



# Institutskolloquium

Am **4. Mai 2005, 16:00 Uhr** spricht:

**Prof. Dr. Ken Ledingham**

Dept. of Physics, Univ. of Strathclyde, Glasgow, Scotland  
& AWE plc, Aldermaston, Reading, UK

über

## “A Vision for Laser Induced Particle Acceleration and Applications”

Large particle accelerators like CERN and GSI have for more than half a century been at the vanguard of nuclear and particle physics revealing the fundamental building blocks and forces of nature.

However the size and cost of these are fuelling serious efforts to develop new and more compact accelerator technologies. Recently it has been shown that ultra-intense lasers, via plasma conditions, can generate high intensity beams of electrons, photons, protons, neutrons and heavy ions. This talk will describe some of the experiments which have been carried out as proof of principle of this new field. The experiments which will be described were mostly carried out on large single pulse lasers which equally are large accelerators.

However it will be argued that the future of the field especially for medical applications lies in compact lasers of a similar intensity to the large single shot lasers. This may yield the vision of particle acceleration on a “table top”

**Ort: Max-Born-Saal, Max-Born-Str. 2a**

Interessenten sind herzlich eingeladen.

Prof. Dr. W. Sandner

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