Mass is the result of slower movement of radiation particles[1] HAN QUAN, Huairou District NO.1 high school — The expression of the energy of the photon: $E=h\gamma$, where h is the Planck constant and γ is the frequency of the photon. According to Einstein's mass-energy equation, the energy of a photon can also be expressed as: $E=mc^2$. the photon propagates in different media, the frequency γ will not change, and h is Planck's constant and will not change. That is, the energy of photons in different media will not change. Assuming the speed v of the photon entering a certain medium from vacuum, there should be the energy of the photon in the vacuum equal to the energy of the photon in the certain medium, that is, there is an equation like $mc^2 = m_1 v^2$, because c is greater than v, From the equation $m/m_1 = v^2/c^2$, the mass of the photon is inversely proportional to the square of the velocity. Let us calculate the increase in mass when light enters the medium from vacuum, $\Delta m = m_1 - m = m(c^2/v^2) - m = m((c^2/v^2 - 1)$. The mass formation of an object is the total increase in the quantum mass of the radiation emitted by the object.

[1]Mass is the result of slower movement of radiation particles

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