

Compressible laminar boundary-layer flow at a  
point of attachment.

Table 3. Velocity and enthalpy functions  $f'$ ,  $g'$ ,  $h$  for  
consultation by readers.

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TABLE 3

| C     | 1.0                |                    |       | 0.75               |       |       | 0.50               |       |       | 0.25               |       |       |
|-------|--------------------|--------------------|-------|--------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
|       | $S_W$              | $f'$               | $g'$  | $f'$               | $g'$  | $h$   | $f'$               | $g'$  | $h$   | $f'$               | $g'$  | $h$   |
| $X_3$ |                    |                    |       |                    |       |       |                    |       |       |                    |       |       |
| 0.0   | 0.000              | 0.000              | 1.000 | 0.000              | 0.000 | 1.000 | 0.000              | 0.000 | 1.000 | 0.000              | 0.000 | 1.000 |
| 0.2   | 0.310              | 0.310              | 0.838 | 0.309              | 0.276 | 0.848 | 0.308              | 0.235 | 0.859 | 0.308              | 0.186 | 0.869 |
| 0.4   | 0.548              | 0.548              | 0.679 | 0.545              | 0.496 | 0.699 | 0.543              | 0.432 | 0.719 | 0.543              | 0.352 | 0.738 |
| 0.6   | 0.720              | 0.720              | 0.527 | 0.717              | 0.665 | 0.555 | 0.715              | 0.593 | 0.583 | 0.714              | 0.497 | 0.611 |
| 0.8   | 0.838              | 0.838              | 0.389 | 0.835              | 0.788 | 0.422 | 0.833              | 0.719 | 0.457 | 0.834              | 0.621 | 0.492 |
| 1.0   | 0.914              | 0.914              | 0.272 | 0.912              | 0.874 | 0.307 | 0.911              | 0.814 | 0.344 | 0.913              | 0.724 | 0.383 |
| 1.2   | 0.958              | 0.958              | 0.179 | 0.957              | 0.929 | 0.212 | 0.956              | 0.883 | 0.248 | 0.961              | 0.806 | 0.287 |
| 1.4   | 0.982              | 0.982              | 0.111 | 0.982              | 0.963 | 0.138 | 0.984              | 0.930 | 0.171 | 0.988              | 0.868 | 0.208 |
| 1.6   | 0.994              | 0.994              | 0.064 | 0.994              | 0.982 | 0.085 | 0.997              | 0.960 | 0.112 | 1.001              | 0.914 | 0.144 |
| 1.8   | 0.998              | 0.998              | 0.035 | 0.999              | 0.992 | 0.050 | 1.002              | 0.978 | 0.070 | 1.006              | 0.946 | 0.096 |
| 2.0   | 1.000              | 1.000              | 0.017 | 1.000              | 0.997 | 0.027 | 1.003              | 0.989 | 0.042 | 1.007              | 0.968 | 0.062 |
| 2.2   | 1.000 <sup>a</sup> | 1.000 <sup>a</sup> | 0.008 | 1.001 <sup>o</sup> | 0.999 | 0.014 | 1.003              | 0.995 | 0.023 | 1.006              | 0.981 | 0.038 |
| 2.4   | 1.000 <sup>a</sup> | 1.000 <sup>a</sup> | 0.004 | 1.000 <sup>7</sup> | 1.000 | 0.007 | 1.002              | 0.998 | 0.012 | 1.004              | 0.990 | 0.022 |
| 2.6   | 1.000 <sup>a</sup> | 1.000 <sup>a</sup> | 0.001 | 1.000 <sup>4</sup> | 1.000 | 0.003 | 1.001              | 0.999 | 0.006 | 1.003              | 0.995 | 0.012 |
| 2.8   | 1.000 <sup>a</sup> | 1.000 <sup>a</sup> | 0.001 | 1.000 <sup>a</sup> | 1.000 | 0.001 | 1.000 <sup>6</sup> | 1.000 | 0.003 | 1.002              | 0.997 | 0.007 |
| 3.0   | 1.000              | 1.000              | 0.000 | 1.000 <sup>a</sup> | 1.000 | 0.000 | 1.000 <sup>s</sup> | 1.000 | 0.001 | 1.001              | 0.999 | 0.003 |
| 3.4   | 1.000              | 1.000              | 0.000 | 1.000 <sup>a</sup> | 1.000 | 0.000 | 1.000 <sup>a</sup> | 1.000 | 0.000 | 1.000 <sup>a</sup> | 1.000 | 0.001 |
| 3.8   | 1.000              | 1.000              | 0.000 | 1.000              | 1.000 | 0.000 | 1.000              | 1.000 | 0.000 | 1.000              | 1.000 | 0.000 |

