



Contribution ID: 210

Type: Oral

## High energy physics studies at PW-class laser and advanced accelerator linear collider facilities

*Thursday, 18 May 2023 14:50 (15 minutes)*

It is widely accepted that the next lepton collider beyond a Higgs factory would require center-of-mass energy of the order of up to 15 TeV with advanced and novel accelerators (ANAs) being the leading candidates for it. However, intermediate facilities at 20-100 GeV are required to test the technology and demonstrate key subsystems. Here possible design and science case for a 20-100 GeV center-of-mass energy ANA-based lepton collider that can be a candidate for an intermediate facility are presented. A special attention is paid to the study of strong field quantum electrodynamics effects. They are expected to start to manifest themselves at PW-class laser facilities and to dominate the charged particle interactions with strong fields at ANA-based lepton collider.

**Presenter:** BULANOV, Stepan

**Session Classification:** Accelerators: Advanced Accelerator Concepts