

Abstract Submitted
for the MAS21 Meeting of
The American Physical Society

The discovery of the characteristics of the energy of the universe and the conservation of mass and energy to analyze the changing laws of the universe¹ HAN YONG QUAN, Huairou District NO.1 high school — The characteristic of cosmic energy is that it is an independent whole, without any matter and its effect, that is, potential energy cannot exist in the universe. The total energy of the universe can be expressed as $E = \frac{1}{2} (mv^2)$. The starting state of my universe is that v tends to zero, m tends to infinity, and the density tends to infinity. $E = m_1 c^2$. According to the meaning of Einstein's mass-energy equation, we know that m_1 is the mass lost in the universe and c is the speed of light. When the lost mass of the universe is m_1 , the energy produced can accelerate the movement of all the remaining mass in the universe to the speed of light—transformed into photons and become a universe without static mass. At this time, the universe still only has kinetic energy, and there is no potential energy. The energy of the universe can also be used. Expressed as: $E = \frac{1}{2} (m - m_1) c^2$, then: $\frac{1}{2} (mv^2) = \frac{1}{2} (m - m_1) c^2$, the solution is: $m_1 = m(1 - v^2/c^2)$. When v approaches 0, the state of the beginning of the universe, that is, the big bang is about to begin, the universe begins to expand from rest, the mass gradually becomes smaller, the energy gradually becomes larger, and the mass and energy are conserved

¹The discovery of the characteristics of the energy of the universe and the conservation of mass and energy to analyze the changing laws of the universe

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Date submitted: 16 Nov 2021

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