

THE ZODIAC IN ANCIENT MOSAICS

Representation of Concept of Time

Derya ŞAHİN*

Roma döneminde altın çağını yaşayan mozaik sanatı halka açık yapıların yanı sıra refah seviyesi yüksek insanların evlerini de süslemeye başlamıştır. Mozaik döşemelerde yaşanan bu ciddi talep artışı, ustaları model çeşitliliğine zorlamış bunun sonucunda da, çok geniş bir repertuar ortaya çıkmıştır. Zodyak ve zaman kavramının kişileştirilmesi de bu yeni dönemde kullanılan motiflerden birisi olmuştur.

Bu çalışmanın amacı, nadir kullanılan kompozisyonlar arasında yer alan bu motife ait örnekleri bir arada incelemek, yer aldığı mekânları göz önünde bulundurarak mimariyle olan ilişkisini ortaya koymak ve böylece neden tercih edilmiş olabileceği sorusuna yanıt aramaktır.

Keywords: mosaic, Zodiac, god, goddess, months, days, synagogue

Catalogue

1 - Astrological Mosaic-Bir-Chana (Oikos). Tunisia Bardo Museum (Fig. 1)

4, 08 x 2, 06 m

The rectangular frames that appear within rhombuses at each corner of the central hexagonal frame inscribed within the six-pointed star are filled with animal figures like a horse, taurus, eagle and goat. In the center of all of these, there is a hexagon surrounded by six hexagons of equal size. Inside the central hexagonal panel a bust of a bearded man wearing a himation on his head (probably Jupiter) appears. In the panels around this bust are depictions of Saturn¹, Sol, Luna, Mars, Mercury and Venus as busts. Within the points of the larger star shape are hexagonal frames which contain depictions of Libra, as a set of scales, and Aries, as a ram motif directly opposite to the scales. Two fish figures within circular frames between two points of the main star represent Pisces, and likewise in similar circular frames around the main star, a bull represents Taurus, a scorpion figure represents Scorpio, a crab figure represents Cancer, and a goat represents the Capricorn.

2nd century (Stern), late 2nd century (Dunbabin)

Bibliography: Stern 1953, 184, fig. XXXIV. - Dunbabin 1978, 249, fig. LXIV 162 - Alexander-Ennaifer 1994, No 344-436, No 430, 123-129 fig. LXVI-LXIX.

2 - Days of the Week Mosaic- Orbe (Balnea of a Villa) (Fig. 2)

4.25 x 4.60 cm

The main mosaic in which there are Gods representing each of the 7 days of the week is formed with 13 octagonal medallions. On these medallions, each day of the week is depicted with gods representing the 7 planets: Saturn, Sol, Mars, Mercury, Jupiter, and Venus. Beside these, there are also medallions in which mythological scenes, formed by Narziss and Ganymed groups, are depicted. On the corner medallions, sea creatures with Nereids appear as well as personifications of seasons. On the margin friezes, however, hunting scenes are depicted. The pictorial area is surrounded with an animal frieze. In this frieze, in which different animals are shown to be running, there are animals

* Dr. Derya Şahin, Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Arkeoloji Bölümü, 16059 Görükle – Bursa. E-mail: dsahin25@hotmail.com

¹ This god is known as the main god of Africa indigenous partheon. Dunbabin 1978: 161.



Figure 1
Bir-Chana Mosaic



Figure 2
Orbe Switzerland

such as dogs, horses, swine and lions. On the central medallion, Venus is shown to be sitting on a fascia with an escort of two Eros looking towards a mirror which she holds with her right hand. Other medallions are ranked clockwise relative to this medallion. On the first medallion to the left of Venus, an old man with a sickle in his hand sits on a bank. It is the god of blessing - Saturn - whom two winged men escort. Sol and Luna who are depicted on a quadriga follow him. On the right of Venus, there is Mars, the god of war. Mars sits on a comfortable base by two Victorians. On the last 2 medallions Mercury and Jupiter are depicted. Mercury is recognized by his winged cap, money case, and caduceus. Here, the god appears on a goat. And lastly, Jupiter is depicted on his eagle with his thunderbolt bunch and wand. There are 7 popular planet gods of Rome, each shown in the 7-octagons in the center. This composition places emphasis on the 7 days of the week. Saturn represents Saturday and Sol represents Sunday. On the top three medallions Ganymed is kidnapped by Jupiter's eagle; Nereids over the Titans are depicted from left to right.

1st quarter of 3rd century

Bibliography: Gonzenbach 1961, 37-40 fig. 45-49.

3 - Hellín Mosaic- Madrid Archaeological Museum (Fig. 3-4)

13 x 13 m.

In the center of the mosaic that is surrounded by geometric and floral designs, 16 concave octagonal panels which are limited by dual rope belts exist (Fig. 3). Four of the panels in the center are occupied by the seasons . On the other 12 panels, from left to right, the names of the months appear. These octagons are linked by 9 circular motifs. In these circles, which are like medallions, there are

