

COURSE CORRECTION ON GENERAL RELATIVITY

by Christina Munns

On this historic day of the commemoration of the 100th anniversary of the confirmation of Albert Einstein's general theory of relativity with the solar eclipse of May 29th, 1919, I feel it is important to share my thoughts on this controversial topic, despite seemingly jumping in the proverbial deep end of classical physics!

The trick in this theory is separating fact from fiction. I propose that gravity cannot distort space (& definitely not time!) as Einstein proposed since I concur with Gauss' Law of Gravity (mathematician), who states that not only is gravity irrotational but it is also is a conservative force. Yes, indeed general relativity is obviously correct in many respects, but the vexed question of exactly WHAT Einstein's field equations relate to in real life terms still remains a subject of debate. Yes, there is distortion in space of the path of light as demonstrated by the solar eclipse of May 1919, but I propose that this distortion is not due to the presence of gravity, but rather due to the close proximity of Mercury to the sun, with its concomitant stronger magnetic field than compared to the other planets (hence the anomaly of Mercury's precession). Mercury's elliptical orbit arises due to the magnetic pull of the sun, NOT its gravitational attraction between these two heavenly bodies.

Gravity is indeed an enigmatic phenomenon. Who should we believe is correct – Isaac Newton, Frederic Gauss or Albert Einstein? Each has a slightly different perspective on this elusive state. Newton believed it caused objects to fall and is an attractive force. Gauss's Law of Gravity states that it is irrotational, has zero curl, is a conservative force and is path independent. Einstein postulated that gravity is not a force but a distortion in the "fabric of space-time" (I do not concur with this theory of space).

The short version is: that I have spent many months examining the historical pathway of the definition of gravity, and I have come to understand that Newton was incorrect about the apple (yes – we must remain open-minded in the face of facts) since gravity is a conservative force (Gauss), it cannot cause objects to fall or change direction or cause distortion (Einstein).¹ Newton also believed that gravity cannot impact on light. Einstein decided to disregard these postulates in order to develop general relativity & to be able to generalise the framework of special relativity. I believe that this was not a good move on Einstein's part because in doing so he disregarded not only Isaac Newton's perspective of gravity in relation to light and being a force, but also disregarded the basic tenets of Gauss' Law of Gravity – that it is irrotational, has zero curl and is a path independent and a conservative force.

Obviously the equations of general relativity are both elegant and precise, but they are generalising special relativity that describes time-dependent reference frames. Thus the general theory of relativity extrapolates time-dependent reference frames NOT time-independent reference frames, which would be the case if the frames were purely gravitational. This subtle point has been missed by most physicists today and is the main reason why the current understanding of black holes is also incorrect, since they are the end result of the death of the phenomenon of mass NOT gravity. Black holes are related to general relativity, yes, but this theory refers to states that contain mass – time-dependent reference frames. Gravity is a separate issue again. It's a lot to absorb I know, but I feel it is essential to get the matter straight.

It is because a black hole arises as a result of GRAVITATIONAL POTENTIAL (note the word “potential”!) that it precludes actual gravity. Gravitational potential is actually the work done against gravity to bring a mass to a given point in space. Because of the inverse square nature of the gravitational force, the force approaches zero for large distances, which is what Karl Schwarzschild picked up on in understanding the existence of black holes arising from the end result of gravitational potential energy. Essentially, the mistake has been in thinking that gravity equates with gravitational potential in relation to GR, for this is surely what the theory of general relativity attests gives rise to the state of zero potential gravitational energy. This is a new understanding of mine that has arisen in the last couple of months, since researching more deeply into the origins of GR and has not been written up anywhere else until this evening.

I am aware that a blog post on the internet is not exactly the conventional *modus operandi* to present a new scientific concept into the physics community, but since my work exists outside academia, I deem that this is a fitting way to present the much needed correction to the historically incorrect assumptions about the true nature of gravity and its association with general relativity and the grand event of the solar eclipse of May 29th, 1919.

I would like to suggest to the reader that my paper listed below be read to give a more comprehensive and complete explanation of this new approach to gravity and any questions regarding this subject of gravity (pun intended!) be directed to : christina@principia.net.au.

May these notes begin a much needed dialogue to further clarify and define the exact nature of gravity, black holes and their relation to time, magnetism and mass.

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¹ Refer paper – What is Gravity? - A Modern Analysis – by Christina Munns