HISTORY: FICTION OR SCIENCE?

THE ISSUE WITH
CHINESE ASTRONOMY

ANATOLY FOMENKO
GLEB NOSOVSKII
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History: Fiction or Science?

by Anatoly Fomenko and Gleb Nosovskiy

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About the authors

- **Fomenko, Anatoly Timofeevich** (b. 1945). Full Member (Academician) of the Russian Academy of Sciences, Full Member of the Russian Academy of Natural Sciences, Full Member of the International Higher Education Academy of Sciences, Doctor of Physics and Mathematics, Professor, Head of the Moscow State University Section of Mathematics of the Department of Mathematics and Mechanics. Solved Plateau’s Problem from the theory of minimal spectral surfaces. Author of the theory of invariants and topological classification of integrable Hamiltonian dynamic systems. Laureate of the 1996 National Premium of the Russian Federation (in Mathematics) for a cycle of works on the Hamiltonian dynamical systems and manifolds’ invariants theory. Author of 200 scientific publications, 28 monographs and textbooks on mathematics, a specialist in geometry and topology, calculus of variations, symplectic topology, Hamiltonian geometry and mechanics, computer geometry. Author of a number of books on the development of new empirico-statistical methods and their application to the analysis of historical chronicles as well as the chronology of antiquity and the Middle Ages.

- **Nosovskiy, Gleb Vladimirovich** (b. 1958). Candidate of Physics and Mathematics (MSU, Moscow, 1988), specialist in theory of probability, mathematical statistics, theory of probabilistic processes, theory of optimization, stochastic differential equations, computer modelling of stochastic processes, computer simulation. Worked as researcher of computer geometry in Moscow Space Research Institute, in Moscow Machine Tools and Instruments Institute, in Aizu University in Japan. Faculty member of the Department of Mathematics and Mechanics MSU.
There are many preconceptions concerning the history of China. It is presumed to be *exceptionally ancient*, a lot more so than European history, and its datings are said to be *perfectly reliable*. The basics of Chinese chronology are believed to be so firm that it serves as a classical example of an indubitably ancient and reliable chronology.

There is a popular misconception about Chinese chronology being based on the “ancient Chinese” astronomical records, which permit to date the events of the “ancient Chinese” history without any ambiguity whatsoever. This example makes it difficult to believe that the history of Europe, Egypt and Asia Minor is as brief as the new chronology claims it to be. Moreover, one must naturally wonder about the possible reasons why the documented history of China begins thousands of years ago, remaining reliable nonetheless, whereas the much shorter history of Europe contains so many errors. Could it really be that the Chinese have maintained the chronology and history of the last six thousand years unbroken and distortion-free, whereas the history of every other nation is a millennium old at best, and filled with errors? Basically, Chinese history looks like a perfect paragon that makes it hard to imagine the Scaligerian version of documented European history to be erroneous to such a tremendous extent.

The authors give a brief description of the *real* situation with Chinese history and chronology as opposed to whatever is advertised. The authors are far from claiming that their reconstruction is complete. The work on the reconstruction of Chinese history has only just begun.
History is a pack of lies about events that never happened
told by people who weren’t there.

George Santayana,
American philosopher
(1863-1952)

Be wary of mathematiciens, particularly when they speak the
truth.

St. Augustine

History repeats itself; that’s one of the things that’s wrong
with history.

Clarence Darrow

Who controls the past controls the future. Who controls the
present controls the past.

George Orwell, 1984
PART ONE

Astronomical events in the “ancient” Chinese chronicles
1. The actual astronomical events described in Chinese chronicles

The astronomical events recorded by the Chinese were studied by N. A. Morozov in the 6th volume of his oeuvre entitled *Christ* ([544]). We shall begin our analysis with quoting some of his observations and then add some of our more recent considerations thereto.

The Chinese have left us records of comet observations, which have reached us as the two primary comet catalogues considered *ultra-ancient* today.

“The major historical tractate entitled *Annals* … begins its narration with the year of 2650 B.C. It is supposed to have been started by a certain ‘Master of the Horse’ around 97 B.C. and continued until 1644 A.D. by different historians. Some of its parts are concerned with nothing but astronomy, and contain the observations of the sun, the moon, and five of the planets, as well as stellar coverings and comets. The Anglo-Shanghai pronunciation of the word ‘Annals’ is She-Ke, which is how this oeuvre is usually referred to by the Europeans.

The ‘Encyclopaedia of the Forest Horse’ … contains a whole volume with comet descriptions. This ‘Forest Horse’ (Ma-Tuan-Lin) is said to have lived around 1232 and recorded all the observations of comets made between 611 B.C. and his own epoch; just whence those revelations came to him remains unclear. The rest of the encyclopaedia covers the period up to 1644, or the exact same time when the records in the *Annals* of the ‘Master of the Horse’ cease, likewise the records of the European cometographers. Let us recollect that Lubieniecki’s famed *Cometography* came out in 1681, preceded by the European compilations of the early XVII and the late XVI century. We see the simultaneous nascence of voluminous cometographic works in the Western Europe and in China in the period between the XIII and the XVII century; it is highly dubitable that they could have come into existence independently from each other.
A shorter *History of China* (comprising a mere 100 volumes), which covers the period between the antediluvian epoch and 1367, was translated into French by the Catholic missionary named Mailla, and it contains the descriptions of several comets that cannot be found in either of the two earlier sources” ([544], Vol. 6, pp. 58-59).

Thus, the final edition of the primary Chinese sources took place as recently as in the XVII century A.D. N. A. Morozov points out that the Chinese possess no manuscripts whatsoever that would predate the XVII century. The absence of earlier manuscript is usually explained by historians as follows: the Chinese only wrote on paper, whereas the Europeans of the XIV-XV century used parchment, or specially treated leather, which is naturally more endurable than paper; the latter disintegrates very fast. At any rate, let us keep in mind the important fact that there are no Chinese texts dating from before the XVII century in existence.

Let us quote from Morozov again: “As I have already mentioned, the Chinese do not have any manuscripts that would predate the XVII century, which is when the chronicles of She-Ke and Ma-Tuan-Lin were compiled – possibly, with the assistance of the Catholic missionaries who were in charge of the Chinese observatories back then, and even built them for the Chinese” (*ibid.*, p. 119).

“Having cited the complete roster of comets that were first filed by Mailla and Gaubil, as well as some later European authors, I cannot refrain from expressing … a certain lack of trust in the purity of this roster’s Chinese origins. It was … included in Pingré’s *Cometography*, albeit edited and abbreviated. Then, in 1846, Biot published the comet rosters from the *Annals* (retaining the Shanghai name ‘She-Ke’) and the almost identical rosters from the *Encyclopaedia*, or ‘Ma-Tuan-Lin’, as it was called in Shanghai, in his oeuvre entitled *Connaissance des Temps*… Both rosters are much more detailed than the original roster of Mailla and Gaubil, although they reveal obvious traces of borrowing from each other” (*ibid.*, p. 42).
N. A. Morozov has thus discovered that the allegedly ancient Chinese comet rosters were substantially expanded by someone in the XVIII-XIX century. This happened in Europe. We shall soon see find out the identity of the responsible parties, as well as their motivations, and demonstrate that the comet roster was almost certainly expanded after 1759.

Furthermore, it turns out that the Chinese sources do not contain any descriptions of astronomical instruments, and there are no traces of the ancient astronomical observatories anywhere on the territory of China (ibid., page 132). This is very odd indeed, if one is to believe that the Chinese have been conducting meticulous astronomical observations for several thousand years.

European astronomical observations of that period are believed to be greatly inferior to the Chinese; nevertheless, the Europeans have preserved detailed descriptions of instruments, observation techniques, etc. It suffices to recollect the “ancient” astronomical work of Claudius Ptolemy, the Almagest. Could it be that it had never occurred to the Chinese, despite many centuries of observing the sky, to relate their exact methods and provide some sort of a description of the instruments that they used for this purpose?

Our opponents will naturally say that the Chinese had “kept their methods secret.” We shall refrain from arguing here, because we shall soon cite much more substantial evidence to prove that the real Chinese astronomical observations started in the XVI century the earliest.

Apart from the comet rosters, Chinese chronicles mention eclipses. N. A. Morozov also managed to discover the sole existing horoscope.

We shall deliberately tackle the comet issue somewhat later. However, we can already formulate the results of our own research. They are as follows.

1) The only comet that could confirm the correctness of the Scaligerian chronology of China is Comet Halley. Other comets are of zero utility insofar as the issue of dating is concerned.

2) All reported observations of Comet Halley before the XV century are
utter disinformation, and were fabricated in the XVIII-XIX century. This isn’t even a hypothesis, it is a *strict assertion*, which shall be proven in Part Two. We do not claim every Chinese report associated with Comet Halley today to be a forgery; *one or two* turned out quite sufficient for that end. This forgery is most likely to date from the period between 1759 and 1835.
2. Chinese eclipses

The descriptions of eclipses as found in Chinese chronicles are very vague, lacking such vital details as the phase of the eclipse, the observation site, etc. N. A. Morozov was perfectly correct to note that such nebulous reports can by no means be used for the purposes of historical dating, since one can find an eclipse of some sort in every decade, observable from some point and possessing some phase value. If we are to assume that the Chinese only described distinctly manifest (or total) eclipses, these descriptions will fail to correspond with reality in any way at all. For instance, the Chinese History of the Khitan State by E. Lun-Li (Moscow: Nauka, 1979) reports eclipses in the years of 992, 994, 998, 999, 1002, 1004, 1007, etc. Total (or at least distinctly observable) solar eclipses cannot happen with this regularity and be visible from the same territory.

**Corollary.** Chinese eclipse observations can neither confirm nor refute any chronology of China at all, be it veracious or erroneous.
3.

Chinese horoscopes

The situation with horoscopes is even worse. N. A. Morozov claims that his study of the Chinese chronicles did not yield a single ancient horoscope compiled in China; at the very least, he didn’t manage to find any of those.

The only horoscope related to Chinese history survived in the chronicles of Eastern Asia (ibid., p. 50). Morozov conducted a study of this horoscope, which is associated with the reign of the grandson of the first Chinese emperor Huangdi “The Yellow” (could it be Emperor John, Ioann, or Juan as pronounced in Spanish?).

Modern historians date the beginning of this emperor’s reign to the first half of the third millennium before Christ. Emperor Huang was “a contemporary of Noah, moreover – we are told that this name wasn’t a real name, but rather a ‘post mortem alias,’ since the Chinese buried the emperor’s name with the emperor and gave him a new name after his death” (ibid., p. 43).

It turns out that “in the reign of the Yellow Emperor’s grandson, in the springtime of the year, on the first day of the first month, all five planets converged underneath the Alpha and Beta of Pegasus – in Aquarius and partially in Capricorn” (ibid., page 50).

This horoscope is dateable perfectly well, and so N. A. Morozov performed this operation. Apparently, in the third millennium before Christ, which is the period that the Yellow Emperor’s reign is dated to by historians (ditto the reign of his grandson), “there was nothing remotely resembling the convergence of five planets near Aquarius; this event only happened once, on 9 February 1345, and in a very spectacular manner at that” (ibid., page 54).

We have verified the calculations of N. A. Morozov with the aid of
modern astronomical software and found another solution for this ancient Chinese horoscope: 15 February 1108 A.D. This solution turned out to be even better than Morozov’s. See for yourselves. Firstly, all five planets did in fact converge in Capricorn, and were clearly visible before dawn. Secondly, the moon was new, which corresponds to the first day of lunar month as indicated in the Chinese texts. Finally, the solution is vernal, since the event took place in the middle of February. Another excellent solution for this horoscope dates from 6 February 1524 A.D. Other solutions that we have found were much worse than the two excellent solutions of 1108 and 1524 as mentioned above; the planets were either at too great a distance from the Alpha and the Beta of Pegasus, or could not be observed simultaneously.

It is therefore very likely that “the grandson of the Yellow Emperor” lived in the XVI century, but definitely not in the third millennium before Christ; that period doesn’t contain a single solution for the “first Chinese horoscope.”

One might wonder whether any attempts of dating the horoscope were made before Morozov. They were; the account of just how this was carried out is most edifying indeed. Let us quote it after N. A. Morozov.

“How could Bailey ‘confirm’ this antediluvian pseudo-Chinese chronology saying that the convergence of the five planets really happened on 20 February 2448 B.C.? Very simple. He assumed that the Chinese anticipated the unnatural mediaeval astrological equality of the planets, the Sun and the Moon, as well as the 19-year Meton’s cycle (some twenty-five hundred years before the European Meton, no less), but suddenly decided to exclude the two most important planets from this list – namely, Jupiter and Saturn – replacing them with the Sun and the Moon. Things instantly became simple: since the geocentric conjunctions of the Sun, the Moon, Mercury, Venus and Jupiter occur once in each constellation every 15 or 17 years, Bailey could instantly locate this event within the 77 years of the alleged reign of the Yellow Emperor’s grandson, relieved from the necessity to fit the larger planets into his equation” (ibid., pp. 50-52).
If one is to “confirm” Scaligerian chronology in this manner, then Chinese history definitely ranks as “well-confirmed.”

