

New Generations @ Digital Art Month



CMBR

Simon Šerc

"CMBR project is based on the data from the Planck space telescope of the European Space Agency. The Planck satellite has recorded the measurements of the coldest objects in the Universe, and has given insight into the creation of the first major structures in which galaxies evolved later on. The beginnings of these structures can be seen in the cosmic microwave background radiation or the CMBR, the first image of the universe. By using the ESA measurements, we used a method of sonification and digital video processing of data from the Planck satellite (the mapping of fluctuations in the CMBR) to convert the measurements into an ambient sound mass and abstract video intertwined with randomised sequences of cosmological parameters.

Values for power as a function of wavelength are transformed into values for frequency as a function of time. The sound and video is generated by an algorithm which uses inverse FFT synthesis for converting the spectra of the CMBR fluctuations. The spectra is also sonified by remapping the values in a data stream for angular wave number, polarisation and temperature anomalies to sonic parameters. With higher dimensionality to the rendering, there is also an increased probability for spontaneous and unexpected formation of auditory gestalts, wherein unrealized patterns in the data can emerge. Finally, the raw output from the sonicator is post-processed in an application which turns the extreme abstract patterns through the manipulation of frequency, intensity and time into a multi-layered sonorous structure.

Using an algorithm to convert spectra from the CMBR fluctuations into image and sound, the results are processed using a higher dimensionality to the rendering, allowing for random resonances to

Open Mon to Fri 11AM - 4PM, Jan 12th - 26th. To find out more: <https://lcbdepot.co.uk/exhibitions/>



New Generations @ Digital Art Month

take shape. While CMBR's conceptual underpinning is fascinating in its own right, the results are equally gratifying - CMBR compositions are doorways into deeper internal realms."

Simon Šerc is a sound and video artist, recording engineer, performer and label founder. He studied philosophy and computing and has been active in the field of experimental music and video since 1990. He has participated in various festivals with his audio-video projects: ADAF, Miami New Media, International Exhibition on New Media Art, Art & Science Days, Experiments in Cinema, Rome Art Week, Videomedeja, Gravity Assist, Instants Vidéo, etc.

His projects were selected among the best releases of the year and featured in The Guardian, BBC, The Wire etc. He is also the founder of the Pharmafabrik production and label, which, according to critics – significantly enriches Slovenian audio diversity with its consistent and clearly defined methodology of sound explorations."

[@simonserc](https://www.instagram.com/simonserc) | [@simonserc](https://www.facebook.com/simonserc) | [@simonserc](https://www.youtube.com/simonserc) | www.serc.si

Open Mon to Fri 11AM - 4PM, Jan 12th - 26th. To find out more: <https://lcbdepot.co.uk/exhibitions/>

