

The reign of Sety I from the absolute chronology. A chronological exercise from oDeM 21



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Abstract

The length and exact chronological position of the reign of Sety I continue to be a subject of discussion among specialists in Egyptian chronology. Fortunately, various astronomical ephemerides linked to the reign of Ramesses II and other monarchs help establish effectively an absolute chronology for the reign of Ramesses II. This is essential when addressing, with complementary astronomical documentation, a precise chronology of the reign of Sety I. In the following lines we will address this issue, emphasizing the importance that ostrakon DeM 21 could have.

Keywords: Sety I, absolute chronology, Beautiful Feast of the Valley, oDeM 21

El reinado de Seti I desde la cronología absoluta. Un ejercicio de cronología a partir de oDeM 21

Resumen

La duración y la posición cronológica exacta del reinado de Seti I siguen siendo temas de discusión entre los especialistas en cronología egipcia. Afortunadamente, diversas efemérides astronómicas vinculadas al reinado de Ramsés II y otros monarcas, ayudan a establecer efectivamente una cronología absoluta para el reinado de Ramsés II. Esto resulta fundamental a la hora de abordar, con documentación astronómica complementaria, una cronología precisa del reinado de Seti I. En las siguientes líneas abordaremos esta cuestión, destacando la importancia que pudiera tener el óstrakon DeM 21.

Palabras clave: Seti I, cronología absoluta, Bella fiesta del Valle, oDeM 21

In past years, the study of the transition period between Sety I and Ramesses II was interpreted by some authors in terms of coregency (Seele, 1940; Christophe, 1951; Murnane, 1975; Spalinger, 1979; Kitchen, 1982), affecting the chronology of that period. One of the first documents that inspired this hypothesis was a relief of the northern outer wall of the Karnak Temple where there is a damaged figure under the representation of prince Ramesses II, with the text “crown prince, first real son of his body” (*PM* II, 56-57 (169); *KRI* I, 21; *RITA* I, 17 (7.b); Murnane, 1977: 60; 1995: fig. 5.2; Biston-Moulin, 2016: KIU 1017, fig. 02.o (3-a)). It was suggested that the enigmatic figure represented a deceased firstborn of Sety I and, for this reason, Ramesses II would have needed to legitimize himself through an association with his father (Breasted, 1899; 1906: 62; Seele, 1940: 25-26).

The theory of coregency was also supported by other kinds of documents, such as the Dedicatory Inscription of Abydos (*KRI* II, 323-336) and the Stele of Kuban (*KRI* II, 353, 1-360, 6; *RITA* II: 188-193; Tresson, 1922: 3-11), both originally understood as a proof of the power of Ramesses II while Sety I was still alive (Seele, 1940: 26-27; Christophe, 1951: 360; Murnane, 1977: 58-59; Spalinger, 1979: 283-284). Some scenes in which father and son are represented together, and those temples in which joint participation has been detected, were also included in the debate.

Authors such as Roeder (1938: 154-156) or Murnane (1977: 63-67) investigated a possible chronological line from the changes in the royal epithets of Ramesses. Except Seele (1940: 1-95), who opted for the long coregency, most authors considered that Ramesses had been coregent in his year 1 and 2 while carrying his prenomen *Wsr-M3ʿt-Rʿw* (Christophe, 1951: 361, 363; Barguet, 1952; Murnane, 1977: 81-87; Spalinger, 1979; Kitchen, 1982: 27-30). An example of this was a scene from the Temple of Sety I at Abydos, where a young Ramesses has this prenomen inserted in a royal cartouche (Seele, 1940: 39; Murnane, 1975: fig. 5a-b) (Fig. 1).

