

1. Record Nr.	UNISA996466748503316
Autore	Dolan Marion
Titolo	Decoding astronomy in art and architecture / / Marion Dolan
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-76511-3
Descrizione fisica	1 online resource (356 pages)
Collana	Springer-Praxis books in popular astronomy
Disciplina	704.943
Soggetti	Astronomy in art Architecture and science Astronomy, Ancient
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I: History of Cosmic Symbolism in Art and Architecture -- 2: Basics of Astronomy and Archaeoastronomy -- Components of Archaeoastronomy -- Cycles of the Sun -- Cycles of the Moon -- The Milky Way Galaxy -- Origin of the Constellations -- The Signs of the Zodiac -- Further Reading -- 3: World's Earliest Art and Architecture -- Introduction -- Abstract Stone Carvings and Cultural Astronomy -- "Venus Figurines" and Astronomy -- Hand Paintings in Cave Art -- Paleolithic Cave Painting -- Non-figurative Cave Art and Astronomy -- El Castillo Cave Art and Astronomy -- Corona Borealis or Northern Crown Constellation -- Lascaux Cave and Astronomy -- Archaeo-acoustics -- Further Reading -- 4: Neolithic Art, Architecture, and Astronomy -- Introduction -- Excavation of Göbekli Tepe -- Göbekli Tepe Enclosures -- Göbekli Tepe Artwork -- Interpretation of the Artwork -- Archaeoastronomy at Göbekli Tepe -- Further Reading -- 5: Art, Architecture, and Astronomy in the British Isles -- Introduction to Mounds, Megaliths, and Circles -- Newgrange Passage Mound -- Knowth Passage Mound -- Dowth Passage Mound -- Artwork on Irish Passage "Grave" Megaliths -- Further Reading -- 6: Art, Architecture, and Astronomy in England -- Introduction to the Stonehenge Stone Circle -- Archaeoastronomy of Stonehenge -- The Stonehenge Extensive Complex -- Avebury Stone Circles -- Avebury's Extensive

