Problemi di elettromagnetismo classico
ERRATA CORRIGE

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PG	RI	PRO	ERRATA	CORRIGE
12	24		"d'esami"	"d'esame"
50	1	8.6	"$\hat{x}$"	"$\hat{\mathbf{x}}$"
50	21	8.7	"+ 0 -"	"+ o -"
65	18	11.1	no "**d)**"	"**d)**"
84	15	14.5	"parallele all'asse z"	"perpendicolari all'asse z"
92	7	1.1	$U_{\varrho_0} = \frac{Q}{4\pi\epsilon_0\varrho}\left(\frac{\varrho_0}{R}\right)^3$	$U_{\varrho_0} = \frac{qQ}{4\pi\epsilon_0\varrho}\left(\frac{\varrho_0}{R}\right)^3$
92	12	1.1	$m\frac{d^2x}{dt^2} = \frac{qQ}{4\pi\epsilon_0 R^2 x^2}$	$m\frac{d^2x}{dt^2} = \frac{qQ}{4\pi\epsilon_0 R^3 x^2}$
103	3	2.1	$\alpha = 55.56°$	$\alpha = 77.56°$
103	11	2.2	$y = -h_n$ e $y = -h_p$	$y = -h_p$ e $y = -h_n$
104	15	2.2	$+\frac{1}{h_p+h_n}$	$-\frac{1}{h_p+h_n}$
105	21	2.3	$\frac{q^2Rd}{R^2-d^2}$	$\frac{q^2Rd}{(R^2-d^2)^2}$
107	8	2.4	$\frac{6p^2x}{(x^2-R^2)^4}$	$\frac{6p^2xR^3}{(x^2-R^2)^4}$
107	18	2.5	"più del potenziale"	"più il potenziale"
108	15	2.5	"Come la caso"	"Come nel caso"
118	27	3.3	$q_1 = q$	$q_1 = -q$
119	22	3.3	$q_1 = \frac{\epsilon_r-1}{\epsilon_r+1}q$	$q_1 = -\frac{\epsilon_r-1}{\epsilon_r+1}q$
125	8	4.2	(15.12)	vedi nota [2]
125	26	4.2	e_2	E_2
131	11	5.1	B_{phi}	B_ϕ
132	28	5.2	$2\frac{mV}{qhb^2} < h$	$2\frac{mV}{qhB^2} < h$
133	20	5.3	$\frac{\pi v m/q}{\pi m/q}\frac{1/B_1-1/B_2}{1/B_1+1/B_2} = v\frac{B_2-B_1}{B_2+B_1}$	$\frac{vm/q}{\pi m/q}\frac{1/B_1-1/B_2}{1/B_1+1/B_2} = \frac{v}{\pi}\frac{B_2-B_1}{B_2+B_1}$
136	16–	6.2	$4\pi r^2$ nei denominatori di H_x etc.	$4\pi r^3$
138	12	6.3	$2a$	$2d$
138	13	6.3	$-\frac{II'}{2\pi(2a)} = -\frac{I^2}{4\pi a}$	$-\frac{II'}{2\pi(2d)} = -\frac{I^2}{4\pi d}$
139	16	6.5	$\partial_\rho(\rho B_\rho) = -\frac{\rho}{2}\partial_z B_z$	$\partial_\rho(\rho B_\rho) = -\rho\partial_z B_z$
149	9	7.8	$(\mu_0/2)\omega J_0 r\sin\omega t$	$-(\mu_0/2)\omega J_0 r\sin\omega t$
149	21	7.8	$I = I_0 S$	$I = J_0 S$