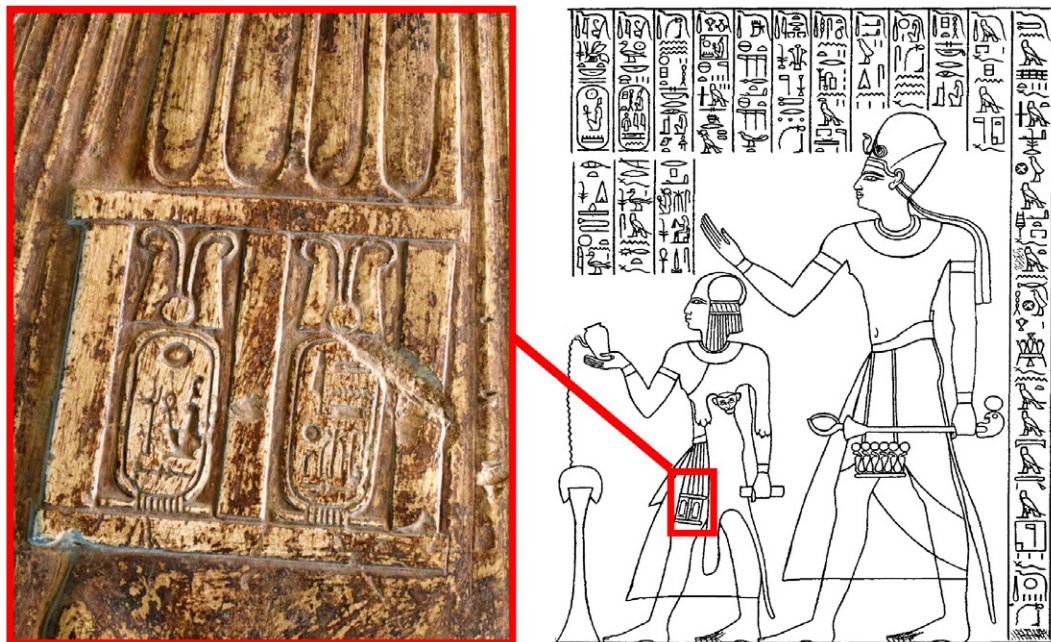


Fig. 1. Ramesses II as crown prince with his father and detail of Prince Ramesses' sash with pendant bearing his cartouches. Scene from corridor X of the temple of Sety I at Abydos (scene: Mariette, 1869: pl. 44; detail: photograph taken by José Lull).

Having all this in mind, it is not surprising that the possibility of a coregency became an established fact during the 20th century. Nevertheless, at the end of the century there was a significant breakthrough. The Epigraphic Survey showed that the supposed prince of Karnak was really a soldier named Mehy (Epigraphic Survey, 1986: pl. 29. 30C, E), and the theory of coregency lost importance. It was at this moment when the antagonistic position of the debate appeared thanks to the work of Brand (2000). Among other things, he concluded that, according to the Dedicatory Inscription, Sety I had already passed away in year 1 of Ramesses II (date shown in the text) because it describes how the temple was after his death (*KRI* II, 326: 3-4; Murnane, 1977: 75, 83; Brand, 2000: 173-174; Spalinger, 2009: 26-28). On the other hand, with regard to the reliefs, Brand demonstrated that Ramesses II only holds royal attributes when he appears in front of Sety I (with the epithet *m3^c hrw*), honoring his deceased father, but not when he is by his side (Brand, 2000: 358, 360, 370; 2005: 27).

In recent years, the latest advances in archaeoastronomy and astronomy combined with improvements in the relative chronology of the New Kingdom have improved our knowledge of the period. In the following lines we will focus on those documents and astronomical data that can help to define an absolute chronology of the reign of Sety I.

The Leiden I 350 papyrus contains a kind of record book with dates ranging from year 52, II Peret 26 (col. II: 19) to III Peret 4 (col. V: 22), of Ramesses II. In column III: 6 the text indicates: “year 52, II Peret 27, in Piramesses, on the feast of the new moon (*psdntyw*)” (Spiegelsberg, 1895: 147, 153; Janssen, 1961: 12, 33). This date is very important from an astronomical –and, consequently, chronological– point of view, since the document specifically indicates that that particular day coincided with the new moon. Initially, the date was recognized as matching with the year 1239 BC if placing the reign of Ramesses II between 1290 and 1223 BC (Rowton, 1948: 69; Parker, 1957: 43; Janssen, 1961: 4), or with 1228 BC if the reign, as we shall consider, began in 1279 BC (Casperson, 1988).

It is well-known that in the festival calendar of Ramesses III, on the south outer wall of his funerary temple at Medinet Habu, it is indicated that the Beautiful Feast of the Valley (BFV) begins with the new moon (Lunar Day 1: LD 1) of II Shemu (Epigraphic Survey, 1986: pl. 142, list 2, section 6, 135; El-Sabban, 2000: 67). It was the moment when the statue of the god Amun was taken to the west bank of the Nile, where in LD 2 the offerings were made to the god in the king’s funerary temple (Epigraphic Survey, 1986: pl. 142, list 4, section 7, 159; El-Sabban, 2000: 68). Despite the claim that the BFV began with the new moon of II Shemu, the truth is that it is also documented during the first fortnight of III Shemu (Krauss, 1985: 141). In any case, thanks to this information, the texts referring to the BFV can provide, even indirectly, astronomical data of great importance for the absolute chronology.

Among the documents with these characteristics we can mention, in particular, two belonging to Tausret (graffito DB 3 found in *Djeser-akhet*, the temple of Thutmose III at Deir el-Bahari, a place that was important during the BFV) (Peden, 2001: 120) and to Ramesses III (graffito DB 10, which indicates the presence of the statue of the god Amun at Medinet Habu) that, combined with the lunar date of year 52, II Peret 27 of Ramesses II, have helped to specify more the chronology. Thus, in year 7, II Shemu 28, the statue of Amun was visiting the funerary temple of Queen Tausret (Marciniak, 1974: No. 3; *KRI* IV, 376), an event that must be associated with the beginning of the lunar month. Later, in year 7 of Ramesses III, III Shemu 9 (Marciniak, 1974: No. 10; *KRI* V, 337), the same situation occurred. As *psdntyw* (new moon, LD 1) is not explicitly mentioned in the texts, these dates correspond to LD 1 or LD 2. Even with this small uncertainty, the dates indicated in these documents are still significant.