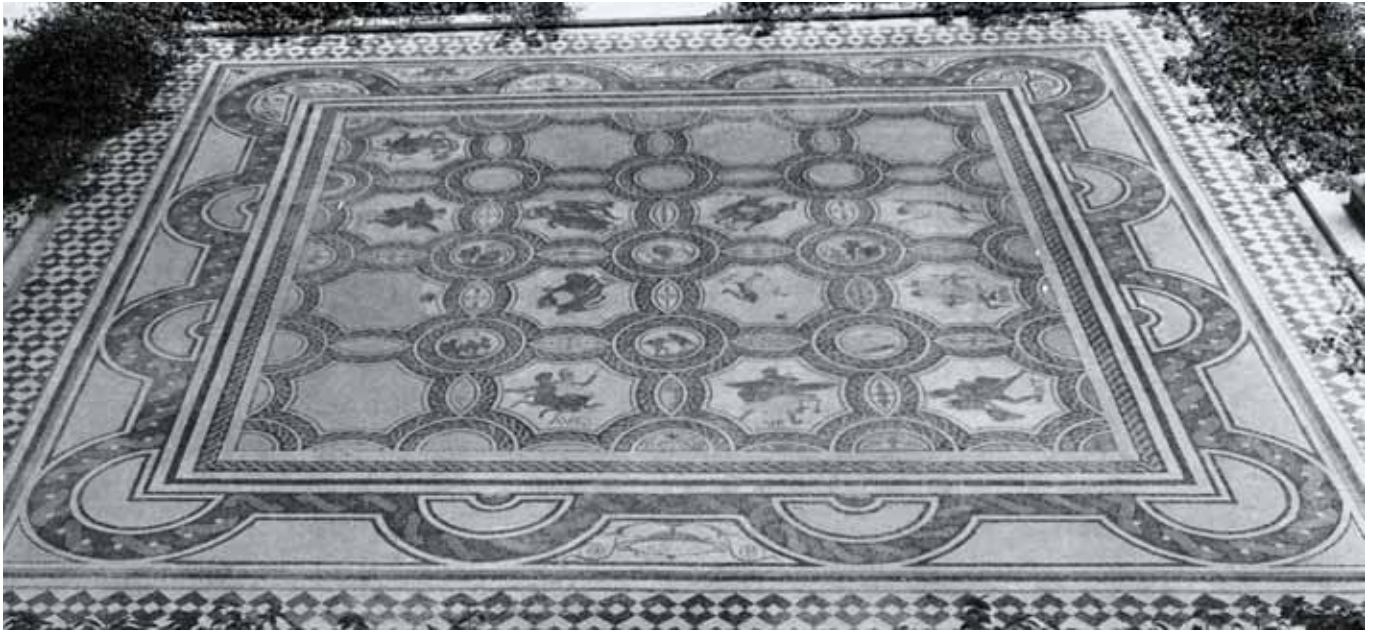


Figure 3
Hellín Mosaic



Figure 4
Detail from Hellín Mosaic

figures. In the octagons, the 12 gods of the Zodiac adverbs are evident. Four panels in the center of the mosaic include figures symbolizing the seasons. In one octagon, the first three letters of April in Latin, 'APR', is placed near the back feet of a man depicted in the form of Taurus who is carrying a half-naked woman. This depiction represents Taurus. In the depiction of May ('MAI') Mercury, holding a caduceus and wearing a petasos, gets on a genius which holds a twin in his hand. This symbolizes Gemini. The month of June is represented by a male figure whose head is surrounded with yellow-brown leaves. Due to semi-clamp motifs on this depiction, it represents Cancer. August is depicted with Diana wearing hunting clothes and holding a half-moon in her hand while she rides a centaur. As the agent of virginity and naivety Diana represents Virgo. September ('SEP') is the Vulcan that is shown on a winged genius with a helmet on his head and a fork in his hand. The genius holds a scale and therefore represents Libra. In October ('OCT') a goddess who has a helmet on her head appears on a Genius holding a grape basket in his hand. On the head of the genius there are two scorpion clamps and, therefore, this octagon represents Scorpio. The grape basket in her hands represents the grape harvest which is the most important agricultural activity of the month. In the agrarian calendar, Goddess Minerva is also known as the protective goddess of the month². In November ('NOV'), the Goddess is depicted on a centaur which holds a bow in its hand. This composition symbolizes Sagittarius. The goddess appearing in this composition can be interpreted as being Vesta. She can also be associated with Isis due to the feasts celebrated in this month³. December ('DEC') is shown with a goddess on a goat legged centaur. She is probably Minerva of the Olympus Gods.

1st half of the 3rd century AD

Bibliography: Stern 1966, 40-59.

² Long 1987: 298.

³ Long 1987: 298.

4 - Zodiac Mosaic-Sentinum-Sassoferrato, Umbria (Fig. 5)

Munich Glyptothek Museum

5.20 x 5.20 m

The mosaic is located in a ceremonial room in a Roman Villa. In the center of the pavement that is enclosed by chevrons, waves and crossed triple rope belts, Tellus appears. He holds a crown made from different stems of fruits and cereals and wears a himation that leaves the top of his body naked. Of the two that flank either side of the image, He leans toward antithetic tree to the right. Around Tellus, small figures of children wearing crowns made from ear, grape and flowers who symbolise the seasons appear. The figure symbolizing the winter is depicted in contrast to the group coiling totally into his himation. In the background of the composition, the personification of the year, holding the Zodiac circle with his right hand, is depicted with small wings in the middle of the head of Annus-Aion. Annus-Aion is shown here with a naked, athletic body. His left foot is on the Zodiac circle and he has considerably rich and gorgeous hair. The Zodiac belt in his hand begins with Aries and continues with Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius and Pisces. Signs of the Aries and Sagittarius are placed in the wrong order, which is most likely a mistake of the artist.

Date: 200/250

Bibliography: Wünsche 2007, 164 ; Simon 1990, 208-209 fig. 11.

5 - Helios Mosaic-Sarmsheim-Bingerbrück Münster (Fig. 6-7).

18, 90 x 13, 70 m, depth of the apse: 5, 35 m, central panel: 2, 80 m²

The pavement is designed apsidal, naturally, because it takes place in an apsidal planned space (Fig. 6). The apse part is adorned by rhombuses standing vertically and colored with reverse colors, and the surrounds of the main composition are adorned by different geometrical designs that are placed within squares the same size as the rhombuses. In the center of the mosaic, a depiction of the God Sol on a vehicle pulled by a quadriga appears. A piece of cloth like a chlamys tied to his neck flits behind and shows that the journey is relatively fast (Fig. 7). The head of Sol is surrounded with a beam of light and he holds a wand with his right hand. Environs of the god are surrounded by Zodiac signs such as Gemini, Taurus, Capricorn, Aries, and Cancer that are preserved. The blank corner sections of the circle are filled with oinoche which is placed in the middle of the north-east corner and has antithetically placed fish forms around it; the crater in the south-east corner shows fish forms mirrored to those in the north-east. The depictions of the top right and bottom right corners could not have been protected.

Mid 3rd century

Bibliography: Wirth-Bernards 1939, 86-87 Fig. 84/2-87.

6 - Monnus Mosaic - Trier, Rheinisches Landesmuseum (Fig. 8-9)

5, 75 x 4, 43 m

The outer border of this mosaic is formed with wave and guilloche motifs. Just outside this border design on the margins approximately 12 squares, of which only one could be protected, appear. Inside this frame, a lion figure symbolizing



