THE BEST STAR ATLASES IN PRINT

by Bill Warren

Need a good star atlas?

Here are the 10 best available in print form, arranged in three categories: Beginner's Level, Intermediate Level and Advanced Level. As a bonus, I'm tossing in an 11th one at no additional charge. It's the best of 'em all.

As might be expected, the three levels reflect increasing sophistication and experience required to use the star charts to full advantage. Within each level, I've arranged them in order of their relative usefulness to me as an observer of 15 years' experience.

All star charts, regardless of their complexity, show star locations and magnitudes via dots or circles of various sizes: the larger the dot or circle, the brighter the star and vice versa. (*Seasonal Star Charts* is the only one that also places small numbers by the stars to denote their magnitudes.) All star charts

Also use symbols to indicate the various types of deep-sky objects.

Finally: with the exception of the last entry, I've limited my list to star atlases *in print form*, thereby excluding: (a) general astronomy books that include star charts, such as *Night Watch* by **Terence Dickinson** or the *National Audubon Society Field Guide to the Night Sky;* (b) specialized books containing star charts (e.g., *Turn Left At Orion* by **Guy Consolmagno** and *The Year-Round Messier Marathon Field Guide* by **H. C. Pennington);** and (c) computer software star atlases (e.g., *Megastar*). In the latter case, I've never used software atlases, and therefore cannot evaluate them properly.

Beginner's Level Star Atlases

All of these beginners' atlases plot the location of all of the Messier objects; all of them show stars to about mag. 5.5-6.5 (i.e., the naked-eye stars); and all but one of them -- #5 – show large portions of the night sky per chart.

To find out more about any of these atlases on the web, simply Google either the title, the author(s) or both, and follow the links. You can find cheap, used copies of most of them at www.amazon.com . Prices – which do not include shipping & handling fees – may vary from the prices I've listed.

1. ***Seasonal Star Charts*.** ($4.99 for the 1st ed. From amazon.com). Contains an excellent planisphere that can be dialed to the time and date you want to observe, and eight large star charts – two for each season. 23 pp.

Strengths: Well organized, easy to use; large, thick, waterproof charts; identifies visual double stars and gives each star's brightness to within ½ mag.; and connects-the-dots to show the constellations' basic shapes.

Weaknesses: Contains some minor errors, but the beginning observer won't notice most of them and the errors will not affect your usage of the charts. Doesn't have many non-Messier deep-sky objects. The pages tend to separate from their plastic binder after repeated use.

I strongly recommend *SSC* as your starter atlas. It's not the only atlas you'll ever need to find deep-sky objects manually, but it's a great place to start. I still use my *SSC* to orient myself to the night sky and locate the constellations and stars within them every time I observe.

2. ***Orion Deep Map 600*** (a.k.a. ***Orion DeepMap Folding Star Atlas***, $19.95 new from amazon.com). Shows the entire sky in one fold-out, road map format. This marvelous, colorful atlas has so much going for it – portability (it fits easily inside a car's glove compartment); a large, water-resistat chart by **Wil Tirion** (if it gets dewy in use, just leave it unfolded overnight until it dries out); 500 deep-sky objects and 101 noteworthy double and variable stars against a blue background, with brief but very good thumbnail descriptions and data for each one; and connect-the-dots constellation shapes – that it was difficult not to list *DM 600* at #1. That I didn't do so is because it's equally useful as an excellent Intermediate Level star atlas.

3. ***Cambridge Star Atlas*** ($10.19 used from amazon.com). An excellent resource from master cartographer **Wil Tirion**. 90 pp., hardback.

Strengths: 20 large, full-page overlapping charts showing stars to mag. 6.5 and 900 deep-sky objects; also contains a usable Moon map.

Weaknesses: Constellation figures aren't drawn in connect-the-dots form; not waterproof or water-resistant. The data accompanying the charts isn't very helpful in terms of describing what you see.

4. ***Norton's Star Atlas and Reference Handbook, 20th ed.*** ($3.90 used from amazon.com). Originally published in 1910, this is the basic star atlas created by British schoolteacher **A. P. Norton** (1876-1955) that most of today's observers such as **David Levy** used to learn the night sky as youngsters. 179 pp., hardback.

Strengths: Contains detailed and valuable information about all aspects of astronomy. The smaller, atlas portion of *Norton* contains 4 lunar maps – one for each quadrant – and 16 star charts covering the entire sky, including 8,800 stars to mag, 6.5 and 600 deep-sky objects.

Weaknesses: Not water-resistant, doesn't connect-the-dots, and the charts' oval shape can be confusing (although it gives *Norton*'s charts an accuracy in star placement and constellation shape that other star charts cannot equal). The Moon maps are detailed but somewhat difficult to read, due to the darkness of the photos.

5. ***The Observer's Sky Atlas*** ($20.88 used from amazon.com). A very good pocket-sized beginner's atlas by **Erich Karkoschka.** The 50 charts are relatively small, but easy to use. Contains 250 deep-sky objects and stars to mag. 6. Paperback, not water-resistant, but connects-the-dots. And, like *DM 600,* it's portable. The text associated with the charts is the best in any of the Beginners Level atlases. 169 pp.

6. ***Bright Star Atlas*** ($2.50 used from amazon.com). A basic star atlas from **Wil Tirion & Brian Skiff.** 32 pp., paperback. Features 10 star maps with stars to mag. 6.5 and about 275 deep-sky objects.