Similarly, some documents belonging to the 19th and 20th dynasties could be useful, with dates of Ramesses II or Ramesses VII (graffito DB 9: year 6, III Shemu 9),¹ Ramesses VI or Ramesses X (DB 32: year 3, II Shemu 20),² Ramesses III or Ramesses VII (DB 10: year 7, III Shemu 9)³ and Ramesses II, Ramesses III or Ramesses XI (DB 31: year 22, II Shemu 22).⁴ In these cases, we do not know if they refer to a LD 1 or LD 2, and to which king they belong to (since it is not indicated), so these texts could offer more possible chronological combinations depending on how we interpret them.

Despite the fact that there is no total agreement –for example, for Huber (2011: 172-227), 1315 BC is the most convincing astronomical chronology for the beginning of the reign of Ramesses II–, the recognition of 1279 BC as year 1 of Ramesses II is one of the options best considered by specialists in Egyptian chronology (Hornung *et al.*, 2006: 493; and Gautschy, 2014: 153, although she also considers the option of 1304 BC). The equivalence between 1279 BC and year 1 of Ramesses II is particularly supported by the German Egyptologist Rolf Krauss (2007: 181-182; 2015: 358; Krauss and Warburton, 2009: 133-134). This year, considering other astronomical and historical sources of diverse nature and origin, can be used as a starting point to reconstruct with more precision the preceding chronology of at least part of the 18th dynasty and the beginning of the 19th dynasty (Krauss, 2016; Lull, 2019).

The coronation date of Sety I is not known with certainty, but several proposals have been offered based on the interpretation of various documents. According to Helck (1966: 233-234; 1990: 207-208), it took place in III Shemu 24, a date that in oGardiner 11 (year 6 of Ramesses VI) is remembered as *hnw n Sty*, a term that has been linked to the celebration of the king's coronation. Murnane (1976: 23-33), on the other hand, defined a period between III Shemu 18 and IV Shemu 23, giving for IV Shemu 2 more options. Redford (1986: 113 n. 46), on the other hand, observed that in the pRollin 1889 there is an uninterrupted sequence, without a change of year, between III Akhet 21 to II Shemu [29], which implies that the change of year should be between II Shemu 30 and III Akhet 21. Taking into account that there is no change of year either between III Akhet 8 and IV Akhet 30 or between I Akhet 2 and III Akhet 6, this author concluded that the best option is a date between II Shemu 30 and I Akhet 2, specifically IV Shemu 23. However, Brand (2000: 302) accepts as the best option the date provided by Helck: III Shemu 24.

The length of Sety I's reign has also been a subject of discussion. The later date ever proposed was initially suggested by Reisner. It comes from a stela (Khartoum Museum 1856) found in the temple of Amun at Gebel Barkal, reused in the Meroitic era as a paving stone. Unfortunately, its state of conservation is not perfect, so the date that appears at the beginning of the text could offer certain doubts. According to Reisner's reading (Reisner and Reisner, 1933: 74, 76), even

1 Marciniak (1974: No. 9); Ramesses IV after *KRI* VI, 102; Ramesses IV according to Peden (2001: 122 and n. 395); Ramesses VII according to Gautschy (2014: 142); Ramesses VII or maybe Ramesses II, according to Krauss (2015: 359).

2 Marciniak, 1974 (No. 32); Ramesses VI according to Gautschy (2014: 142); options for Ramesses VI and Ramesses IX in Krauss (2015: 359).

3 Marciniak (1974: No. 10); *KRI* V, 337; Ramesses III according to Gautschy (2014: 142); options for Ramesses III, Ramesses VII or Ramesses IX in Krauss (2015: 359 n. 224, 360).

4 This inscription mentions the 'Beautiful Feast of the Valley of Amun-Re'; Marciniak (1974: No. 31 [date transcribed as II Shemu 23]); date translated as II Shemu 23 after Sadek (1984: 89); *KRI* V, 417-418; Ramesses XI after Gautschy (2014: 142 table 1); options for Ramesses II and Ramesses III but not for Ramesses XI because of the destruction of the *Djeser-akhet* during his reign, according to Krauss (2015: 361); see also Krauss (2006: 416).

with the existing gaps, the date would be *h3t sp 11, 3bd IV (?) smw sw 13* “Year 11, IV (?) Shemu 13.” This date has been accepted as right (even with the doubt between IV Shemu 12 and 13) for a long time.⁵ However, in a study published some years ago, Van Dijk (2011; followed by Aston, 2012: 295) firmly questioned the year 11 read by Reisner, arguing for a “year 3” reading instead.

