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**Einige Neuerscheinungen des Franckh-Kosmos-Verlages Stuttgart:**

**TIRION, W. / DUNLOP, S.: Der Kosmos Sternführer – Schritt für Schritt den Sternenhimmel entdecken.** Kosmos Naturführer. Stuttgart, Franckh-Kosmos-Verlags-GmbH 2004. 256 S., zahlr. farb. Abb. u. Sternkarten, Bibliographie, Glossar, Register. Kart. m. Kunststoff-Umschlag, ISBN 3-440-09785-4, CHF 29.00.

Die Autoren sind für ihre Astronomiebücher und Sternkarten international bekannt, denn ihre Publikationen wurden weltweit in 19 Sprachen übersetzt. Ihre Erfahrung kommt im Kosmos Sternführer deutlich zum Ausdruck. Die naturgetreuen Sternkarten sind besonders nutzerfreundlich und machen das Erkennen der Sternbilder am Himmel leicht. Panorama-Himmelsanblicke für jeden Monat des Jahres und detaillierte Aufsuchkarten erlauben es, Sterne und Planeten am Himmel sofort und einfach aufzufinden. Mit Hilfe von Übersichtsfotos lassen sich die beobachteten Sternbilder mit den Sternkarten identifizieren. Viele Phänomene des Nachthimmels sind in schönen Photographien illustriert und geben einen Eindruck, wie sie von bloßem Auge, mit dem Fernglas oder dem Fernrohr beobachtet werden können. Ausstattung, Format und Schutzhülle machen den Kosmos Sternführer zu einem unverzichtbaren Begleiter, um den Sternenhimmel Schritt für Schritt entdecken und erleben zu können.

**FERRIS, T.: Fasziniert von den Sternen – Abenteuer und Entdeckungen berühmter Hobby-Astronomen.** Stuttgart, Franckh-Kosmos-Verlags-GmbH 2004. 368 S., Astronomisches Lexikon, Bibliographie, Register. Geb. m. Schutz-Umschlag, ISBN 3-440-09712-9, CHF 42.00.

In diesem Buch erzählt der Autor aus seinen eigenen reichhaltigen Erfahrungen als Hobby-Astronom und berichtet von seinen Besuchen bei berühmten Hobby-Astronomen. In den dazwischengeschalteten "Beobachtungspausen" erfährt man zudem viel Wissenswertes über Himmelsobjekte und Beobachtungstechniken. Der Autor erzählt aber nicht nur von seinen eindrücklichen Beobachtungserlebnissen als passionierter Amateur-Astronom, sondern berichtet von seinen Begegnungen mit berühmten Persönlichkeiten der Astro-Amateur-Szene wie z.B. Tom Bopp, der durch seine Entdeckung des Kometen Hale-Bopp bekannt wurde und damit einen Traum eines jeden Amateurs verwirklichte. Ferris gilt als einer der besten englischsprachigen Autoren für populär-wissenschaftliche Astronomie-Bücher und wurde von der Washington Post zum besten englischsprachigen Wissenschaftsjournalist seiner Generation gekürt. Das Buch ist deshalb lesenswert, weil die Leserschaft von den Erfahrungen dieser bekannten Amateur-Astronomen profitieren können.

**STEINICKE, W.: Praxishandbuch Deep Sky – Beobachtung von Sternen, Nebeln und Galaxien.** Stuttgart, Franckh-Kosmos-Verlags-GmbH 2004. 208 S., 90 Farbfotos, 37 SW-Fotos, 47 Zeichnungen, 48 Illustratio-

nen, Register. Geb., ISBN 3-440-09779-X, CHF 50.20.