TABLE 3 (Continued)

| C         | 0.0                |       |       |                    | -0.25 |       |                    |        | -0.50 |                    |        |       |
|-----------|--------------------|-------|-------|--------------------|-------|-------|--------------------|--------|-------|--------------------|--------|-------|
| $S_{W^2}$ | 1.0                |       |       |                    | 1.0   |       |                    |        | 1.0   |                    |        |       |
| $X_s$     | $f'$               | $g'$  | $h$   | $f'$               | $g'$  | $h$   | $f'$               | $g'$   | $h$   | $f'$               | $g'$   | $h$   |
| 0.0       | 0.000              | 0.000 | 1.000 | 0.000              | 0.000 | 1.000 | 0.000              | 0.000  | 1.000 | 0.000              | 0.000  | 1.000 |
| 0.2       | 0.308              | 0.123 | 0.877 | 0.309              | 0.042 | 0.881 | 0.310              | -0.050 | 0.879 | 0.310              | -0.050 | 0.879 |
| 0.4       | 0.544              | 0.245 | 0.755 | 0.546              | 0.103 | 0.764 | 0.547              | -0.063 | 0.758 | 0.547              | -0.063 | 0.758 |
| 0.6       | 0.716              | 0.364 | 0.636 | 0.719              | 0.179 | 0.649 | 0.721              | -0.041 | 0.641 | 0.721              | -0.041 | 0.641 |
| 0.8       | 0.837              | 0.478 | 0.522 | 0.841              | 0.268 | 0.539 | 0.842              | 0.012  | 0.529 | 0.842              | 0.012  | 0.529 |
| 1.0       | 0.917              | 0.583 | 0.417 | 0.921              | 0.364 | 0.437 | 0.922              | 0.090  | 0.427 | 0.922              | 0.090  | 0.427 |
| 1.2       | 0.966              | 0.675 | 0.324 | 0.971              | 0.463 | 0.346 | 0.971              | 0.186  | 0.336 | 0.971              | 0.186  | 0.336 |
| 1.4       | 0.994              | 0.756 | 0.244 | 0.999              | 0.559 | 0.267 | 0.999              | 0.292  | 0.258 | 0.999              | 0.292  | 0.258 |
| 1.6       | 1.007              | 0.822 | 0.178 | 1.013              | 0.648 | 0.200 | 1.013              | 0.401  | 0.193 | 1.013              | 0.401  | 0.193 |
| 1.8       | 1.012              | 0.874 | 0.126 | 1.018              | 0.727 | 0.146 | 1.018              | 0.507  | 0.141 | 1.018              | 0.507  | 0.141 |
| 2.0       | 1.012              | 0.914 | 0.086 | 1.018              | 0.795 | 0.104 | 1.018              | 0.605  | 0.101 | 1.018              | 0.605  | 0.101 |
| 2.2       | 1.010              | 0.944 | 0.056 | 1.015              | 0.850 | 0.072 | 1.015              | 0.691  | 0.071 | 1.015              | 0.691  | 0.071 |
| 2.4       | 1.008              | 0.964 | 0.036 | 1.012              | 0.894 | 0.049 | 1.012              | 0.765  | 0.048 | 1.012              | 0.765  | 0.048 |
| 2.6       | 1.005              | 0.978 | 0.022 | 1.009              | 0.927 | 0.032 | 1.009              | 0.825  | 0.032 | 1.009              | 0.825  | 0.032 |
| 2.8       | 1.004              | 0.987 | 0.013 | 1.006              | 0.951 | 0.020 | 1.006              | 0.873  | 0.021 | 1.006              | 0.873  | 0.021 |
| 3.0       | 1.002              | 0.993 | 0.007 | 1.004              | 0.968 | 0.013 | 1.005              | 0.910  | 0.014 | 1.005              | 0.910  | 0.014 |
| 3.4       | 1.001              | 0.998 | 0.004 | 1.002              | 0.988 | 0.008 | 1.002              | 0.958  | 0.005 | 1.002              | 0.958  | 0.005 |
| 3.8       | 1.000 <sup>4</sup> | 0.999 | 0.001 | 1.001              | 0.996 | 0.004 | 1.001              | 0.982  | 0.002 | 1.001              | 0.982  | 0.002 |
| 4.2       | 1.000              | 1.000 | 0.000 | 1.000 <sup>4</sup> | 0.999 | 0.001 | 1.000 <sup>3</sup> | 0.993  | 0.001 | 1.000 <sup>3</sup> | 0.993  | 0.001 |
| 4.6       |                    |       |       |                    |       |       |                    | 0.997  |       |                    | 0.997  |       |
| 5.0       |                    |       |       |                    |       |       |                    | 1.000  |       |                    | 1.000  |       |
| 5.4       |                    |       |       |                    |       |       |                    | 1.000  |       |                    | 1.000  |       |