We see a vivid example of how certain scientists committed actual forgeries striving to confirm the Scaligerian history of China, possibly guided by “best considerations possible.”
4.
The “ancient” Chinese 60-year cycle and its origins

Many people are aware of the cycle in question and follow the Chinese zodiac meticulously, taking into account the sign of the current year and asking each other about their Chinese signs (Dog, Pig, Monkey, Rooster, etc.), believing themselves to be in touch with the ancient wisdom of the grandeval Orient, where the mysterious calendar cycles that rule our destinies were discovered in antediluvian times. What makes this theory particularly appealing is, of course, its alleged unbelievably ancient age. It is presumed that the 60-year cycle was adopted by the Chinese at the very dawn of their history, in the reign of the same famed Yellow Emperor, or the alleged year 2638 B.C. ([544], Volume 6, page 43). However, the 60-year cycle is known very well in astronomy; it is the approximate conjunction period of Jupiter and Saturn. Such conjunctions were indeed presumed very important in the Middle Ages. N. A. Morozov came up with the natural hypothesis that such conjunctions provided the basis of the “ancient” Chinese 60-year cycle.

However, the 60-year period between the conjunctions of Jupiter and Saturn is approximated; we are therefore given a spectacular opportunity of dating the moment when the 60-year calendar circle was introduced. Indeed, over the course of time the discrepancy between the astronomical conjunctions of Jupiter and Saturn and the calendar beginnings of the sixty-year Chinese cycle grows ever greater. It would be interesting to calculate the date when they coincided, which will give us the epoch when the cycle in question was introduced.

It turns out that these coincidences only existed between 1204 and 1623 A.D. By the way, this time interval fully covers the moment encoded in the horoscope of the Yellow Emperor – 1345 A.D., qv above.

Thus, the “ancient” Chinese sixty-year circle was introduced in the
XIII century A.D. the earliest; most likely in the XIV century, the epoch of Huang, or John, the Yellow Emperor, or even later.
5. When did the Chinese invent the telescope?

We are all of the opinion that the telescope was invented by Galileo or his immediate predecessors in the XVII century. He came up with the revolutionary idea of using optical lenses for looking at distant objects, including stars and planets. This invention truly revolutionised many fundamental disciplines, such as navigation, astronomy, etc.

However, it turns out that we are under a prodigious delusion about the time when the telescope was invented. In the alleged VI century B.C., the time when many European nations were still nestling in caves, the Chinese already had telescopes and used them widely.

This becomes obvious from the ancient Chinese book entitled the *Book of Songs* (Shih-Ching), which “are said to have been edited anew, presumably, by the great sage Confucius from the [alleged – Auth.] VI century B.C. … Chinese scientists believe the *Book of Songs* to be one of the five books comprising their primary ancient collection of historical verse…

The first part of this book is called ‘Highest Emperor,’ and it tells about the deeds of the ‘Highest Emperor’ (Yao), who ascended to the throne in the 41st year of the 5th cycle… Paragraphs 3-8 of the *Book of Songs* contain the instruction given by this ‘Highest Emperor’ to his two court astronomers named ‘Plan’ and ‘Draft’ (He and Ho).

In the first paragraph (or Paragraph 3), he orders them to ‘Observe the sky, calculate the calendar and construct an instrument that would represent the 12 signs of the zodiac and the movements of the Sun and the Moon along them’… In Paragraph 8, the Emperor addresses his astronomers as follows: ‘Plan and Draft! You know that the year consists of 366 days! Devise the intermediate months and a hundred religious services to make everything work fine.’
The commentator adds that 366 days stand for the true time of the entire celestial sphere’s rotation, whereas the length of the solar year equals 365.25 days. Hence the conclusion that the Julian year was discovered in China by Confucius ... and that the precession of the climatic year was already known to the Chinese back then, albeit erroneously estimated as greater than it really was” (ibid., p. 57).

Let us emphasise that this level of astronomical knowledge of the “ancient China” would correspond to that of the European astronomy in the XV-XVI century A.D. Modern historians aren’t surprised by this fact, for some reason.

However, this does not exhaust the list of the “ancient Chinese discoveries.”

“The second part of the Book of Songs, called ‘Humble Emperor’ (Shun-Di), tells us about the deeds of Emperor Humble, the heir of the Highest Emperor. He ordered to make a ‘looking-glass’ to make the seven mobile luminaries ‘observable daily.’ This must be a direct implication that Galileo’s telescope was known to the Chinese four thousand years before the great European scientist... Why is it that the ones who believe in the existence of the Julian year, the armillary sphere, the knowledge of the solstices and the equinoxes, etc., in the Ancient China stop before this final step and identify the ‘looking-glass’ as an astronomical quadrant?” (ibid., p. 58).

Corollary. Such texts cannot possibly predate the XVII century A.D., in our opinion.

Let us once again emphasise that the surviving Chinese manuscripts date from the XVI-XVII century the earliest.
Chinese comets
6.
Suspiciously high comet observation frequency in China

Above we have told about the sources that recorded the observations of Chinese comets. By a “Chinese” comet we mean a comet observation recorded in a certain chronicle identified as Chinese nowadays.

The complete roster of Chinese comets contains over 300 records. It is presumed that these records report observations of comets that took place in 309 different years. Nowadays historians distribute them over the interval between 610 B.C. and 1640 A.D. Thus, the roster covers the span of some 2200 years, which gives us about one comet observed in seven years. However, since the comet roster contains a number of lacunae, since there are epochs when no comet observations were recorded, the frequency of comet observation in China is much higher — a comet in every three years for some epochs, for instance. In the III century A.D. the Chinese observed 35 comets, and 20 of them in the IV century.

Apart from that, all these comets are presumed to have been visible to the naked eye, since they’re mentioned in chronicles, which often contain personal impressions of the chroniclers, and not specialised astronomical literature. It would be natural to assume that comets mentioned in chronicles were quite spectacular and visible to many people.

This makes the Chinese comet roster very odd indeed. The frequency of comet observations recorded therein is very high, even if we’re to assume that the Chinese didn’t merely mention spectacular comets, but also tiny ones, which would appear as a minute point to the naked eye.

How many comets have modern readers seen in their lifetime? Not a single truly spectacular one over the last fifty years. There were small comets, which could be seen to the naked eye after their prior location on
the sky with the use of a telescope. However, the ancient Chinese are unlikely to have used powerful telescopes in order to rake through every sector of the sky in order to find a comet and instantly write it into a chronicle.

Moreover, in order to distinguish between a small comet and a star the Chinese needed a full catalogue of visible stars in order to locate a slowly moving dot of a comet among them. Let us consider the star charts used by the Chinese astronomers. What do we see? In figs. 5.1 and 5.2, we reproduce a Chinese star chart of the XIX century as an example. Even this chart is rather primitive, and it dates from the XIX century. N. A. Morozov also cites the ancient Chinese star catalogues of the XIX century ([544], Volume 6). They are rather primitive, crude and incomplete.
Fig. 5.1. Chinese star chart of the XIX century. Northern Hemisphere. The map is very primitive. Taken from [544], Volume 6, p. 64.
Fig. 5.2. Chinese star chart of the XIX century. Southern Hemisphere. N. A. Morozov wrote the following about these star charts: “In order to picture just how naïve Chinese astronomy was as recently as in the XIX century, I suggest to consider the following six star charts from the book of John Williams… The readers shall instantly recognize… Ursa Major, but that is the only constellation here that looks familiar. Nearly every constellation looks untypical; also, the lack of a coordinate grid leads to an almost childishly naïve disposition of star configurations that renders them unidentifiable in most cases” ([544], Volume 6, pages 64 and 69). Taken from [544], Volume 6, page 69.

N. A. Morozov wrote the following in this respect: “It is plainly obvious to the reader that almost all of the untypical stellar combinations are distributed in a childishly naïve manner due to the lack of a grid [in the
XIX century, no less! – Auth.], which often makes it impossible to identify them as real stellar configurations” (ibid., p. 69).

We are supposed to believe that these “childishly naïve” astronomers successfully discovered a comet *almost every three years*. This frequency implies *most of them to have been hardly observable dots*. One must observe such a dot for many days on end to discover its slow motion across the sky and identify it as a comet. Apart from that, this dot needs to be found first; it is easy to speak about it now, when the sky is constantly combed through by telescopes.

These considerations make us admit that the Chinese comet roster looks *exceptionally strange*. N. A. Morozov was perfectly correct to write: “Our modern and exact knowledge of the amount of comets visible to the naked eye registered over the last three centuries make it perfectly obvious that these interstellar vagabonds don’t quite rain over us in such abundance as one finds in the roster [of Chinese comets – Auth.]” (ibid., p. 60).

In fig. 5.3, we reproduce some drawings of comets from an ancient book of Stanislaw Lubieniecki dating from 1681. In fig. 5.4, we see an ancient Chinese drawing of a comet next to Ursa Major.
Fig. 5.3. Several ancient drawings of comets from S. Lubieniecki’s *Theatrum Cometicum* dating from 1681. The very nature of the drawings demonstrates that all the comets were observed with the naked eye. Book archive of Pulkovo Observatory, St. Petersburg. Taken from [543], page 201.

Fig. 5.4. Chinese drawing of a comet near the constellation of Ursa Major. Taken from
[544], Volume 6, page 70.
7. Years of comet observations in China

A list of Scaligerian dates when alleged comet observations are registered in Chinese sources

(Also given in [544], Volume 6, pages 130-132)

-610,
-530, –515, –501,
-466, –432,
-304, –302,
-118, –109, –108,
13, 22, 39, 55, 60, 61, 65, 66, 71, 75, 76, 77, 84,
102, 110, 131, 141, 147, 148, 149, 161, 178, 180, 182, 185, 188, 192, 193,
300, 301, 302, 303, 304, 305, 329, 336, 340, 343, 349, 358, 363, 369, 373, 386, 390, 393,
400, 401, 402, 415, 416, 418, 419, 422, 423, 442, 449, 451,
501, 532, 539, 560, 561, 565, 568, 574, 575, 588, 594,
607, 615, 616, 626, 634, 639, 641, 663, 667, 676, 681, 683, 684,
707, 708, 710, 713, 730, 739, 760, 767, 770, 773,
815, 817, 821, 828, 829, 834, 837, 838, 839, 840, 841, 851, 856, 864, 868, 869, 877, 885, 886, 892, 893, 894,
• 905, 912, 928, 936, 941, 943, 956, 975, 989, 998,
• 1003, 1014, 1018, 1035, 1036, 1049, 1056, 1066, 1080, 1095, 1097,
• 1106, 1110, 1126, 1131, 1132, 1133, 1145, 1147, 1151,
• 1222, 1226, 1232, 1237, 1240, 1264, 1277, 1293, 1299,
• 1301, 1304, 1313, 1315, 1337, 1340, 1351, 1356, 1360, 1362, 1363,
• 1366, 1368, 1373, 1376, 1378, 1385, 1388, 1391,
• 1407, 1430, 1431, 1432, 1433, 1439, 1444, 1449, 1450, 1452, 1453,
• 1456, 1457, 1458, 1461, 1462, 1465, 1468, 1472, 1490, 1491, 1495, 1499,
• 1500, 1502, 1506, 1520, 1521, 1523, 1529, 1531, 1532, 1533, 1534,
• 1536, 1539, 1545, 1554, 1556, 1557, 1569, 1577, 1578, 1580, 1582,
• 1584, 1585, 1591, 1593, 1596,
• 1604, 1607, 1609, 1618, 1619, 1621 1639, 1640.

1) We have omitted sightings of several comets in a single year; for instance, it is presumed that the Chinese observed three comets in 416 A.D., two comets in 422 A.D. and so on. All such multiple records are omitted.

2) We do not cite the data concerning precise calendar dates of presumed comet observations. The Chinese have left records that report the exact year, month, and sometimes even day, when a given comet was observed, presumably of the highest exactitude. We shall not require these data; moreover, we shall see that all of these “exact indications” are likely to date from a rather recent epoch.

3) Many Chinese records specify paths of comets across different constellations. We do not cite these data here for the following reason. The analysis of these paths only make sense if we need to estimate the orbits of these comets or want to identify them as comets that we already know. The only comet that it is sensible to identify in this manner is the famous Comet Halley. However, we shall consider it specifically later on.

As for all the other comets, we have to point out the following: “Apart from Comet Halley, we know of no other recurrent comets visible to the
naked eye that would confirm the precision of European and Chinese reports.

