

Abstract Submitted
for the DNP07 Meeting of
The American Physical Society

The Explanation of Quantum Teleportation and Entanglement Swapping RUSSELL MOON, Dr., VICTOR VASILIEV, Pr. — According to the Vortex Theory, the rotation of a particle causes the surrounding three-dimensional space to rotate creating the particle's electromagnetic characteristic. Because three-dimensional space is the surface of fourth-dimensional space, this rotation extends slightly downward into the fourth-dimensional volume beneath. If two photons possessing complementary polarizations are “entangled”, this extreme closeness forces their rotations extending into fourth-dimensional space to join together forming a vortex. When the particles are separated, the vortex between them remains. A change in the orientation of a photon at one end of the vortex travels in a wave down the length of the vortex creating a change in the orientation of the photon at the other end. Entangled separated particles of matter such as electrons are similarly connected and effected by each other. The breaking and reconnecting of these vortices also explains the phenomenon of entanglement swapping. 1 R.G. Moon, *The Possible Existence of a New Particle: the Neutral Pentaquark?* Book of materials, The Scientific Seminar Ecology and Space 1, February 22, 2005, Saint-Petersburg, Russia, 2005.

Victor Vasiliev
Pr.

Date submitted: 16 May 2007

Electronic form version 1.4