

Low Level RF Workshop 2022



9-13 Oct 2022, Brugg-Windisch, Switzerland



Contribution ID: 53

Type: **Poster**

LCLS-II LLRF System Checkout Lessons Learned

Wednesday 12 October 2022 14:46 (1 minute)

The SLAC National Accelerator Laboratory has completed the installation and checkout of hardware for the SRF based accelerator LCLS-II, an ultra-bright Free Electron Laser. The LCLS-II is composed of 296 SRF cavities, each with its own LLRF control system. During production, care was taken to preserve the low noise design performance needed for controlling the 5×10^7 QL SRF cavities. A novel continuous checkout process was run for months before and after SRF commissioning began. Production hardware has also been sent to collaboration SRF facilities for performance evaluation, firmware/software development, and cryomodule testing. So, how did it go? This work will discuss practical aspects of LLRF system installation, checkout, and integration. Test methods, results, statistics, and lessons learned will be presented.

Authors: RATTI, Alessandro; MCCOLLOUGH, Andre (SLAC); BENWELL, Andy (SLAC); CHASE, B. (Fermilab); SERRANO, Carlos (Lawrence Berkeley National Laboratory); HOVATER, Curt (Jefferson Laboratory); CULLERTON, Ed; HUANG, Gang (LBNL); CHEN, Jing (SLAC); DIAZ-CRUZ, Jorge A (SLAC National Accelerator Laboratory); EINSTEIN-CURTIS, Joshua (RadiaSoft); DOOLITTLE, Lawrence (Lawrence Berkeley National Laboratory); PETREE, Mark (SLAC); BACHIMANCHI, Ramakrishna (Jefferson Laboratory); KELLY, Richard (SLAC); MURTHY, Shree (LBNL); HOOBLER, Sonya (SLAC)

Presenter: BENWELL, Andy (SLAC)

Session Classification: Poster Session

Track Classification: Low Level RF Workshop 2022