

Extension of reference tracking method to reduce RF amplitude drift in particle accelerators

Thursday 29 August 2024 16:00 (2 hours)

RF long-term stability (drift) is as important as RF short-term stability for the stable operation of particle accelerators including PAL-XFEL. Increasing the performance of LLRF itself becomes an important factor in maintaining the long and short-term stability of the RF field. The reference tracking method applied to LLRF is effectively used as a method of reducing the drift of the RF phase. However, this drift improvement method was not applied to the RF amplitude. This time, the method of reference tracking was newly expanded to improve the RF amplitude drift. As a result of applying this new function to PAL-XFEL LLRF, it is showing some effect in improving the RF amplitude drift. We would like to share the progress so far.

Footnotes

Funding Agency

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