

the large-scale eddies may occur and in fact, do occur.

Stockholm, February, 1952.

REFERENCES

- KUO, H. L., 1951: A Note on the Kinetic Energy Balance of the Zonal Wind Systems. *Tellus*, 3, 205—207.
- VAN MIEGHEM, J., 1949: Production et redistribution de la quantité de mouvement et de l'énergie cinétique dans l'atmosphère. Application à la circulation atmosphérique générale. *J. Sc. de la Météor.*, 1, 55—67.

Reply

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March 1952

Prof. Van Mieghem's introduction of the mean value weighted by the density distribution is interesting. Through this definition of the mean, the restriction on the density put forward in my short note becomes unnecessary.

As for the sentence "the eddy process in the atmosphere is a self consistent and self sufficient mechanism in maintaining the zonal wind systems" quoted by Prof. Van Mieghem, I have only intended to point out that this eddy process is important both for the angular momentum balance and for the kinetic energy balance of the mean zonal winds and that its effects are of the right order of magnitude and direction, so that it may account for the major portions of these balances. It is hoped that it does not give the impression that no energy supply is needed by these eddies, nor that it excludes the effects of other physical processes. The note is primarily concerned with the kinetic energy balance of the mean zonal wind systems, in which the work done by the pressure forces does not occur, although it is a very important factor for the production of kinetic energy of almost all other kinds of motions. This is one advantage of my equation. The energy exchange between eddies of different scales discussed by Van Mieghem is surely an important process in the atmosphere, but not directly connected with the maintenance of the mean zonal wind systems.