



Summary :

The Almanac of Trebizond is an astronomical-astrological text presenting the position of the planets, the Sun and the Moon between May 1336 and March 1337 as well as the respective astrological predictions. It is a text combining the Ptolemaic with the Persian astronomical tradition, while the predictions are of particular interest, providing a picture of the social stratification in Trebizond.

Date

1336

Geographical Location

Trebizond

1. Historical Background – Publications

The *Almanac of Trebizond* has the form of an astronomical journal (canons) according to the terminology of the period it was written (14th century). It is an astronomical-astrological text organised in tables presenting the position and motion of the Sun, the Moon and the five planets known at that era (Saturn, Mars, Venus, Jupiter, Mercury).

The manuscript has been preserved in Cod. 525 of the Bavarian State Library of Munich (fols. 155v-171v) of the 14th century. Codex 525 consists mainly of works written by [Andrew Libadenos](#), a Byzantine official of the 14th century. As a result, the almanac was initially mistakenly attributed to Libadenos. However, the same Codex, apart from the manuscript works of Libadenos,¹ the most important among them being the [Periegesis](#), includes other works as well, which are not reported not even in the list given by the writer at the end of the book. As for the *Almanac*, it appears to have been written by a different person. The writer remains unknown, although the text is attributed to the monk Manuel, who in Trebizond initiated [George Chrysokokkes](#) in the work of [Gregory Chioniades](#). Chrysokokkes mentions Manuel in his work [Introduction in the Syntaxis of the Persians](#) and states that it was thanks to Manuel that he himself gained his specialised knowledge on astronomy: 'I was fortunate because, being a student in medicine myself, I was introduced to these books; and on realising that the comprehension of planetary motion is useful for medicine I went to that priest in Trebizond, who was my teacher, and gained knowledge' (Ἐπειδὴ κατὰ τιν' ἀγαθὴν τύχην καὶ αὐτὸς τὰ τῆς ἰατρικῆς παιδευόμενος, τοῖς τούτων συγγράμμασιν ἐντυχὼν, καὶ ἰδὼν ὅσον εἰς ἰατρικὴν τὸ χρήσιμον ἐκ τῆς καταλήψεως τῶν πλανωμένων κινήσεως, παρὰ μὲν τῷ Τραπεζουντίῳ ἐκείνῳ ἰερεῖ τῶν ἡμῶν διδασκάλῳ, σπεύσας, ὥσπερ οἷσθα, μεμάθηκα).²

A part of the Almanac (referring to astrological predictions) was published for the first time in 1908 in the series *Catalogus Codicum Astrologorum Graecorum*. Later on, in 1916, it was republished by S. Lambrou, who annotated the edition.³ A full and annotated edition of the astronomical part of the text, as well as the tables, were published in 1994 by R. Mercier in the series *Corpus des Astronomes Byzantins* of Louvain-la-Neuve.⁴

2. Content

The *Almanac of Trebizond* consists of monthly astronomical tables referring to the period from 12 May 1336 until 12 March 1337. In the margin around the tables, short texts are added, referring to astrological predictions concerning ten-day periods.

The tables give the position of the Sun, the Moon and the five then-known planets (Saturn, Mars, Venus, Jupiter, Mercury) for each month, as well as the duration of each day, the time of the day the Moon passes through each zodiac sign, the arrangement of the seven celestial bodies and the phases of the planets.

The tables are divided into 23 columns, as follows:



The 1st column includes the names of the months in the Byzantine and the Islamic calendar (hijrah / hegira); moreover, the names of some Sundays according to the liturgical Christian Orthodox calendar are added.

The 2nd, 3rd and 4th columns include the days of the week written symbolically as numbers (eg. Sunday is symbolised by the number 7) as well as the respective days of each month, according to the Byzantine and the Islamic calendar.

Columns 5 to 12 give the position of the Sun, the Moon and the five planets at every point of the zodiac in degrees and minutes, as well as the highest point of their orbits.

The 13th column gives the duration of days in hours and minutes.

The 14th column includes the time the Moon moves from one sign to another sign of the zodiac every day or every following night.

Column 15 gives the sign where the Moon is at midday.

The next columns, 16-21, include the hours the Moon is in syzygy or forms shapes (hexagon, triangle, etc.) with the Sun or the five planets.