Complex -- West Kennet Long Barrow (Fig. 6.7) -- Summary of Megalithic Monuments of the British Isles -- Further Reading -- Part II: Astronomical Art and Architecture of Southeast Asia -- 7: Hinduism and Cosmology in India -- Introduction -- Cosmology Encoded in Shiva Nataraja, Lord of the Dance -- Dancing Shiva Iconography -- Cosmology of Hindu Temples -- Further Reading -- 8: Art, Archaeology, and Astronomy at Angkor Wat Temple -- Introduction to Angkor Wat History -- Temple Functions -- Angkor Wat Temple Architecture -- Current Research -- Celestial Correlations at Angkor Wat -- Angkor Wat Sculptural Program -- Summary -- Further Reading -- 9: Art, Architecture, and Astronomy of Buddhism -- Introduction -- Ashoka and the Mauryan Dynasty -- Cosmic Pillars of Ashoka -- Celestial Symbolism of the Buddhist Stupa -- The Great Stupa at Sanchi -- Cosmology of the Borobudur Buddhist Temple -- Borobudur Sculpture -- Encoded Buddhist Teachings -- Cosmological Symbolism of Borobudur -- Solar Alignments of the Ajanta Caves -- Further Reading -- Part III: Astronomical Art and Architecture of China -- 10: Art, Architecture, and Astronomy in China -- Astronomy in Early China -- Dunhuang Star Map -- Chinese Cosmological Temples -- The Mandate of Heaven -- Cosmology of Beijing -- Cosmology of the Forbidden City -- Cosmic Temples -- Temple of Heaven Compound -- Cosmic Symbolism of the Temple of Heaven -- Enactment of Imperial Duties -- Further Reading -- Part IV: Astronomical Art and Architecture of the Classical World -- 11: Art, Architecture, and Astronomy in Classical Greece -- Introduction -- Greek Astronomers -- The Astronomical Poem: *Phaenomena* -- Greek Temples and Archaeoastronomy -- Temple of Apollo Delphi, Greece -- Astronomy of the Apollo: Asclepius Cult Temples -- Archaeoastronomy of Greek Temples in Sicily -- Greek Theater -- Further Reading -- 12: Art, Architecture, and Astronomy of Petra -- History of Petra -- Nabataean Religion -- Nabataean Architecture -- Current Research -- Urn Tomb and Astronomy -- The Monastery and Astronomy -- Nabataean Sculpture -- Conclusion -- Further Reading -- 13: Art, Architecture, and Astronomy in the Roman Empire -- Introduction -- Astronomical Texts in Roman Empire -- Vitruvius and Astronomy -- Geminus and Astronomy -- Pliny the Elder and Astronomy -- Solar Orientations of Roman Towns -- Symbolism of the Dome in Roman Architecture -- Archaeoastronomy and the Pantheon -- Pantheon Symbolic Architectural Design -- Pantheon Solar Phenomena -- Mausoleum of Theodoric the Great and Astronomy -- Astronomical Light Effects -- The Roman Temples at Baalbek -- The Temple of Jupiter -- The Temple of Bacchus -- The Temple of Venus -- Cosmology in Mithraic Art -- The Mithraeum and the Tauroctony -- Cautes and Cautopates: The Torchbearers -- Archaeoastronomy Encoded in Mithraic Art -- Futher Reading -- Part V: Astronomical Art and Architecture of Early Europe -- 14: Astronomy and Cosmology in the Middle Ages -- Introduction -- Cosmology in the Middle Ages -- Cosmological Diagrams -- Medieval Astronomical Artwork -- Archaeoastronomy and the Christian Church -- Hagia Sophia: The Cosmos in Miniature -- Astronomy in the Age of Charlemagne -- Charlemagne's Throne and Astronomy -- The Computistical Anthology of 809 -- Aratea Manuscripts in the Carolingian Age -- The Leiden Aratea -- The Planetary Configuration -- Giotto and Astronomy in the Scrovegni Chapel -- Giotto and the Miraculous Star of Bethlehem -- Astronomy at Chartres Cathedral -- Introduction -- Sculptural Program on the Royal Portal -- The Zodiacial Problem -- Astronomical Angels -- Further Reading -- 15: Renaissance Art and Astronomy -- Astronomy During the Renaissance -- Michelangelo's Sistine Chapel Frescoes -- The

Cosmology of Michelangelo Buonarroti -- Fresco Design Description -- Visualizing the Creation and Fall of Mankind -- The Cosmology of The Last Judgment -- The Last Judgment and Astronomy -- Further Reading -- Part VI: Astronomical Art and Architecture of the New World -- 16: Astronomy at Teotihuacan -- Introduction -- Pyramid of the Sun -- Pyramid of the Moon -- Ciudadela Ceremonial Grounds -- The Temple of Quetzalcoatl: The Feathered Serpent -- Archaeoastronomy at Teotihuacan -- Collapse of Teotihuacan -- Further Reading -- 17: Art, Architecture, and Astronomy in South America -- Introduction -- Cultural Astronomy of Chavin de Huantar -- Cultural Astronomy and the Nazca Lines -- Cultural Astronomy of the Inca Civilization -- Astronomy of Machu Picchu.

Sommario/riassunto

For centuries, our ancestors carefully observed the movements of the heavens and wove that astronomical knowledge into their city planning, architecture, mythology, paintings, sculpture, and poetry. This book uncovers the hidden messages and advanced science encoded within these sacred spaces, showing how the rhythmic motions of the night sky played a central role across many different cultures. Our astronomical tour transports readers through time and space, from prehistoric megaliths to Renaissance paintings, Greco-Roman temples to Inca architecture. Along the way, you will investigate unexpected findings at Lascaux, Delphi, Petra, Angkor Wat, Borobudur, and many more archaeological sites both famous and little known. Through these vivid examples, you will come to appreciate the masterful ways that astronomical knowledge was incorporated into each society's religion and mythology, then translated into their physical surroundings. The latest archaeoastronomical studies and discoveries are recounted through a poetic and nontechnical narrative, revealing how many longstanding beliefs about our ancestors are being overturned. Through this celestial journey, readers of all backgrounds will learn the basics about this exciting field and share in the wonders of cultural astronomy.