

# Astronomy and Astrology in El Cielo de Salamanca (15th century)

Sánchez León, J. G.<sup>1</sup>

<sup>1</sup> Universidad de Salamanca

## Abstract

In an enclosure next to the cloister of the Patio de Escuelas Menores in Salamanca, there is a mural known as “El Cielo de Salamanca” (The Sky of Salamanca). It is part of a painting (c. 1483–1486) that once adorned the ceiling of the Chapel of San Jerónimo. Those who visited it shortly after its completion described it as a magnificent astrological vault. Hidden in 1763, it was rediscovered in 1901 and relocated to its current location in 1952. Since 1960, there has been speculation that the mural represents the celestial vault on a day in August 1475. This article demonstrates that this speculation is wrong. The planets in the painting are likely depicted in their astrological domiciles.

## 1 Introduction

The mid-fifteenth century marked a period of astronomical splendor in Salamanca, Spain. The establishment of the Chair of Astrology during this time underscored the growing importance of the field, coinciding with the presence of Abraham Zacut, one of Europe’s foremost astronomers and astrologers. Within this intellectual climate, a new library was constructed on the second level of the Chapel of San Jerónimo, adorned with an astrological painting (c. 1483–1486) on its vaulted ceiling. This painting featured zodiac signs, Ptolemaic constellations, and planetary symbols, creating a vivid representation of the celestial sphere as understood during the period [1].

## 2 The history

From 1503 to 1506, the library was relocated to a new building, and the floor separating it from the chapel was demolished. Consequently, the vault with its astrological artwork came to crown the Chapel of San Jerónimo. However, the subsequent modifications and humidity

led to the degradation of the painting, which was subjected to a poorly executed restoration attempt.

In 1763, the chapel underwent further renovations. Only around one-third of it was preserved, hidden behind a false ceiling, where it remained forgotten for over a century and a half. In 1901, a hidden chamber was discovered above the Chapel of San Jerónimo in the Escuelas Mayores building. Inside, a deteriorated mural depicting astrological motifs was found, and it was first described by the scholar Gómez Moreno, who attributed its creation to the painter Fernando Gallego [2]. The name “El Cielo de Salamanca” (The Sky of Salamanca), given by Professor Rafael Lafínez Alcalá in 1950, who was among its occasional visitors, contributed to the popular but mistaken belief that the artwork depicted the sky as seen from Salamanca, although constellations not visible from Salamanca, such as Centaurus, are represented.

In 1952, the surviving portion of the original vault—about one-third—was relocated by the Gudiol brothers using the strappo technique, transferring it to a wooden vault in a large room within the Patio de Escuelas Menores at the University of Salamanca (Figure 1), where it remains today.



Figure 1: El Cielo de Salamanca (The Sky of Salamanca). Pablo Recio [3].

### 3 The interpretation

Since its rediscovery, the missing two-thirds of the original painting and the lack of detailed documentation have fuelled speculation about its original content. When the painting is compared with a realistic representation of the celestial vault many discrepancies show up (e.g.: i) Libra is rotated with respect to Virgo, ii) The Sun should be located under the feet of Leo instead of over its head and the head of Hydra and Mercury should be between Virgo and Crater and not between Virgo and Boötes, iii) They don't match between the real stars

and their representations, although we do not know how they were in the original painting after the repainting's of 1506). One persistent question is whether the zodiacal configuration depicted in the painting was intended to represent a specific event. Rafael Laínez Alcalá suggested that it might symbolize the zodiac on the date of Prince Juan's birth (June 30, 1478), but he discarded this option because in the picture the Sun is in Leo, and on June 30 it was in Cancer.

