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Boundary Characteristic Point Regularity for Navier-Stokes Equations: Blow-up Scaling and Petrovskii-type Criterion (a Formal Approach)

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It is shown that Wiener's regularity of the vertex of a backward paraboloid for 3D Navier-Stokes equations with zero Dirichlet conditions on the paraboloid boundary is given by Petrovskii's criterion for the heat equation (1934), i.e., the nonlinear convection term does not affect the regularity result.

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