

Astrophotography On The Go Using Short Exposures

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Comprehending as without difficulty as contract even more than other will present each success. next to, the declaration as skillfully as keenness of this astrophotography on the go using short exposures can be taken as capably as picked to act.

Yearbook of Astronomy 2007

Star Ware Philip S. Harrington 2002-10-16 This is the third edition of Phil Harrington's popular and comprehensive guide to astronomical equipment, written for both new astronomers as well as experienced amateurs. It includes numerous tips and tricks from other experienced astronomers. In this revised and updated edition of Star Ware, the essential guide to buying astronomical equipment, award-winning astronomy writer Philip Harrington does the work for you, analyzing and exploring today's astronomy market and offering point-by-point comparisons of everything you need. Whether you're an experienced amateur astronomer or just getting st.

The Complete Guide to Landscape Astrophotography Michael C Shaw 2017-03-15 The Complete Guide to Landscape Astrophotography is the ultimate manual for anyone looking to create spectacular landscape astrophotography images. By explaining the science of landscape astrophotography in clear and straightforward language, it provides insights into phenomena such as the appearance or absence of the Milky Way, the moon, and constellations. This unique approach, which combines the underlying scientific principles of astronomy with those of photography, will help deepen your understanding and give you the tools you need to fulfil your artistic vision. Key features include: • Distinguished Guest Gallery of images from renowned nightscape photographers such as Babak Tafreshi, Bryan Peterson, Alan Dyer, Brenda Tharp, Royce Bair, Wally Pacholka, and David Kingham • The twenty-five best landscape astrophotography subjects and how to photograph them • Astronomy 101 - build your knowledge of night sky objects and their motion: the Milky Way, moon, Aurora Borealis/Australis, constellations, meteors and comets • Information on state-of-the-art planning software and apps designed to enable you to capture and enhance your landscape astrophotography • Field guide for creating a detailed plan for your night shoot • Description of the best moon phases for specific types of nightscape images, and the best months and times of night to see the Milky Way • How-to guide for creating stunning time-lapse videos of the night sky, including Holy Grail transitions from pre-sunset to complete darkness • Four detailed case studies on creating landscape astrophotography images of the Milky Way, full moon, star trails, and constellations

Digital SLR Astrophotography Michael A. Covington 2007-11-29 In the last few years,

digital SLR cameras have taken the astrophotography world by storm. It is now easier to photograph the stars than ever before! They are compact and portable, flexible to adapt with different lenses and for telescope use, and above all DSLR cameras are easy and enjoyable to use. In this concise guide, experienced astrophotography expert Michael Covington outlines the simple, enduring basics that will enable you to get started, and help you get the most from your equipment. He covers a wide selection of equipment, simple and advanced projects, technical considerations and image processing techniques. Unlike other astrophotography books, this one focuses specifically on DSLR cameras, not astronomical CCDs, non-DSLR digital cameras, or film. This guide is ideal for astrophotographers who wish to develop their skills using DSLR cameras and as a friendly introduction to amateur astronomers or photographers curious about photographing the night sky.

Digital Astrophotography: The State of the Art David Ratledge 2006-01-20 Provides novice to accomplished amateur astronomers with a firm grounding in the basics and successful use of digital astrophotography. Provides examples of the best images, and gives readers hints and tips about how to get the best out of this extraordinary technology. Experts in CCD astronomy from North America and Europe have contributed to this book, illustrating their help and advice with many beautiful colour images - the book is in full color throughout. Techniques range from using simple webcams to highly technical aspects such as supernovae patrolling. Computer processing, stacking and image-enhancement are detailed, along with many hints and tips from the experts.