In 1960, Ernst Zinner (1886–1970) visited the University of Salamanca and proposed that the painting represented the sky around August 6, 1475, to commemorate the inauguration of the University Library that it is incorrect, the library opened after 1479. Furthermore, on August 6, the Moon was in the sign of Virgo, but it is not represented in the painting. In 1992, the historian Gisela Noehles-Doerk visited Salamanca and consulted the astronomer H. W. Duerbeck to determine a configuration for the period 1474–1494 where the Sun was in Leo, Mercury in Virgo, and Venus, Mars, Jupiter, and Saturn were not in Leo, Virgo, Libra, Scorpio, or Sagittarius, as depicted in the painting. Duerbeck concluded that this configuration occurred between August 14 and 29, 1475. This interpretation was assumed as a fact. Different reasons have been given to justify why that date was chosen (planetary conjunctions, a very rare configuration, etc.). However, according to the criteria taught in the Chair of Astrology in the 15th century, when the painting was created, and as described by Abraham Zacut in his *Hibbur* (1478) the position of the planets should be calculated with respect to the zodiac signs, not to the zodiac constellations as Duerbeck did[3]. Then, on August 14-29, the Sun should be in Virgo and not in Leo.

The presence of the Sun in Leo, his house, and Mercury in Virgo (one of its houses) suggests that the painter placed the planets in their respective domiciles or houses. Additionally, Leo appears in the wheel of the cart that the sun is riding, its only domicile, and in the cart carrying Mercury, its two domiciles Virgo and Gemini are painted. We can apply the same criterion to the missing part of the mural: the planets would be in one of their domiciles, according to the *Tetrabiblos* (Ptolemy) and the *Tratado breve en las ynfluencias del Cielo* (Zacut), as shown in Figure 2. In 1759, shortly before the vault with the original painting was hidden, Juan González de Dios, a professor at the University of Salamanca, collected some inscriptions from the chapel. In some of them, the *Tetrabiblos* and *Centiloquium* are expressly quoted. That inscription further supports the idea of the astrologic contents of the vault [3].

## 4 Conclusion

In the World Heritage city of Salamanca there is a relatively small enclosure featuring a vault popularly known as "El Cielo de Salamanca" (The Sky of Salamanca). It has been suggested that the painting represents the position of the planets on a certain date of August 1475 but it is a mistake due to the position of the planets having been calculated in relation with the zodiac constellations and not with zodiac signs, according to the criteria of 15th Century. Different skies with the same configuration of the planets as in "El Cielo de Salamanca" could be found although that was not the author's purpose. Even choosing a random configuration, 16,807 different possible configurations (20-25 days per century) can be found, where planet

and zodiacal sign have the same configuration as in “El Cielo de Salamanca” [3].

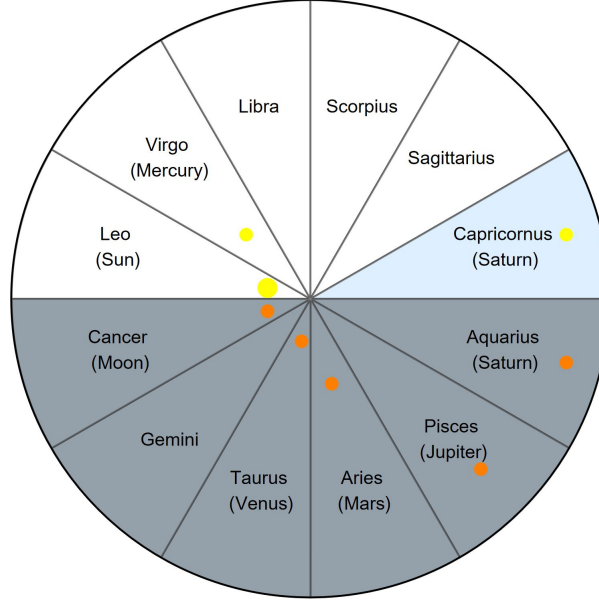


Figure 2: A possible solution to the position of the planets in the original vault “El Cielo de Salamanca” (Saturn could be in Capricornus or Aquarius). The background in white is the conserved part. The upper semicircle contains the daytime domiciles, and the lower semicircle contains the nighttime domiciles.

The planets are probably represented in their astrological domiciles according to the teachings of the chair of astrology in this period (e. g. , *Opus Astrologicum* by D. de Torres) . Also, the ptolemaic “...the forty-eight images” (Diego Perez de Mesa 1595) and the 7 planet of the original vault can be represented in the available surface as P. Recio has demonstrated[3].

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## References

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