A possible solution to the mystery of the Bermuda Triangle: A nuclear physics-based quark transfer model leading to perpetuity of magnetic force

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Abstract

On the basis of a nuclear physics-based model, an attempt has been made to explain the neutron to proton (n – p) conversion in the nucleus of an atom and the way of transfer of a d-quark into a u- quark. From examination of their implications in the mechanism of low and high temperature superconductivity, we came across a stupendous conclusion which may lead to busting the mystery of the Bermuda triangle. This, however, assumes free quarks may have limited existence under special condition.

It is the swarm of quarks produced from unlimited supply of free electrons, unhindered by the warmth and the depth of the ocean, unchecked by the Meissner effect, add up (aided and abated by mutual enforcement) to a strong attractive force which can explain the anomalous magnetic behaviour as noticed by Columbus during his voyage through Bermuda triangle. The appearance and disappearance of the hysteresis curve shows that the Bermuda Triangle serves as a natural channel, passing everything that comes into contact with it into eternal sleep leading ultimately to the perpetuity of magnetic force.

It is advisable that the study of tectonic and geophysical processes should be carefully made by the scientists so as not to meet the swarm of quarks for their own safety, security and escape from becoming a part and parcel of perpetuity.

Keywords: Possible solution of the Bermuda triangle mystery; Quark model of perpetuity of magnetic force

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Introduction

Bermuda Triangle, a loosely defined region in the North Atlantic Ocean, roughly bounded by Florida, Bermuda, and Puerto Rico has drawn attention of both public and scientists for its mysterious behavior since the days of Christopher Columbus in September, 1492 during his first voyage to the New World.

Geographers, geologists, seismologists are still busy in studying the physical aspects of Bermuda triangle and discovered some unique features of this area. Columbus observed an anomalous magnetic declination of 11.25 degrees between magnetic north of the compass and true geographical north during his voyage through this area. He, however, did not disclose this at that time to avoid panic and mutiny among his crew members. Later, such navigational chaos was reported to be received by the authority from the few last SOS messages of the disappearing vessels. Scientists, however, believe that Bermuda triangle is one such area through which the "Agonic line" pass. They admitted the panic as human error and thrashed away the idea that there occurred some uncontrolled spinning of compass needles due to any supernatural power. The history, geography and the perilous consequences of Bermuda Triangle are well documented. There have been occasional speculative discussions about busting of the mystery of Bermuda Triangle without any positive solution of the main problem which is acceptable to the scientists.

Our findings of nuclear physics based magnetic forces

It all started from the interpretation of exchange of similar particles as an attractive force, which was opposed by Coulson [1]. The particles may be a pair of electrons or μ-mesons or π-mesons of Yukawa [2]. To overcome the difficulty, we searched the nuclear description of an atom so as to find a solution in the exchange of u- and d- quarks which may be called quark exchange force [3].

Before going to the proper interpretation, we must understand that there are two natural forces acting on matter 1) *solar* or outer influence and 2) *nuclear* or inner influence. The solar influence impinges on metals to eject electrons but the process is not perpetual. It stops as soon as solar energy is discontinued. The other (nuclear) energy arises from n – p or a d-quark to a u- quark conversion (quark exchange) which has been discussed in an earlier communication [3]. Fig. I shows the conversion of neutron to proton in a nucleus by exchange of position. The conversion process may emit an electron from the system in the form of a d- quark (+⅔ e^-) along with a u- quark (-⅓ e^-) which goes against the independent existence of fractionally charged electrons. However, the existence of *transient* d- quarks are to be accepted (*vide infra).*