How to Observe the Sun Safely Lee Macdonald 2012-12-06 The Sun is the brightest and most accessible object in the sky, and it has much to offer the amateur astronomer with modest equipment. On most days it shows sunspots and other features that display a wealth of fine detail and change their appearance strikingly from day to day. But observing the Sun can be dangerous. NEVER look at the Sun through a telescope or other optical aid, even for a brief instant. The Sun's intense radiation, amplified and focused by a telescope, will almost certainly cause eye injury and could well lead to complete blindness. Do not attempt any solar observing until you have read and understood the safety precautions and observing advice set out in Chapter 2 of this book - even if you think you have the correct equipment. Be especially wary about using filters to observe the Sun. If you have a filter that makes the Sun look dark, it is not necessarily safe, as it is largely the Sun's invisible radiation that is harmful to the eye. But provided you use the correct techniques, such as projecting the solar image onto a screen or using a specially designed, quality solar filter that fits over the telescope aperture, it is quite easy to observe the Sun safely.

Astrophotography Robert T. Little 1983 Explains how to photograph constellations, comets, meteors, eclipses, planets, and galaxies, describes telescopes, drives, and useful photographic equipment, and discusses exposure times and parallax correction

[A User's Guide to the Meade LXD55 and LXD75 Telescopes](#) Martin Peston 2010-04-28 This book offers a comprehensive introductory guide to "choosing and using" a series LXD55 or LXD75 computer-controlled ("goto") telescope, containing a wealth of useful information for both beginners and more advanced practical amateur astronomers. The manufacturer's manuals are not nearly detailed enough to be of real help to beginners. No other book offers advanced techniques for more experienced LXD series users.

[Astrophotography is Easy!](#) Gregory I. Redfern 2020-10-29 There are many books covering different facets of astrophotography, but few of them contain all the necessary steps for beginners in one accessible place. *Astrophotography is Easy!* fills that void, serving as a guide to anybody interested in the subject but starting totally from scratch. Assuming no prior experience, the author runs through the basics for how to take astrophotos using just a camera—including cell phones and tablets—as well as a telescope and more sophisticated equipment. The book includes proven techniques, checklists, safety guidelines, troubleshooting tips, and more. Each chapter builds upon the last, allowing readers to master basic techniques before moving on to more challenging material. Also included is a comprehensive list of additional books and resources on a variety of topics so readers can continue expanding their skills. *Astrophotography Is Easy!* doesn't simply teach you the basic skills for becoming an astrophotographer: it provides you with the foundations you will need for a lifelong pursuit.

Astronomy 1987

Illustrated Guide to Astronomical Wonders Robert Bruce Thompson 2007-10-31 With the advent of inexpensive, high-power telescopes priced at under \$250, amateur astronomy is now within the reach of anyone, and this is the ideal book to get you started. The *Illustrated Guide to Astronomical Wonders* offers you a guide to the equipment you need, and shows you how and where to find hundreds of spectacular objects in the deep sky -- double and multiple stars as well as spectacular star clusters, nebulae, and galaxies. You get a solid grounding in the fundamental concepts and terminology of astronomy, and specific advice about choosing, buying, using, and maintaining the equipment required for observing. The *Illustrated Guide to Astronomical Wonders* is designed to be used in the field under the special red-colored lighting used by astronomers, and includes recommended observing targets for beginners and intermediate observers alike. You get detailed start charts and specific information about the best celestial objects. The objects in this book were chosen to help you meet the requirements for several lists of objects compiled by The Astronomical League. Binocular Messier Club Urban Observing Club Deep Sky Binocular Club Double Star Club RASC Finest NGC List Completing the list for a particular observing club entitles anyone who is a member of the Astronomical League or RASC to an award, which includes a certificate and, in some cases, a lapel pin. This book is perfect for amateur astronomers, students, teachers, or anyone who is ready to dive into this rewarding hobby. Who knows? You might even find a new object, like amateur astronomer Jay McNeil. On a clear cold night in January 2004, he spotted a previously undiscovered celestial object near Orion, now called McNeil's Nebula. Discover what awaits you in the night sky with the *Illustrated Guide to Astronomical Wonders*.

Observing the Solar System Gerald North 2012-10-25 A practical primer for aspiring observers of the planets and other Solar System objects, written by an experienced amateur astronomer.

