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Mystery of the Universe : matter-antimatter asymmetry

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Why do we exist today? The question simply comes to mind and most of us must have wondered at least once. Scientifically answering it is one of the serious but engrossing challenges in modern physics. The question is translated into another one in language of particle physics; why is there more matter than antimatter in our Universe? Antimatter is composed of antiparticles which have an opposite electric charge to that of particle. In the early Universe, both particles were present in equal amount. However, looking around the present Universe, everything, such as the moon, galaxies and human being, is made of matter. The puzzle is known as matter-antimatter asymmetry of the Universe. This talk will discuss theoretical approaches to solving the mystery in terms of particle physics introducing one possible hypothesis, electroweak baryogenesis, which is the most testable scenario in experiments.