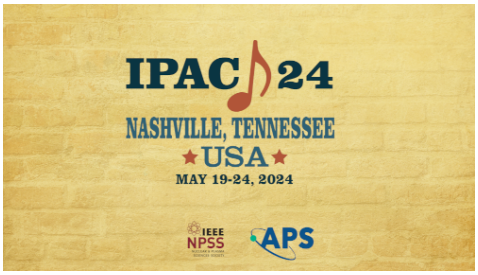

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Canadian Light Source developments of the ALBA /CLS DLLRF system

Thursday, 23 May 2024 16:00 (2 hours)

Located in Saskatoon, Saskatchewan, Canada, the Canadian Light Source (CLS) has been operation since 2003. CLS is a 3rd generation Synchrotron Light Source operating at 2.9GeV. The CLS Booster RF system uses a 100 kW, 500 MHz solid-state power amplifier to power two 5-cell "PETRA"cavities. Recently ALBA and CLS collaborated to commission a CLS-constructed version of the ALBA Digital Low-Level RF system in the CLS Booster ring RF system to replace the aging analog low-level RF system. Changes were required to address differing configuration and requirements between the CLS and ALBA RF systems. Challenges and opportunities for system machine safety, reliability, and performance improvements identified during and after commissioning have been addressed. Hardware configuration changes were implemented. Additional hardware devices have been produced and incorporated to streamline interfacing and to mitigate some risks. Software and machine code changes were made to alter and automate functions, and to reduce potential stresses on high-power RF equipment components.

Footnotes

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Paper preparation format

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Region represented

North America

Primary author: BEAUREGARD, Denis (Canadian Light Source Inc.)

Co-authors: BOYLE, Connor (Canadian Light Source Inc.); STAMPE, Jonathan (Canadian Light Source Inc.); WILLARD, Juniper (Canadian Light Source Inc.)

Presenter: BEAUREGARD, Denis (Canadian Light Source Inc.)

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