

Errata For Mathematical Methods for Oscillations and Waves

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1. p. 10. In (1.36), the speed v_{sc} should read v_{esc} .
2. p. 40 Before (2.32), the set of complex coefficients a_j should have index from negative infinity to infinity: $\{a_j\}_{j=-\infty}^{\infty}$.
3. p. 40 In (2.36) and just below, the exponential should not have a $-$ sign in it: $e^{i2\pi(j-k)}$.
4. p. 42-43 The description of even and odd for the function with $t \in [0, T/2)$ should read “so that what we really have is $p(T/2 + (T/2 - t)) = -p(t)$ ”, and similarly, for even functions, we have $p(T/2 + (T/2) - t) = p(t)$. The same definitions should appear in the captions of Figure 2.7 and Figure 2.8.
5. p. 42 Above Fig. 2.7, should read: “so for $p(t)$ odd, $p(t) \cos(2\pi jt/T)$ is odd.”
6. p. 111 In (4.79), there should be a $-$ in the exponential on the far right: $\alpha^2 = -\omega^2 e^{-\alpha\tau}$.
7. p. 112 In (4.81) the tangent of the Mach angle should be the sine of the Mach angle: $\tan \theta_m \rightarrow \sin \theta_m$.
8. p. 155 Just before (6.33), the side length of the box should be 2ℓ : “use a box of side length 2ℓ , centered at the origin.”
9. p. 156 The first equality in (6.39) is missing an integration symbol for dz — it should read:
$$\int_S \mathbf{V} \cdot d\mathbf{a} = \int_{-\ell}^{\ell} \int_{-\ell}^{\ell} (-y^2) dy dz = -2\ell \int_{-\ell}^{\ell} y^2 dy = -\frac{4\ell^4}{3}.$$
10. p. 219 Third line from the top of the page — the number of grid points, n , must be a *multiple* of two, not a “factor” of two: “(that *must* be a multiple of two, as is clear from (8.34)).”