

# The Discovery of the Colossal Coronation Horoscope of Antiochus I, King of Commagene on Mt. Nemrud

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## Abstract

*The main sanctuary of Commagene is situated on Mt. Nemrud in eastern Turkey. Here, the coronation memorial of Antiochus is presented. Two identical ensembles of five colossal statues were erected at the East and West terraces during the first century BCE. The statues are named after five deities corresponding with the Sun, Moon, Mercury, Mars and Jupiter. The ensemble represents a frozen picture of the sky as seen from Mt. Nemrud on the 29<sup>th</sup> January 91 BCE at dawn around 06:58 local time. The time is determined by an annual phenomenon of Regulus, the royal star of Commagene as explained in the article. The colossi represent the largest known horoscope in the world and commemorate the coronation day of Antiochus I.*

*Next to the statues, an ensemble of five reliefs was erected on the West and East terraces i.e., four dexioseis and the Lion Horoscope. The Lion relief is the oldest picture of a horoscope in the world. The importance of Regulus is emphasized by its central location at the heart of the lion. The sculpture is a frozen picture of the sky as seen from Mt. Nemrud on the 14<sup>th</sup> July of 109 BCE at dusk around 19:38 local time. Also here, the time is determined by Regulus. The ensemble of dexioseis and Lion relief is the coronation memorial of Mithridates I and likely commemorates the symbolic birthday of his son, Antiochus.*

*The research presented in this article, allows for a reconstruction of the Commagenian calendar. Moreover, it is hypothesized that historical chronology can benefit from an unknown tool i.e., the use of the four annual phenomena of the agricultural marker star to determine absolute dates.*

*The astronomical research is based on data as obtained during the latest archaeological and conservation campaigns from 2001 to 2003 on Mt. Nemrud. The campaigns were a joint effort of the University of Amsterdam as well as other universities and the International Nemrud Foundation. The works were supervised by the Turkish Ministry of Culture.*

## INTRODUCTION

After a short introduction on the architectural design of the Nemrud monument, the proposals from the past regarding the dating and attribution of the Lion Horoscope are evaluated in chapter 2. Chapter 3 and 4 describe the research resulting in the discovery and dating of the horoscope of King Antiochus I i.e., his coronation memorial. The subsequent finds are presented in chapter 5 i.e., calendar, anomalies and building program. The time is notated as the universal time UT or local time at Greenwich. The local time at Mt. Nemrud is two hours and thirty-six minutes ahead of the UT

The architectural design at the top of Mt. Nemrud is most spectacular. Here, Antiochus built his tomb “in closest proximity to the heavenly throne” and constructed a fifty-meter high burial mound or *tumulus* (fig. 1).<sup>1</sup> The tomb has never been found despite the efforts of ancient treasure hunters and modern archaeologists.<sup>2</sup> Antiochus was determined “to enlarge and embellish” everything

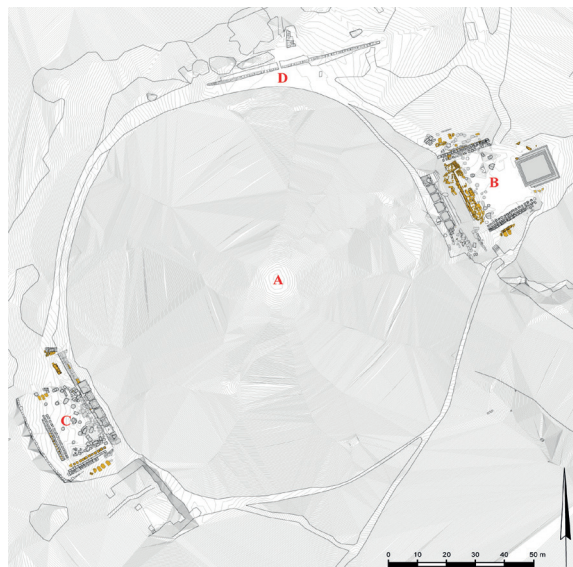


Fig. 1. GPS map of the monument on Mt. Nemrud. A: Tumulus. B: East terrace. C: West terrace. D: North terrace. Brijder 2014, Fig. 13a © 2008 Waagen and INF.



Fig. 2. East terrace: The five colossal statues and tumulus behind. The five *dexiosis* reliefs were erected at the stepped platform below. Brijder 2014, Fig. 20 © 2011 Roeloffs.

he had inherited.<sup>3</sup> Three terraces are constructed around the *tumulus*, the North, East and West terraces.<sup>4</sup> On the East and West terrace, Antiochus erected two identical groups of five colossal statues. The statues at the East terrace tower high above the court (fig. 2). At the West terrace, the statues are just slightly elevated (fig. 3). At the back of the statues a large text of Antiochus is inscribed, the *Nomos*.<sup>5</sup>

Next to the statues on the West terrace, a group of five stelae were erected (fig. 3). At four so-called *dexioseis*, the king welcomes a celestial deity. These are the same deities as depicted by the statues. The fifth relief is the Lion Horoscope depicting the image of a lion covered with stars. These five stelae are referred to as the *dexiosis* reliefs.<sup>6</sup> An identical group of these five reliefs was erected below the statues at the East terrace, on a stepped platform; they have preserved in the shape of fragments. The group of five statues and the group of five *dexiosis* reliefs, are both flanked by an eagle and a lion. The *dexiosis* reliefs may date from King Mithridates I.<sup>7</sup> They are dwarfed by the colossi of his son Antiochus: “*Antiochos embraced, as it were, his father’s monument by building over it his own series of statues*”.<sup>8</sup>

Two long rows of reliefs border the East as well as the West terrace. One row depicts the Greek-Seleucid ancestors of Antiochus’ mother and the other row, the Persian ancestors of Antiochus’ father. There are two more groups of five reliefs, each located at the East and West terrace, the so-called *investiture* stelae. These are not flanked by an eagle and a lion. The largest relief in the middle, depicts two kings, one of which is Antiochus.<sup>9</sup> Either Mithridates I is crowning his son Antiochus as co-ruler or Antiochus is crowning his son Mithridates II as co-ruler.<sup>10</sup> The *invest-*

*iture* reliefs may hint at the meaning of both ensembles of statues and *dexiosis*.

The star cult of Commagene suggests that the design of the monument might feature certain astronomical alignments. The research regarding these possible alignments are based on a GPS-RTK map.<sup>11</sup> The map was surveyed by the University of Technology Delft of The Netherlands in 2002.<sup>12</sup> The survey is part of the SIS Site Information System. The SIS is a database of all artefacts on the Nemrud compiled during the archaeological campaigns mentioned.<sup>13</sup> The GPS map displays the true north. Previous maps were made with a compass, indicating the magnetic north which differs about five degrees. The true north enables a correct research resulting in the following astronomical alignments:

On the East terrace, the row of Greek-Seleucid ancestors at azimuth 58° points at the sunrise at the summer solstice, the longest day of the year. No specific celestial event is found for the row of Persian ancestors pointing at azimuth 70°. <sup>14</sup>

The azimuth of the view direction of the row of statues and *dexiosis* reliefs is 64° (fig. 4). That is the point on the horizon where Regulus was rising in the time of Commagene. So, the statues and *dexiosis* reliefs were looking at the daily rise of Regulus. This event is emphasized by the rows of Persian and Greek-Seleucid ancestors. The ancestor rows form together with the row of statues a large isosceles triangle pointing at the daily rise of Regulus.<sup>15</sup> The extended line of vision of Zeus at the centre of the statues, bisects the centre of the *tumulus* behind. The design suggests that this specific point on the horizon must have been of the greatest importance to the Commagenians.

A horizon profile might be of help for a better understanding (fig. 5).<sup>16</sup> The horizon profile

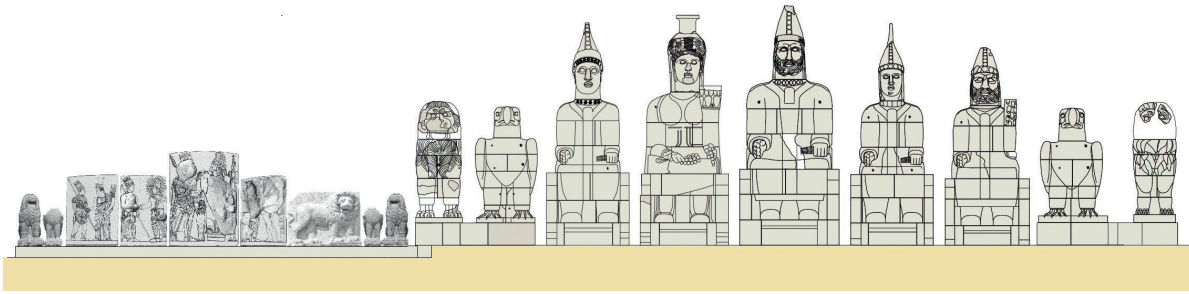


Fig. 3. West terrace: Reconstruction drawing of the five colossal statues. The five dexiosis stelae are erected to the left of the statues. Both ensembles are flanked by an eagle and a lion. Brijder 2014, Figs. 40 and 99D © 2011 Roeloffs and Brijder.

ranges from azimuth  $57^\circ$  to  $70^\circ$  as visible from the East terrace. The rise of Regulus in the time of Commagene is indicated. Regulus was rising from behind a mountain at a distance of about 23 kilometres. The extended line of view intersects a mountain, referred to by the locals as *Little Nemrud*. A picture that covers the same part of the horizon is displayed in fig. 6. The mountain contours match the contours of the horizon profile.

