FUTURE FEL'S

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Abstract

Free electron lasers offer exciting new capabilities in EUV and x-ray science, with possibilities for producing intense x-ray pulses with temporal and spatial coherence, tunable wavelength and polarization, and with pulse duration from hundreds of femtoseconds to sub-femtosecond.

Superconducting linacs offer significant benefits in providing high quality electron beams required for free-electron lasers, maintaining a high gradient with reduced wakefield effects. CW applications offer potential for higher pulse repetition rates, with the advantages of stable phase and amplitude of steady-state operations. A number of new SC RF FEL facilities are proposed, and outlined in this talk. Requirements of major systems are described and proposals and concepts for future FEL's presented.

NO SUBMISSION RECIEVED