MARS: AN INTRODUCTION TO ITS INTERIOR, SURFACE, AND ATMOSPHERE ERRATA

These are errors that I have caught in the book. Let me know if you find any others.

Page 43: Axes are Figure 2.5 are reversed.

Page 54, section 3.2.1: The gravitational potential (U) is the integral of the gravitational acceleration (g).

Page 57, section 3.2.2: Gravity anomalies are variations in gravity from the geoid, not gravitational potential.

Page 57, section 3.2.2, equation 3.19: Equation 3.19 is from the series expansion (not a Taylor series expansion):

$$(x+y)^n = x^n + nx^{n-1}y + \cdots$$

Page 98, equation 4.9: The last parenthesis on the right side is missing a ¼ power. Should read:

$$T_{eq} = (1 - A_b)\left(\frac{L_{solar}}{16\pi r^2 \varepsilon \sigma}\right)^{1/4}$$

Page 114: L in equation 5.9 is the projectile diameter.

Page 115, equation 5.11: The transient crater depth (d_t) is 1/10 of the transient diameter (D_t), thus equation 5.11 should read:

$$d_{ex} \approx \frac{1}{3} d_t \approx \frac{1}{30} D_t$$

Page 118, equation 5.12: Should be D_t, not D.

Page 163, last paragraph on page, 2nd sentence: Should be "vaporization", not "sublimation". Therefore the sentence should read: "Emplacement of liquid H_2O on Mars' surface leads to its immediate vaporization into the atmosphere or freezing into ice on the surface."

Page 167, equation 6.11: In the equation for C_V, the $\partial U/\partial T$ quantity should have a V subscript to indicate the partial derivative is taken at constant volume. Hence, the equation should read:

$$C_V = \left(\frac{\partial Q}{\partial T}\right)_V = \left(\frac{\partial U}{\partial T}\right)_V$$

Page 171, equation 6.29: Should be a less than sign (<) rather than a greater than sign (>).