

Ptah

Beiträge zu Ikonographie und
Dekoration Ägyptens Bd. 3

Sylvie Cauville

The Astronomical Ceilings of Dendara

Ptah

Beiträge zu Ikonographie und Dekoration Ägyptens

Herausgegeben von

Horst Beinlich · Julia Budka · Rune Nyord

Bd. 3

SYLVIE CAUVILLE

The Astronomical Ceilings of Dendara

PHOTOGRAPHS :

© IFAO — Gaël POLLIN
(Institut français d'archéologie orientale)

Restoration of Paintings:
Ministry of Antiquities of Egypt



J.H. Röhl
2022



© IFAO, Le Caire :
Tous les droits concernant les photos utilisées dans ce volume
appartiennent à l'Institut français d'archéologie orientale.

Drawings of the ceilings: Yousreya Hanafi ©IFAO

Alle Rechte vorbehalten. Vervielfältigungen aller Art,
auch auszugsweise, bedürfen der Zustimmung des Verlags
und der Autorin.

Gedruckt auf chlorfreiem, alterungsbeständigem Papier.

© 2022 J.H. Röhl Verlag, Dettelbach, Deutschland

ISBN 978-3-89754-631-8

Die Deutsche Bibliothek – CIP Einheitsaufnahme
Die Deutsche Bibliothek verzeichnet diese Publikation
in der Deutschen Nationalbibliographie;
detaillierte bibliographische Daten sind im Internet
über <http://dnb.d-nb.de> abrufbar.

Contents

Foreword	6
The Sun	13
The Solar Journey	14
The Protective Geniuses	20
The Solar Hymnes	34
The Moon	37
The Invisible Moon	39
The Moon Rise	43
The Full Moon	50
The Four Winds	55
The Hymns to Osiris	56
The Sky of the Gods	59
Gods and Constellations	60
The Hours of Day and Night	65
The Decans	66
Cardinal Points and Wind	69
Hymns to Re and Hathor	71
The Cosmos	85
The Birth of the World	86
The Sky to the Infinite	89
South Sky and North Sky	92
The Planets and Constellations	96
The Zodiacal Constellations	99
Time Stopped: The Solar Eclipse	100
The Hymns	101
Plates.	117

FOREWORD

On the banks of the Nile, hundreds of temples honored the gods of the beloved country: Ra the Sun, Osiris the Moon, Ptah the Creator, Hathor and Isis the two aspects of woman, and many others that enlightened the thought of the priests who were essentially turned towards the sacred.

For the past twenty years, thanks to the restorers of the Egyptian Antiquities Service, the walls have been coming out of the shadows, and several temples have regained their colors, Karnak, Esna and, the most beautiful of all, Dendara.

This book is devoted to the most attractive part of this temple: the astronomical ceilings of the pro-naos; it is an eternal sky, designed and painted 2000 years ago, a universe of knowledge and beauty.



Fig. 1: *Lunar disk.*



Fig. 2: Pronaos.

Thinkers imagined the genesis of a sacred world whose organization they described; the astronomers looked at the sky, recorded and registered the movement of the stars. Hierogrammatists, measuring time precisely – day and night, month and year – show the depth and accuracy of their observations.

Dendara is dedicated to the most beautiful of goddesses, Hathor, the daughter of Ra, who gave her her own temple and, at the same time, the millennia-old archives of Heliopolis preserving the knowledge of the country's elite.

Once the door of Hathor is crossed, the pronaos with its multiple faces of the goddess is revealed to the visitor. Each of the six façade columns is surmounted by four heads, Hathor being *the beautiful sovereign with four faces*. The twenty-four faces see the twenty-four hours pass by; similarly, twenty-four columns stand in the vast hall. Hathor embraces the entirety of the country: Heliopolis in the north, where her father Ra lives; Edfu in the south, where her husband Horus lives, from where the flood comes. Khepri, the scarab-sun of the morning rises in the east.

This type of room with columns (hypostyle) preceded, in the majority of the temples, the secret spaces; it received the solar light, and the sky was represented on its ceilings or its upper friezes.