Dieses Praxishandbuch ist eine gute Anleitung zur Beobachtung von Deep-Sky-Objekten. Es wird beschrieben, welche Objekte es überhaupt zu sehen gibt und welche Rolle sie im Universum spielen, was die Bezeichnungen wie z.B. M81, NGC 7293 oder PKS 1226+02 bedeuten, wie man Feldstecher und Teleskope sinnvoll einsetzt und welches Zubehör benötigt wird, wie man durch geeignete Beobachtungstechniken mehr sieht, und wie man Deep-Sky-Objekte zeichnen und dokumentieren kann. Grenzgrößenkarten zur Bestimmung der Himmelselligkeit, eine Checkliste zur Beobachtungsplanung sowie kopierfähige Zeichenschablonen sind dazu sehr hilfreich. Der Serviceteil des Buches enthält zudem über 80 ausführlich kommentierte Literatur- und Internettipps sowie über 500 Hinweise auf Fachbeiträge und bietet damit ein umfangreiches Quellenverzeichnis zum Thema Deep Sky. Der Autor ist Physiker und ein weltweit bekannter Deep-Sky-Beobachter, der 2002 von der englischen "Webb Society" für seine Leistungen in die "Royal Astronomical Society" aufgenommen wurde. Er ist zudem Vorstandsmitglied der "Vereinigung der Sternfreunde e.V.", welche dieses Buch herausgegeben hat.

**BOURGE, P. / LACROUX, J.: Sternbeobachtung für Einsteiger – Mit bloßem Auge und Fernglas.** Kosmos Ratgeber. Stuttgart, Franckh-Kosmos-Verlags-GmbH 2004. 144 S., 60 Farbfotos, 63 Illustrationen, Glossar, Bibliographie, Register. Kart., ISBN 3-440-09712-9, CHF 25.90.

Dieses Buch bietet allen Einsteigern in die Astronomie nützliche Hinweise, wie der Sternenhimmel von bloßem Auge oder mit dem Fernglas beobachtet werden kann und wie man sich am Nachthimmel orientieren kann. Anhand von Aufsuchkarten kann man die wichtigsten Sternbilder, Planeten, Sternhaufen und Galaxien "entdecken". Dieser Ratgeber vermittelt zudem die wichtigsten astronomischen Grundlagen und gibt Hintergrund-Information über die beobachteten Himmelsobjekte. Die Leserschaft erfährt, welche Sternbilder im Laufe eines Jahres gesehen werden können, wie man Planeten erkennen und Sternschnuppen verfolgen kann. Zudem enthält das Buch Angaben darüber, wann besonders schöne Planetenkonstellationen sowie Sonnen- und Mondfinsternisse stattfinden und wie diese am besten zu beobachten sind. Alle wichtigen Himmelsereignisse bis ins Jahr 2010 werden unter dem Motto "gewusst wo und gewusst wie" kurz beschrieben.

**LORENZEN, D. H.: Mission: Mars. Die sensationellen Entdeckungen der neuen Raumsonden.** Stuttgart, Franckh-Kosmos-Verlags-GmbH 2004. 138 S., 105 Fotos. Geb., ISBN 3-440-09840-0, CHF 25.90.

In diesem Buch fasst der bekannte Wissenschafts-Journalist und profunde Kenner der Astro- und Raumfahrt-Szene die Ergebnisse der vergangenen und aktuellen Mars-Missionen prägnant und leicht verständlich mit eindrücklichen Bildern zusammen. Der Inhalt des Textes dreht sich um die Fragen, ob es Was-

ser und somit Leben auf dem Mars gegeben hat oder noch gibt. Ziel der Missionen besteht in der Beantwortung genau dieser Fragen. Mit sensationellen dreidimensionalen Bildern und spektakulären Panorama-Aufnahmen vermittelt das Buch einen Eindruck über unseren äusseren Nachbarplaneten. Der Autor berichtet nicht nur über die ESA-Sonde Mars Express und über die NASA-Roboter Spirit und Opportunity, sondern er schildert zudem alle bekannten Details über das Schicksal des verschollenen Landers Beagle-2. Das spannend geschriebene und gut illustrierte Buch ist empfehlenswert für all jene, die sich mit einem der interessantesten Raumfahrt-Projekte der Gegenwart befassen möchten, nämlich der *Mission Mars*.

**HAHN, H.-M.: Was tut sich am Himmel 2004/2005.** Extra: Top-Himmelsereignisse bis 2010. Stuttgart, Franckh-Kosmos-Verlags-GmbH 2004. 109 S., zahlreiche farbige Abb. Geb., ISBN 3-440-09790-0, CHF 12.40.