Astronomy Adventures and Vacations Timothy Treadwell 2017-03-29 This astronomy travel guide examines the many wonderful opportunities for experiencing the observing hobby. Amateur astronomy is often consigned to observing from home or from a local park, yet it can be much more. Tim Treadwell explores all the possibilities of astronomical and space-related activities that are available on day trips and longer vacations. These activities

range from observatory visits and other simple ways to build an astronomy event into a holiday, to full blown specialized astronomy travel. Many trips give the opportunity to visit some of the world's famous attractions. On most vacations it can be a matter of just taking a day (or night) out of your schedule to fit in an astronomy event, but larger, dedicated pilgrimages are also possible. How to make the most of astronomy potential on a holiday, whether observing on the beach in Hawaii with the Telescope Guy or visiting Star City in Russia, is covered in detail. Go to a star party, explore the national parks or see the northern lights! There are a wide variety of activities for all budgets described in this book.

The Art of Astrophotography Ian Morison 2017-02-02 In *The Art of Astrophotography*, astronomer and Popular Astronomy columnist Ian Morison provides the essential foundations of how to produce beautiful astronomical images. Every type of astroimaging is covered, from images of the Moon and planets, to the constellations, star clusters and nebulae within our Milky Way Galaxy and the faint light of distant galaxies. He achieves this through a series of worked examples and short project walk-throughs, detailing the equipment needed - starting with just a DSLR (digital single lens reflex) camera and tripod, and increasing in complexity as the book progresses - followed by the way to best capture the images and then how, step by step, these may be processed and enhanced to provide results that can rival those seen in astronomical magazines and books. Whether you are just getting into astrophotography or are already deeply involved, Morison's advice will help you capture and create enticing astronomical images.

Practical Astrophotography Jeffrey R. Charles 2012-12-06 For all but the simplest star-trail pictures, photographing the night sky involves machinery to track the stars, and the task becomes even more complicated when photographing very small or very faint objects that require high magnification or very long exposure times. *Astrophotography for Amateurs* presents equipment and techniques, features practical hints and tips from the experts, including coverage of traditional "wet" photography, CCD imaging, and computerized image enhancement. There are sections on photographing different classes of astronomical object from the moon to faint nebulae, as well as a detailed look at the equipment needed.

Making Beautiful Deep-Sky Images Greg Parker 2007-10-11 This book is based around the author's beautiful and sometimes awe-inspiring color images and mosaics of deep-sky objects. The book describes how similar "Hubble class" images can be created by amateur astronomers in their back garden using commercially available telescopes and CCD cameras. Subsequent processing and image enhancement in the "electronic darkroom" is covered in detail as well. A range of telescopes and equipment is considered, from the author's 11-inch with Hyperstar camera, down to more affordable instruments. Appendices provide links to free software - not available from a single source - and are themselves an invaluable resource.

The Astrophotography Manual Chris Woodhouse 2015-05-01 Capturing the serene beauty of planets, stars, and celestial bodies is both fine art and scientific discovery. Fascinating, challenging, and extremely rewarding, astrophotography is a pursuit that is greatly enhanced by gaining access to the type of detailed instruction this book offers, with charts, tables, over (number of TK) images, and real-life troubleshooting advice in detailed case studies. The *Astrophotography Manual* is for those astrophotographers who wish to swiftly move beyond using standard SLR cameras and Photoshop, and who are ready to create beautiful images of

nebulae, galaxies, clusters, and the solar system. Beginning with a brief astronomy primer, this book takes readers through the full astrophotography process, from equipment choice and set-up, through image acquisition, image calibration, and processing. Along the way it explains how sensor performance and light pollution relate to image quality and exposure planning. This book will satisfy the technical and practical reader and uses case studies to illustrate the entire process, using a range of equipment (including tablets and smartphones), exploring deep sky and planetary objects, and utilizing a variety of software, including Maxim, Nebulosity, Photoshop, RegiStax and PixInsight.

