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superstring theory, robotics, and computers. With fun math facts and illuminating figures, The Handy Math Answer Book explores the uses of math in everyday life and helps the mathematically challenged better understand and enjoy the magic of numbers. Funded by the National Science Foundation, Lecture-Tutorials for Introductory Astronomy is designed to help make large lecture-format courses more interactive with easy-to-implement student activities that can be integrated into existing course structures. The Second Edition of the Lecture-Tutorials for Introductory Astronomy contains nine new activities that focus on planetary science, system related topics, and the interactions of Light and matter. These new activities have been created using the same rigorous class-test development process that was used for the highly successful first edition. Each of the 38 Lecture-Tutorials, presented in a classroom-ready format, challenges students with a series of carefully designed questions that spark classroom discussion, engage students in critical reasoning, and require no equipment. The Night Sky: Position, Motion, Seasonal Stars, Solar vs. Sidereal Day, Ecliptic, Star Charts. Fundamentals of Astronomy: Kepler's 2nd Law, Kepler's 3rd Law, Newton's Laws and Gravity, Apparent and Absolute Magnitudes of Stars, The Parse, Parallax and Distance, Spectroscopic

Parallax. Nature of Light in Astronomy: The Electromagnetic (EM) Spectrum of Light, Telescopes and Earth's Atmosphere, Luminosity, Temperature and Size, Blackbody Radiation, Types of Spectra, Light and Atoms, Analyzing Spectra, Doppler Shift. Our Solar System: The Cause of Moon Phases, Predicting Moon Phases, Path of Sun, Seasons, Observing Retrograde Motion, Earth's Changing Surface, Temperature and Formation of Our Solar System, Sun Size. Stars Galaxies and Beyond: H-R Diagram, Star Formation and Lifetimes, Binary Stars, The Motion of Extrasolar Planets, Stellar Evolution, Milky Way Scales, Galaxy Classification, Looking at Distant Objects, Expansion of the Universe. For all readers interested in astronomy. &>NOTE: This edition features the exact same content as the traditional text in a convenient, three-hole-punched, loose-leaf version. Books a la Carte also offer a great value for your students-this format costs 35% less than a new textbook. Before you purchase, check with your instructor or review your course syllabus to ensure that you select the correct ISBN. Several versions of Pearson's MyLab & Mastering products exist for each title, including customized versions for individual schools, and registrations are not transferable. In addition, you may need a CourseID, provided by your instructor, to register for and use Pearson's

MyLab & Mastering products. xxxxxxxxxxxxxxxxxxxxx The Essential Cosmic Perspective, Seventh Edition gives non-science majors a streamlined, cutting edge introduction to astronomy built on a strong tradition of effective pedagogy and coverage. Focus on skill building includes new group work exercises that require active participation, helping you to retain concepts longer and build communication skills. MasteringAstronomy® works with the text to create a learning program that enables you to learn interactively both in and out of the classroom. This text is a brief version of the authors' The Cosmic Perspective Plus MasteringAstronomy. This program will provide a better learning experience for you. Here's how: Personalize learning with MasteringAstronomy: MasteringAstronomy provides you with engaging and interactive experiences that coach you through introductory astronomy with specific wrong-answer feedback, hints, and a wide variety of educationally effective content. Gain a modern understanding of astronomy with the latest content: Since the previous edition, new discoveries about Exoplanets, planetary formation, dark matter, and the early universe have had a significant impact on our understanding of astronomy. The Seventh Edition incorporates this new content to give you a modern presentation of the science. Learn