At the West terrace, the azimuth of the view direction of the row of statues is  $241^\circ$  (fig. 7). That is the point on the horizon where the Sun sets in midwinter.<sup>17</sup> The statues and *dexiosis* reliefs are looking at the sunset on the shortest day of the year. The importance of the Sun is emphasized by the row of Persian ancestors, pointing at the same event.<sup>18</sup> The azimuth of the view direction of the row of Greek-Seleucid ancestors is  $65^\circ$ . The azimuth of the rising Regulus is  $64^\circ$  (fig. 4). Despite the fact that the tumulus prohibits a direct view,

the Greek-Seleucid ancestors are looking in the direction of the daily rise of Regulus in the east.

In sum, the astronomical alignments as found can be thought of as a blueprint of the astro-religion of Commagene in which the stars Sun and Regulus play a significant role. The importance of the Sun needs no explanation, but why was Regulus so important? Regulus is the brightest star of the Leo constellation and easily visible with the naked eye. More importantly, Regulus is an agricultural marker star. An agricultural marker star is a star of which the four annual phenomena regarding its visibility coincide with the agricultural seasons in a certain region. The ancient farmers used such a star to plan agriculture. Over time, the star became an integral part of the religious and cultural set of beliefs. The star phenomena were used to plan the date and time of important events like a coronation, also. For example, the agricultural marker star of

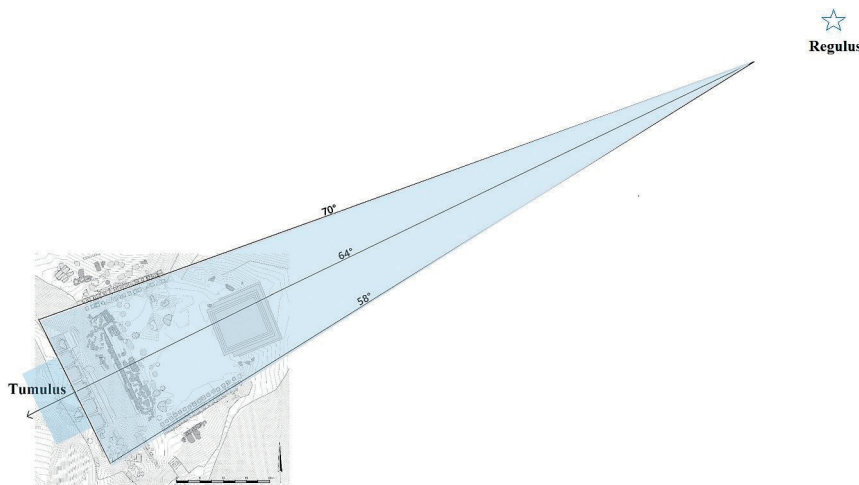


Fig. 4. East terrace, reconstruction drawing: The statues and the dexioseis ensemble look at the daily rise of Regulus at azimuth  $64^\circ$ . The rows of Persian and Greek-Seleucid ancestors and the row of statues, form a large isosceles triangle. The extended line of vision of Zeus, intersects the top of the tumulus behind. The arrow in blue points at the distant rise of Regulus. Brijder 2014, Fig. 13b © 2008 Waagen and INF.



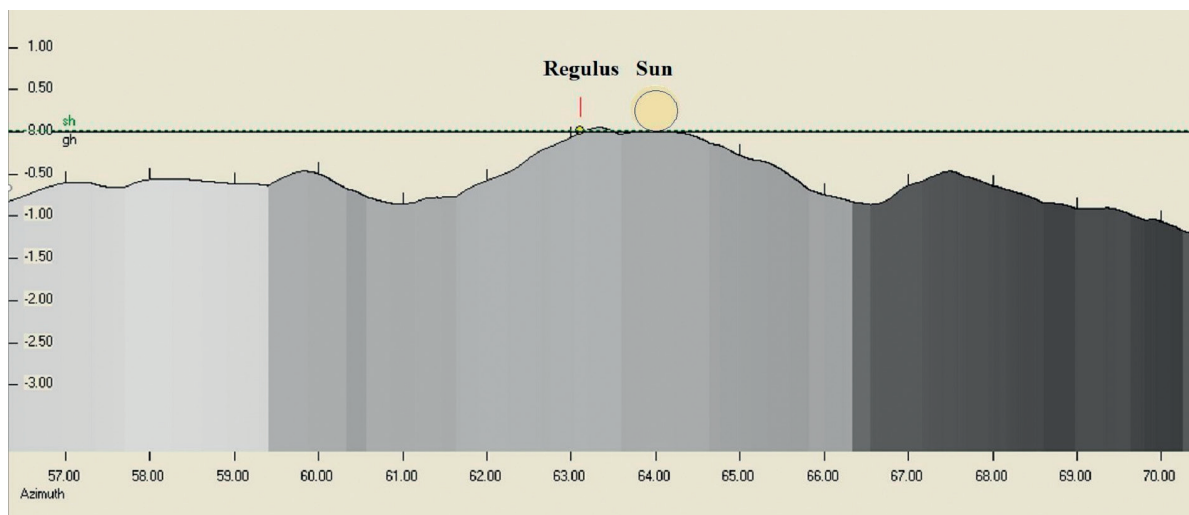


Fig. 5. Horizon profile as visible from the East terrace, © 2015 Rademaker.

Egypt is Sirius. The heliacal rise of Sirius is a well-known tool to determine Egyptian chronology. So far, the other three annual phenomena of Sirius are ignored. The Rosetta Stone provides for the coronation date of Ptolemy V on 28 November 205 BCE. This is common knowledge to Egyptologists, but they failed to notice that the day coincides with an annual phenomenon of Sirius. At dawn, Sirius can be seen to set for the first time. This is called the Apparent Morning Setting or AMS.<sup>19</sup> The phenomenon determines the time of the coronation around 6:13 local time in Memphis.<sup>20</sup> Maybe, Regulus played a similar role in Commagene.

#### THE CONFUSING LION HOROSCOPE

The importance of Regulus is confirmed by the Lion Horoscope, where the star is depicted at the heart of the lion. According to Friedrich Dörner, the Lion Horoscope 'is the oldest picture of a horoscope that has been preserved' (fig. 8).<sup>21</sup> A horoscope is no more than an astronomical picture of the sky at a given time and place.<sup>22</sup> That picture can

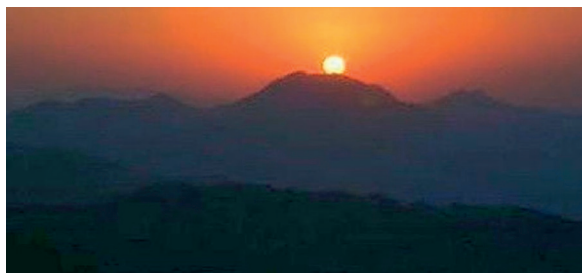


Fig. 6. The same horizon profile as Fig. 5 as pictured from the East terrace on the 26<sup>th</sup> of July 2005 at 2:24 UT © 2005 Crijns.

be dated by an astronomical analysis. In fact, the date is written on the relief through the astronomical data as depicted:

1. Nineteen 8-rayed stars are depicted on the lion body. These stars match the 19 stars of the constellation Leo as described by Eratosthenes.<sup>23</sup> The configuration searched for must be in Leo, which covers about 30 arc degrees of the ecliptic.<sup>24</sup> This has been extended to 50 arc degrees to avoid academic discussions about different norms.<sup>25</sup>
2. New moon is in conjunction with Regulus as depicted at the heart of the lion.
3. Three 16-rayed stars are depicted above the lion with their names inscribed above. From left to right these are the planets: The flaming one of Herakles - ΠΥΡΟΕΙΧΠΑΚΑ[ΕΟΥC] (Mars), The shining one of Apollo CTΙΑΒΩΝ-ΑΠΟΛΛΩΝΟC (Mercury), and The radiating one of Zeus - ΦΑΕΘΩΝΔΙΟC (Jupiter). In that order Mars, Mercury, Jupiter and Moon/Regulus must be part of the searched configuration in Leo.
4. Venus and Saturn are not depicted. These planets are not part of the searched configuration in Leo.