In diesem kleinen Himmels-Führer findet man alle wichtigen Infos zum Sternenhimmel auf einen Blick: Übersichtliche Grafiken und Tabellen zeigen die Mondphasen für jeden Tag des Jahres, Sonnen-Auf- und Untergänge sowie die Planeten-Positionen. Er beschreibt besondere Himmels-Schauspiele, die schon mit blossen Augen oder mit einem Fernglas gut beobachtet werden können: Sternschnuppen am Sommerhimmel, Mondfinsternisse sowie der "Tanz" der Jupitermonde. Diese Ausgabe enthält zudem eine Vorschau auf die spannendsten Astro-Ereignisse bis zum Jahr 2010. Das handliche Büchlein passt gut in jede Tasche und ist deshalb ideal geeignet für unterwegs.

**Some recent publications by Kluwer Academic Publishers, Dordrecht**

**HECK, A. / MADSEN, C. (eds.): Astronomy Communication.** *Astrophysics and Space Science Library*, Vol. 290. Dordrecht, Kluwer Academic Publishers 2003. IX, (1), 226 p., numerous Figures and Diagrams. Hardcover, ISBN 1-4020-1345-0, EUR 128.00, USD 141.00, GBP 88.00.

Astronomers communicate all the time, with colleagues of course, but also with managers and administrators, with decision makers and takers, with social representatives, with the news media, and with society at large. Education is naturally part of the process. Astronomy communication must take into account several specifications: the astronomy community is rather compact and well organized world-wide; astronomy has penetrated the general public remarkably well with an extensive network of associations and organizations of aficionados all over the world. Also, as a result of the huge amount of data accumulated and by necessity for their extensive international collaborations, astronomers have pioneered the development of distributed resources, electronic communi-

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cations and networks coupled to advanced methodologies and technologies, often long before they become of common world-wide usage. This book fills a gap in the astronomy-related literature by providing a set of chapters not only of direct interest to astronomy communication, but also well beyond it. The experts contributing to this book have done their best to write in a way comprehensive to readers not necessarily hyperspecialized in astronomy nor in communication techniques while providing specific detailed information, as well as plenty of pointers and bibliographic elements. This book will be very useful for researchers, teachers, editors, publishers, librarians, computer scientists, sociologists of science, research planners and strategists, project managers, public-relations officers, plus those in charge of astronomy-related organizations, as well as for students aiming at a career in astronomy or related space science.

**MIROSHNICHENKO, L. I.: Radiation Hazard in Space.** *Astrophysics and Space Science Library*, Vol. 297. Dordrecht, Kluwer Academic Publishers 2003. X, 238, (8) p., numerous Figures and Diagrams, Bibliography, Acronyms. Hardcover, ISBN 1-4020-1538-0, EUR 108.00, USD 119.00, GBP 68.00.

This book gives a modern picture of the Earth's radiation environment and dynamics of radiation conditions in the heliosphere. The present monograph, unlike the reviews published earlier, treats the problem in self-contained form, in all its associations – from fundamental astrophysical, geophysical, and biological aspects to technical, engineering, aircraft and astronautical applications. The monograph includes a large amount of new data on the main sources of natural radiation hazard (terrestrial belts, solar cosmic rays and galactic cosmic rays), accumulated during the last several decades of space research. As a result of the "information burst" in space physics, there are a lot of new interesting theoretical concepts, prediction models and ideas that deserve attention. The author gives an extensive bibliography, which covers impartially the main achievements, failures, problems and prospects in this field. The book will be helpful for a wide audience of space physicists, designers, engineers and other specialists in the practical cosmonautics (astronautics). It also will be relevant to a few graduate courses on solar physics, geophysics, solar-terrestrial physics, and other branches of space research.

**BEUTLER, G. / RUMMEL, R. / DRINKWATER, M. R. / VON STEIGER, R. (eds.): Earth Gravity Field from Space – from Sensors to Earth Sciences.** *Space Science Series of ISSI*, Vol. 17. Dordrecht, Kluwer Academic Publishers 2003. X, (2), 446, (2) p., numerous b/w- and coloured Figures, numerous Tables and Diagrams. Hardcover, ISBN 1-4020-1408-2, EUR 148.00, USD 162.00, GBP 93.00.

