

## Review on The problem of weak and strong nuclear forces

Jamie Watersmith

Morningstar Applied Physics, LLC, USA

### Abstract:

In that time of Planck, Bohr and Einstein, established researchers encountered an abnormal new universe of nuclear scale phenomena and reacted with straightforward, but radically new, physical ideas and perspectives. Fruitful early models of that type are the Bohr Model of the Hydrogen molecule and Uhlenbeck and Goudsmit's model of the turning electron. The issue of feeble and solid atomic powers and expectation of the Higgs-Boson mass from the GEMS (Gravity electro-attraction solid) unification hypothesis John Brandenburg Morningstar Applied Physics, LLC, Vienna, Virginia 22182, (USA) Email: brandenburg@madisoncollege.edu The GEMS (Gravity Electro-Magnetism Strong) hypothesis is stretched out to the issue of Weak also, Strong Nuclear Forces and the issue of the Higgs Boson mass, as the start of an exertion to incorporate short range Nuclear Forces in the fruitful GEM unification hypothesis. The presence of a smaller 5<sup>th</sup> measurement is found to make subatomic structures whereupon surface resonances and Mie scatterings happen, and these resonances can give rise quanta, called, here, mieons, that intercede atomic powers.. In the Kaluza-Klein hypothesis of EM and gravity, a 5<sup>th</sup> power field called the iRadion emerges as a scalar, with a mark number of the Radion communication in the GEM hypothesis:  $\approx 42.8503$ . Higher request resonances off the electro-static radii of the electron, proton and 5<sup>th</sup> measurement size type of the GEM hypothesis, produce the quanta with masses of the pion  $m_{\pi} = 2 m_e \approx 140.0$  MeV and Z boson:  $m_Z = 2 m_p = 80.4$  GeV. The c meson  $m_c = 2985$  GeV is related to the 5<sup>th</sup> measurement compactification power interceded by the Radion field. Another molecule related with is the Radion dissipating quanta off the fifth measurement with a mass  $m_{\pi} \approx 127.7$  GeV, which is the Higgs-Boson. Gotten : July 5, 2012 Acknowledged : September 7, 2012 Distributed : September 15, 2012 Abstract Full Paper \*Corresponding author's Name and Add. John Brandenburg Morningstar Applied Physics, LLC, Vienna, Virginia 22182, (USA) Email: jebrandenburg@madisoncollege.edu Watchwords Jewel unification hypothesis; Quantum electrodynamics; Weak power; Strong power; Exchange boson; Mie dissipating; Higgs Boson. id9026453 pdfMachine by Broadgun Software - an extraordinary PDF essayist! - an incredible PDF maker! - <http://www.pdfmachine.com> <http://www.broadgun.com> JSE, Full Paper tron, which represented observables with basic models, and even now, fill in as a reason for more complex understandings. The GEM hypothesis is a mathematical hypothesis, that is a compound of the Sakharov [7] and Kaluza-Klein hypothesis [8] approaches to the unification of EM and gravity, the