Astrophotography for the Amateur Michael A. Covington 1999-05-03 First published in 1999, this is an expanded and updated edition of the best-selling, standard handbook on astrophotography for amateurs.

AstroFAQs Stephen F. Tonkin 2012-12-06 An increasing number of people are taking advantage of the relatively low prices of astronomical equipment. Many of these people are doing so with little knowledge of practical astronomy and, as the volume of questions asked at astronomical society meetings and on internet newsgroups attest, there is a need for these questions to be answered in one place. Hence this book. The fundamental premise behind AstroFAQs is that the beginning amateur astronomer wishes to get "up and running" with the minimum delay. A secondary premise is that anyone will better appreciate why something is done as it is if there is an understanding of the underlying principles. AstroFAQs addresses both these premises. AstroFAQs makes no pretence to go into great depth -that would be impossible in such a slim volume -but it will give you the kick-start you need to choose and use your instrument effectively, and will take you to a level of expertise that is significantly higher than the "beginner" status. It uses a hierarchical section numbering system that simplifies cross-referencing. Suggestions for more in-depth reading are given throughout. More and more "newbie" astronomers are entering this fascinating hobby by purchasing one of the "gee whiz" GOTO telescopes, of which there is an increasing selection. These serve the wish to begin observation as soon as possible, but they do so at a price premium.

Philip's Astrophotography With Mark Thompson Mark Thompson 2015-01-30 Philip's Astrophotography With Mark Thompson is an essential guide for anyone wishing to photograph or image the stars and planets, written by TV's favourite astronomer. For many people, looking at the sky is not enough and they would love to try and capture what they can see. Until a few years ago, capturing astronomical images was fraught with many challenges, but with the development of digital cameras replacing film, things have become much easier and great astronomical images are now within the reach of even the most novice stargazer. Mark Thompson has spent many years capturing the beauty of the night sky, first with film and now with the digital camera, and has discovered and overcome many of the pitfalls. This book takes the reader on a journey through the world of capturing astronomical images from using the humble mobile phone to specialist cameras, brought to life with Mark's personal experiences and many of his own astronomical images.

The Astrophotography Manual Chris Woodhouse 2017-12-04 The Astrophotography Manual, Second Edition is for photographers ready to move beyond standard SLR cameras and editing software to create beautiful images of nebulae, galaxies, clusters, and the stars. Beginning with a brief astronomy primer, this book takes readers through the full astrophotography process, from choosing and using equipment to image capture, calibration, and processing.

This combination of technical background and hands-on approach brings the science down to earth, with practical methods to ensure success. This second edition now includes: Over 170 pages of new content within 22 new chapters, with 600 full-color illustrations. Covers a wide range of hardware, including mobile devices, remote control and new technologies. Further insights into leading software, including automation, Sequence Generator Pro and PixInsight Ground-breaking practical chapters on hardware and software as well as alternative astrophotography pursuits

Astrophotography on the Go Joseph Ashley 2014-10-31

DN to $[\lambda]$ James R. Janesick 2007 Contains more than 230 figures that present experimental CCD and CMOS data products and modeling simulations connected to photon transfer. This title also provides hundreds of relations that support photon transfer theory, simulations, and data.

Video Astronomy on the Go Joseph Ashley 2016-10-24 Author Joseph Ashley explains video astronomy's many benefits in this comprehensive reference guide for amateurs. Video astronomy offers a wonderful way to see objects in far greater detail than is possible through an eyepiece, and the ability to use the modern, entry-level video camera to image deep space objects is a wonderful development for urban astronomers in particular, as it helps sidestep the issue of light pollution. The author addresses both the positive attributes of these cameras for deep space imaging as well as the limitations, such as amp glow. The equipment needed for imaging as well as how it is configured is identified with hook-up diagrams and photographs. Imaging techniques are discussed together with image processing (stacking and image enhancement). Video astronomy has evolved to offer great results and great ease of use, and both novices and more experienced amateurs can use this book to find the set-up that works best for them. Flexible and portable, they open up a whole new way of seeing space.

