References:

1. B.W. Petley, Nature **303**, 373 (1983).
2. E.R. Cohen and B.N. Taylor, Rev. Mod. Phys. **59**, 1121 (1987). The set of constants resulting from this adjustment has been recommended for international use by CODATA (Committee on Data for Science and Technology).
3. *The Astronomical Almanac for the year 1994*, U.S. Government Printing Office, Washington, and Her Majesty's Stationary Office, London (1993). Where possible, the values as adjusted for the fitting of the ephemerides to all the observational data are used.
4. JPL Planetary Ephemerides, E. Myles Standish, Jr., private communication (1989).
5. 1 AU divided by $\pi/648\,000$; quoted error is from the JPL Planetary Ephemerides value of the AU [4].
6. Heliocentric gravitational constant from Ref. 3 times $2/c^2$. The given 9-place accuracy appears to be consistent with uncertainties in actually defining the earth's orbital parameters.
7. Obtained from the heliocentric gravitational constant [3] and G_N [2]. The error is the 128 ppm standard deviation quoted for G_N.
8. It is surprisingly difficult to find a definitive value for this important constant. In all cases, the solar luminosity is calculated as $4\pi \times (1\text{ AU})^2$ times the solar constant (or total solar irradiance, TSI). The luminosity given is reduced from TSI $= 1367.51 \pm 0.01$ W m^{-2}, obtained from SMM/ACRIMI spacecraft measurements during the interval 2/80–6/89 [23]. While the time constant for energy production by the sun is very long, radiation from the surface might be modulated or otherwise modified by sunspots; this has apparently not been taken into account. Accordingly, we quote 4-place accuracy. We do not know the actual error, but suppose it might be 5 or 10 in the last place. Sackmann *et al.* [24] use TSI $= 1370 \pm 2$ W m^{-2}, but conclude that the solar luminosity ($L_\odot = 3.853 \times 10^{26}$ J s^{-1}) has an uncertainty of 1.5%. Their value is based on three 1977–83 papers, and they comment that the error is based on scatter among the reported values, which is substantially in excess of that expected from the individual quoted errors. The conclusion of the 1971 review by Thekaekara and Drummond [25] ($1353 \pm 1\%$ W m^{-2}) is often quoted [26], and a luminosity based on this value was tabulated in the last two editions of this Review. The conversion to luminosity is not given in the Thekaekara and Drummond paper, and we cannot exactly reproduce the solar luminosity given in Ref. 26. Finally, a value based on the 1954 spectral curve due to Johnson [27] ($1395 \pm 1\%$ W m^{-2}, or $L_\odot = 3.92 \times 10^{26}$ J s^{-1}) has been used widely, and may be the basis for higher value of the solar luminosity and corresponding lower value of the solar absolute bolometric magnitude (4.72) still common in the literature [10].
9. Obtained from the geocentric gravitational constant [3] and G_N [2]. The error is the 128 ppm standard deviation quoted for G_N.
10. E.W. Kolb and M.S. Turner, *The Early Universe*, Addison-Wesley (1990).
11. F.J. Kerr and D. Lynden-Bell, Mon. Not. R. Astr. Soc. **221**, 1023–1038 (1985). "On the basis of this review these [$R_\circ = 8.5 \pm 1.1$ kpc and $\Theta_\circ = 220 \pm 20$ km s^{-1}] were adopted by resolution of IAU Commission 33 on 1985 November 21 at Delhi".
12. M.J. Reid, Annu. Rev. Astron. Astrophys. **31**, 345–372 (1993). Note that $\Theta_\circ$ from the 1985 IAU Commission 33 recommendations is adopted in this review, although the new value for $R_\circ$ is smaller.
13. Conversion using length of tropical year.
14. P.J.E. Peebles, *Principles of Physical Cosmology,* Princeton University Press (1993.).
15. Kolb and Turner [10] give the more conservative limits $0.4 < h_0 < 1$. For other conclusions, see the recent reviews by Jacoby *et al.* [28], who say "Using the weighted or unweighted Virgo distances to bootstrap to the Coma cluster, we find the Hubble constant to be either 80 ± 11 or 73 ± 11 km s^{-1} Mpc^{-1}, respectively," and Huchra [29], who concludes that "Values are still clustered about two numbers, but these numbers are now 50 and 85. A preponderance of the newest local estimates favors the higher value of 85 km s^{-1} Mpc^{-1}...".
16. G. Gilmore, R.F.G. Wyse, and K. Kuijken, Annu. Rev. Astron. Astrophys. **27**, 555 (1989).
17. J.N. Bahcall, M. Schmidt, and R.M. Soneira, Astrophy. J. **265**, 730 (1983);
    E. Gates and M.S. Turner, Phys. Rev. Lett. **72**, 2520 (1994) state that "...in plausible CDM models the local CDM density is at least 10^{-25} g cm^{-3}.
    The value 0.3 GeV/c^2 has been taken as "standard" in several papers setting limits on WIMP mass limits, *e.g.* in M. Mori *et al.*, Phys. Lett. **B289**, 463 (1992).
18. Tonry gives $0.2 < \Omega_0 < 2$ [19]. We extend the lower limit so as not to exclude the absence of nonbaryonic dark matter.
19. J. L. Tonry, in *Proc. Texas/PASCOS 92: Relativistic Astrophysics and Particle Cosmology*, ed. C.W. Akerlof and M. Srednicki (Ann. N. Y. Acad. Sci. **688**, 113 (1993).
20. S.M. Carroll and W. H. Press, Annu. Rev. Astron. Astrophys. **30**, 499 (1992).
21. J. C. Mather *et al.*, Astrophy. J. **420**, 439 (1994). Error quoted here is $1\,\sigma$.
22. A. Kogut *et al.*, Astrophy. J. **419**, 1 (1993).
23. R.C. Willson, pp 5–18 in *Atlas of Satellite Observations Related to Global Change*, ed. J.L. Foster and C.L. Parkinson, Cambridge University Press, (1993).
24. I.-J. Sackmann, A.I. Boothroyd, and K.E. Kraemer, Astrophy. J. **418**, 457 (1993).
25. M.P. Thekaekara and A.J. Drummond, Nature Phys. Sci. **229**, 6 (1971).
26. K.R. Lang, *Astrophysical Formulae*, Springer-Verlag (1974);
    K.R. Lang, *Astrophysical Data: Planets and Stars*, Springer-Verlag (1992).
27. F.S. Johnson, J. Meterol. **11**, 431 (1954).
28. G.H. Jacoby *et al.*, J. Astron. Soc. Pacific **104**, 599–662 (1992).
29. J.P. Huchra, Science **256**, 321–325 (1992).