

DYNAMICS OF SUBMICRON PARTICLES IN AIR
ENVIRONMENT: CHORNOBYL' ASPECTS

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S u m m a r y

For the study of specific features of the motion of submicron dust particles in the air environment, a mesoscopic approach is developed. An algorithm for the numerical solution of the obtained general equations of motion in a computer experiment is worked out. Numerical simulations are performed and the radioecological risks caused by the presence of submicron particles in the "Shelter" object (SO) are estimated. It is shown, in particular, that the flow-electro-gravitational mechanism appears to be dominant in transport of dust particles, and the role of the gravitational component decreases with decreasing the sizes of particles. A special danger is presented by submicron particles with radii $R < 100$ nm, which can come out of the SO and migrate on large distances of the order of 1000 km.