two long-run powers of nature. The hypothesis is genuinely crude, being depicted as a Bohr Model of field unification at this point, by relationship to the early straightforward model of the quantum mechanics of the hydrogen particle. Nonetheless, the Diamond hypothesis is effective in clarifying the fundamental relationship of EM and gravity power handle, that the texture of spacetime is electromagnetic, and gets the field conditions of both with the 5<sup>th</sup> measurement of Kaluza-Klein and by connecting the presence of the proton and electron, the least vitality end individuals from the Lepton also, Baryon families as a couple of fields, to the presence of the power field pair of gravity and EM. The GEM hypothesis finds the estimation of G and the mass of the proton as far as the Planck mass, both to high precision, with out free boundaries, subsequently. The GEM hypothesis connected the presence of the electronic charge and old style molecule range, as a shrouded measurement size,  $r_0$ , to the presence of the mass size of the sub-nuclear particles, the electron and protons. Be that as it may, it is presently perceived that the GEM hypothesis made an entryway to understanding the two short range powers of nature the Weak and Strong atomic powers, on the grounds that in binding together gravity and EM in a mathematical hypothesis, it created a geo-metric scale system for atomic particles and the system for their cooperations. The GEM hypothesis created the image of EM powers between charged articles as well as likewise between uncharged structures that can be broadened to incorporate short-run atomic powers. Subsequently, the GEM hypothesis can be reached out to clarify the Weak and Strong powers dependent on two proposes: 1. The electron and proton show up as resonances off the Kaluza-Klein 5<sup>th</sup> dimension size of the Radion or mass inciting field made when EM and Gravity independent; 2. Second request quantum Mie scatterings off the EM structures of the electron what's more, proton and the 5<sup>th</sup> measurement itself make boson fields related with Strong Weak and Mass initiating fields. In the Kaluza-Klein 5<sup>th</sup> dimensional hypothesis, whereupon the GEM hypothesis is based, a 5<sup>th</sup> power field, a scalar field called the R-field or iRadion field [9], must exist with massless quanta. This can be seen heuristically in the setting of the SU(5) hypothesis of Georgi and Glashow [10], with SU(5) representing a unique unitary 5 dimensional gathering, where each measurement can be related with a balance and a power field, with the R field and its quanta being related with the 5<sup>th</sup> measurement. Be that as it may, similar to all power handle, the R-field must have a collaboration vitality with particles that must change their mass through  $E=mc^2$ . Besides, on account of the Radion field it delivers all the rest-mass, as opposed to a little augmentation. It is

found in this viewpoint that the Strong and Weak Forces, which are short-extend are interceded with first-request ibranchingsi or quantum Mie scatterings of the R-field and quantum EM field off the mathematical structures related with the Electron and proton individually. An enchanted meson low-est mass state is related with the size of the 5 th dimension itself and a diverging from this meson creates a quanta The mass in the range anticipated for the Higgs-Boson. In this way, the Higgs-Boson happens in the all-encompassing Diamond hypothesis, and as in the Standard model is related with the field that makes mass. In the following segment, it will be quickly indicated that the majority of the intervening quanta at low energies for the Weak, Strong and Radion fieldñ the Higgs-Boson can be created. In any case, this part will be just basic and guide the route toward cautious study the Strong atomic power in the GEM setting. The Weak atomic power has as of now effectively bound together with EM power by Glashow, Weinberg and Salam[11], prompting the fruitful forecast of the mass of the Z and W vector Bosons. We will in this manner concentrate basically on the relationship of the Strong power to EM, which is the long-go power generally dynamic in the subatomic scales. In the rest of this article we will portray how an broadened electrodynamics from the GEM 5 th dimensional hypothesis prompts a large group of temperamental particles and that these new particles lead to new power fields outside the proton, prompting the development of cores, and furthermore to shading charge electrodynamics. At last, we will talk about the unification of both the long-and short-go powers of nature in a five dimensional universe through the re-sulting GEMS SU(5) balance bunch in an expansion of crafted by Georgi and Glashow[10]. Here, we will bring instruments utilized in the unification of gravity with EM. To begin with, we will start with the GEM formation of the lepton and proton as pair of particles symmetric in control In any case, awry in structure, mirroring the asymmetry of structure of reality. The presence of the Kaluza-Klein fifth measurement originates from the parting of a smaller ilight-likei spacetime span, the main spacetime stretch viable with the vacuum, and that this triggers the show up ance of both the proton and electron from the vacuum ZPF and the different appearance of the EM and gravity power .

