

Reply

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22 December 1961

I am indebted to Messrs. Endlich and Rados for their defense of the reliability of "Project Jet Stream" aircraft data. Flight No. 29 actually contained an extreme case of discrepancies between radiosonde and aircraft observations among the many flights which have been analyzed (cf. Reiter, 1962). To ascribe the occurrence of superadiabatic lapse rates to a mesoscale temperature change, which occurred while two successive flight legs have been executed, seems to be a rather interesting comment in view of the fact that the mesostructure of the temperature field has been eliminated in the cross-section of flight No. 29 by a smoothing process, which has been described in my paper (cf. Reiter, 1961). Apparently, if one accepts Endlich's and Rados' train of thought, there may be critical occasions, in which mesostructural details *along* and *across* the axis of flow may be sufficiently different so that one is *not* eliminated by the elimination of the other. To be more specific on this point, one actually should have detailed four-dimensional measurements

available, possibly carried out by simultaneous flights of two or more aircraft, and rendering the horizontal and vertical distribution of meso-scale phenomena, as well as their change in time.

While it is felt that these speculations will not change any of the conclusions drawn in my paper (Reiter, 1961)—(instead of allowing for an unknown mesoscale change of temperatures at one level the flight cross-section has been referenced to the Albany soundings and thus has been adapted "quasi-synoptically")—attention is drawn again to the significance of details in the structure of the atmosphere, on which our lack of knowledge still is rather deplorable.

REFERENCES

- Reiter, E. R., 1961: The detailed structure of the wind field near the jet stream. *J. Meteor.* 18, 9-30.
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