



Bentley's Paradox

Abstract

This article refers to and is at the same time a supplement to the work *The Cold Big Bang Model*, hereafter called MBBR or the basic work, which was printed by the Tribuna Economică publishing house, in the year 2021, with ISBN 987-973-688-429 -0; work is also listed at: <https://bigbangdigitalmodel.com/en/>

We aim to solve the paradox in the title based on the principles of MBBR.

1. INTRODUCTION

In short, the paradox refers to Newton's theory of gravity applied at the cosmological level, namely, if the universe were finite then the stars being attracted to each other by means of gravity then they should all collapse into one point; if the universe is infinite then the forces of attraction would be infinite which would break the stars apart.

2. CONTENTS

How would the *Cold Big Bang Model* respond to this challenge, given that this paper concerns finite universes in which *trigonometric quantum gravity* acts? It was shown in the basic work that Universes with *iteration numbers* less than or equal to 6 do indeed create in the middle an *energy-mass concentration* whose attraction is large enough, and those Universes are small enough – no matter how much the number of *inflations* and *stages* increases - so that no more accumulation centers can be formed and as a result the whole matter gathers in the center. Conversely, for Universes with the number of iterations greater than 6, a sufficiently vast space is formed from the beginning so that the local gravitational actions create mass-energy concentrations between which, (taking into account Axiom 8) weaker gravitational actions are exerted than the action exerted by the rest of space¹. Added to all this are the successive inflations that expand space and add large additional amounts of *dark matter*; in addition, the decrease in time of the value of the gravitational constant is observed, which makes impossible a single central accumulation of *energy-mass*.

¹ Allow me to refer to the gravitational action of space, remembering that I am not speaking in terms of traditional physics but in terms of this work in which physical space is not geometric space - regardless of the associated metric - but is a unitary whole containing *energy-mass*, space geometric and the principle stated by *Axiom 8*. This all unitary being in the *Cold Big Bang Model* what classical cosmology calls *dark matter*.