Reply

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We appreciate Prof. Gill's comments on our comparison of cup and sonic anemometer measurements made in Kansas in 1968.

At the outset we should mention that the cup anemometers used in the Kansas experiments were not, strictly speaking, the Beckman and Whitley model 170-41. Only the cups were of the same model; the transducer housing and magnetic encoding system were developed specially for us by Control Equipment Corporation, Needham, Mass. [A complete description is given in the report on Project Windy Acres by the Boundary Layer Branch (1967)].

In the second paragraph of his letter, Gill remarks, "Surely some of their measurements were made in steady flow. . . ." Unfortunately, the measurements on which we reported did not occur in the steady flow postulated by Gill. In fact, in no cases were the mean winds less than 2 m sec^{-1} .

Gill has questioned the magnitude of the overspeeding in our cup anemometers. We have checked our cup anemometer calibration records, some of which date back to 1965, and have not been able to find any specific source of error that would affect our wind speed calibration. In particular, the calibration curves for the cup anemometers used in our 1968 experiments conform to calibration results obtained independently in the low-speed wind tunnel at the National Bureau of Standards, Washington, D. C.

Calibration procedures are still under investigation, and any significant result will be reported.

REFERENCE

Boundary Layer Branch, Air Force Cambridge Research Laboratories, 1967: Wind and temperature profiles from Project Windy Acres. AFCRL-67-0339, Spec. Rept. No. 65, 161 pp.