If we accept Van Dijk’s proposal –as, in fact, many researchers already accept (for example, Masquelier-Loorius, 2013: 28-29)–, the document with the highest date of the reign of Sety I would be the inscription of text B from Kanais (Year 9,⁶ III Shemu 20),⁷ in Wadi Abad, about 50 km east of Edfu. Taking into account that no documents dated to year 10 have been found and that the highest dates written in the hieratic notes on amphorae sherds of Sety I found in the Valley of the Kings refer to year 8, Aston (2016: 16) concludes that “these Year 8 dockets possibly mark either the date the tomb was finished or, more likely, refers to the last vintage before the death of the king,” thus making year 9 the last of Sety I. If the wine of year 8 is related to the last vintage of Sety I prior to his burial in KV17, certainly, it would be unfeasible to postulate a long reign of Sety I, as the up to the 15 years proposed by some authors. Bierbrier (1972: 303) concluded a reign of at least 15 years by analyzing the years in which HPA Bakenkhonsu held his various positions; however, this method was proven wrong by Jansen-Winkeln (1993). Kitchen (2000: 42-43) also proposes a reign of 11-15 years; Servajean (2014: 316 n. 3) follows that Ramesses I and Sety I total 17 years; Krauss (2016: 358) leaves open a reign of Sety I from 1293 BC, respecting the year 1 of Ramesses II in 1279 BC, which means 14 full years; likewise, Belmonte (2022: table 2), but recently amended to 12 years in Belmonte and Lull (2023: table 7.5). On the other hand, Brand (1997: 106) concludes that the works begun by the monarch in year 9 in the quarries of Aswan, to produce an important set of obelisks and statues, were largely unfinished. However, these observations, although pertinent, are perhaps not sufficient to conclude that the reign of Sety I could not continue beyond his year 9. Regarding the hieratic notes on amphorae sherds, it should be noted that not all the years between 1 and 9 are documented. On the contrary, the number of years that are not documented with certainty is greater⁸ and year 8 labels found in the Valley of the Kings not necessarily show the last vintage prior to the death of Sety I.

Valbelle (1985: 164 n. 3) also associates a series of ostraca with specific years to Sety I: year 1: oDeM 30; year 2: oCairo 25704, oBM 50728 and label 6110; year 3: oDeM 5, 7-9, 13, 18, 23 and 24; years 7 and 9: oDeM 91 and oBerlin P 10840; year 8: label 6422.

On the other hand, the epitomes of Manetho’s *Aegyptiaca* (Waddell, 1940: 121, 149, 151) do not offer useful data on the duration of the reign of Sety I, since Sety I reigned for 51 years according to Africanus (from Syncellus), 55 years according to Eusebius (from Syncellus) or 59 years according to Josephus. However, Theophilus of Antioch grants Sethos 10 years (Waddell, 1940: 111), so taking this secondary source as good, Redford (1967: 211) accepts a 10-year long reign for Sety I.

5 *KRI* I, 75: 8; *RITA* I, 64, 75: 8 “day 12 (or 13)”; Brand (2000: 305-309), “year eleven, IV *smw* 12 or 13”; Hornung (2006: 211), “13/IV/Shemu year 11.”

6 *KRI* I, 65: 14; belonging to this year 9, without further specifications, two other documents from Aswan are preserved: Habachi (1973: 115 fig. 1 and 119 fig. 2); *KRI* I, 73:11 and *KRI* I, 74: 7.

7 And not Year 9, IV Shemu 12/13, as Dodson (2019: 58, 69) recently argued.

8 *KRI* VII, 60: 9, 55: 7 (wines from the domain of Sety I, from years 3 and 8).

Considering that the date of text B of Kanais (Year 9, III Shemu 20) is only a few days before Sety I's possible coronation date (III Shemu 24), it is probable that the monarch continued his reign at least during the year 10, in a complete way, since the date of the text B of Kanais refers to the day in which "His Majesty surveyed the deserts right up to the mountains (...) to see the mines from which electrum is brought" (*KRI* III, 298: 3-4; *RITA* I, 56-57). And it was during this expedition that Sety I became aware of the poor living conditions of his workers and when, therefore, he was "seeking out a (suitable) place for making a well." Finally, "another good deed (...) was to found a settlement with a cult-chapel within it (for) noble is a town that possesses a temple!" That is to say, this initial date implies a whole time of subsequent work that must include the location and excavation of the water well, the establishment of the mining settlement and also the excavation, construction and decoration of the speos of Sety I at Kanais. And, once everything is finished, the text also refers to a second visit by the king to consecrate the temple. These actions, prolonged in time from practically the beginning of year 10 of Sety I, imply that at least the year 10, if not more, should be recognized. Despite this, and although a literal reading of the text leaves no room for another option, authors such as Schott (1961: 163-164) and Brand (2000: 279-280) believe that the date of the text should refer to the second visit of the king.