Figure 5
Zodiac Mosaic

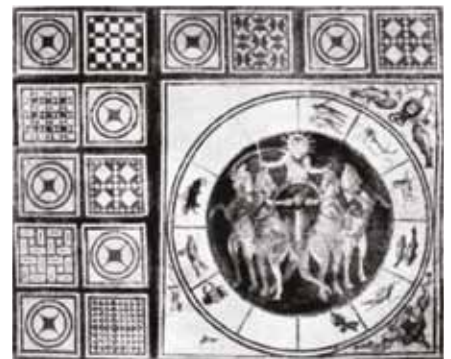


Figure 6
Münster Mosaic – General view



Figure 7
Münster Mosaic – in detail

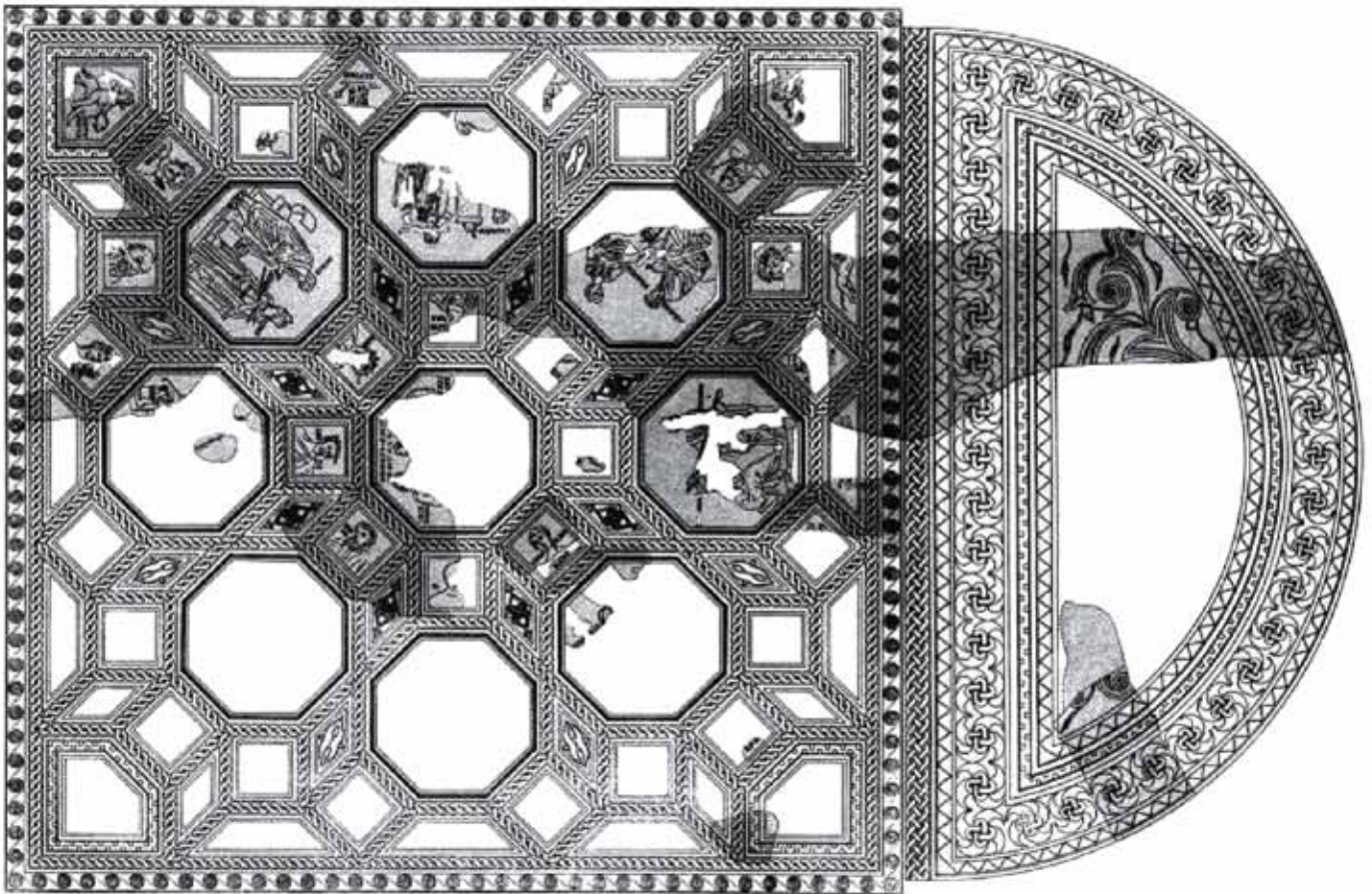


Figure 8
Monnus-Trier

Leo - one of the Zodiac signs - appears (Fig. 8). It is not obvious, however, whether the figure is an animal sign or one that marks the Zodiac. On the mosaic, there are 12 circular panels which are filled with different busts (Fig. 9). In the central part of the mosaic there is an octagonal frame which bears the signature "MONNVS FECIT". The composition is formed by a main square plan on which there are ten octagonal medallions. Around these medallions there are square and rhombus panels that are surrounded by dual pattern motifs. In the original, there are young male figures symbolizing the seasons in each corner. Among these figures, only the autumn personification in the southwest corner has been preserved. The figures on the top right and bottom right are totally damaged, and of the one on the top left, only the head of the figure remains. On the pavement, seasons escort the gods. Only 8 of the panels symbolizing the months remain and on the panel showing May, only part of the caduceus, which is a symbol of Mercury, remains. June is depicted with a goddess who has a diadem (probably Juno), whereas July is depicted with Neptune holding his trident. Following, is August with a red tunic and beardless god/goddess (probably Ceres or Diana), September with bearded Vulcan who is depicted with his tongs, October with Bacchus, whose head is adorned with vine leaves and who has a thyrsus behind his shoulder, and November with Isis holding a sistrum in her hand. It is obvious that these gods and goddesses are shown as the month Gods and goddesses. Inside of the octagons, names of the months are also written as abbreviations.

3rd or 4th century, the end of 3rd century (Hoffman-Hupe)

Bibliography: Goethert-Polaschek 1979, 69-96 - Hoffmann (ed.) 1999, 138-141 fig. 63-69 - Parlasca 1959, 41-46 fig. 42-47

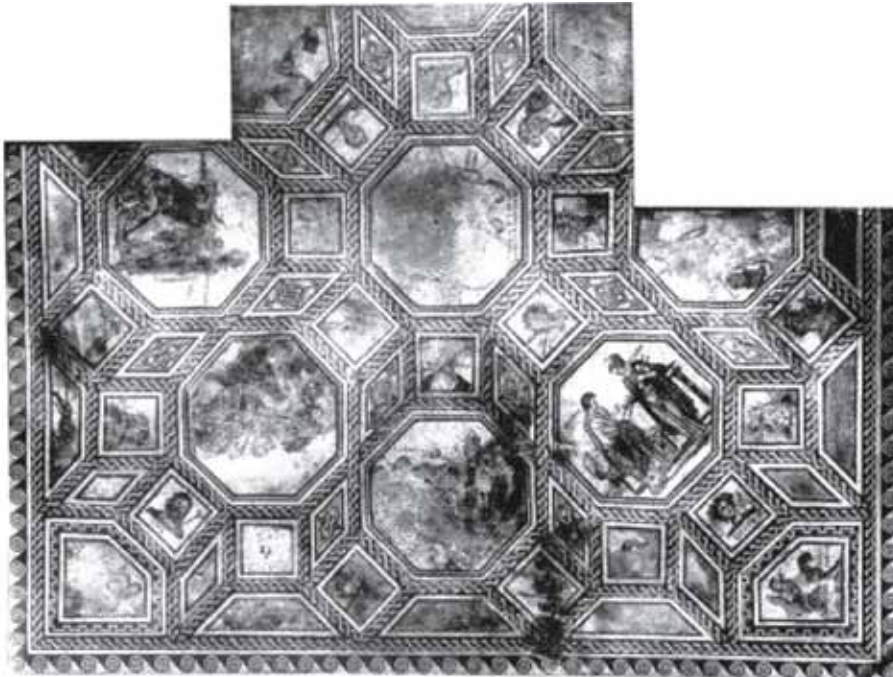


Figure 9
Monnus-Trier

7 - Hippo Regius, Zodiac Mosaic, Africa Proconsularis, Algeria (Villa). Hippo Museum (Fig. 10)