Now, the search can start to determine the date with a matching planetary configuration. The first archaeologists assumed that the Lion Horoscope dates back to Antiochus in the period from 100 BCE to 50 BCE.<sup>26</sup> In 1890, that assumption was reasonable as King Antiochus states in the *Nomos* that he constructed the monument in its present state. Over time, this assumption was taken for a fact. Unfortunately, there exists no



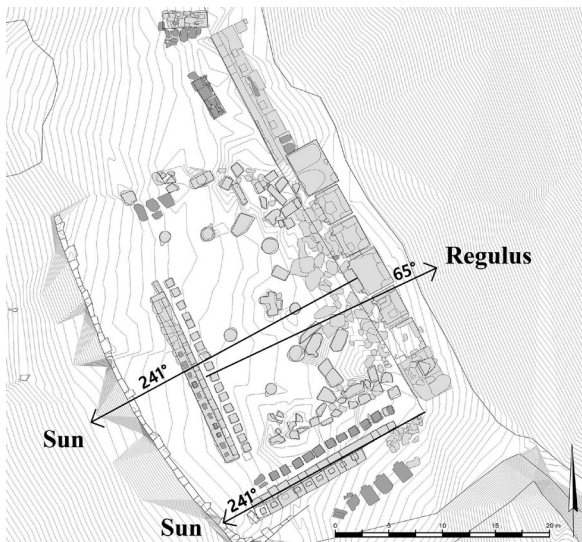


Fig. 7. West terrace, reconstruction drawing: The statues and dexioseis look at the annual sunset on the shortest day at azimuth 241°. The row of Persian ancestors, point at the same event. The Greek ancestors look at the daily rise of Regulus at 65°. Brijder 2014, Fig. 13c © 2008 Waagen and INF.

matching configuration in the era of Antiochus as has been confirmed by Otto Neugebauer.<sup>27</sup> And so, plenty look-alike configurations have been proposed right from the beginning.

In 1890, the astronomer Paul Lehmann found four possible configurations in the prescribed period i.e., 27 July 49 BCE, 3 July 51 BCE, 22 July 96 BCE and 17 July 98 BCE.<sup>28</sup> The latter was selected as the best look-alike.<sup>29</sup> The sequence Mars-Mercury-Jupiter is correct, but the Moon had already passed Leo. More important, the configuration was invisible, because Mars, Mercury and Jupiter were in conjunction with the Sun. During the day, it is difficult to see stars or planets.

In 1959, Otto Neugebauer decided not to ignore the position of the Moon in Leo, but to ignore the sequence of Mars-Mercury-Jupiter. This assumption yielded five new dates of look-alikes of which two were selected, the 11 July 49 BCE and 6/7 July 62 BCE. He opted for 7 July 62 BCE.<sup>30</sup>

In 1984, Vladimir Tuman decided to not to ignore the conjunction of Moon-Regulus and the sequence Mars-Mercury-Jupiter, but to ignore the crescent Moon and the location of the planets in Leo. He found 4/5 February 55 BCE. On that day it was full Moon and the planets were invisible.<sup>31</sup>

In 2007, Talât Saygac decided not to ignore the sequence Mars-Mercury-Jupiter, but to ignore the conjunction Moon-Regulus. He found 3 July 62 BCE at 18:43 UT.<sup>32</sup>

In 2010, Juan Belmonte decided to not to ignore the location of the planets in Leo, but to ignore the conjunction of Moon-Regulus in Leo and the sequence Mars-Mercury-Jupiter. He found 23 July 49 BCE. By ignoring subsequently the location of the planets in Leo, he found also 23 December 49 BCE.<sup>33</sup>

All these and other proposed configurations are as valuable as the most frequently accepted one of 7 July 62 BCE by Neugebauer. They are all look-alikes, ignoring one or more of the astronomical data of the relief. From a scientific perspective, there is no reason to favour one or the other.



Fig. 8. The plaster cast of the complete Lion Horoscope as found in 1883, Crijns 2014, Fig. 305b © 2004 Crijns.

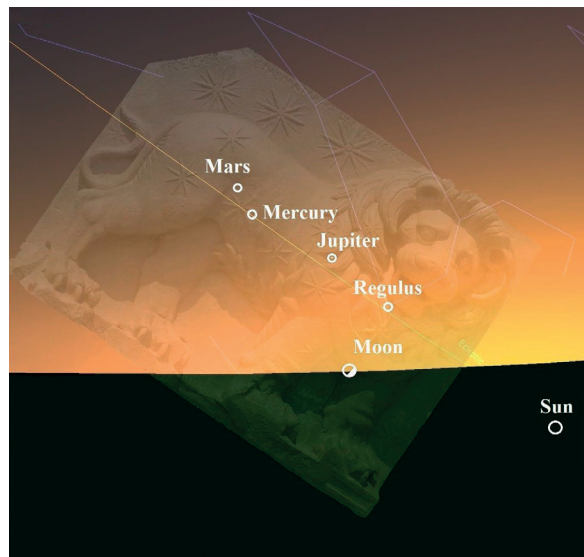


Fig. 9. The setting coronation configuration of Mithridates I on the 14<sup>th</sup> of July at 17:02 UT (Universal Time). The lion relief is depicted in the background © 2021 Crijns.

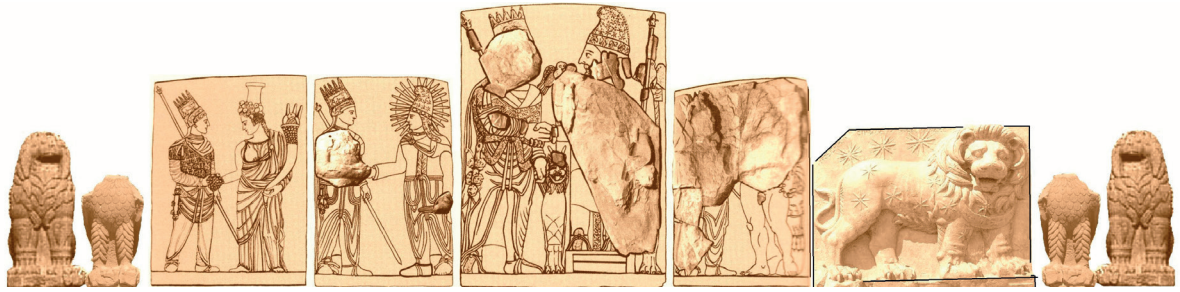


Fig. 10. Reconstruction drawing of the coronation memorial of Mithridates I, from left to right: Lion, Eagle, Commagene-Moon, Apollo-Mercury, Zeus-Jupiter, Herakles-Mars, Lion Horoscope-Regulus, Eagle, Lion. Brijder 2014, Fig. 203a-d © 2021 Crijs.

Any date can be found by selectively ignoring data as depicted on the relief. This arbitrary approach created confusion and induced some scholars to consider the relief completely symbolic. Wolfgang Haase in 1975: “The expression of a personal *katasterismos* of the King i.e., the transformation of the king into a star.”<sup>34</sup> And Öncü Güney in 2009: “He [Antiochus] might be seen as the conquering lion, ultimate domineer of the land wearing a lion embroidered *thiara*, seating on a lion carved throne”.<sup>35</sup> Contrary, Miguel John Versluys assumes that the Lion relief refers to a specific date, but: “... the date of the constellation displayed is not necessarily congruent with the date of the Lion horoscope’s creation. Antiochos I could well have made the horoscope in 50 BC to recall or claim an event that occurred in 62 BC or 109 BC —or any date before its fabrication — and therefore have displayed this specific constellation.”<sup>36</sup> This the case, the question remains why Antiochus does not claim the Lion relief, while he does claim the *dexioseis* and the other reliefs. Moreover, it does not explain the removed text on the back of the Lion relief. Following on from Versluys’s thought construct, it is theoretically possible that Antiochus changed his mind

in e.g., 40 BCE and had the text removed. These thought constructs are interesting, but we are no closer to what event the Lion relief refers to.

