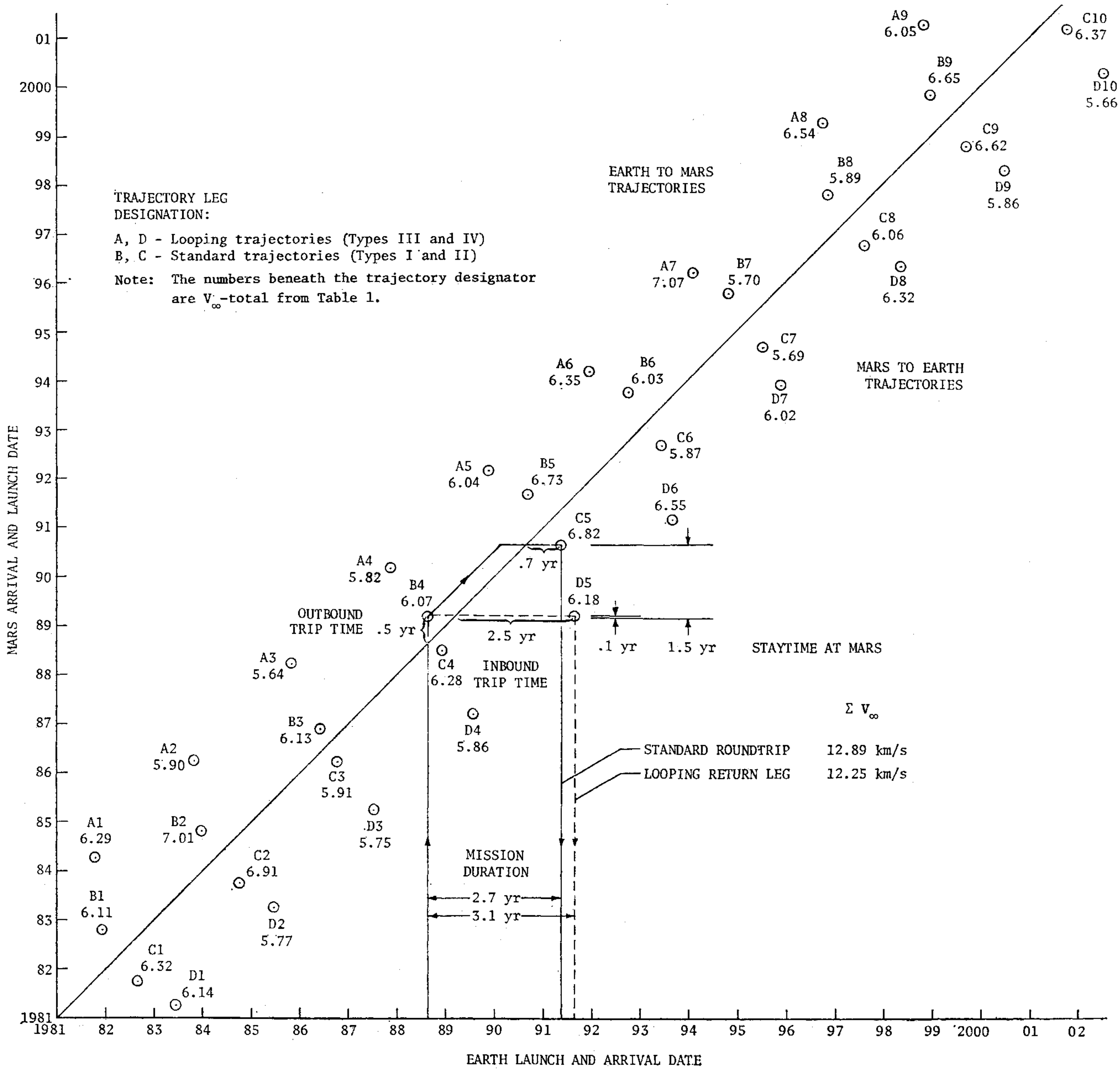

Fig. 2 Comparison of round trip Mars missions.

week Mars stay time mission can be obtained which requires 1 km/sec less than the comparable B2-C3 mission for an increase in total mission time of less than two months. Another interesting comparison is in the 1986 Earth launch date year. There, either the B3-D4 or the A3-C4 trajectories would allow a round trip with a V_∞ savings of 0.5 km/sec. This method thus allows round trip missions in launch years which are unfavorable for standard trajectories.

In summary, looping trajectories offer an attractive alternative to standard trajectories for round trip Mars missions. A slight increase in total mission time can be traded for a significant reduction in Mars stay time with the possible added benefit of a decrease in energy requirements. The same type of trade-off should be available for any planetary round trip mission.

References

[1] Battin, R. H., *Astronautical Guidance*, McGraw-Hill, New York, 1964, p. 78.

[2] Escobal, P. R., *Methods of Orbit Determination*, Wiley, New York, 1965, p. 234.

Errata

Integral Method for Nonlinear Transient Heat Transfer in a Semi-Infinite Solid

BENJAMIN T. F. CHUNG AND L. T. YEH
University of Akron, Akron, Ohio

[JSR 10, 88–89 (1973)]

ON p. 88, under Eq. (4), the boundary condition should read $(\partial\theta/\partial x)(\theta,t) = N_r(z^4 - u^4)$ and Eq. (8) on p. 89 should read

$$(2/3)N_r^2 t = (1/8u^4)[z^2/(u^4 - z^4) + \ldots]$$

instead of $N_r^2 t = (1/8u^4)[z^4/(u^4 - z^4) + \ldots]$

Received April 26, 1973.
Index categories: Heat Conduction; Radiation and Radiative Transfer.