From a chronological point of view, a reference given by HPA Bakenkhonsu (Munich Gl. WAF 38) may also be of interest. He said: "I spent 11 years as a youth, when I was a trainee Stablemaster of King Men[ma]re" (*RITA* III, 214) (*hrj-jh n shpr n nswt Mn-[mʕt]-Rʕw*). From this reference we must understand that, in that role, he lived eleven years under Sety I.

On the other hand, the coronation of Ramesses II took place on III Shemu 27, as Helck (1959: 118-120) and Krauss (1977: 147-148) originally concluded. This implies that the last year of Sety I's reign was short-lived, lasting no more than three days. The question, taking into account the previous observations, is whether that last short year was the 11th, the 12th or if there were any more. Certainly, it would be strange to give a short reign to a monarch who was capable of monumental works and able "to create the most magnificent royal tomb in the Valley of the Kings and to decorate it with painted reliefs from the entrance to the chambers beyond the sarcophagus chamber" (Altenmüller, 2015: 202-203).

At this point, we must introduce a document that, despite the uncertainties that surround it, discussed by Krauss (2016: 363-364), can help to establish the chronological fit we need to better define the reign of Sety I. We refer to ostrakon DeM 21 (Fig. 2).

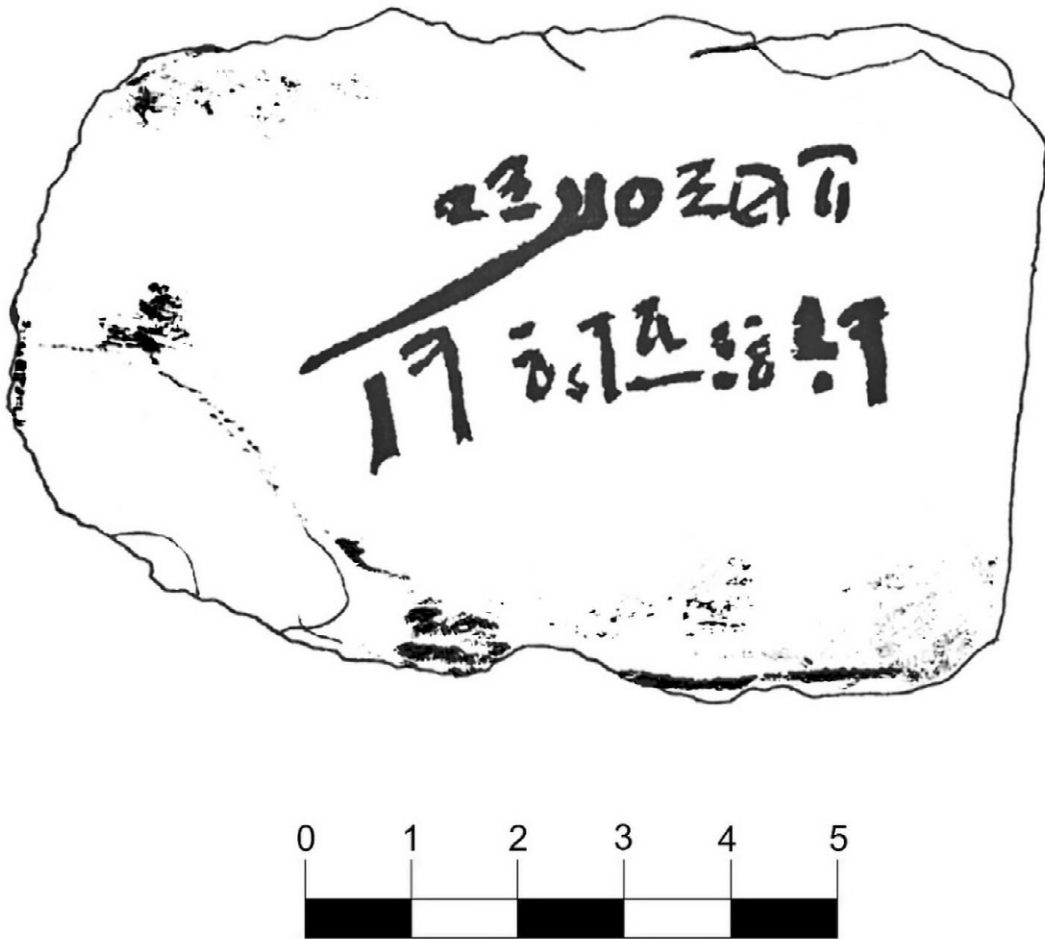


Fig. 2. oDeM 21 (drawn by Diana Navarro).

