Errata (first printing, 1998)

Present text	Corrected text
1) page viii, line 7	
Localized Itinerant	Localized–Itinerant
2) page xii, line 13	
... spend	... spent
3) page xii, line 16	
We also...	I also...
4) page xii, change the e-mail address	
apguima@cat.cbpf.br	apguima@cbpf.br
5) page xii, Introduce the reference:	
Simonds, J.L., Phys. Today, **48**, 26 (1995).	
6) page 3, line 22	
A magnetic current...	An electric current...
7) page 25, exercise **1.3**	
Use $D = \frac{1}{3}$...	Use $N_D = \frac{1}{3}$...
8) page 29 (Eq. 2.9)	
... $= -e\omega\rho$	... $= -e\omega\rho B$
9) page 29 (Eq. 2.10)	
... $= \frac{eB}{m_e}$	... $= \frac{eB}{2m_e}$

10) page 30 (Eq. 2.15)

$\left[\frac{\hbar^2}{2m_e}\cdots\right.$ $\left[-\frac{\hbar^2}{2m_e}\cdots\right.$

11) page 39, last but one line

Bk and CF... Bk and Cf...

12) page 47, the two last lines of the table should be inserted:

70	13	Yb		3	$\frac{1}{2}$	$\frac{7}{2}$	$\frac{8}{7}$	0.32	10300
71	14	Lu	Yb^{2+}	0	0	0	0	0	

Present text **Corrected text**

13) page 47, caption below the table

Lande's factor ... Landé's factor ...

14) page 54, Eq. 2.85

$\approx -\frac{1}{3} g\mu_B (J+1)x'$ $\approx \frac{1}{3} g\mu_B (J+1)x'$

15) page 58, 9th line from below

Lea 1962 Lea et al. 1962

16) page 60, exercise **2.4c**

$T_N = C(\lambda \pm \lambda')$ $T_N = \frac{C}{\mu_0}(\lambda \pm \lambda')$

17) page 61, exercise **2.8**

...distance r_0 from... ...distance a from...

18) page 61, exercise **2.8**

...at a distance r_1. ...at a distance b.

19) page 95, Eq. 4.3

...= $\frac{3}{4}$ (...	...= $\frac{3}{2}$ (...

20) page 98, line 7

...function of temperature;	...function of temperature,

21) page 99, line 11

... integrals $F(n)$ ...	... integrals $F(\epsilon)$ ...

22) page 100, Eq. 4.17

$\mathcal{H}_m = -\frac{1}{2}\ \boldsymbol{\mu}\ \cdot \mathbf{B}_m =$	$\mathcal{H}_m = -\frac{1}{2}\mathbf{M} \cdot \mathbf{B}_m =$

23) page 100, line 6 from the bottom

where $U = \lambda {\mu_B}^2$ is ...	where $U = \lambda_m {\mu_B}^2$ is ...

24) page 102, Eq. 4.28

...then E_T is minimum...	...then ΔE_T is minimum...
...then E_T is minimum...	...then ΔE_T is minimum...

25) page 103 Eq. 4.30

... $= B_0 + \lambda M$	... $= B_0 + \lambda_m M$

26) page 105, figure caption

Magnetization (ζ)...	Reduced magnetization (ζ_0)...

27) page 105, Eq. 4.38; present text

$$n = \left(\frac{n}{E_F^{3/2}}\right)\left(\frac{kT}{E_F}\right)^{3/2} \frac{2}{3}\left\{\left[\left(\frac{k\theta'\zeta+\mu}{kT}\right)^{3/2}\right] + \left[\left(\frac{-k\theta'\zeta+\mu}{kT}\right)^{3/2}\right]\right\}$$

page 105, Eq. 4.38; corrected text

$$n = \frac{n}{2}\left(\frac{kT}{E_F}\right)^{3/2}\left[\left(\frac{k\theta'\zeta+\mu}{kT}\right)^{3/2} + \left(\frac{-k\theta'\zeta+\mu}{kT}\right)^{3/2}\right]$$

28) page 106, Eq. 4.39; present text:

$$M = \left(\frac{n}{E_F^{3/2}}\right)\mu_B\left(\frac{kT}{E_F}\right)^{3/2}\frac{2}{3}\left\{\left[\left(\frac{k\theta'\zeta+\mu}{kT}\right)^{3/2}\right] - \left[\left(\frac{-k\theta'\zeta+\mu}{kT}\right)^{3/2}\right]\right\}$$

page 106, Eq. 4.39; corrected text

$$M = \frac{n}{2}\mu_B\left(\frac{kT}{E_F}\right)^{3/2}\left[\left(\frac{k\theta'\zeta+\mu}{kT}\right)^{3/2} - \left(\frac{-k\theta'\zeta+\mu}{kT}\right)^{3/2}\right]$$

