

H⁻ Painting Injection for the JHF 3-GeV Synchrotron, S. IGARASHI, Y. IRIE, I. SAKAI, K. TAKAYAMA, I. YAMANE, KEK- The JHF 3-GeV synchrotron is designed to supply 200 microamps proton beam at 25 Hz repetition to the meson and the spallation neutron source, and 10 microamps to the 50-GeV ring. The H⁻ charge exchange injection is adopted at 200 MeV, where the injection painting will be performed in the transversal planes. Two painting methods are proposed and compared; one utilizes two sets of orbit bump magnets in the ring and so-called a corner foil for charge stripping, the other utilizes the kicker magnet which is placed at the linac-to-ring transfer line in order to paint in either of the transversal planes and a postage-stamp foil. The latter method is superior from view point of aperture requirement for lattice magnets, power supply manufacturing and a beam loss due to large angle scattering. The decay rate of the excited state of H⁰, produced by the interaction with stripping foil, is less than a part of ten thousands for both cases.