Fig. 3: Ceiling.

The ceilings extend the horizon to the farthest reaches of the sky, from the Pole in the north to Canopus in the south, from the Big Dipper to Sirius and Orion. The Sun unfolds its diurnal cycle, the Moon its rotation. The decanal stars are recorded, the planets and the zodiacal constellations move in the ecliptic: the sky seems to turn for the infinity of time above the gods, from the New Year to the *Night of Ra*. The temple is thus inscribed in the eternal universe.

The pronaos opens to the north, to look towards Heliopolis. The sun rises in the east and sets in the west:

- Ra dominates the northeast, thus ruling over Heliopolis and giving life from the eastern sky. The sun strikes the northeast corner of the pronaos of Dendara in the morning.
- Osiris dominates the southwest, for he is the flood and the Moon in the nocturnal world.

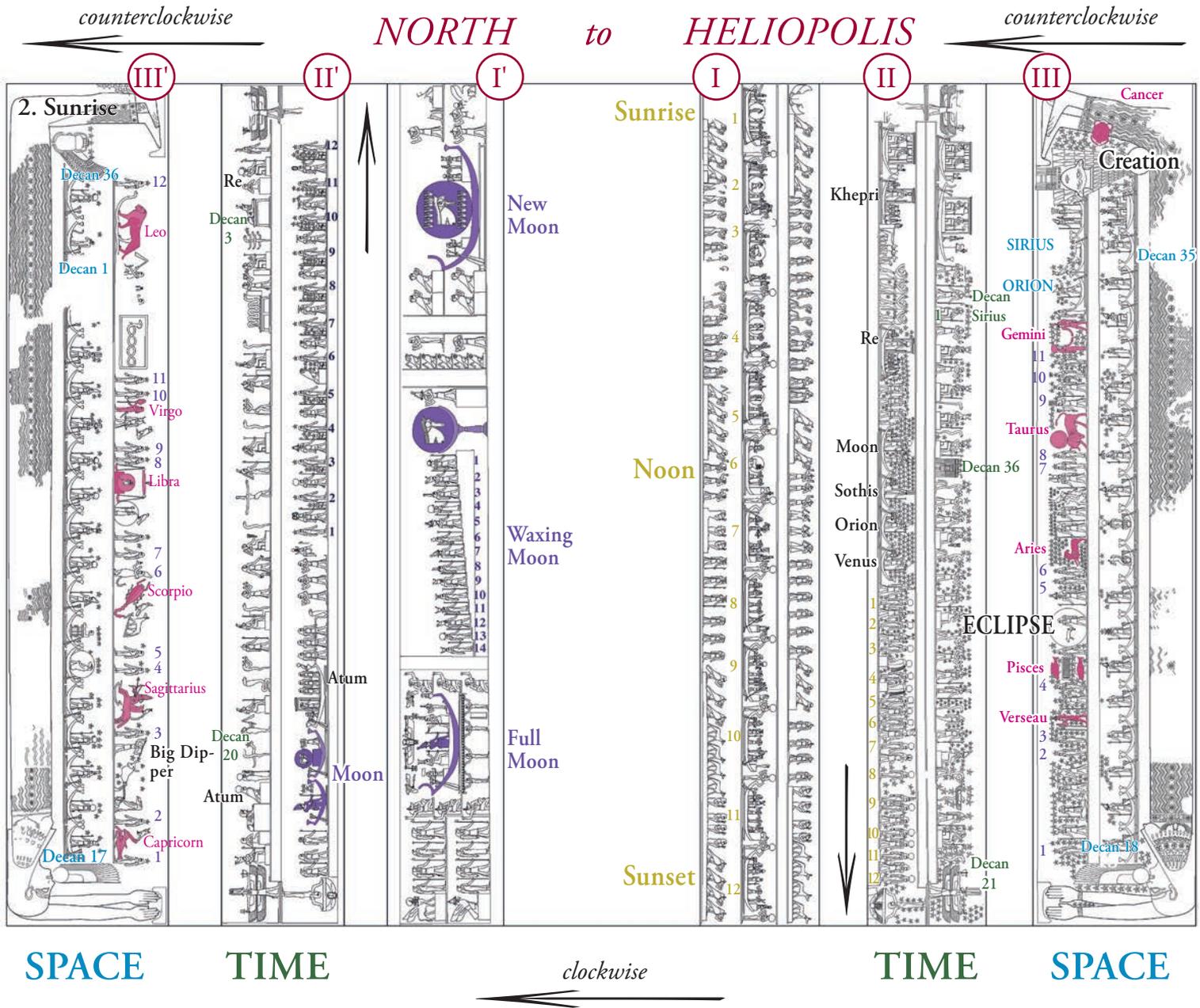


Fig. 4: Ceiling designs cf. p. 138/139.

Six bays show the celestial world, above the temple, during the annual night and farthest from the known world.

The linear axial bays (I and I') show the visible stars extending in parallel: the temporal sky gives rhythm to the life of the temple.

The Sun and the Moon give rhythm to the days and months, ensuring the continuity of kingship; Ra and Osiris observe the same march, that of the stars in the sky. The Sun transforms itself during the twelve hours of the day, the Moon in three phases.

To align the two movements, the priests paralleled the first hour of the day with the invisibility of the Moon, the sixth hour of the day with the waxing Moon, and the last hour of the day with the Moon at its

peak. The New Moon appears at dawn, like the Sun; the two stars thus shine concomitantly in the East. As the descending lunar phase progresses, the star rises in the night. The priests render this phenomenon by having Osiris leave at the moment of the sunset.

The first hour of the day is always linked to the appearance of the Sun; to determine the hours of the night, astronomers note the rising and setting of the Decans.

The middle bays (II and II') insert among the Decans the divine forms visible to the naked eye: solar forms (Khepri, Ra, Atum), lunar forms (Osiris as god and star), Orion, Sothis and Venus.

