

ERRATA: Peter H Zipfel “Modeling and Simulation of Aerospace Vehicle Dynamics”, AIAA Educational Series, 2000. 2nd Edition, 2007
--- As of May 2013, sorry for the inconvenience, PHZ ---

Page		Wrong	Correct
PART I			
76	line 25	The TM [T] ^{WB} is about this ...	The TM [T] ^{BS} is about this ...
98	bottom equation	$[R^{S_1 S_0}]^I = [R^{S_1 E}]^I [R^{EI}]^I [\bar{R}^{S_0 E}]^I$	$[R^{S_1 S_0}]^I = [R^{S_1 E}]^I [R^{EI}]^I [\bar{R}^{S_0 I}]^I$
99	Eq. 4.20	$[R^{S_1 S_0}]^I = [T]^{IE} [R^{S_1 E}]^E [\bar{T}]^{IE} [R^{EI}]^I [\bar{R}^{S_0 E}]^I$	$[R^{S_1 S_0}]^I = [T]^{IE} [R^{S_1 E}]^E [\bar{T}]^{IE} [R^{EI}]^I [\bar{R}^{S_0 I}]^I$
101	Eq. 4.26	$[\varepsilon R]^A = \begin{bmatrix} 0 & \varepsilon r_{12} & \varepsilon r_{13} \\ -\varepsilon r_{12} & 0 & \varepsilon r_{23} \\ -\varepsilon r_{13} & \varepsilon r_{23} & 0 \end{bmatrix}$	$[\varepsilon R]^A = \begin{bmatrix} 0 & \varepsilon r_{12} & \varepsilon r_{13} \\ -\varepsilon r_{12} & 0 & \varepsilon r_{23} \\ -\varepsilon r_{13} & -\varepsilon r_{23} & 0 \end{bmatrix}$
169	top eq. 3 rd line	$... + \sum_i m_i \bar{s}_{iB} s_{BR} + \bar{s}_{BR} \sum_i m_i s_{iB} - \sum_i m_i s_{iB} \bar{s}_{BR} - s_{BR} \sum_i m_i \bar{s}_{iB}$	$... + \sum_i m_i \bar{s}_{iB} s_{BR} E + \bar{s}_{BR} \sum_i m_i s_{iB} E - \sum_i m_i s_{iB} \bar{s}_{BR} - s_{BR} \sum_i m_i \bar{s}_{iB}$
229	line 31	... mirrored by the reflection tensor M_{jm}	... mirrored by the reflection tensor M_{jp}
235	Eq. 7.53	$[\mathcal{E}_a]^{Bp} = \left[\frac{\partial m_a}{\partial v_B^A}(M, \text{Re}) \right]^{Bp} [\varepsilon v_B^A]^{Bp} + \dots$	$[\mathcal{E}_a]^{Bp} = \left[\frac{\partial f_a}{\partial v_B^A}(M, \text{Re}) \right]^{Bp} [\varepsilon v_B^A]^{Bp} + \dots$
236	Eq. 7.56	$[f_{Bp}]^{Bp} \left[\frac{d\omega_{Bp}^{Bp}}{dt} \right]^{Bp} = \left[\frac{\partial m_{Bp}}{\partial v_B^I}(M) \right]^{Bp} [\varepsilon v_B^I]^{Bp} + \dots \left[\frac{\partial f_{Bp}}{\partial v_B^I}(M) \right]^{Bp} [\varepsilon v_B^I]^{Bp} \dots$	$[f_{Bp}]^{Bp} \left[\frac{d\omega_{Bp}^{Bp}}{dt} \right]^{Bp} = \left[\frac{\partial m_{Bp}}{\partial v_B^I}(M) \right]^{Bp} [\varepsilon v_B^I]^{Bp} + \dots \left[\frac{\partial m_{Bp}}{\partial v_B^I}(M) \right]^{Bp} [\varepsilon v_B^I]^{Bp} \dots$
239	line 17	Substituting Eq.(7.63) into Eq.(7.61) eliminates...	Substituting Eq.(7.63) into Eq.(7.60) eliminates...
249	4 lines below Eq.7.83	Because the reference roll rate ϕ_r is also zero,....	Because the reference roll rate p_r is also zero,....
PART 2			
294	Eq. 9.9	$\omega^{BV} = \dot{\beta} u_3 + \dot{\alpha} b_2$	$\omega^{BV} = -\dot{\beta} u_3 + \dot{\alpha} b_2$
294	Eq. after Eq. 9.9	$[\omega^{BV}]^B = \dot{\beta} [T]^{BV} [u_3]^V + \dot{\alpha} [b_2]^B$	$[\omega^{BV}]^B = -\dot{\beta} [T]^{BV} [u_3]^V + \dot{\alpha} [b_2]^B$
297	line after Eq.9.17	$[\omega^{BU}]^B$ is given by Eq.(9.10)..	$[\omega^{BV}]^B$ is given by Eq.(9.10)..
322	line above Eq. 9.64	velocity vector v_{u_v}	unit velocity vector u_v
322	Eq. 9.64	$a = K V E u_v$	$a = K E u_v$
322	Eq. 9.65	$a = K V (E_P u_v - G E_L u_v) = K V (U_v U_{LOS} u_v - G U_v U_{LOA} u_v)$	$a = K (E_P u_v - G E_L u_v) = K V (U_v U_{LOS} u_v - G U_v U_{LOA} u_v)$
324	last equation	$\begin{bmatrix} -\sin \gamma \\ 0 \\ \cos \gamma \end{bmatrix}$	$\begin{bmatrix} -\sin \gamma \\ 0 \\ \cos \gamma \end{bmatrix}$
372	Eq. 10.13	$\tan \phi = \frac{2(q_2 q_3 + q_0 q_1)}{q_0^2 - q_1^2 - q_2^2 - q_3^2}$	$\tan \phi = \frac{2(q_2 q_3 + q_0 q_1)}{q_0^2 - q_1^2 - q_2^2 + q_3^2}$
392	Eq. 10.45	$v_B^I = v_B^E + \Omega^{BE} s_{BI}$	$v_B^I = v_B^E + \Omega^{EI} s_{BI}$
432	equation which is written in middle of p432	$\dots = ([E]^I - [\varepsilon R^{II}]^I) [\bar{T}]^{BI} ([\hat{f}_{sp}]^B - [\mathcal{E}_{sp}]^B) + [\hat{g}]^I - [\varepsilon g]^I$	$\dots = ([E]^I + [\varepsilon R^{II}]^I) [\bar{T}]^{BI} ([\hat{f}_{sp}]^B - [\mathcal{E}_{sp}]^B) + [\hat{g}]^I - [\varepsilon g]^I$

