

**Beam Halo Collection for the JHF 3-GeV Synchrotron,** Y. IRIE, M. UOTA, KEK; A. DROZDZHIN, N. MOKHOV, FNAL - The JHF 3-GeV synchrotron is designed to supply 200 microamps proton beam at 25 Hz repetition to the spallation neutron source. In order to allow hands-on-maintenance for most area, beam-loss should be localized by means of a halo collection system at a restricted area where remote-handling devices are provided so that personnel do not receive excessive radiation dose. The design goal is to realize a few watts per meter for hands-on-maintenance area under a given beam-losses (a few percent of the total beam). The halo collection system comprises a primary collimator, followed by secondary collimators located approximately at  $(\theta)$  and  $(\pi - \theta)$  downstream in the collimation plane and  $(\pi/2)$  downstream in the orthogonal plane. The computer code STRUCT is used to simulate the beam loss distribution around the ring, and the resultant induced radioactivity and shield requirement are estimated by the code MARS.