The 22nd column is a catalogue of the syzygies of the Moon as well as the ecliptic.

Finally, the 23rd column contains the phases of each of the five planets as well as the entrance of each planet into the twelve parts of the zodiac (signs).

In the margins of the tables predictions concerning ten-day periods are written. The predictions are based on the positions of the planets, the Sun and the Moon in the respective period. These predictions use astrological symbols and follow the principles of astrology as they had been formulated in the Hellenistic period. For example, the prediction about a particular day is based on the position of the celestial bodies, as follows: 'With the help of God, in the year 6844,⁵ when the Sun passes from Pisces to Mars, on the 12th of the current month of March, on the 3rd day (Tuesday), at the 4th hour of the day, Cancer will be the nativity, while the Moon and Venus will be falling into the house'. Then there are other predictions, such as: '[...] The next year will be good [...] for all Christians and particularly the powerful, the blessed potentates and the king [...] Throughout the year there will be harmony between men and women'.⁶

Predictions appeal to different social and professional groups. A rough classification concerns, for example, the following professional and social groups: kings, grammarians and notaries, clergymen, potentates and soldiers, old men and eunuchs, stall keepers and travellers, ambassadors, musicians and actors, tradesmen at fairs, famous women, etc.⁷

3. Evaluation

The *Almanac of Trebizond* is yet another result of the interaction between the Ptolemaic and the Persian astronomical tradition, as it had been imported into [Trebizond](#) through the astronomical tables Gregory Chioniades had carried from Tabriz. The Almanac tables are mainly based on the works of Claudius Ptolemy *Almagest* (Mathematike Syntaxis Megiste, "The Great Mathematical Treatise") and *Persian Tables*. However, there are differences, as it happens with the calculations of the orbits of celestial bodies, which differ from the respective Ptolemaic calculations. Their source is Zij-i Ilkhani, the work of the significant astronomer Nassir al-Din Al-Tusi of the observatory of Maragha, written circa 1270, as well as Zij al-'Ala'i, written in 1176 by Abd al Karim al Shirwani.

Given that the Byzantine scholars were positive about the superiority of Greek education,⁸ the fact that elements from different scientific traditions, such as the Persian tradition, were adopted, as the example of the text in question shows, is of great importance, reflecting a change of attitude in the 14th century.



The text is also important because it reveals the prevailing attitude towards astrology. It is obvious that, despite the objections to astrology raised at times and mainly expressed by the Church and several scholars, astrological predictions have survived remarkably well since Late Antiquity and had probably a large following.⁹

Finally, the text of the *Almanac* is of particular interest for yet another reason: the social and professional groups mentioned in the predictions give a clear picture of the social hierarchy as well as of the social and professional stratification in 14th century Trebizond, in the age of the Grand Komnenoi. The categories mentioned and the characteristics their members should have are eloquent. For example, kings should confront their external enemies and ward off internal discords, grammarians and notaries should be magnanimous and kind, potentates and soldiers should obey the orders of the kings, etc. As a result, the *Almanac* is an excellent illustration of the commonly accepted view on the social organisation and the rules that society should conform to at the time.

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1. According to the text of the codex: 'ἔ γράφη ἔ μῆ σποράδην χειρί, πλῆ ν... ἃ περίττως... καὶ ἃ καλῶς. Ἦδη δὲ ... συνῆ πται ἄ μα καὶ ἥ ρμοσαι καὶ εἶ ς τὸ παρὸν ἔ στί τε καὶ φαίνεται'. The fact is mentioned by Λαμπιδης Ο., 'Συμβολαί εις τον βίον και τα ἔργα Ανδρέου του Λιβαδηνού', *Αρχαίον Πόντου* 29 (1968), p. 183.
 2. Chap. 48 of code Vat.gr. 210, Dachy P., *La Syntaxe Perse de Georges Chrysococcès. Chap. 14, 15, 16, 31, 32, 33, 34, 35, 43, 48* [Mémoire (inédit), Faculté de Philosophie et Lettres, Université Catholique de Louvain (1968)], p. 64.
 3. Λάμπρου, Σπ., 'Τραπεζουντιακόν ωροσκόπιον του ἔτους 1336', *Νέος Ελληνομνήμων* 13 (1916), pp. 33-50.
 4. Mercier, R., *An Almanac for Trebizond for the year 1336* (Corpus des Astronomes Byzantins VII, Academia, Louvain-la-Neuve 1994).
 5. Chronology follows the calendar of the Byzantines, which started from the creation of the world, believed to have occurred in 5508 BC (21 March 5508, spring equinox).
 6. Mercier, R., *An Almanac for Trebizond for the year 1336* (Corpus des Astronomes Byzantins VII, Academia, Louvain-la-Neuve 1994), p. 147.
 7. Mercier, R., *An Almanac for Trebizond for the year 1336* (Corpus des Astronomes Byzantins VII, Academia, Louvain-la-Neuve 1994), pp. 150-151.
 8. Beck, H.-G., *Η βυζαντινή χιλιετία* (Athens 1992), from p. 17 onward.
 9. As for the connection between astronomy and astrology in the Byzantine period, see also Κατσιαμπούρα, Γ., *Πρόσληψη, μετάδοση και λειτουργία των επιστημών στους μεσοβυζαντινούς χρόνους και το Quadrivium του 1008* (Athens 2004).