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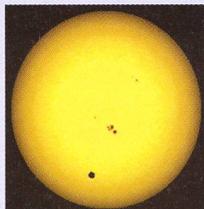


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The ESA explorer core mission GOCE, to be launched in 2006, will enhance our knowledge of the global static gravity field and of the geoid by orders of magnitude. The U.S. satellite gravity mission GRACE (2002 – 2006) is currently measuring, in addition, the temporal variations of the gravity field. With these new data a whole range of fascinating new possibilities will be opened for solid Earth physics, oceanography, geodesy and sea-level research. The new generation of gravity missions employs sensor concepts for gravity field measurements, orbit and attitude control and orbit determination that show interesting similarities with space experiments planned in the field of fundamental physics. This volume is the result of a workshop held in March 2002 in Bern, Switzerland, that brought together some 50 acknowledged experts in their field to discuss (1) strategies for ultra precision orbit determination and gravity field modelling with the data of the upcoming gravity field missions, (2) the use of accurate and high resolution gravity models in Earth sciences whereby, in particular, synergy is expected between the various science fields in their use of this type of new information, and (3) gravity field requirements and possible sensor and mission concepts for the time after GRACE and GOCE.

**GARCIA, P. J. V. / GLINDEMANN, A. / HENNING, T. / MALBET, F. (eds.): *The Very Large Telescope Interferometer – Challenges for the Future*.** Dordrecht, Kluwer Academic Publishers 2003. XVI, 312 p., numerous Figures and Diagrams. Hardcover, ISBN 1-4020-1518-6, EUR 118.00, USD 130.00, GBP 84.00.

This book presents state of the art optical interferometry in astrophysics. The last quarter of the 20<sup>th</sup> century witnessed the rebirth and maturing of optical interferometry and associated technologies. Major successes spanning from direct detection of stellar pulsations to imaging in the optical were achieved either test-bed systems, some of which have now evolved to facilities open to the astronomical community. The intense activity and rapid growth of this field are a clear sign that interferometry will be a major observational tool in this century both from ground and space. The Very Large Telescope Interferometer (VLTI) is the largest ground-based interferometric facility combining four 8.2-m telescopes with up to eight 1.8-m telescopes. This facility is the first opened on a shared risk basis in 2002, a milestone for the astronomical community. The combination of enhanced sensitivity and common user support bring into grasp a vastly unexplored astrophysical territory. The book includes the results of a workshop held in September 2002 in Porto, Portugal, and emphasises new VLTI users by including tutorials in optical interferometry theory and practice, and related instrumentation, as well as reviews in stellar formation and evolution, and extragalactic science.

**Recent publications from Cambridge University Press, Cambridge:**

**WALL, J. V. / JENKINS, C. R.: *Practical Statistics for Astronomers*.** Cambridge Observing Handbooks for Research Astronomers, Vol. 3. Cambridge, Cambridge University Press 2003. XV, (1), 277, (3) p., numerous Figures, Diagrams and Tables, Bibliography, Index. Paperback, ISBN 0-521-45616-9, GBP 19.99, USD 35.00; Hardback, ISBN 0-521-45416-6, GBP 55.00, USD 85.00.

Astronomy, like any experimental subject, needs statistical methods to interpret data reliably. This practical handbook presents the most relevant statistical and probabilistic machinery for use in observational astronomy. Classical parametric and non-parametric methods are covered, but there is a strong emphasis on Bayesian solutions and the importance of probability in experimental inference. Chapters cover basic probability, correlation, analysis, hypothesis testing, Bayesian modelling, time series analysis, luminosity functions and clustering. The book avoids the technical language of statistics in favour of demonstrating astronomical relevance and applicability. It contains many worked examples, and problems that make use of databases that are available on the Web. It is suitable for self-study at advanced undergraduate or graduate level, as a reference for professional astronomers, and as a textbook basis for courses in statistical methods in astronomy. It includes over fifty problems, with solutions available on the Web.

