

SSRF FAST ORBIT FEEDBACK SYSTEM DESIGN AND COMMISSIONING

C. X. Yin, D. K. Liu, M. Liu, S. W. Tang, L. Y. Zhao, SINAP, Shanghai

Abstract

As the 3rd generation light source, Shanghai Synchrotron Radiation Facility (SSRF) are pushing the requirement of beam stability to sub-micron in the range of DC to 100Hz. To satisfy this requirement, fast orbit feedback system is necessary, which consists of 40 eBPMs, 60 pair's correctors (horizontal and vertical). SSRF fast orbit feedback system has a 10kHz sampling rate. SVD of measured orbit response matrix is implemented as orbit correction algorithm. In this paper, the system structure, the structure of its hardware & software subsystems, and the simulation model are presented. At last, the system performance based on model simulation and system commissioning are given; the system parameters tuning method is discussed.

**CONTRIBUTION NOT
RECEIVED**