## INTRODUCTION

iSeek straightforwardness and afterward doubt it.î Albert Einstein This article presents an endeavor to bring together gravity, EM, Weak, and Strong Forces with regards to the GEM (Gravity Electro-Magnetism) unification hypothesis [1-6]. The quest for unification is the quest for Straightforwardness, where a solitary un-derlying standard or wonder is looked to clarify various and conceivably confusing impacts. On account of the Solid and Weak Nuclear collaborations, profoundly created what's more, complex formalisms were created to clarify each independently, be that as it may, to accomplish formal unification of these associations, one must advance back and spotlight on making straightforward portrayals that clarify notable trial real factors. Specifical-

ly, imperatives including science of wonders that are not legitimately discernible must be abstained from, for forecast of observables. The Pearl unification hypothesis has had some achievement in bringing together the two long-go powers of nature, EM and gravity, and has accomplished this dependent on basic models, yet can foresee the proton mass and Newton Gravitation steady to high exactness without free boundaries. Subsequently, this GEMinspired investigation of the short-go powers of nature: the Powerless and Strong collaborations, is done in the equivalent soul of material science, that of utilizing basic physical models to accomplish a basic figuring of observables. Such a soul existed in the beginning of the quantum period. In that time of Planck, Bohr and Einstein, stablished researchers en-counterred an abnormal new universe of nuclear scale phenom-enon and reacted with straightforward, butradically new, physical ideas and perspectives. Fruitful early models of that type are the Bohr Model of the Hydrogen molecule and Uhlenbeck and Goudsmitis model of the turning elecThe issue of feeble and solid atomic powers and expectation of the Higgs-Boson mass from the GEMS (Gravity electro-attraction solid) unification hypothesis John Brandenburg Morningstar Applied Physics, LLC, Vienna, Virginia 22182, (USA) Email: brandenburg@madisoncollege.edu The GEMS (Gravity Electro-Magnetism Strong) hypothesis is stretched out to the issue of Weak also, Strong Nuclear Forces and the issue of the Higgs Boson mass, as the start of an exertion to incorporate short range Nuclear Forces in the fruitful GEM unification hypothesis. The presence of a smaller 5 th measurement is found to make subatomic structures whereupon surface resonances and Mie scatterings happen, and these resonances can give rise quanta, called, here, mieons, that intercede atomic powers.. In the Kaluza-Klein hypothesis of EM and gravity, a 5 th power field called the iRadionî emerges as a scalar, with a mark number of the Radion communication in the GEM hypothesis:  $\approx 42.8503$ . Higher request resonances off the electro-static radii of the electron, proton and 5 th measurement size type of the GEM hypothesis, produce the quanta with masses of the pion  $m_{\pi} = 2 \text{ me} \approx 140.0 \text{ MeV}$  and Z boson:  $m_Z \approx 2 m_p = 80.4 \text{ GeV}$ . The  $c$  meson  $m_c \approx 2985 \text{ GeV}$  is related to the 5 th measurement compactification Power interceded by the Radion field. Another molecule related with is the Radion dissipating quanta off the fifth measurement with a mass  $m_{\pi} \approx 127.7 \text{ GeV}$ , which is the Higgs-Boson. Gotten : July 5, 2012 Acknowledged : September 7, 2012 Distributed : September 15, 2012 Abstract Ful Paper \*Corresponding authoris Name and Add. John Brandenburg Morningstar Applied Physics, LLC, Vienna, Virginia 22182, (USA) Email: jebrandenburg@madisoncollege.edu Watchwords Jewel unification hypothesis; Quantum electrodynamics; Weak power; Strong power; Exchange boson; Mie dissipating; Higgs Boson. id9026453 pdfMachine by Broadgun Software - an extraordinary PDF essayist! - an incredible PDF maker! - <http://www.pdfmachine.com> <http://www.broadguntron>, which represented observables with basic mod-els, and even now, fill in as a reason for more complex understandings. The GEM hypothesis is a mathematical hypothesis, that is a com-

