Universität Hamburg
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CANDLE

German-Armenian Joint Practical Course on Accelerator Physics

Supported by PIER (Partnership for Innovation, Education and Research) and the Hamburglobal funding program, an internship on advanced accelerator physics at CANDLE Institute in Armenia is offered. The internship will be carried out by selected small mixed teams of German and Armenian students.

During a one-week stay, each team will perform one out of 8 experiments offered at AREAL accelerator (CANDLE SRI). AREAL is an ultrafast laser driven electron accelerator that produces extremely short relativistic electron pulses using high-frequency electric fields. Students will perform a wide range of experiments in the field of accelerator physics and techniques.

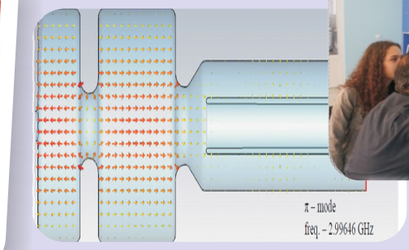
In addition to acquired important skills the students will experience the significance of international cooperation and knowledge exchange. The internship will be conducted in English and is expected in early October 2022.

Ultrafast lasers

- IR and UV lasers
- Laser pulse manipulation
- Beam shaping and control

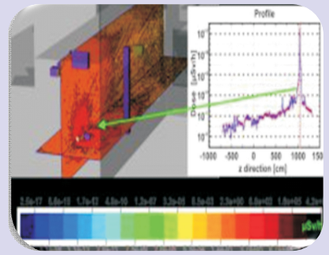
Electromagnetic fields

- Cavities and waveguides
- High power electromagnetic fields
- RF measurements and control



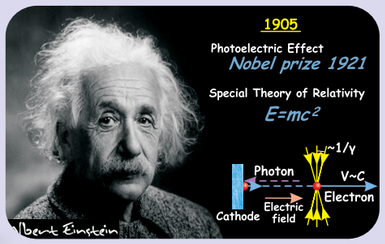
Accelerator technology

- Ultrahigh vacuum
- Beam – matter interactions
- Magnets for accelerators



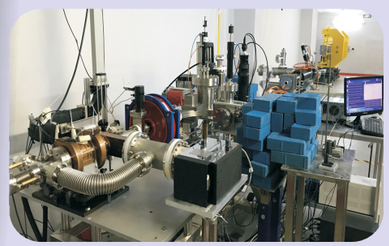
Generation of ultrashort relativistic electron beams

- Photoelectric effect
- High gradient acceleration
- Significance of relativistic kinematics



Beam physics and diagnostics

- Energy and energy spread
- Beam phase space
- Beam profile and charge



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Welcome to Armenia - 2022

PIER
Partnership of
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MES of RA
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