

CONSEQUENCE OF THE DOUBLING THEORY: THE PERIODIC SEPARATION OF TIME FLOWS (PAST, PRESENT, FUTURE) EXPLAINS DARK MATTER (COSMOLOGICAL CONSTANT)

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Abstract

The Doubling theory [1, 2] is based on a fundamental movement which doubles any particle into two, within and around its horizon of interaction, the latter also being a particle within a larger horizon which encompasses it (e.g. planets-starts-galaxies). This movement, which is the same for the particle and the horizon, is carried out at different speeds. It allows us to define one time flow for an observer, or frame of reference which considers particles within its horizon, and another time flow for another observer or reference frame whose horizon is one of these particles. Thus, an observer, or reference frame is linked to a horizon of observation which defines an observation time of the fundamental movement of the particles within this horizon: this constitutes the limit of perception of the time flow within the horizon.

A real, perceptible, observable particle constitutes always the horizon of smaller, imperceptible, unobservable, and thus virtual particles. Thus, the observer only perceives a continuous time flow which contains imperceptible, virtual instances called "temporal openings". When an observer moves at relativistic speeds [3], the perception of the time flow slows down, compared to a fixed observer who stays behind [4, 5]. This moving observer evolves in the temporal openings of the fixed one, with a slower time perception in an accelerated time flow: the events observable by the moving observer constitute a potential, future, virtual state. Inversely, this first observer evolves in the temporal openings of a still slower time flow where evolves a third observer. This separation of time flows of the three observers, or frames of reference, depends on a cycle of 25 920 years which is now about to end.

All these new concepts have already been verified and justified in our sun's horizon whose particles are the planets [1, 2]. This paper will demonstrate that this essential mechanism of the time flow separation is necessary for an observer who wishes to be able to experiment his various potential states within its temporal openings and to memorise the consequences of these potentials in the slowest time flow thanks to an anticipatory, hyperincursive phenomenon. The anticipation and hyperincursion [6] which emerge from the separation of time flows give to an observer at every instant, through the temporal openings, the possibility to obtain information about the future (observed in an accelerated time flow) and of the past (memorised in a slower time flow but observed in the temporal openings of the accelerated time flow). The requirement for a "time-cycle" allows us to explain the present acceleration in the expansion of the universe, as well as the dark matter, whose presence is deduced by its effects [7, 8, 9]. The Doubling theory allows the calculation of a repulsive force (66,6% of the total energy of the universe) which is the cause of the universe's periodic expansion, as well as the understanding of the contradictions concerning Einstein's cosmological constant [10, 11, 12, 13].

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