

Model 48m Cassegrain Antenna General Dynamics Satcom Tech 486638

Universe by Robert M. Geller and Roger Freedman strikes the right balance between scientific rigor, student comprehension, and excitement. Available as the full 27-chapter text or split into *Stars and Galaxies* and *The Solar System*, *Universe* provides all the detail you need to prepare students for engaging with astronomical ideas and theories, while also inviting students to explore through stunning visuals and relatable narratives.

An in-depth treatment of array phenomena and all aspects of phased array analysis and design *Phased Array Antennas, Second Edition* is a comprehensive reference on the vastly evolving field of array antennas. *The Second Edition continues to provide an in-depth evaluation of array phenomena with a new emphasis on developments that have occurred in the field over the past decade. The book offers the same detailed coverage of all practical and theoretical aspects of phased arrays as the first edition, but it now includes: New chapters on array-fed reflector antennas; connected arrays; and reflect arrays and retrodirective arrays Brand-new coverage of artificial magnetic conductors, and Bode matching limitations A clear explanation of the common misunderstanding of scan element pattern measurement, along with appropriate equations In-depth coverage of finite array Gibbsian models, photonic feeding and time delay, waveguide simulators, and beam orthogonality The book is complemented with a multitude of original curves and tables that illustrate how particular behaviors were derived from the author's hundreds of programs developed over the past forty years. Additionally, numerous computer design algorithms and numerical tips are included throughout the book to help aid in readers' comprehension. Phased Array Antennas, Second Edition is an ideal resource for antenna design engineers, radar engineers, PCS engineers, and communications engineers, or any professional who works to develop radar and telecommunications systems. It also serves as a valuable textbook for courses in phased array design and theory at the upper-undergraduate and graduate levels.*

With a lively yet rigorous and quantitative approach, this textbook introduces the fundamental topics in optical observational astronomy for undergraduates. It explains the theoretical foundations for observational practices and reviews essential physics to support students' mastery of the subject. Student understanding is strengthened through over 120 exercises and problems.

Graze Observer's Handbook

Human Security

Mars Direct

The Knight of the Lion

Remote Sensing Satellite Compendium

Aseptolin

This is the first truly comprehensive and most up-to-date handbook available on modern reflector antennas and feed sources for diversified space and ground applications. There has never been such an all-encompassing reflector handbook in print, and no currently available title offers coverage of such recent research developments. The Handbook consists of three volumes. Volume III focuses on the range of reflector antenna applications, including space, terrestrial, and radar. The intent of this book volume is to provide practical applications and design information on reflector antennas used for several communications systems. This book covers recent developments of reflector antennas used for satellite communications, terrestrial communications, and remote sensing applications. New subjects are introduced for the first time, including satellite antennas, Terahertz antennas, PIM, multipaction, corona, deployable mesh reflector antennas, and mechanical aspects of reflector antennas. In addition, this book contains a separate topic on integrated feed assembly for reflector antennas covering analysis, design, fabrication, and test.

The 18th century was a wealth of knowledge, exploration and rapidly growing technology and expanding record-keeping made possible by advances in the printing press. In its determination to preserve the century of revolution, Gale initiated a revolution of its own: digitization of epic proportions to preserve these invaluable works in the largest archive of its kind. Now for the first time these high-quality digital copies of original 18th century manuscripts are available in print, making them highly accessible to libraries, undergraduate students, and independent scholars. Medical theory and practice of the 1700s developed rapidly, as is evidenced by the extensive collection, which includes descriptions of diseases, their conditions, and treatments. Books on science and technology, agriculture, military technology, natural philosophy, even cookbooks, are all contained here. + + + + The below data was compiled from various identification fields in the bibliographic record of this title. This data is provided as an additional tool in helping to insure edition identification: + + + + Harvard University Houghton Library T149787 Note on p.1: 'Read before the Royal Society, December 14, 1797.' - 'Reprinted from the Philosophical Transactions, vol.88' (NUC). [London, 1798]. 35, [1]p., plates; 4°