The two-lines hieratic inscription offered by oDeM 21 (Černý, 1935: pl. 5A 21; *KRI* I, 367: 3) is very simple:

- 1) II 3bd šmw 25 “II Shemu 25”
- 2) jnht jnht 51 “Beer: 51 inhet-jars”

As can be seen, it does not include the reign of any monarch, nor the year of reign. Černý considered that the text belonged to an “écriture de la XIX dynastie” (1935: 5), without specifying a concrete reign. Helck (2002: 40), however, argued that the similarity between oCG 25704, from year 2 of Sety I, and oDeM 1-28, meant that the latter should be dated to the same reign. But the enormous amount of beer mentioned, about 637 liters, assuming a minimum capacity of 12.5 liters per *jnht* jar (Janssen, 1975: 434) or even 1300 liters considering 25,5 per *jnht* jar (Frood, 2003: 57), being delivered in II Shemu, made Kitchen (*RITANC* I, 257-258) associate it with offerings linked to the Beautiful Feast of the Valley. The Feast lasted only two days and the offerings were presented on these days. After Frood (2003: 59 n. 174), this kind of jars are associated with festival or temple offerings, and oDeM 21 is included among them. And, for Spalinger (2000: 310), the *jnht* vessels were employed for special beers, or at least they were rather

unusual size, and appear to have been brought to the workmen at Deir el-Medina as part of special deliveries, in particular from the surpluses that the local temples had after their offerings.

Kitchen (*RITANC* I: 257-258), on the other hand, postulated that this inscription should belong to a group of inscriptions linked to year 3 of Sety I:

The deliveries on 2nd Shomu 25 almost certainly herald a celebration of the Feast of the Valley, when Amun's portable image crossed the Nile from Karnak temple to one of the royal memorial-temples on the West Bank, while Thebans would hold an overnight picnic feast in their family tomb-chapels.

Helck (2002: 40) –unlike Dorn (2011: 33)– also includes it within a group of ostraca from year 3 of Sety I, of which it is worth highlighting oDeM 20 (II Shemu 12), since it mentions a batch of 60 *jnht* jars, DeM 25 (II Shemu [1]3) with 85 great *jnht* jars, or oDeM 19 (II Shemu 8) with 54 *jnht* jars. In the case of oDeM 19, the *jnht* jars are accompanied by special *ʿkkt* loaves, so Spalinger (2000: 311), taking into account that the date is from II Shemu, concludes “without a doubt, that the recently celebrated festival was that of The Valley.”

As Krauss (2016: 364) recognized, a “definite conclusion is not possible, since whether the delivery was indeed for the Feast of the Valley and whether oDeM 21 dates to 3 Sety I both remain open.” But, even considering that we start from a series of premises, given that this celebration took place at the beginning of the lunar month on II Shemu, oDeM 21 could have an obvious chronological utility.

If, as a test, we calculate⁹ in which moment between 1295 and 1280 BC (that is, within the probable years of the reign of Sety I considered by most of the authors) II Shemu 25 coincided with a LD 1, we see that on May 1, 1288, BC (Julian) this coincidence occurred (see Table 1):

LD 1	Julian Date LD 1	Last Crescent	First Crescent
II Shemu 11	19/04/1295 BC	II Shemu 9	II Shemu 12
II Shemu 30	08/05/1294 BC	II Shemu 28	III Shemu 1
II Shemu 19	26/04/1293 BC	II Shemu 18	II Shemu 20
II Shemu 9	16/04/1292 BC	II Shemu 7	II Shemu 10
II Shemu 28	05/05/1291 BC	II Shemu 26	II Shemu 29
II Shemu 17	24/04/1290 BC	II Shemu 15	II Shemu 18
II Shemu 6	12/04/1289 BC	II Shemu 5	II Shemu 7
II Shemu 25	01/05/1288 BC	II Shemu 24	II Shemu 26
II Shemu 14	20/04/1287 BC	II Shemu 13	II Shemu 15
II Shemu 4	10/04/1286 BC	II Shemu 3	II Shemu 5

9 See <http://www.gautschy.ch/~rita/archast/mond/mondeng.html#download> [access date: 15-1-2024]; Gautschy (2011).

LD 1	Julian Date LD 1	Last Crescent	First Crescent
II Shemu 23	28/04/1285 BC	II Shemu 22	II Shemu 24
II Shemu 12	17/04/1284 BC	II Shemu 11	II Shemu 13
II Shemu 2	07/04/1283 BC	II Shemu 1	II Shemu 3
II Shemu 21	26/04/1282 BC	II Shemu 19	II Shemu 22
II Shemu 10	14/04/1281 BC	II Shemu 8	II Shemu 11
II Shemu 28	02/05/1280 BC	II Shemu 27	II Shemu 30

Table 1. LD 1, LD1 Julian date, first crescent and last crescent in II Shemu between 1295 BC and 1280 BC.

