

ESSAY 9: THE COLLAPSE OF SCATTERING AND ABSORPTION THEORY

Recent work in UFT 158 to 163 has brought about the astonishing collapse of the very fundamentals of twentieth century physical science. It has been found that the de Broglie equations are wildly self inconsistent, and the concept of covariant mass ratio has been put forward in an attempt to find a fundamentally new property of nature. The old standard model is now thoroughly obsolete and the ECE scholars are racing ahead of the crowd. The latter is beginning to wonder whether it is time to come off the fence and study nature, and do the unthinkable, talk to ECE scholars. The familiar de Broglie wave particle duality has a deeper meaning than taught in the textbooks. The equations put forward by de Broglie were the first attempt to put together the quantum theory of Planck and Einstein and the special relativity of Einstein. In these theories. The quantum theory and special relativity both predict expressions for the total relativistic energy E and the relativistic momentum p . The expressions are the same, so de Broglie equated them. The resulting equations are known as the de Broglie Einstein equations. For ninety years these were thought to be valid and completely tested experimentally, but within a few weeks in late 2010 they collapsed into nonsense.

This was shown by the use of routine algebra, which was checked for correctness by computer. The collapse was so complete and sudden that the academic world of string theory and quantum electrodynamics was left stranded. It is easy now for any undergraduate to see that string theory and quantum electrodynamics are meaningless. The very basics have been found to be totally wrong, the cake tastes bad, and no icing will cure it. In order to begin to meet this challenge the concept of covariant mass ratio (CMR) has been proposed. The CMR is a direct consequence of the use of geometry in ECE theory, and is not empirical or plucked out of the blue like string theory with its multitude of completely meaningless parameters known optimistically as Adimensions@. Never in the history of humankind have we seen so many dimensions. In a sense, the complete refutation of the de Broglie Einstein equations is a triumphant vindication of the ECE theory. The latter corrects some of Einstein=s errors in general relativity and ECE is meant to strengthen the philosophy of relativity put forward by Einstein and many others over hundreds of years back to classical times, in which geometry meant beauty.

The first sign of trouble occurred when the Compton effect equations were extended for use with finite photon mass. The latter was actually proposed in classical times, and the tradition of corpuscular light carried on to Newton=s time. Newton proposed his own corpuscular theory of light as is well known in the schools. After Newton the corpuscular theory was continued until Planck used it as a centrepiece of his famous quantum theory and proposed the quantum of energy, later named the photon. Einstein combined the Planck concept with his 1905 theory of special relativity, and proposed that the photon must have mass. In about 1922 - 1924 de Broglie extended this idea to momentum, and put together the quantum theory and the theory of special relativity. The total relativistic energy E is a concept that emerges directly from the relativistic momentum of Einstein=s special relativity, and the relativistic momentum in turn is necessary to conserve total momentum within special relativity. So the concepts of E and p are very fundamental to the physical sciences. It was thought that special relativity has been tested to great precision, it was thought that quantum mechanics had been tested to great precision. This mirage of certainty collapsed like a pack of cards in October 2010 as described in UFT 158 to 163 on www.aias.us. As soon as Compton theory is extended to include photon mass, the resulting expressions give varying mass, which in the old physics is a total nonsense.

The theory rapidly disintegrated when it was found that the scattering of a particle of

any mass from another of any mass also resulted in gross self inconsistency. This was easily seen in special cases such as ninety degree scattering, equal mass scattering, and inelastic scattering. The theory does not stand up to a combination of energy and momentum conservation. These simple and straightforward algebraic tests were then extended to every day Raman scattering, with the same disastrous results for the old standard model. Finally it was found that the Einstein theory of absorption also collapsed when the de Broglie equations were rigorously applied with finite photon mass. So it became clear that the original de Broglie and Einstein theories had never been tested properly. Einstein himself frequently admitted as much, citing his own absorption theory as being at best heuristic. This becomes obvious when it is considered that that theory is based on energy conservation only, without any consideration of momentum conservation at all. This is an astonishing failure of science, a prime example of Langmuir=s pathological science or uncritical repetition of dogma, the creation of iconic figures and so forth. All a very familiar human failing.

Finally the theory of elastic scattering was shown in UFT 163 to contain a direct self contradiction and to be completely incorrect. So it will go on, throughout the whole range of particle theory, so the theory behind CERN will also collapse. I am sure that the physics establishment will greet this news with total silence, it might affect their funding. In the meanwhile the ECE scientists forge ahead voluntarily to try to build a new physics, and to find the new and fundamental property of nature that is hidden in the collapse of the old theory. This has been named the covariant mass ratio, and its meaning will be discussed in the next essay, essay ten.
