A Model of Smarandache Geometry in Quantum Mechanics

ION PATRASCU, Fratii Buzesti College, Craiova, Romania — Let’s consider a simple model of a Smarandache Geometry built in the following way:

- an Euclidean plane $\alpha$, where through any exterior point to a given line ($d$) there is only one parallel line;
- and an Elliptic sphere ($S$), where lines are defined as the big sphere circles, and points are the regular points on the sphere’s surface; this is a Riemannian model of an Elliptic Geometry;
- suppose the plane $\alpha$ cuts the sphere ($S$) upon a big sphere circle ($C$) into two equal parts; let’s A and B be two distinct points on ($C$), which simultaneously belongs to both: the Euclidean plane $\alpha$ and to the Non-Euclidean sphere ($S$); therefore, the plane $\alpha$ together with the sphere ($S$) form a model ($M$) of a Smarandache Geometry. This model can be interpreted in Quantum Mechanics as follows:

- a particle ($P$) that it is and it is not in a place in the same time, is like this circle ($C$) which is a line [if ($C$) is referred to the sphere ($S$)] and it is not a line [if ($C$) is referred to the plane $\alpha$] in the model ($M$) simultaneously;
- a particle ($R$) which is in two places in the same time, is like line AB (i.e. the line which passes through the above distinct points A and B) in the model ($M$); which means that ‘line’ AB is a straight line in the classical sense in the Euclidean plane $\alpha$, while ‘line’ AB is the big sphere circle ($C$) in the Non-Euclidean sphere ($S$), therefore line AB is simultaneously in two different places (and has two different forms).

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Date submitted: 08 Sep 2010

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