effectively: Better understand astronomy with a clear and continually reinforced learning path from chapter opening to end of chapter using dynamic learning tools in the text and in MasteringAstronomy. Introduction to Astronomy & Cosmology is a modern undergraduate textbook, combining both the theory behind astronomy with the very latest developments. Written for science students, this book takes a carefully developed scientific approach to this dynamic subject. Every major concept is accompanied by a worked example with end of chapter problems to improve understanding Includes coverage of the very latest developments such as double pulsars and the dark galaxy. Beautifully illustrated in full colour throughout Supplementary web site with many additional full colour images, content, and latest developments. The book contains solutions to individual exercises included to the "Laboratory Exercises In Astronomy", by Dr. Adrian Kaminski. This book depicts also methods that can be used to elaborate respective exercises. Students are guided through various topics, like constellations, measures in Astronomy, coordinate systems, cosmic objects, characteristics of stars and galaxies, elements of cosmology and others. It's designed for College and High School students as well as first years of University students, where Astronomy is

discussed on the introductory and intermediate level. It can be also used by individuals who are interested in practical aspects of Astronomy. The book is available on the following websites and stands for one unit with the first one. http://www.bookfinder4u.com/search_title/Laboratory_Exercises_in_Astronomy.html or/and http://www.bookfinder4u.com/IsbnSearch.aspx?isbn=1490734511&mode=direct or/and at every seller, like: Bookdepository Abebooks Barnes&Noble BookQuest Textbooks.com Amazon and others on the same site. This book covers the use and development of software for astronomy. It describes the control systems used to point the telescope and operate its cameras and spectrographs, as well as the web-based tools used to plan those observations. In addition, the book also covers the analysis and archiving of astronomical data once it has been acquired. Readers will learn about existing software tools and packages, develop their own software tools, and analyze real data sets. This is a truly astonishing book, invaluable for anyone with an interest in astronomy and surely the bargain of the year.---Physics BulletinJust the thing for a first year university science course.---NatureThis is a beautiful book in both concept and execution.---Sky & Telescope This is the first scholarly collection of articles focused on the cultural astronomy of the African continent. It

weaves together astronomy, anthropology, and Africa and it includes African myths and legends about the sky, alignments to celestial bodies found at archaeological sites and at places of worship, rock art with celestial imagery, and scientific thinking revealed in local astronomy traditions including ethnomathematics and the creation of calendars. Contains 250 questions and answers about astronomy, particular for the amateur astronomer. Plain-language explanations and a rich set of supporting material help students understand the mathematical concepts and techniques of astronomy. In writing this textbook the author's objective was to provide students with a non-trivial, reasonably priced introduction to astronomy. Starting with problems astronomers face on Earth connected with observation, the book then moves on to cover the Solar System, galaxies and finally cosmology, one of the most exciting and fastest developing areas of astronomy. Up-to-date and carefully structured Introductory Astronomy has a strong narrative thread running through it; concepts are gradually introduced and subsequently built upon in later chapters. The science behind the subject is integrated and presented in a way that allows readers to gain a thorough understanding of the subject without being blinded by unnecessary mathematical detail or scientific

theory. Throughout the book there are plenty of worked examples, problems, figures and photographs. FEATURES - A balanced coverage of the field of astronomy. - Many carefully chosen worked examples and problems. - Clear exposition of the science behind astronomy. CONTENTS: Introduction; Light; Seeing into Space; The View From Earth; The Sun, the Stars and Time; Observation of the Solar System; Gravity and the Solar System; The Origin of the Solar System; A Closer Look at the Terrestrial Planets; A Closer Look at the Jovian Planets; The Sun; Studying Stars; Stellar Birth and Early Life; Stellar Evolution and Death; Galaxies; Cosmology; Appendices: Measurement and units; Atoms, ions and molecules; Ellipses; Historical milestones in astronomy; Compendium of astronomical data; Some fundamental physical constants; Multiple choice quiz; Short answers to selected questions; Index. How to predict and calculate the positions of stars, planets, the sun, the moon, and satellites using a personal computer and high school mathematics. Our knowledge of the universe is expanding rapidly, as space probes launched decades ago begin to send information back to earth. There has never been a better time to learn about how planets, stars, and satellites move through the heavens. This book is for amateur astronomers who want to move beyond pictures of constellations in star