The side bays (III and III') illustrate the worlds farthest from the earth, from the south (Sirius and Orion) to the north (Big Dipper) with several constellations, the zodiac and the planets that move along the ecliptic. It is the most distant world that connects the land of the Nile to the unknown reaches.

The sky is read from the morning of the New Year, when Sirius reappears and the Nile finds its streambed with the first signs of the flood. The march, counterclockwise, is from Cancer to Leo.

The real celestial movement is clockwise, going from east to west. Following the twelve hours of the day, the night begins and sets off by the western bays. It passes by the Big Dipper visible at night and its 12th hour, at the opposite end, announces the new dawn. The scarab comes out again to illuminate the world (III'): a 24-hour cycle has been completed.

The ophidian decans on the middle bays (II and II') shape time; they sail in boats (III and III') and give the image of infinite space.

The Big Dipper rules the northern sky, Orion and Sirius the southern. The latter constellations are at the same time gods in the sky: Osiris followed by Isis. Recall that Isis-Sothis-Sirius, after a period of invisibility, reappears just before sunrise, at about the time when the flood begins.

Creation comes from the north and the east, from the south too, since the flood flows from the Tropic of Cancer at the moment of Cancer, when Sirius shines in the sky. Space and time are thus united.

Cancer is represented as a hybrid, half alien entity in the distant world, half scarab beetle when it is in the Egyptian sky.



Fig. 5: North ceiling.

Khepri (II), dawn (I), and the New Moon (I') form the first morning of the world. Ra reappears at the second dawn with Horus, in the west, himself a winged scarab that takes possession of the temple in the same way as Hathor in the eastern corner. The organized world is put into place: Hathor and Horus are its masters, they are both daughter and son of Ra.

The Sun dominates the day, he is Ra who gives all life; Osiris is the Moon, he watches over the dead and guarantees them an eternal life. The two gods essential to the survival of Egypt are complementary. Ra, the Sun and daylight, evolves according to a short cycle: the disc leaves the earth every day and returns in the same guise. Osiris, water and lord of the night, follows a long cycle.

