Errata corrige

- pagina 11, dopo la formula (1.5):

$$f(r,z) = \frac{r^2}{a^2} + \frac{z^2}{b^2} = 1$$

- pagina 13:

$$\begin{cases} x = \frac{a\cos\varphi\cos\lambda}{\sqrt{1-e^2\sin^2\varphi}} \\ y = \frac{a\cos\varphi\sin\lambda}{\sqrt{1-e^2\sin^2\varphi}} \\ z = \frac{a(1-e^2)\sin\varphi}{\sqrt{1-e^2\sin^2\varphi}} \end{cases}$$

- pagina 14:

$$\begin{cases} x = \left(\frac{a}{\sqrt{1-e^2\sin^2\varphi}} + h\right)\cos\varphi\cos\lambda \\ y = \left(\frac{a}{\sqrt{1-e^2\sin^2\varphi}} + h\right)\cos\varphi\sin\lambda \\ z = \left(\frac{a(1-e^2)}{\sqrt{1-e^2\sin^2\varphi}} + h\right)\sin\varphi \end{cases}$$

- pagina 17:

$$\begin{cases} r(\varphi) = \frac{a\cos\varphi}{\sqrt{1-e^2\sin^2\varphi}} \\ z(\varphi) = \frac{a\,(1-e^2)\sin\varphi}{\sqrt{1-e^2\sin^2\varphi}} \end{cases}$$

- pagina 17:

$$dr = \frac{dr}{d\varphi}d\varphi =$$

$$= \frac{-a\sin\varphi\,(1-e^2\sin^2\varphi)^{1/2} - a\frac{1}{2}\cos\varphi\,(1-e^2\sin^2\varphi)^{-1/2}(-2e^2\sin\varphi\cos\varphi)}{1-e^2\sin^2\varphi}d\varphi =$$

$$= \frac{-a\sin\varphi\,(1-e^2\sin^2\varphi) + ae^2\sin\varphi\cos^2\varphi}{(1-e^2\sin^2\varphi)^{3/2}}d\varphi = \frac{a\sin\varphi\,(-1+e^2\sin^2\varphi+e^2\cos^2\varphi)}{(1-e^2\sin^2\varphi)^{3/2}}d\varphi$$

- pagina 24, formula (1.11):

$$\lambda_P = \lambda_0 + \frac{s\,sen\alpha_0}{N(\varphi_0)\cos\varphi_0} + \frac{s^2 sen\alpha_0\cos\alpha_0 sen\varphi_0}{N^2(\varphi_o)\cos\varphi_0}$$

$$\alpha_P = \alpha_0 + (\lambda_P - \lambda_0)sen\varphi_m$$

- pagina 40, formula (1.13): $\sum_{i=1}^{n} \delta H_i \neq H_t$

- pagina 49: $X_2 = X_0 + R_k X_1$

- pagina 57: $h = \sqrt{\left(R + D\cos z + 350\right)^2 + \left(Dsenz\right)^2} - R = 500.202m$

- pagina 69: Se $|\Delta| > \lambda\sqrt{n}\sigma_\alpha \Longrightarrow$ non si accettano le misure α_i^0

- pagina 72: $\frac{AP}{\sin\beta} = \frac{AB}{\sin[\pi-(\alpha+\beta)]} = \frac{AB}{\sin(\alpha+\beta)}$

- pagina 74, formula (2.9): $y_P = \frac{(x_A - x_B) - y_A \operatorname{tg}\vartheta_{AP} + y_B \operatorname{tg}\vartheta_{BP}}{\operatorname{tg}\vartheta_{BP} - \operatorname{tg}\vartheta_{AP}}$

- pagina 93, formula (2.21):

$$\Delta h_{AB} = S\left[1 + \frac{h_m}{R}\right] \operatorname{tg}\left(\frac{Z_B - Z_A}{2}\right) =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{tg}\left(\frac{\delta - Z_A + \pi - Z_A}{2}\right) =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{tg}\left(\frac{\pi}{2} - Z_A + \frac{\delta}{2}\right) =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{tg}\left[\frac{\pi}{2} - \left(Z_A - \frac{\delta}{2}\right)\right] =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{cotg}\left(Z_A - \frac{\delta}{2}\right) =$$

- pagina 95, formula (2.23):

$$\Delta h_{AB} = S\left[1 + \frac{h_m}{R}\right] \operatorname{cotg}\left(Z'_A + \varepsilon_A - \frac{S}{2R}\right) =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{cotg}\left(Z'_A + \kappa_A \frac{\delta}{2} - \frac{S}{2R}\right) =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{cotg}\left(Z'_A + \kappa_A \frac{S}{2R} - \frac{S}{2R}\right) =$$

$$= S\left[1 + \frac{h_m}{R}\right] \operatorname{cotg}\left(Z'_A - \frac{1 - \kappa_A}{2R} S\right)$$

