

An Open Code Perturbative Model for Ionization Collisions

Content

Due to the COVID 19 pandemic, the Bariloche Atomic Center, like the rest of the facilities of the National Atomic Energy Commission of Argentina, has remained closed, except for essential tasks as the production of radioisotopes, the irradiation plants, the nuclear medicine centers, etc. In this context, the three accelerators and the remaining experimental facilities of the Laboratory for Radiation Interaction with Matter have largely remained in a state of maintenance. For its part, theoretical studies have continued to be carried out remotely. In this communication, one of these theoretical undertakings will be discussed, which proposes the development for its use in an open-code format, of a computer program for the calculation of the cross section for the ionization of atoms and molecules by the impact of charged particles. This proposal seeks to complement the CDW-EIS code currently available in online format at the website of the AMD unit of the IAEA.

During the presentation, we will review the basic principles of the open-code concept and will discuss the improvements that the new program implies with respect to the existing CDW-EIS.

Primary author: BARRACHINA, raul oscar (National Atomic Energy Commission, Argentina)

Presenter: BARRACHINA, raul oscar (National Atomic Energy Commission, Argentina)

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