

Abstract Submitted
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Particles in the wake of other particles¹ DIETMAR BLOCK,
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University of Oslo, Norway — The charging of dust grains in the wake of another
grains in sonic and supersonic collisionless plasma flows is studied by numerical sim-
ulations. The simulations are carried out with DiP3D, a three dimensional particle-
in-cell code with both electrons and ions represented as numerical particles. We
consider two grains aligned with the flow, as well as dust chains and multiple grain
arrangements. It is found that the dust charge depends significantly on the flow
speed, distance between the grains, and the grain arrangement. Special attention is
paid to typical experimental situations like a particle below a layer of particles and
small 3D clusters.

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