



Contribution ID: 1383 Contribution code: MOPL149

Type: **Poster Presentation**

Low-level radio-frequency system integrated with feed-forward control and vector modulation

Monday, 8 May 2023 16:30 (2 hours)

To provide a more accurate and stable Radio-Frequency (RF) signal in conditioning and processing test progress, it is necessary to design an Low-Level Radio-Frequency (LLRF) control system which can provide high precision RF driving signal based on meeting the amplitude and phase stabilization requirement. Through Feed-Forward operation, accurate phase adjustment and amplitude adjustment are realized inside the pulse, to realize the precision and automation of phase-inversion, amplitude stabilization, phase stabilization, and waveform adaptation matching. An LLRF System integrated with feed-forward control and vector modulation output was designed and built, the long term working stability of the LLRF system was verified during a new 50MW S band Klystron conditioning progress.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: XIAO, Chengcheng (Shanghai Synchrotron Radiation Facility)

Co-authors: FANG, Wencheng (Shanghai Synchrotron Radiation Facility); TAN, Jianhao (Shanghai Synchrotron Radiation Facility); WANG, Cheng (Shanghai Synchrotron Radiation Facility); ZHANG, Junqiang (Shanghai Synchrotron Radiation Facility)

Session Classification: Monday Poster Session

Track Classification: MC1: Colliders and other Particle Physics Accelerators: MC1.A08: Linear Accelerators