**PETERSEN, C. C. / BRANDT, J. C.: *Visions of the Cosmos*.** Cambridge, Cambridge University Press 2003. VIII, 218, (6) p., numerous colour Photographs, Glossary, Bibliography, Index. Hardback, ISBN 0-521-81898-2, GBP 25.00, USD 40.00.

This spectacularly illustrated book is a comprehensive exploration of astronomy through the eyes of the world's observatories and spacecraft missions. Featuring the latest and most stunning images, it provides a magnificent portrayal of the beauty of the Cosmos. The accompanying text is an accessible guide to the science behind the wonders, with clear explanations of all the major themes in astronomy. Readers will learn of the remarkable discoveries being made about our solar system, the stars, nebulae, galaxies, and the structure of the Universe. It also presents a look at some exciting observatories of the future. An essential guide to understanding and appreciating the Universe, *Visions of the Cosmos* builds on the success of the author's previous book, *Hubble Vision*, which became an international bestseller and won worldwide acclaim.

**BRADT, H.: *Astronomy Methods – A Physical Approach to Astronomical Observations*.** Cambridge, Cambridge University Press 2004. XXIII, (1), 433, (7) p., numerous Figures, Diagrams and Tables, Bibliography, Index. Paperback, ISBN 0-521-53551-4, GBP 33.00, USD 60.00; Hardback, ISBN 0-521-36440-X, GBP 80.00, USD 110.00.

Astronomy Methods is an introduction to the basic practical tools, methods and phenomena that underlie quantitative astronomy. Taking a technical approach, the author covers a rich diversity of topics across all branches of astronomy, from radio to gamma-ray wavelengths. Topics include the quantitative aspects of the electromagnetic spectrum, atmospheric and interstellar absorption, telescopes in all wavebands, interferometry, adaptive optics, the transport of radiation through matter to form spectral lines, and neutrino and gravitational-wave astronomy. Clear, systematic presentations of the topics are accompanied by diagrams and problem sets. Written for undergraduates and graduate students, this book contains a wealth of information that is required for the practice and study of quantitative and analytical astronomy and astrophysics. Using basic principles in analysis, vector algebra, and physics, amateurs may understand this book as well and may thus gain insight into the methods and problems of modern astronomy. The book is recommended to all readers interested in the scientific foundations of astrophysics.

**DURIC, N.: *Advanced Astrophysics*.** Cambridge, Cambridge University Press 2004. XIV, 296, (10) p., numerous Figures, Diagrams and Tables, Bibliography, Index. Paperback, ISBN 0-521-52571-3, GBP 30.00, USD 60.00; Hardback, ISBN 0-521-81967-9, GBP 80.00, USD 110.00.

This book develops the basic underlying physics required for a fuller, richer understanding of the science of astrophysics and the important astronomical phenomena it describes. The cosmos manifests phenomena in which physics can appear in its most extreme, and therefore more insightful, forms. A proper understanding of phenomena such as black holes, quasars, and extrasolar planets requires that we understand the physics that underlies all of astrophysics. Consequently, developing astrophysical concepts from fundamental physics has the potential to achieve two goals: to derive a better understanding of astrophysical phenomena from first principles and to illuminate the physics from which the astrophysics is developed. To that end, astrophysical topics are grouped according to the relevant areas of physics. The book is divided into four parts: (1) Classical mechanics, (2) Statistical mechanics, (3) Electromagnetism, and (4) Quantum mechanics. It is ideal as a text for graduate students and as a reference for established researchers.

**Llwo, M. (ed.): *The Dark Universe – Matter, Energy, and Gravity*.** Space Telescope Science Institute Symposium Series, Vol. 15. Cambridge, Cambridge University Press 2003. X, 193, (5) p., numerous Figures, Diagrams and Tables, Bibliography. Hardback, ISBN 0-521-82227-0, GBP 65.00, USD 90.00.

