

ESSAY 3: ON LIGHT DEFLECTION BY GRAVITATION

(For sound broadcasting on the www.aias.us site)

This phenomenon of nature has been developed by the theologians of the twentieth century using Albert Einstein as an icon. He himself mentioned around the time of the Eddington experiment that he was right and nature would be wrong if the experiment failed. There is not much here of the enlightenment brought about by Francis Bacon and his contemporaries in the late sixteenth and early seventeenth centuries. The experiment did fail of course, Eddington did not have anywhere near enough precision, only one measurement luckily coincided with the result proposed by Einstein. The latter used a method of solution which is fabled as the Schwarzschild metric. The facts of history are different, Schwarzschild died of disease in the trenches in 1916 having produced two papers on the Einstein field equation of 1915 / 1916. Neither solution was the so called Schwarzschild metric of the latter day theologians. This is easily looked up, but no one looks it up. The Einstein field equation itself is known to the initiated scholarship of our times as being incorrect fundamentally. This is easily seen by correct application of the fundamental geometry which Einstein should have used, but no theologian applies the geometry correctly. What appears to have happened is that Hilbert modified the solution by Schwarzschild when the latter was safely unable to object. Einstein uncritically used the solution by Hilbert to produce a theory of light deflection by gravitation.

There is something in the human condition that looks for icons and omens. The deflection of light is one such happening. After the Eddington exhibition one lucky strike by Eddington became the omen, Albert Einstein became the icon. This was the first big media event in the history of science, and thus it has remained ever since. Lately it has been found that Albert Einstein's method was and is wildly wrong – because he used an identically zero photon mass. Such a thing should not pass examinations. It was ridiculously easy to prove that the method was wrong, we just took Albert Einstein's own integral and computed it. I have no idea why this has not been done before, but that is always a futile question always asked after the stable door is seen wide open with no sign of the stallion. A careful study of the Einstein method shows that the denominator in this integral is zero if the photon mass is zero, because of Einstein's assumption of circular orbits for the photon. The integral is numerically unstable and could produce any value at all. It is very difficult to understand how an infinite integral can produce, under any circumstances, a precise answer.

Why should such a tremendous failure be accepted as natural philosophy? Well obviously: big money depends on it. In order to obtain funding one has to say the right things, and in order to pass examinations too. Science is no longer the investigation of nature, but big business. It is no longer politically correct to accept facts, even though these facts are produced by a computer without any possibility of human error. All those satellites are sent up to make an icon even more precise, to cut ever deeper into the marble. Recently the BBC asked the question: *Are Everything We Know About The Universe Totally Wrong?* We can answer that question now, it is perilously close to the affirmative. The leading intellectuals of our time have quietly dropped big bang in the aftermath of a Hubble search that produced no sign of it. The problem is that those ancient mariners that advocated such a silly theory in the first place are still there, safely entrenched in their university chairs.

The fact that we talk about Einstein means that he is an important figure, and I still have the greatest respect for his work and ideas. My colleagues and I name our school of thought after Einstein and the mathematician Elie Cartan. So it is called the Einstein Cartan Evans or ECE theory, the last name being there in all modesty, vanity being boring and

quickly found out. The problem is that he was capable of making errors in mathematics, and he had no computers to do the algebra for him. The idea of basing physics on geometry is fine, it goes back to the Greek and Celtic philosophers. The problem is that he used the wrong geometry, he did not know in 1915 of the existence of what Cartan later inferred - the torsion of spacetime. Einstein and Cartan did correspond a lot about torsion, but neither implemented it in the optimal way. It turned out that the ECE theory does so as well as any theory, in fact it is safe to claim that ECE is the only theory of physics that makes sense at present. It brings together previous theories and improves them. One can forget entirely about string theory as an artificiality - a failure to find the right way forward. The latter is always simple and always obvious in retrospect, like the safety pin. String theory is also big money of course, and to have a university career one needs to say the right things about strings. Such is the catatonic end point of human nature - strings rule OK.

Ironically, if Einstein had done the calculation correctly, and if he had lived in the era of NASA Cassini, he would have arrived at the idea he himself proposed in about 1906 - the idea that the photon has mass. The deflection of light by mass means that light itself has mass. By correcting the method used by Einstein, the photon mass has at last been estimated plausibly in the light bending experiment, and lately by combining this experiment with the time delay experiment using data from NASA Cassini. One strange thing out of very many about human nature is that it never bothers to check things. No one ever bothered to check whether Einstein carried out his famous or notorious calculation correctly. It is a very strange calculation - the photon mass is put to zero, meaning that light must be deflected by a mass that does not exist. No wonder it went wrong. Even stranger is that it was based on something that never existed - the Schwarzschild metric. The same fallacy that underpinned big bang with which the world was conned for such a long time. The fallacy was based on another - the Einstein field equation with its incorrect geometry, and so it goes on. The optimal strangeness is its regurgitation at undergraduate examinations which take place around the time of year when overheated minds that should be doing something original, or useful, but have to pass theoretical physics examinations in order to become unemployed. Then they do not have to pay back the student loans.

The Cassini result for light bending is always described as twice the Newton value, but this is another fallacy, it should come as no surprise. There is no Newton result for light bending, there is only guesswork which happens, meaninglessly, to give half the result found incorrectly by Einstein. We now know why Einstein found his result, it is because of the existence of photon mass. That makes sense, but is it politics?

There are many comedies of errors like this in physics, well known to the initiated intellectuals, but not politics. Another example is the fabled Heisenberg Uncertainty Principle, but that is another broadcast. In that case Einstein didn't swallow it - he always rejected it. There are many experiments that show the Principle to be wildly wrong, but that is not politics. Suffice it to say that ideas cannot be stopped, the march of ideas goes on as it always has. The purpose of these uncensored and informal talks is to ask the general public to think for itself and to ask Governments to take advice from people with no vested interest in funding obsolete physics at such huge expense, that is, no interest in funding themselves.