The recurrence of many comets, most of them minute, has been estimated by now; however, not one of them is mentioned in the chronicles in such a manner that it could be identified” ([544], Volume 6, page 156).
8.
European comets and their observation dates

A list of Scaligerian dates when the alleged sightings of comets were recorded in European chronicles
(Also given in [544], Volume 6, pages 130-132)

-479, -465, -430, -429, -413, -411, -409,
-372, -352, -347, -340, -335,
-219 (?), -203,
-199, -182, -167, -165, -164, -149, -145, -143, -135, -128, -118, -117, -116, -109,
12, 14, 16, 17, 40, 48, 51, 54, 56, 57, 60, 61, 62, 66, 68, 69, 70, 72, 73, 76, 78, 79, 81,
130, 145, 146, 160, 161, 181, 188, 190, 192, 195,
204, 213, 217, 220,
307, 308, 324, 335, 340, 363, 367, 370, 375, 377, 380, 383, 384, 386, 389, 390, 393, 394, 396, 399,
405, 410, 412, 413, 418, 423, 434, 442, 443, 448, 450, 453, 454, 457, 459, 488,
500, 519, 531, 533, 535, 538, 540, 541, 550, 557, 560, 570, 583, 587, 589, 594, 597, 599,
601, 602, 603, 604, 607, 617, 620, 622, 623, 631, 633, 660, 667, 674, 675, 676, 678, 684, 685, 687,
715, 719, 729, 744, 745, 761, 763, 791,
800, 809, 812, 814, 815, 817, 818, 828, 819, 830, 837, 838, 839, 840, 841, 844, 868, 876, 882,
900, 902, 905, 906, 910, 912, 913, 930, 941, 942, 944, 964, 968, 975,
979, 983, 996, 999,
- 1000, 1004, 1005, 1006, 1009, 1017, 1027, 1031, 1038, 1042, 1053, 1058, 1064, 1066, 1067, 1071, 1077, 1092, 1095, 1097, 1098,
- 1102, 1103, 1106, 1107, 1108, 1109, 1110, 1111, 1112, 1113, 1119, 1125, 1132, 1133, 1141, 1145, 1163, 1169, 1172, 1180,
- 1200, 1202, 1211, 1214, 1217, 1219, 1222, 1223, 1230, 1238, 1240, 1241, 1254, 1255, 1256, 1264, 1267, 1268, 1269, 1273, 1282, 1285, 1286, 1293, 1298, 1299,
- 1300, 1301, 1302, 1303, 1307, 1312, 1313, 1314, 1315, 1318, 1337, 1338, 1339, 1340, 1341, 1345, 1347, 1351, 1352, 1353, 1362, 1363, 1365, 1368, 1376, 1379, 1380, 1382, 1390, 1391, 1394, 1399,
- 1400, 1401, 1402, 1403, 1407, 1408, 1414, 1426, 1433, 1434, 1439, 1444, 1445, 1450, 1454, 1456, 1457, 1458, 1460, 1461, 1467, 1468, 1470, 1471, 1472, 1475, 1476, 1477, 1491, 1492, 1493,
- 1500, 1504, 1505, 1506, 1510, 1511, 1512, 1513, 1514, 1516, 1517, 1521, 1522, 1523, 1524, 1526, 1527, 1529, 1530, 1531, 1532, 1533, 1537, 1538, 1539, 1541, 1542, 1545, 1554, 1556, 1557, 1558, 1559, 1560, 1564, 1566, 1569, 1572, 1576, 1577, 1578, 1580, 1582, 1583, 1585, 1590, 1593, 1596, 1597,
- 1602, 1604, 1607, 1618, 1652, 1653, 1661, 1664, 1665, 1682.

Apparently, the European list also provokes many confused questions. Nearly every oddity pointed out in Chinese rosters is also present here. Furthermore, one cannot fail to notice the amazing multitudes of comets that Europeans are believed to have observed in the Middle Ages. Take the part of the roster corresponding to the XVI century, for instance. See for yourselves:

4 comets were observed in 1500,
2 comets were observed in 1504,
6 (!) comets were observed in 1506,
3 comets were observed in 1511,
3 comets were observed in 1516,
2 comets were observed in 1523,
4 comets were observed in 1527,
3 comets were observed in 1529,
4 comets were observed in 1530,
6 (!) comets were observed in 1531,
6 (!) comets were observed in 1532,
5 (!) comets were observed in 1533,
3 comets were observed in 1538,
6 (!) comets were observed in 1539,
2 comets were observed in 1541,
3 comets were observed in 1542,
2 comets were observed in 1545,
8 (!) comets were observed in 1556,
3 comets were observed in 1557,
6 (!) comets were observed in 1558,
2 comets were observed in 1560,
3 comets were observed in 1569,
6 (!) comets were observed in 1572,
2 comets were observed in 1576,
9 (!!) comets were observed in 1577.
And so on, and so forth (see [544]).

It appears that in the XVI century Europeans are said to have observed 145 (!) comets with the naked eye. This is completely out of proportion. Let us remind the readers that the telescope was only invented in the XVII century; therefore, one can only speak of comets visible with the naked eye, and those are very scarce indeed.

N. A. Morozov was perfectly correct to note: “European comets observed with the naked eye are so abundant that no such observations must ever have taken place” ([544], Volume 6, page 135). The comet roster cited above brings us to the following conclusion.
It is most likely that we are confronted with various reports of a single comet, which were later presumed to refer to different comets. This also demonstrates that many mediaeval records were misdated by later chronologists, who have transformed a single comet into a multitude, which became spread over many years. Once again, this proves that a correct conversion of a date found in a mediaeval document into the modern chronological system is anything but a simple task. At any rate, we can see that mediaeval chronologists have made a great many mistakes.

Alternatively, we shall have to assume that in the XVI century one could indeed observe comets with the naked eye nearly every month.

One might suggest that the chronologists could be corrected; for this end, we should collate different descriptions of a single comet into one and create a correct comet chronology.

Unfortunately, this would only be possible if we knew the dates when said comets could be observed in reality a priori. The problem is that we know no such dates; this is precisely what we have to find out from the roster that we have at our disposal today.

We can see that the astronomers and cometographers of the XVII-XVIII century could not distinguish between the “fictitious comets” and real ones, or identify various descriptions of a single comet as such. It is easy enough to understand why: various eyewitnesses of a single comet could describe it differently (for instance, confusing the constellations that lay in the path of the comet). Different trajectories were recorded as a result. Mediaeval cometographers were apparently unable to take their bearings in the resulting chaos of data. Chances are, it is impossible to reconstruct the veracious chronology of mediaeval comet observations.

One of the implications is that the years of comet observations reported by mediaeval chronologists, let alone the months, cannot be considered reliable datings.

References to the constellations that lay in the path of the comet are also unreliable, especially seeing as how it is highly unlikely that all mediaeval citizens had star charts at their disposal (Dürer’s, for instance), which
would give them an opportunity of tracing the comet’s path; therefore, it could only be traced by professional astronomers. However, we see that even they often got confused. Let us, for instance, consider the European description of the path of Comet Halley in the alleged year 1378 A.D. ([544], Vol. 6, page 142). Initially it strikes one as a natural description of a comet’s trajectory across constellations. However, a closer study reveals that “the comet’s position fitted the purpose of calculating its orbit so poorly that Pingré declared it useful for nothing but tiring the very heart out of an overly diligent researcher of Comet Halley” (ibid.). Apparently, the mediaeval observers muddled something up, and it is impossible to estimate the exact nature of their error nowadays.
9.
A comparison of the Chinese and European comet rosters

Let us sum up. N. A. Morozov compiled comparative dating tables for the Chinese and European records of comet sightings (*ibid.*, pages 130-132). He discovered that the “ancient” Chinese comet observations fail to concur with the “ancient” European observations. Both rosters (the “ancient” Chinese and the “ancient” European) are too dense. Such great density of comets visible to the naked eye is impossible. Both these facts are made obvious by the table compiled by N. A. Morozov, which is reproduced in fig. 5.5. Dashes to the left of the middle lines correspond to the years of “comet sightings” in European sources, and dashes to the right represent the Chinese. The right part of the table corresponds to the years between 1610 and 1910, when comets visible to the naked eye were observed veritably.
Fig. 5.5. Table from N. A. Morozov’s book ([544], Vol. 6, p. 168) that reveals the existence of serious contradictions within and between the “ancient” Chinese and the “ancient” European comet rosters.

It is plainly visible that the density of dashes in the veracity zone of the last few centuries is much lower than what we see in the “original ancient sources,” Chinese as well as European. The lack of concordance between the dashes in the left and right parts demonstrates that the “ancient” Chinese and the “ancient” European rosters do not concur with each other, which makes one doubt their veracity. It is obvious that the Europeans and the Chinese must have observed the same comets in the sky. If we’re to assume that the Europeans only registered one half of all comets, and the Chinese the other half, the frequency of “ancient” comet observations shall become completely implausible.
The corollary of N. A. Morozov based on the analysis of the resultant summary tables X and XIII is as follows (ibid., pp. 130-132, 168).

“Let us consider the chronological likeness of the Chinese and European reports. I am referring to correspondence in dates exclusively, without taking the actual descriptions of comets into consideration, since we won’t be able to find a single European comet, whose description will resemble that of its Chinese counterpart up until the arrival of the Catholic missionaries to China. The extent of correspondence between the respective dates can be judged by the readers from the following table [ibid., pp. 130-132 – Auth.]; I also included all the dubious comets as registered in the Chinese chronicles and everything I could find in Lubieniecki’s *Theatrum Cometicum* [the famous mediaeval Cometography, a catalogue of 1681 – Auth.] for the European chronicles.

The situation with the B.C. comets is truly astounding. There is chance coincidence between the comets of 109, 86 and 83 B.C., whereas the datings of all the other comets are diverse to the following extent: whenever we see Chinese records, their European counterparts are missing, and vice versa, large arrays of European records aren’t matched with any Chinese sources. The Europeans contradict the Chinese, and the Chinese contradict the Europeans…

Let us now regard the period between the beginning of the new era and the ascension of Constantine (0-306 A.D.). We see the same chaotic leapfrog of Chinese and European datings up until Alexander Severus (222 A.D.)… The 85-year interval between the respective ascensions of Alexander Severus and Constantine to the throne is even more spectacular: *Chinese reports indicate 38 comet observations for this period; European chronicles mention none*, save for the vague report of some occurrence that dates from 252 A.D.

… However, the leapfrog of the Chinese and European dates continues after this period, the sole difference being that they become more numerous and thus more susceptible to random coincidence. *The correspondence between the two only becomes regular enough to stop*
resembling random coincidence in the XII century” (ibid., pp. 133-134). This leads us to one of the following conclusions:

1) The consensual datings of Chinese comet observations before the XIII century A.D. are incorrect.

2) The consensual datings of European comet observations before the XIII century A.D. are incorrect.

3) Both are incorrect.

We believe the latter to be the case.
10. Comet Halley

10.1. Introduction

Comet Halley is the most famous comet of all. Comet Halley is also the most spectacular comet of all. Comet Halley is one of the primary foundations of Chinese chronology and the modern theory about the great antiquity of the Chinese civilisation.

It is believed that the Chinese observed all of this comet’s forthcomings between the I century B.C. and the present at the very least. It is believed that the modern theory of Comet Halley’s motion is confirmed by the ancient Chinese chronicles; this theory, in turn, confirms the Scaligerian chronology of China. In fig. 5.6 we reproduce an ancient representation of a comet from the ancient carpet of Baille. Scaligerian history tries to convince us that the comet in question is Comet Halley as seen in the alleged year of 1066.

Fig. 5.6. Comet depicted on an ancient carpet from Baille. Historians identify it as Comet Halley and date the observation to the alleged year 1066. The carpet was presumably made around 1073-1083. It is kept in the city library of Baille and made of
wool on linen. The picture is reproduced in [930] as a fragment of “the longest and the most famous mediaeval carpet that can also serve as a historical chronicle” ([930], page 161). Taken from 930, page 161. See also the drawn copy in [544], Volume 6, page 144.

Even N. A. Morozov in his radical revision of many layers of the ancient history only questions the veracity of the Chinese records concerning Comet Halley before the beginning of the new era, believing them to be more or less correct afterwards. He makes the following confused statement: “Whatever the origin of these Chinese comet records, some of them are in amazing concurrence with the theoretically calculated recurrences of Comet Halley, which makes us treat them seriously as a valid means for the verification of the ancient documents that contain comet descriptions” ([544], Volume 6, page 156).

Thus, one has no apparent reasons to be suspicious of the Chinese chronology, based on the recurrences of Comet Halley, among other things; even N. A. Morozov was convinced, although he retained a number of serious suspicions: “Comet Halley does not substantiate the reports of She-Ke and the ‘Forest Horse’ concerned with the first centuries A.D. What right have we to assume that these books can prove any chronological scale extending further back into the past?” (ibid., p. 154).

However, the situation here isn’t quite as simple as it might seem originally. The analysis of N. A. Morozov proved incomplete here. He shouldn’t have considered the correspondence between some of the “ancient” Chinese records and the calculated recurrence cycle of Comet Halley “amazing”; our analysis demonstrates that the probability of said correspondence being mere coincidence is high enough; many such correspondences do in fact turn out purely coincidental, q.v. below.

However, fortunately enough, the creators of the “ancient” Chinese chronology refused to stop here, attempting to bring the entire picture to “perfection.” They made a mistake here, having added several “ancient” Chinese records of the alleged sightings of Comet Halley in the XVIII
century and thus left a criminating piece of evidence that permits proving the falsity of the entire “ancient” Chinese chronology.

The forgery in question was committed in the XVIII century.

10.2. The analysis of Planet Halley’s recurrence cycles

10.2.1. A list of the dates of Comet Halley’s alleged sightings

Let us begin with the list of dates traditionally associated with the sightings of Comet Halley. It is usually divided into two parts, namely, the Chinese and the European records of Comet Halley’s observations. Let us cite both lists and compare them to each other.