4,10 x 3,09 m

The mosaic is surrounded by a garland border. In this huge frame, theater masks that are used in comedy or tragedy occur inside circular Garland frames and amusing naked women figures, of which three of four remain, appear inside oval frames. These female figures should not be considered to be personifications of seasons because they do not have any adverbs referring to the seasons. These women have wreaths on their heads and bracelets on their arms and they are wearing sandals. The woman in the top right holds a lute and another figure just below of this holds a strophium. The figure in the bottom left is shaped like a torso with only the arms and feet of a woman wearing a dress of green flowing fabric. In the central panel, Annus-Aion, depicted as young and half-naked, stands and holds a Zodiac circle in his right hand. On his left hand, he holds a cornucopia that is full with vine leaves. In the background of this panel, vine leaves, seasonal fruits, flowers, ear bunch and olive offshoots appear.

Late 3rd century or early 4th century (Dunbabin), 1st half of the 4th century (Parish)

Bibliography: Dunbabin 1978, 249 fig. LXII. – Parrish 1984, 194-196 No 46 fig. 61 b-612.

8 - Synagogue Zodiac Mosaic – Hammath Tiberius⁴ (Fig. 11-12)

4, 50 x 9 m.

On the central panel of this mosaic, which forms the pavement of a synagogue, there is a Zodiac circle, in the centre of which appears the sun god (Sol or Sol Invictus) in a sun chariot (Fig. 11). Female busts of personifications of the



Figure 10
Hyporegios Mosaic

4 City of Tiberias is one of the four sacred Jewish cities (others are: Jerusalem, Hebron, Safad).

Figure 11
Hammath Mosaic



Figure 12
Hammath Mosaic



seasons are placed in the corners of the frame surrounding the Zodiac circle (Fig. 12). The names of the seasons and Zodiac signs are written in Jewish alphabet. Among these, the personification of Summer is shown with a sickle in her right hand and ear bouquets on her left shoulder. Just above this depiction, Spring is shown with flowers in her hands and on her head. To the right of this, Winter is shown with a hymation on her head and an amphora on her left shoulder. On the panel above the depictions of the zodiac, 7 armed oil lamps, a smoke oar, a Jewish chancel placed between an Aries horn and a palm offshoot, all of which are defined as mediums used in liturgies, appear. Here, the Zodiac signs that are preserved (Libra, Aquarius, Gemini, and Virgo) are symbolized with adverbs held by human figures. Other Zodiac panels show Scorpio with a crab, Pisces with a fish, Leo with a lion, Taurus with a bull and Aries with an Aries. Only some parts of these are preserved.

4th century AD (Ovadiah)

Bibliography: Ovadiah - Ovadiah 1987, 63 fig. LXV-LXVIII, CLXXIX-CLXXXII. – Dunbabin 1999, 189-190 fig. 202.

9 - Beth Alpha Zodiac Mosaic. Beth Alpha - Israel (Fig. 13)

3.55 x 3.75 m

This mosaic is composed with the sun god Helios and the Zodiac circle in the center and seasons busts placed in the corners. Helios/Sol, whose head is surrounded by a beam of light, is placed between four difficultly defined animal figures made in a geometrical form. These animals are Helios' horses that we know from earlier periods' examples. In the background of this depiction is the moon and stars indicates that the journey is in the sky. On the third panel in the entrance, sacrificing Isaac is chosen as the issue. The Zodiac circle begins with a crab depiction that symbolizes Cancer. Among the Zodiac adverbs Libra, Aquarius, Gemini, Virgo are symbolized with adverbs that are held by human figures. Other Zodiac panels are depicted as Scorpio with a crab, Pisces with a fish, Leo with a lion, Taurus with a bull and Aries with an Aries and only some part of them are preserved.

End of 6th century

Bibliography: Sukenik 1932, 35-40, pl. 10-18- Dunbabin 1999, 191 fig. 203. - Maghess 2005, 4.

The common point of the 9 mosaics mentioned above is that all of them are comprised of motifs personifying the concept of time. The earliest example of this motif seen in different geographies is the Astrological Mosaic from Bir-Chana which dates back to the 2nd century or late 2nd century (Nr. 1). Then, in chronological order, the Orbe-“Days of the Week” mosaic from the first quarter of 3rd century (Nr. 2), Madrid (Nr. 3) and Munich Mosaics (Nr. 4) that date to the first half of the 3rd century, the Munster Mosaic that dates back to the mid 3rd century (Nr. 5), the Monnus mosaic (Nr. 6) and the Hippo Regius Zodiac Mosaic that both date back to the late 3rd century (Nr. 7). After these mosaics, among later examples which are found in Synagogues, are the Hammath Tiberias Mosaic which dates to the late 4th century (Nr. 8) and the Beth Alpha Mosaic of the late 6th century (Nr. 9). In accordance with this observation, it is obvious that Zodiac motifs began to be used on mosaic pavements in the 2nd century, became popular in mid-3rd century and were used until the end of 6th century.



Figure 13
Beth Alpha Mosaic

On the Hellín Mosaic, twelve gods on animals appear with their symbols. The month of April is depicted with a Taurus formed male figure carrying a woman probably Venus which is half-naked; May with Mercury wearing a petasos while carrying a caduceus and a Genius holding a Gemini in his hand; June with a male figure representing Cancer; August with the goddess Diana (Diana represents Virgo), September with Vulcan on a genius with his blacksmith's tongs, holding a Libra in his hand; October with Minerva on a Genius holding a grape basket; November with Vesta or Isis on a centaur holding an archer; and December with a goat-legged centaur, symbolizing Capricorn, carrying the goddess Minerva. When we look at the Monnus Mosaic we see that there are only 7 months preserved. Among these, Mercury is perceived as the patron god of May whereas Juno is June's protector, Neptune is July's, Ceres/Diana is August's, Vulcan is September's, Bacchus is October's and Isis is November's.