guides and solve the mysteries of a starry night. It is a book for readers who have wondered, for example, where Saturn will appear in the night sky, when the sun will rise and set, or how long the space station will be over their location. In Celestial Calculations, J. L. Lawrence shows readers how to find the answers to these and other astronomy questions with only a personal computer and high school math. Using an easy-to-follow step-by-step approach, Lawrence explains what calculations are required, why they are needed, and how they all fit together. Lawrence begins with basic principles: unit of measure conversions, time conversions, and coordinate systems. He combines these concepts into a computer program that can calculate the location of a star, and uses the same methods for predicting the locations of the sun, moon, and planets. He then shows how to use these methods for locating the many satellites we have sent into orbit. Finally, he describes a variety of resources and tools available to the amateur astronomer, including star charts and astronomical tables. Diagrams illustrate the major concepts, and computer programs that implement the algorithms are included. Photographs of actual celestial objects accompany the text, and interesting astronomical facts are interspersed throughout. Source code (in Python 3, JAVA, and Visual Basic)

and executables for all the programs and examples presented in the book are available for download at https://CelestialCalculations.github.io. For courses in Introductory Astronomy. Peer Instruction is a simple yet effective method for teaching science. Techniques of Peer Instruction for introductory college Physics classes were developed primarily at Harvard, and have aroused interest and excitement in the Physics Education community. This approach involves students in the teaching process, making physics more accessible to them. Peer Instruction is a new trend in astronomy that is finding strong interest and is ideally suited to introductory Astronomy classes. This book is an important vehicle for providing common ground for instructors using the method nationwide, and also provides a bridge to future collaborative efforts by instructors. It is key that the instructor has a large number of thought-provoking, conceptual short-answer questions aimed at a variety of class levels. While significant numbers of such questions have been published for use in Physics, Peer Instruction for Astronomy provides the first such compilation for Astronomy. Astronomy is written in clear non-technical language, with the occasional touch of humor and a wide range of clarifying illustrations. It has many analogies drawn from

everyday life to help non-science majors appreciate, on their own terms, what our modern exploration of the universe is revealing. The book can be used for either aone-semester or two-semester introductory course (bear in mind, you can customize your version and include only those chapters or sections you will be teaching.) It is made available free of charge in electronic form (and low cost in printed form) to students around the world. If you have ever thrown up your hands in despair over the spiraling cost of astronomy textbooks, you owe your students a good look at this one. Coverage and Scope Astronomy was written, updated, and reviewed by a broad range of astronomers and astronomy educators in a strong community effort. It is designed to meet scope and sequence requirements of introductory astronomy courses nationwide. Chapter 1: Science and the Universe: A Brief Tour Chapter 2: Observing the Sky: The Birth of Astronomy Chapter 3: Orbits and Gravity Chapter 4: Earth, Moon, and Sky Chapter 5: Radiation and Spectra Chapter 6: Astronomical Instruments Chapter 7: Other Worlds: An Introduction to the Solar System Chapter 8: Earth as a Planet Chapter 9: Cratered Worlds Chapter 10: Earthlike Planets: Venus and Mars Chapter 11: The Giant Planets Chapter 12: Rings, Moons, and Pluto Chapter 13: Comets and Asteroids: Debris of the Solar System Chapter

14: Cosmic Samples and the Origin of the Solar System Chapter 15: The Sun: A Garden-Variety Star Chapter 16: The Sun: A Nuclear Powerhouse Chapter 17: Analyzing Starlight Chapter 18: The Stars: A Celestial Census Chapter 19: Celestial Distances Chapter 20: Between the Stars: Gas and Dust in Space Chapter 21: The Birth of Stars and the Discovery of Planets outside the Solar System Chapter 22: Stars from Adolescence to Old Age Chapter 23: The Death of Stars Chapter 24: Black Holes and Curved Spacetime Chapter 25: The Milky Way Galaxy Chapter 26: Galaxies Chapter 27: Active Galaxies, Quasars, and Supermassive Black Holes Chapter 28: The Evolution and Distribution of Galaxies Chapter 29: The Big Bang Chapter 30: Life in the Universe Appendix A: How to Study for Your Introductory Astronomy Course Appendix B: Astronomy Websites, Pictures, and Apps Appendix C: Scientific Notation Appendix D: Units Used in Science Appendix E: Some Useful Constants for Astronomy Appendix F: Physical and Orbital Data for the Planets Appendix G: Selected Moons of the Planets Appendix H: Upcoming Total Eclipses Appendix I: The Nearest Stars, Brown Dwarfs, and White Dwarfs Appendix J: The Brightest Twenty Stars Appendix K: The Chemical Elements Appendix L: The Constellations Appendix M: Star Charts and Sky Event Resources From planetary movements and the