The astronomers Cowell and Crommelin have used these dates as a basis for the astronomical and mathematical theory of Comet Halley’s motion at the very beginning of the XX century. They used this theory for their theoretical calculations of the comet recurrence cycles into the past.

In the following table we cite the results of their theoretical calculations as well as the years of European and Chinese observations presumed to be related to Comet Halley. The names of months in the left column indicate the passage of the comet through the perihelion point.

<table>
<thead>
<tr>
<th>Theory (Cowell &amp; Crommelin), Julian calendar</th>
<th>Traditional dates of Chinese records (acc. to She-Ke)</th>
<th>Traditional dates in European chronicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 1910</td>
<td>1910</td>
<td>1910</td>
</tr>
<tr>
<td>March 1835</td>
<td>1835</td>
<td>1835</td>
</tr>
<tr>
<td>March 1759</td>
<td>1759</td>
<td>1759</td>
</tr>
<tr>
<td>September 1682</td>
<td>1682</td>
<td>1682</td>
</tr>
<tr>
<td>October 1607</td>
<td>1607</td>
<td>1607</td>
</tr>
<tr>
<td>August 1531</td>
<td>1531</td>
<td>1531</td>
</tr>
<tr>
<td>June 1456</td>
<td>1456</td>
<td>1456</td>
</tr>
<tr>
<td>November 1378</td>
<td>1378</td>
<td>–</td>
</tr>
<tr>
<td>October 1301</td>
<td>1301</td>
<td>1301</td>
</tr>
<tr>
<td>Date</td>
<td>Year</td>
<td>Year</td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>September 1222</td>
<td>1222</td>
<td>1222</td>
</tr>
<tr>
<td>April 1145</td>
<td>1145</td>
<td>1145</td>
</tr>
<tr>
<td>March 1066</td>
<td>1066</td>
<td>1066</td>
</tr>
<tr>
<td>September 989</td>
<td>989</td>
<td>–</td>
</tr>
<tr>
<td>July 912</td>
<td>912</td>
<td>912</td>
</tr>
<tr>
<td>February 837</td>
<td>837</td>
<td>837</td>
</tr>
<tr>
<td>July 760</td>
<td>760</td>
<td>–(761 ?)</td>
</tr>
<tr>
<td>November 684</td>
<td>684</td>
<td>684</td>
</tr>
<tr>
<td>March 607</td>
<td>607</td>
<td>–(607 ?)</td>
</tr>
<tr>
<td>November 530</td>
<td>532</td>
<td>531</td>
</tr>
<tr>
<td>July 451</td>
<td>451</td>
<td>–(450 ?)</td>
</tr>
<tr>
<td>November 373</td>
<td>373</td>
<td>–</td>
</tr>
<tr>
<td>April 295</td>
<td>296?</td>
<td>–</td>
</tr>
<tr>
<td>April 218</td>
<td>218</td>
<td>217</td>
</tr>
<tr>
<td>March 141</td>
<td>141</td>
<td>–</td>
</tr>
<tr>
<td>January 66</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>October –12</td>
<td>–11</td>
<td>–12</td>
</tr>
<tr>
<td>August –86</td>
<td>–86</td>
<td>–86</td>
</tr>
</tbody>
</table>

No other mentions of Comet Halley are found in either the Chinese or the European sources, apart from a few scarce exceptions. For instance, the Chinese record of 239 B.C. is occasionally considered to be a reference to Comet Halley ([544], Volume 6, page 140). See the graph of Cowell and Crommelin and the comet roster on page 73 of the abovementioned source.

The first impression one gets is that the table unambiguously leads us to the following fundamental conclusion: the mathematical theory of Comet Halley’s motion is in excellent correspondence with the observations of the Chinese. A propos, the correspondence of said theory with European sources is a great deal worse. However, let us refrain from being overly critical; after all, it is common knowledge that the Chinese astronomers were known for their meticulousness, especially in the distant past, a far
cry from their European colleagues.

Let us reiterate: the theoretical graph appears to be conformed by the coincidence of all the theoretical dates with the ones taken from the Chinese chronicles, with the exception of one two-year discrepancy and two one-year discrepancies. Actually, the one-year discrepancies can be disregarded, owing to a certain ambiguity concerning the beginning of the year in the antiquity.

10.2.2. What happened to Comet Halley in 1986? The reasons why it shifted to the other hemisphere

One must specifically mark the fact that the Chinese astronomers are believed to have observed every single apparition of Comet Halley over the course of two thousand years without missing any.

China is located in the Northern Hemisphere. Apart from that, every description of the path of a comet identified as Comet Halley today refers to the constellations of the Northern Hemisphere or the Zodiac. We have checked this against the comet roster in [544], Volume 6.

The inevitable conclusion is that every single apparition of Comet Halley over the last two thousand years was theoretically observable from the Northern Hemisphere exclusively.

Everything seems understandable and natural so far. A large recurrent comet has been following the same stationary orbit, more or less stable in relation to the ecliptic, for the last two thousand years.

Let us ask the readers residing in the Northern Hemisphere whether they saw Comet Halley in 1986? The answer is in the negative. The reason is perfectly simple: it wasn’t visible from the Northern Hemisphere, and could only be observed from the Southern (being rather dim at that).

What could have possibly happened to Comet Halley? Two thousand years of observations from the Northern Hemisphere followed by a sudden migration to the Southern? Our opponents might suggest this fact to be a consequence of the mathematical law of its motion. This very
mathematical law is what we shall consider in the following section.

For the time being, let us make a summary. Such a drastic change in the motion pattern of a comet that had remained stable for two thousand years strikes us as very odd indeed.

The above makes us strongly doubt the veracity of the traditional chronology of Comet Halley’s sightings.

Are all of its apparitions reflected in the Chinese chronicles veraciously? Could we be faced with random coincidences, or something worse still – later insertions into the text?

By the way, what is the probability of an arbitrary “periodical sine curve” randomly coinciding with the accepted traditional dates as found in Chinese records?

We shall provide the answer to this question below; jumping ahead, we can tell the readers that such a probability is actually rather high.

10.2.3. What has been happening to Comet Halley after 1759? The reason why its recurrence cycles have become irregular

The sequence of dates suggested to stand for the apparitions of Comet Halley in Chinese rosters has a very odd trait. It reveals an exceptionally precise centenarian regularity in the changes of Comet Halley’s recurrence cycles, which is believed to be characterised by exceptional stability. We are referring to the law discovered by the astronomers Cowell and Crommelin, who studied the Chinese comet rosters ([544], Volume 6).

We reproduce the graph they built in fig. 5.7.
Fig. 5.7. The graph shows the fluctuations of time intervals between the observations of Comet Halley according to the Scaligerian chronology. The horizontal line corresponds to the Scaligerian Comet Halley observation dates, and the vertical to the distances between comet observations given in years. The graph is very obviously periodical in nature; the borders of the resulting periods are indicated at the bottom.

On the horizontal axis we have the years when Comet Halley was observed according to the Chinese chronology. The dates are given with the precision margin of one tenth of a year.

On the vertical axis we see the recurrence periods of Comet Halley, or the intervals between its consecutive reappearances. For instance, the interval between its last apparition of 1986.1 and the previous one of 1910.3 equals 75.8 years, etc. These numbers are indicated underneath the graph. The graph reveals a distinct periodic regularity manifest as centenarian accelerations and decelerations in the motion of Comet Halley with a period of 77.0 years. The levelled sine curve corresponds to the modified values of recurrence intervals. The saw-tooth curve corresponds to the consecutive recurrence periods of the comet calculated from the Chinese chronicles. We shall be calling this curve “experimental” in this regard. One must point out that the theoretical dates calculated by the astronomers for the recurrence cycles of Comet Halley are in excellent correspondence with the “Chinese experiments.” This very fact confused N. A. Morozov greatly and partially convicted him that the Chinese dates
of Comet Halley’s sightings over the last fifteen hundred years of the new era were veracious.

Now let us analyse the saw-tooth “Chinese experimental” curve. It turns out that the scatter range of “experimental” dots around the sine curve is also far from random. This saw-tooth graph, presumably experimental, is also strictly periodic de facto.

Three of its periods are indicated in fig. 5.7:

1. Between the alleged years 551 B.C. and 218 A.D. (apparent extrapolation, since the Chinese are assumed to have lacked the information concerning Comet Halley for some part of this epoch);
2. Between the alleged years 218 and 989 A.D.;
3. Between the alleged years 989 and 1759 A.D.

In fig. 5.8 we have assigned a number from 1 to 10 to the “experimental” dots comprised by each period. It is perfectly obvious that the segment of the saw-tooth curve numbered 1, 2, …, 10 repeats itself three times, almost without variations.

![Fig. 5.8. Previous graph of fluctuating time intervals between the observations of Comet Halley. Here we have assigned the same number to every corresponding point within a given period.](image)

This effect is particularly demonstrable in fig. 5.9, where said three segments of the saw-tooth curve are superimposed over each other.
Despite the minor discrepancies between the three curves, we can clearly see that they are virtually identical.

![Graph](image)

**Fig. 5.9. Superimposition of three fictional periods in the behaviour of Comet Halley.**

This goes to say that Comet Halley behaved in the exact same manner thrice.

Thus, the “experimental” curve of Comet Halley’s recurrence periods is _strictly periodic_, the period being roughly equal to 770 years. Therefore, _it would be normal to expect this law, which has theoretically been valid for two millennia, to retain its validity until the present day._

For mathematicians we must add that this curve is approximated well by the real-analytic functional relation as a solution of an analytic problem of celestial mathematics. Therefore, the fact that it demonstrates strict periodic behaviour within a certain interval implies that it should behave with similar periodicity on the entire real number line.

In other words, it should remain periodic in the closest future as well.

What do we see in reality? Let us return to fig. 5.7. If Comet Halley continued to move in accordance with its centenarian, allegedly periodic, recurrence interval fluctuation law, the real curve of these intervals would have moved in the direction of Cowell and Crommelin’s dotted line after 1759, or manifest growing recurrence intervals. However, we find the _reverse_ to be the case in reality.

This is especially obvious in fig. 5.10. The thick black curve
corresponds to the behaviour of Comet Halley’s recurrence intervals in the years of 1759, 1835, 1910 and 1986. This curve completely disproves the “Chinese experimental law,” which is said to have remained valid for two millennia.

Fig. 5.10. Breaks in the false periodicity of Comet Halley’s behaviour discovered in the XX century. This fact delivers a mortal blow to the Scaligerian chronology of Comet Halley observations that follows the “ancient” Chinese chronicles.

Apparently, N. A. Morozov was the first one to doubt the validity of this “periodic law.” His commentary is as follows:

“The comet appeared in 1910, forestalling the predicted date by 3.5 years. This fact gives us a reason to suspect a certain arbitrariness in the selection of mediaeval dates as well, possibly aimed at validating the sine curve of accelerations and decelerations” ([544], Volume 6, page 138).

Several decades later, when Comet Halley reappeared earlier than it was predicted by the “Chinese law,” we can assert it with even greater confidence that the consensual chronology of Comet Halley’s recurrence contains grave errors.

Fig. 5.11 shows the behaviour of Comet Halley’s recurrence intervals over the course of the last six hundred years, that is, between 1301 and
1986 A.D. Since we can more or less trust the Scaligerian chronology of this time interval, it makes sense to assume that fig. 5.11 corresponds to the real behaviour of Comet Halley, on the condition that its apparitions in the XIV-XV century A.D. were identified correctly in the Chinese and European records. However, we have already mentioned that we have every reason to doubt the correctness of such identifications – otherwise, why would the trajectory of the comet observed in 1378, conditionally identified as Comet Halley, confuse the astronomer Pingré so much (see above)?

![Fig. 5.11](image)

Fig. 5.11. The real behaviour of Comet Halley over the last six hundred years drawn as a thick curve. The dotted line demonstrates how Comet Halley should have behaved in accordance with the false periodic law of the “ancient” Chinese records. Similarly to the previous graphs, the dates of Comet Halley observations are on the horizontal line, and the intervals between observations are on the vertical line.

However, let us agree with Scaligerian chronology for the time being and assume that every apparition of Comet Halley over the course of the last six centuries was identified in the respective Chinese and European observations correctly.

What do we see? The approximated curve of time intervals, represented as a thick black line in fig. 5.11, obviously recedes, which implies the reduction of Comet Halley’s recurrence intervals on the average. It is
perfectly obvious that the dotted line that represents the hypothetical “Chinese law” of Cowell and Crommelin does not correspond with the real apparitions of Comet Halley over the course of the last 600 years.

In other words, the comet is sighted in the vicinity of the Sun more and more often. The reasons behind this tendency remain somewhat unclear; Comet Halley’s orbit might be affected by substantial fluctuations, and it may be accelerating. It is possible that it is beginning to disintegrate on the whole. Only its future sightings can shed some light over the issue; as of this moment, we haven’t got enough data to predict its evolution.

However, one can make the more or less definitive claim that every reappearance of the comet reveals substantial changes in its behaviour, which means that there are no reasons whatsoever to assume that its past apparitions were characterised by any periodicity at all.

