

Amateur Astronomy Resources for the Beginning & Intermediate Stargazer, Binocular and Telescopic Observer



This is a short list of books, star charts and web sites that beginners and non-beginners alike will find helpful. Some are for those of you who have telescopes; some for binocular users and others are for those with no equipment at all.

Astronomy Without Equipment – Just Your Own Eyes!

Stargazing: Astronomy Without a Telescope by Patrick Moore (Cambridge University Press)

Seeing the Sky: 100 Projects, Activities, and Explorations in Astronomy by Fred Schaaf (John Wiley & Sons, Inc.) Full of observing projects requiring nothing more than your own eyes.

Binocular Astronomy

Exploring the Night Sky With Binoculars by David Chandler (David Chandler Co) a small booklet that is a nice introduction to what can be seen with binoculars and a very brief but good introduction to astronomy. David Chandler Co.; ISBN: 0961320710

Exploring the Night Sky With Binoculars by Patrick Moore Paperback - 213 pages 4th edition (January, 2000) Cambridge University Press; ISBN: 0521793904 Good guide to what can be seen in binoculars. Covers moon, planets, constellations.

Binocular Astronomy by Craig Crossen, Wil Tirion (Willmann-Bell) A very well written book on observing the night sky with binoculars, it also covers the history, mythology and astronomy of the sky. Good introduction to astronomy in general. Highly recommended. Reviewed at <http://www.cloudynights.com/books/binocular.htm>

General Observing Guides: The first three titles are guides that try to cover it all. Information about planets, stars, nebulae, galaxies are packed into these books. Unfortunately, the sky maps can be too small to be of much use in the field. However, when combined with a good set of star charts, these can be very good resources.

National Audubon Society Field Guide to the Night Sky (Audubon Society Field Guide Series)

Peterson's Field Guide - Stars and Planets - Donald H. Menzel and Jay M. Pasachoff (Houghton Mifflin Co.)

Stars and Planets (Princeton Field Guides) by Ian Ridpath, Wil Tirion (Ill.) ISBN: 0691089132 Princeton University Press Better suited for the beginner than the above volume of the same title.

The Astronomical Companion by Guy Ottewell An overview of astronomy good at explaining how astronomical phenomena happen. Drawings by the author using a unique style convey the 3-dimensional nature of astronomical phenomena.

Astronomical Calendar 2004 by Guy Ottewell In this annual publication the author produced a well-written, well illustrated guide to predicted astronomical events. Combined with the above volume, it makes a great resource.

Skywatching (Nature Company Guide) by David H. Levy (September 1995) Time Life; ISBN: 078354751X Can find this in bookstore "bargain bins" – has decent sky maps for beginners & binocular users.

Backyard Astronomy: Your Guide to Starhopping and Exploring the Universe (Nature Company Guides) by Robert Burnham, Alan Dyer, Robert A. Garfinkle, Martin George, Jeff Kanipe, David H. Levy, John O'Byrne Publisher: Nature Company Guides ISBN: 0737000961 (This book is also published under this title: Skywatching (Nature Company Guides) by David H. Levy, John O'Byrne, Time-Life Books ISBN: 078354751X)

Advanced Skywatching: The Backyard Astronomer's Guide to Starhopping and Exploring the Universe (Nature Company Guide) by Robert Burnham, Alan Dyer, Robert A. Garfinkle, Martin George, Jeff Kanipe, David H. Levy Time-Life Books ISBN: 0783549415. This is a companion to the above title(s).

Both of the above two volumes have also been issued as one book going by the title "**Practical Skywatching**" (Nature Companion Series) by David H. Levy, John O'Byrne. ISBN: 1876778911

Constellation Guides: These briefly describe constellations, their appearance and how to locate them.

Find the Constellations and **The Stars : A New Way to See Them**, both by H. A. Rey (Houghton Mifflin Company) These two books have been around for decades and are easy to read & entertaining, almost as much a classic as the author's "Curios George" series. Good for adults & children.

