

A Science Service Feature

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? WHY THE WEATHER ? Mailed Feb. 5, 1935

"-SPHERES"

By Charles Fitzhugh Talman
Authority on Meteorology

The ice and snow of the earth -- found in the air, on the ground and under ground, on the water and under water -- form collectively the earth's "cryosphere," if science accepts the name proposed two or three years ago by Dr. A. B. Dobrowolski, a Polish meteorologist and a veteran student of ice in all its forms. Which reminds us that our planet now acquires a new "-sphere" or two almost every year.

The heavy interior portion of the globe is the "centrosphere" or "barysphere." Outside of this (according to one system of terminology) is the "lithosphere," or solid crust. The waters of the earth form the "hydrosphere." The gaseous envelope is the well-known "atmosphere." The living beings of the earth constitute the "biosphere."

The atmosphere has been variously subdivided. The layer lying within a few miles of the ground is the "troposphere." Above this lies the "stratosphere," which until a few years ago was supposed to extend all the way to outer space. At present, however, we hear much about still higher "-spheres," though there is no consensus of usage. These include the "ozonosphere," the "altotroposphere," the "altostratosphere" and the "ionosphere," the ionized region, which turns radio signals back to the earth.

The late Alfred Wegener believed the uppermost portion of the atmosphere to consist of hydrogen and proposed calling it the "hydrogensphere." Dr. W. J. Humphreys is responsible for the "konisphere" -- the part of the atmosphere in which dust is found.

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2101 Constitution Ave.
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