The Sun-Ra, by setting in the west, reaches the underground world of Osiris; it brings life to the darkness. Osiris, for his part, regenerates it and allows it to resume its course each morning.

Heliopolis was at the origin of all the intellectual speculations; during three thousand years, these were centered around the two essential gods to the survival of Egypt: Ra and Osiris.

The priest-astronomers of Dendara shaped a “classical” sky, the harmony and the perfection of the drawing and the colors are remarkable. The latter are those of the sky: a monochrome of blues and cream tones, which exclude neither dark tints nor deep reds.

The primary colors give life. Thus, the blue of the river, the yellow of the first sand and of the zenithal sun, the red of the blood and of the twilight crimson. The first life is yellow like the sand, Hathor is thus “the gold of the gods”. The water is blue, or green when the Nile of May is invaded by nauseating algae; it is dark red when the flood tears its sediments from the mountains of Ethiopia.

The symbolism of colors is dominant; it is primordial in alchemy, which originated in Egypt. Even today, white evokes the shroud and the resurrection, yellow the heat and the light, red the vivifying blood.

The Egyptian pigments were ground and agglutinated with a little binder made of various gums. Red and yellow are powders, blue and green are obtained by grinding hard substances.

Black is composed of charcoal and manganese oxide. The black of the constellation Taurus and the delicate gray of Leo are particularly successful; the representations of jackals and the pupil of the *wedjat* eye are also remarkable.

The whites are obtained from white limestone or chalk; they are particularly suited to the distant skies, the lunar disk of Taurus and certain bodies of genii. They give the whole an ivory-like opacity.

Yellow and various shades of ochre are readily found in desert earth. Ochre-brown is used for haulers and oarsmen; it tends towards reddish brown in the case of Aries.

The pinkish orange is used for Schedar, the brightest star in the constellation of Cassiopeia; this hue, rare in Egypt and unique to Dendara, is obtained from realgar or arsenic sulfide.

Red is obtained from carnelian or hematite. Often reserved for crowns and the prows of solar boats, it is the fire of the solar discs.

Green comes from malachite, and all its shades are used: the two coves of Cancer reflect the color of water from the lands of Africa; the green is paler for the water of Aquarius or the head of Pisces. The baboons that worship the solar boat are a soft green. In the solar eclipse, the representation of the kilt and corselet of the character uses a wider range of colors (blue, green, turquoise, red) than in the surrounding scenes.

Very early on, the Egyptians succeeded in producing a blue pigment from copper ore, limestone sand and natron. The components, finely ground and mixed with water, were fired at a very high temperature. The final color resulted from mixing the pigment with gum arabic dissolved in water. The various blues constitute the palette of the sky par excellence; they are also mixed with red and brown to good effect, especially in the plumage of birds.

Drawings of the ceilings: Yousreya Hanafi ©IFAO

Publication of the texts (*Dendara XV* made available online at the Ifao)

<https://www.ifao.egnet.net/uploads/publication/enligne/Temples-Dendara015.pdf>

East bay no. I = *Dendara XV*, 8-15

East bay no. II = *Dendara XV*, 15-22

East bay no. III = *Dendara XV*, 23-26

West bay no. I' = *Dendara XV*, 27-37

West bay no. II' = *Dendara XV*, 38-44

West bay no. III' = *Dendara XV*, 45-48

Complete translation of these texts:

S. Cauville, *Dendara XV – Traduction*. OLA 213, Peeters, Leuven, 2012.

Commentary (with bibliographical references):

S. Cauville, *Le pronaos du temple d'Hathor à Dendara : Analyse de la décoration*. OLA 221, Peeters, Leuven, 2013.

Fundamental work on astronomy:

O. Neugebauer and A. Parker, *Egyptian astronomical texts III: Decans, planets, constellations and zodiacs*. Brown Egyptological Studies 6, Providence, 1969.