What is the problem with cosmology? As a science cosmology is limited to the study of the universe as a whole, drawing conclusions based on astronomical observation and mathematical models. Over time cosmology has evolved from a speculative enterprise into a data-driven science; however, even in this new cosmology of facts and figures the origins of our universe remain a mystery, one that will perhaps never be solved. Every day new theories on the birth and evolution of the universe are made without the support of scientific observation-theories that may never be proven by hard evidence. And so cosmology remains a principle driven enterprise, with its roots deeply planted in the soil of uncertainty and wonder, in many ways completely contradictory to the definition of science as we know it today. Bruce Kriger takes readers on a breathtaking journey from the hallowed halls of Harvard to the Isle of Freedom and into the roots of the philosophy of cosmology, deploying an understanding of physics and philosophy to mount a serious challenge to the dominant cosmologist view, expose the politics behind conventional scientific theories (proving that in many cases it isn't the science but the funding behind it that dictates which direction scientific discovery and cosmology itself will take) and define the ultimate limits of human knowledge to form a sober view of what we can know and what will always remain a mystery. Bruce Kriger is a prolific scientific writer whose work has been published in a number of languages. He is a member of several associations including: the Canadian Science Writers' Association, the Canadian Philosophical Association, the International Academy of Science, the World Future Society, the National Space Society and the Royal Astronomical Society of Canada and Planetary Society. In 1996 he has formed his own organization called the Kriger Research Group. Through this organization Kriger has been instrumental in bringing together other research organizations and training institutions for different scientific projects.

Theory, Design, and Technology

Phased Array Antennas

Reflectarray Antennas

RF MEMS

Ice, Cloud, and Land Elevation Satellite

This comprehensive textbook for the two-term course focuses students on not only the foundational concepts of astronomy but on the process of scientific discovery itself—how we know what we know about the cosmos. Engagingly written and filled helpful pedagogical tools, the book also excels at dispelling widely held misconceptions and helping students avoid common pitfalls as they explore the heavens. Thoroughly updated, the new edition features the latest discoveries and new pedagogy, and is supported by an expanded media/supplements package centered on W. H. Freeman's extraordinary new online course space, LaunchPad.

This book provides engineers with a comprehensive review of the state-of-the-art in reflectarray antenna research and development. The authors describe, in detail, design procedures for a wide range of applications, including broadband, multi-band, multi-beam, contour-beam, beam-scanning, and conformal reflectarray antennas. They provide sufficient coverage of basic reflectarray theory to fully understand reflectarray antenna design and analysis such that the readers can pursue reflectarray research on their own. Throughout the book numerous illustrative design examples including numerical and experimental results are provided. Featuring in-depth theoretical analysis along with practical design examples, em style="mso-bidi-font-style: normal;">Reflectarray Antennas is an excellent text/reference for engineering graduate students, researchers, and engineers in the field of antennas. It belongs on the bookshelves of university libraries, research institutes, and industrial labs and research facilities.

Grice provides strategies and resources to remove barriers and make astronomysessions welcoming and accessible for people of all abilities.

First Interim Report

The Data Book of Astronomy

Handbook of Reflector Antennas and Feed Systems Volume III: Applications of Reflectors

The Atmospheres of the Earth and Planets

Atlas of the Universe

Fifty Solutions to the Fermi Paradox and the Problem of Extraterrestrial Life

The story of the men and women who drove the Voyager spacecraft mission— told by a scientist who was there from the beginning. --Publisher

During his lifetime, W.E. Blatz was so much occupied with the development of the University of Toronto's Institute of Child Study that he was able to devote little time to writing. This is his first book to appear in twenty-one years, and his first complete exposition of his famous Theory of Security. The Theory of Security is radically different from the theories promulgated by Freudian psychologists. Whereas Freudian personality theory is based on the notion of "unconscious," an entity that is only indirectly observable, the Theory of Security derives from the observation of the conscious state in all its manifestations. Dr. Blatz thus makes use of both empirical observations and the results of introspection, and, as might be expected, some of his conclusions run counter to those reached in much current psychological discussion. But proof of the forcible influence of the theory and its author may be found in the impressive number of books and articles already published by Dr. Blatz's associates at the Institute of Child Study, applying the theory to the practical problems of psychological observation and therapy. It is fitting that the man whose work has generated so much fruitful research by others in this field should at last have set down in book form the fundamental principles that guided them.