- pagina 114, formula (3.5): $p_R^S(t) = c \cdot \Delta t_R(t) = d_R^S(t) + c \cdot \left(\delta t^S(t) - \delta t_R(t)\right)$

- pagina 116, formula (3.8):

$$\varphi_R^S(t) = \frac{f_i}{c} \cdot d_R^S(t) + f_i \cdot \left(\delta t^S(t) - \delta t_R(t)\right) - N_R^S(t_0)$$

- pagina 130, formula (3.17):

$$\Delta'''\varphi_{jk}^{in}(t_{12}) = \Delta''\varphi_{jk}^{in}(t_2) - \Delta''\varphi_{jk}^{in}(t_1) = \frac{f}{c} \cdot \left[\left(d_j^i - d_j^n - d_k^i + d_k^n\right)_{t_2} - \left(d_j^i - d_k^i - d_j^n + d_k^n\right)_{t_1}\right] +$$
$$+ \frac{f}{c} \cdot \left(\Delta''' d\rho + \Delta''' d_{ion} + \Delta''' d_{tro} + \Delta''' d\varepsilon\right) - \left(N_j^i - N_j^n - N_k^i + N_k^n\right)_{t_2} + \left(N_j^i - N_j^n - N_k^i + N_k^n\right)_{t_1}$$

- pagina 165:

$$tg\delta = tg(\alpha' - \alpha) = \frac{tg\alpha' - tg\alpha}{1 + tg\alpha' tg\alpha} = \frac{\sqrt{e^* g^* - (f^*)^2}\, \frac{tg\alpha}{e^* + f^* tg\alpha} - tg\alpha}{1 + \sqrt{e^* g^* - (f^*)^2}\, \frac{tg\alpha}{e^* + f^* tg\alpha}\, tg\alpha} = \frac{\left[\sqrt{e^* g^* - (f^*)^2} - (e^* + f^* tg\alpha)\right] tg\alpha}{\sqrt{e^* g^* - (f^*)^2}\, tg^2\alpha + (e^* + f^* tg\alpha)}$$

- pagina 165, formula (4.12):

$$\delta = arctg\left\{\frac{\left[\sqrt{e^* g^* - (f^*)^2} - (e^* + f^* tg\alpha)\right] tg\alpha}{\sqrt{e^* g^* - (f^*)^2}\, tg^2\alpha + (e^* + f^* tg\alpha)}\right\}$$

- pagina 177:

$$\left(\frac{\partial x}{\partial \lambda}\right)^2 = N^2 \cos^2\varphi \left[1 + \frac{\lambda^2}{2} \cos^2\varphi \left(1 - t^2 + \eta^2\right)\right]^2 = N^2 \cos^2\varphi \left[1 + \frac{\lambda^4}{4} \cos^4\varphi \left(1 - t^2 + \eta^2\right)^2 + \lambda^2 \cos^2\varphi \left(1 - t^2 + \eta^2\right)\right] \cong$$
$$\cong N^2 \cos^2\varphi \left[1 + \lambda^2 \cos^2\varphi \left(\frac{\cos^2\varphi - sen^2\varphi}{\cos^2\varphi} + \eta^2\right)\right] = N^2 \cos^2\varphi \left[1 + \lambda^2 \cos^2\varphi - \lambda^2 sen^2\varphi + \lambda^2 \eta^2 \cos^2\varphi\right]$$

- pagina 177:

$$m^2 = \frac{1}{r^2}\left[N^2 \cos^2\varphi \left(1 + \lambda^2 \cos^2\varphi - \lambda^2 sen^2\varphi + \lambda^2 \eta^2 \cos^2\varphi\right) + \lambda^2 N^2 sen^2\varphi \cos^2\varphi\right] =$$
$$= \frac{1}{N^2 \cos^2\varphi} N^2 \cos^2\varphi \left[1 + \lambda^2 \cos^2\varphi - \lambda^2 sen^2\varphi + \lambda^2 sen^2\varphi + \lambda^2 \eta^2 \cos^2\varphi\right] =$$
$$= 1 + \lambda^2 \cos^2\varphi (1 + \eta^2)$$

- pagina 193:

$$m_l^2 = \frac{1}{r^2}\left[\left(\frac{\partial x}{\partial \lambda}\right)^2 + \left(\frac{\partial y}{\partial \lambda}\right)^2\right] \cong \frac{4}{\cos^2\varphi} tg^2\left(\frac{\pi}{4} - \frac{\varphi}{2}\right) \Rightarrow m_l = 2\frac{1 + tg^2\frac{\varphi}{2}}{(1 + tg\frac{\varphi}{2})^2}$$

- pagina 232, formula (5.33): $M\left[\alpha g_1(x)+\beta g_2(x)\right]=\alpha M\left[g_1(x)\right]+\beta M\left[g_2(x)\right]$

