

## Universe Is Expanding Or Cooling And It Will Die As Planck Era

Er. Gurpreet Singh Jangla

Amateur Astronaut, India

Graduated as Computer Science Engineer in 2004 from Punjab Technical University, India.

Post Graduated in MBA in 2008 from Bangalore University, India.

[gurpreet2282@hotmail.com](mailto:gurpreet2282@hotmail.com)

**Abstract:** Big Bang is the most popular theory of Universe Creation. The echo of Big Bang is still received on earth as radiation called Cosmic Microwave Background Radiation. It is assumed to be bath of photons consisting of ripples particles which can stretch to enormous size during inflation. These microwave radiations started as optical radiation from different galaxies. The places from which it starts are called surface of scattering. This get weak during propagation and loose energy to become red shift microwave radiations. When we check these radiations wavelength with interval of time, it is found that wavelength of received CMBR is increasing with time. That is CMBR received today and CMBR received from same surface of scattering after one month have different wavelength which is more than previous, which make clear that surface of scattering is moving away from us in other words our universe is expanding. These findings are already discovered by Radio astronomer Arno Penzias and Robert Wilson in 1964. As per Zhang Dongsheng (张洞生) in New York Science journal Volume 7, Number 1, 2014, Singularity of universe was not possible at time of Big Bang which is supposed and the same is not possible in future. Dr. Hawkins gives the concept of Cosmic Black Hole CBH. He assumes Singularity in Pre Big Bang and Post CBH. But as per me it is possible that before Big Bang there was Planck era and in future it will be Planck era i.e. complete darkness. In our holy book Guru Granth Sahib it is mentioned that in starting, Universe was completely dark and in future also our Universe will become completely dark with no mass. There will be presence of only Hawking quantum radiations mss.

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**Keywords:** Cosmic Microwave Background Radiation CMBR; Surface of scattering; Recombination epoch; Photon decoupling; Optical radiation; Microwave Radiation; Photons; Inflation; Hawking quantum radiation; mss, minimum BH--Mbm; Planck particles Mp; Planck Era.

### 1. Introduction

When the big bang occurred 13.8 billion years ago, the universe or energy starts doubling within the time of  $10^{-34}$  second. Within a second Neutrons and Protons came into existence. Within few minutes Hydrogen and Helium ions without electrons were formed which were not neutral. After 300,000 years Hydrogen and Helium atoms were formed with the inclusion of electrons. When the universe was young, before the formation of stars and planets, it consists of optical thermal radiations (bath of photons) and white hot fog of hydrogen/helium plasma. The ratio of Hydrogen to Helium was 92:08. After 380,000 years this plasma and radiation started cooling resulting in formation of many neutral different atoms by stretching of photons during inflation in the presence of free Neutrons and Protons. These photons can take any large shape using free electrons and protons which were also presented at that time. Forming of neutral atoms is called recombination epoch. Thus stars and galaxies start forming with the fuel of hydrogen and helium to light up. These neutral atoms were seeds of galaxies/ stars and were not able to absorb thermal radiation more.

Now photons radiations was set free and were not been scattered by protons and neutrons. The process of setting free photons radiation was called photon decoupling. These optical lights are still receiving by radio receiver but they are converted to microwave due to loose of energy while travelling and their spectrum is shifting red. These radiations are called cosmic microwave background radiation which is supposed to be echo of Big Bang. These radiations were discovered by Radio astronomer Arno Penzias and Robert Wilson in 1964 and were given Nobel Prize in 1978.

In 1929 astronomer Edwin Hubble discovered that the Universe isn't static but is in fact expanding. Red shifting is due to Universe expansion but Wavelength is inversely proportional to energy according to Planck's relation and chances are their that Surface of Scattering is getting cooled down or our Universe is cooling instead of expanding.

As per Zhang Dongsheng (张洞生) in New York Science journal Volume 7, Number 1, 2014, The essential attribute of any BHs is that, once a BH was formed, it would be a BH forever until it finally

becomes  $m_p = M_{bh}$  and then disappears in the Planck Era. The last destiny of all BHs could only become  $m_{ss} \equiv M_{bh} \equiv m_p \equiv (hc/8\pi G)^{1/2}(1e)$ , and disintegrated in Planck Era. Here  $\frac{1}{2}$  is power. So, any BH or CBH of  $M_b$  could not contract into a Singularity. Dr. Hawkins proved that, our Universe would be a really and completely gigantic cosmic-BH. As per Dr. Hawkin, Hubble law could just be the expansive law of our Universe caused from the combinations of new innumerable  $M_{bh} = m_p$ . As per Dr. Hawkin For any BH and our Universe as a cosmic-BH(CBH),  $\Omega=1$  ie Singularity is an inevitable result. But I suggest that before Big Bang there was only Hawking quantum radiation  $m_{ss}$  and complete darkness, only Planck Era exist. These Hawking quantum radiation  $m_{ss}$  get converted into Planck particles  $m_p$  converted into minimum BH –  $M_{bh}$  and then Big Bang occurred resulting in release of huge energy. Within a second Neutrons and Protons came into existence as explained earlier.

In last our Universe will become CBH and then as already discussed the essential attribute of any BHs/CBH is that, once a BH/CBH will be formed, it would be a CBH forever until it finally becomes Hawking quantum radiation  $m_{ss} = m_p = M_{bh}$  and disappears in the Planck Era. In starting of Universe also only Hawkins Quantum radiation was present ie. Planck Era which get converted into minimum black hole  $M_{bh}$  and resulted in Big Bang as per our best Universe beginning explanation. In our holy book Guru Granth Sahib it is mentioned that in starting, Universe was completely dark and in future also our Universe will become completely dark with no

Mass. There will be presence of only Hawking quantum radiations  $m_{ss}$ .

## 2. Material and Methods

1. Red Shifting of spectrum of CMBR.
2. Hawkins Formula viz.  
 $m_{ss} \equiv M_{bh} \equiv m_p \equiv (hc/8\pi G)^{1/2}(1e)$   
 Here  $\frac{1}{2}$  is power.

## 3. Results

Firstly Surface of Scattering is moving away from our earth. So our Universe is expanding. Secondly there was Planck era before Big Bang and after the death of our Universe again Planck era will come.

## 4. Discussions

Firstly Wavelength is inversely proportional to energy according to Planck's relation. Chances are there that Surface of Scattering is getting cooled down or our Universe is cooling instead of expanding. Secondly Planck Era consists of complete darkness and it contains only Hawking quantum radiation  $m_{ss}$ . Thirdly Hawking quantum radiation  $m_{ss}$  are convertible to Planck Particles  $m_p$  and  $m_p$  are convertible to minimum black hole  $M_{bh}$  and reversible too.

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## Corresponding Author:

Er. Gurpreet Singh Jangla  
 HNO 210, SBS Colony  
 Rajpura Town, District Patiala  
 Punjab 140401, India  
 E-mail: [gurpreet2282@hotmail.com](mailto:gurpreet2282@hotmail.com)

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