Outer atmosphere and wake of space objects, kinetic simulation

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Problems of the kinetic simulation of charged and neutral particle flows due to interactions of bodies with space magnetoplasma are dealt with. The image method (see [1], [2]) is considered in application to modeling disturbances of space plasma near a space station taking into account interactions with boundaries and pollution clouds. Different special cases of the objects wake are considered in detail. The correlations of boundary material properties and space plasma disturbances are discussed on the basis of the simulation results.

References:

[1] Physical Review E, v.54, 5591-5598, 1996

[2] Planetary and Space Science, v.43, 1409-1418, 1419-1427, 1995;