



Contribution ID: 249 Contribution code: MOP09

Type: Contributed Poster

Origin of Echo-Enabled Harmonic Generation

Monday, 22 August 2022 17:10 (20 minutes)

Echo-Enabled Harmonic Generation (EEHG) became a very promising and very popular technique after original publication [1]. As it commonly happens, this was the reinvention of already known technique, which was not broadly known in FEL community. EEHG vaguely reminded me of theory developed at Novosibirsk Institute of Nuclear Physics (BINP), but I was not sure that my memory is correct. Recently, BINP made their preprint available on the web and I was able to confirm that technique proposed by I.G. Idrisov and V.N. Pakin [2,3] based on the same principles as described in [1]. In this presentation I would like to briefly review this original invention and to give historic perspective to EEHG.

[1] G. Stupakov, Phys. Rev. Lett. 102, 074801 (2009)

[2] I.G. Idrisov and V.N. Pakin, "High efficiency cascade bunching using a single frequency modulation" Preprint 80-197 of Institute for Nuclear Physics, October 3, 1980, Novosibirsk, Russia (in Russian)

[3] I.G. Idrisov and V.N. Pakin, "High efficiency bunching of ultra-relativistic beams using magnetic compressors", Preprint 80-192 of Institute for Nuclear Physics, October 3, 1980, Novosibirsk, Russia (in Russian)

I have read and accept the Privacy Policy Statement

Yes

Primary author: LITVINENKO, Vladimir (Stony Brook University)

Presenter: LITVINENKO, Vladimir (Stony Brook University)

Session Classification: Monday posters

Track Classification: FEL Theory