

Measurements of Initial Beam Conditions for Halo Formation Studies, G. HAOUAT, N. PICHOFF, CEA-BIII/SPTN, Bruyères-le-Châtel; P.Y. BEAUVAIS, R. FERDINAND, J.M. LAGNIEL CEA-SACLAY-DSM/GECA and LNS, Gif-sur-Yvette - An experimental study of halo formation for a low-energy, high-brightness proton beam transported through a periodic FODO channel is in progress at Saclay. Since beam halo evolution sensitively depends on the initial beam conditions, in particular its emittance, precise measurements of this parameter have been performed at the front end of the FODO channel. They were made using two different techniques described here: the hole-profile method and the pepper-pot method. Measured data are presented and compared. The proton beam contains additional H_2^+ and H_3^+ ions which are troublesome for halo observation. To eliminate these undesirable species a Wien filter has been designed and installed behind the proton source at the beginning of the transport line. It is presented here, and measurements of beam profile and emittance obtained with and without this filter are reported.