

Vibration at the ESRF, L ZHANG, ESRF - Beam stability involves the vibration of accelerator subsystems and components, especially as far as the storage ring magnets are concerned. Vibration aspects have been considered in the ESRF during both the construction and operation phase. Ground vibration was extensively studied: external and internal vibration sources have been identified and countermeasures have been taken to limit the influences of some vibration sources. Some vibrations induced by the accelerator subsystems and components are investigated and controlled by the use of suitable damping techniques. Dynamic behaviour of the magnet-girder assembly has formed the centre of our interest. Various techniques have been used in the consideration of vibrations at the ESRF: site vibration monitoring by use of a seismic recording network, vibration diagnostics including response measurements and modal testing, finite element analysis (modal, harmonic, spectrum response analysis).