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151	18	8.1	$\frac{dr}{dt}$	$\frac{d^2r}{dt^2}$
157	18	8.4	$\frac{d^2V}{dx^2} \simeq -\frac{2q^2n_0}{\epsilon_0 k_B T}V$	$\frac{d^2V}{dx^2} \simeq +\frac{2q^2n_0}{\epsilon_0 k_B T}V$
162	19	8.8	$r < R$	$r > R$
165	14	9.1	$\frac{LC}{\omega^2}$	$\frac{1/LC}{\omega^2}$
165	15	9.1	$\omega_0^2 = LC$	$\omega_0^2 = 1/LC$
167	17	9.2	$-\frac{1}{i\omega C} - \frac{1}{2}\left(i\omega L + \frac{1}{i\omega C_0}\right)$	$-\frac{1}{i\omega C_0} - \frac{1}{2}\left(i\omega L + \frac{1}{i\omega C_1}\right)$
167	19	9.2	$\frac{1}{L}\left(\frac{2}{C} + \frac{1}{C_0}\right)$	$\frac{1}{L}\left(\frac{2}{C_0} + \frac{1}{C_1}\right)$
177	13	9.7	$Z_0 = \pm i\sqrt{\omega^2 - \omega_T^2}$	$Z_0 = \pm i(L/2)\sqrt{\omega^2 - \omega_T^2}$
178	6	9.8	$Z_0^2 = \frac{L}{2C}$	$Z_0^2 = \frac{L}{C}$
178	25	9.8	$\frac{1}{C}(q_n - Q_n)$	$\frac{1}{C}\frac{d}{dt}(q_n - Q_n)$
178	26	9.8	$\frac{1}{C}(Q_n - q_{n+1})$	$\frac{1}{C}\frac{d}{dt}(Q_n - q_{n+1})$
179		9.8	punto **d)**	vedi nota [1]
181	5	10.1	$2iE_z$	$2iE_i$
182	30	10.2	$\mathbf{E}' = \mathbf{E}$, $\mathbf{B}' = 0$	$\mathbf{E}'' = \mathbf{E}$, $\mathbf{B}'' = 0$
183	12	10.3	una quindi	quindi una
183	13	10.3	$\gamma(\lambda - vI) = -\gamma vI$	$\gamma(\lambda - vI/c^2) = -\gamma vI/c^2$
184	27	10.5	$(\Phi, \mathbf{A}) = (0, 0, A_y, 0)$ $= (-\gamma\beta cA_y, 0, \gamma A_y, 0)$	$(\Phi, c\mathbf{A}) = (0, 0, cA_y, 0)$ $= (-\gamma\beta cA_y, 0, \gamma cA_y, 0)$
184	29	10.5	$\bar{A}_\mu = (\bar{\Phi}', 0, \bar{A}_y', 0)$	$\bar{A}_\mu' = (\bar{\Phi}', 0, c\bar{A}_y', 0)$
189	31	11.1	$\int (u_M + u_E)\, dV$	$\frac{d}{dt}\int (u_M + u_E)\, dV = \frac{d}{dt}\int u_M dV$
196	4–	11.4	$4A$	$8A$
199	15	12.1	$[(\hat{\mathbf{x}} + i\hat{\mathbf{y}}) \times \hat{\mathbf{x}}] \times \hat{\mathbf{x}} = i\hat{\mathbf{y}}$	$[(\hat{\mathbf{x}} + i\hat{\mathbf{y}}) \times \hat{\mathbf{x}}] \times \hat{\mathbf{x}} = -i\hat{\mathbf{y}}$
200	20	12.1	$\frac{4}{3}r_0^2 c$	$-\frac{4}{3}r_0^2 c$
201	16	12.2	$\mathbf{p} = -e\mathbf{x}$	$\mathbf{p} = -e\mathbf{r}$
207	1	12.6	T = Tesla	T=Tesla
211	6	13.1	$-\frac{e}{m_e}\mathbf{E} - \omega_0^2 - \gamma\frac{d\mathbf{x}}{dt}$	$-\frac{e}{m_e}\mathbf{E} - \omega_0^2\mathbf{x} - \gamma\frac{d\mathbf{x}}{dt}$
212	23	13.2	10.5 m	105 m
217	22	13.4	"su derivata"	"sua derivata"
220	10	13.6	$\omega^2 = k^2c^2 + \gamma\omega_p^2$	$\omega^2 = k^2c^2 + \omega_p^2/\gamma$
221	11	13.6	$\omega = \sqrt{\gamma}\omega_p$	$\omega = \omega_p/\sqrt{\gamma}$
233	2	14.4	$e^{ik_x - i\omega t}$	$e^{ik_x x - i\omega t}$
241	1	15.5	$\mathbf{B} = E_0\hat{\mathbf{z}}e^{ikx - i\omega t}$	$\mathbf{B} = B_0\hat{\mathbf{z}}e^{ikx - i\omega t}$

[1] le ultime due formule e la figura vanno corrette; vedi
`http://www.df.unipi.it/~macchi/FISICAB/PROBLEMI/B2/acoustopt.pdf`
[2] la numerazione (15.12) deve riferirsi all'equazione $(E_1 + E_2)h/2 = V$.