

Important Design Issues of a High Efficiency Cyclotron Complex to Drive the Energy Amplifier,
P. MANDRILLON and N. FIETIER, Laboratoire du Cyclotron, CAL, Nice and C. RUBBIA, CERN, Geneva - A high efficiency three stage cyclotron has been proposed to provide a 10 MW proton beam in the 1 GeV kinetic energy range for driving the Energy Amplifier. This accelerator complex consists of the following chain: two 10 MeV compact isochronous cyclotrons (CIC) feeding a four separated sector isochronous ring cyclotron (ISSC) raising the energy up to 120 MeV. A final stage made of ten spiral separated sectors boosts the energy in the 1 GeV range. This paper describes the main components of this complex and presents the critical design issues of this high intensity high energy complex.