The study and reconstruction, carried out by Miller (2007), of some tablet fragments from the reign of Mursili II, brought him to conclude that the person the Hittite king is referring to, called *Ar-ma-a*, is no other than the general Horemheb. This hypothesis carries important consequences from a chronological perspective. The most evident is that the deceased king Nipkhururiya –mentioned, among others (Gabolde, 2015: 64-68), in the well-known letter KBo V 6 where the Egyptian Dahamunzu asks for a son to the Hittite king Suppiluliuma–, cannot be Tutankhamun, but Akhenaten. On the other hand, KBo 50.24 speaks of a war that the Egyptians had in the region of Amurru, possibly in the year 9 of Mursili II, at the time when a new (Egyptian?) king sat upon the throne. Wilhelm (2009) states that the accession to the throne mentioned in KBo 50 refers to Horemheb, so Mursili's year 8 or 9 corresponds to Horemheb's year 1. But, as Devicchi and Miller (2011: 157) have shown,

what name is to be restored in l. 2' of KUB 19.15+KBo 50.24 thus remains a matter of speculation. Of the suggestions put forth thus far, Ay's throne name Ḥeper-ḥepu-re can be considered a leading candidate. The events of col. ii, likely to be dated to Muršili's 9th year, would thus have taken place while Horemheb was not yet pharaoh, perhaps shortly after Ay ascended the throne of Egypt.

If oDeM 21 is associated with the BFV of year 3 of Sety I, and furthermore we consider that year 1 of Ramesses II began in 1279 BC, the reign of Sety I should have a length of 12 full years, beginning in 1291 BC and ending almost in the middle of 1279 BC (Fig. 3). In this case, how might this chronology fit with the immediate reigns, accepting the correspondence between year 1 of Ay and year 1313 BC as proposed by Krauss (2016: 357)?

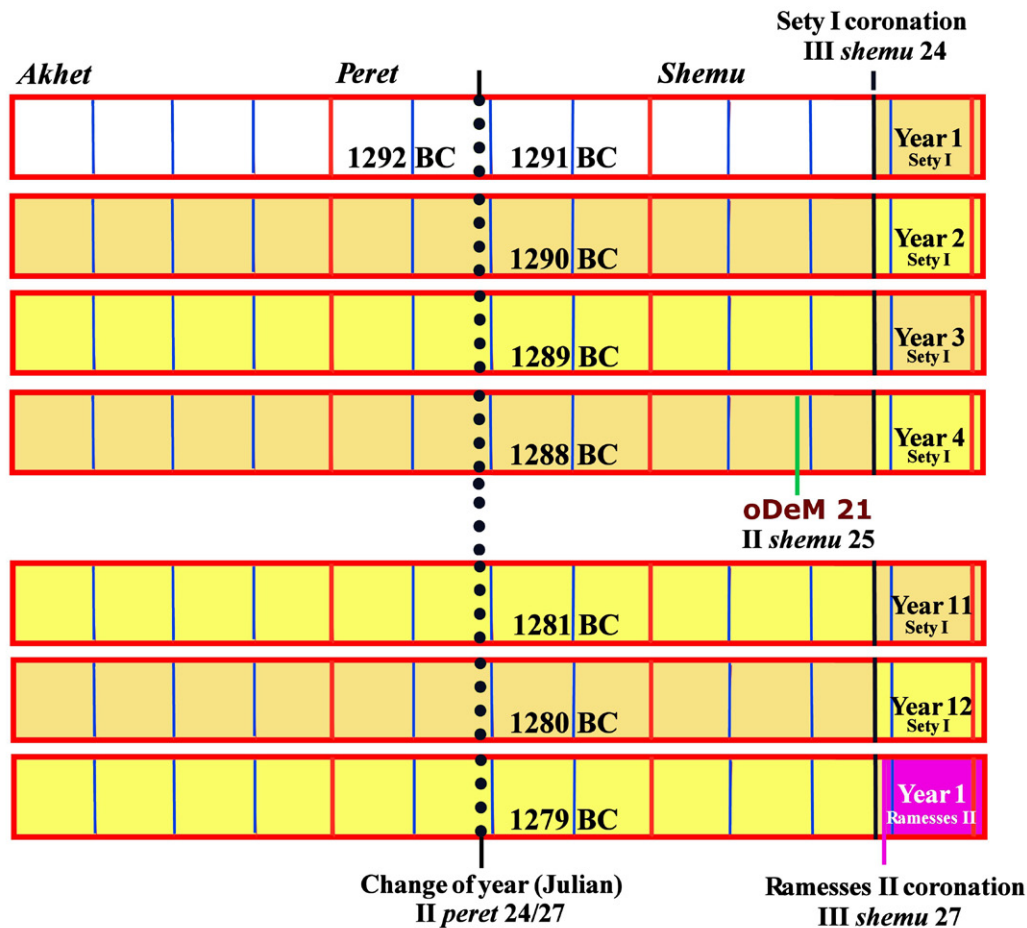


Fig. 3. Chronological scheme. Reign's length of Sety I from 1291 to 1279 BC (drawn by José Lull).