Foreword by Norman R. Augustine In 1977, Voyager 1 and 2 journeyed to the outer planets, gathering information about Jupiter and Saturn, sending scientists on Earth their first close-up photographs of Uranus and Neptune, and collecting a series of images of the sun and its planets. Twenty years later, Voyager Tales presents a collection of interviews from a cross section of the professionals involved in all aspects of the mission. Voyager Tales: Personal Views of the Grand Tour provides insights into the development of a major research project from the personal perspectives of the people who helped design, build, and fly the two spacecraft. Readers will use this book as a case study of a project that not only was highly successful, operating on time and on budget, but far surpassed its initial goals.

Personal Views of the Grand Tour

Some Reflections

Yvain

On the Discovery of Four Additional Satellites of the Georgium Sidus. ... by William Herschel, ... from the Philosophical Transactions

A History of the Photographic Lens

A Guide to Accessible Astronomy Places

Describes the configuration and principles of a reflectarray antenna, its advantages over other antennas, the history of its development, analysis techniques, practical design procedures, bandwidth issues and wideband techniques, as well as applications and recent developments. Both authors are well respected practitioners who have built these antennas and developed them for space flight.

Despite remarkable advances in astronomy, space research, and related technology since the first edition of this book was published, the philosophy of the prior editions has remained the same throughout. However, because of this progress, there is a need to update the information and present the new findings. In the fourth edition of Astronomy: Principles and Practice, much like the previous editions, the celebrated authors give a comprehensive and systematic treatment to the theories of astronomy. This reference furthers your study of astronomy by presenting the basic software and hardware, providing several straightforward mathematical tools, and discussing some simple physical processes that are either involved in the astronomer's tools of trade or concerned in the mechanisms associated with astronomical bodies. The first six chapters introduce the simple observations that can be made by the eye as well as discuss how such observations were interpreted by previous civilizations. The next several chapters examine the interpretation of positional measurements and the basic principles of celestial mechanics. The authors then explore radiation, optical telescopes, and radio and high-energy technologies. They conclude with practical projects and exercises. New to the Fourth Edition: Revised values such as the obliquity of the ecliptic Expanded material that is devoted to new astronomies and techniques such as optical data recording A listing of Web sites that offer information on relevant astronomical events Revised and expanded, this edition continues to offer vital information about the fundamentals of astronomy. Astronomy: Principles and Practice, Fourth Edition satisfies the need of anyone who has a strong desire to understand the philosophy and applications of the science of astronomy.

Techniques based on the method of modal expansions, the Rayleigh-Stevenson expansion in inverse powers of the wavelength, and also the method of moments solution of integral equations are essentially restricted to the analysis of electromagnetic radiating structures which are small in terms of the wavelength. It therefore becomes necessary to employ approximations based on "high-frequency techniques" for performing an efficient analysis of electromagnetic radiating systems that are large in terms of the wavelength. One of the most versatile and useful high-frequency techniques is the geometrical theory of diffraction (GTD), which was developed around 1951 by J. B. Keller [1,2,3]. A class of diffracted rays are introduced systematically in the GTD via a generalization of the concepts of classical geometrical optics (GO). According to the GTD these diffracted rays exist in addition to the usual incident, reflected, and transmitted rays of GO. The diffracted rays in the GTD originate from certain "localized" regions on the surface of a radiating structure, such as at discontinuities in the geometrical and electrical properties of a surface, and at points of grazing incidence on a smooth convex surface as illustrated in Fig. 1. In particular, the diffracted rays can enter into the GO shadow as well as the lit regions. Consequently, the diffracted rays entirely account for the fields in the shadow region where the GO rays cannot exist.

