

Machine Operation

The beam commissioning of the SPring-8 storage ring begun on March 13, 1997. The operation statistics for the last four years are shown in Fig. 1. In 2000, the SPring-8 storage ring was operated on three- or four-week period for one cycle. The total operation time was approximately 5000 hours. About 67% of the operation time was available to the users and the remaining 33% was dedicated for: (i) the machine study, (ii) the machine and beamline tuning, (iii) the commissioning of the new optics (Phase-II optics), and (iv) the commissioning of new photon beamlines.

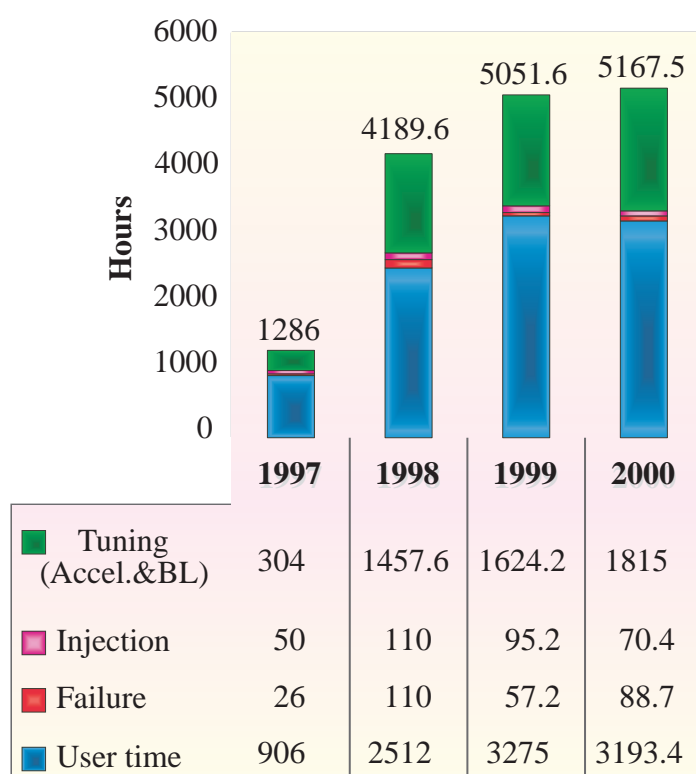


Fig. 1. Operational statistics since 1997.

Three different filling patterns were delivered to the user time; 53.5% in the multi-bunch mode operation, 30.7% in the several bunch mode such as 29 equally spaced 9-, 11- or 15-bunch trains, and the remaining 15.7% in the hybrid filling mode such as a 2/29-partially filled multi-bunch with 26-isolated bunches. For the hybrid filling mode, 1 or 1.5 mA is stored in each isolated bunch, with impurity level of 10^{-7} being routinely kept in the user time.