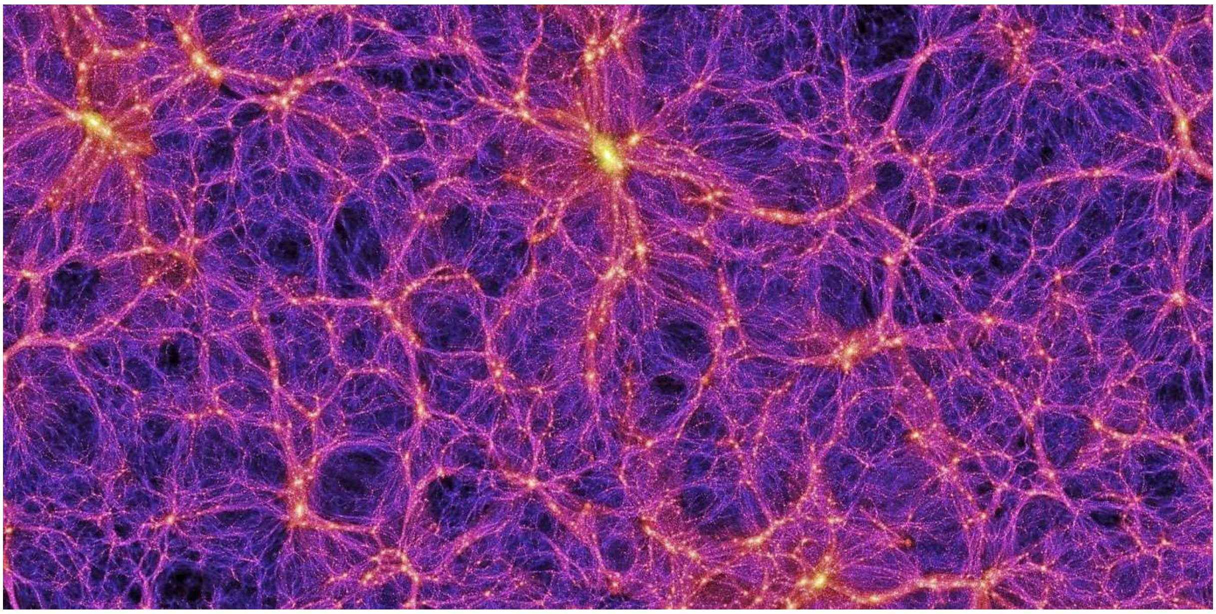
A second cosmic background radiation within the 8 meter wavelength range!

What will actually happen to the cosmic microwave background radiation that we do NOT collect and analyze with detectors, for example with the radio telescopes of the **ALMA-Project in Chile**? Where do the electromagnetic waves of the cosmic background radiation move to? With the help of high resolution images that we received by ALMA we could identify the source of the cosmic background radiation as light of very distant galaxies that are **about 22 billion light years** away from us. **These galaxies lie in an area of the quasi-spherically curved space of the universe, which, so to speak, lies opposite to us.**



Similar to this computer representation, the cosmic microwave background radiation reveals the structure of the universe to us. The individual threads and clusters are formed by galaxies that are arranged in this tissue-like form. No Big Bang far and wide.

So, the observed cosmic background radiation is NOT an early state of a Big Bang, because **there was simply no Big Bang**. The wavelength of the light of the galaxies 22 billion light years away from us was stretched by the gravitational potential of the universe about **4000 times**. So we receive this archaic light within the microwave range (approx. 2mm).

But what happened to the light waves that came from the ancient stars of OUR region of the universe? Well, these electromagnetic waves do not disappear into NOTHING, because no energy - and thus no light wave - is lost. The law of energy conservation does not allow this.

These light waves move forward through the entire, spherically curved space of the universe, and reach us again after approx. 44 billion years! Due to the gravitational potential of the universe, these ancient light waves were stretched about **16 million times** (4000 x 4000) and reach us in the form of electromagnetic waves with a wavelength of **about 8 meters, respectively a frequency of about 37.5 MHz (short wave range). So, on this frequency we will be able to see our area of the universe as it looked 44 billion years ago!** This is quite possible with the receivers of the **LOFAR-Project (Low Frequency Array)**, and in high resolution too. In addition, we have the unique chance - due to the relativistic lensing effect, caused by the mass of our universe (gravitational potential of the universe), to see our area of the universe as it looked 44 billion years ago 16 million times magnified! The LOF-Array consists of many short wave receivers connected interferometrically with a baseline up to 1300 km, which corresponds to a short wave telescope with a diameter of 1300 km. This allows observations with extremely high resolution.

Let's come back to the question asked at the beginning: **"What happens to the cosmic microwave background radiation passing us? Where does it move to?"**

Well, due to the quasi-spherical curvature of space, this background radiation will reach us AGAIN after 44 billion years, however, not in the form of a microwave background radiation, but in the form of very much stretched electromagnetic waves. By the effect of the gravitational potential of the universe, the ancient background radiation has been stretched about 64 billion times (4000x4000x4000), during its 66 billion years journey through the universe. We could observe this 66 billion years old background radiation in the form of a wavelength of approx. 32 kilometers, respectively a frequency of about 9.4 KHz (VLF). **If we could observe this radiation in high resolution, we would have the unique opportunity to see the area of the universe that is, so to speak, opposite to us, as it looked 66 billion years ago!** Since the earth atmosphere is not permeable to this wavelength range, the VLF observation stations would have to be positioned outside the earth atmosphere.