

Bekenstein Bound Action on the 3rd Cyclic Universe Produced MHCE8S Starting Energy for the 4th Universe

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Abstract: The starting energy for the 4th cyclic universe came from Bekenstein collapse energy produced by the 3rd cyclic universe.

I published earlier on Bekenstein bound effects on the stability of cyclic universes (unfortunately with holography calculation errors which I know now how to avoid¹); now I will consider Bekenstein-bound collapse effects of the first three cyclic universes and their consequences.

According to Bekenstein, the mc^2 energy of a collapsing universe is given by $E = 1/2 \times \pi \times R \times \hbar \times c$, where R is the radius reached just before collapse. Now for the 4th cyclic universe 13.5×10^9 years age and $R = 4.1082355 \times 10^{26}$ M were the scheduled collapse parameters, but thanks to **nature** the collapse did not happen. For our (holographic) universe, E (GeV) per galaxy = 13.36 (13.5-0.1-0.04) (broken-E8 symmetry cool universe age in billions of years), i.e. energy per galaxy tracked time **exactly**. This means that for our broken-E8 symmetry cool universe age of 13.36 billion years, $E = 13.36$ GeV/galaxy. Now for time running backwards, $100 \times 13.36 = 1336$ GeV/galaxy and this energy is greater (1.003892) than the **1330.82 GeV/galaxy** (see my latest flow diagram) starting energy of the forward-time, reverse-time action shown on the flow diagram.

1. George R. Briggs, "Small corrections to the critical density calculations in MHCE8S theory produce full agreement with Planck collaboration data", ViXra 1901.0221, (2019)