Page	Position	In text	Correction
18	Eq. (1.80)	$(p'_e)^\mu = (p_e)^\mu + (p'_\gamma)^\mu - (p'_\gamma)^\mu$	$(p'_e)^\mu = (p_e)^\mu + (p_\gamma)^\mu - (p'_\gamma)^\mu$
21	Eq. (1.97)	$j^\mu_\mu = 0$	$j^\mu_{,\mu} = 0$
29	line 2	$a_0 \approx \hbar^2/m_e e^2 \approx 0.5 \cdot 10^{-8}$ cm	$a_0 = \hbar^2/m_e e^2 \approx 0.5 \cdot 10^{-8}$ cm
61	Eq. (2.135)	$u_2^2 = \frac{1}{2\rho_1} \frac{[(\Gamma-1)P_1+(\Gamma-1)P_2]^2}{(\Gamma-1)P_1+(\Gamma+1)P_2}$	$u_2^2 = \frac{1}{2\rho_1} \frac{[(\Gamma+1)P_1+(\Gamma-1)P_2]^2}{(\Gamma-1)P_1+(\Gamma+1)P_2}$
66	line 13	infrared, $10^4 \gtrsim T \gtrsim 10^2$ K	infrared, $10^4 \gtrsim T \gtrsim 50$ K
66	line 14	radio, $10^1 \gtrsim T \gtrsim 10^{-1}$ K	radio, $50 \gtrsim T \gtrsim 10^{-1}$ K
70	line 7	monochromatic flux per unit area is	monochromatic flux is
77	footnote 4	poet Joseph Stephan	poet Joseph Stefan
86	line 4	$\int_V \left(\vec{\nabla} \cdot \vec{X}\right) dV = \int_\Sigma \vec{X} d\vec{A}$	$\int_V \left(\vec{\nabla} \cdot \vec{X}\right) dV = \int_\Sigma \vec{X} \cdot d\vec{A}$
92	Eq. (3.113)	$\vec{E}_{\text{rad}} = \sum_i \frac{q_i}{c^2} \frac{\vec{n} \times \left(\vec{n} \times \dot{\vec{u}}_i\right)}{R_i}$	$\vec{E}_{\text{rad}} = \sum_i \frac{q_i}{c^2} \frac{\vec{n}_i \times \left(\vec{n}_i \times \dot{\vec{u}}_i\right)}{R_i}$
95	line 3	so that quantum-particle electrodynamical effects	so that quantum electrodynamical effects
104	line 15	[...] original power law.	[...] original power law. This effect is called synchrotron ageing.
105	Eq. (3.167)	$\frac{1}{\gamma^2} = 1 - \beta^2 = (1+\beta)(1-\beta) \approx 2(1-\beta)$	$\beta = \sqrt{1 - \frac{1}{\gamma^2}} \approx 1 - \frac{1}{2\gamma^2}$
106	Eq. (3.173)	$\frac{C_0}{2\nu_{\text{L}}} \int \left(\frac{\nu'}{\nu_{\text{L}}}\right)^{-(p-1/2)} \delta(\nu - \nu') d\nu' = \frac{C_0}{2\nu_{\text{L}}} \left(\frac{\nu}{\nu_{\text{L}}}\right)^{-(p-1/2)}$	$\frac{C_0}{2\nu_{\text{L}}} \int \left(\frac{\nu'}{\nu_{\text{L}}}\right)^{-(p-1)/2} \delta(\nu - \nu') d\nu' = \frac{C_0}{2\nu_{\text{L}}} \left(\frac{\nu}{\nu_{\text{L}}}\right)^{-(p-1)/2}$
107	line 23	$\propto \nu^{-(p-1/2)}$	$\propto \nu^{-(p-1)/2}$
108	lines 22-23	$(3/8)(\sigma_{\text{T}}/x)[\ln(2x + 1/2)]$	$(3/8)(\sigma_{\text{T}}/x)[\ln(2x) + 1/2]$
146	line 28	a gravitational field is	a gravitational field with potential Φ is
158	Eq. (4.69)	$t_{\text{diff}} = 3.9 \cdot 10^{-3} \rho_{12}^{1/3} \left(\frac{E_\nu}{10 \text{ MeV}}\right)^2$ s	$t_{\text{diff}} = 3.6 \cdot 10^{-2} \rho_{12}^{1/3} \left(\frac{E_\nu}{10 \text{ MeV}}\right)^2$ s
166	line 32	At the time of writing (summer 2006)	Currently
166	line 33	2.1 ± 0.2 M$\odot$ (1σ error)	1.9 ± 0.04 M$\odot$
166	footnote 4	Nice, D. J. et al. (2005). *The Astronomical Journal*, 634, 1242	Demorest et al., *Nature*, 467, 1081 (2010)
208	Eq. (6.20)	$\frac{dr}{d\varphi} = \frac{\mu r^2}{L} \cdot \frac{dr}{dt}$	$\frac{dr}{d\varphi} = \frac{\mu r^2}{L} \frac{dr}{dt}$
