

A High Resolution, Non Destructive Energy Detector and Beam Current Monitor for Bunched Beams, P. BARBIERI, M. BELLATO, A. FACCO, M. POGGI, INFN-LNL - A high sensitivity, non destructive energy detector and beam current monitor, based on a set of 3 resonant cavities, was designed and constructed for the linac ALPI, where only poor information on the accelerated beam energy could be obtained from the magnetic field of the bending dipoles due to the achromatic design of the extraction line. This device will provide, without interfering with the beam itself, a continuous monitoring of the bunched beam average energy (with a resolution of 10^4 or better) and intensity, for beam currents as low as 1 nA.