



TECHNISCHE
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IAP-SEMINAR

EINLADUNG

Termin: **Dienstag, 29.3.2011 um 16:00 Uhr**
Ort: **Technische Universität Wien,
Institut für Angewandte Physik,
Seminarraum 134A, Turm B (gelbe Leitfarbe), 5. OG
1040 Wien, Wiedner Hauptstraße 8-10**

Vortragender: **Dipl.-Ing. Donat Holzer**
Cern/CH

Thema: **Experimental and theoretical studies for the CERN Super
Proton Synchrotron (SPS) Vacuum System**

Kurzfassung

In the LHC and its injector chain the electron cloud effect induced by photoelectrons, gas ionization and secondary electrons emitted from the beam pipe walls can be a performance limitation. A possible mitigation strategy is to coat the beam pipe walls with a material with exhibits a low secondary electron yield. Amorphous carbon thin films, produced by DC magnetron sputtering, are currently studied extensively at CERN for that purpose. In my talk, I will first present the coating procedure and characterization methods of amorphous carbon films. In the second part, I will describe the LINAC 3 experimental setup to measure heavy-ion induced desorption yields and give first results for amorphous carbon films. Furthermore, an extension to the Inelastic Thermal Spike (ITS) model is presented, with the goal to predict heavy-ion induced desorption yields. Finally, I will present my future work, including pressure simulations for the LINAC 3 experiment and a further extension of the ITS model to higher energies relevant for the SPS.

*Alle interessierten Kolleginnen und Kollegen sind zu diesem Seminar
(45 min mit anschließender gemeinsamer Diskussion) herzlich eingeladen.*

*H. Störi e.h.
(LVA-Leiter)*