planck vacuum inside the singularity as a unique energy origin under universe expulsion

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The consideration of the Universe evolution shows that the instantaneous appearance of a big energy in the initial point of the Universe expansion could result in the fatal change of the space-time metric [1]:

. (1)

It follows from the expression for 

, (2)

when for the sufficiently large energy, that is determined by the averaging over the angles of the tensor energy component ,  changes its sign (and simultaneously ) [2].The appearance of  is connected with the break-up of the Planck particles by the zero total energy  into the charged particles  with the mass  and the subsequent their annihilation in the singularity by the generation of the electromagnetic field [3]. Because of the angular momentum conservation in the singularity the energy flux turns out to be isotropic what results in . It follows from the  sign conservation in the formula (2) that the singularity size is equal to , where . The outlet energy flux from the singularity by the above mentioned electromagnetic field is equal to

, (3)

what coincides with the formally calculated energy flux for Planck particle , where  [1]. In this case the energy by the account of the gravitational mass defect  in view of (2) is compensated by the negative gravitational energy [3]

, . (4)

The electromagnetic field generation in the singularity at the expense of the Planck particle break-up happens in the region, where there exist the particles with mass , whose “gravitational charge”  lies in the range  and the efficient transformation of the gravitational energy into the electromagnetic energy occurs. Beyond the singularity range such an energy transformation is impossible.

References.

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