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E-epsilon modeling of the atmospheric boundary layer

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I propose a new turbulent kinetic energy dissipation equation for the E-epsilon 2-equations model of the atmospheric boundary layer. Previous achievements for the neutrally stratified, sheared, rotating boundary layer are generalized in order to allow the application also in the unstably stratified case. In the stably stratified case, the generalization is obtained by invoking the consistency of the equilibrium solution with the Deardorff mixing length formulation. This model is suitable for application in the mesoscale meteorological models.