Bibliography :

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	Dachy P. , <i>La Syntaxe Perse de Georges Chrysococcès (Chapitres 14, 15, 16, 31, 32, 33, 34, 35, 43, 48)</i> , Faculté de Philosophie & Lettres, Univ. Cathol. de Louvain, Louvain 1968



	Mercier R. , <i>An Almanac for Trebizond for the year 1336</i> , Louvain-la-Neuve 1994, Corpus des Astronomes Byzantins VII
	Λάμπρος Σ. , "Τραπεζουντιακόν ωροσκόπιον του έτους 1336", <i>Νέος Ελληνομνήμων</i> , 13, 1916, 33-50
	Λαμψίδης Ο. , "Συμβολαί εις τον βίον και τα έργα Ανδρέου του Λιβαδηνού", <i>Αρχείον Πόντου</i> , 29, 1968, 162-279
	Beck H.-G. , <i>Η βυζαντινή χιλιετία</i> , 2η έκδ., Αθήνα 1992
	Βαρβούνης Μ.Γ. , "Όψεις της καθημερινής ζωής στην Τραπεζούντα του 14ου αιώνα. Η μαρτυρία του ωροσκοπίου της Τραπεζούνας (1336)", <i>Αρχείον Πόντου</i> , 45, 1994, 18-36

Webliography :

Τραπεζούντα, Ανάπτυξη θετικών επιστημών

<http://www.fhw.gr/choros/trapezounda/gr/webpages/501.html>

Quotations

The introduction to the Horoscope of Trebizond

Ἦρξε σὺν Θεῷ ὁ ζωμδ [1336] χρόνος. Θαρροῦντες γοῦν εἰς τὴν ἄφατον τοῦ Θεοῦ μακροθυμίαν καὶ πολὺ ἔλεος προγράφομεν τὰ ἐσόμενα ἐν τῷ παρόντι ἐνιαυτῷ. Καλῶς τοίνυν καὶ θεαρέστως ἔσεται ἐν πᾶσι τοῖς χριστιανοῖς μάλιστα τῷ ἁγίῳ ἡμῶν ἀθέντη καὶ βασιλεῖ σὺν τῇ εὐσεβεστάτῃ δεσποίνῃ καὶ παντὶ τῷ θεοφρουρητῷ παλατίῳ καὶ τῷ στρατῷ ἅμα τῷ μεγαλοῦπερόχῳ ἄρχοντι τοῦ κραταιοῦ καὶ ἁγίου ἡμῶν ἀθέντου καὶ βασιλέως, τοῦ μεγάλου Κομνηνοῦ, καὶ πρωτονοταρίῳ καὶ πρωτοβεστιαρίῳ κυρῷ Κωνσταντίνῳ τῷ Λουκίτῃ ὄν καὶ οὐς διαφυλάξει Κύριος ὁ Θεὸς καὶ περιφρουρήσει ὁ ποιητὴς χρόνων καὶ βασιλέων εἰς τοὺς αἰῶνας τῶν αἰώνων· ἀμήν.

Λάμπρου Σπ., 'Τραπεζουντιακόν ωροσκόπιον του έτους 1336', *Νέος Ελληνομνήμων* 13 (1916), p. 38.