exploration of our solar system to black holes and dark matter, this comprehensive reference simplifies all aspects of astronomy with an approachable question-and-answer format. With chapters broken into various astronomical studies—including the universe, galaxies, planets, and space exploration—this fully updated resource is an ideal companion for students, teachers, and amateur astronomers, answering more than 1,00 questions, such as Is the universe infinite? What would happen to you if you fell onto a black hole? What are the basic concepts of Einstein's special theory of relativity? and Who was the first person in space? Introduction to Meteorology and Astronomy Course Description This is the suggested course sequence that allows one core area of science to be studied per semester. You can change the sequence of the semesters per the needs or interests of your student; materials for each semester are independent of one another to allow flexibility. Semester 1: Meteorology The Earth was created to be the dwelling place of man. It is a complex world and its weather patterns affect our lives every day. Whether you live near the equator, a polar region, or somewhere in between, knowledge of the weather is important. The Weather Book will teach you: why our exact distance from the sun allows life on earth, how the weather on the

other side of the earth affects you, how clouds form and how to identify the different types, what the difference is between a cold and warm front, why you can often see lightning long before you can hear thunder, how to build your own weather station, how to survive in dangerous weather, what the greenhouse effect and the ozone hole are, what Noah's flood and the Ice Age have in common, how weatherpersons forecast hurricanes and tornadoes, how to read a weather map, and what our responsibility is to the environment. Learning about the weather is fun! It will change the way you look at the clouds in the sky. Now you'll have more of an understanding about what is going on miles above your head. And when you hear a weather report on television, you will understand so much more about the world around you!. Semester 2: Astronomy One thing we have in common with the ancients is that all of the human race has gazed at the night sky, and the bright morning, and wondered, "What's out there?" Our universe is so vast and awe-inspiring that to learn about it is to learn about ourselves. The Astronomy Book will teach you: what long-ago astronomers thought about other worlds, solar system facts, how constellations relate to astrology, the history of space exploration, black holes-do they exist?, the origin and age of the moon, why Mars doesn't

support life, the composition of stars, supernova remnants, and the myth of star birth, asteroid legends and the extinction of the dinosaurs, are there planets outside our solar system, and could they be home to intelligent life?, what are UFOs?, and the age of comets and meteor showers. Learning about the universe is huge fun! In the almost infinite expanse above us, we can examine planets, galaxies, and phenomena so beautiful and complex that we never outgrow a childlike wonder. We see our own reflection in the moon, the stars, and in comet trails. The more we learn, the less we fear! FOUNDATIONS OF ASTRONOMY, 11e, INTERNATIONAL EDITION brings science to life. With this newly revised Eleventh Edition of FOUNDATIONS OF ASTRONOMY, INTERNATIONAL EDITION, best-selling authors Mike Seeds and Dana Backman strive to help students use astronomy to understand science--and use science to understand what we are. Fascinating, engaging, and extremely visual, this text emphasizes the scientific method throughout as it guides students to answer two fundamental questions: What are we? And how do we know? In discussing the interplay between evidence and hypothesis, the authors provide not only fact but also a conceptual framework for understanding the logic of science. The Eleventh Edition addresses the newest developments and latest

