REJOINDER TO SOME REMARKS ON HEAT TRANSFER IN THE AXISYMMETRIC BOUNDARY LAYER OVER A CIRCULAR CYLINDER

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WE THANK Professor Bourne for preparing the above mentioned note (Vol. 13, No. 1, p. 223) and citing important references that we had unfortunately overlooked. There are, however, differences between our work and those reported previously. To Professor Bourne's comments on these differences, we would like to add that our paper also included an accurate finite-difference solution of the partial differential equations. This was carried out for the two-fold purpose of (i) determining the shape of the profiles and (ii) providing further evidence for the validity of our interpolation scheme in the intermediate range of curvature. Our treatment of the small-curvature solution is comprehensive and accurate. It consists of a three-term expansion evaluated to at least five places of accuracy for three different Prandtl numbers. The simple expression for heat transfer rate is exact for small curvature, and it remains accurate up to at least a boundary-layer to radius ratio of 10:1, for the range of Prandtl numbers considered.

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