WG 5: ERL Applications

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ERL applications talks

- ERL-based Electron-Ion Colliders, V. Ptitsyn
- The Femto-Science Factory: A Multi-turn ERL-based Light Source, T. Atkinson
- 10 Years of ALICE: From Concept to Operational User Facility, P. Williams
- Design work of the ERL-FEL as the high intense EUV light source N. Nakamura
- Science cases on ERL as a synchrotron light source, H. Kawata
- ERL as FEL driver, Y.Jing
- ERL facility at CERN for applications, E. Jensen
- A Lepton Energy Recovery Linac Scalable to TeV, V. Litvinenko
- Current Status of the MESA Project, R.Heine
- Laser Compton Sources Based On Energy Recovery Linacs , R. Hajima
- Using ERLs for Coherent electron Cooling, I.Pinayev
- ERL as high intensity mono-energetic γ-ray sources, V. Yakimenko
- Ultra-High Flux of X-ray/THz Source based on Asymmetric Dual Axis Energy Recovery Configuration, I. Konoplev
- ERL for low energy electron cooling at RHIC (LEReC), J.Kewisch
- An Inverse Compton Scattering Beamline for High-Energy, Time-Resolved X-ray Scattering Studies of Materials, G.Hoffstaetter
- Nuclear and High-Energy Physics Experiments with Cornell's FFAG ERL, M. Perelstein

"Relevant to ERL applications" talks

– actually all talks at this workshop are relevant and important for one of foreseen applications

Goals/Charge

- ## Discuss applications which require ERLs or can benefit from ERLs

- ## Discuss strengths & weaknesses of ERLs as accelerator used for applications
  - Example of possible weaknesses: (a) difficulty with radiation protection/ beam loss limitations; (b) need to bend electrons and suffer SR losses and effects….
  - Example of obvious advantages: (a) energy efficiency; (b) ability of providing fresh beam very high power; (c) preserve polarization …

- ## Discuss set(s) of critical parameters which ERLs should demonstrate to become of interest for various applications
  - High energy/nuclear physics (including γ-ray sources)
  - Light sources/FELs
  - Material science/technology
  - Industry (including XUV lithography)
  - ……