Actually, as understood from the Hellín Mosaic (Nr. 3), divine symbols prevail in Zodiac depictions which suggests that people tended to be dependent on a regional calendar rather than an agrarian one⁵. Veneralia was celebrated in April. May took its name from Mercury's mother Maia and feasts in honor of Mercury and his mother were celebrated in this month. Diana Natalis was celebrated in August; however, with time it began to be celebrated in September. In the Trier Monnus mosaic (Nr. 4) Vulcan is shown as the protector god of September. Stern asserts that the Armilustrum feast was in October and there

⁵ Stern 1966: 53-55.

was also another celebration in honour of Isis from 28th October to November⁶. In Nr. 6, Isis is shown with sistrum, proving this assertion. In the Hellín Mosaic, it is attempted to be expressed as Venus with Taurus, Vulcan with Libra, Mercury with Gemini, Mars with Scorpio, Diana with Virgo, Isis with Sagittarius and Minerva with Capricorn. Here, figures carrying the gods have wings which is very similar to the Orbe Mosaic (Nr. 2) in which Jupiter is depicted on an eagle. In this pavement Mercury gets on a goat just like Venus. V. Von Gonzenbach indicates that this mosaic is taken from a ceiling design⁷.

It is a striking fact that motifs of seasons became frequent from the mid-2nd century AD⁸. The Zodiac was combined with busts of the seasons which were placed in corners Nr. 3, 4, 6, 8 and 9 or with figures of children placed in the main composition just like the Munich Mosaic (Nr. 4). The season busts that are placed into corners are especially appropriate for use in the corners of diagonal and rectangular rooms. Nevertheless, it is necessary to ask the question of whether using these motifs is a result of a strong custom or if there are any other reasons.

Considering these motifs of time as a collective (except the mosaics in Nr. 3 and 6) it can be assumed exactly what kind of building or structure each kind of mosaic can be found in. From the analyzed mosaics, those in Nr. 1, 2, 4, 5 and 7 were used in houses whereas the mosaics in Nr. 8 and 9 were used in Synagogues. According to archaeologists' statements about which spaces these mosaics are used within, the Orbe Mosaic (Nr. 2) can be found in a balnea of a Roman Villa. The mosaic in Nr. 5 belongs to an unknown setting but covers an Oecus of a Roman Villa (Nr. 1). This information suggests that the choice of this motif most likely depended on decorative purpose rather than religious belief. After all, it is a known fact that the popularity of astrology increased in the Roman period and Augustus and Tiberius used astrology for some purposes unofficially⁹. Besides that, Israeli mosaics (Nr. 8 - 9) that date back to the late 4th century and 6th century are motifs typically preferred in Synagogues¹⁰. The appearance of this composition in a sanctuary obviously shows that it expresses a religious meaning rather than a decorative purpose. Before answering the question of whether this preference is a coincidence or if the motif has a religious meaning, it would be useful to examine when the calendar concept emerged and what its purposes of use are.

Zodiac is a name that is generally given to the belt on which the symbols of Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricorn, Aquarius and Pisces are found. However, until today, a survey of why the Zodiac motif is preferred in Mosaic art has not been made.

6 Stern 1966: 57.

7 Gonzenbach 1961: 181-194.

8 Dunbabin 1978: 158-159.

9 Warrior 2006: 52-53 fig.41.

10 Weiss 2005: 1119-1129. Weiss emphasizes why this composition is preferred in synagogues by giving examples of mosaic pavements in synagogues in his article. It is obvious that, aside from the use of the same 'time' criteria, Christianity purposely did not employ like depictions in an attempt to undermine the impacts of poly-theist religions. This is partly different in religious places of Jewish culture because there are Zodiac depictions found in synagogues. This is explained with different reasoning. Weiss states in his article that there is a parallel to be drawn between the Jewish calendar and the Zodiac. Besides that, one other reason given is that the planning of liturgies in a year, or motifs, can be preferred as the symbol of universal power. It can also be explained by reflecting on Pagan religion in which the non-existence of Zodiac motifs is perceived as an effort to eradicate everything related to pagan religions in Christianity, whereas the existence of Zodiac motifs can be explained with reference to the Zodiac's twelve constellations and twelve Jewish tribes, or with the twelve entrance doors of Jerusalem that is mentioned in St. John's Bible. As no belief or custom can be destroyed in a short time, this situation may be accepted as a reflection.

A review of the concept of time as it appears throughout history would be useful before starting on the topic of the Zodiac. The concept of time has taken an important place in the history of humanity. With the Sumerians' interests in astronomy, the passing of time was originally considered to be a cycle of harmony and balance and thereby daily life was ordered within this repeating system. In this context, humankind primarily developed subjective systems such as dividing time into equal parts to make it possible to understand and direct. There is no coincidence in the order of days, months and years. All of these systems completed their development as a result of astrological surveys that were done in different periods. The weekly order of days, as we know today, is rooted in Antiquity and began to be used from the 2nd century BC. This system is a derivative of week systems from different cultures with some additional changes.

Actually, as an abstract concept, the Zodiac has become a concrete concept through personification. Some star families in the Galaxy – Via Lactea which is seen as a belt in the celestial sphere and named “Divine Star or Animal Way” - are entitled by metaphors and, from these, the personified depictions that now comprise the Zodiac emerged. The underlying fact of Zodiac is the concept of “Twelve Gods”. The names of these twelve gods are used as adverbs for the months of the year or as symbols for them.

The Zodiac is said to be rooted in the Greek Civilization, however there are indicators which suggest that the emergence of Zodiac began in earlier periods. The “twelve gods” concept forms basis of the Zodiac. Names or adverbs of these twelve gods are given to months or are used to symbolize them. The common view about this is that the origin of Zodiac comes from Egypt and Mesopotamia¹¹. Aside from this, it is necessary to consider the twelve gods of Hittites and Lycians¹². The meeting of the legion of the gods with goddesses (these goddesses walk in the end of the legion) is depicted on the “A” part of the Yazılıkaya Monument. However, it is supposed to differentiate partly the concept of ‘twelve gods’ of Hittites from the ‘twelve gods’ concept of Greek and Roman cultures.

