Errata and Additions to Handbook, 3rd Print
February 4, 2009

p.3, add an entry

Original text

New text	Alfvén current	$I_A = \frac{ec}{r_e}$	17.045093 kA

p.27, right column, Reference [16]

Original text M.R. Cleland, M.R.,

New text M.R. Cleland,

p.48, right column, middle of the column

Original text $f = 1.643 E_s e^{-(8.5/E_s)}$

New text $f = 1.643\, E_s^2 e^{-(8.5/E_s)}$

p.115, right column, 3rd line in Sec.2.4

Original text Alfén current

New text Alfvén current

p.117, Eq.(10)

Original text $-\frac{\epsilon_{\rm edge}^2}{\beta\gamma r^3}$

New text $-\left(\frac{\epsilon_{\rm edge}}{\beta\gamma}\right)^2 \frac{1}{r^3}$

p.117, right below Eq.(10)

Original text in a solenoid.

New text in a solenoid, and $\epsilon_{\rm edge}$ is normalized edge emittance ($4\beta\gamma\epsilon_{\rm rms,N}$ if Gaussian).

p.117, Eq.(12)

Original text $+\frac{3\epsilon_{\rm edge}^2}{\beta\gamma r_{\rm eq}^4}$

New text $+\left(\frac{\epsilon_{\rm edge}}{\beta\gamma}\right)^2\frac{3}{r_{\rm eq}^4}$

p.155, following Eq.(23)

Original text where $\sqrt{\alpha_q}$ is the amplitude normalized by σ_q.

New text where $\sqrt{\alpha_q}$ is the amplitude normalized by $2\sigma_q$.

p.170, middle of left column

Original text Artificial resonance from local oscillating field [4,5]

New text Artificial resonance from local oscillating solenoidal field [4,5]

p.170, Eq.(7)

Original text $B_\perp = \hat{B}_\perp \cos(\omega t) \;\rightarrow\; \epsilon_K = \frac{(1+G\gamma)}{4\pi}\frac{\int \hat{B}_\perp ds}{B\rho}; \quad K = n + \frac{\omega}{\omega_0} \quad (7)$

New text For oscillating dipole field $B_\perp = \hat{B}_\perp \cos(\omega t)$, see [6].

p.170, right column

Original text (add a reference)

New text [6] M. Bai et al, PRE 56, 6002 (1997); M. Bai et al, PRL 80, 4673 (1998); Ya.S. Derbenev and V.A. Anferov, PRST-AB 3, 094001 (2000); S.Y. Lee, PRST-AB 9, 074001 (2006); S.R. Mane, PRST-AB 10, 111001 (2007)

p.231, Under **Diffraction formulae**, first row on the right side of table

Original text $(Z_1^\perp)_{in} = (Z_1^\perp)_{out} = \frac{Z_0}{2\pi k}\left(\frac{1}{b^2} - \frac{1}{d^2}\right)$

New text $(Z_1^\perp)_{in} \approx 0, \quad (Z_1^\perp)_{out} = \frac{Z_0}{\pi k}\left(\frac{1}{b^2} - \frac{1}{d^2}\right)$

p.237, 4th column on **Circuit Models**

Original text $\frac{1}{\sqrt{3}}$

New text $\frac{1}{2\sqrt{3}}$

p.269, left column, two locations

Original text: Tab.4

New text: Tab.5

p.287, left column, last line

Original text: M. Rieser

New text: M. Reiser

p.404, left column, 2nd line from bottom

Original text: $H_x = \cdots \sin\left(\frac{\pi z}{d}\right)$

New text: $H_x = \cdots \cos\left(\frac{\pi z}{d}\right)$

p.407, right column, 3rd line under Fig.1

Original text: cavit

New text: cavity

p.505, Table 1, the row Kick strength

Original text	Kick strength	Tm	3.6	14	88	$\cdots$
New text	Kick strength	mT-m	3.6	14	11.6	$\cdots$

p.505, Table 1, the row Magnet Length

Original text: 2.50

New text: 0.25

p.511, under Eq.(3)

Original text: multipole order,

New text: multipole order ($N = 1$ dipole, $N = 2$ quad, $N = 3$ sextupole, and for $N = 1$, Eq.(3) reads $B^*(z) = B_r \sum_{v=0}^{\infty} \left(\frac{z}{r_1}\right)^{n-1} \ln\left(\frac{r_2}{r_1}\right) K_n$.

p.517, Ref.[3]

Original text R.D. Schlueter, Mag. Tech. LNBNL Pub 754 LBNL (1995) 55

New text R.D. Schlueter, et al, NIM A 395 (1997) 153

p.529, following Eq.(7)

Original text

$c_3 = \mathrm{Re}\left[F^3 \frac{i}{4J_1(P)} \exp(K)\right]$

$c_5 = \mathrm{Re}\left[F^5 \frac{i}{48\sqrt{2J_1(P)}} \exp(K)\right]$

New text

$c_3 = \mathrm{Re}\left[-F^3 \frac{i}{4\sqrt{2}J_1(P)} \exp(K)\right]$

$c_5 = \mathrm{Re}\left[F^5 \frac{i}{48\sqrt{2}J_1(P)} \exp(K)\right]$

p.538, Eq.(33)

Original text $g_\perp = \frac{\tanh \pi w}{4b}$

New text $g_\perp = \tanh \frac{\pi w}{4b}$

p.572, right column, Eq.(1)

Original text $\omega_{mnv} = \left[k_{mn}^2 + \left(\frac{\pi v}{\ell}\right)\right]^{1/2}$

New text $\omega_{mnv} = \left[k_{mn}^2 + \left(\frac{\pi v}{\ell}\right)^2\right]^{1/2} c$

p.573, one line below Eq.(4)

Original text the stored energy

New text the stored energy W

Subject Index page i

Original text Alfén current 115

New text Alfvén current 3, 115

Subject Index page ix

Original text [add an entry]

New text Kicker magnets (see Magnets, pulsed)

Subject Index page xi, left column

Original text [add an entry]

New text Magnets, kicker (see Magnets, pulsed)