To Know the Stars by Guy Ottewell (for children)

Walk through the Heavens: A Guide to Stars & Constellations & Their Legends Milton D. Heifetz & Wil Tirion (Cambridge University Press)

Star Maps for Beginners by I.M. Levitt, Roy K. Marshall Publisher: Fireside; ISBN: 06717918774675

The Monthly Sky Guide by Ian Ridpath, Wil Tirion (Press Syndicate of the University of Cambridge)- Simple sky charts for each month of the year accompanied by descriptions of what the most prominent aspects of seasonal constellations.

National Audubon Society Pocket Guide to Constellations of the Northern Skies (National Audubon Society Pocket Guides) by Mark Chartrand, Wil Tirion, Gary Mechler Publisher: Knopf ISBN: 0679779981 A small but very useful guide to the constellations.

Planispheres

No matter what equipment you do or do not have, a planisphere is mandatory for observing the night sky. It is a device that tells you what constellations are visible at any given time on any given day of the year.

The Night Sky A New Kind of Planisphere or Miller Planisphere (latitude 40-degree north) edited by Ian Ridpath or **Philip's Planisphere for Latitude 42 North** Sterling Publications

Sky Charts & Maps: These are maps of the sky that precisely locate objects in constellations. These are listed in increasing order of sophistication.

Star Maps for Beginners by I.M. Levitt and Roy K. Marshall 50th Anniversary Edition Fireside; ISBN: 0671791877

Sky Atlas for Small Telescopes and Binoculars by David S. Chandler, Billie E. Chandler David Chandler Co. ISBN: 1891938061

The DeepMap 600 From Orion Telescopes and Binoculars (Orion Telescope Center) Good for all levels of knowledge.

The Cambridge Star Atlas by Wil Tirion - Tirion (Cambridge University Press) A set of maps that shows stars only bright enough to be seen with the unaided eye along with faint deep sky objects. Good starter set of comprehensive sky charts.

The Observer's Sky Atlas : With 50 Star Charts Covering the Entire Sky by Erich Karkoschka (Springer Verlag) A small, easy to carry & use guide for use at the telescope. Contains a set of maps of the entire night sky covering the brighter deep sky objects, double stars, with data such as distance, brightness and size (for intermediate observers).

Sky Atlas 2000 by Wil Tirion, Roger W. Sinnott (Sky Publishing) a comprehensive set of sky maps for the intermediate to advanced observer.

Equipment Guides

Star Ware: The Amateur Astronomer's Ultimate Guide to Choosing, Buying, and Using Telescopes and Accessories, 3rd Edition Philip S. Harrington (John Wiley & Sons) This is not only a guide to equipment, but an introduction to techniques, targets and what to expect. Highly recommended, a must for someone thinking of investing hard earned dollars in this hobby.

The Backyard Astronomer's Guide by Terence Dickinson, Alan Dyer Firefly Books; Revised edition (October 2002) ISBN: 155209507X A beautifully illustrated to equipment, techniques and targets.

Astronomy with a Telescope

Seeing the Solar System: Telescopic Projects, Activities, and Explorations in Astronomy (Fred Schaaf John Wiley & Sons, Inc.) Easy to read guide to observing objects in our solar system - planets, comets, meteors and asteroids.

Seeing the Deep Sky: Telescopic Astronomy Projects Beyond the Solar System (Fred Schaaf John Wiley & Sons, Inc.) Easy to read introduction to the astronomy of the deep sky - those objects beyond our solar system.

Turn Left at Orion: A Hundred Night Sky Objects to See in a Small Telescope and How to Find Them by Guy Consolmagno, Dan M. Davis, Karen Kotash Sepp, Anne Drogin, Mary Lynn Skirvin (Cambridge University Press)

Deep-Sky Observing: The Astronomical Tourist by Steven R. Coe, Steve Coe (Springer Verlag) The author's drawings of how astronomical objects appear in the eyepiece gives realistic depictions of what can be seen in a medium to large sized telescope.

The Deep Sky: An Introduction by Philip S. Harrington, Leif J. Robinson (Sky Publishing)

Nightwatch: A Practical Guide to Viewing the Universe by Terence Dickinson (Firefly Books) Very good all-round introduction to telescope equipment, techniques, what to observe.