THE SUN

At summer solstice, the Sun totally illuminates the façade, irradiating the solar discs arranged on the axial bay:

The soul of Ra appears in the sky. He flies as a divine beetle to fly off to the place his heart desires in joy.

Horus comes from the sky as a hawk who flies towards the road that his heart wishes. He takes possession of the temple of Hathor, he unites with the Lady of Female Heliopolis; their hearts communicate with the same joy, they are satisfied with this great monument that the pharaoh has made for them.

The parallel march of the “Two Luminaries” is a staple of Egyptian thought, both in texts and in representations. Both rise in the east and set in the west in almost the same trajectory, a fact which did not escape the priest-astronomers. The hieroglyphic combination of the stars, ☉☌, means “every day”.

The Sun-Ra crosses the sky in a boat and changes its appearance as it travels through the twelve hours of the day; the artists represent it in the form of a disk inside which twelve avatars are seen, including the child at dawn, the four-headed ram at noon and the old man in the evening. On either side, twenty-eight groups of genies protect the solar march.

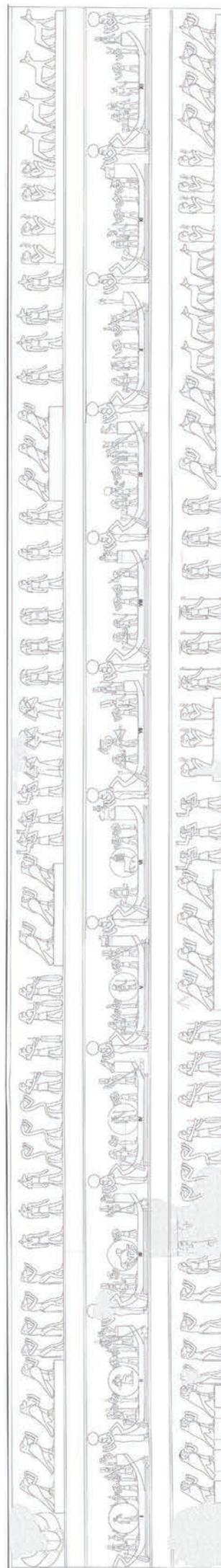


Fig. 6: Bay I
Dendara XV, 8-15.

THE SOLAR JOURNEY

In each scene, a goddess placed at the head of the boat turns towards the deity and makes a speech. Each form of the Sun has a name, and the disk is surrounded by deities who adore it. A god, at the prow, pierces the harmful force that could hinder the course of the Nile: the snake Apophis that would try to hypnotize the pilot, the turtle that swallows the water of the Nile or the enemy that is always likely to harm.

At high noon (hours VI-VII), nothing can attack the god; it is the same during twilight (hours XI-XII).

The colors evolve; from a light blue for the first three hours, they are more sustained for the zenithal Sun and become darker at the end of the day. The same phenomenon is observed for the protective genies, who become black jackals when the Sun disappears.



Fig. 7: 1st hour of the day.

The one who enlightens: Rise, Ra. Come into being, Khepri, risen from Nun to the sky in your beautiful appearance as the Luminous.

Eastern Ra-Horus. Isis and Nephthys.

Maat. Thoth. Montu.

The first hour is a child, finger in mouth, standing in the solar disk, while Isis and Nephthys hold the disk. They also represent the two towers of the pylon between which the sun appears in the morning.



Fig. 8: 2nd hour of the day.

The one who escorts: O luminous one, who shines with his uraeus, shine, you illuminate, O Khepri! Ra in the form of a child. Thoth, Isis and Nephthys. Neith. Soped.

The second hour is a child, just like the pupil of the New Moon (see p. 39). He sits on a throne: he is the legitimate heir.



Fig. 9: 3rd hour of the day.

The one who protects his master: Awake in peace, Ra who comes out of the fields of the One of the two lions (= Atum), who is high in the sky with his uraeus, he shines in the horizon.

The names are not inscribed. The Sun takes the form of a sphinx with a hawk's head placed on a lotus flower. The disk is surrounded by Thoth and Hatmehyt, a goddess of the Delta recognizable by the fish on her head.