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# Inviscid incompressible limits on expanding domains

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## Abstract

We consider the inviscid incompressible limit of the compressible Navier-Stokes system on large domain, the radius of which becomes infinite in the asymptotic limit. We show that the limit solutions satisfy the incompressible Euler system on the whole physical space  $R^3$  as long as the radius of the domain is larger than the speed of acoustic waves inversely proportional to the Mach number. It is a joint work with E. Feireisl and Y. Sun.

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