Present text	**Corrected text**
29) page 106, Eq. 4.40a	
$... = \frac{1}{E_F^{3/2}}(E_F + k\theta')^{3/2}$	$... = \frac{1}{E_F^{3/2}}(E_F + k\theta'\zeta)^{3/2}$
30) page 106, Eq. 4.40b	
$... = \frac{1}{E_F^{3/2}}(E_F + k\theta')^{3/2}$	$... = \frac{1}{E_F^{3/2}}(E_F - k\theta'\zeta)^{3/2}$
31) page 107, Section Heading	
Localized Itinerant	Localized–Itinerant
32) page 108, Eq. 4.48	
$...\left[F\left(\frac{E+\mu_B B_e}{kT}\right) + F\left(\frac{E-\mu_B B_e}{kT}\right)\right]$	$...\left[F\left(\frac{\mu+\mu_B B_e}{kT}\right) + F\left(\frac{\mu-\mu_B B_e}{kT}\right)\right]$
33) page 108, Eq. 4.49	
$...\left[F\left(\frac{E+\mu_B B_e}{kT}\right) - F\left(\frac{E-\mu_B B_e}{kT}\right)\right]$	$...\left[F\left(\frac{\mu+\mu_B B_e}{kT}\right) - F\left(\frac{\mu-\mu_B B_e}{kT}\right)\right]$

34) page 109, Eq. 4.50

... $+ 2J(g-1)(\frac{\mathcal{J}}{E_F})$ ... $+ 2J(g-1)(\frac{\mathcal{J}}{E_F})\zeta_i$

35) page 113, exercise **4.2**

$= E_0(1+\zeta)^{5/2} - \frac{1}{2}n\mu B(1+\zeta)$ $= E_0(1+\zeta)^{5/3} - \frac{1}{2}N\mu_B B(1+\zeta)$

36) page 113, exercise **4.2**

where $E_0 = (\frac{3}{10})nE_F$. where $E_0 = (\frac{3}{10})NE_F$.

37) page 113, exercise **4.2**

...is given by $M = 3n\mu_B^2 B/2E_F$. ...is given by $M = 3N\mu_B^2 B/2E_F$.

38) page 113, exercise **4.4**

... $-\frac{1}{2}n\mu B(1+\zeta)$ ... $-\frac{1}{2}n\mu_B B(1+\zeta)$

39) page 113, exercise **4.4**

$= \frac{3n\mu^2}{2E_F - \frac{3}{2}Vn}B$ $= \frac{3n{\mu_B}^2}{2E_F - \frac{3}{2}Vn}B$

40) page 120, line 1

...in Fig. 5.6; ...in Fig. 5.6, multiplied by μ_0;

41) page 156, exercise **5.2**

...tensor e_{ij} is: ...tensor ϵ_{ij} is:

42) page 157, exercise **5.2**

$e_{xx} = \frac{-B_1[C_{11}^2\alpha_1^2 + C_{12}^2\alpha_2^2 - C_{11}C_{12}\alpha_3^2]}{C_{11}^3 + C_{12}^3}$ $\epsilon_{xx} = \frac{B_1[C_{12} - \alpha_1^2(C_{11}+2C_{12})]}{(C_{11}-C_{12})(C_{11}+2C_{12})}$

43) page 167, line 6

...indices, and +1... ...indices, +1...

44) page 197, Eq. 7.28, subscript '0' should not be bold

... $\times \left(\mathbf{B_0} - \frac{\mathbf{\Omega}}{\gamma}\right)$ ... $\times \left(\mathbf{B}_0 - \frac{\mathbf{\Omega}}{\gamma}\right)$

45) page 212, Eq. 7.91:

$\frac{1}{T_1} = \frac{\Delta B}{B}$... $\frac{1}{T_1} = \left(\frac{\Delta B}{B}\right)^2$ ...

46) page 222, line 7

Abe 1966 Abe et al. 1966

47) page 227, line 13

materials (ferromagnets...	materials (e.g., ferromagnets...

48) page 229, figure caption, 2nd line

Riedl	Riedi

49) page 231, 6th line below the table

... Guimarães (1977);	... Guimarães (1997);

50) page 239, 6th line

; for the nuclei at ...	; for nuclei at ...

51) page 241, line 10

... rotation m_0 after ...	... rotation of m_0 after ...

