

Preface

The year of 1997 was a memorable year in the history of SPring-8. We started commissioning the storage ring on March 14, 1997 and succeeded in storing a current of 0.05mA on March 24. The first synchrotron radiation from a bending magnet was observed on the beamline BL02B1. Then, radiation from an undulator was successfully extracted and observed on the beamline BL47XU. Eight public beamlines, one R&D beamline and one RIKEN beamline were installed and commissioned from January to September. The dedication ceremony of SPring-8 was held on October 6, 1997. Mr. Tanigaki, the Minister of State for Science and Technology and Mr. Kaibara, the Governor of Hyogo Prefecture attended the Ceremony and gave congratulatory addresses.

Since the dedication ceremony, ten beamlines have been open for use. The first beam time from October 1997 to the end of March 1998, was mainly dedicated to tuning up the beamlines and experimental test experiments. The storage ring was operated at a maximum current of 20mA with a lifetime longer than 100 hours from October to December. All accelerators worked stably and beam time loss due to machine trouble was only 2% during this period. We have pursued machine studies to examine machine performance. The electron orbit has been monitored every 30 second by beam position monitors. By analyzing the data, we found that DC component or the circumference of the storage ring changes periodically in a little longer than one day. This phenomenon is due to the effect of earth tides.

The adjustment of beamline components and optical elements was performed on the beamlines, BL01B1, BL02B1, BL04B1, BL08W, BL09XU, BL10XU, BL39XU, BL41XU, BL44XU, and BL47XU. It became clear that SPring-8 can provide high quality synchrotron radiation for users in various research fields. Experimental tests were conducted on these beamlines and interesting results were obtained. Some of these results are reported in this volume.

The construction of new beamlines is continuing. Two public beamlines and three JAERI/RIKEN beamlines will be in operation in early February 1998.

This report summarizes all the activities of SPring-8 in 1997.



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