On Linear B tablets that date back to the late Bronze Age, the twelve gods are not mentioned as a group¹³. It can be concluded, then, that that the twelve gods concept still did not mature in Mycenaean period. There is not any evidence

11 In Mesopotamia, twelve gods are shown as determinants of months. However, occasionally a month can be shown with adverbs belonging to more than one god which means that the same god symbolizes more than one month. Although the ‘twelve gods’ concept of the Zodiac does not correspond totally to Olympus’ twelve gods, the striking similarities between them should be considered. For instance there are parallels between Ishtar and Demeter/Ceres, Marduk and Ares/Mars, and Sin and Apollo. For detailed information look at Reiner-Pingree 1981: 81-82. For Egypt, look at Raevsky 1998: 299-305. Ancient Egyptians were aware that the environment directly affected their lives. The sun’s circle, the moon, the stars and the Nile’s flow were crucial for them. They tried, through seasonal feasts, to incorporate a seasonal system in their lives. It is a known fact that there are a minimum of two different systems in Egypt. One of these systems was the calendar of spherical events, and the other was a calendar system to organize worldly matters. This calendar is also named ‘the public calendar’. To understand this calendar one is assumed to know the Nile River too, Because there can be no Egypt without the Nile River. After the harvest time, which is also the warmest season in Egypt, the period which Egyptians fear most begins. The river has its highest amount of shoals of the entire year, then rises suddenly. In this period, the color of the river becomes reddish-brown because it carries the rich soil of Africa. The Egyptians named this ‘Akhet’. This flood lasts for four months and afterwards the water subsides and the color of soil remaining turns black. The soil is then extremely fertile, and agriculture on it’s land can produce high yields. For detailed information about this look at Parker 1950: 32 vd. Long emphasize on Egyptians’ month Gods and their existence especially in Egyptian art in 18th Dynasty in his study. Long 1987: 339-344.

12 Akurgal 1962: 110-113 fig.19.

13 Gérard-Rousseau 1968: 256-260; Chadwick 1973: 410.

indicating that the twelve gods' concept originates in earlier periods than the 6th century BC in Greek Civilization. With the exception of the altars in Olympia, it is observed that the concept emerged later in Greek cities¹⁴. The gods mentioned are Zeus, Hera, Poseidon, Athena, Aphrodite, Artemis, Apollo, Hermes, Hephaestus, Demeter, Ares and Dionysus. Hades, however, does not appear among these gods because he is the god of the underground and he is not respected as one of the gods of Olympus. If we look at the piece¹⁵ of Herodotus, we see that the Egyptians divided their year into the seasons and the twelve months by looking to the stars and making calculations based on their observations. He writes that Egyptians calculated the year better than the Greeks and he adds that the Greeks inserted an additional month biennially to counterbalance the year whereas the Egyptians insert 5 days to the year through counting each month as 30 days. In this way, seasons complete their natural cycle. In addition to this, he indicates that originally the Egyptians used 12 names for their great gods – a concept the Greeks then took from the Egyptians. The functions of the gods, feasts honoring the gods and also seasonal cycles played important roles in the emergence of the Attic Greek calendar. In his study, Long gives place to a table in which he adds Zodiac signs as well as Attic months and feasts¹⁶.

Attic months & Feasts

<i>Months</i>	<i>Gods signed by months</i>	<i>Great Feasts</i>	<i>Gods honored with great feasts</i>	<i>Feasts</i>	<i>Zodiac/Seasons</i>
Hekatombaion	Apollo	Panathenaia	Athena	Theoria-Panathenaic ship	Leo, Sirius, fall
Metageitnion	Apollo			Herakles=Kynosarges Herakleias	Virgo
Boedromion	Apollo	Eleusinian Misteris	Demeter&Kore	Epebe=Eleusis legion	Chelai (Claws)
Pyanopsiyon	Apollo	Thesmophoria	Demeter&Kore	Pyanopsia, Oschophoria, Thesmophoria	Scorpio, Winter
Maimakterion	Zeus				Plowing&Sowing Sagittarius
Poseidon	Poseidon	Rural Dionysia	Dionysus	Theoria, Judges for Rural Dionysia	Capricorn
Gamelion	Zeus & Hera	Lenaia	Dionysus	Lenaia, Hieros Gamos	Missing
Anthesterion	Dionysos	Anthesteria	Dionysus	Missing	Missing
Elaphebolion					
	Artemis	Urban Dionysia	Dionysus	Theoria, Sacrificia for urban Dionysos	Aries
Mounichion	Artemis			Artemis Mounichia	Taurus, summer
Thargelion	Apollo				Gemini
Skrophorion					
	?	Skira	Athena, Poseidon, Helios; Demeter&Kore	Bouphonos of Dipolieia	Cancer

14 For detailed information about this topic look at: Long 1987: 154-157. In particular the twelve gods of Altar in the Agora of Athens which dates back to 522/521 BC can be given as an example.

15 Herodotos 40.

16 Long 1987: 178.

Aristotle advocates that the earth is constant and all other cosmic elements turn around it in his piece named “Over the Canopy”¹⁷. In doing so, he also draws on the concept of time through his dissertation.

The relationship between the Greek gods and the months of the year appeared soon after the Macedonians’ conquered Egypt¹⁸. All late inscriptions write that ten months are expressed as Olympian gods (Aphrodite, Ares, Artemis, Athena, Zeus, Demeter, Hephaestus, Hermes, Hestia and Poseidon). In his work named “Acts”, Plato states that “an ideal city should organize feasts in the honor of one among 20 gods in each month.”¹⁹. Under such a system the order of months could not be retained and it is therefore almost impossible to say that there is a consistency between the system that is brought with Demetrius and agrarian calendars²⁰.

We learn about the Etruscans’ twelve gods from late Roman inscriptions²¹ and, logically, If Etruscans came from Anatolia, then the twelve gods they brought with them should be related to the Hittites. However, evidence shows that Etruscans’ twelve gods do not exist together. Considering an adaptation of these gods from Greek culture is more reasonable. When we look at other basic studies about this issue, we find information about the gods related to the Zodiac that is dates back to the Julius Claudius Period, especially in a work of Manilius named “Astronomica”²². “MANILIUS”, who devotes his working to Emperor Tiberius, gives places to the twelve gods in a similar system and he orders each of the gods as a sign of months. During months, horoscopes arise and therefore each god is seen as “the protector” of a month.

It is widely acknowledges that Roman months are related to the gods²³. Religious beliefs and courier animals play especially important roles in the personification of the Zodiac. On the other hand, in agrarian calendars, the Zodiac is associated with agrarian activities and the planets are associated with animals.

As mentioned above, the Roman system should be correlated with the Hellenistic world, especially considering the intense relationship that Caesar had with Egypt. Roman gods associated with the months of the Reform Calendar

17 Aristotle 1, 8, 17-21. In his thesis named geocentric model, the way that the planets orbit the Earth form an imaginary routes. People divided the sky into simple parts just like they did on Earth e.g. for navigating oceans successfully. They appropriated two poles in the sky too: North or Arctic pole and South or Antarctic Pole. They gave place to an equatorial line which is perpendicular to the axis between the poles and passes just in the middle of the earth between them. The Zodiac which replaces the ecliptic system of earth in the sky intersects the equator at two different points and, therefore, six of the Zodiac’s six horoscopes appear to the north of the equator towards other six appear to the south of the equator. The northern-most horoscope of the Zodiac is Cancer, and Capricorn exists in the southern-most part.

