VISCOELASTIC WAVES AND RAYS IN LAYERED MEDIA 2ND EDITION

Cambridge University Press, 2020

DOI: 10.1017/9781108862660, Hardcover ISBN: 9781108495691, Ebook ISBN: 9781108852241)

Roger D. Borcherdt

ERRATA

(Misprints in red strike-through font. Correct expresssions in black font.)

January 4, 2024

page 24 line 13: ~~$M \equiv \frac{1}{2} i\,\omega\, R_S N$~~ $M \equiv \frac{1}{2} i\,\omega\, R_S$

page 41 line 27: ~~(11.3.10)~~ (3.1.12)

page 157 heading 6th column Table (6.2.2): ~~Q_{HS}^{-1}~~ Q_{HP}^{-1}

page 164 lines 4 and 5: delete redundant words in Figure (6.3.1) caption

page 165 heading 4th column Table (6.4.1): ~~Q_{HS}^{-1}~~ v_{HP} (km/s)

page 225: delete redundant lines 6 and 7

page 255 line 3 Figure (9.1.13) caption: ~~(a,b,c,d~~ (a,b,c,d).

page 324: Computation Steps 6, 7, 8 and 9 in Table 11.1.199 were accidently deleted during production. These computation steps are provided as the next page in this Errata.

page 337 line 22: ~~incidence.~~ incidence,

page 337 line 28: … soil layers *in Figure (11.1.207). These calculations* reveal …

page 398 line 21: …~~6 and 7 in Appendix 9~~ 7 and 8 available at www.cambridge.org/borcherdt2.

page 400 Computation Step 8: ~~umber~~ Number

page 428 line 22: ~~and absorption~~ and *montonic decreases in intrinsic* absorption

page 483 line 18: Kramers-Kronig relation ~~282~~ 283

Computation Steps (continued)		General SII Reflected Wave	Eqn. Ref.	General SII Head Wave
6	Phase Ray Parameter	$p_P = \frac{k_R}{\omega} = \frac{\lvert\vec{P}_{u_{21}}\rvert}{\omega}\sin\varepsilon_{u_{21}} = \frac{\sin\varepsilon_{u_{21}}}{\lvert\vec{v}_{u_{21}}\rvert}$	(11.1.51)	$p_{P_{n_h}} = \frac{k_R}{\omega} = \frac{\lvert\vec{P}_{u_{21}}\rvert}{\omega}\sin\left[\varepsilon_{u_{21}}\right] = \frac{\sin\left[\varepsilon_{u_{21}}\right]}{\lvert\vec{v}_{u_{21}}\rvert} = \frac{1}{v_{HS_{n+1}}}$
	Attenuation Ray Parameter	$p_A = -\frac{k_I}{\omega} = \frac{\lvert\vec{A}_{u_{21}}\rvert}{\omega}\sin\left[\varepsilon_{u_{21}} - \gamma_{u_{21}}\right]$	(11.1.52)	$p_{A_{n_h}} = -\frac{k_I}{\omega} = \frac{\lvert\vec{A}_{u_{21}}\rvert}{\omega}\sin\left[\varepsilon_{u_{21}} - \gamma_{u_{21}}\right]$
III) Infer Propagation and Attenuation Characteristics of General Waves in m^{th} Layer				
7	Wave Number $k = k_R + ik_I$	$k_R + ik_I = \omega\left(p_P - ip_A\right)$	(11.1.48)	$k_{n_h} = k_{n_{h_R}} + ik_{n_{h_I}} = \omega\left(p_{P_{n_h}} - ip_{A_{n_h}}\right)$
8	k_{S_m}	$k_{S_m} = \frac{\omega}{v_{HS_m}}\left(1 - i\frac{Q_{HS_m}^{-1}}{1+\sqrt{1+Q_{HS_m}^{-2}}}\right).$	(11.1.9)	$k_{S_m} = \frac{\omega}{v_{HS_m}}\left(1 - i\frac{Q_{HS_m}^{-1}}{1+\sqrt{1+Q_{HS_m}^{-2}}}\right).$
9	$d_{\beta_m} = p.v.\sqrt{k_{S_m}^2 - k^2} = d_{\beta_{m_R}} + id_{\beta_{m_I}}$	$d_{\beta_{m_R}} = \frac{1}{\sqrt{2}}\sqrt{\left(\lvert k_{S_m}^2 - k^2\rvert + \mathrm{Re}[k_{S_m}^2 - k^2]\right)}$	(11.1.34)	$d_{\beta_{m_{n_{h_R}}}} = \frac{1}{\sqrt{2}}\sqrt{\left(\lvert k_{S_m}^2 - k_{n_h}^2\rvert + \mathrm{Re}[k_{S_m}^2 - k_{n_h}^2]\right)}$
		$d_{\beta_{m_I}} = \frac{\delta_m}{\sqrt{2}}\sqrt{\left(\lvert k_{S_m}^2 - k^2\rvert - \mathrm{Re}[k_{S_m}^2 - k^2]\right)}$	(11.1.35)	$d_{\beta_{m_{n_{h_I}}}} = \frac{\delta_{m_{n_h}}}{\sqrt{2}}\sqrt{\left(\lvert k_{S_m}^2 - k_{n_h}^2\rvert - \mathrm{Re}[k_{S_m}^2 - k_{n_h}^2]\right)}$