Large eddy simulation of sheet to cloud cavitation[1] MRUGANK
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eddy simulation is used to study sheet to cloud cavitation. A homogeneous mix-
ture model is employed to represent the multiphase mixture of water and water
vapor. A novel predictor-corrector method (Gnanaskandan and Mahesh, Int. Jour-
nal of Multiphase Flow, 2015, 70:2234) is used to numerically solve the compressible
NavierStokes equations for the liquid/vapor mixture along with a transport equa-
tion for the vapor mass fraction. The algorithm is implemented on an unstructured
grid and a parallel platform, with a fully coupled implicit time advancement of both
viscous and advection terms. Simulation of sheet to cloud cavitation over a wedge
at a Reynolds number, Re $= 200,000$ and cavitation number, $\sigma = 2.1$ is performed.
A propagating condensation shock similar to the one observed in the experiments of
Harish et.al. (Harish Ganesh, PhD thesis- University of Michigan, 2015) is observed
in the computed flow field. Results will be presented and the flow physics will be
discussed.

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