434	Eq. 10.93	$\left[\frac{d\varepsilon R^{\hat{I}I}}{dt}\right]^{\hat{I}} = \left[\overline{T}\right]^{BI} \left[\varepsilon\omega^{BI}\right]^B$	$\left[\frac{d\varepsilon R^{\hat{I}I}}{dt}\right]^{\hat{I}} = \left[\overline{T}\right]^{B\hat{I}} \left[\varepsilon\omega^{BI}\right]^B$
438	Eq. 10.98	$[...]=\begin{bmatrix} \dots & \dots & & O_{3\times 3} & & \\ & & 0 & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/3} & \left(\hat{f}_{sp}\right)^{\hat{L}}_{/2} & \\ & \dots & \dots & \left(\hat{f}_{sp}\right)^{\hat{L}}_{/3} & 0 & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/1} \\ & & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/2} & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/1} & 0 & \\ \dots & \dots & & O_{3\times 3} & & \end{bmatrix} [...]$	$[...]=\begin{bmatrix} \dots & \dots & & O_{3\times 3} & & \\ & & 0 & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/3} & \left(\hat{f}_{sp}\right)^{\hat{L}}_{/2} & \\ \dots & \dots & \left(\hat{f}_{sp}\right)^{\hat{L}}_{/3} & 0 & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/1} & \\ & -\left(\hat{f}_{sp}\right)^{\hat{L}}_{/2} & \left(\hat{f}_{sp}\right)^{\hat{L}}_{/1} & 0 & & \\ \dots & \dots & & O_{3\times 3} & & \end{bmatrix} [...]$