Everyone's Universe

Loose-leaf Version of Universe

The Guinness Book of Astronomy Facts & Feats

Antenna Handbook

Space Exploration, the Red Planet, and the Human Future: A Special from Tarcher/ Penguin

2020 Joint Agency Commercial Imagery Evaluation

"This thoroughly revised edition of the Artech House classic, Phased Array Antenna Handbook, offers the most up-to-date and broadest view of array antennas and systems. Supported with over 350 equations and more than 270 illustrations, the book offers complete design details that allow practitioners to size an array system with speed and confidence."--BOOK JACKET.Title Summary field provided by Blackwell North America, Inc. All Rights Reserved

This book is intended as a graduate/post graduate level textbook for courses on high-speed optical networks as well as computer networks. The ten chapters cover basic principles of the technology as well as latest developments and further discuss network security, survivability, and reliability of optical networks and priority schemes used in wavelength routing. This book also goes on to examine Fiber To The Home (FTTH) standards and their deployment and research issues and includes examples in all the chapters to aid the understanding of problems and solutions. Presents advanced concepts of optical network devices Includes examples and exercises inall the chapters of the book to aid the understanding of basic problems and solutions for undergraduate and postgraduate students Discusses optical ring metropolitan area networks and queuing system and its interconnection with other networks Discusses routing and wavelength assignment Examines restoration schemes in the survivability of optical networks

Ultrasmall Radio Frequency and Micro-wave Microelectromechanical systems (RF MEMs), such as switches, varactors, and phase shifters, exhibit nearly zero power consumption or loss. For this reason, they are being developed intensively by corporations worldwide for use in telecommunications equipment. This book acquaints readers with the basics of RF MEMs and describes how to design practical circuits and devices with them. The author, an acknowledged expert in the field, presents a range of real-world applications and shares many valuable tricks of the trade.

An Introduction to Observational Astronomy

Phased Array Antenna Handbook

Universe

The Interstellar Age

The Uncertain Universe

Surveying

The twelfth-century French poet Chrétien de Troyes is a major figure in European literature. His courtly romances fathered the Arthurian tradition and influenced countless other poets in England as well as on the continent. Yet because of the difficulty of capturing his swift-moving style in translation, English-speaking audiences are largely unfamiliar with the pleasures of reading his poems. Now, for the first time, an experienced translator of medieval verse who is himself a poet provides a translation of Chrétien's major poem, Yvain, in verse that fully and satisfyingly captures the movement, the sense, and the spirit of the Old French original. Yvain is a courtly romance with a moral tenor; it is ironic and sometimes bawdy; the poetry is crisp and vivid. In addition, the psychological and the socio-historical perceptions of the poem are of profound literary and historical importance, for it evokes the emotions and the values of a flourishing, vibrant medieval past.

Filled with data about the Earth, Moon, the planets, the stars, our Galaxy, and the myriad galaxies in deep space, this invaluable resource reveals the latest scientific discoveries about black holes, quasars, and the origins of the Universe. It includes maps supported by detailed tables of the names, positions, magnitudes, and spectra of the main stars in each constellation along with key data on galaxies, nebulae, and clusters. MNASA wrote, "This book fills a niche with detailed astronomical data and concise explanations, all at an accessible level it is an excellent resource, and probably will be the first book I shall reach for.

The lens is generally the most expensive and least understood part of any camera. In this book, Rudolf Kingslake traces the historical development of the various types of lenses from Daguerre's invention of photography in 1839 through lenses commonly used today. From an early lens still being manufactured for use in low-cost cameras to designs made possible through such innovations as lens coating, rare-earth glasses, and computer aided lens design and testing, the author details each major advance in design and fabrication. The book explains how and why each new lens type was developed, and why most of them have since been abandoned. This authoritative history of lens technology also includes brief biographies of several outstanding lens designers and manufacturers of the past.

