

Accelerator Physics of High Intensity Proton Accelerators, K. BONGARDT, M. PABST, KFA JUELICH - A review is given about technical and beam dynamical problems for high intensity proton linear accelerators. Special emphasis is given to the high β part of the linac. For the technically designed European Spallation Source proton linac with a 200 mA bunch current, Monte Carlo simulations are presented for core and halo particles. Space charge problems in the subsequent transfer line to either a target station or compressor ring are discussed. For long transfer lines without bunching, image forces cannot be neglected in all three planes. Comments are made about the use of superconducting cells.