This leads us to a very important conclusion. Taking into account all the above considerations, we must admit that the “Chinese saw-tooth curve” as the presumed recurrence cycle function of Comet Halley is manifestly false. It cannot possibly reflect the real sightings or the real trajectory of the comet. Therefore, it is either of a random nature, or a forgery, all in all, either premeditated or unwilled and resulting from “the very best intentions.” We shall discuss this issue below.

10.2.4. The provenance of the “Chinese law of periodicity” for Comet Halley

We may be asked the following question, which is perfectly justified: if the behaviour of Comet Halley does in fact lack periodicity, whence did the experimental saw-tooth curve that provided Cowell and Crommelin with a foundation for their hypothesis actually originate? After all, they did manage to locate every single dot of the graph in the old comet rosters, and arrange them into the “Chinese law of periodicity” perfectly well. Could all the Chinese observations have been counterfeited in order to prove the periodicity of Comet Halley’s recurrence cycles over the course
of the last two thousand years? One cannot deny the fact that the graph in fig. 5.7 contains at least 17 dots that represent the pre-XIV century epoch. Is it possible that each and every one of them is the result of a forgery?

This is not the case, obviously enough. However, our analysis demonstrates that a partial forgery did actually take place; simultaneously, as we shall demonstrate in an instant, it was unnecessary to fabricate several dozen records.

The structure of the Chinese comet roster, dense as it happens to be, is such that the substantiation of almost any “law of periodicity” would require the fabrication (insertion) of three observations maximum.

Let us linger upon this for a while. The matter is that the Chinese comet roster is exceptionally dense; in other words, it contains a great variety of recorded “comet sightings.” Let us assume that someone might pursue the objective of integrating a certain “law of periodicity” into it, which comes down to the task of discovering a periodic series of observations separated by equal intervals of 76 years, 80 years, 120 years, etc. Is it feasible at all?

Actually, yes. Moreover, it is possible to implement this for almost any given periodicity value; we can find a “comet” with the recurrence cycle of 55 years, 101 years, and so on. However, in some cases ideal periodicity will require the insertion of two or three observations into the comet roster. Interval values that would complicate the formulation of such a “periodicity law” due to the necessity of adding too many “observations” to the roster are few and far between.

Let us begin our demonstration with the observation of Comet Halley that dates from 1607, which is located at the very end of the Chinese roster. We believe this record to be veracious; after all, it dates from as recent an epoch as the XVII century.

We have tried to find a fitting observation for every prior date covered by a step with a fixed value. It turns out that the majority of such a priori defined interval values shall correspond to actual observations contained in the Chinese comet rosters with the maximal precision margin of three
years, with no more than three lacunae for the entire roster, q.v. in the table below.

Therefore, *the insertion of an observation or two into the Chinese cometary roster suffices to use the latter for the validation of any centenarian periodicity law for Comet Halley; moreover, any recurrence cycle can be substantiated in this manner quite as easily.* Exceptions are extremely rare; there are very few actual “unfortunate” periodicity values that completely fail to correspond with the Chinese experimental data.

Comet Halley has got nothing to do with these matters; the sole reason is the extremely high chronological density of the Chinese comet roster, which makes it possible to discover any kind of periodicity in the motion of any comet.

Let us cite the table of correspondence between different “periodicity values” of Comet Halley’s apparitions and the “experimental” Chinese data for the period between 100 B.C. and 1607 A.D.

**A comparison of the Chinese comet data and the “theoretical” reappearances of Comet Halley as calculated for randomly chosen recurrence periodicity values**

*(The comparison covers the interval between 100 B.C. and the end of the Chinese comet roster)*

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The first column of the table contains the value of the “period”; we have tried every value in the range between 50 and 200 years, calculating all possible discrepancies (in years) between the “theoretical” dates of Comet Halley’s repeated sightings in the past as determined for this “period” and the most fitting “experimental” dates from the Chinese comet roster for each of said values.

The resulting discrepancy values were then arranged in the order of decreasing and marked d1, d2, d3, etc. The first four values of this decreasing (or, rather, non-ascending) sequence can be found in columns 2-5 of our table.

Thus, the second column contains the maximal value of discrepancy (in years) between the “theoretical” sightings of Comet Halley in the past calculated for a given “period” and the best matches from the Chinese comet roster. The third column contains the second greatest discrepancy value. The fourth and the fifth are ascribed to the next two values in descending order.

Thus, we indicate the four greatest discrepancy values for a given “period,” which represent the difference between the Chinese data and the
periodicity law of Comet Halley’s recurrence cycles as formulated for the “period” in question.

Consider the last column of the table. More than half of the values contained therein are zeroes. Only ten per cent of discrepancy values exceed three years.

Thus, in 90 per cent of all cases the Chinese comet roster will “confirm” a given arbitrary period value to be the alleged “recurrence cycle value” of Comet Halley, and with high precision at that – the maximal discrepancy value shall not exceed three years in any of the cases. In fifty per cent of the cases the “correspondence” shall be ideal. The greatest number of lacunae in the Chinese roster, by which we mean a lack of correspondence with the “theoretically calculated” date in a given instant, does not exceed three.

Indeed, what do we mean if we say that the fourth largest value of discrepancy between the Chinese experimental data and the “theoretically calculated” equivalents does not exceed three years? It means that no other “theory vs. experiment” discrepancy value (with the sole possible exception of the first three values found in columns 2-4) exceeds 3 years, either.

Hence the theoretical “excellent correspondence between the theory and the experimental Chinese data.” The structure of the Chinese comet roster provides for such “excellent correspondences,” regardless of whether or not the theory in question is correct.

Let us return to our table. As it is easy enough to see, one of the theoretically possible “Comet Halley recurrence period values” stands out distinctly, namely, that of 77 years. It is made unique by the fact that nearly every single alleged sighting of Comet Halley corresponding thereto is actually represented in the Chinese roster. Initially, it strikes us as indubitable proof of veracity that validates the roster itself, the dates it contains and the “Comet Halley Theory” in general.

However, this is just the initial impression. Indeed, the last advent of Comet Halley in 1986 could not be observed from the Northern
Hemisphere.

Could this be the only such case in seventeen hundred years? This fact alone makes the “ideal correspondence” between the theory and the “Chinese experiment” highly suspicious.

Let us point out that the European comet roster, which has an even greater density than its Chinese counterpart, does not contain any quintuple recurrences of Comet Halley, q.v. above. Therefore, the European roster does not confirm the periodicity of Comet Halley’s recurrence. Actually, a more precise formulation shall ring as follows: the periodicity of Comet Halley’s recurrent observations does not confirm the veracity of the European comet roster.

As we have demonstrated, the discrepancies between the “Chinese experiment” and the theory (with a period equalling 77 years) are also far from random and can be expressed as a saw-tooth curve, q.v. above. The sum total of these circumstances leads us to the conclusion that what we have before us is clearly a case of forgery.

10.2.5. Dating the introduction of fabricated data into the “observation records” of Comet Halley

The dating in question is easy enough to estimate. It suffices to take a look at the curve in fig. 5.7 and mark the point where the strict periodicity in the behaviour of the saw-tooth curve built for Comet Halley ceases to manifest. This occurs on the interval between 1759 and 1835. In other words, to the left of the 1759 mark, the saw-tooth curve spawns two or even three copies of itself, which are almost completely identical to one another. What we see is the allegedly ideal “centenarian periodicity law.”

In 1835 this “law” gets broken for the first time, qv in fig. 5.7. Although this very first discrepancy is far from catastrophic, it is nonetheless clearly manifest, the first time in two thousand years. However, since the first discrepancy was rather mild, it is easy enough to understand Cowell and Crommelin, who didn’t consider it a deviation from their “Chinese
periodicity law” of Comet Halley’s recurrence.

However, the next two advents of Comet Halley (in 1910 and in 1986) were completely outrageous from this theory’s point of view. One must think that if Cowell and Crommelin were our contemporaries, they wouldn’t merely refrain from advertising their discovery of the “Chinese law,” but also put the chronology of the Chinese comet rosters to question, just as we have done.

It goes without saying that the missing observations (three of them at most) weren’t introduced in the Chinese roster by Cowell and Crommelin, eager to build an ideal sine curve. They merely processed the Chinese rosters available at their time and made rigid by the tradition.

A visual study of the “Chinese curve” leads us to the assumption that the insertion of fabricated observation records (a maximum of three) must have taken place between 1759 and 1835. This is the only condition upon which the law in question could have been formulated with “immaculate precision” – before the embarrassing observation of 1835, which wasn’t taken into account by the authors of the forgery. Therefore, the forgery must predate 1835; however, it is also most likely to postdate 1759.

But how can this be true? Weren’t the Chinese comet rosters published by Mailla and Gaubil in the XVII century (see above)?

The reply is as follows. Indeed, the initial version of the Chinese rosters must have been published in the XVII century. However, in the beginning of the XIX century, more detailed versions of the Chinese rosters came out; one of them was published by Biot in 1846, for instance ([544], Volume 6, page 42). This curious fact had already been pointed out by N. A. Morozov, who never managed to find out anything about the origins of these mysterious supplements to the Chinese roster of the XVII century.

However, nowadays we realise that if the supplements in question were introduced in the beginning of the XIX century, shortly before the publication of the new extended Chinese roster, this circumstance is in good concurrence with our reconstruction. The initial Chinese roster was complemented with a few “observations” designed to justify the “Chinese
sine curve” of Comet Halley.

One shouldn’t consider the parties responsible for said forgery malevolent falsifiers. They must have been guided by the best intentions possible. The matter is that the approximate recurrence cycle of Comet Halley must have already been known – possibly calculated in the epoch of Halley, or the XVIII century, on the basis of three or four real observations of the comet made in the XVI-XVIII century.

Scientific thought was evolving, and somebody must have come up with the brilliant idea of looking for the recurrent observations of Comet Halley in deep antiquity as reflected in the stupendous Chinese rosters dating from times immemorial. We are of the opinion that this person wasn’t that much au fait with astronomy.

For some reason, this mysterious well-wisher decided that the duration of the comet’s recurrence period had always fluctuated around the average value of 77 years. The next step involved the construction of a graph spanning the last seven or eight hundred years, which was then mechanically copied so as to reach further back into the past. The resulting graph turned out a periodic saw-tooth curve. The author must have been overjoyed at finding almost all of the required dates included in the graph, failing to understand that any other value of the recurrence period would have yielded the same results (109 years instead of 77, for example).

Let us repeat that the author must have been ill at ease with astronomy. The two or three observations aimed at the “justification” of his “theory” must have been lacking from the roster. This dissonance between the theory and the practice, which would be perceived as normal by a professional astronomer, transformed into a menace to the harmonious model of the author’s newly created paradigm, hence the decision to introduce the missing observation (alternatively, the author could have found some Chinese document and interpreted the vague data and evidence contained therein in the desired key). The motivation behind this must have been pure and noble, such as the desire to reconstruct the
veracious picture of the distant past.

Some 100-150 years later, Cowell and Crommelin, two professional astronomers, made the astonishing discovery of this recently created graph. They transformed it into an astronomical “law of nature,” effectively canonising this artificial construction. Shortly afterwards, in 1910, this law was ruthlessly broken by nature itself when Comet Halley appeared in the sky 3.5 years earlier than the “Chinese graph” had predicted.

All of this activity must have resembled the mediaeval Cabbala, or the attempts of many scientists to find harmonious and perfect numeric relations in nature – the great Kepler descanting universal harmony is a good example. It was particularly vogue to calculate lunar eclipses, horoscopes and the like into the past; apparently, comets weren’t spared this fate.

Let us conclude with another observation concerning the 77-year recurrence period of Comet Halley. If we are to consider the entire Chinese comet roster and not just the part of it that postdates 100 B.C., as we have done above, the 77-year period value ceases to be unique as compared to all the other possible values. It lacks two dots for ideal repetition, likewise many other period values.

10.2.6. On the chaotic character of Comet Halley’s motion

In 1989, B. V. Chirikov and V. V. Vyacheslavov published an article in Astronomy and Astrophysics ([1066]). They demonstrate therein that the motion of Comet Halley is largely affected by a random compound. This work was brought to our attention by Professor V. V. Kozlov, Member of the Russian Academy of Sciences, Professor of the MSU and Doctor of Physics and Mathematics, as well as A. I. Neyshtadt, Professor of the MSU and Doctor of Physics and Mathematics.

The main corollary of the authors’ research can be formulated as follows: “It was demonstrated that the motion of Comet Halley is chaotic
due to the perturbations caused by Jupiter” ([1066], p. 146).

Therefore, the model of Comet Halley’s motion is by no means determinate, but rather constructed within the paradigm of dynamic chaos – in other words, if a certain comet, such as Comet Halley, for instance, revolves around a greatly elongated orbit that reaches beyond the circular orbit of Jupiter, it meets the latter in a random phase every time it returns to the Solar System due to the incompatibility of their revolution periods. Jupiter, being a massive planet, affects the perturbation of the comet’s trajectory the most. Thus, upon encountering the planet in a random phase, the comet becomes subjected to a random perturbation.

