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Is There an Age of the Universe Problem after the Hipparcos Data?

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Abstract: We have reanalyzed the age of the universe problem under the assumption that the lower limit on the age of the globular clusters is \sim11 Gyr, as predicted by the recent Hipparcos data. We find that the globular cluster and the expansion ages in a standard ●=0 universe are consistent only if the present value H_0 of the Hubble constant is \leq 60{\rm kms}$^{-1}$Mpc^{-1}. If H_0>60{\rm kms}$^{-1}$Mpc^{-1} some kind of modification of the standard ●=0 model is required. Invoking a (time-independent) cosmological term ● in the Einstein field equations, as has been done frequently before, we have found that due to the gravitational lensing restrictions a flat universe with the present matter density parameter Ω_M<0.5 is not problem-free. A nonflat universe with Ω_M\leq 1 does not suffer from the age problem if H_0\leq 75{\rm kms}$^{-1}$Mpc^{-1}.

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