

INNOVATIVE THOUGHTS ON THE NATURE OF “DARK MATTER” AND “DARK ENERGY”

GUIDO ZBIRAL

Retired private scientist, Konradtasse 34,
A-3400 Klosterneuburg, Austria, Europe

Preamble

Dark material and (even more so) dark energy are still completely mysterious. Before a coherent physical theory on these two dark phenomena can be put forward, light must be shed concerning the nature of these two physical quantities. This is the purpose of my paper.

Abstract

For many years physicists have been engaged around the globe on research about the nature of dark matter and dark energy, but it has hitherto not been possible to find one satisfying explanation – such is the wide range of different opinions of leading experts in this field. I conjecture that at least one thing might be fundamentally wrong with the premises underlying the doctrine of physics applicable today, which is preventing a solution from being found. In fact, I am convinced that “extraordinary ideas and a radically new physical approach” are necessary in order to achieve progress in these mysterious fields of physics. As a possible cause, I suppose that the gravitation of photons is not negligible and might possess a hitherto unknown important influence on electromagnetism, although this opinion does not accord with the current state of physics. But in this context it emerges that it is indeed possible to explain the nature of “Dark Matter” on the basis of two insights, which are described in the Journal of Modern Physics (JMP) Paper “Does gravitation have an influence on electromagnetism?” [1]:

- 1) Electromagnetic energy and thus photons too are associated with a hitherto unknown dynamic gravitation instead of a negligible static gravitation!
- 2) The Law of Conservation of Gravitation is applicable, and additionally to take into consideration the events that took place in the initial phase of the cosmos.

With regard to the nature of “Dark Energy”, I arrive at the unexpected result that it does not in fact exist, but rather that the “Dark Matter” present at the boundary of the cosmos, lying beyond our “cosmic horizon”, exhibits such a high density that it has created a “gravitational instability” between this boundary and the extremely distant cosmic structures still barely perceptible to us. This gravitational instability affects these extremely distant cosmic structures in the form of an accelerated attraction, currently interpreted as “dark energy” or “antigravity”.

Keywords: Gravitation, gravitational quanta, gravitational instability, transformation of energy, conservation of gravitation, dark matter, dark energy.