Astronomy with a Home Computer Neale Monks 2006-03-30 Here is a one-volume guide to just about everything computer-related for amateur astronomers! Today's amateur astronomy is inextricably linked to personal computers. Computer-controlled "go-to" telescopes are inexpensive. CCD and webcam imaging make intensive use of the technology for capturing and processing images. Planetarium software provides information and an easy interface for telescopes. The Internet offers links to other astronomers, information, and software. The list goes on and on. Find out here how to choose the best planetarium program: are commercial versions really better than freeware? Learn how to optimise a go-to telescope, or connect it to a lap-top. Discover how to choose the best webcam and use it with your telescope. Create a mosaic of the Moon, or high-resolution images of the planets... *Astronomy with a Home Computer* is designed for every amateur astronomer who owns a home computer, whether it is running Microsoft Windows, Mac O/S or Linux. It doesn't matter what kind of telescope you own either - a small refractor is just as useful as a big "go-to" SCT for most of the projects in this book.

Wide-field Astrophotography Robert Reeves 2000

Popular Photography 1985-03

Digital SLR Astrophotography Michael A. Covington 2018-09-30 Digital SLR cameras have made it easier than ever before to photograph the night sky. Whether you're a beginner, nature photographer, or serious astronomer, this is the definitive handbook to capturing the heavens. Starting with simple projects for beginners such as cameras on tripods, it then moves onto more advanced projects including telescope photography and methods of astronomical research. With 80% revised and updated material, this new edition covers nightscapes, eclipses, using cameras with sky trackers and telescopes, and tools for identifying celestial objects and investigating them scientifically. Image processing is discussed in detail, with worked examples from three popular software packages - Nebulosity, Maxlm DL, and PixInsight. Rather than taking a recipe-book approach, Covington explains how your equipment works as well as offering advice on many practical considerations, such as choice of set-up and the testing of lenses, making this a comprehensive guide for anyone involved in astrophotography.

TELESCOPE Rx - The BIG Book on Equipping, Maintaining and Using a Telescope Clay Sherrod 2017-02-09 The investment in our love of space and skygazing can be high. All too often, we are led to believe that we did not have enough equipment, or have the wrong equipment or we are not doing things right. Telescope Rx is intended to provide solid and practical advice on everything from setting up a telescope, eyepieces, important accessories and even computer or smart phone programs to run the telescope, then turning that telescope into a nightly research tool with projects for every night you wish to pursue. This is your directory to properly outfit your telescope without spending lots of money; what the functions of astronomical telescope are, pitfalls to avoid in purchasing, and ultimately your guide to pursue some serious scientific studies with your telescope after you have had your long look around. The sky is out there for all of us to study and enjoy. Through your proper understanding of how to set up a telescope and do those studies, your mind, spirit and enthusiasm will grow.

Practical Projects for Astronomers Neil Wyatt 2021-04-26 Astronomy and astrophotography are fascinating hobbies. It is possible to create and enhance astronomical equipment and accessories using techniques and materials accessible to the hobbyist metalworker or model engineer. Written by an amateur astronomer and experienced hobby engineer, this wide-ranging book presents tried and tested ideas from the simplest of gadgets to advanced projects. Includes how to design and make refracting telescopes and how to make a Newtonian reflector around a mirror set. Instructions are given on making different types of eyepiece using stock lenses and making gadgets for collimation, polar alignment, focusing, sky quality metering and much more. Information is given on improving the performance of mounts and tripods and how to cool cameras and improve their performance for long-exposure photography. Details are given on making an equatorial platform for Dobsonian telescopes and using Arduinos and other electronic modules as part of your projects.

