

A 5 GEV, 100 MA ERL BASED ON CW SRF

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Abstract

ERLs have the potential of producing linac quality beams with a beam power hitherto only achievable in rings. Such beams can, for example, power x-ray sources with extreme spectral brightness, colliders with increased luminosity, or electron cooler systems. Cornell plans to build an ERL for hard x-rays with a CW, 5GeV SRF linac for 100mA beam. Initial results from a prototype high-current, CW gun and SRF injector linac will be shown. Subjects that are investigated to prepare for construction of this x-ray ERL will be discussed.

**CONTRIBUTION NOT
RECEIVED**