

Abstract Submitted  
for the APR10 Meeting of  
The American Physical Society

**Deconfinement of Quarks with TeV Attosecond Photon Beams**

V. ALEXANDER STEFAN, Institute for Advanced Physics Studies, Stefan University, La Jolla, CA. — Recently, I have proposed a novel heuristic method for the deconfinement of quarks.<sup>1</sup> It proceeds in two phases.<sup>2</sup> Firstly, a frozen hydrogen pellet is inertially confined by the ultra-intense lasers up to a solid state density. Secondly, a solid state nano-pellet is “punched” by the photon beam created in the beat wave driven free electron laser (BW-FEL), leading to the “rapture” (in a “karate chop” model) of the “MIT Bag”<sup>3</sup> before the asymptotically free quarks move apart. Hereby, I propose TeV, a few 100s attosecond, photon beams in interaction with the nano-pellet. The threshold “rapture force” of the TeV attosecond photon is  $10^7\text{N}$ .

<sup>1</sup>M. Gell-Mann. **The Quark and the Jaguar: Adventures in the Simple and the Complex** (New York, NY: W.H. Freeman and Co., 1994) [cf. M. Gell-Mann, *The Garden of Live Flowers* in: V. Stefan (Editor), **Physics and Society. Essays Honoring Victor Frederick Weisskopf** (Springer, 1998), pp. 109-121].

<sup>2</sup>V. Alexander Stefan, **On a Heuristic Point of View About Inertial Deconfinement of Quarks**, American Physical Society, 2009 APS April Meeting, May 2-5, 2009, abstract #E1.038.

<sup>3</sup>J. I. Friedman and H. Kendall, *Viki*, in: V. Stefan (Editor), **Physics and Society**. (Springer, 1998), pp. 103-108].

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Date submitted: 22 Oct 2009

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