In 2021, the never ending debate resulted in a premature conclusion: “The exact interpretation of the meaning of the lion horoscope is therefore likely to remain unknowable”.<sup>37</sup>

A more scientific approach would have been to reconsider the initial assumption by Otto Puchstein and Karl Humann: Does the configuration of the Lion Horoscope really date back to Antiochus? The answer can only be provided by searching an era larger than that of Antiochus and by applying the astronomical data stringently without manipulating them. Over a period of 10,000 years, there is only one perfect match to be found.<sup>38</sup> I have argued in previous studies that that unique planetary configuration was visible in Commagene on the 14<sup>th</sup> July of 109 BCE.<sup>39</sup> Fig. 9 displays the actual configuration with the Lion relief at the background. The planetary sequence is identical. It is new Moon in conjunction with Regulus and Mercury is visible.<sup>40</sup>

Fascinating is the unexpected find that the 14<sup>th</sup> July of 109 BCE also coincides with one of the four

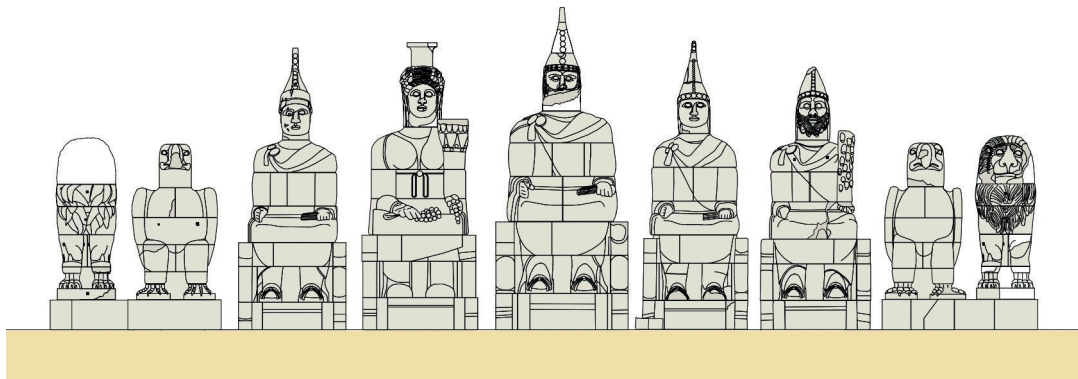


Fig. 11. East terrace: Reconstruction drawing of the statues, from left to right: Lion, Eagle, Antiochus, Commagene-Moon, Zeus-Jupiter, Apollo-Mercury and Herakles-Mars, Eagle, Lion. Brijder 2014, Fig. 39 © 2011 Roeloffs.



annual phenomena of Regulus. That day at 17:02 UT, is the last visible setting of Regulus. And so, Regulus determines the time of the configuration.

In 2005, Stephan Heilen criticised my dating proposal.<sup>41</sup> I discussed his criticism and had to refute it in great detail in 2014.<sup>42</sup> Since then, no reaction by Heilen nor by others has been published nor any further criticism, suggesting that the debate is finished. The proposed date is undisputable from an astronomical perspective. It is of course meaningful that Stephan Heilen admits that 14 July 109 BCE is ‘*plausibel*’.<sup>43</sup> Moreover, Otto Neugebauer stated in his letter to Friedrich Dörner that 14 July 109 BCE “*remains a possibility*”, contradicting his earlier statement that “*-61 July 7 remains the only possibility*”.<sup>44</sup>

Seen from a historical perspective, the 14<sup>th</sup> July of 109 BCE fits to the coronation date of Antiochus’ father, Mithridates I. The ensemble of the four *dexioseis* stelae and the Lion Horoscope, flanked by a guardian eagle and lion, comprise the coronation memorial of Mithridates. It is most unlikely that Antiochus displays the coronation memorial of his father without displaying his own memorial. Until now, this was the missing link to give final proof of the attribution of the *dexiosis* reliefs as the coronation memorial of Mithridates (fig. 10). In the following, I would like to present the discovery of the second coronation memorial i.e., the horoscope of Antiochus.

## THE HOROSCOPE OF ANTIOCHUS

Antiochus placed the *dexiosis* reliefs commemorating his fathers’ coronation day next to the stat-

ues at the West terrace and under the statues at the East terrace. The five *dexiosis* reliefs and the five colossal statues are each flanked by a guardian eagle and a lion (fig. 3).

The reliefs and statues depict the same four deities: Commagene (Moon), Zeus-Oromasdes (Jupiter), Apollo-Mithras-Helios-Hermes (Mercury) and Artagnes-Hercules-Ares (Mars) (fig. 11). Waldmann concludes: “*This shows that the entire row of colossal statues (...) represents a single large dexiosis.*”<sup>45</sup> Here, the dating of the ‘large *dexiosis*’ is presented.

### 3.1 Method

Before the astronomical search can be conducted, the order of the statues and the celestial body assigned to each single statue must be undisputed. The monument was found with all heads tumbled down and the statues collapsed in part or completely. Only the statue of Commagene at the East terrace was intact until 1964.<sup>46</sup> The identification of the statue of Commagene (female), Zeus (the largest in the middle) and Herakles (holding a club) is beyond doubt. The identification of the remaining two statues i.e., Apollo and Antiochus, was an issue. Initially, it was concluded that the first statue from the left was Apollo and the one next to Zeus was Antiochus.<sup>47</sup> At present, there is consensus that it is the other way around. This is confirmed by the SIS: On the West terrace, block number WT109 is the shoulder block of the most left statue. The neckline displays an array of lightning symbols. Block number WT108 is the head of Antiochus. On his

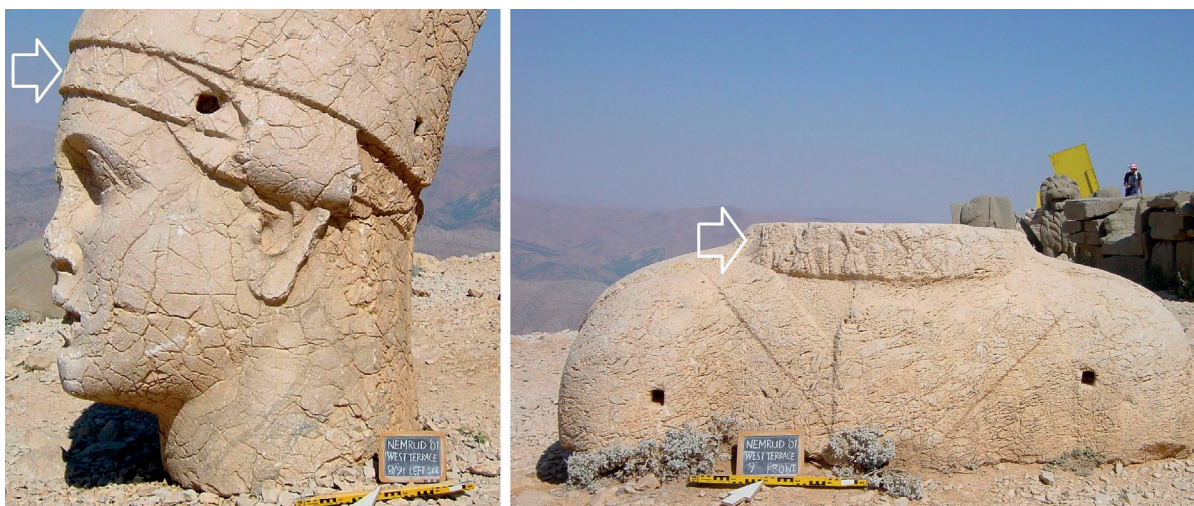


Fig. 12. The identical embellishment with an array of lightning symbols on the tiara of the head and the neckline of the shoulder block, © 2001 Crijns.



tiara Antiochus has the same embellishment (fig. 12). As the shoulder block is part of the most left statue, the head of Antiochus must belong to this statue.

The order of the statues (and celestial bodies) is from left to right: Antiochus (unknown), Commagene (Moon), Zeus-Oromasdes (Jupiter), Apollo-Mithras-Helios-Hermes (Mercury) and Artagnes-Heracles-Ares (Mars) (fig. 11). The attribution of a celestial body to each statue is unambiguous, except for Antiochus. The text at the back of the statues provides for no clue. Common assumption is that Antiochus associated himself with Regulus: “*Antiochos chose the star Regulus as Royal Star, as the image of himself*”.<sup>48</sup> The alignments of the East terrace emphasizing Regulus, are in support of this assumption (fig. 4). Therefore, Regulus is an option. The West terrace emphasizes another star, the Sun (fig. 7). Therefore, the Sun is a second option.

#### Research Criteria

The search criteria can now be defined as follows: The location of the event was on Mt. Nemrud (search criterium 1). The search period starts before Commagene became independent and ends after the death of Antiochus i.e., from 200 BCE to 1 CE (search criterium 2). The configuration of the statues should be taken literally as the archaeologists Humann and Puchstein did in the 1880s (search criterium 3). The celestial objects assigned to the statues should be part of the configuration. The other celestial objects must be left outside (search criterium 4). The configuration must have been visible in the sky in agreement with Neugebauer’s and Dörner’s conclusion (search criterium 5).<sup>49</sup> The statues are placed next to one another, suggesting that the celestial objects must be in close proximity as well. Therefore, the maximum distance between the two most extreme objects of the configuration i.e., Regulus/Sun and Mars is limited to 80° (search criterium 6).

