DIPARTIMENTO DI FISICA "E.Fermi"
UNIVERSITÀ DI PISA
CORSO DI DOTTORATO IN FISICA
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CORSO DI DOTTORATO IN FISICA

Giovedi 28 aprile 2005
ore 11:00

Dipartimento di Fisica
Via Buonarroti, 2
Sala Seminari (248) I piano - Ed. C

Prof. Klaus Petermann

Institute of Laser-Physics, University of Hamburg

terrà un seminario su:

"Novel thin-disc laser materials with special crystal structures"

Abstract: For high power thin-disc lasers a high concentration of the active ions and a fluorescence quantum efficiency close to unity are absolutely necessary. However, when doping the host lattice with a high Yb-concentration, energy migration occurs within the Yb-ions and finally a transfer to unwanted impurities resulting in a diminished quantum efficiency. There exist two ways out: Reduction of the number of impurities or reduction of the energy migration by using crystal structures with large Yb-Yb separations. The second route seems to be the more promising one, since impurities can never be avoided totally. In this talk the spectroscopic and laser properties of Yb:LSB and Yb:NGW will be presented and compared with the corresponding data of Yb:YAG.

M.Tonelli