Apparently, comets of this kind (as described by the mathematical model developed in [1066]) are characterised by chaotic dynamics. One of the most sensitive parameters of a comet’s orbit is the time of its passage through the perihelion, or the time it takes a given comet to return (its period). In particular, the period of Comet Halley is a random value with an exponentially progressive dispersion.

However, the “ideal Chinese sine curve” could not have become manifest in the behaviour of Comet Halley as a result of a random experiment.

Our opponents may appeal to the theoretical possibility of miracles, their scarcity notwithstanding. We do not deny it; for instance, a monkey pressing the keys of a typewriter might produce a coherent text without any grammatical errors (a novel, for instance). However, the probability thereof is negligibly small, although it doesn’t equal zero. The same is true about the possibility of the “Chinese curve” being the product of a random experiment series. The probability thereof is just as small and just as negligible as the chance that some monkey might type the entire text of *War and Peace* with gusto and élan, all four volumes of it, sans errors or omissions.

10.2.7. *Suspiciously high frequency of improbable occurrences in Scaligerian history*
It would be apropos to make a general observation concerning historical events of low probability. N. A. Morozov, likewise the authors of the present book, would often encounter the following sort of counter-argumentation. Let us quote from one of Morozov’s most qualified opponents as an example – B. A. Rosenfeld, a mathematician and the author of the article entitled “Mathematics in the works of N. A. Morozov” ([583], pages 129-138). B. A. Rosenfeld wrote the following in re the numerous bizarre parallels inherent in the traditional version of history, such as coinciding reign durations characteristic for the dynastic currents from different epochs, recurrent astronomical events and so forth: “Morozov would calculate the probability rates of various events; upon finding them infinitesimal, he would declare such coincidences impossible. Considerations of this sort are completely invalid [? – Auth.], seeing as how the probability theory is concerned with mass events and not individual ones. Events whose probability rates approximate zero to whatever extent can still actually happen” (ibid., p. 137).

The last claim of B. A. Rosenfeld is actually true. Events with infinitesimal probability rates do happen. However, if one is to make a certain improbable event happen, one needs to run a large number of trials; more precisely, its magnitude needs to be inversely proportional to the value of the probability rate. Therefore, apart from the actual probability rate of a given event, one also needs to consider the amount of trials required for this event to happen.

There is a special discipline concerned with these very matters, it is called mathematical statistics. And one must state that N. A. Morozov’s considerations are perfectly valid insofar as mathematical statistics is concerned.

If we are to explain the above on the qualitative level to the lay reader, we must point out that the objections along the lines of “the event is improbable, but it could still have happened randomly” that we hear so frequently cannot be voiced too often – once or twice, three times at most. They are also applicable to individual occurrences and nothing but; as
soon as they get voiced *too often* and become applied to *whole series and classes of improbable coincidences inherent in the traditional version of history, they become utterly meaningless.*

Some of our readers might voice the very same sentiment in re Comet Halley and the allegedly random nature of the Chinese curve, whose probability rate is minute but yet greater than zero, which makes it possible.

However, this sentiment will be nothing but *yet another link in a lengthy chain* of similar objections. Scaligerian history is virtually packed with events with probability rates approximating zero. Each objection of the above sort only makes sense as an individual phenomenon; as soon as it becomes drowned in a *multitude* of similar objections, the entire multitude *loses all validity and meaning.*

Let us emphasise the following important circumstance once again. Why do all such “mass-produced coincidences” precede the XVI century A.D. chronologically? Why have they been nonexistent for the last four hundred years? What is the matter with history? How come *it has only been conforming to the rules of the probability theory for the last four hundred years*, after having stubbornly ignored the laws of mathematical statistics for centuries on end?

10.3. In re the comet of Charles V

The famous comet of Charles V is a spectacular example of how the Chinese comet roster can be used to prove virtually anything. The comet in question appeared in 1556, “it was large, and the Chinese describe it similarly. 292 years before it, in 1264, a similar comet was observed right before the death of Pope Urban – it is also recorded in the ‘Annals’ (She-Ke). Pingré used this source to estimate the comet’s orbit as extremely similar to the orbit of the comet of Charles V… He identified both comets as one and the same comet, whose recurrence cycle equals 292 years. This theory stipulated the search of the same comet in 972, 680, 388 and 96 A.D.” ([544], Vol. 6, pp. 157-158).
Needless to say, scientists managed to find all the necessary dates in the Chinese roster; the European roster also contained all of them save for the first one. Once again, there is nothing surprising about this fact whatsoever; the comet rosters are very dense, and the descriptions they contain are vague enough to suit any taste identification-wise.

N. A. Morozov was perfectly right to note: “Everything seems to be perfectly harmonious here, just as it is in case of Comet Halley: Chinese and European sources alike ‘confirm’ the periodicity of the comet of Charles V, and the actual comet of Charles V, in turn, confirms the veracity of these records traced back to the beginning of the new era… However, the expectants were soon disappointed in the most deplorable manner; when they tried to foretell its return around 1858, it mocked their expectations by never turning up… It hasn’t been observed to date, which was truly a blow to all of the ‘validations’ contained in the Chinese annals” (ibid., p. 159).

What we see is yet another example of insufficiently justified attempts of employing the dense Chinese and European rosters in order to validate the periodicity of comets. Such attempts are made for one reason only: astronomers trust these rosters too much, being unaware of the fact that the rosters in question may in fact be of a very recent origin. Moreover, the very density of records contained in comet rosters, which confuse real observations of comets with their duplicates multiplied in various chronicles, allows to use them for the “validation” of virtually anything.

10.4. Strange duplicates with the periodicity of 540 years inherent in the Chinese and European comet rosters

N. A. Morozov discovered the following strange tendency that characterises all known comet rosters, European as well as Chinese, in the course of his analysis related in [544], Volume 6. All the ancient comets that predate 59 A.D. recur over the period of 540 years. Moreover, the large lacunae, or gaps in comet observation records, recur after the same
period of time.

He wrote the following: “This is by no means a random occurrence; therefore, only two explanations are possible” (ibid., p. 167). The first one: the “ancient” comets copy more recent ones. The second: the real astronomical life of comets has a strange 540-year period, which makes all comets “recur” after the passage of 540 years.

N. A. Morozov adds that a third explanation is also possible; we believe it to be the closest to the truth. A shift of 540 years “is also possible if the historical events associated with the sightings of all the European comets were shifted backwards in time by a factor of 540 or 1080 years” (ibid., p. 170). However, the shifts of 540 and 1080 years are known to us quite well; they are indeed manifest in the Scaligerian version of the “ancient” history and can be discovered by a variety of independent methods – statistical, astronomical, etc. We discuss them at length and in great detail in Chron1.
Overview of the seven-volume print edition

History: Fiction or Science?

**Chronology 1**
*A. T. Fomenko*
Introducing the problem.
A criticism of the Scaligerian chronology.
Dating methods as offered by mathematical statistics.
Eclipses and zodiacs.

**Chronology 2**
*A. T. Fomenko*
The dynastic parallelism method.
Chronological shifts.

**Chronology 3**
*A. T. Fomenko, T. N. Fomenko, V. V. Kalashnikov, G. V. Nosovskiy*
Astronomical methods as applied to chronology.
Ptolemy’s Almagest. Tycho Brahe. Copernicus.
The Egyptian zodiacs.
Chronology 4
A. T. Fomenko, G. V. Nosovskiy

Chronology 5
A. T. Fomenko, G. V. Nosovskiy
Russia = Horde. Ottomans = Atamans.
The Etruscans. Egypt. Scandinavia.

Chronology 6
A. T. Fomenko, G. V. Nosovskiy
The Horde-Ataman Empire.
The Bible. The Reformation.
America. Passover and the calendar.

Chronology 7
A. T. Fomenko, G. V. Nosovskiy
A reconstruction of global history.
The Khans of Novgorod = The Habsburgs.
Miscellaneous information.
The legacy of the Great Empire in the history and culture of Eurasia and America.

This seven-volume edition is based on a number of our books that came out over the last couple of years and were concerned with the subject in question. All this gigantic body of material was revised and categorized; finally, its current form does not contain any of the repetitions that are
inevitable in the publication of separate books. All of this resulted in the inclusion of a great number of additional material in the current edition – including previously unpublished data. The reader shall find a systematic rendition of detailed criticisms of the consensual (Scaligerian) chronology, the descriptions of the methods offered by mathematical statistics and natural sciences that the authors have discovered and researched, as well as the new hypothetical reconstruction of global history up until the XVIII century. Our previous books on the subject of chronology were created in the period of naissance and rather turbulent infancy of the new paradigm, full of complications and involved issues, which often resulted in the formulation of multioptional hypotheses. The present edition pioneers in formulating a consecutive unified concept of the reconstruction of ancient history – one that apparently is supported by a truly immense body of evidence. Nevertheless, it is understandable that its elements may occasionally be in need of revision or elaboration.

A. T. Fomenko
What mainstream historians say about the New Chronology?

The **New Chronology** is a fringe theory regarded by the academic community as pseudohistory, which argues that the conventional chronology of Middle Eastern and European history is fundamentally flawed, and that events attributed to the civilizations of the Roman Empire, Ancient Greece and Ancient Egypt actually occurred during the Middle Ages, more than a thousand years later. The central concepts of the New Chronology are derived from the ideas of Russian scholar Nikolai Morozov (1854-1946), although work by French scholar Jean Hardouin (1646-1729) can be viewed as an earlier predecessor. However, the New Chronology is most commonly associated with Russian mathematician Anatoly Fomenko (b. 1945), although published works on the subject are actually a collaboration between Fomenko and several other mathematicians. The concept is most fully explained in *History: Fiction or Science?* book series, originally published in Russian.

The New Chronology also contains a *reconstruction*, an alternative chronology, radically shorter than the standard historical timeline, because all ancient history is “folded” onto the Middle Ages. According to Fomenko’s claims, the written history of humankind goes only as far back as AD 800, there is almost no information about events between AD 800–1000, and most known historical events took place in AD 1000–1500.

The New Chronology is rejected by mainstream historians and is inconsistent with absolute and relative dating techniques used in the wider scholarly community. The majority of scientific commentators consider the New Chronology to be pseudoscientific.
History of New Chronology

The idea of chronologies that differ from the conventional chronology can be traced back to at least the early XVII century. Jean Hardouin then suggested that many ancient historical documents were much younger than commonly believed to be. In 1685 he published a version of Pliny the Elder’s *Natural History* in which he claimed that most Greek and Roman texts had been forged by Benedictine monks. When later questioned on these results, Hardouin stated that he would reveal the monks’ reasons in a letter to be revealed only after his death. The executors of his estate were unable to find such a document among his posthumous papers. In the XVII century, Sir Isaac Newton, examining the current chronology of Ancient Greece, Ancient Egypt and the Ancient Near East, expressed discontent with prevailing theories and proposed one of his own, which, basing its study on Apollonius of Rhodes’s *Argonautica*, changed the traditional dating of the Argonautic Expedition, the Trojan War, and the Founding of Rome.

In 1887, Edwin Johnson expressed the opinion that early Christian history was largely invented or corrupted in the II and III centuries. In 1909, Otto Rank made note of duplications in literary history of a variety of cultures:

“... almost all important civilized peoples have early woven myths around and glorified in poetry their heroes, mythical kings and princes, founders of religions, of dynasties, empires and cities—in short, their national heroes. Especially the history of their birth and of their early years is furnished with phantastic [sic] traits; the amazing similarity, nay literal identity, of those tales, even if they refer to different, completely independent peoples, sometimes geographically far removed from one another, is well known and has struck many an investigator.” (Rank, Otto. *Der Mythos von der Geburt des Helden.*)

Fomenko became interested in Morozov’s theories in 1973. In 1980, together with a few colleagues from the mathematics department of
Moscow State University, he published several articles on “new mathematical methods in history” in peer-reviewed journals. The articles stirred a lot of controversy, but ultimately Fomenko failed to win any respected historians to his side. By the early 1990s, Fomenko shifted his focus from trying to convince the scientific community via peer-reviewed publications to publishing books. Beam writes that Fomenko and his colleagues were discovered by the Soviet scientific press in the early 1980s, leading to “a brief period of renown”; a contemporary review from the journal *Questions of History* complained, “Their constructions have nothing in common with Marxist historical science.” (Alex Beam. “A shorter history of civilization.” *Boston Globe*, 16 September 1991.)

By 1996, his theory had grown to cover Russia, Turkey, China, Europe, and Egypt.

### Fomenko’s claims

According to New Chronology, the traditional chronology consists of four overlapping copies of the “true” chronology shifted back in time by significant intervals with some further revisions. Fomenko claims all events and characters conventionally dated earlier than XI century are fictional, and represent “phantom reflections” of actual Middle Ages events and characters, brought about by intentional or accidental misdatings of historical documents. Before the invention of printing, accounts of the same events by different eyewitnesses were sometimes retold several times before being written down, then often went through multiple rounds of translating and copyediting. Names were translated, mispronounced and misspelled to the point where they bore little resemblance to originals.

