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**Exponential time integration of the incompressible
Navier-Stokes equations**

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We discuss a high order projection scheme for time integration of the incompressible Navier-Stokes equations. The method is based on a projection onto the subspace of divergence-free (incompressible) functions interleaved with a Krylov-based exponential time integration.

These time integration methods provide a high order accurate, stable approach with many of the advantages of explicit methods, and can reduce the computational resources over implicit methods. We present numerical examples to support our claims and provide comparison against a Crank Nicolson scheme.