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Einstein's mass–energy equivalence theory, $E = mc^2$, which was discovered in 1905 in the paper "Does the inertia of a body depends upon its energy-content?", and led to the invention of the first atomic bomb, has been proven right, with the help of a computational effort by French, German, and Hungarian physicists. This theory emphasizes that any mass has an associated energy and vice versa. A group led by Laurent Lellouch of France's Centre for Theoretical Physics, have assigned the calculations for estimating the mass of subatomic particles. Protons and neutrons compromise smaller particles known as quarks. The irregular fact is the mass of quarks is only five percent of the mass of protons and neutrons. This observation violates conservation of mass. The group found that the missing 95 percent comes from the energy from the movements of quarks in the atom. In other words there is an energy associated with the mass of a quark. In general any mass has an associated energy. Even though this equation was used for the invention of the first atomic bomb, it had yet to be proven right. However, now it is proven for the first time after 103 years.