According to Fomenko, this led early chronologists to believe or choose to believe that those accounts described different events and even different countries and time periods. Fomenko justifies this approach by the fact that, in many cases, the original documents are simply not available. Fomenko claims that all the history of the ancient world is known to us
from manuscripts that date from the XV century to the XVIII century, but
describe events that allegedly happened thousands of years before, the
originals regrettably and conveniently lost.

For example, the oldest extant manuscripts of monumental treatises on
Ancient Roman and Greek history, such as *Annals* and *Histories*, are
conventionally dated c. AD 1100, more than a full millennium after the
events they describe, and they did not come to scholars’ attention until the
XV century. According to Fomenko, the XV century is probably when
these documents were first written.

Central to Fomenko’s New Chronology is his claim of the existence of a
vast Slav-Turk empire, which he called the “Russian Horde”, which he
says played the dominant role in Eurasian history before the XVII century.
The various peoples identified in ancient and medieval history, from the
Scythians, Huns, Goths and Bulgars, through the Polyane, Duleby,
Drevliane, Pechenegs, to in more recent times, the Cossacks, Ukrainians,
and Belarusians, are nothing but elements of the single Russian Horde. For
the New Chronologists, peoples such as the Ukrainians, Belarusians,
Mongols, and others who assert their national independence from Russia,
are suffering from a historical delusion.

Fomenko claims that the most probable prototype of the historical Jesus
was Andronikos I Komnenos (allegedly AD 1152 to 1185), the emperor of
Byzantium, known for his failed reforms; his traits and deeds reflected in
‘biographies’ of many real and imaginary persons (A. T. Fomenko, G. V.
The historical Jesus is a composite figure and reflection of the Old
Testament prophet Elisha (850-800 BC?), Pope Gregory VII (1020?-1085),
Saint Basil of Caesarea (330-379), and even Li Yuanhao (also known as
Emperor Jingzong, or “Son of Heaven”, emperor of Western Xia, who
reigned in 1032-1048), Euclides, Bacchus and Dionysius. Fomenko
explains the seemingly vast differences in the biographies of these figures
as resulting from difference in languages, points of view and time frame of
the authors of said accounts and biographies.

Fomenko claims the Hagia Sophia is actually the biblical Temple of Solomon. He identifies Solomon as sultan Suleiman the Magnificent (1494–1566). He claims that historical Jesus may have been born in 1152 and was crucified around AD 1185 on the hill overlooking the Bosphorus.

On the other hand, according to Fomenko the word “Rome” is a placeholder and can signify any one of several different cities and kingdoms. He claims the “First Rome”, or “Ancient Rome”, or “Mizraim”, is an ancient Egyptian kingdom in the delta of the Nile with its capital in Alexandria. The second and most famous “New Rome” is Constantinople. The third “Rome” is constituted by three different cities: Constantinople (again), Rome in Italy, and Moscow. According to his claims, Rome in Italy was founded around AD 1380 by Aeneas, and Moscow as the third Rome was the capital of the great “Russian Horde.” Similarly, the word “Jerusalem” is actually a placeholder rather than a physical location and can refer to different cities at different times and the word “Israel” did not define a state, even not a territory, but people fighting for God, for example, French St. Louis and English Elizabeth called themselves the King/Queen of Israel.

He claims that parallelism between John the Baptist, Jesus, and Old Testament prophets implies that the New Testament was written before the Old Testament. Fomenko claims that the Bible was being written until the Council of Trent (1545–1563), when the list of canonical books was established, and all apocryphal books were ordered to be destroyed. Fomenko also claims that Plato, Plotinus and Gemistus Pletho are one and the same person; according to him, some texts by or about Pletho were misdated and today believed to be texts by or about Plotinus or Plato. He
claims similar duplicates Dionysius the Areopagite, Pseudo-Dionysius the Areopagite, and Dionysius Petavius. He claims Florence and the House of Medici bankrolled and played an important role in creation of the magnificent ‘Roman’ and ‘Greek’ past.

**Specific claims**

In volumes 1, 2, 3 and 4 of *History: Fiction or Science?*, Fomenko and his colleagues make numerous claims:

- Historians and translators often “assign” different dates and locations to different accounts of the same historical events, creating multiple “phantom copies” of these events. These “phantom copies” are often misdated by centuries or even millennia and end up incorporated into conventional chronology.
- This chronology was largely manufactured by Joseph Justus Scaliger in *Opus Novum de emendatione temporum* (1583) and *Thesaurum temporum* (1606), and represents a vast array of dates produced without any justification whatsoever, containing the repeating sequences of dates with shifts equal to multiples of the major cabbalistic numbers 333 and 360. The Jesuit Dionysius Petavius completed this chronology in *De Doctrina Temporum*, 1627 (v.1) and 1632 (v.2).
- Archaeological dating, dendrochronological dating, paleographical dating, numismatic dating, carbon dating, and other methods of dating of ancient sources and artifacts known today are erroneous, non-exact or dependent on traditional chronology.
- No single document in existence can be reliably dated earlier than the XI century. Most “ancient” artifacts may find other than consensual explanation.
- Histories of Ancient Rome, Greece and Egypt were crafted during the Renaissance by humanists and clergy - mostly on the basis of documents of their own making.
• The Old Testament represents a rendition of events of the XIV to XVI centuries AD in Europe and Byzantium, containing “prophecies” about “future” events related in the New Testament, a rendition of events of AD 1152 to 1185.
• The history of religions runs as follows: the pre-Christian period (before the XI century and the birth of Jesus), Bacchic Christianity (XI and XII centuries, before and after the life of Jesus), Christianity (XII to XVI centuries) and its subsequent mutations into Orthodox Christianity, Catholicism, Judaism, and Islam.
• The *Almagest* of Claudius Ptolemy, traditionally dated to around AD 150 and considered the cornerstone of classical history, was compiled in XVI and XVII centuries from astronomical data of the IX to XVI centuries.
• 37 complete Egyptian horoscopes found in Denderah, Esna, and other temples have unique valid astronomical solutions with dates ranging from AD 1000 and up to as late as AD 1700.
• The Book of Revelation, as we know it, contains a horoscope, dated to 25 September - 10 October 1486, compiled by cabbalist Johannes Reuchlin.
• The horoscopes found in Sumerian/Babylonian tablets do not contain sufficient astronomical data; consequently, they have solutions every 30–50 years on the time axis and are therefore useless for purposes of dating.
• The Chinese tables of eclipses are useless for dating, as they contain too many eclipses that did not take place astronomically. Chinese tables of comets, even if true, cannot be used for dating.
• All major inventions like powder and guns, paper and print occurred in Europe in the period between the X and the XVI centuries.
• Ancient Roman and Greek statues, showing perfect command of the human anatomy, are fakes crafted in the Renaissance, when artists attained such command for the first time.
• There was no such thing as the Tartar and Mongol invasion followed
by over two centuries of yoke and slavery, because the so-called “Tartars and Mongols” were the actual ancestors of the modern Russians, living in a bilingual state with Turkic spoken as freely as Russian. So, Russia and Turkey once formed parts of the same empire. This ancient Russian state was governed by a double structure of civil and military authorities and the hordes were actually professional armies with a tradition of lifelong conscription (the recruitment being the so-called “blood tax”). The Mongol “invasions” were punitive operations against the regions of the empire that attempted tax evasion. Tamerlane was probably a Russian warlord.

- Official Russian history is a blatant forgery concocted by a host of German scholars brought to Russia to legitimize the usurping Romanov dynasty (1613-1917).
- Moscow was founded as late as the mid-XIV century. The battle of Kulikovo took place in Moscow.
- The tsar Ivan the Terrible represents a collation of no fewer than four rulers, representing two rival dynasties: the legitimate Godunov rulers and the ambitious Romanov upstarts.
- English history of AD 640–1040 and Byzantine history of AD 378–830 are reflections of the same late-medieval original.

Fomenko’s methods

Statistical correlation of texts

One of Fomenko’s simplest methods is statistical correlation of texts. His basic assumption is that a text which describes a sequence of events will devote more space to more important events (for example, a period of war or an unrest will have much more space devoted to than a period of peaceful, non-eventful years), and that this irregularity will remain visible in other descriptions of the period. For each analysed text, a function is devised which maps each year mentioned in the text with the number of pages (lines, letters) devoted in the text to its description (which could be
zero). The function of the two texts are then compared. (*Chron1*, pp. 187–194.)

For example, Fomenko compares the contemporary history of Rome written by Titus Livius with a modern history of Rome written by Russian historian V. S. Sergeev, calculating that the two have high correlation, and thus that they describe the same period of history, which is undisputed. (*Chron1*, pp. 194–196.) He also compares modern texts, which describe different periods, and calculates low correlation, as expected. (*Chron1*, pp. 194–196.) However, when he compares, for example, the ancient history of Rome and the medieval history of Rome, he calculates a high correlation, and concludes that ancient history of Rome is a copy of medieval history of Rome, thus clashing with mainstream accounts.

**Statistical correlation of dynasties**

In a somewhat similar manner, Fomenko compares two dynasties of rulers using statistical methods. First, he creates a database of rulers, containing relevant information on each of them. Then, he creates “survey codes” for each pair of the rulers, which contain a number which describes degree of the match of each considered property of two rulers. For example, one of the properties is the way of death: if two rulers were both poisoned, they get value of +1 in their property of the way of death; if one ruler was poisoned and another killed in combat, they get -1; and if one was poisoned, and another died of illness, they get 0 (Fomenko claims there is possibility that chroniclers were not impartial and that different descriptions nonetheless describe the same person). An important property is the length of the rule. (*Chron1*, pp. 215–223.)
Fomenko lists a number of pairs of unrelated dynasties – for example, dynasties of kings of Israel and emperors of late Western Roman Empire (AD 300-476) – and claims that this method demonstrates correlations between their reigns. (Graphs which show just the length of the rule in the two dynasties are the most widely known; however, Fomenko’s conclusions are also based on other parameters, as described above.) He also claims that the regnal history from the XVII to XX centuries never shows correlation of “dynastic flows” with each other, therefore Fomenko
insists history was multiplied and outstretched into imaginary antiquity to justify this or other “royal” pretensions.

Fomenko uses for the demonstration of correlation between the reigns exclusively the data from the *Chronological Tables* of J. Blair (Moscow, 1808-1809). Fomenko says that Blair’s tables are all the more valuable to us since they were compiled in an epoch adjacent to the time of Scaligerian chronology. According to Fomenko these tables contain clearer signs of “Scaligerite activity” which were subsequently buried under layers of paint and plaster by historians of the XIX and XX centuries.

**Astronomical evidence**

Fomenko examines astronomical events described in ancient texts and claims that the chronology is actually medieval. For example:

- He says the mysterious drop in the value of the lunar acceleration parameter D” (“a linear combination of the [angular] accelerations of the Earth and Moon”) between the years AD 700–1300, which the American astronomer Robert Newton had explained in terms of “non-gravitational” (i.e., tidal) forces. By eliminating those anomalous early eclipses the New Chronology produces a constant value of D” beginning around AD 1000. ([Chron1](#), pp. pp.93-94, 105-6.)
- He associates initially the Star of Bethlehem with the AD 1140 (±20) supernova (now Crab Nebula) and the Crucifixion Eclipse with the total solar eclipse of AD 1170 (±20). He also believes that Crab Nebula supernova could not have exploded in AD 1054, but probably in AD 1153. He connects it with total eclipse of AD 1186. Moreover he holds in strong doubt the veracity of ancient Chinese astronomical data.
- He argues that the star catalog in the *Almagest*, ascribed to the Hellenistic astronomer Claudius Ptolemy, was compiled in the XV to XVI centuries AD. With this objective in sight he develops new methods of dating old stellar catalogues and claims that the *Almagest* is based on data collected between AD 600 and 1300, whereby the
telluric obliquity is well taken into account.

- He refines and completes Morozov’s analysis of some ancient horoscopes, most notably, the so-called Dendera Zodiacs—two horoscopes drawn on the ceiling of the temple of Hathor—and comes to the conclusion that they correspond to either the XI or the XIII century AD. Moreover, in his *History: Fiction or Science?* series finale, he makes computer-aided dating of all 37 Egyptian horoscopes that contain sufficient astronomical data, and claims they all fit into XI to XIX century timeframe. Traditional history usually either interprets these horoscopes as belonging to the I century BC or suggests that they weren’t meant to match any date at all.

- In his final analysis of an eclipse triad described by the ancient Greek Thucydides in *History of the Peloponnesian War*, Fomenko dates the eclipses to AD 1039, 1046 and 1057. Because of the layered structure of the manuscript, he claims that Thucydides actually lived in medieval times and in describing the Peloponnesian War between the Spartans and Athenians he was actually describing the conflict between the medieval Navarrans and Catalans in Spain from AD 1374 to 1387.

- Fomenko claims that the abundance of dated astronomical records in cuneiform texts from Mesopotamia is of little use for dating of events, as the astronomical phenomena they describe recur cyclically every 30–40 years.