Strengths: Costs less than most basic star atlases. Tirion (the charts) and Skiff (the data) are tops in their respective fields, although Skiff's contribution is largely limited to data tables of limited value in describing what you see.

Weaknesses: Not water-resistant, and constellation shapes aren't shown in connect-the-dots form.

<u>Intermediate Level Star Atlases</u>

7. ***Sky Atlas 2000.0, 2nd ed.*** Charts by **Wil Tirion.** This set of 26 charts comes in several format options – loose-leaf vs. spiral bound, black-on-white vs. white-on-black, laminated vs. unlaminated. The laminated spiral bound is the best and most expensive option at $65.85 new from amazon.com.

Opinions vary, of course, but I prefer the white stars-on-black background format because what you see on the charts matches what you see when you look up at the night sky. The loose-leaf format can be a problem when you're constantly going back and forth between charts, and unlaminated charts will dew up on humid evenings.

Be advised: This marvelous atlas in any format is a *big* step up from Beginner star charts. The charts are *huge* – more than twice as large as any other atas's charts – and because *SA 2000* shows 43,000 stars to mag. 8.1, there are a *lot* more stars per chart. The 26 main charts contain 2,700 deep-sky objects, including most of the Herschel 400s and much, much more. Does not connect-the-dots, but the size of the charts offsets that disadvantage by showing large areas of sky.

SA 2000 is, purely and simply, a set of overlapping star charts. There is no index or list of the objects shown on the charts, and no data about them. (There is, however, a companion volume of data, *Sky Atlas 2000.0 Companion, 2nd ed.* [$29.00 used from amazon.com]).

8. ***Pocket Sky Atlas*** ($9.99 used from amazon.com). Small but easily portable, this wonderful little atlas by *Sky & Telescope's* **Roger W. Sinnott** is exceptionally well done. Its 80 main charts contain all of the Herschel 400s, Caldwell Club objects and a total of 1.500 deep-sky objects, but no data or information about them. There is an Index in the back, but the authors assume that you already know something about what you're looking for, or that you can find information elsewhere. *PSA* isn't water-resistant, but the pages are thick, the charts connect-the-dots, and they show 30,800 stars to mag. 7.6. (97 pp.)

<u>Advanced Level Star Atlases</u>

9. ***Uranometria 2000.0 Deep-Sky Atlas*** ($147.92 for all three paperback volumes from amazon.com). Also comes in hardcover at a higher price, and individual volumes can be purchased separately in either format.

Not for the faint-of-heart or financially challenged, this set features two volumes of star charts by **Wil Tirion & Barry Rappaport** and a third volume of data by **Murray Cragin & Emil Bonanno.** Vols. 1-2 feature 280,000 stars to mag. 9.75 and 30,000 deep-sky objects on 259 charts. Finder charts direct you toward large, double-page charts of smaller areas of sky where the object(s) you're looking for are located. (If that's unclear, think of the difference between a Telrad's or finderscope's field of view (fov) vs. that of, say, a standard 25mm eyepiece fov: the eyepiece magnifies objects' sizes and at the same time reduces the fov to a tiny portion of sky. *U 2000's* charts are somewhat larger than a Telrad fov but not so small as to be easy to use, especially in portions of the sky that are devoid of bright stars.) Not water-resistant, doesn't connect-the-dots.

10. ***Millennium Star Atlas*** (3-vol. set, $149 used [hardcover] and $84.95 [paperback] from amazon.com. With 1 million stars down to mag. 11.0 and 40,000 deep-sky objects on 1,548 charts, *MSA* is the unquestioned Top Dawg among print atlases. Except as a bragging point re how much disposable income you have and how much of it you're willing to spend, though, you won't need *MSA* unless you're also a glutton for punishment. (*MSA* is not water-resistant and does not connect-the-dots. It was prepared by **Roger W. Sinnott & Michael Perryman.**)

<u>One for the Road</u>

Night Sky Observer's Guide (2 vols., hardback, $52.95 for both, used, from amazon.com). Although not technically a star atlas but rather a book on observational astronomy that contains hundreds of star charts covering the entire night sky, *NSOG* is the best book of its kind ever written. In the Introduction to Vol. 1, authors **George Robert Kepple & Glen W. Sanner** tell you everything you'll ever want or need to know about stars, deep-sky objects and how to observe them.

NSOG is not a book for beginners, but it's indispensable for any seasoned observer who wants to know about what he's looking for (or at). There are 88 large constellation charts that connect-the-dots, and 431 smaller finder charts that do not connect-the-dots but show stars to mag. 9. Those finder charts show you where to look for 4,000 deep-sky objects. There are 431 photos and 827 drawings of selected objects (including 55 drawings by ex-FRAC member **Rich Jakiel**) to show you what they look like in the eyepiece, and detailed written descriptions of those 4,000 deep-sky objects to tell you what you're likely to see in telescopes of various sizes. The books are not water-resistant.

NSOG comes in 2 volumes, *Spring & Summer* and *Autumn & Winter,* and can be purchased separately. Both are exceptionally well-written. For example, *NSOG* is the only book that defines terms such as *large, small, faint (*or *dim), bright,* etc., and uses those standardized definitions in object descriptions.

If I were stranded on a desert island for life with a telescope and only one astronomy book, *NSOG* would be that book.

Without the telescope, I'd want *Burnham's Celestial Handbook,* a wonderfully lyrical, meticulously researched, out-of-print, 3-volume set by the late **Robert Burnham.** But that's another story for another time.