Sixteenth Marcel Grossmann Meeting



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How a Laser Physics Induced Kerr-Newman Black Hole Can Release Gravitational Waves without Igniting the Black Hole Bomb (Explosion of a Mini Black Hole in a Laboratory)

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Note, that micro black holes last within micro seconds, and that we wish to ascertain how to build, in a laboratory, a black hole, which may exist say at least up to 10^{^-1} seconds and provide a test bed as to early universe gravitational theories. First of all, it would be to determine, if the mini black hole bomb, would spontaneously occur, unless the Kerr-Newmann black hole were carefully engineered in the laboratory. Specifically, we state that this paper is modeling the creation of an actual Kerr Newman black hole via laser physics, or possibly by other means. We initiate a model of an induced Kerr-Newman black Holes, with specific angular momentum J, and then from there model was to what would happen as to an effective charge, Q, creating an E and B field, commensurate with the release of GWs. The idea is that using a frame of reference trick, plus E + i B = -function of the derivative of a complex valued scalar field, as given by Appell, in 1887, and reviewed by Whittaker and Watson, 1927 of their "A Course of Modern Analysis" tome that a first principle identification of a B field, commensurate with increase of thermal temperature, T, so as to have artificially induced GW production. This is compared in part with the Park 1955 paper of a spinning rod, producing GW, with the proviso that both the spinning rod paper, and this artificial Kerr-Newman Black hole will employ the idea of lasers in implementation of their respective GW radiation. The idea is in part partly similar to an idea the author discussed with Dr. Robert Baker, in 2016 with the difference that a B field would be generated and linked to effects linked with induced spin to the Kerr-Newman Black hole.

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