The death of Tutankhamun possibly occurred in III-IV Peret, since some botanical elements introduced in his tomb at the time of his burial seem to have been collected during the months of March or April (Krauss, 1996). Therefore, the coronation of Ay took place sometime in III-IV Peret. On the other hand, the highest known date of Ay is year 4, IV Akhet 1 (Berlin 2074) (*Urk.* IV, 2110: 13), about 4 or 5 months before starting year 5 in III-IV Peret. Although year 5 of Ay is not documented, the length of his reign is unknown and he could have ruled for as long as 5 or even 6 full years.

In the Armenian Version of Eusebius (Waddell, 1940: 117, 119) it is said that “Cherres, (reigned) for 15 years,” and “Armais, also called Danaus, for 5 years.” If Cherres corresponds to Kheperkheperure (Ay) and Armais to Horemheb, it is possible to think that the years assigned to one and the other have been mistakenly interchanged. In this case, here we have figures similar to those we propose, although it is true that other epitomes offer different data.

In the case of Horemheb, the coronation date is not documented, although Hornung (1964: 38-39) proposed II Akhet. On the other hand, especially after the publication of Van Dijk (2008), which concludes that “Horemheb reigned for no more than a maximum of 14 full years and

that he was buried early in his Year 15 at the very latest,” there is almost general¹⁰ agreement in lowering the length of his reign to 14 or 15 years. In this sense, let us bear in mind that Hari (1964: 300-302) and Von Beckerath (1997: 116) postulated that Horemheb’s London UC 14391 inscription could refer to “[year 1]5.”

Ramesses I has no reliable data on his coronation date, although Hornung (2006: 210) suggested III-IV Peret, taking into account the coronation date of Sety I and the reference given by Josephus / Theophilus of 1 year and 4 months for the reign of Ramesses I (Waddell, 1940: 109). However, this reference is unreliable because, in that case, since the highest dated document we have of Ramesses I is a stela found in Buhen (Louvre C57) (*KRI I*, 2: 9) from year 2, II Peret 20, it would be necessary to admit a reign that began at least in II Peret and lasted at least 1 year and 5 months. Hornung considers that “the king may have died at the beginning of his third year, which would allow for two full years.” It might be prudent to estimate around two full years, taking into account the limited monumental legacy of Ramesses I.

Beginning the reign of Ay in III or IV Peret of 1313 BC (the Julian year 1313 BC began in II Peret 18) and ending in II Akhet of 1308 BC, Ay would have been on the throne 5 full years and 5 or 6 months of his sixth year. Beginning the reign of Horemheb in II Akhet of 1308 BC and ending in the middle of the Julian year 1293 BC, Horemheb would have reigned 14 full years and about 9 or 10 months of his year 15 (III-IV Shemu, that is, near the beginning of the grape harvest). Nowadays, in Egypt, the grape harvest season begins in May and ends in September, but low temperatures during the growing season can slow down the plant growth and the high temperatures can accelerate ripening. The wine jars could be docketed at the end of the harvest season (especially during the first months of Akhet). In year 13 of Horemheb, for example, there is a jar docketed in III Akhet (Martin, 1979: 15, pl. III 2). In that case, the reign of Ramesses I would have lasted 2 full years or almost 2 full years.¹¹ We consequently consider the following chronology (see Table 2) for the end of the 18th dynasty and the beginning of the 19th dynasty:

King	Reign	Coronation	Highest known date	Full years
Ay	1313–1308 BC	III–IV Peret	Year 4, IV Akhet 1 (Berlin 2074)	5
Horemheb	1308–1293 BC	II Akhet (?)	[Year 1]5 (?) London UC 14391 Year 14 (Jar label, KV 57)	14
Ramesses I	1293–1291 BC	III–IV Peret (?) very doubtful	Year 2, II Peret 20 (Louvre C57)	2
Sety I	1291–1279 BC	III Shemu 24	Year 9, III Shemu 20 (Text B, Kanais) If Year 11, IV Shemu 13 (Khartoum 1856) is not considered	12

Table 2. Chronology from Ay to Sety I (Julian year 1313 BC begins in II Peret 18; 1293 BC in II Peret 23; 1279 BC in II Peret 27). The full years are hypothetical and are not necessarily based on the highest known dates of the reigns mentioned.

¹⁰ An exception is, for example, Dodson (2019: 159), who still considers a long reign, from 1308 to 1278 BC, for Horemheb.

¹¹ On the other hand, if the reign of Ay lasted for 6 full years and the coronation of Horemheb was carried out in II Akhet of 1307 BC, his reign could have extended, for 14 full years, until the end of 1293 BC. In this case, Ramesses I reign would have lasted at least 1 year and 5 months.

Finally, we must emphasize again that the characteristics of oDeM 21 do not allow us to affirm the conclusions proposed in this paper, but at least it can be considered as a chronological exercise whose validity or not could only be demonstrated with a more in-depth analysis of other similar documents of Sety I.¹²

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