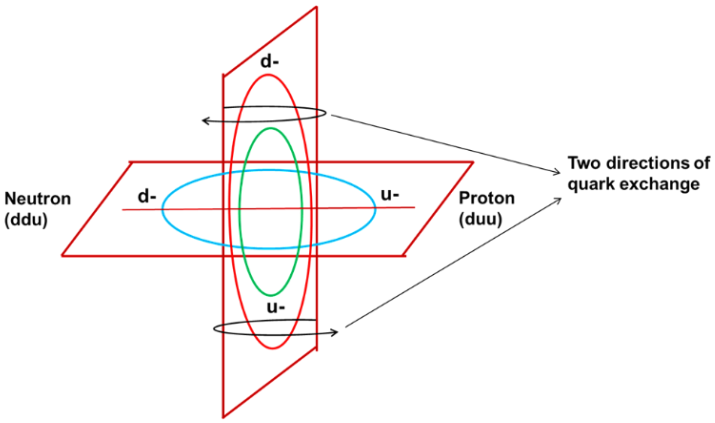

Fig. I: Role of nucleo-magnetic effect on the perpetuity of magnetic force

The role of nucleo-magnetic forces has been examined logically in explaining the mechanism of low and high temperature superconductivity. At higher temperature, the quarks start entering the system and the hysteresis curve vanishes but is readily reappears once the temperature is lowered. At this stage due to the absence of "Meissner's Effect" [4], the quarks add up to form a strong attractive force which leads to perpetuity.

a) It is to be understood that the mechanism of superconductivity is completely different for low temperature superconductivity (LTSC) and high temperature superconductivity (HTSC) and hence these could not be treated simultaneously for one another. The LTSC is controlled by the findings of K. Onnes [5]. The number

of phonons and magnons near 0 K is negligible as they are quantum oscillators and effect of traces of ferromagnetic substance will be cancelled by the Meissner effect. Any probability of perpetual motion from outside seems to be negligible so there is no problem for the explanation of LTSC.

b) At relatively higher temperature, the number of free electrons in the system is quite small but overlap of Brillion Zones will open the pathway for superconductivity (described elsewhere) [3]. The presence of d- quarks are not essentially important for superconductivity.

c) At higher temperature, HTSC is stopped but then what about nuclear forces? At this stage, the swarm of electrons (in the form of quarks) will stay till the temperature falls again and hysteresis curve reappears. Till this time, everything is O.K., but as soon as the temperature drops, the nuclear force will be operative once again and the swarm of endless number of quarks will enter the system. Herein lies the crux of the problem of Bermuda Triangle.

The depth from ocean level and warmth of the submarine starting point of the hysteresis curve (Fig. II) cannot be automatically ascertained. In absence of any Meissner effect, the quarks add up (aided and abated by mutual enforcement) to a strong force of attraction leading to perpetuity. Conversion of a neutron to a proton will involve in the ejection of an electron. These electrons with endless supply are responsible for the Bermuda triangle mystery. Enter the dragons! The dragons in this case are the electrons themselves. For natural perpetuity, it is necessary that each electron breaks up into *transient* 2d- quarks ($+\frac{2}{3}\ e^-$) and 1 u- quark ($-\frac{1}{3}\ e^-$). It will be possible for the absence of any Meissner effect which acted as a hindrance in case of LTSC and will now operate in a reverse way i.e., these quarks will add up by mutual enforcement to form a strong force. This force will lead to a strong attraction towards deep

inside the ocean and form a bed of eternal sleep and ultimately lead to perpetuity of magnetic force.

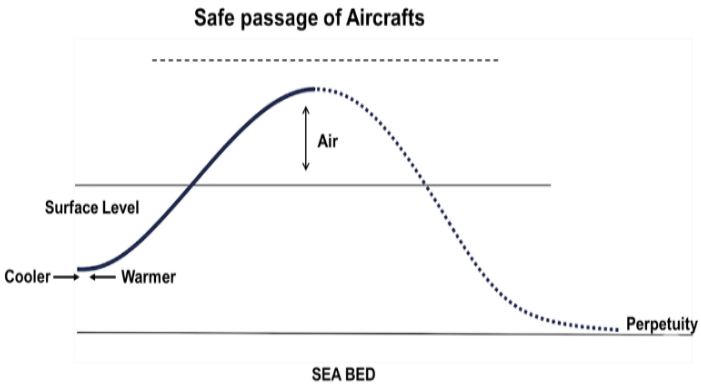

Fig. II Two-dimensional description of mystery of Bermuda Triangle

The ailing old man (BKS) thinks that by strict order, the authority will restrict the entry into the area irrespective of temperature being higher or lower. Scientists or their equipment for tectonic and other geophysical research must avoid the swarm of quarks for their own safety and security to escape from perpetual sleep and becoming a part of perpetuity.

Acknowledgement

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