**REACTOR FOR BORON FUSION WITH PICOSECOND ULTRAHIGH POWER LASER PULSES AND ULTRAHIGH MAGNETIC FIELD TRAPPING**

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Deuterium tritium (DT) fusion produces apart from stable helium such intense neutron emission that the blankets of these reactors were considered as "hottest radioactive environment on earth" [1]. The reaction of light hydrogen (protons) with the boron isotope 11 (boron fusion HB11) primarily resulting only in helium and less radio activity per generated energy than burning coal. HB11 fusion was shown to be extremely more difficult than DT until the non-thermal nonlinear force driven plasma blocks from ultrahigh acceleration were produced for initiation of fusion flames [2]. Laser pulses of ps duration and >PW power produce block ignition in solid fuel where HB11 fusion is not more difficult than of DT [3]. Trapping the reaction by ultrahigh magnetic fields of 10 kilotesla results in more than GJ energy of alpha particles ignited by 30kJ laser pulses [4], however, only after very HB11 fusion [5] was evaluated showing avalanche amplification [6]. After a first scheme of a fusion reactor resulted in the feasibility of economic energy production, more details of the reactor design are presented about the involved techniques with million volts converted into multi-phase electric currents, and the design of involved laser technology.

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