

Thursday 26 September

CERN COLLOQUIUM

at 16.30 hrs – Auditorium

Prions and brain diseases in animals and humans

by Maurizio POCCHIARI / Laboratory of Virology,
Istituto Superiore di Sanita, Roma, Italy

Friday 27 September

SEMINAR FOR CERN GUIDES

organised by CERN Visits Service – Groupe DSU/CP

at 16.00 hrs – Auditorium

Particle accelerators for therapy

by Pierre MANDRILLON / CERN-LHC

EDUCATION SERVICES EDUCATIFS



ENSEIGNEMENT TECHNIQUE TECHNICAL TRAINING

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Information sur les cours, dates et places disponibles sur WWW :
Information about the courses, dates and places available on WWW :

<http://www.cern.ch/Training/>

TECHNICAL TRAINING SEMINAR

Fibre Reinforced Composites Rikard Gebart

10 lectures of 2 hours, starting 20 September 1996

This series of lectures is intended for engineers and physicists who want to improve their understanding of composite materials.

Prerequisites: although no particular knowledge of composites is necessary, the participants should be familiar with basic solid mechanics and have an understanding of elementary concepts like stress, strain, material constitutive parameters, beam and plate theory. In addition some knowledge of matrix algebra and elementary calculus will be necessary.

The following subjects will be treated:

- Materials: properties of common fibres, matrices and fillers.
- Laminate theory: theoretical analysis of composite properties.
- Performance: static, fatigue and impact properties.
Environmental and other long time effects.
Damage tolerance.

- Manufacturing: different manufacturing methods and their characteristics. Theoretical description of the processes. Quality inspection methods.
- Design: failure prediction, laminate design and joint design.

The seminar will be accompanied by many practical exercises and case studies based on problems presently encountered at CERN.

Recommended literature:

1. Mallick, P.K., "Fiber-reinforced Composites - Materials, Manufacturing and Design", Marcel Dekker, 1993 (appr. CHF 220.-)
2. ESAComp Software, European Space Agency, 1996

This course takes place on Fridays from 2 p.m. to 4 p.m. in building 112 room R-018.

The first lecture will start on Friday 20th of September.

If you wish to follow this course, please fill in **as soon as possible** an "Application for Training" form available from your Divisional Secretariat or from the Divisional Training Officer (DTO). A financial contribution of CHF 500.- per person will be charged to the division.