The resulting search criteria are:

Location: Mt. Nemrud, altitude 2156 meters, N 37°59' and E 38°44'.

Search period: 200 BCE to 1 CE.

Astronomical order with decreasing longitude:

Configuration 1: Regulus, Moon, Jupiter, Mercury and Mars.

Configuration 2: Sun, Moon, Jupiter, Mercury and Mars.

Venus and Saturn outside configuration 1 and 2.

Sun outside configuration 1.

Visibility: All objects visible.

Configuration span: 80°.

The astronomical data have been calculated with the following programs:

- 1 Astronomical Calculation Program version 2.10, 2020 @ Rademaker Software, The Netherlands.
- 2 Calendar Conversion Program version 1.60, 2020 @ Rademaker Software, The Netherlands.
- 3 Stellarium version 0.19.3. Stellarium is one of the most professional astronomical programs. The open source platform allows the verification by anyone of the astronomical data as provided in this article.

## RESULTS

### Dating

The astronomical search of the configurations yields no date for configuration 1 and only one date for configuration 2 i.e., the 29<sup>th</sup> of January 91 BCE (fig. 13).<sup>50</sup> The configuration was visible in the constellation of Capricornus or Sea-Goat. The Sea-Goat is known from coinage minted in the capital of Commagene, Samosata.<sup>51</sup>

At dawn, first Mercury became visible, rising in the east at 03:36 UT (table 2). Mercury is normally not visible due to its proximity to the Sun, but now Mercury was visible thanks to its almost maximum apparent distance of 27°. Mars followed Mercury at 03:39 UT. At 03:58 UT, the waning crescent Moon became visible and at 04:20 UT the brilliant rising Jupiter.

Then, a surprise unfolded in the sky. Far away to the west, Regulus could be seen to set for the first time at 04:22 UT (fig. 14). The phenomenon is called the Apparent Morning Setting or AMS, see n.17. The same phenomenon determined the time of the coronation of Ptolemy V. Finally, sunrise followed at 04:39 UT and the configuration was no longer visible.<sup>52</sup>

The horoscopes of 91 BCE and 109 BCE feature remarkable astronomically similarities. Compare tables 1 and 2: The same planets are part of the horoscope. Mercury is in both cases at a maximal distance to the Sun and thus visible. The Sun is located just under the horizon. And most importantly, the time of both celestial events is determined by an annual phenomenon of Regulus. An interesting detail is that the configuration of Antiochus was rising at azimuth 115° exactly opposite the setting configuration of Mithridates at azimuth 295° (fig. 15).

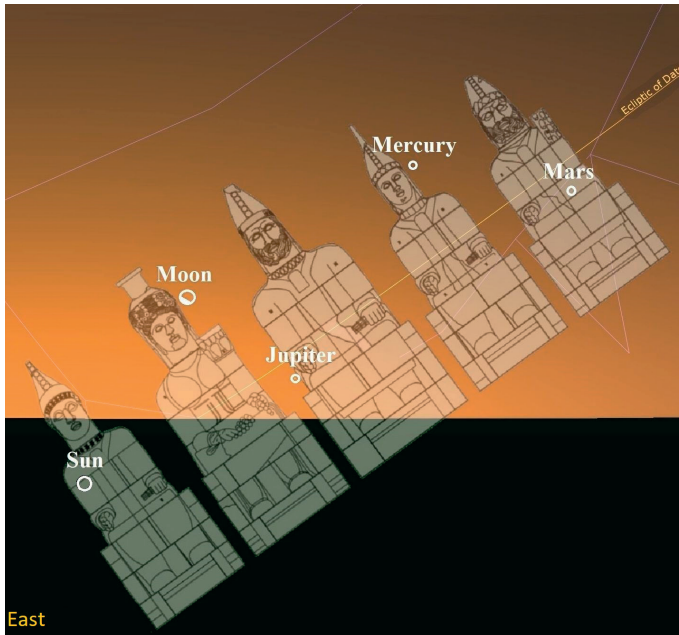


Fig. 13. East: The rising celestial configuration on the 29<sup>th</sup> of January 91 BCE at 04:22 UT. The statues are depicted in the background, © 2021 Crijns.

#### Historical Event

The date of the 29<sup>th</sup> of January 91 BCE, must be attributed to a certain event. Antiochus mentions in the *Nomos* two annual events to be celebrated i.e., his birthday and his coronation.

A birthday in 91 BCE is possible, because Antiochus is mentioned as king in 69 BCE by Cassius Dio: “He [the Roman general Lucullus] furthermore received Antiochus, king of Commagene.”<sup>53</sup> Antiochus would then have been 22 years of age. The year 36 BCE is generally accepted for his death.<sup>54</sup> That leaves us with a lifespan of 55 years. A controlled study states that the median life span for Roman and Greek men born before 100 BCE is 72 years and 62 years if born after 100 BCE.<sup>55</sup> In that perspective, an age of 55 years does not fit the statement of Antiochus in the *Nomos*: “[I] have attained the fullness of a long life”.<sup>56</sup>

The second possibility is that 91 BCE refers to his coronation as suggested by the *investiture* reliefs. The reliefs display a king coronating a second king as co-ruler.<sup>57</sup> Presumably, Mithridates died in 70 BCE and so, Antiochus may have been crowned by his father as co-ruler in 91 BCE.<sup>58</sup>

The strongest argument in favour of a coronation is found in the *dexiosis* reliefs. They are placed prominently next or under the statues on both terraces. The design of the two ensembles of *dexioseis* and statues feature an identical architec-



Fig. 14. West: The first visible setting AMS of Regulus at 04:22 UT, © 2021 Crijns.

tural design as discussed i.e., five reliefs and five statues flanked by a guardian eagle and lion. Moreover, their horoscopes feature similar astronomical characteristics as mentioned. The most convincing conclusion is that the statues commemorate the crowning of Antiochus in 91 BCE,

Horoscope of Mithridates 14 July 109 BCE		
	Phenomenon	UT
Sun	apparent set	16:50
Regulus	AES	17:02
Moon	New Moon (topocentric)	16:55
Jupiter		17:02
Mercury	distance to Sun 28°	17:02
Mars		17:02

Table 1. Astronomical data of the Horoscope of Mithridates.

Horoscope of Antiochus 29 January 91 BCE		
	Phenomenon	UT
Regulus	AMS	04:22
Moon	waning crescent	04:24
Jupiter		04:24
Mercury	distance to Sun 28°	04:24
Mars		04:24
Sun	apparent rise	04:39

Table 2. Astronomical data of the Horoscope of Antiochus.



