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Oddělení diodově čerpaných laserů a realizační tým projektu HiLASE

Vás zve na seminář

High power laser developments at JAEA

Hiromitsu Kiriya

Advanced Laser Development Group & Laser Application Technology Division
Quantum Beam Science Directorate
Japan Atomic Energy Agency

We present some specific high power laser systems that are being developed at our laboratory for many applications such as high field science and nonlinear optics. We report on an ultra-high intensity petawatt-class OPCPA/Ti:sapphire hybrid laser system that can produce a pulse energy of ~ 18 J with ~ 30 fs pulse duration for studying extremely high intensity laser matter interaction processes, a small-scaled OPCPA/Yb:YAG hybrid laser system that can generate a pulse energy of ~ 100 mJ with ~ 500 fs pulse duration at 10 Hz as a compact and high efficiency system, and a Nd:YAG master oscillator power amplifier (MOPA) laser system that can provide a pulse energy of 360 mJ with 30 ns pulse duration at 1 kHz as a high average power laser system. We also briefly introduce a Yb:YAG laser system that is being constructed to realize a pulse energy of 100 mJ of ps pulse duration at 1 kHz as a high repetition system and an OPCPA laser that is being developed toward a pulse energy of 10 mJ of sub-10 fs pulse duration at 1 kHz as an ultra-short pulse and high repetition laser system. We discuss the basic design aspects and present the results from our experimental investigations of these laser systems.

***který se bude konat dne 24. 7. 2012 od 14:00
v zasedacím sále***

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