

Reply

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The primary intent of my dryline model is to illuminate basic physical processes which propel the phenomenon. The simulation of observed motions by a rather primitive subgrid-scale parameterization scheme tends to verify the postulated driving by turbulent mixing. While Mahrt's observations on the behavior of the eddy exchange coefficient are correct, a more complicated scheme, perhaps including countergradient fluxes, would be much more costly and might mask the essential physics in details which are unverifiable now or in the near future.

A similar use of the extrapolation procedure of O'Brien (1970) with the eddy diffusivity set to zero at the base of the free atmosphere has been shown by Sasamori (1970) to simulate observed Ekman layer conditions as adequately as more complex microphysical techniques. The accuracy of the model is not so surprising when one considers the many other simula-

tive and even prognostic models (e.g., Estoque, 1971; Gerrity, 1967) which have shown good results using "bulk" transfer formulations similar to those I employ.

I take this opportunity to correct a misprint in the original paper. The sentence immediately following Eq. (15) should read, "For unstable conditions ($Ri < 0$), the ratio (Z/L) is equal to the Richardson number"

REFERENCES

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