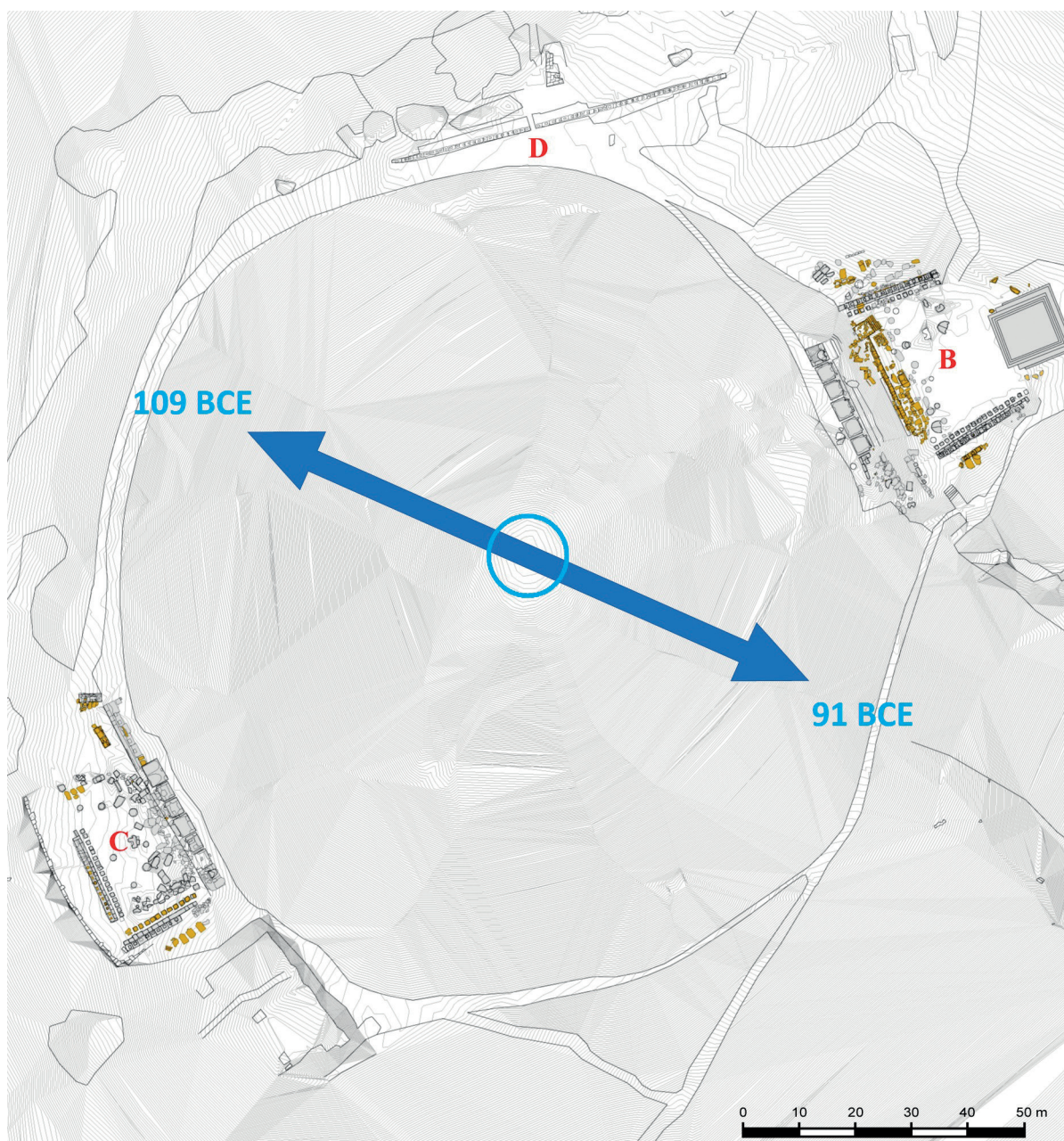


Fig. 15. The setting configuration of Mithridates in 109 BCE at azimuth  $295^{\circ}$ . The rising configuration of Antiochus in 91 BCE at azimuth  $115^{\circ}$ . Brijder 2014, 15 Fig. 13a © 2008 Waagen and INF.

while the reliefs commemorate the crowning of his father in 109 BCE.<sup>59</sup> The scale of both ensembles is different: The coronation memorial of Mithridates is dwarfed by the colossal coronation memorial of Antiochus.

The fact that the configuration of Antiochus rises exactly opposite the one of his father fits in this picture (fig. 15). It is a perfect metaphor for a going and coming king. In the early morning, the

people of Commagene could see the rising celestial configuration of their new king Antiochus in the east. At the same moment, the setting Regulus indicated the location of his fathers' coronation configuration in the west. The people witnessed how Antiochus honoured his father and Regulus, the star of their homeland. Thus, Antiochus justifies his own statement in the *Nomos* as "the Righteous One".



A coronation was a major event. The extensive ceremonies and festivities required that the day had to be planned long in advance. Most important was the celestial configuration on that day. The fickle deities were associated with the erratic moving planets. Like the planets, their actions were unpredictable and it was important to keep them appeased. The coronation configuration had to reflect the benevolence of the deities. It should reassure the people that the new king was a capable mediator. The configurations of 109 BCE and 91 BCE, must have been considered to be 'beneficial' configurations. To calculate and select these configurations before they were actual visible, gives proof of an advanced mathematical and astronomical knowledge in the circles around the Royal Court of Commagene.

The *Nomos* mentions the coronation day of Antiochus to be celebrated as well as his birthday. The date of the coronation day has been established, but the birthday not. A coronation day can be chosen, but not a birthday. Dörner stressed the fact that the royal birthday had to be celebrated on a symbolic day, because: "*with the knowledge of the birthday horoscope, one also possessed the astrological key to make the calculations about the end of life [and other important events]*".<sup>60</sup> The celebration of a royal symbolic birthday is long-lived tradition. A tradition that survives until today e.g., in England and The Netherlands.<sup>61</sup> Speculating, Antiochus will have chosen a symbolic day to celebrate his birthday. Provided that Antiochus was born around 109 BCE, an obvious choice would have been to align the celebration of his birthday to his father's coronation memorial on the 14<sup>th</sup> of July. In that way, he both honoured his father and promoted himself by attaching his birthday to the benevolent configuration of his fathers' coronation.

In 1883, Hamdy Bey was the first archaeologist to observe the lion relief and wondered whether the relief was referring to the birthday of Antiochus.<sup>62</sup> Herman Brijder assumes that the five *dexiosis* reliefs possibly commemorate the coronation of Mithridates as well as the symbolic birthday of his son Antiochus.<sup>63</sup> Historically, it is a possibility that Antiochus was born in 109 BCE.<sup>64</sup> A birth of Antiochus in 109 BCE would mean that "*the king must have been 73 when he died*".<sup>65</sup> Contrary to a birth in 91 BCE, this age is in accordance with the statement of Antiochus in the *Nomos* of "*a long life*". To determine the feasibility of the hypothesis, we must look at the Greek dates for these celebrations as mentioned in the *Nomos* and subsequently the Commagenian calendar.

## CALENDAR

Having discussed the astronomical and historical context of the dates in 109 and 91 BCE, a connection must be established to the monthly and annual celebrations mentioned in the *Nomos*. First, a short introduction for those scholars who are not familiar with astronomy and subsequently, calendars. The modern calendar is the Gregorian which is quite similar to the Julian calendar based on twelve months of about 30 days, see *table 3*, first and second column in grey. The Julian is a solar calendar. That means that the calendar matches the annual seasons winter, spring, summer and autumn as dictated by the Sun. The New Year is on 1 January in winter, after the shortest day of the year around 21 December. The shortest day occurs every 365 days and so the Julian year has 365 days in total, see *table 3*, second column.<sup>66</sup>

Ancient calendars are different. The Babylonian calendar is a luni-solar calendar with twelve lunar months of 29 or 30 days, see *table 3*, column 5 and 6 in yellow. A lunar month matches the number of days between two new moons, which is in average 29.5 days.

The Babylonian year counts in total 354 days, lagging behind the solar year with 11 days (365-354). The Babylonians added an extra lunar month to stay in sync with the solar year when they noticed that New Year in a certain year would fall in winter instead of spring. As a result Babylonian New Year on 1 *Nisanu* (the first day of the first month) is always a day after 21 March. For example, Babylonian New Year on 1 *Nisanu* in 109 BCE is 18 April, see *table 3* column 3. In 92 BCE, 1 *Nisanu* is 11 April, see *table 3* column 4.<sup>67</sup>

In 311 BCE, the Seleucids replaced the Babylonian calendar of the former Persian empire by the Seleucid calendar. They shifted New Year to fall in autumn and substituted the Babylonian month names by Greek names, see *table 3* in green. The exact date of the Seleucid New Year on 1 *Dios* is unknown, but must have been a day in September/October. The Seleucid New Year was only in use by the Seleucid court. The common people continued to use the Babylonian New Year in March/April. A Seleucid date cannot be converted to a Julian date, because it is not known with certainty to which Julian date a Seleucid New Year refers.<sup>68</sup>

Antiochus mentions two annual celebrations in the *Nomos* inscription: "*The birthday of my natural body, the 16<sup>th</sup> of Audnaios and the 10<sup>th</sup> of Loos, the day of my accession to the throne...*"<sup>69</sup> Puchstein concluded from the Greek month names that the Seleucid calendar was in use in Commagene.<sup>70</sup>

1	2	3	4	5	6	7	8
Julian		109/108 BCE	92/91 BCE	Babylonian		Seleucid	Commagenian
month	days/month	conversion Julian to Babylonian dates		month	days/month	month	month
Aprilis - April	30	18 April 109 BCE	11 April 92 BCE	Nisanu	30	Artemisios	Dios
Maius - May	31	18 May	10 May	Aiaru	29	Daisios	Apellaos
Iunius - June	30	17 June 109 BCE	9 June	Simanu	30	Panemos	Audnaos
Quintilis - July	31	16 July	8 July	Duzu	29	Loos	Peritios
Sextilis - August	31	15 August	7 August	Abu	30	Gorpaaios	Dystros
Septembris - September	30	13 September	6 September	Ululu	29	Hyperberetaios	Xanthikos
Octobris - October	31	13 October	5 October	Tashritu	30	Dios	Artemisios
Novembris - November	30	11 November	4 November	Arahsamnu	29	Apellaos	Daisios
Decembris - December	31	11 December	3 December	Kislimnu	30	Audnaos	Panemos
Ianuarius - January	31	9 January 108 BCE	2 January 91 BCE	Tebetū	29	Peritios	Loos
Februarius - February	28	8 February	31 January	Shabatu	30	Dystros	Gorpaaios
Martius - March	31	9 March	2 March	Addaru	29	Xanthikos	Hyperberetaios
Total days/year	365			Total days/year	354	Artemisios	
						Daisios	
						Panemos	
						Loos	
						Gorpaaios	
						Hyperberetaios	

Table 3. The Julian (grey), Babylonian (yellow), Seleucid (green) and Commagenian (blue) calendars. column 1: Julian months; column 2: number of days per month; column 3: Julian dates in 109/108 BCE for the first day of a Babylonian month; column 4: Julian dates in 92/91 BCE for the first day of a Babylonian month; column 5: Babylonian months; column 6: number of days per month; column 7: Seleucid months; column 8: Commagenian months.

