

**The Broad-Band Impedance of the SPring-8 Storage Ring, T. NAKAMURA, SPring-8** - The longitudinal and transverse impedance of the SPring-8 storage ring was estimated by the simulation with MAFIA. The longitudinal and transverse impedance were estimated from both the longitudinal wake function  $W'_0(z)$  and  $W'_1(z)$ , respectively. Based on the Panofsky-Wenzel theorem, the comparison of the shape and the amplitude of these wake functions shows that the validity of the frequency dependence and the factor  $d$  of the well known but not rigorous equation  $Z_1^\perp(\omega) \sim 2c / (d^2 \omega) Z_0^\parallel(\omega)$  for each impedance source.