

**High Beam Intensities for Cyclotron-Based Radioisotope Production, P. COHILIS, Y. JONGEN,**

IBA - Cyclotron technology is, nowadays, largely disseminated into the medical and radio-pharmaceutical community. In particular, cyclotron-based systems devoted to radioisotope production, both for therapy and diagnostics, are commercially available and used since many years. Today, almost 10 years after the construction of IBA's first CYCLONE 30, a cyclotron that revolutionised cyclotron technology for medicine and industry, the requirement for high beam intensities is becoming more and more important. As a consequence, and favoured by continuous developments in target technology and on ion sources, the maximum beam intensity available from these cyclotrons has increased, with years, from a few hundred  $\mu\text{A}$  to more than 2 mA. The present paper will focus on some of the applications for which high beam intensities are required, as well as on the achievements and developments at IBA in relation with these applications.