Student Assistant for a Research Task or a Master Thesis in the Strong-Field QED Experiment at FACET-II (SLAC)

Predictions of strong-field quantum electrodynamics (SFQED) models have been widely studied. The Strong-Field QED experiment at FACET-II takes advantage of the high energy and stability of electron beams of a linear accelerator and the high-intensity laser to explore the regime of interaction where the perturbative treatment of a strong electromagnetic (laser) field breaks down, i.e., the electrons start to interact coherently with many photons. In the experiment, we expect to observe phenomena such as: nonlinear Compton Scattering, radiation reaction and electron-positron pair creation.

Your tasks:
- Perform numerical simulations to predict the behavior of the detectors according to the experimental parameters
- Support the development of positron and electron detectors for the SFQED experiment
- Assemble and carry experimental tests for the SFQED experiment at FACET-II, SLAC (USA)

Your profile:
- Background in Physics or Optics
- Flexible and ability to work creatively and independently
- Highly motivated to work in a large scientific collaboration
- Programming skill are desirable
- German communication skills, at least intermediate
- English communication skills, both written and spoken

References:

Further information:
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