

NUCLEAR DATA FOR THE PRODUCTION OF MEDICAL RADIONUCLIDES

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Cancer management is a major medical and economic issue because of the increasing incidence of the disease in the world. The need for radioisotopes in both cancer diagnosis and therapy is very well established. These needs have been addressed through a series of IAEA Coordinated Research Projects running for the last 20 years.

Experimental data compilations, theoretical calculations and evaluations were carried out for many of the reactions of interest for isotope production and beam monitoring. The recommendations for both established and emerging radionuclides, monitor reactions, and validation/testing of the cross-section production library are discussed.

Recommended data for charged-particle reactions have been also used to constrain nuclear reaction models for protons and cluster projectiles with neutron emission. Status and current issues in theoretical description of charged-particle induced reactions up to 100 MeV are reviewed.

Primary author: CAPOTE, Roberto (International Atomic Energy Agency)

Presenter: CAPOTE, Roberto (International Atomic Energy Agency)

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