



TECHNISCHE
UNIVERSITÄT
WIEN

Vienna University of Technology

INSTITUT FÜR
ANGEWANDTE PHYSIK
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IAP-SEMINAR

EINLADUNG

Termin: **Dienstag, 9.11.2010 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: **Rahat Ullah**
Seibersdorf Labor GmbH, Seibersdorf/NÖ

Thema: **Laser-induced thermal damage to the retina**

Kurzfassung

Excised bovine eyes are used as models for threshold determination of laser-induced thermal damage to the retina for varying spot sizes and exposure durations. The damage thresholds as determined by fluorescence viability staining compare very well with prediction of an extended computer model developed by this group. Both models threshold data compare well with the already published data of the rhesus monkey available in this time domain. The dependence of thermal damage thresholds on pulse durations for time between 1 ms -- 1 s is seen. We conclude retinal pigment epithelium (RPE) cell damage as the primary damage mechanism. Based on these findings a validated computer model provides the basis for safety analysis of more complicated retinal exposures scenarios and will be used in future for calculating damage thresholds of more complex laser beam parameters.

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

*W. Husinsky e.h.
(Seminar-Chairperson)*

*H. Störi e.h.
(LVA-Leiter)*