discoveries in the exciting study of astronomy, including information to emphasize observations over the entire electromagnetic spectrum; new data on star formation and stellar structure; new insight on global warming and ozone depletion; updated information on the Kuiper belt and dwarf planets; and more. Whether you choose to assign homework in an online environment, give your students access to an affordable and interactive online text, or do both, the new FOUNDATIONS OF ASTRONOMY, INTERNATIONAL EDITION Online Version is the ideal solution for your course needs, giving your students Web-based access to a digital version of the text. In addition, the new online Enhanced WebAssign® homework management system enables you to easily assign and manage homework online. Introductory Astronomy is a lucidly written introduction to theplanets, the stars and beyond. Starting with problems astronomersface on Earth connected with observation, the text then moves on tocover the Solar System, stars, galaxies and finally cosmology. Theevolution and internal workings of astronomical bodies areoutlined, demystifying arcane entities such as black holes andwhite dwarfs in the process. Carefully structured, this test has astrong narrative thread running throughout and concepts aregradually introduced, and subsequently built upon in laterchapters. The

science behind the subject is integrated andpresented in a way that enables the reader to gain a thoroughunderstanding of the subject without blinding them with unnecessarymathematical detail or scientific theory. Astronomy is brought tolife through the many carefully chosen examples, figures andphotographs. Introductory Astronomy: * Provides a balanced introduction to the field of astronomy. * Includes many carefully chosen worked examples andproblems. * Is clearly written to appeal to students and amateur astronomersalike.

What do your students know or think they know about what causes night and day, whether the Moon orbits the Earth, and why the Sun keeps glowing? Find out with this book on astronomy, the latest in NSTA s popular Uncovering Student Ideas in Science series. The 45 astronomy probes provide situations that will pique your students interest while helping you evaluate their understanding (or misunderstanding) of how the universe operates. The book is organised into four broad sections: the Earth and gravity; the Earth, Sun, and Moon system; the solar system and gravity in space; and stars, galaxies, and the universe. As the authors note, it s not always easy to help students untangle mistaken ideas. Using this powerful set of tools to identify

students preconceptions is an excellent first step to helping your students achieve scientific understanding.

New Scientist magazine was launched in 1956 "for all those men and women who are interested in scientific discovery, and in its industrial, commercial and social consequences". The brand's mission is no different today - for its consumers, New Scientist reports, explores and interprets the results of human endeavour set in the context of society and culture. For courses in Introductory Astronomy. Connects introductory astronomy to a broad understanding of the universe In this Ninth Edition of Astronomy Today , authors Eric Chaisson and Steve McMillan communicate their excitement about astronomy, combining up-to-date science with insightful pedagogy. The text emphasizes visualization, focusing on the process of scientific discovery in order to teach readers "how we know what we know." Updated features in the 9th Edition, Big Pictures and Big Questions, help readers connect the content of each chapter with a broader understanding of the universe while piquing interest in current research. New features within MasteringAstronomy bring these features together and allow readers to interact with astronomy outside of the classroom. The 9th

Edition has also been thoroughly updated and revised to reflect recent discoveries in the field of astronomy. Also available with MasteringAstronomy(tm) MasteringAstronomy is the leading online homework, tutorial, and assessment system, designed to improve results by engaging students with powerful, interactive content. Instructors ensure students arrive ready to learn by assigning new Interactive pre-lecture videos that give students exposure to key concepts before class and open classroom time for active learning or deeper discussions of topics. With Learning Catalytics(tm) instructors can expand on key concepts and encourage student engagement during lecture through questions answered individually or in pairs and groups. Students further master concepts through book-specific MasteringAstronomy assignments, which provide hints and answer-specific feedback that build problem-solving skills. MasteringAstronomy now features Virtual Astronomy Labs, providing assignable online laboratory activities that use Stellarium and Interactive Figures. Note: You are purchasing a standalone product; MyLab(tm) & Mastering(tm) does not come packaged with this content. Students, if interested in purchasing this title with MyLab & Mastering, ask your instructor for the correct package ISBN and Course ID. Instructors, contact your Pearson representative