This book reviews the recent findings on the composition of the Universe, its dynamics, and the implications of both for the evolution of large-scale structure and for fundamental

theories of the Universe. With each chapter written by a leading expert in the field, topics include Massive Compact Halo Objects, the oldest white dwarfs, hot gas in clusters of galaxies, primordial nucleosynthesis, Modified Newtonian Dynamics, the cosmic mass density, the growth of large-scale structure, and a discussion of dark energy. This book contains the proceedings of the Space Telescope Science Institute Symposium held in Baltimore, Maryland, April 2001, and is an invaluable resource for both professional astronomers and graduate students in this cutting-edge area of research.

**BURNHAM, R. / TIRION, W.: *Exploring the Starry Sky*.** Cambridge, Cambridge University Press 2003. 24 p., numerous Star Maps. Paperback, ISBN 0-521-80251-2, GBP 7.99, USD 12.00.

This book is illustrated by Wil Tirion, a celestial cartographer who is widely regarded as the leading exponent of his art in the world. *Exploring the Starry Sky* is the perfect guide for anyone interested in stargazing for the first time. With large, colourful, and easy-to-use star maps, it contains simple directions for finding all of the major stars and constellations visible from the northern hemisphere. For each season, two star charts show all the major sights that can be seen from suburban or rural locations. For those who already have binoculars or a small telescope, more detailed maps spotlight special regions of interest. Additional sections show where the planets are from now until 2006, when to look for meteor showers, and dates and places of upcoming eclipses of the Sun and Moon. Easy to use and fun, *Exploring the Starry Sky* is an enjoyable introduction to sky watching for every beginner.

**SHOSTAK, S. / BARNETT, A.: *Cosmic Company – the search for Life in the Universe*.** Cambridge, Cambridge University Press 2003. VI, 161, (1) p., numerous Figures, Diagrams and Tables, Bibliography, Index. Hardback, ISBN 0-521-82233-5, GBP 19.99, USD 29.00.

This book ponders the possibility of aliens visiting the Earth, and what it would mean if we were to pick up a signal from the cosmos that would prove we are neither alone, nor the smartest creatures in creation. It explains why scientists think life might be plentiful on other worlds, what it might be like, and how we might get in touch. Containing a thorough overview of the science and technology behind the search for life in the universe, the book highlights current and future space missions and research, which are aiming to answer some of the greatest questions mankind has ever asked. With stunning illustrations and easy-to-read text, this is a book for all to enjoy. It is written by two experienced writers of popular astronomy and is well suited for anyone who ever wondered whether there's anybody out there!

**TOBIN, W.: *The Life and Science of Léon Foucault – The Man Who Proved the Earth Rotates*.** Cambridge, Cambridge University Press 2003. XIV, 338 p., numerous Figures Pho-

tographs, Bibliography, Index. Hardback, ISBN 0-521-80855-3, GBP 40.00, USD 60.00.

In 1851 a young French physicist erected a giant pendulum in the heart of Paris and showed astonished spectators that the Earth was turning beneath their feet. Pendulum mania swept the learned and everyday worlds and Léon Foucault's name became synonymous with his famous pendulum. The demonstration continues to captivate a century and a half later. The history and interpretation of the pendulum experiment are described in terms suitable for the general reader in this abundantly illustrated biography of Foucault. His contributions to science went well beyond the pendulum, however: most notably to the gyroscope, to decisive laboratory measurements of the speed of light, and to the invention of the telescope in its modern form. Foucault was a talented early photographer. Gifted with his hands, he valued precision and loved clockwork. He worked in optics and electricity. Through steadfast in friendship, he could be stubborn and blunt. His collaboration with Hippolyte Fizeau ended in rift while the frankness of the newspaper articles that he wrote provoked hostilities that hindered his acceptance by academic peers. Telescope making and dreams of wealth from an industrial governor were curtailed by an agonizing early death. The blend of pure and applied in Foucault's work and the ordeals he suffered make him an intriguing case study as one of the last amateur scientists at a time when science was becoming institutionalized. The book assumes some familiarity with simple scientific terms, but no detailed knowledge of physics is required. This biography offers a fascinating read about an unconventional scientific pioneer whose independent spirit led to acclaimed and unexpected discoveries but whose horizon was limited by his disdain for abstraction. This book may highly recommend to everyone interested in the history of science.

