THE PHYSICS OF THE NEWLYCOME SNOW FORMATIONS

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In this work a completely new explanation is given for newlycome snow formation. It is proved that it is the result of cavitations in the domain of the clouds. Nowadays the newlycome snow is considered to be a type of snow and its formation is similared to that of snow, i.e. as accumulation of crystals. But compared to snow the newlycome snow has the following principal contradictions: a) Certainly the newlycome snow is consisted of grains, but not of grains of microscopic measures. The grains have globelike form and a diameter about 1mm. b) The density of snow is 10-20 times smaller than that of newlycome snow.

As it is known, the density of newlycome snow is 0.1-0.2g/cm^3 although the grains are rather solid. In that case if they are consisted of entire ice, then its density should be 0.9g/cm^3. In that case a difference of 80-90% of densities between the entire newlycome snow and its grains should arise from intergrain spaces. But, even if we take a cube which is full of layers of grains, the space would be less than 50% of the cubes volume. We are to suppose that 80-90% lightness of newlycome snow is the result of the fact that consistent little globes are hollow. Taking into consideration this fact the formation of newlycome snow is connected with the cavitations phenomena in clouds. Cavitations may be in clouds because of both acoustic waves and eddy motion. In result of cavitations there appear cavities of low pressure and low temperature, where the small drops of the cloud under the domain of low pressure extends adiabatically and in case of certain critical pressure not exploding they freeze and become icy hollow balls. Because of this, the difference between the pressures of the cavity and external environment reaches to the minimum and the cavity is pressed at no high velocity and the small balls gathering together form the newlycome snow. As result of cavitations, the P_k pressure inside the cavity should exceed the surface intensity force, i.e. critical pressure P_k should be $P_k \leq 2\sigma/r$ where σ is the surface intension, r is the radius of the globes. And if the pressure is less than the permitable limits of P_k, the small-drops (drops) explode and it drizzles.