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phenomena such as solar flares and coronal mass ejections are described in detail, together with their potential effects on the Earth. Introduction to Meteorology and Astronomy Course Description This is the suggested course sequence that allows one core area of science to be studied per semester. You can change the sequence of the semesters per the needs or interests of your student; materials for each semester are independent of one another to allow flexibility. Semester 1: Meteorology The Earth was created to be the dwelling place of man. It is a complex world and its weather patterns affect our lives every day. Whether you live near the equator, a polar region, or somewhere in between, knowledge of the weather is important. The Weather Book will teach you: why our exact distance from the sun allows life on earth, how the weather on the other side of the earth affects you, how clouds form and how to identify the different types, what the difference is between a cold and warm front, why you can often see lightning long before you can hear thunder, how to build your own weather station, how to survive in dangerous weather, what the greenhouse effect and the ozone hole are, what Noah's flood and the Ice Age have in common, how weatherpersons forecast hurricanes and tornadoes, how to read a weather map, and what

our responsibility is to the environment. Learning about the weather is fun! It will change the way you look at the clouds in the sky. Now you'll have more of an understanding about what is going on miles above your head. And when you hear a weather report on television, you will understand so much more about the world around you!. Semester 2: Astronomy One thing we have in common with the ancients is that all of the human race has gazed at the night sky, and the bright morning, and wondered, "What's out there?" Our universe is so vast and awe-inspiring that to learn about it is to learn about ourselves. The Astronomy Book will teach you: what long-ago astronomers thought about other worlds, solar system facts, how constellations relate to astrology, the history of space exploration, black holes-do they exist?, the origin and age of the moon, why Mars doesn't support life, the composition of stars, supernova remnants, and the myth of star birth, asteroid legends and the extinction of the dinosaurs, are there planets outside our solar system, and could they be home to intelligent life?, what are UFOs?, and the age of comets and meteor showers. Learning about the universe is huge fun! In the almost infinite expanse above us, we can examine planets, galaxies, and phenomena so beautiful and complex that we never outgrow a childlike wonder. We see our own reflection in

the moon, the stars, and in comet trails. The more we learn, the less we fear! Astronomy is the field of science devoted to the study of astronomical objects, such as stars, galaxies, and nebulae. Astronomers have gathered a wealth of knowledge about the universe through hundreds of years of painstaking observations. These observations are interpreted by the use of physical and chemical laws familiar to mankind. These interpretations supply information about the nature of these astronomical objects, allowing for the deduction of their surface and interior conditions. The science associated with these interpretations is called astrophysics. An Introduction to Astronomy and Astrophysics offers a comprehensive introduction to astronomy and astrophysics, complete with illustrative examples and illuminating homework problems. Requiring a familiarity with basic physics and mathematics, this undergraduate-level textbook: Addresses key physics concepts relevant to stellar observations, including radiation, electromagnetic spectrum, photometry, continuous and discrete spectrum, and spectral lines Describes instruments used for astronomical observations as well as how the radiation received is characterized and interpreted to determine the properties of stars Examines the structure of stars, the basic equations which explain stars in equilibrium, and

the fusion reactions occurring in stellar cores Discusses the evolution of stars, the solar system, the dynamics of galaxies, and the fundamentals of modern cosmology Explores the universe at high redshifts, where it is dominated by objects such as active galaxies Solutions manual and figure slides available with qualifying course adoption An Introduction to Astronomy and Astrophysics teaches students how to interpret the night sky, providing them with a critical understanding of the stars and other heavenly bodies. Lecture-Tutorials for Introductory Astronomy were developed to integrate the needs of busy, research-focused faculty who teach in challenging environments with existing, effective teaching strategies. Chapter topics include the Solar System, stellar magnitudes, techniques in astronomy, moon phases, stellar evolution, and more. For college professors, instructors and other professionals who are interested in a lively, engaging method of teaching introductory astronomy. FOUNDATIONS OF ASTRONOMY brings science to life. With this newly revised Eleventh Edition of FOUNDATIONS OF ASTRONOMY, best-selling authors Mike Seeds and Dana Backman strive to help students use astronomy to understand science--and use science to understand what we are. Fascinating, engaging, and extremely visual, this text emphasizes the scientific method