pound of the Sakharov [7] and Kaluza-Klein hypothesis [8] approaches to the unification of EM and gravity, the two long-run powers of nature. The hypothesis is genuinely crude, being depicted as a Bohr Model of field unification at this point, by relationship to the early straightforward model of the quantum mechanics of the hydrogen particle. Nonetheless, the Diamond hypothesis is effective in clarifying the fundamental relationship of EM and gravity power handle, that the texture of spacetime is electromagnetic, and gets the field conditions of both with the 5th measurement of Kaluza-Klein and by connecting the presence of the proton and electron, the least vitality end individuals from the Lepton also, Baryon families as a couple of fields, to the presence of the power field pair of gravity and EM. The GEM hypothesis finds the estimation of G and the mass of the proton as far as the Planck mass, both to high precision, with out free boundaries, subsequently. The GEM hypothesis connected the presence of the electronic charge and old style molecule range, as a shrouded measurement size,  $r_0$ , to the presence of the mass size of the sub-nuclear particles, the electron and protons. Be that as it may, it is presently perceived that the GEM hypothesis made an entryway to understanding the two short range powers of nature the Weak and Strong atomic powers, on the grounds that in binding together gravity and EM in a mathematical hypothesis, it created a geo-metric scale system for atomic particles and the system for their cooperations. The GEM hypothesis created the image of EM powers between charged articles as well as likewise between uncharged structures that can be broadened to incorporate short-run atomic powers. Subsequently, the GEM hypothesis can be reached out to clarify the Weak and Strong powers dependent on two proposes: 1. The electron and proton show up as resonances off the Kaluza-Klein 5th dimension size of the Radion or mass inciting field made when EM and Gravity independent; 2. Second request quantum Mie scatterings off the EM structures of the electron what's more, proton and the 5th measurement itself make boson fields related with Strong Weak and Mass initiating fields. In the Kaluza-Klein 5th dimensional hypothesis, whereupon The GEM hypothesis is based, a 5th power field, a scalar field called the R-field or 'Radion' field [9], must exist with massless quanta. This can be seen heuristically in the setting of the SU(5) hypothesis of Georgi and Glashow[10], with SU(5) representing a unique unitary 5 dimensional gathering, where each measurement can be related with a balance and a power field, with the R field and its quanta being related with the 5th measurement. Be that as it may, similar to all power handle, the R-field must have a collaboration vitality with particles that must change their mass through  $E=mc$  Besides, on account of the Radion field it delivers all The rest-mass, as opposed to a little augmentation. It is found in this viewpoint that the Strong and Weak Forces, which are short-extend are interceded with first-request branchings or quantum Mie scatterings of the R-field and quantum EM field off the mathematical structures related with the electron and proton individually. An enchanted meson low-est mass state is related with

the size of the 5th dimension itself and a diverging from this meson creates a quanta of the mass in the range anticipated for the Higgs-Boson. In this way, the Higgs-Boson happens in the all-encompassing Diamond hypothesis, and as in the Standard model is related with the field that makes mass. In the following segment, it will be quickly indicated that the majority of the intervening quanta at low energies for the Weak, Strong and Radion field the Higgs-Boson can be created. In any case, this part will be just basic and guide the route toward cautious study the Strong atomic power in the GEM setting. The Weak atomic power has as of now effectively bound together with EM power by Glashow, Weinberg and Salam[11], prompting the fruitful forecast of the mass of the Z and W vector Bosons. We will in this manner concentrate basically on the relationship of the Strong power to EM, which is the long-go power generally dynamic in the subatomic scales. In the rest of this article we will portray how an broadened electro-dynamics from the GEM 5th dimensional hypothesis prompts a large group of temperamental particles and that these new particles lead to new power fields outside the proton, prompting the development of cores, and furthermore to shading charge electro-dynamics. At last, we will talk about the unification of both the long-and short-go powers of nature in a five dimensional universe through the resulting GEMS SU(5) balance bunch in an expansion of crafted by Georgi and Glashow[10]. Here, we will bring instruments utilized in the unification of gravity with EM. To begin with, we will start with the GEM formation of the electron and proton as pair of particles symmetric in control in any case, awry in structure, mirroring the asymmetry of structure of reality. The presence of the Kaluza-Klein fifth measurement originates from the parting of a smaller 'light-like' spacetime span, the main spacetime stretch viable with the vacuum, and that this triggers the show up ance of both the proton and electron from the vacuum ZPF and the different appearance of the EM and gravity power