

The TOP-ISS Linear Accelerator: A High Frequency Proton Linac for Therapy*, L. PICARDI, G. ORLANDI, C. RONSIVALLE, A. VIGNATI, ENEA - The Italian National Institute of Health (Istituto Superiore di Sanità, ISS), has recently (Dec. 1995) decided the construction of a proton linac for its TOP (Terapia Oncologica con Protoni) project. It is close to the Compact High Frequency Linac, envisaged by the TERA foundation for proton therapy. The TOP linac will be composed of a 428.3 MHz 7 MeV RFQ+DTL injector followed by a 7-70 MeV section of the innovative 3 GHz SCDTL structure, a 180° bending magnetic system, and a 70-200 MeV variable energy SCL 3 GHz structure. This machine, whose construction will begin in 1996, will be the first linear accelerator dedicated to proton therapy, and the first 3 GHz proton linac ever built. In this paper the accelerator design and the construction schedule will be described.