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1 Status of Effort

The graduate student, Tom Dreeben, is very close to completing the research. He is expected to complete his Ph.D. thesis in November 1996.

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2 Accomplishments

A PDF-closure—the Stochastic Lagrangian Wall Model—has been developed, following Durbin's ideas of elliptic relaxation. The model has been reformulated as a Reynolds stress closure and tested against DNS data of channel flow. The paper describing this model has been accepted for publication in Physics of Fluids. The same model has been implemented in a PDF method. This involved considerable numerical difficulties which have been overcome. A paper describing the model, the numerics, and comparisons with experimental data is in preparation.

3 Personnel Supported

Thomas D. Dreeben, Graduate Student

4 Publication

T. Dreeben and S.B. Pope (1996) "PDF and Reynolds-stress modeling of near-wall turbulent flows," Physics of Fluids, (submitted).

5 Inventions and Patents

None.