**BERTHIER, D.: *Urban Astronomy*.** Cambridge, Cambridge University Press 2003. 107, (5) p., numerous Figures and Tables, Bibliography, Index. Paperback, ISBN 0-521-53190-X, GBP 11.99, USD 17.99.

Light pollution has spread so much in the last few decades that it compromises our view of the stars. It is becoming more and more difficult to find an observing site with clear, dark skies away from light and industrial pollution. However, with patience and some simple equipment, and by choosing the right targets to observe, amateur astronomers can still find observing from towns and cities a rewarding hobby. The result of thirty years of observing the night sky from the city, the author's practical guide will help amateur astronomers to enjoy their hobby without having to travel to distant sites, and without using complicated equipment or difficult techniques. It will enable them to observe and photograph stars, planets and other celestial objects from their own town. This book is a season by season guide to the most beautiful objects that can be seen from towns and cities, including the

Moon, Sun, planets, comets and double stars. It explains how to locate the principal constellations, and how to use star charts. It gives advice on buying the best equipment for observing from urban areas. Beautifully illustrated throughout by colour star charts and photographs this book may be helpful for beginners in observing the starry sky from their own town or city.

**ESTEBAN, C. / LÓPEZ, R. J. G. / HERRERO, A. / SÁNCHEZ, F. (eds.): *Cosmochemistry. The Melting Pot of the Elements*.** Cambridge Contemporary Astrophysics. Cambridge, Cambridge University Press 2004. XII, (2), 298, (6) p., numerous Figures, Diagrams and Tables. Hardback, ISBN 0-521-82768-X, GBP 65.00, USD 100.00.

This book contains the lectures delivered at the XII Canary Islands Winter School of Astrophysics dedicated to Cosmochemistry. The evolution of the chemical composition of the Universe is a story lasting billions of years, which started just seconds after the Big Bang. Understanding why celestial objects have the chemical composition that we observe is an amazing but very difficult task. It requires the knowledge of which elements were generated at the birth of the Universe, how galaxies and stars form and evolve, how many stars are produced, how and where the elements are synthesised, and a host of astrophysical processes and observations of varying relevance – truly a titanic endeavour that we have just begun to tackle during the last decades. Written by several prestigious astrophysics researchers, the book covers cosmological and stellar nucleosynthesis, abundance determinations in stars and ionised nebulae, chemical composition of nearby and distant galaxies, and models of chemical evolution of galaxies and intracluster medium. The main scientific originality of this school has been to gather and review in a single event the tremendous improvements in the field of Cosmochemistry in the last decade, especially since the advent of space observations and very large ground-based telescopes. The book is useful for graduated students and researchers of chemistry, physics, astrophysics and cosmologists.

**HEIFETZ, M. D. / TIRION, W.: *A Walk through the Heavens. A Guide to Stars and Constellations and their Legends*.** Third edition. Cambridge, Cambridge University Press 2004. VII, (1), 87, (1) p., numerous Star Maps and Figures. Paperback, ISBN 0-521-54415-7, GBP 8.99, USD 12.00.

This book is written for those who look at the stars with wonderment and would like to feel more at home with them, to go a friendly walk with them. It is a guide for learning the stars and constellations seen by the naked eyes and their names and legends. The book is divided into four parts: Part 1 deals with the measuring of distances in the sky; Part 2 is the main body of the book and contains the guide through the constellations; Part 3 describes the myths and legends of each of the constellations; and Part 4 introduces those cele-

## BUCHBESPRECHUNGEN BIBLIOGRAPHIES

tial objects which can be observed using binoculars and small telescopes. Written from the complete beginner in mind, this book introduces the patterns of the starry skies in a memorable way. No equipment is needed to use this practical guide: apart from normal sight and clear skies.

