

# The Birth of the Universe

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**Abstract:** The universe is created from nothing. Before the birth of the universe, matter, space, and time were not yet created. The mass of universe before the birth is zero. Space and time are something unknown. Calculation using the relative density of space-time, the universe gets mass from its birth at the birth time and the process is instantaneous.

**Keywords:** The universe is created from nothing. The universe gains mass from its birth. Relative universe.

## 1. INTRODUCTION

The universe is created from nothing. Before the birth of the universe, matter, space, and time were not yet created. The mass of universe before the birth is zero. Space and time are something unknown. Calculation using the relative density of space-time, the universe gets mass from its birth at the birth time and the process is instantaneous.

## 2. BEFORE THE BIRTH OF THE UNIVERSE

There is nothing before the birth of the universe. Our universe is created from nothing. Matter, space, and time are not yet created. The mass of universe before the birth is zero. Space and time are something unknown. From my previous paper, "Relative Universe, a Special Theory of Gravitation", there is a relative density of space-time. The value of the relative density of space-time is varied depending on the level of gravitation. When the gravitation is at the same level value of the relative density of space-time is one. When the gravitation is not at the same level value of the relative density of space-time is other than one. Before the birth of the universe mass of the universe was zero, space and time did not yet exist, and there was no gravitation so the relative density before the birth of the universe to after the birth of the universe was zero.

## 3. CALCULATIONS

$$d_{before\ after} = d_{ba}$$

$$d_{ba} = \frac{m_{1before\ bir}}{m_{2af\ bir}} = \frac{m_b}{m_a}$$

$d_{ba}$  is the relative density of space-time before and after the birth of the universe

$m_b$  is the mass of the universe before birth

$m_a$  is the mass of the universe after birth

$$d_{ba} = 0$$

$$m_b = 0$$

$$d_{ba} = \frac{m_b}{m_a}$$

$$0 = \frac{0}{m_a}$$

## The Birth of the Universe

$m_a$  = any value

Before birth, the mass of the universe is zero. When it is born, the universe immediately gains mass. The universe gains mass from its birth at the birth time and the process is instantaneous.

### 4. CONCLUSIONS

1. Our universe is created from nothing
2. Before the birth of the universe, its mass is zero. space and time are something unknown.
3. Our universe gains mass from its birth

### REFERENCE

- [1.] Waluyo, Teguh, Relative Universe, a special theory of gravitation, <https://vixra.org/pdf/2305.0177v2.pdf>, <https://osf.io/bzca9/> (2023).