Choosing and Using a New CAT Rod Mollise 2020-05-22 Catadioptric telescopes (CATs) such as the Schmidt Cassegrains remain popular among amateur astronomers for their ability to reveal thousands of beautiful deep-space wonders. Additionally, their computer-assisted capabilities allow them to automatically point to and track celestial objects, making astronomy accessible to more people than ever before. However, selecting the right one and learning how to use it can be difficult for stargazers both old and new. That's where this book comes in. The first edition, published in 2009, has remained the standard reference for

mastering these popular instruments. This revised edition brings the material completely up to date, with several extensively rewritten chapters covering the most recent developments in telescope and camera equipment as well as computer software. Through the author's 45 years of experience with catadioptric telescopes, readers will learn to decide which catadioptric telescope is right for them, to choose a specific make and model, and finally, to use the telescope in the field. Covered in other chapters are: Solar System and deep-sky observations; astrophotography and computer control of CATs; and troubleshooting and maintaining your equipment. If you dream of owning a telescope or are frustrated by the telescope you already own, this is the book for you!

Using the Meade ETX Mike Weasner 2002-01-25 The Meade ETX range of telescopes is one of the most successful ever made. It is low-cost, has sold in its tens of thousands, and is available in almost every country. Here, ETX expert Mike Weasner reveals everything any amateur astronomer ever wanted to know about the telescope. First book dedicated entirely to the ETX. Written by an acknowledged world authority. Describes the "best" 100 objects to begin observing. Contains detailed hints and tips aimed at getting the best out of the ETX. Features imaging (photographic and digital) as well as visual observing.

CCD Astrophotography: High-Quality Imaging from the Suburbs Adam Stuart 2006-09-10 This book details an approach to the problem of getting high-quality astronomical images under light-polluted conditions. The book is for amateur astronomers interested in CCD imaging, especially those who have to work under suburban conditions. It outlines the materials and equipment used for high-quality imaging. The many wonderful images produced allow the reader to see the product of - initially - a fellow beginner's efforts. Respectable images are attainable with modest equipment. This book outlines a complete and thoroughly tested working program for every beginner to achieve high-quality digital imaging.

Stargazing For Dummies Steve Owens 2013-03-18 Reach for the stars Stargazing is the practice of observing the night sky and its contents - from constellations through to planets and galaxies. Stars and other night sky objects can be seen with the naked eye, or seen in greater numbers and in more detail with binoculars or a telescope. Stargazing For Dummies offers you the chance to explore the night sky, providing a detailed guide to the main constellations and also offering advice on viewing other night sky objects such as planets and nebulae. It's a great introduction to a fun new hobby, and even provides a fun way to get the kids outside while doing something educational! Gives you an introduction to looking at the sky with binoculars or a telescope Offers advice on photographing the night sky Without needing to get your head around mind-bending theories, you can take part in some practical physics If you're looking for easy-to-follow guidance on getting to know the night sky, Stargazing For Dummies has you covered.

The Mythology of the Night Sky David E. Falkner 2020-09-28 This book is for amateur astronomers who would like to know the mythology behind the names of astronomical objects in the night sky. It covers the lore and legend behind Ptolemy's 48 constellations, along with significant asterisms, the planets and their moons, the brightest named asteroids and dwarf planets. The revised second edition includes a host of new moons and dwarf planets discovered since 2011. In addition, it now features a new section on major asteroids and their associated myths. While still primarily focused on Greco-Roman mythology, the book now

branches out to cover more recently named objects from other cultures, such as Hawaiian, Rapanui, Tongva and Inuit. To assist practical observers, the book gives the location and description of each constellation, including named stars and deep-sky objects. A host of helpful astronomy tips and techniques, as well as a brief introduction to astrophotography, are included to encourage direct observation and imaging of these mythical objects in the night sky.

Astronomy Hacks Robert Bruce Thompson 2005 Astronomy Hacks begins the space exploration by getting you set up with the right equipment for observing and admiring the stars in an urban setting. Along for the trip are first rate tips for making most of observations. The hacks show you how to: Dark-Adapt Your Notebook Computer. Choose the Best Binocular. Clean Your Eyepieces and Lenses Safely. Upgrade Your Optical Finder. Photograph the Stars with Basic Equipment.