throughout as it guides students to answer two fundamental questions: What are we? And how do we know? In discussing the interplay between evidence and hypothesis, the authors provide not only fact but also a conceptual framework for understanding the logic of science. The Eleventh Edition addresses the newest developments and latest discoveries in the exciting study of astronomy, including information to emphasize observations over the entire electromagnetic spectrum; new data on star formation and stellar structure; new insight on global warming and ozone depletion; updated information on the Kuiper belt and dwarf planets; and more. Whether you choose to assign homework in an online environment, give your students access to an affordable and interactive online text, or do both, the new FOUNDATIONS OF ASTRONOMY Online Version is the ideal solution for your course needs, giving your students Web-based access to a digital version of the text. In addition, the new online Enhanced WebAssign homework management system enables you to easily assign and manage homework online. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version. Stoicheiosis Astronomike ("Elements of Astronomy") is a late Byzantine comprehensive introduction to Astronomy. It was written by an

outstanding figure in Byzantine culture and politics, who served also as prime minister. This volume makes available for the first time a large part of its astronomical contents, offering the original text with an English translation, accompanied by an introduction and analysis. This book describes the celestial spheres, the rotation of the planets, and especially the apparent trajectory of the sun with its uniform and anomalous rotations, which are used to determine the length of the year. Metochites proposed a new starting date for the calendar (6th of October 1283) specifying the position of the sun on that date. The work revived the interest in studies of Ptolemaic astronomy as attested by numerous annotations in the margins of the manuscripts. Besides its astronomical content there are statements on the epistemological method and other issues elucidating the spirit of that age. It will be of interest as an introduction to Byzantine astronomy for historians of science and philosophy, for astronomers, and those interested in the development of calendars.
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Cosmic Perspective, Seventh Edition gives non-science majors a streamlined, cutting edge introduction to astronomy built on a strong tradition of effective pedagogy and coverage. Focus on skill building includes new group work exercises that require active participation, helping you to retain concepts longer and build communication skills. MasteringAstronomy® works with the text to create a learning program that enables you to learn interactively both in and out of the classroom. This text is a brief version of the authors' The Cosmic Perspective Plus MasteringAstronomy. This program will provide a better learning experience for you. Here's how: Personalize learning with MasteringAstronomy: MasteringAstronomy provides you with engaging and interactive experiences that coach you through introductory astronomy with specific wrong-answer feedback, hints, and a wide variety of educationally effective content. Gain a modern understanding of astronomy with the latest content: Since the previous edition, new discoveries about Exoplanets, planetary formation, dark matter, and the early universe have had a significant impact on our understanding of astronomy. The Seventh Edition incorporates this new content to give you a modern presentation of the science. Learn effectively: Better understand astronomy with a clear and continually reinforced learning

path from chapter opening to end of chapter using dynamic learning tools in the text and in MasteringAstronomy. Astronomical Problems: An Introductory Course in Astronomy covers astronomical problems, together with a summary of the theory and the formula to be exercised. The book discusses the types of problems solved with the help of the celestial globe and how to solve astronomical problems. The text tackles problems on interpolation, the celestial sphere, systems of celestial coordinates, and culmination. Problems about the rising and setting of a heavenly body, precession, planetary movement, and parallax and aberration are also considered. The book presents problems about refraction, the apparent motion of the sun, time and longitude, and the calendar. The text also demonstrates problems related to the moon, planets, stars, comets, meteors and meteorites, and the structure of the universe. Miscellaneous problems and problems of artificial celestial bodies are also examined. Teachers and students of astronomy will find the book useful.