This thesis, however, collapsed with the Heliocentric theory of Copernicus in his book, “De Revolutionibus Orbium Coelestium” (On the Revolutions of the Heavenly Spheres by Nicolaus Copernicus of Torin 6 Books) of 1540. In his book, Copernicus explains that the earth and other planets revolve around the sun. This Heliocentric theory is known as the Copernicus Theory today. These revolutionary ideas were explored and confirmed after his death. The reason of this is that he was not certain and he hesitated because of the Church. For detailed information look at: Rosen 1943: 457-474. Moreover, afterwards, Galileo Galilei confirms this thesis in his piece on sun spots. 12 Akur-gal 1962: 110-113 fig.19.

18 This conception that is seen in Egypt was brought by Demetrius Poliorcetes in 293 BC into the Hellenistic World: Long 1987: 212-216.

19 Platon 828 B-D

20 Long 1987: 216-217.

21 Weinreich 1924-1937: 818.

22 Manilius 4, 744-817. In this chapter, Manilius emphasizes especially on geography of the Zodiac.

23 Long 1987: 235-305..

that Julius Caesar created in 45 BC match with those of the Egyptian sun year (in same date)²⁴. In another system, which is based on the grounds the celebration of feasts, god depictions are also used²⁵. The earlier example is the floor of Candelabrum from Rome²⁶. Here, three Olympus gods related to the summer months are depicted. These gods are on some kind of livings which are also correlated with these months. For instance, Neptune is shown over Cancer, Jupiter is shown over Leo and probably goddess Ceres is shown over Virgo.

Depictions of the holding of the Zodiac cycle (as a circle) in hand is the same in Nr. 4 and Nr. 7 of the Hippo Regius mosaic of North Africa. On the other hand, in the Monnus Mosaic (Nr. 6) gods surround mosses. Statements of months should be connected with feasts honoring gods or goddesses. For instance, Vulcan and Venus look over April and September (However they are shown as protector gods of June in agrarian calendars), in Nr. 3 and 6 they are moved to May. On the other hand Diana is moved to August from November and furthermore this month is her birth month. Neptune is moved to June from February and in February “Neptunalia” was celebrated.

On the Hellín Mosaic (Nr. 3), Mars shows the October. In the Monnus Mosaic, it is the Bacchus-the god of vintage. The impacts of Egyptian Isis and her feast is placed on November in Nr. 3 and 7.

There is no standard method of depicting of the gods. They can be shown as busts like in the Monnus Mosaic (Nr. 6) or as godlike figures on Zodiac symbols just like in the Hellín mosaic (Nr. 3). Additionally, as seen in Nr. 8 and 9, Helios, who is found in the center of the motif, is integrated with sun god depiction. However, as can be seen in other artefacts with similar depictions, occasionally Mithras²⁷, Tyche²⁸, Kybele²⁹ were also used in place of Helios. In catalogue 5, Helios is depicted with beams of light around his head as he rides his golden vehicle through the sky like in Nr. 8 and 9. In Nr. 4 and 7, Annus-Aion holds

24 For instance the god Liber who appears in Pompeii Medallions is associated with Bacchus and therefore with Dionysus. That is to say thtLiber, in Roman art, is also is Bacchus. This depiction is named Liber/Bacchus. Young Liber/Bacchus is shown as especially long-haired and slightly feminine, with a crown his head. Liber is mentioned as the god of agriculture and abundance in Roman Mythology (that is to say he is not the god of wine). Look at: Simon: 126-135. In ancient calendar depictions, Liber symbolizes the “Liberalia” of the 17th of March. Liber/Bacchus is already shown as the representative god of March in Pompeii Medallions. He was worshipped especially in the early 5th century BC with Ceres and Libera. At the time that the Bacchus cult began to spread in Roman culture in 2nd century BC, it received hostility and he was subsequently embraced as the new Dionysus. Grape or Kantaros do not exist among Liber’s adverbs. Long 1992: 488. In many of the calendars that are known, March is not shown with “Liberalia”, but, in Menelogia Rustica it takes place in the list of feasts that are celebrated in March. Scullard: 91-92; Long 1987: 232-284.

25 For instance, an official celebration organized in honor of Augustus is mentioned, 16-17 January, 23 September (celebrated as the birthday of Augustus), 3-12 October the time for the “Augustalia” feast (In this date Augustus returns from Syria, and the senate proposes an annual celebration at this time and 10-days-holiday is declared for the Roman public). For Roman feasts also look at: Jocelyn 1969: 3-12.

26 Long 1987: 38-39 fig. 99-101; Cain 1985: 119-122, 170-171 No. 62: It is dated to Augustus times.

27 Campbell 1968: 361-362..

28 Tyche appears in the center of the Zodiac belt in this depiction. Besides that, in Syria, Jupiter Heliopolitanus features the god of the days of the week by combining two gods. Long 1987: 304. The Tyche relief surrounded by the Zodiac from Khirbet Et-Tannūr is considerably important. This relief was found in an ancient area that was discovered during a trip to Jerusalem by the School of America-Jerusalem headed by Dr. Nelson Glueck for the school’s east researches in 1937. It is thought that the relief belongs to Nabataeanls (Nabataeans are originally a nomadic tribe and emigrated from Arabian deserts in 4th century BC). This relief is accepted as unique in Archaeological History. Six Zodiac adverbs are placed clockwise around Tyche. On the reverse, the other six adverbs of the Zodiac are found. Look at: Freeman 1941: 337-341.

29 Goddess Kybele is also associated with the Zodiac. In the Eastern Mediterranean World, Cybele is associated with the twelve gods as the mother of all gods. Look at: Long 1987: 284-285.

the Zodiac like a circle in his hand. Annus-Aion is known as a god symbolizing good destiny³⁰.

The Hellín months (Nr. 3) and the form of the Monnus Mosaic (Nr. 4) show a consistent form around a central panel. This reminds us of Pompeii Medallions which are also circular³¹. The importance of the emphasis on depictions in circles is that it shows an indivisible and infinite conception. The Monnus Mosaic is found nearby to the imperial palace. On the other hand, the Hellín Mosaic in Spain is in a region far from the Capital City. A serious professionalism draws attention to the design of mosaics. The selections of gods here are closely related with feast celebrations in Rome. The Latin Abbreviations of months' names are used near depictions. Flying winged figures on the pavement suggest that the design of the pavement was originally planned to be a ceiling decoration³².

Days of the week are depicted on the Orbe Mosaic (Nr. 2). Gods symbolizing the days of the week or planet gods are similar to the 12 gods. On Pompeii medallions, both groups are shown with Zodiac signs³³. Actually, on the pavement Nr. 1 that exists in Bir-Chana, planet gods symbolize the 12 gods. Jupiter appears in the center and, in panels around him, Saturn, Sol, Luna, Mars, Mercury and Venus depictions are represented as busts. On the outer parts of these panels Zodiac signs draw attention.