239	last line	$L_{\text{GW}} = 0.6 \cdot 10^{33}$ erg/s	$L_{\text{GW}} = 0.6 \cdot 10^{33}$ erg s^{-1}

Page	**Position**	**In text**	**Correction**
262	line 11	The observer measures a time difference between the arrival of the two photons of	The observer measures a Lorentz-dilated time difference of
262	Eq. (7.17)	$\Delta t_{\mathrm{obs}} = t_{2,\mathrm{obs}} - t_{1,\mathrm{obs}} = \Delta t_{\mathrm{em}}(1 - \beta \cos\theta)$	$t_{\mathrm{obs}} = \gamma\, \Delta t_{\mathrm{em}}(1 - \beta \cos\theta)$
262	Eq. (7.18)	$\Delta t_{\mathrm{obs}} = \frac{\Delta t_{\mathrm{em}}}{2\gamma^2}$	$\Delta t_{\mathrm{obs}} = \frac{\Delta t_{\mathrm{em}}}{2\gamma}$
262	line 20	if the Lorentz factor is high enough: $\Delta t = \Delta t_{\mathrm{em}}/2\gamma^2$.	if the Lorentz factor is high enough.
262	line 21	this modification has an effect $\propto \gamma^4$	this modification has an effect $\propto \gamma^2$
292	line 11	Accretion denotes the accumulation of gas onto	Accretion denotes the accumulation of matter onto
292	line 22-24	If a mass ΔM is accreted within a time Δt, the rate of mass accretion is $\dot{M} = \Delta M/\Delta t$. This mass accretion generates a power	The mass accretion rate $\dot{M}$ generates a power
293	24	the mass of the proton is 1836 times bigger	the mass of the proton is about 1836 times bigger
300	Eq. (8.17)	$t_{\mathrm{relax}} \approx \frac{v_{\mathrm{rms}}^3}{8\pi G^2 M_*^2 n \ln \Lambda_{\mathrm{g}}}$	$t_{\mathrm{relax}} \approx \frac{\sigma_*^3}{8\pi G^2 M_*^2 n \ln \Lambda_{\mathrm{g}}}$
300	line 7	v_{rms} is the velocity dispersion of stars	σ_* is the velocity dispersion of stars
300	Eq. (8.18)	$t_{\mathrm{collapse}} \approx 9.5 \cdot 10^{12}\,\mathrm{yr} \cdot \left(\frac{v_{\mathrm{rms}}}{200\,\mathrm{km\,s^{-1}}}\right)^3 \left(\frac{n}{10^6\,\mathrm{pc^{-3}}}\right)^{-1} \left(\frac{M_*}{1\,M_\odot}\right)^{-2}$	$t_{\mathrm{collapse}} \approx 9.5 \cdot 10^{12}\,\mathrm{yr} \cdot \left(\frac{\sigma_*}{200\,\mathrm{km\,s^{-1}}}\right)^3 \left(\frac{n}{10^6\,\mathrm{pc^{-3}}}\right)^{-1} \left(\frac{M_*}{1\,M_\odot}\right)^{-2}$
305	line 16	the black hole, M_{BH}	the black hole of mass M_{BH}
324	line 18	via Compton scattering. In Compton scattering	via inverse Compton scattering. In inverse Compton scattering
345	Planck constant	erg sec	erg s
345	Speed of light in vacuum	cm/sec	$\mathrm{cm\,s^{-1}}$
345	Electron charge/mass ratio	statcoul/g	$\mathrm{statcoul\,g^{-1}}$

Page	Position	In text	Correction
345	Classical electron radius	$r_e = e^2/m_e c^2$	$r_0 = e^2/m_e c^2$
345	Stefan-Boltzmann constant	σ_{B}	σ_{SB}
345	Stefan-Boltzmann constant	$\mathrm{erg/cm^2}$	$\mathrm{erg\,cm^{-2}}$
345	Stefan-Boltzmann constant	$\mathrm{sec\,deg^4}$	$\mathrm{s\,deg^4}$
346	Solar absolute luminosity	$\mathrm{ergs^{-1}}$	$\mathrm{erg\,s^{-1}}$
354	line 15	pulsar, 145	pulsar, 145, 239, 240
355	line 7	viscosity, 51, 309, 310, 311	viscosity, 38, 51, 309, 310, 311