

# If homogeneous and isotropic Universe is infinite, then ...

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If our universe is homogeneous and isotropic in a large enough scale one can't exclude that it also is infinite. This leads to a Multiverse concept, the idea proposed by M. Tegmark. In the simplest version of the Multiverse, one claims that in a distance  $10^{10^{115}} m$  there exists a universe, that is a copy of our own Universe. Such a Twin Universe is an identical copy of our own in a sense of a distribution of matter. Hence, there is an identical copy of every object (also every individual) but those objects and in particular the individuals have their own unique histories, different in different Twin Universes.

The purpose of this presentation is to consider the problem of the existence of a Twin Universe identical to our own Universe in every aspect: every human being, living in a unique environment, having a unique memory of his/her own history etc. is identical in both copies. Hence the question is: does a universe, an identical, in every aspect copy of our own universe exist? And if „YES”, how far such a copy would exist.

We will present the(positive answer for the last question in a two-steps.

We will argue that:

first, a copy of our universe, with its identical 100-years history would be found in a distance  $10^{10^{168}} m$ ;

second, a copy to our universe with *its whole history identical to the whole history of our own universe* does exist in a distance, at most  $10^{10^{175}} m$  .