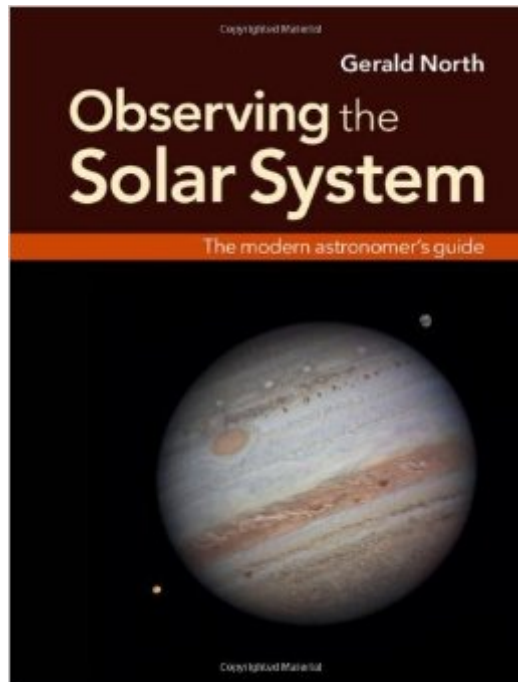


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# Observing The Solar System: The Modern Astronomer's Guide



## Synopsis

Written by a well-known and experienced amateur astronomer, this is a practical primer for all aspiring observers of the planets and other Solar System objects. Whether you are a beginner or more advanced astronomer, you will find all you need in this book to help develop your knowledge and skills and move on to the next level of observing. This up-to-date, self-contained guide provides a detailed and wide-ranging background to Solar System astronomy, along with extensive practical advice and resources. Topics covered include: traditional visual observing techniques using telescopes and ancillary equipment; how to go about imaging astronomical bodies; how to conduct measurements and research of scientifically useful quality; the latest observing and imaging techniques. Whether your interests lie in observing aurorae, meteors, the Sun, the Moon, asteroids, comets, or any of the major planets, you will find all you need here to help you get started.

## Book Information

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## Customer Reviews

"Observing the Solar System" is a fairly complete (a relative term when discussing the Solar System) guide for an amateur astronomer to start viewing the night sky. It has a strong focus on planets and comets, and not as much attention to galaxies and some of the Messier objects. There are twelve chapters: 1. Earth and Sky - half is about basic geology of the Earth and the other half discusses meteors. 2. Moon and planet observer's hardware - this whole chapter is about what type of telescope setup you need for observing the moon and planets. 3. The Solar System framed - discusses CCD cameras for amateur astrophotography. 4. Stacking up the Solar System - this whole

chapter is about "focus stacking" with astrophotography to get better images.5. Our Moon - This is one of the better chapters of the book and is very comprehensive for an amateur lunar observer. It discusses lunar characteristics and what you can expect when viewing the moon. I found some very useful info in it that I didn't already know.6. Mercury and Venus - You're not going to see much in a telescope when observing these two planets due to their size and apparent magnitude, but it discusses their orbits and phases and has some interesting info on transits.7. Mars - a decent chapter on observing through a telescope, and with the naked eye, as well as the orbit of Mars and its moons.8. Jupiter - One of the better chapters of the book and that I've found in an amateur astronomer's guide, with information on observing the planet and its moons.9. Saturn, Uranus, and Neptune - Half about Saturn and its moons, and half about Uranus and Neptune.10. Small Worlds - Asteroids, Pluto, binocular observing, asteroid photography, and photometry (which I feel is a bit dry and could have been left out).11. Comets - 1/3 discusses comet behavior, and the rest is about comet photography and photometry.12. Our daytime star - solar characteristics, tips for safe solar viewing without setting your eyeballs on fire, and sunspots.

This is not a shallow work produced by an amateur authority for a transient audience. This is an impressive, detailed work that is meant to be part of a home astronomer's library. It is well illustrated with black and white and colour plates together with appropriate drawings. As the title indicates, it deals with more than just the planets. Comets, asteroids and other "local" phenomena are also covered. I must admit that the occasional mathematical formula, while not overwhelming, did bring on a cold sweat. The appendices on collimating a telescope and polar alignment are quite dated. You can get easier, if less theoretical directions on "YouTube".

Planetary observation can be highly addicted but equally highly frustrating. A productive visual or imaging session requires a seemingly impossible confluence of vital factors such as atmospheric stability, accurate optical collimation, proper polar alignment, thermal equilibrium of optics, etc. For folks who live in parts of the country where the jet stream is prevalent, observation can be quite frustrating. This book, written by an experienced and knowledgeable astronomer, does a good job in balancing observational, imaging, and foundational information for intermediate amateurs interesting in taking a more serious step in this area. Three things that would have been nice to mention more:

1. Thermal equilibrium of a telescope. It takes a bit of effort to get a Schmidt-Cass or Maksutov to get into thermal equilibrium. Taking it out of storage with a huge thermal differential with the ambient will guarantee a pretty much useless night of productive observation. Bringing huge optical surfaces

from a cold indoors into a warm night will likewise create a huge amount of dew on the optical surfaces. 2. There are, for those starting in the hobby, very nice iPhone observational apps that will help one locate the planets. Other programs will actually show correct real-time features that will allow one to correlate to what is being observed. 3. The choice of a proper equatorial mount and tripod are as vital as selecting the optics. Too often, people get stymied by cheap shaky import mounts and tripods with low stability and poor tracking. Some of these can be surprisingly expensive but useless for serious work. All in all, a good book and recommended read.

This is an excellent book that about the solar system for astronomy buffs. The book is full of information for the amateur astronomer. Each chapter about a specific planet, not only tells you about the planet, but also tells you how to observe and photograph the planet. This book will tell you about observing with various types of telescopes and give you recommendations of certain eyepieces. Chapter 2 is devoted to a description of observing hardware. Chapter 4 is devoted to solar system photography including information about using webcams and other photography equipment. Brand name equipment from Celestron and Meade are covered. The book also goes into considerable detail on photographic techniques such as stacking and the use of various software to enhance your photos of the heavens. The amount of detail on techniques to get photos is phenomenal. The discussion of each planet, and the asteroids is full of information about the latest scientific finds, as well as observing. He discusses in considerable detail observation of the transit of Venus, observing various moons of the various planets, use of color filters, photographing Jupiter, observing comets and the sun. This book does a better job of any I've seen of integrating detailed information about the planets, the history of discovery and exploration, and observing techniques of each object for amateurs. Add to that detailed information and tips about telescopes and photographing the various objects, and this book is a real winner. Highly recommended for all amateur astronomers.

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