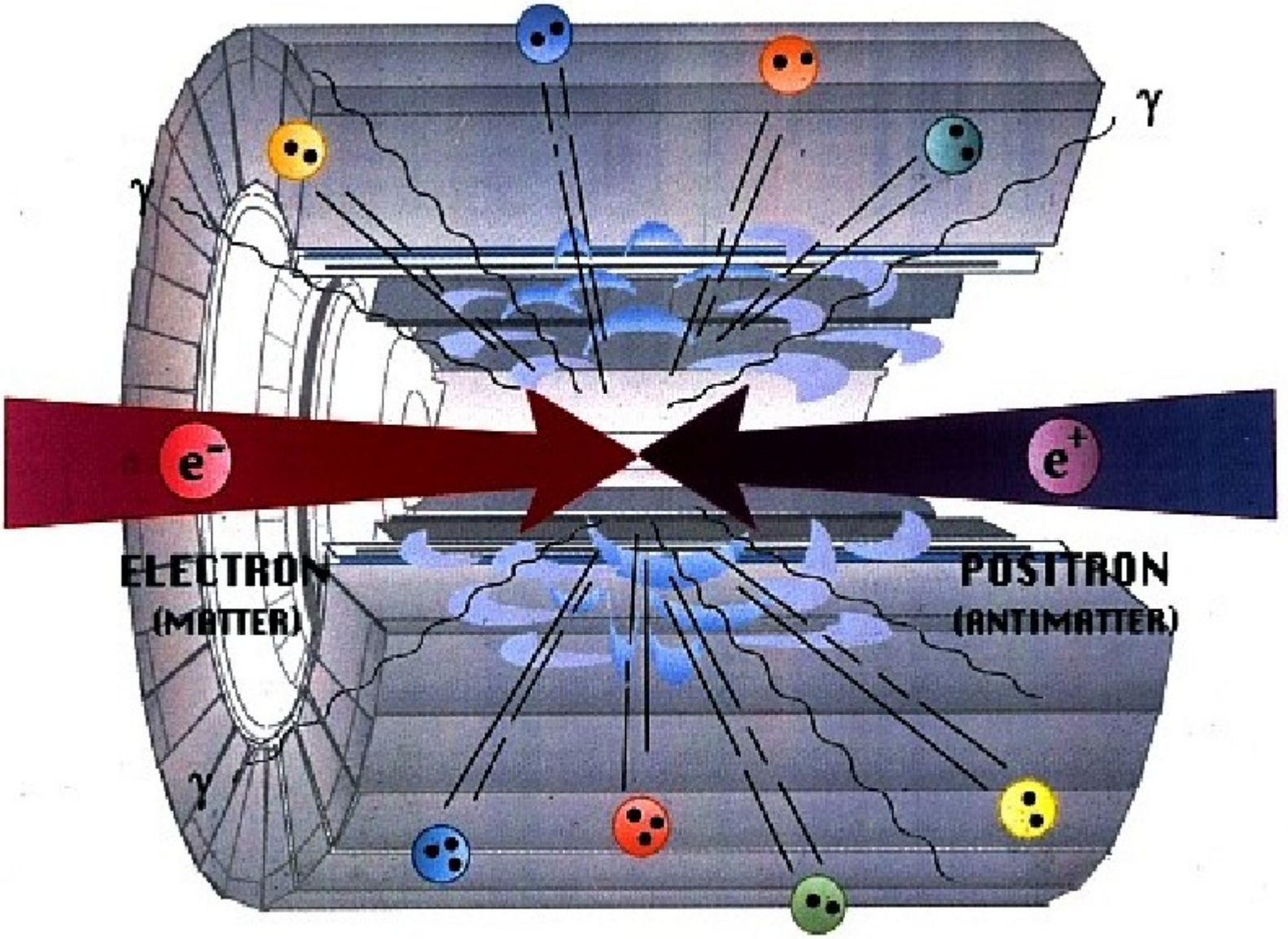
ÇARPIŞMA BÖLGESİ


LHC
Ring
Proton Beams
Proton Injector
Booster rings
Experimental Hall
(Collision point)
Detector for
ATLAS experiment
(displaced for clarity)


γ
γ
γ
e⁻
e⁺
ELECTRON
(MATTER)
POSITRON
(ANTIMATTER)

Kütle Merkezi Enerjisi

$E_{KM}=\sqrt{s}$

$s=(p_1+p_2)^2=p_1^2+p_2^2+2p_1.p_2$

$=m_1^2+m_2^2+2(E_1E_2-\mathbf{p}_1.\mathbf{p}_2)$

$\sim 2(E_1E_2-|\mathbf{p}_1|.|\mathbf{p}_2|\cos\theta)$

KM çerçevesinde $|\mathbf{p}_1|=|\mathbf{p}_2|$

Işınlık

$L=f.N_b.N_1.N_2/(4\pi.\sigma_x.\sigma_y)$