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OR30 - Operation of accelerator system at The Wakasa Wan Energy Research Center

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“At the Wakasa Wan Energy Research Center (WERC), we had constructed an accelerator system with a 5 MV tandem accelerator, which is an injector for a 200 MeV proton synchrotron.

After completion of the construction in 2000, we have operated the accelerator system for the ion beam analysis, irradiation for the material and biological sciences. In the period from 2002 to 2009, the study of the cancer therapy with a proton beam from the synchrotron had been performed. Recently, the accelerator beam has been used for testing radiation resistance of the semiconductor devices, especially used in space.

Our system is used for many users with various purposes. Stable operation of the system and efficient sharing of the operation duration are required. The tandem machine is used for all experiments. Large amounts of maintenance work are spent for the tandem accelerator. It is the most important to improve and maintain the withstand voltage performance in the operation of the tandem accelerator.

The system is operated and maintained by 2 researchers and 9 operators. The maintenance of the tandem accelerator is done with no help of the provider of the accelerator.”

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Session Classification: Operating Accelerators in Small Organizations