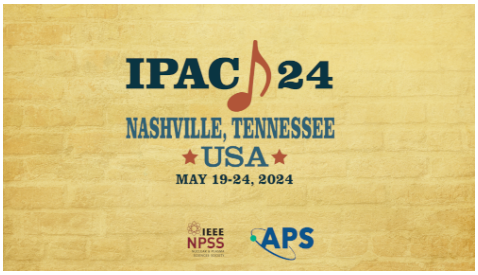

Contribution ID: **430** Contribution code: **TUPR62** Type: **Poster Presentation**

Influence of reduced baking time of Taiwan photon source front-end system on dynamic pressure

Tuesday, 21 May 2024 16:00 (2 hours)

The Taiwan photon source (TPS), a synchrotron accelerator at the National Synchrotron Radiation Research Center in Taiwan, is a third-generation accelerator operating at 3 GeV that was designed to create a high energy photon source. The TPS front-end (FE) systems are located between the storage ring and beamline, which was designed to protect the safety of users as well as control experimental requirements. As the FE vacuum pressure influences the storage ring and beamline vacuum pressures, the FE vacuum systems must maintain a low dynamic pressure. Therefore, at the beginning of FE system construction, each FE vacuum system is baked at 200℃ for 24 hours. Next, when the FE systems need to be upgraded or maintained lead to vacuum interventions, it must also be baked for 24 hours to recover a low dynamic pressure. However, the 24 hour baking process requires manpower support on-site owing to facility safety in the TPS tunnel. The maintenance of the FE systems takes two duty days. Therefore, reducing baking time is necessary in the TPS facility. The beam cleaning efficiency after reduced baking time has been described in this paper.

Footnotes

Funding Agency

Paper preparation format

Region represented

Asia

Primary author: SHUEH, Chin (National Synchrotron Radiation Research Center)

Co-authors: HSIAO, Yuan-Ming (National Synchrotron Radiation Research Center); CHEN, Bo-Ying (National Synchrotron Radiation Research Center); CHENG, Yu Tsun (National Synchrotron Radiation Research Center); CHENG, Chia-Mu (National Synchrotron Radiation Research Center); GUO, Yan-Hong (National Synchrotron Radiation Research Center); YANG, Yi-Chen (National Synchrotron Radiation Research Center); CHAN, Che-Kai (National Synchrotron Radiation Research Center); CHANG, Chin-Chun (National Synchrotron Radiation Research Center)

Presenter: CHAN, Che-Kai (National Synchrotron Radiation Research Center)

Session Classification: Tuesday Poster Session

Track Classification: MC7: Accelerator Technology and Sustainability: MC7.T14 Vacuum Technology