

RAMOND-RAMOND BREMSSTRAHLUNG UNDER BRANES COLLISION

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We investigate three-form Ramond-Ramond radiation from two crossed flat two-branes propagating with constant velocities in 4+1 dimensions in a way that the line of their minimal separation moves faster than light. Radiation can be interpreted as an analog of the Cherenkov's effect. The radiation power is computed via the local work done by the reaction force defined through the half-difference of the retarded and advanced fields of the branes. The spectrum contains an infrared divergence. By suitable reparametrizations of the world-volumes and the spacetime Lorentz transformations the whole picture can be related to radiation of the two-form field by colliding strings in 3+1 dimensions. Classical renormalization related to both problems is discussed.