- pagina 239, formula (5.53): $P\left[X=x_i \mid Y=y_j\right]=\frac{p_{ij}}{q_j}=p_{i;j}$

- pagina 240, formula (5.54): $P\left[Y=y_j \mid X=x_i\right]=\frac{p_{ij}}{p_i}=q_{j;i}$

- pagina 244, formula (5.74): $p_{ij}=p_i q_j \quad \forall\, i,j$

- pagina 249, formula (5.98): $f_{X_1|X_2\ldots X_n}\left(x_1|x_2\ldots x_n\right)=\frac{f_{\underline{X}}\left(x_1,\ldots,x_n\right)}{f_{X_2\ldots X_n}\left(x_2,\ldots,x_n\right)}$

- pagina 292, formula (6.37):

$$\sigma^2(S^2)=\frac{1}{n}\left(\mu_4-\frac{n-3}{n-1}\sigma^4\right) \quad n>1$$

- pagina 308, formula (6.101):

$$\hat{\alpha}'=\alpha_0-Q'B^t\left(BQ'B^t\right)^{-1}\Delta=\alpha_0-\gamma QB^t\left(B\gamma QB^t\right)^{-1}\Delta=$$
$$=\alpha_0-\gamma QB^t\frac{1}{\gamma}\left(BQB^t\right)^{-1}\Delta=\alpha_0-QB^t\left(BQB^t\right)^{-1}\Delta=\hat{\alpha}$$

- pagina 308, formula (6.102):

$$M\left[\hat{\alpha}\right]=M\left[\alpha_0\right]-QB^t\left(BQB^t\right)^{-1}M\left[\Delta\right]=\mu_\alpha$$

-

- pagina 333, formula (6.192):

$$\left(\hat{x}-x\right)^t C_{\hat{x}\hat{x}}^{-1}\left(\hat{x}-x\right)=\frac{1}{\sigma_0^2}\left(\hat{x}-x\right)^t\left(A^tK^{-1}A\right)\left(\hat{x}-x\right)=\chi_n^2$$

-

- pagina 333, formula (6.193):

$$\frac{\left(\hat{x}-x\right)^t\left(A^tK^{-1}A\right)\left(\hat{x}-x\right)}{n\hat{\sigma}_0^2}=\frac{\dfrac{\left(\hat{x}-x\right)^t\left(A^tK^{-1}A\right)\left(\hat{x}-x\right)}{n\sigma_0^2}}{\dfrac{\hat{\sigma}_0^2}{\sigma_0^2}}=\frac{\dfrac{\chi_n^2}{n}}{\dfrac{\chi_{(m-n)}^2}{m-n}}=F_{n,m-n}$$

- pagina 334, formula (6.197):

$$\begin{bmatrix}\hat{x}_1-x_1 & \hat{x}_2-x_2\end{bmatrix}\begin{bmatrix}\hat{\sigma}_1^2 & \hat{\sigma}_{12}\\ \hat{\sigma}_{12} & \hat{\sigma}_2^2\end{bmatrix}^{-1}\begin{bmatrix}\hat{x}_1-x_1\\ \hat{x}_2-x_2\end{bmatrix}=\cos t.=C$$

- pagina 334, formula (6.198):

$$\frac{1}{1-\rho_{12}^2}\left[\left(\frac{\hat{x}_1-x_1}{\hat{\sigma}_1}\right)^2-2\rho_{12}\left(\frac{\hat{x}_1-x_1}{\hat{\sigma}_1}\right)\left(\frac{\hat{x}_2-x_2}{\hat{\sigma}_2}\right)+\left(\frac{\hat{x}_2-x_2}{\hat{\sigma}_2}\right)^2\right]=C$$

- pagina 334, testo dopo la (6.198):

con $\rho_{12}=\dfrac{\hat{\sigma}_{12}}{\hat{\sigma}_1\hat{\sigma}_2}$ e $C=2\,F_{2,\,m-2}^{\alpha}$.

- pagina 334, formula (6.199):

$$\tan 2\omega=\frac{2\hat{\sigma}_{12}}{\hat{\sigma}_1^2-\hat{\sigma}_2^2}$$

- pagina 335, formula (6.200):

$$a^2=\frac{C}{2}\left(\hat{\sigma}_1^2+\hat{\sigma}_2^2\right)+\frac{C}{2}\sqrt{\left(\hat{\sigma}_1^2-\hat{\sigma}_2^2\right)^2+4\hat{\sigma}_{12}^2}$$

$$b^2=\frac{C}{2}\left(\hat{\sigma}_1^2+\hat{\sigma}_2^2\right)-\frac{C}{2}\sqrt{\left(\hat{\sigma}_1^2-\hat{\sigma}_2^2\right)^2+4\hat{\sigma}_{12}^2}$$