**LACROUX, J. / LEGRAND, C.: Discover the Moon.** Cambridge, Cambridge University Press 2003. 143, (1) p., numerous b/w and colour Photographs. Paperback, ISBN 0-521-53555-7, GBP 10.99, USD 16.00. The Moon is accessible to everyone, and easy to observe even in big cities. It is a prime target for aspiring astronomers and for those who are merely curious about the night sky. This easy-to-use guide to discovering lunar sites takes the reader through 14 observing sessions from New Moon to Full Moon. For each evening, the book shows which craters, mountains and other features can be seen, and how to find them. Each photograph shows what the observer actually sees through a telescope, solving the usual difficulties of orientation confronting beginners. Images are shown as they appear through both refracting and reflecting telescopes. Maps printed on the front and back flaps of the book show the whole Moon with sites as seen through a refractor, through a Newtonian reflector, or when turned upside down, through binoculars.

**SAGE, L. / ASCHENBRENNER, G.: A Visitor's Guide to the Kitt Peak Observatories.** Cambridge, Cambridge University Press 2003. XII; (2), 104, (2) p., numerous colour Photographs. Glossary. Paperback, ISBN 0-521-00652-X, GBP 12.99, USD 15.00. The Kitt Peak National Observatory is located in the Quinlan Mountains, southwest of Tucson, Arizona. For more than 40 years, astronomer have used the telescopes there to make many remarkable discoveries about the Universe. Today, Kitt Peak is the most visited astronomical observatory site in the world. With over twenty telescopes of different types and sizes, the site gives visitors an indication of the great diversity of modern astronomy. This guide gives a comprehensive tour of the Kitt Peak telescopes, and introduces some of the important science that is done with them. It also points out some of the beautiful surrounding scenery, and gives an idea of what it is like to be an astronomer on the mountain. The book contains color-coded walking tours of the telescopes, and also includes an introduction to the natural and cultural history of the area. The booklet is written in cooperation with Kitt Peak National Observatory, a division of the National Optical Astronomy Observatory (NOAO), operated by the Association of Universities for Research in Astronomy, Inc. (AURA) in under cooperative agreement with the National Science Foundation.

ANDREAS VERDUN

## Impressum Orion

### Leitende Redaktoren/Rédacteurs en chef:

**DR. NOËL CRAMER**, Observatoire de Genève, Ch. des Maillettes 51, CH-1290 Sauverny  
Tél. 022 755 26 11  
e-mail: noel.cramer@obs.unige.ch  
<http://obswww.unige.ch/~cramer>

**DR. ANDREAS VERDUN**, Astronomisches Institut, Universität Bern, Sidlerstrasse 5, CH-3012 Bern  
Tél. 031 631 85 95  
e-mail: andreas.verdun@aiub.unibe.ch  
<http://www.aiub.unibe.ch>

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### Ständige Redaktionsmitarbeiter/ Collaborateurs permanents de la rédaction

**THOMAS BAER**, Bankstrasse 22,  
CH-8424 Embrach  
e-mail: thomas.baer@wtinet.ch

**DR. FABIO BARBLAN**, 6A, route de l'Etraz,  
CH-1239 Collex/GE  
e-mail: fabio.barblan@obs.unige.ch

**ARMIN BEHREND**, Vy Perroud 242b  
CH-2126 Les Verrières/NE  
e-mail: omg-ab@bluewin.ch

**JEAN-GABRIEL BOSCH**,  
90, allée des Résidences du Salève,  
F-74160 Collonges S/Salève

**HUGO JOST-HEDIGER**, Lingeriz 89,  
CH-2540 Grenchen  
e-mail: hugo.jost@infrasy.com.ch

**STEFAN MEISTER**, Steig 20,  
CH-8193 Eglisau  
e-mail: stefan.meister@astroinfo.ch

**HANS MARTIN SENN**, Püntstrasse 12,  
CH-8173 Riedt-Neerach  
e-mail: senn@astroinfo.ch

### Übersetzungen/Traductions:

**DR. H. R. MÜLLER**,  
Oescherstrasse 12,  
CH-8702 Zollikon

### Korrektor/Correcteur:

**DR. ANDREAS VERDUN**,  
Astronomisches Institut, Universität Bern,  
Sidlerstrasse 5, CH-3012 Bern  
e-mail: verdun@aiub.unibe.ch

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**MICHAEL KOHL**,  
Strickel 701, CH-8637 Laupen  
e-mail: mike.kohl@gmx.ch

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**HANS WITTWER**,  
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