TABLE 3 (Continued)

| $c$   | 0.0   |       |       |                    | -0.25              |                    |       |       | -0.5               |       |       |                    |
|-------|-------|-------|-------|--------------------|--------------------|--------------------|-------|-------|--------------------|-------|-------|--------------------|
| $S_w$ | -1.0  |       |       |                    | -1.0               |                    |       |       | -1.0               |       |       |                    |
| $X_s$ | $f'$  | $g'$  | $h$   | $f'$               | $g'$               | $h$                | $f'$  | $g'$  | $h$                | $f'$  | $g'$  | $h$                |
| 0.0   | 0.000 | 0.000 | 1.000 | 0.000              | 0.000              | 1.000              | 0.000 | 0.000 | 1.000              | 0.000 | 0.000 | 1.000              |
| 0.2   | 0.129 | 0.101 | 0.899 | 0.121              | 0.076              | 0.908              | 0.120 | 0.032 | 0.909              | 0.120 | 0.032 | 0.909              |
| 0.4   | 0.255 | 0.202 | 0.798 | 0.239              | 0.152              | 0.816              | 0.237 | 0.066 | 0.818              | 0.237 | 0.066 | 0.818              |
| 0.6   | 0.373 | 0.302 | 0.698 | 0.351              | 0.230              | 0.725              | 0.348 | 0.103 | 0.727              | 0.348 | 0.103 | 0.727              |
| 0.8   | 0.483 | 0.400 | 0.600 | 0.454              | 0.308              | 0.635              | 0.451 | 0.144 | 0.639              | 0.451 | 0.144 | 0.639              |
| 1.0   | 0.582 | 0.494 | 0.506 | 0.549              | 0.386              | 0.548              | 0.544 | 0.191 | 0.554              | 0.544 | 0.191 | 0.554              |
| 1.2   | 0.669 | 0.582 | 0.418 | 0.633              | 0.464              | 0.466              | 0.627 | 0.243 | 0.473              | 0.627 | 0.243 | 0.473              |
| 1.4   | 0.744 | 0.663 | 0.337 | 0.706              | 0.540              | 0.388              | 0.700 | 0.301 | 0.398              | 0.700 | 0.301 | 0.398              |
| 1.6   | 0.806 | 0.735 | 0.265 | 0.769              | 0.612              | 0.318              | 0.763 | 0.364 | 0.329              | 0.763 | 0.364 | 0.329              |
| 1.8   | 0.857 | 0.797 | 0.203 | 0.822              | 0.679              | 0.254              | 0.815 | 0.430 | 0.268              | 0.815 | 0.430 | 0.268              |
| 2.0   | 0.897 | 0.849 | 0.151 | 0.865              | 0.741              | 0.199 <sup>s</sup> | 0.858 | 0.499 | 0.216              | 0.858 | 0.499 | 0.216              |
| 2.2   | 0.928 | 0.891 | 0.109 | 0.900              | 0.795              | 0.153              | 0.893 | 0.567 | 0.171              | 0.893 | 0.567 | 0.171              |
| 2.4   | 0.951 | 0.924 | 0.076 | 0.927              | 0.842              | 0.114              | 0.920 | 0.633 | 0.133              | 0.920 | 0.633 | 0.133              |
| 2.6   | 0.968 | 0.949 | 0.051 | 0.948              | 0.881              | 0.083              | 0.942 | 0.695 | 0.103              | 0.942 | 0.695 | 0.103              |
| 2.8   | 0.980 | 0.967 | 0.033 | 0.964              | 0.913              | 0.059              | 0.958 | 0.752 | 0.078              | 0.958 | 0.752 | 0.078              |
| 3.0   | 0.987 | 0.979 | 0.021 | 0.975              | 0.938              | 0.041              | 0.971 | 0.802 | 0.059              | 0.971 | 0.802 | 0.059              |
| 3.4   | 0.996 | 0.992 | 0.008 | 0.989              | 0.971              | 0.018              | 0.986 | 0.882 | 0.033              | 0.986 | 0.882 | 0.033              |
| 3.8   | 0.999 | 0.998 | 0.002 | 0.996              | 0.988              | 0.007              | 0.994 | 0.936 | 0.017              | 0.994 | 0.936 | 0.017              |
| 4.2   | 0.999 | 0.999 | 0.001 | 0.999              | 0.995              | 0.003              | 0.997 | 0.968 | 0.009              | 0.997 | 0.968 | 0.009              |
| 4.6   | 1.000 | 0.999 | 0.000 | 0.999 <sup>s</sup> | 0.998              | 0.001              | 0.999 | 0.985 | 0.005              | 0.999 | 0.985 | 0.005              |
| 5.0   |       | 1.000 |       | 1.000              | 0.999 <sup>s</sup> | 0.000 <sup>a</sup> | 1.000 | 0.994 | 0.002              | 1.000 | 0.994 | 0.002              |
| 5.4   |       |       |       |                    | 1.000              |                    |       | 0.998 | 0.001              |       | 0.998 | 0.001              |
| 5.8   |       |       |       |                    |                    |                    |       | 0.999 | 0.000 <sup>s</sup> |       | 0.999 | 0.000 <sup>s</sup> |
| 6.2   |       |       |       |                    |                    |                    |       | 1.000 | 0.000              |       | 1.000 | 0.000              |