52) page 243, Eq. 8.47a

... $+ M_y B_0 + M_z B_1]$	... $- M_y B_0 + M_z B_1]$

53) page 243, Eq. 8.47b

... $+ M_x B_0 + M_z B_1]$	... $+ M_x B_0 - M_z B_1]$

54) page 243, line 16

uniform mode precession frequency	*uniform mode* precession frequency

55) page 246, reference Dormann

Elsevier, 1991	Elsevier, Amsterdam, 1991

56) page 257, exercise **2.1**

$\Longrightarrow v_x(t) = -r\omega sin\theta;$	$\Longrightarrow v_x(t) = -r\omega sin\omega t;$
$\Longrightarrow v_y(t) = r\omega cos\theta$	$\Longrightarrow v_x(t) = r\omega cos\omega t$

57) page 257, exercise **2.1**

$\frac{dv_x}{dt} = -r\omega^2 cos\theta;$	$\frac{dv_x}{dt} = -r\omega^2 cos\omega t;$
$\frac{dv_y}{dt} = -r\omega^2 sin\theta$	$\frac{dv_y}{dt} = -r\omega^2 sin\omega t$

58) page 259, line 4

... 10^{26} m^{-3} The ...	... 10^{26} m^{-3}. The ...

59) page 259, last but one equation

$\left(1 - \frac{C\lambda'}{T_N\mu_0}\right)^2 = \left(\frac{C\lambda}{T_N\mu_0}\right)^2 = 0$	$\left(1 - \frac{C\lambda'}{T_N\mu_0}\right)^2 = \left(\frac{C\lambda}{T_N\mu_0}\right)^2$

60) page 273, last equation

$...= 0.366\left(\frac{\mu B}{I}\right)m$	$...= 0.366\left(\frac{\mu' B}{I}\right)m$

61) page 274, exercise **6.2**

$E = \frac{A}{\hbar} < \mathbf{I}\cdot\mathbf{J} >$	$E = A < \mathbf{I}\cdot\mathbf{J} >$

62) page 274, exercise **6.2**

$= \frac{1}{2}\hbar[F(F+1) - I(I+1) - J(J+1)]$	$= \frac{1}{2}[F(F+1) - I(I+1) - J(J+1)]$

63) page 274, exercise **6.2**

... of ^{87}Rb we have	... of ^{85}Rb we have

64) page 274, exercise **6.2**

$..., \lvert I + J\rvert = 2, 3, 4, 5, 6$	$..., \lvert I + J\rvert = 2, 3$

65) page 274, exercise **6.2**

...for $2E/A\hbar$:	...for $2E/A$:

66) page 274, exercise **6.2**

-3.5, 2.5, 10.5, 20.5, and 32.5,	-3.5 and 2.5,

67) page 274, exercise **6.2**

$F = 2, 3, 4, 5, 6$, respectively.	$F = 2, 3$, respectively.

68) page 274, exercise **6.2**

coupling $I - J$,	$I - J$ coupling,

69) page 276, exercise **7.1**

$... = \gamma\hbar \mathbf{I} \cdot B_{hf}$;	$... = -\gamma\hbar \mathbf{I} \cdot \mathbf{B}_{hf}$;

70) page 276, exercise **7.1**

$\gamma = (\mu_N/h)(\mu'/I(B_{hf}))$	$\gamma = (\mu_N)(\mu'/I)$

71) page 283, second entry of the table

—	10^{-19} C	4.80654×10^{-10} esu	10^{-19} C

72) page 284, lines 6, 7, 8 (remove the bold):

Electronvolt/**h**	eV$\mathbf{h}^{-1}$	Electronvolt/h	eVh^{-1}
Electronvolt/**hc**	eV$\mathbf{h}^{-1}\mathbf{c}^{-1}$	Electronvolt/hc	eVh^{-1}c^{-1}
Electronvolt/**k**	eV$\mathbf{k}^{-1}$	Electronvolt/k	eVk^{-1}

73) page 285, second column, remove space

Henry (1952),	Henry (1952),

74) page 286, in the name 'Morup' use Danish 'o'

75) page 286, second column

Seeger and Kronmüller (1989), **112**	Seeger and Kronmüller (1989), 112, **112**

76) page 288, first column

χ (susceptibility tensor)	$\boldsymbol{\chi}$ (susceptibility tensor)

77) page 289

Electronic susceptibilies Electronic susceptibilities

78) page 289: Change order of entry (see annotated Xerox of the book):

** Put 'ϵ_{ijk} (Levi-Civita symbol)' after 'ϵ_{ij} (strain)'

79) page 292, second column, line 16

** Suppress line: 'M(magnetization), 104-105, 120, 149, 154' (these page numbers are included in the subsequent entry (**M**,M))

80) page 296, use italic T

T_L	T_L
T_s	T_s

October 5, 2012