

Abstract Submitted
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On the Speed of Rotation of the Isotropic Space (the Home of Photons) DMITRI RABOUNSKI — This paper applies the mathematical method of chronometric invariants, which are physical observable quantities in the General Theory of Relativity (Zelmanov A.L., Soviet Physics Doklady, 1956, v.1, 227-230). The isotropic region of the four-dimensional space-time is considered. This is the home for massless light-like particles (e.g. photons). It is shown that the isotropic space rotates, at each its point, with a linear velocity equal to the velocity of light. Even if the problem is tackled in the simplified conditions of Special Relativity, the same result is obtained. It is shown that the light-speed rotation of the isotropic space has a purely geometrical origin due to the space-time metric, where time is presented as the fourth coordinate, expressed through the velocity of light. This presentation is dedicated to Hermann Minkowski, on the 100th anniversary of his “Raum und Zeit”.

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