



Tue, May 6, 2014 – 11.00-12.00 – room 131 building C
The 20PW OPCPA laser system.

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The aim of the 20PW project is to upgrade the existing Vulcan laser, located at the Central Laser Facility (CLF), to beyond the 20PW power level. To achieve these specifications we plan to generate pulses with energies of 400J and pulse duration less than 20fs using the technique of optical parametric chirped pulse amplification, OPCPA. The amplification is divided in three stages. In the first stage the laser pulse is generated and amplified up to μ J in the picosecond domain. Then the pulse is stretched to the nanosecond timescale and amplified up to the Joule level within a repetition rate of 2Hz. Using a novel amplification scheme in the first stage united to the dual CPA technique we will guarantee a high contrast pulse at the end of the system. The last stage is designed to increase the pulse energy up to 600J using a big single shot Nd:glass laser. In this presentation the overall project will be presented, focusing more on the amplification technique and the compression challenges.

Wed, May 7, 2014 – 15.00-17.00 – room 241 building C
Laser-driven inertial confinement fusion: principle, issues, achievements

Stefano ATZENI

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Abstract will follow.