ICESat

To Measure the Sky

Advances in Optical Networks and Components

Eclipses of the Sun Theory, Designs, and Applications Astronomy

In a 1950 conversation at Los Alamos, four world-class scientists generally agreed, given the size of the Universe, that advanced extraterrestrial civilizations must be present. But one of the four, Enrico Fermi, asked, "If these civilizations do exist, where is everybody?" Given the fact that there are perhaps 400 million stars in our Galaxy alone, and perhaps 400 million galaxies in the Universe, it stands to reason that somewhere out there, in the 14 billion-year-old cosmos, there is or once was a civilization at least as advanced as our own. Webb discusses in detail the 50 most cogent and intriguing solutions to Fermi's famous paradox.

"Bob Zubrin really, nearly alone, changed our thinking on this issue." —Carl Sagan, The Denver Post If you ever daydream about space travel and human space flight—or hope to one day rove the Red Planet alongside Curiosity—then MARS DIRECT will teach you how we can get there The human race is at a crossroads. In the coming decades, we will make decisions regarding our human spaceflight program that will lead to one of two familiar futures: the open universe of Star Trek, where we allow ourselves the opportunity to spread our wings and attempt to flourish as an interplanetary species—or the closed, dystopian, and ultimately self-destructive world of Soylent Green, constantly at war with one another over humanity's "limited" resources. If we plan to survive ourselves and one day travel to the stars, the human race's next stepping-stone must be a manned mission to and the eventual colonization of Mars. In this four-part e-special, Mars Society founder Dr. Robert Zubrin details the challenges of a manned Earth-to-Mars mission. Challenges which, according to Zubrin, we are technologically more prepared to overcome than the obstacles of the missions to the moon of the sixties and seventies. Dr. Zubrin's relatively simple plan, called Mars Direct, could feasibly have humans on the surface of Mars within a decade. Zubrin also discusses the current predicament of NASA, the promise of privatized space flight from companies like SpaceX, and the larger implication behind the absolute necessity to open the final frontier and transform from a planetary society into an interplanetary society. Our future as a species requires us to take baby steps away from the cradle that is planet Earth or, ultimately, perish here.

Put the Universe at your fingertips with this dramatic and comprehensive look at the sky. Richly illustrated with hundreds of recent photographs and images from ground-based telescopes, the Hubble Space Telescope, and interplanetary spacecraft, Atlas of the Universe is a definitive reference to the stars, the planets and their moons, and the universe. In addition to a beautiful and informative portrait of the cosmos, this book provides superb star charts with sound advice on practical observing. The book guides its reader through the universe in seven sections: exploring the universe, the solar system, the Sun, the stars, the universe, star maps, and practical astronomy. In addition to a beautiful and informative portrait of the cosmos, this book provides superb star charts with sound advice on practical observing. This is a highly suitable guide for amateurs with telescopes who want to explore the richness of astronomical knowledge and to learn the beauty of the night sky. Patrick Moore is one of the world's outstanding popularizers of astronomy and can count fifty years of experience presenting astronomy to general readers. His extensive body of work includes Exploring the Night Sky with Binoculars (Cambridge 1989 and 1996) and The Cambridge Guide to Stars and Planets (1997).

Theory, Applications, and Design

Astronomy, Structure of the Universe

OBSERVER'S HANDBOOK.

Astronomical Observations Made ...

Totality

The Secret of the Universe

A total eclipse of the Sun is the most awesome sight in the heavens. Totality: Eclipses of the Sun takes you to eclipses of the past, present, and future, and lets you see - and feel - why people travel to the ends of the Earth to observe them. Totality: Eclipses of the Sun is the best guide and reference book on solar eclipses ever written. It explains: how to observe them; how to photograph and videotape them; why they occur; their history and mythology; and future eclipses - when and where to see them Totality also tells the remarkable story of how eclipses shocked scientists, revealed the workings of the Sun, and made Einstein famous. And the book shares the experiences and advice of many veteran eclipse observers. Totality: Eclipses of the Sun is profusely illustrated with stunning photographs (many in color) and more than a hundred maps and diagrams. It can be read by lay people and astronomers with ease and enjoyment.

Voyager

If the Universe Is Teeming with Aliens ... WHERE IS EVERYBODY?

journey to the outer planets

Voyager Tales

Radio-frequency Transmission Lines

The Story of the NASA Men and Women Who Flew the Forty-Year Voyager Mission