Technical Comments

Comments on "Similar Laminar Boundary Layer with Large Injection"

SEYMOUR L. ZEIBERG*
Aerospace Corporation, San Bernardino, Calif.

IN Ref. 1 it was stated that to order $1/f_w$ a variation of the pressure gradient parameter β around the value of $\frac{1}{2}$ (for the axisymmetric stagnation point) does not alter the inner constant shear layer structure (see Ref. 1 for definition of symbols). The result is in error because of the use of a perturbation scheme which did not contain consistent orders of magnitude for the various terms. This can be corrected by noting that in the inner layer $f \sim 0$ (f_w) and $\eta \sim 0$ (f_w); thus, the correct variables are $\tilde{f} = f/f_w$ and $\tilde{\eta} = \eta/f_w$. The result shows that relative to the $\beta = \frac{1}{2}$ case for a given f_w, the wall shear decreases for $\beta < \frac{1}{2}$, and increases when $\beta > \frac{1}{2}$. However, as indicated in Ref. 1, only the $\beta = \frac{1}{2}$ case has constant shear throughout the inner layer.

There is no need to resort to the method discussed in Ref. (1) to study the inner layer. Pretsch[2] and, more recently, Aroesty and Cole[3] have considered boundary-layer flows with asymptotically large injection. The boundary-layer characteristics noted previously and in Ref. 1 are contained in these papers.

Received June 30, 1966.

* Head, Gas Dynamics Section, Technology Division. Member AIAA.

References

[1] Zeiberg, S. L., "Similar laminar boundary layer with large injection," AIAA J. **4**, 157–158 (1966).

[2] Pretsch, J., "Analytical solutions of the laminar boundary layer with asymptotic suction and injection," ZAMM **24**, 264–267 (1944).

[3] Aroesty, J. and Cole, J. D., "Boundary layer flows with large injection rates," RAND Corp. Memo RM-4620-ARPA (1965).

Errata: "Thermionic Energy Conversion Using Barium Plus Cesium Vapors"

JOHN PSAROUTHAKIS*
Martin Company, Baltimore, Md.

[AIAA J. **4**, 1201–1208 (1966)]

CERTAIN references are incorrectly typeset in the text: Reference numbers 18–23 in the text correspond to numbers 17–22 in the References.

Received July 22, 1966.

* Manager, Thermionic Energy Conversion Research and Development. Member AIAA.