(t, i, f)-Physical Laws and (t, i, f)-Physical Constants

FLORENTIN SMARANDACHE, University of New Mexico — In our reality, we do not have perfect spaces and perfect systems. Therefore many physical laws function approximately. Also, the physical constants are not universal too. Variations of their values depend from a space to another, from a system to another, from a time to another, and so on depending on many parameters. The physical laws and similarly the physical constants are t% true, i% indeterminate, and f% false in a given space with a certain composition, and it has a different neutrosophical truth value <t', i', f'> in another space with another composition. That’s why, instead of universal (1, 0, 0)-physical laws and universal (1, 0, 0)-physical constants, we have (t, i, f)-physical laws and respectively (t, i, f)-physical constants, meaning partially true, partially indeterminate, and partially false in each space. Therefore, one uses the neutrosophic logic, which is a general framework for unification of many existing logics, and its components t (truth), i (indeterminacy), f (falsehood) are standard or non-standard real subsets of \([-0, 1+\] with not necessarily any connection between them. It has many applications in physics. Reference: Florentin Smarandache, *Introduction to Neutrosophic Measure, Neutrosophic Integral, and Neutrosophic Probability*, by Sitech & Educational, Craiova, 140 p., 2013.

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