Errata - Modeling of Atmospheric Chemistry, by G.P. Brasseur and D.J. Jacob, Cambridge University Press, 2017

Updated August 5, 2021

Page 22, line 9: σ should not be in italics

Page 34, equation (2.28): R in numerator should be R_d (*thanks to Hosein Foroutan, Virginia Tech).*

Page 108, equation (4.73): first term on the rhs of the equation, replace *uw* by *vw*

Page 108, equation (4,73): second term on the rhs, replace cosϕ by *r*cosϕ

Page 109, equation (4.77): add a minus (-) sign just after the = sign (in front of the square bracket in the rhs of the equation).

Page 109, equation (4.81): The sign before the 4th term on the rhs of the equation should be a minus rather than a plus.

Page 109, equation (4.82): first term on the rhs of the equation, replace the first symbol $\mathbf{v}_h$ (only the first one) by $\boldsymbol{\nabla_h}$

Page 111, second line after eq. (4.89): add "(with $\beta = (2\,\Omega/a)\cos\varphi$)" before the words "is assumed to vary…"

Page 117, line 5: "higher", not "earlier"

Page 119, equation (4.131): ρ should not be in italics

Page 121, equation (4.137): v on LHS should be $\mathbf{v_\sigma}$ (bold) and on RHS, first term, replace $\mathbf{v}$ by $\mathbf{v_\sigma}$

Page 125, equation (4.153): first term on the RHS, remove a^2 in the denominator.

Page 125, equation (4.153): first term on the RHS, replace cosφ by $\cos^2\varphi$ in the denominator

Page 125, equation (4.153): last term on the RHS: replace $u'v'$ by $u'w'$ (keep the overbar)

Page 125, equation (4.157): second term on the rhs, replace a by $a\cos\varphi$

Page 145, line 11: replace section 4.7.1 by section 4.8.1

Page 151, Box 4.7 Figure 1 caption: replace $y' = y_1 + y_2 + y_3$ by $y^* = y_1 + y_3 + y_5$

Page 154, just after equation (4.253) add: where a is the radius of the sphere.

Page 154, two lines before equation (4.254): μ should not be in italics

Page 156, line 2: λ and μ should not be in italics.

Page181, equation (4.352): $\{\Psi\}^{(1)} = \frac{1}{4}[\Psi_{i-1} + 2\,\Psi_i + \Psi_{i+1}]$

Page 181, equation (4.353): $\{\Psi\}^{(2)} = \frac{1}{16}\left[-\Psi_{i-2} + 4\Psi_{i-1} + 10\,\Psi_i + 4\Psi_{i+1} - \Psi_{i+2}\right]$

Page 182, equation (4.358): $\left|g(k_x,k_y)\right| = \left[1-2\,S\,sin^2\,(\frac{k_x\Delta x}{2})\right]\left[1-2\,S\,sin^2\,(\frac{k_y\Delta y}{2})\right]$

Page 182, equation (4.361): $\left|g(k_x,k_y)\right| = 1-S\,\left[sin^2\,\left(\frac{k_x\Delta x}{2}\right)+sin^2\,(\frac{k_y\Delta y}{2})\right]$

Page 190, 2 lines before equation (4.396): replace "a junction…" by "at junction…."

Page 212, next to last line: replace "Planck function" by "incident intensity" *(thanks to Dylan Millet, U. Minnesota)*

Page 222, equation (5.59): integral should go from τ to τ_S rather from 0 to τ.

Page 243, immediately after equation (5.126): Replace "Here D_p is…" by "Here N_0 is the total number concentration, D_p is…".

Page 259, line after equation (6.13): Nicholson should be Nicolson. The same mistake occurs at three places in chapter 7 (*thanks to Hosein Foroutan, Virginia Tech).*

Page 263, 2 lines after equation (6.31): the sign "(0)" that appears in the equation should not be in subscript.

Page 265, equation (6.41): Ψ_k^* should be Ψ_k^n *(thanks to Lu Shen, Harvard)*

Page 266, line 2: replace Table 4.2 by Table 4.1.

Page 286, 10 lines before the end of the page: replace $g(k)$ by $|g(k)|$

Page 288, line 12: Section 4.7.3 should be Section 4.8.3.

Page 297, line before equation (7.100): replace "(see 4.197)" by "(see 4.199)".

Page 297, equation (7.100): replace $+5\left(\Psi_{j+1}^{n-1}-\Psi_{j-1}^{n-2}\right)$ by $+5\left(\Psi_{j+1}^{n-2}-\Psi_{j-1}^{n-2}\right)$

Page 302, equation (7.103), RHS of the equation, last term, replace "$c[\Psi_A$-$\Psi_B]$" by "$c\Delta t\,[\Psi_A$-$\Psi_B]$"

Page 307, equation (7.125): Replace (1-α) by (1+α).

Page 323, equation (7.179): = 1 should be = 0.

Page 345, line 28: should be $\overline{\Psi'}=0$. (*thanks to Hosein Foroutan, Virginia Tech).*

Page 347, Figure 8.5: tick marks are placed incorrectly.

Page 348, line 19: ρ' = 0 should be $\rho_a'=0$.

Page 349, equation (8.23): μ″ should be μ_i''

Page 414, equation (9.8) and the line before this equation: When writing variable u_{*t}, put * and t at the same level, as in the text of page 415 (to ensure consistency). (3 changes)

Page 431: in caption, replace $k_{G,I}$ by $k_{G,i}$ and replace $Sc_{W,I}$ by $Sc_{W,i.}$ (also on line 2).

Page 448, line 24: delete comma after "sizes"

Page 448, lines 2 and 3 before the bottom of the page: replace u^* by u_*

Page 474, equation (10.33): should be $\alpha = (yy + yn)(yy + ny)/(yy + yn + ny + nn)$ (*thanks to Drew Pendergrass, Harvard)*

Page 478, Figure 10.21: in the lower part of the figure, replace < by > and replace > by <

Page 487, 7th line below equation (11.1): 0 should be **0**

Page 489, line 19: replace $\boldsymbol{\varepsilon_0}$ by $\boldsymbol{\varepsilon_O}$

Page 491, line 6: replace Section 11.7 by Section 11.8

Page 498, lines 4 and 5 from bottom: $\mathbf{S_A} = \mathbf{[\varepsilon_A \varepsilon_A}^T]$ should be $\mathbf{S_A} = E\mathbf{[\varepsilon_A \varepsilon_A}^T]$, $\mathbf{S_O} = \mathbf{[\varepsilon_O \varepsilon_O}^T]$ should be $\mathbf{S_O} = E\mathbf{[\varepsilon_O \varepsilon_O}^T]$

Page 499, equation (11.42): replace S by $\mathbf{S_A}$

Page 532, line 4: replace Figure 11.4 by Figure 11.5.

Page 580, last equation: integration should be over $[-\infty, +\infty]$, not [a, b]