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THz generation fro 3-D printed structures in accelerators

Wednesday, 9 November 2022 13:30 (30 minutes)

The presentation will discuss advancements and new concepts on the topic of THz generation by 3-d printed structures in relativistic electron beams. A new concept has been developed that would greatly increase the efficiency of THz light generation, as well as allow for greater possibilities for control of the properties of the so generated Thz light. Wavelength, collimation and possibly pulse duration of the THz pulse could all be parameters that can be selected with the choice of a proper 3-D structure. This new concept would be more synchronized with the FEL beam than laser-based THz sources, and would take up less space and would be less expensive than THz undulators. The manufacture of the structures would be significantly simpler as well.

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Primary authors: JURANIC, Pavle (Paul Scherrer Institut); Dr ISCHEBECK, Rasmus (PSI); Prof. UWE, Niedermeyer; Ms DADASHI, Raziye

Presenter: JURANIC, Pavle (Paul Scherrer Institut)

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