of rings very close to the nose may altogether alter the shock structure appearing at the nose, thus decreasing the effective Mach number at the base and increasing base pressure.

It is also observed that base pressure increases with the diameter ratio of the ring for the same location of ring mounting. However, the effect is more pronounced for location of ring mounting closer to the nose than to the base. This phenomenon is linked with the strength of the shock wave generated at the leading edge of the ring. When the ring is mounted near the base, the expansion by the ring will be practically independent of the diameter. However, the shock generated at the leading edge of the ring will increase in strength with diameter ratio resulting in a slight rise in base pressure. As the ring is moved towards the nose of the test body, the interaction of the wake of the ring with the flow at the downstream edge of the base becomes more severe whereas the tip shock strength of the ring remains unchanged. When the ring is moved close to the nose, it is possible that the pressure field created due to tip shock propagates to the nose of the test body through the subsonic portion of the boundary layer on the test body thereby altering the shock structure at the nose of the test body. Under such circumstances, the shock wave at the nose of the test body may as well become normal indicating at least a change to a sonic condition which results in a very weak expansion and thus a very high base pressure.

Conclusion

From the results and the discussions of the previous section the following conclusions may be drawn: 1) the ring mounting increases the base pressure of the body under consideration; 2) as the ring is moved closer to the nose, the base pressure increases; and 3) as the ratio of the diameter of the ring to that of the body increase, the base pressure increases.

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ERRATA

Mass Properties of Sphere-Cone Entry Vehicles

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Avco Systems Division, Wilmington, Mass.
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LINE 2 of Eq. (4) should read

$$4(Ba^3/L^3 - e^{KL})/K^2L^2 + 6C\times$$

Line 1 of Eq. (5) should read

$$gI'_y/\pi\rho_0 L^5 \tan^2\theta_c = \{e^{KL}(2a/L+1)/KL - 4e^{KL}/K^2L^2$$

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