Star Watch - The Amateur Astronomer's Guide to Finding, Observing, and Learning About over 125 Celestial Objects by Philip S. Harrington John Wiley & Sons ISBN: 0471418048 Very good beginner's guide to "deep sky" objects of interest to telescope users.

Periodicals

Astronomy (Kalmbach Publishing) is a popular-level monthly magazine geared more towards beginners than it's competitor **Sky & Telescope** (Sky Publishing). Both are well illustrated, informative and accurate magazines that have articles on predicted astronomical events and recent discoveries. The best magazine for beginners is Sky Publishing's **Night Sky** – highly recommended.

Astronomical Web Sites of Interest

St. Louis Astronomical Society: <http://www.slasonline.org> a member of the Astronomical League: <http://www.astroleague.org/>

Sky & Telescope Magazine's web site: <http://skyandtelescope.com/>; Very good for getting updates on astronomical events, also has links to various email lists you can subscribe to that will alert you to various classes of astronomical events at : http://skyandtelescope.com/resources/internet/article_331_1.asp . Sky Publishing website also has several Javascript utilities that will generate predictions of such things as the positions of Jupiter and Saturn's moons and what side of Mars is visible at http://skyandtelescope.com/observing/article_1193_1.asp Astronomy Magazine's web site: <http://www.astronomy.com/home.asp>

Free Monthly Skymaps can be downloaded at <http://www.skymaps.com/> and at <http://www.pa.msu.edu/abrams/SkyCalendar/Index.html> (Abrams Planetarium Sky Calendar)

Tips for beginners: <http://observers.org/beginner/j.r.f.beginner.html>

Equipment reviews & tips for beginners (and others): <http://www.cloudynights.com/>

Space Weather site (for aurora updates and other near-earth space phenomena such as close passing asteroids, comets):

<http://spaceweather.com/>

Observing Earth Satellites and spacecraft: <http://www.heavens-above.com/>

What Time Is It? <http://www.time.gov/> Or tune to WWV at 2.5, 5,10,15,or 20 Mhz.; CHU at 3.330, 7.335, 14.670 Mhz. or 900-410-8463 (there is a charge!) Official US Time at <http://www.time.gov/>

Where to buy used equipment? <http://www.astomart.com>

<http://www.astronomy-mall.com/telescope-warehouse/>

<http://www201.pair.com/resource/astro.html/teletrade/>

Observing the Moon? See <http://www.inconstantmoon.com/index.htm> and <http://www.stargazing.net/david/moon/index29days.html>

Lunar and Solar Eclipse information: <http://sunearth.gsfc.nasa.gov/eclipse/eclipse.html>

Labeled images of the moon's appearance every night of the lunar month at <http://www.stargazing.net/david/moon/index29days.html>

Solar system (planets, comets, asteroids, sun) information can be found at <http://www.seds.org/nineplanets/nineplanets/nineplanets.html>

Information on observing planets can be found at <http://www.shallowsky.com>

Constellations and their stars: <http://www.astro.wisc.edu/~dolan/constellations/>

Great site for more technical information on deep sky objects: <http://www.seds.org/>

<http://www.andreas-domenico.de/astro/links.html> - Visual Deep Sky Website, many good links and information for those that really want to dive into deep sky observing with a telescope.

Bill Ferris' web site "Cosmic Voyage" is an excellent site for an introduction to amateur astronomy:

<http://hometown.aol.com/billferris/index.html>

<http://webpages.charter.net/darksky25/Astronomy/Articles/Getstarted.html> How to get started in Astronomy for under \$200!

Binocular Astronomy websites:

http://skyandtelescope.com/howto/scopes/article_153_1.asp Sky & Telescope's online introduction to binocular astronomy article

<http://www.lightandmatter.com/binosky/binosky.html> - "Best Bet" astronomical objects for binoculars. Includes online maps.

<http://www.novac.com/Jon/RA/ra.bino.html> The Recreational Astronomer - short tip sheet for binocular users

<http://www.astroleague.org/al/obsclubs/binomess/binomess.html> Astronomical League's Messier Binocular List

http://dmoz.org/Science/Astronomy/Amateur/Binocular_Astronomy/faq.html Binocular Astronomy FAQ

(Updated September 28 2006)