

JENTSCHKE LECTURE.

DESY Lecture in memory of Willibald Jentschke

The Linac Coherent Light Source (LCLS) “Accelerator Physics Challenges of Free-Electron Lasers”

Prof. Dr. Paul Emma

SLAC National Accelerator Laboratory
Menlo Park, California



Free-electron lasers (FEL) are opening up new scientific opportunities in atomic physics, chemistry, biology, and many other fields of research, and are capable of imaging the structure and dynamics of matter at atomic size and time scales. This new class of 4th generation light source also creates new demands on electron beam quality from accelerators, including high energy, low emittance, and ultra-short bunch lengths. The Linac Coherent Light Source (LCLS) at SLAC is presently meeting these demands, delivering coherent x-rays with Angstrom-wavelengths and femtosecond-pulse durations to a growing list of researchers. This presentation introduces the LCLS, its operational characteristics, and also surveys the key accelerator physics challenges of this revolutionary new type of light source.

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17:00 h

DESY Auditorium

Notkestraße 85 | 22607 Hamburg | Germany

More Information: www.desy.de/jentschke

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