This is understandable as Commagene was part of the Seleucid empire before it became an independent kingdom.

Now, we can look how the astronomical dates as found fit into these calendars. The dates are the assumed symbolic birthday of Antiochus on the 14<sup>th</sup> of July 109 BCE and his coronation on the 29<sup>th</sup> of January 91 BCE.

The 16<sup>th</sup> of July 109 BCE is 1 *Duzu*, see table 3, column 3 and 5. And the 14<sup>th</sup> of July is two days earlier on 29 *Simanu*. *Simanu* corresponds to the Seleucid month *Panemos*, see table 3, columns 5 and 7 in pink.

The 2<sup>nd</sup> of January 91 BCE is 1 *Tebetū*, see table 3 column 4 and 5. And the 29<sup>th</sup> of January is 27 days later on 28 *Tebetū*. *Tebetū* corresponds to the Seleucid month *Peritios*, see table 3 columns 5 and 7 in orange.

Both Seleucid months are different from the ones mentioned by Antiochus. The *Nomos* states as birthday the month *Audnaos* and not *Panemos*. Moreover, the coronation month is *Loos* and not *Peritios*.

As an architect, the present author is not a specialist on ancient calendars. As a thought experiment he assumes that Commagene restored the former Babylonian New Year. In that case the Seleucid months may either have remained and *Artemisios* becomes the first month or have shifted and *Dios* becomes the first month, see table 3. Assuming the latter, the birthday in the month *Panemos* becomes *Audnaos* and the coronation in

the month *Peritios* becomes *Loos*, see table 3, columns 7 and 8 in pink and orange, respectively.

Now, the coronation day of Antiochus on the 29<sup>th</sup> of January 91 BCE fits to the month *Loos* and the symbolic birthday of Antiochus on the 14<sup>th</sup> of July 109 BCE fits to the month *Audnaos*.

The find suggests that Commagene restored the Babylonian New Year as the official New Year. And more importantly, the find is in line with the hypothesis that on the 14<sup>th</sup> of July the symbolic birthday of Antiochus was celebrated.

## CONCLUSIONS

The *coronation memorial of Antiochus* is the major discovery of the article. The five colossal statues flanked by a guardian lion and eagle, commemorate the coronation day of Antiochus on the 29<sup>th</sup> of January 91 BCE at 04:22 UT. The colossi are the largest known horoscope in the world.

The *coronation memorial of Mithridates* is displayed by the four *dexioseis* and the Lion Horoscope flanked by a guardian lion and eagle. The Lion relief depicts the celestial configuration on the 14<sup>th</sup> July of 109 BCE at 17:02 UT. The relief 'is the oldest picture of a horoscope that has been preserved'.<sup>71</sup> The celebration of Antiochus' symbolic birthday may be attached to this day.

*Regulus*, the royal star of Commagene, determines the time of both horoscopes at the minute by one of the four annual visible phenomena:

AMS Apparent Morning Set (Acronychal set), AMR Apparent Morning Rise (Heliacal rise), AES Apparent Evening Set (Heliacal set) and AER Apparent Evening Rise (Acronychal rise).

The *lifespan of Antiochus* may be pinpointed to 109 BCE until 36 BCE, assuming that the coronation memorial of his father was also a symbolic birthday memorial for his birth somewhere in 109 BCE.

Two stars, *Regulus and the Sun* determine the design of the East and West terrace of the main sanctuary of Commagene.

The *Commagenian calendar* was identical to the former Babylonian calendar. New Year started in spring, the month *Loos* equals the Julian month January and the month *Audnaïos* July.

*Historical chronology* in general, can benefit from the use of the four annual phenomena of an agricultural marker star to determine a date as suggested by the coronation day of Ptolemy V of Egypt and the two coronation days of Commagene. This tool is not used, because it is not known to classical scholars.

The *archaeological anomalies* can now be explained in the context of this research:

- Erased texts are visible on some pedestal stones and at the back of the *dexiosis* reliefs. These reliefs were erected by Mithridates and re-used in the new context of Antiochus' rule: "*Antiochos erased the old text of Mithradates I on the dexiosis and wrote his own texts on them*".<sup>72</sup>
- Antiochus claims all Greek-Seleucid and Persian reliefs as well as four of the five *dexiosis* reliefs. The fifth relief, the Lion Horoscope, is not claimed by Antiochus. That makes only sense, if the relief origins from his father and not from him as is the case.
- At the West terrace, the limestone pedestal of the statues has been built over the soft sandstone pedestal of the reliefs (fig. 3): "*which means that it [the pedestal of the statues] must have been constructed later.*"<sup>73</sup> The years of the configurations as found; i.e., 109 BCE and 91 BCE, supports a later date of erection of the statues. The anomalies suggest that the Nemrud monument was constructed in different phases as suggested by Eric Moormann.<sup>74</sup>

In retrospective, the assumption that the Lion Horoscope dates from Antiochus was logic in the context of 1890. Accepted as a fact over time, it hampered novel insights and subsequently, new finds.

## NOTES

\* The author likes to express his gratitude to Herman Brijder and Eric Moormann for their critical comments. Also, he likes to thank Jan Rademaker and Rob van Gent for their astronomical advice.

<sup>1</sup> Sanders 1996, 214.

<sup>2</sup> Şahin 1991, 53 - 79.

<sup>3</sup> Dörner/Goell 1963, 41.

<sup>4</sup> Brijder 2014, Fig. 13a-c.

<sup>5</sup> Sanders 1996, 206-224.

<sup>6</sup> The Lion relief can be considered a symbolic *dexioseis*. Dörrie 1964, 205: "*Es ergab sich am Himmel das Bild der Dexiosis: ein Stern Gott nach dem andren näherte sich grüßend dem Königsgestirn, dem Regulus.*"

<sup>7</sup> Moormann/Versluys 2002, 100 and Crijns 2014, 593.

<sup>8</sup> Moormann/Versluys 2002, 101.

<sup>9</sup> Waldmann 1991, 159 and: Brijder 2014, 366, Fig. 224.

<sup>10</sup> Jacobs 2009, 51-6.

<sup>11</sup> GPS-RTK is Global Positioning System - Real Time Kinematic, has an accuracy of 2 mm.

<sup>12</sup> Garlich 2002, 188-93.

<sup>13</sup> Stek/Thiermann/Waagen 2014, 458-465.

<sup>14</sup> Azimuth is the arc of the horizon measured clockwise from the north. True north is 0°, east is 90°, south is 180°.

<sup>15</sup> Crijns 2014, 594.

<sup>16</sup> The shown altitudes are corrected for refraction and the curvature of the Earth (both axis in degrees), and are calculated with the biquadratic interpolation method based on SRTM3-data. The gray shading defines the distance: lighter gray is at a smaller distance than darker gray. Left top about 63.34, 22500 metres and right top about 63.95, 23200 metres: sh = Apparent horizon at 22500 metres; gh = Geometrical horizon Nemrud. The vertical red line indicates the rising Regulus on 14/07/-0108 JD at 3:10:07 UT with azimuth 63.110. The yellow circle indicates the rising Sun on 26/07/2005 at 02:24 UT

<sup>17</sup> Contrary to Regulus, that is valid until today. The azimuth of rise and set of a star gradually changes in the course of time.

<sup>18</sup> Crijns 2014, 598.

<sup>19</sup> See for a definition of all four star phenomena Robinson 2009, 356.

<sup>20</sup> Crijns 2020, 1-5.

<sup>21</sup> Dörner 1987, 237: "*Es handelt sich um das älteste Bild eines Horoskops, das uns erhalten geblieben ist.*"

<sup>22</sup> Astrology interprets that picture to cast predictions. This article is about astronomy.

<sup>23</sup> Olivieri 1897, 15.

<sup>24</sup> The star signs matched the star constellations around 2000 years ago. Nowadays, they have shifted about 30 arc degrees.