Capturing the Universe Chris Woodhouse 2020-05-27 This book provides a thorough introduction to and exploration of deep sky astrophotography for the digital photographer. With over 280 images, graphs, and tables, this introductory book uses a progressive and practical style to teach readers how to image the night sky using existing, affordable equipment. The book opens with a brief astronomy primer, followed by chapters that build progressively to explain the challenges, offer solutions, and provide invaluable information on equipment choice through image capture, calibration, and processing in affordable software. The book's focus ranges from how to image sweeping vistas and star trails using only a camera body, lens and tripod, to more advanced methods suitable for imaging galaxies, clusters, nebulae, and stars. Other features of the book include: Real-world assignments showing how and when to use certain tools and how to overcome challenges and setbacks Practical construction projects Evaluations of the most recent developments in affordable hardware and software Exploration on how sensor performance and light pollution relate to image quality and exposure planning Ground-breaking practical chapters on lucky imaging and choosing and using the latest CMOS cameras Written in an accessible, easy to follow format, this comprehensive guide equips readers with all the necessary skills to progress from photographer to astrophotographer.

The Urban Astronomer's Guide Rod Mollise 2006-12-22 This book covers the "why," "how," and "what" of astronomy under light-polluted skies. The prospective city-based observer is told why to observe from home (there are hundreds of spectacular objects to be seen from the average urban site), how to observe the city sky (telescopes, accessories, and modern techniques), and what to observe. About half of the book is devoted to describing "tours" of the sky, with physical and observational descriptions, at-the-eyepiece drawings, and photographs.

Astrophotography on the Go Joseph Ashley 2014-10-03 No longer are heavy, sturdy, expensive mounts and tripods required to photograph deep space. With today's advances in technology, all that is required is an entry-DSLR and an entry level GoTo telescope. Here is all of the information needed to start photographing the night sky without buying expensive tracking mounts. By using multiple short exposures and combining them with mostly 'freeware' computer programs, the effect of image rotation can be minimized to a point where it is undetectable in normal astrophotography, even for a deep-sky object such as a galaxy or nebula. All the processes, techniques, and equipment needed to use inexpensive,

lightweight altazimuth and equatorial mounts and very short exposures photography to image deep space objects are explained, step-by-step, in full detail, supported by clear, easy to understand graphics and photographs. Currently available lightweight mounts and tripods are identified and examined from an economic versus capability perspective to help users determine what camera, telescope, and mount is the best fit for them. A similar analysis is presented for entry-level telescopes and mounts sold as bundled packages by the telescope manufacturers. This book lifts the veil of mystery from the creation of deep space photographs and makes astrophotography affordable and accessible to most amateur astronomers.

Budget Astrophotography Timothy J. Jensen 2014-10-25 Here are clear explanations of how to make superb astronomical deep-sky images using only a DSLR or webcam and an astronomical telescope - no expensive dedicated CCD cameras needed! The book is written for amateur astronomers interested in budget astrophotography - the deep sky, not just the Moon and planets - and for those who want to improve their imaging skills using DSLR and webcams. It is even possible to use existing (non-specialist astronomical) equipment for scientific applications such as high resolution planetary and lunar photography, astrometry, photometry, and spectroscopy. The introduction of the CCD revolutionized astrophotography. The availability of this technology to the amateur astronomy community has allowed advanced science and imaging techniques to become available to almost anyone willing to take the time to learn a few, simple techniques. Specialized cooled-chip CCD imagers are capable of superb results in the right hands - but they are all very expensive. If budget is important, the reader is advised on using a standard camera instead. Jensen provides techniques useful in acquiring beautiful high-quality images and high level scientific data in one accessible and easy-to-read book. It introduces techniques that will allow the reader to use more economical DSLR cameras - that are of course also used for day-to-day photography - to produce images and data of high quality, without a large cash investment.