In general, month gods/zodiac issues are used in luxury spaces on great, colorful, highly qualified pavements.

Most of these designs are planned as one copy and demanded by rich people in important cities of the empire. These people most likely preferred these designs in their places to protect them from the dangers of daily life (natural disasters, war deficits and political confusions) and to be presented with a good future by gods. The message given from the month gods is of the permanence of the divine control over earth and the seasons. The Zodiac also has an iconographic meaning that is related to the seasons and 12 gods concept. The reason at the base of this is that these depictions symbolize abundance and blessing which were the most important facts of human life.

It is likely that the Zodiac depictions that are frequently used in different branches of Art were not popular in mosaic art if we look at the examples. Even the typical Zodiac form that was used in Synagogues (Nr. 8-9) was used in different artistic styles in earlier examples, however, this was not reflected in mosaic art.

30 Parrish 1984: 196.

31 Long 1987: 280.

32 For comparison look at: Switzerland Orbe Mosaic, the gods showing the days of the week, look at: Gonzenback 1961: 184-194 fig. 64-67.

33 Long 1987: 280.

Bibliography

- Akurgal 1962 E. Akurgal, *The Arts of the Hittites*, London.
- Alexander – Ennaifer 1994 M. A. Alexander – M. Ennaifer (ed.), *Corpus des Mosaïques de Tunisie, Thuburbo Majus II, Fasc. 4*, Tunus.
- Aristotle Aristotle, *On the Heavens*, J.L. Stocks (transl.). Internet Classics Archive, <http://classics.mit.edu/Aristotle/heavens.html>
- Bittel 1970 K. Bittel, *Hattusha. The Capital of the Hittites*, New York.
- Cain 1985 H. Cain, *Römische Marmorkandelaber*, Mainz.
- Campbell 1968 L. A. Campbell, “Mithraic Iconography and Ideology”, *EPRO* 11.
- Chadwick 1973 J. Chadwick, M. Ventris – J. Chadwick (eds.), *Documents in Mycenaean Greek*, Cambridge.
- Dunbabin 1978 K. M. Dunbabin, *The Mosaics of Roman North Africa*, Oxford.
- Dunbabin 1999 K. M. Dunbabin, *Mosaics of the Greek and Roman World*, Cambridge.
- Freeman 1941 R. B. Freeman, “Sculpture in the Cincinnati art Museum”, *AJA* 45, 337-341.
- Gérard-Rousseau 1968 M. Gérard-Rousseau, “Les mentions religieuses dans les tablettes mycéniennes”, *Incunabula Graeca* 29, 256-260.
- Goethert-Polaschek 1979 K. Goethert-Polaschek, “Das Gebäude mit dem Monnus-Mosaik, Festschrift”, in: *100. Jahre Rheinisches Landesmuseum Trier*, Mainz, 69-96.
- Gonzenbach 1961 V. von Gonzenbach, *Die römischen Mosaiken der Schweiz*, Basel.
- Güterbock 1975 H. Güterbock - K. Bittel (eds.), *Das Hethitische Felsheiligtum Yazılıkaya, (Boğazköy-Hattuşa IX)*, Berlin.
- Herodotos Herodotos, *Herodot Tarihi*, M Ökmen (transl.), İstanbul, 2004.
- Hirsch 1997 S. Hirsch (Übersetz.), *Die Römische Villa von Orbe-Boscéaz und ihre Mosaiken*, *Archäologische Führer der Schweiz* 4.
- Hoffmann *et. al.* 1999 P. Hoffmann – J. Hupe – K. Goethert, *Katalog der römischen Mosaiken aus Trier und dem Umland, Trierer Grabungen und Forschungen Band XVI*, Trier.
- Jocelyn 1969 H. D. Jocelyn, *The Tragedies of Ennius*, Cambridge.
- Long 1987 C. R. Long, *The Twelve Gods in Greek and Roman Art*, Leiden.
- Long 1992 C. R. Long, “The Pompeii Calendar Medallions”, *AJA* 96, 477-501.
- Maghess 2005 J. Maghess, “Heaven on Earth: Helios and the zodiac Cycle in Ancient Palestinian Synagogues”, *DOP* 59, 1-52.
- Marcus Manilius Marcus Manilius, *Astronomica*, G. P. Goold (transl.), London.
- Mason 1981 E. Mason, *Le pantheon de Yazilikaya; nouvelles lectures*, Paris.
- Ovadia – Ovadia 1987 R. Ovadia – A. Ovadia, *Mosaic Pavements in Israel*, Roma.
- Parker 1950 R. A. Parker, *The Calendars of Ancient Egypt, Illinois-USA*.
- Parlasca 1959 K. Parlasca, *Die Römischen Mosaiken in Deutschland*, Berlin.
- Parrish 1984 D. Parrish, *Season Mosaics of Roman North Africa*, Roma.
- Platon Platon, *Laws*, W. R. M. Lamb (transl.), Loeb Classical Library (London: William Heinemann; Cambridge, MA: Harvard University Press).
- Raevsky 1998 D. S. Raevsky, “Ancient astronomy as the mirror of the history of culture”, *Astronomical & Astrophysical Transactions, Institute of Oriental Studies* 24, 299-305.
- Reiner – Pingree 1981 E. Reiner – D. Pingree, “Babylonian Planetary Omens 2”, *BiblMesopotamica* 2, 2, 81-82.
- Rosen 1943 E. Rosen, “The Authentic Title of Copernicus’s Major Work”, *Journal of History of Ideas* 4, 4, 457-474.
- Scullard 1981 H. H. Scullard, *Festivals and Ceremonies of the Roman Republic*, Ithaca.
- Simon 1990 E. Simon, *Die Götter der Römer*, München.
- Stern 1953 H. Stern, *Le Calendrier de 354*, Paris.
- Stern 1966 H. Stern, “Mosaïque de Hellín (Albacete)”, *MonPiot* 54, 40-59.
- Sukenik 1932 E. L. Sukenik, *The Ancient Synagogue of Beth Alpha, Jarusalem*.

- Visconti 1717 E. Q. Visconti, *Monumenti Gabini della villa Pinciana*, Roma.
- Warrior 2006 V. M. Warrior, *Roman Religion*, Cambridge.
- Weinreich 1924-1937 O. Weinreich, "Zwölfgötter", in: ^L *Roscher, ML VI*, 764-848, 818.
- Weiss 2005 Z. Weiss, "The Zodiac in Ancient Synagogue Art", *CMGR IX*, 1119-1129.
- Wirth-Bernards 1939 H. Wirth-Bernards, *Über das Heliosmosaik aus Münster bei Bingerbrück*, Bonn.
- Wünsche 2007 R. Wünsche, *Glyptothek Munich Masterpieces of Greek and Roman Sculpture*, R.Batstone (transl.), Munich.