<sup>25</sup> Heilen 2005, 147: The system of Eudoxus, the Babylonian System A and B and of Hipparchus / Ptolemy, define different borders for Leo. The actual constellation of Leo ranges from 105° to 145° of the ecliptic. The borders have been extended to 105° and 145° respectively, to avoid academic discussions.

<sup>26</sup> Humann/Puchstein 1890, 331: "*... an welchen Tagen in der ersten Hälfte des ersten Jahrhunderts v. Chr. die Konstellation des Antiochos eintreten konnte.*"

<sup>27</sup> Neugebauer/van Hoesen 1959, 15: "*Following this principle [the literal order Mars-Mercury-Jupiter] the only date possible within the first century B.C. seemed to be -97 July 17 [the date of Lehmann which was not accept-*



- able]". The astronomical year -97 equals the Julian year 98 BCE.
- <sup>28</sup> The dates have been abbreviated for a better overview e.g., the 17<sup>th</sup> of July 98 BCE has been notated as 17 July 98 BCE.
- <sup>29</sup> Humann/Puchstein 1890, 332-333.
- <sup>30</sup> Neugebauer/van Hoesen 1959, n. 9: "The 6<sup>th</sup> and 7<sup>th</sup> of July are strictly speaking equivalent dates."
- <sup>31</sup> Tuman 1984, 56-69.
- <sup>32</sup> Saygac 2008, 1327.
- <sup>33</sup> Belmonte 2010, 6-8. Belmonte used the Brokamp map displaying the magnetic north. The true north was measured on site: "In June 2009, within the context of a dedicated archaeo-astronomical mission in eastern Anatolia, we visited Mount Nemrud at the precise epoch of the summer solstice (see Figure 6) in an attempt to check possible astronomical alignments and to obtain direct observations that would permit the immediate correction of the orientation data."
- <sup>34</sup> Haase 1975, 21.
- <sup>35</sup> Öncü Güney 2008, 5.
- <sup>36</sup> Versluys 2017, 180.
- <sup>37</sup> De Jong 2021, 274: "The exact interpretation of the meaning of the lion horoscope is therefore likely to remain unknowable But its function is at least somewhat clear: it supports the notion that the king, without inhibiting traditional custom in any way, strongly experienced that the gods ordered him to do something new for his kingdom: to reshape it into a lasting abode of the gods and of his own blessed ancestors, whose ranks he would join in due time This is, of course, literally what he tells us."
- <sup>38</sup> Crijns 2014, 585: There is a second match on 28 August 3996 CE which cannot not be applicable.
- <sup>39</sup> Crijns 1987, 39. And Crijns 2002, 97-99.
- <sup>40</sup> Most of the time Mercury is invisible due to its close proximity to the Sun.
- <sup>41</sup> Heilen 2005, 145-158.
- <sup>42</sup> Crijns 2014, 563-599.
- <sup>43</sup> Heilen 2005, 146.
- <sup>44</sup> Crijns 2014, 586.
- <sup>45</sup> Waldmann 1973, 163 n 1: "Hier zeigt sich daß die gesamte Reihe der Kolossalstatuen (...) eine einzige große dexiosis darstellt."
- <sup>46</sup> Brijder 2014, 402-405.
- <sup>47</sup> Humann/Puchstein 1890, Tafel XII and Young 1964, 32-34.
- <sup>48</sup> Dörner 1987, 240: "Antiochus erwählte den Stern Regulus, ...als Königsstern, als Abbild seiner Person."
- <sup>49</sup> Configuration 2 can only have been visible at sunrise. During the day, the celestial objects are invisible and at sunset they are below the western horizon.
- <sup>50</sup> Contrary to the Lion Horoscope, the statues may look at their own celestial bodies as well. Then, we get the mirrored versions of configuration 1 and 2. The search of these configurations did not yield any date.
- <sup>51</sup> Dillen 2014, 561.
- <sup>52</sup> Due to atmospheric refraction, the Sun is lifted up. The apparent upper limb of the Sun is visible when the Sun is still 0.83° below the horizon. Source: The United States Naval Observatory. 2020. Rise, Set, and Twilight Definitions, in USNO, retrieved 2021-01-16.
- <sup>53</sup> Cary 2001, Cassius Dio XXXVI, 1-3
- <sup>54</sup> Wagner 1983, 212-213.
- <sup>55</sup> Montagu 1994, 25-26.
- <sup>56</sup> Sanders 1996, 213.
- <sup>57</sup> Jacobs 2009, 53.
- <sup>58</sup> Brijder 2014, Fig. 28.
- <sup>59</sup> The hypothesis as published in 1987 and 2002 proofs to be correct, see Crijns 1987, 40 and Moormann 2012, 103. The speculated year is not correct. The research was limited to configuration 2 and resulted in a look-alike configuration in 87 BCE: "The combination of all these 'stars' visible at the same moment is in 87 BC. This constellation may represent the personal horoscope of Antiochos, similar to that on the Lion stele discussed above."
- <sup>60</sup> Dörner 1987, 239: "...mit der Kenntnis des <Geburtshoroskops> besaß man zugleich den astrologischen Schlüssel dazu, die Berechnungen über das Ende des Lebens anzustellen."
- <sup>61</sup> The birthday of the Queen of England is celebrated in countries of the Commonwealth. That day does not necessarily correspond to the date of her actual birth. The Kingdom of The Netherlands celebrated the birthday of former Queen Beatrix on Queen's Day at the 30<sup>st</sup> of April for pragmatic reasons, not because of traditions. The real date of the latter queen's birthday is the 31 January.
- <sup>62</sup> Hamdi Bey 1883, 22.
- <sup>63</sup> Brijder 2014, 60.
- <sup>64</sup> Waldmann 1991, 55.
- <sup>65</sup> Brijder 2014, 65.
- <sup>66</sup> To be precise 365.25 days. That's why we add one extra day in February each four years.
- <sup>67</sup> The conversion of Babylonian/Julian dates is based on the calculation method of Louis Straus. These formulas are corrected by Jan Rademaker to synchronise the results with those as provided by the tables of Parker and Dubberstein. Alternatively, the online date converter of the University of Utrecht made by Rob van Gent can be applied, see the online date converter.
- <sup>68</sup> Strootman 2015, 2: "Still, the problem remains that for the modern historian it is sometimes unclear whether a date given in SE [Seleucid Era] refers to the Macedonian or the Babylonian year".
- <sup>69</sup> Sanders 1996, 214.
- <sup>70</sup> Humann/Puchstein 1890, 334.
- <sup>71</sup> See n. 17.
- <sup>72</sup> Moormann/Versluys 2002, 100.
- <sup>73</sup> Moormann/Versluys 2002, 86. And see Brijder 2014, 358.
- <sup>74</sup> Moormann/Versluys 2002, 100. Moreover, novel data were obtained during the archaeological campaigns. Predrag Gavrilovic found that the building technique of the statues at the West and East terrace is not identical: "The main difference is that the statues on the East Terrace are constructed of massive large blocks." And: "The statues on the West Terrace are erected of smaller stone blocks." (Gavrilovic 2014, 480). The construction method applied at the West terrace is more efficient i.e., less limestone was required to construct the same statues. At the East terrace, all heads are connected to the shoulder block with mortise-and-tenon joints and additional filling mortar. At the West terrace, the heads are placed directly on the shoulder block, without any support tenons or mortar (Brijder 2014, Fig. 235a-j). As the digital volume models show, that is only possible because the artisans had mastered a technique to locate the point of gravity of the heads exactly at the centre of each shoulder block. The statues of the West terrace give proof of an advanced building technique. A technical development which was acquired from previous experience or when accumulated funding allowed to hire more experienced artisans from abroad. These finds suggest that the statues on the West terrace have been constructed after those of the East terrace and not

at the same time. Moreover, the style and iconography of the both ensembles of statues is different. Contrary to the puppet style of the heads at the East terrace, the heads at the West terrace are naturalistic which fits the Hellenistic style of a later era as noted by some scholars: “The East Terrace statues are still simpler than their counterparts” (Moormann/Versluys 2002, 104). Another reason to assume that the Nemrud monument was constructed in different phases, is that the required funds were not available at first. Commagene was a minor mountain kingdom with limited resources. Obviously, the ancestors of Antiochus did not have such resources: “Written records are known stating the wealth of Commagene during the reign of Antiochus I and thereafter, but not before” (Brijder 2014, 172). A possible explanation for the sudden wealth may be the silk trade. In 69 BCE, Armenia was defeated by the Romans (Cary 2001, Cassius Dio XXXVI, 1-3), Commagene remained as the only ‘independent’ kingdom between Rome and Parthia. Antiochus was on good terms with both. And so, Commagene was in an excellent position to act as a central trading hub.

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