

Università degli Studi di Trieste

Dipartimento di Fisica

Seminario

Xavier Artru

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CNRS/IN2P3 and Université Lyon-1

Thursday, November 8th, 4:30 PM – Lecture Room B, F building, Dip. di Fisica – via Valerio 2 – Trieste

Various ways of making a relativistic electron radiate.

A relativistic electron can emit photons in various ways :

- 1) being in nonuniform motion: synchrotron radiation, bremsstrahlung, channeling radiation, etc.
- 2) crossing and polarizing a material object: Cherenkov effect, transition radiation, parametric X-rays etc.
- 3) passing close to a material object: diffraction radiation, Smith-Purcell effect, etc.

No less than 12 ways can be listed. After writing a common basic formula, I will present the properties and applications of some of them. When possible I will use phenomenological concepts like the Equivalent Photon one. Finally I will speak of the less known

phenomena of shadowing (or half-bare electron), photon impact parameter and "side-slipping" of the electron.



Organizzazione a cura di: A. Martin, E. Vesselli

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Everyone interested in the topic is welcome to attend

Informazioni: seminari@ts.infn.it