**Rejection of common dating methods**

On archaeological dating methods, Fomenko claims:

> “Archaeological, dendrochronological, paleographical and carbon methods of dating of ancient sources and artifacts are both non-exact and contradictory, therefore there is not a single piece of firm written evidence or artifact that could be reliably and independently dated earlier than the XI century.” (*Chron1.*)
Dendrochronology is rejected with a claim that, for dating of objects much older than the oldest still living trees, it isn’t an absolute, but a relative dating method, and thus dependent on traditional chronology. Fomenko specifically points to a break of dendrochronological scales around AD 1000.

Fomenko also cites a number of cases where carbon dating of a series of objects of known age gave significantly different dates. He also alleges undue cooperation between physicists and archaeologists in obtaining the dates, since most radiocarbon dating labs only accept samples with an age estimate suggested by historians or archaeologists. Fomenko also claims that carbon dating over the range of AD 1 to 2000 is inaccurate because it has too many sources of error that are either guessed at or completely ignored, and that calibration is done with a statistically meaningless number of samples. Consequently, Fomenko concludes that carbon dating is not accurate enough to be used on historical scale.

Fomenko rejects numismatic dating as circular, being based on the traditional chronology, and points to cases of similar coins being minted in distant periods, unexplained long periods with no coins minted and cases of mismatch of numismatic dating with historical accounts. (Chron1, pp. 90-92.)

He fully agrees with absolute dating methods for clay tablets or coins like thermoluminescence dating, optically stimulated luminescence dating, archaeomagnetic, metallographic dating, but claims that their precision does not allow for comprehensive pinpointing on the time axis either.

Fomenko also condemns the common archaeological practice of submitting samples for dating accompanied with an estimate of the expected age. He claims that convergence of uncertainty in archaeological dating methods proves strictly nothing per se. Even if the sum S of probabilities of the veracity of event produced by N dating methods exceeds 1.00 it does not mean that the event has taken place with 100% probability.
Reception

Fomenko’s historical ideas have been universally rejected by mainstream scholars, who brand them as pseudoscience, but were popularized by former world chess champion Garry Kasparov. Billington writes that the theory “might have quietly blown away in the wind tunnels of academia” if not for Kasparov’s writing in support of it in the magazine Ogoniok. Kasparov met Fomenko during the 1990s, and found that Fomenko’s conclusions concerning certain subjects were identical to his own regarding the popular view (which is not the view of academics) that art and culture died during the Dark Ages and were not revived until the Renaissance. Kasparov also felt it illogical that the Romans and the Greeks living under the banner of Byzantium could fail to use the mounds of scientific knowledge left them by Ancient Greece and Rome, especially when it was of urgent military use. However, Kasparov does not support the reconstruction part of the New Chronology. Russian critics tended to see Fomenko’s New Chronology as “an embarrassment and a potent symbol of the depths to which the Russian academy and society have generally sunk … since the fall of Communism.” Western critics see his views as part of a renewed Russian imperial ideology, “keeping alive an imperial consciousness and secular messianism in Russia.”

In 2004 Anatoly Fomenko with his coauthor Gleb Nosovsky were awarded for their books on “New Chronology” the anti-prize of the Moscow International Book Fair called “Abzatz” (literally ‘paragraph’, a euphemism for a vulgar Russian word meaning disaster or fiasco) in the category “Esteemed nonsense” (“Pochotnaya bezgramota”) awarded for the worst book published in Russia.

Critics have accused Fomenko of altering the data to improve the fit with his ideas and have noted that he violates a key rule of statistics by selecting matches from the historical record which support his chronology, while ignoring those which do not, creating artificial, better-than-chance correlations, and that these practices undermine Fomenko’s statistical
arguments. The new chronology was given a comprehensive critical analysis in a round table on “The ‘Myths’ of New Chronology” chaired by the dean of the department of history of Moscow State University in December 1999. One of the participants in that round table, the distinguished Russian archaeologist, Valentin Yanin, compared Fomenko’s work to “the sleight of hand trickery of a David Copperfield.” Linguist Andrey Zaliznyak argued that by using the Fomenko’s approaches one can “prove” any historical correspondence, for example, between Ancient Egyptian pharaohs and French kings.

James Billington, formerly professor of Russian history at Harvard and Princeton and currently the Librarian of Congress placed Fomenko’s work within the context of the political movement of Eurasianism, which sought to tie Russian history closely to that of its Asian neighbors. Billington describes Fomenko as ascribing the belief in past hostility between Russia and the Mongols to the influence of Western historians. Thus, by Fomenko’s chronology, “Russia and Turkey are parts of a previously single empire.” A French reviewer of Billington’s book noted approvingly his concern with the phantasmagorical conceptions of Fomenko about the global “new chronology.”

H.G. van Bueren, professor emeritus of astronomy at the University of Utrecht, concluded his scathing review of Fomenko’s work on the application of mathematics and astronomy to historical data as follows:

“It is surprising, to say the least, that a well-known (Dutch) publisher could produce an expensive book of such doubtful intellectual value, of which the only good word that can be said is that it contains an enormous amount of factual historical material, untidily ordered, true; badly written, yes; mixed-up with conjectural nonsense, sure; but still, much useful stuff. For the rest of the book is absolutely worthless. It reminds one of the early Soviet attempts to produce tendentious science (Lysenko!), of polywater, of cold fusion, and of modern creationism. In brief: a useless and misleading book.” (H. G. van Bueren, Mathematics and Logic.)
Convergence of methods in archaeological dating

While Fomenko rejects commonly accepted dating methods, archaeologists, conservators and other scientists make extensive use of such techniques which have been rigorously examined and refined during decades of use.

In the specific case of dendrochronology, Fomenko claims that this fails as an absolute dating method because of gaps in the record. However, independent dendrochronological sequences beginning with living trees from various parts of North America and Europe extend back 12,400 years into the past. Furthermore, the mutual consistency of these independent dendrochronological sequences has been confirmed by comparing their radiocarbon and dendrochronological ages. These and other data have provided a calibration curve for radiocarbon dating whose internal error does not exceed ±163 years over the entire 26,000 years of the curve.

In fact, archaeologists have developed a fully anchored dendrochronology series going back past 10,000 BCE. “The absolutely dated tree-ring chronology now extends back to 12,410 cal BP (10,461 BC).”

Misuse of historical sources and forced pattern matching

Critics of Fomenko’s theory claim that his use of historical sources is highly selective and ignores the basic principles of sound historical scholarship.

“Fomenko … provides no fair-minded review of the historical literature about a topic with which he deals, quotes only those sources that serve his purposes, uses evidence in ways that seem strange to professionally-trained historians and asserts the wildest speculation as if it has the same status as the information common to the conventional historical literature.”

They also note that his method of statistically correlating of texts is very rough, because it does not take into account the many possible sources of
variation in length outside of “importance.” They maintain that differences in language, style, and scope, as well as the frequently differing views and focuses of historians, which are manifested in a different notion of “important events”, make quantifying historical writings a dubious proposition at best. What’s more, Fomenko’s critics allege that the parallelisms he reports are often derived by alleged forcing by Fomenko of the data – rearranging, merging, and removing monarchs as needed to fit the pattern.

For example, on the one hand Fomenko asserts that the vast majority of ancient sources are either irreparably distorted duplicate accounts of the same events or later forgeries. In his identification of Jesus with Pope Gregory VII (Chron2, p. 51) he ignores the otherwise vast dissimilarities between their reported lives and focuses on the similarity of their appointment to religious office by baptism. (The evangelical Jesus is traditionally believed to have lived for 33 years, and he was an adult at the time of his encounter with John the Baptist. In contrast, according to the available primary sources, Pope Gregory VII lived for at least 60 years and was born 8 years after the death of Fomenko’s John-the-Baptist equivalent John Crescentius.)

Critics allege that many of the supposed correlations of regnal durations are the product of the selective parsing and blending of the dates, events, and individuals mentioned in the original text. Another point raised by critics is that Fomenko does not explain his altering the data (changing the order of rulers, dropping rulers, combining rulers, treating interregna as rulers, switching between theologians and emperors, etc.) preventing a duplication of the effort and effectively making this whole theory an ad hoc hypothesis.

**Selectivity in reference to astronomical phenomena**

Critics point out that Fomenko’s discussion of astronomical phenomena tends to be selective, choosing isolated examples that support the New
Chronology and ignoring the large bodies of data that provide statistically supported evidence for the conventional dating. For his dating of the Almagest star catalog, Fomenko arbitrarily selected eight stars from the more than 1000 stars in the catalog, one of which (Arcturus) has a large systematic error. This star has a dominant effect on Fomenko’s dating. Statistical analysis using the same method for all “fast” stars points to the antiquity of the Almagest star catalog. Rawlins points out further that Fomenko’s statistical analysis got the wrong date for the Almagest because he took as constant Earth’s obliquity when it is a variable that changes at a very slow, but known, rate.

Fomenko’s studies ignore the abundance of dated astronomical records in cuneiform texts from Mesopotamia. Among these texts is a series of Babylonian astronomical diaries, which records precise astronomical observations of the Moon and planets, often dated in terms of the reigns of known historical figures extending back to the VI century BCE. Astronomical retrocalculations for all these moving objects allow us to date these observations, and consequently the rulers’ reigns, to within a single day. The observations are sufficiently redundant that only a small portion of them are sufficient to date a text to a unique year in the period 750 BCE to 100 CE. The dates obtained agree with the accepted chronology. In addition, F. R. Stephenson has demonstrated through a systematic study of a large number of Babylonian, Ancient and Medieval European, and Chinese records of eclipse observations that they can be dated consistently with conventional chronology at least as far back as 600 BCE. In contrast to Fomenko’s missing centuries, Stephenson’s studies of eclipse observations find an accumulated uncertainty in the timing of the rotation of the earth of 420 seconds at 400 BCE, and only 80 seconds at 1000 CE.

Magnitude and consistency of conspiracy theory

Fomenko claims that world history prior to 1600 was deliberately falsified
for political reasons. The consequences of this conspiracy theory are twofold. Documents that conflict with New Chronology are said to have been edited or fabricated by conspirators (mostly Western European historians and humanists of late XVI to XVII centuries). The lack of documents directly supporting New Chronology and conflicting traditional history is said to be thanks to the majority of such documents being destroyed by the same conspirators.

Consequently, there are many thousands of documents that are considered authentic in traditional history, but not in New Chronology. Fomenko often uses “falsified” documents, which he dismisses in other contexts, to prove a point. For example, he analyzes the Tartar Relation and arrives at the conclusion that Mongolian capital of Karakorum was located in Central Russia (equated with present-day Yaroslavl). However, the Tartar Relation makes several statements that are at odds with New Chronology (such as that Batu Khan and Russian duke Yaroslav are two distinct people). Those are said by Fomenko to have been introduced into the original text by later editors.

Many of the rulers that Fomenko claims are medieval doppelgangers moved in the imaginary past have left behind vast numbers of coins. Numismatists have made innumerable identifications of coins to rulers known from ancient sources. For instance, several Roman emperors issued coinage featuring at least three of their names, consistent with those found in written sources, and there are frequent examples of joint coinage between known royal family members, as well as overstrikes by kings who were known enemies.

Ancient coins in Greek and Latin are unearthed to this day in vast quantities from Britain to India. For Fomenko’s theories to be correct, this could only be explained by counterfeit on a very grand and consistent scale, as well as a complete dismissal of all numismatic analyses of hoard findings, coin styles etc.

*Popularity in forums and amongst Russian imperialists*
Despite criticism, Fomenko has published and sold over one million copies of his books in his native Russia. Many internet forums have appeared which aim to supplement his work with additional amateur research. His critics have suggested that Fomenko’s version of history appealed to the Russian reading public by keeping alive an imperial consciousness to replace their disillusionment with the failures of Communism and post-Communist corporate oligarchies.

Alexander Zinoviev called the New Chronology “one of the major scientific breakthroughs of the XX century.”

(Wikipedia text retrieved on 2nd August, 2015)

**Afterword from the publisher**

Dr. Fomenko *et al* as scientists are ready to recognize their mistakes, to repent and to retract on the condition that:

- radiocarbon dating methods pass the black box tests, or
- astronomy refutes their results on ancient eclipses, or
- US astrophysicist Robert Newton was proved wrong to accuse Ptolemy of his crime.

At present, historians do not, can not, and will not comply. The radiocarbon dating labs run their very costly tests only if the sample to be dated is accompanied with an idea of age pronounced by historians on basis of … subjective … mmm … gutfeeling … and the history books they have been writing for the last 400 years. Radiocarbon labs politely bill for their fiddling and finetuning to get the dates “to order” of historians. *Circulus vitiosus* is perfect.
Separate books on the New Chronology

Prior to the publication of the seven-volume *Chronology*, we published a number of books on the same topic. If we are to disregard the paperbacks and the concise versions, as well as new re-editions, there are seven such books. Shortened versions of their names appear below:

1. *Introduction*.
3. *Methods 3*.
4. *The New Chronology of Russia, Britain and Rome*.
5. *The Empire*.
7. *Reconstruction*.

**Book One. Introduction.**


- **Book Two, Part One: Methods-1.**


[Meth1]:7. A revised version of the book was published as two volumes (the first two in a series of three) in 1999 in the USA (in Russian) by the Edwin Mellen Press. Fomenko, A. T. New Methods of Statistical Analysis of Historical Texts. Applications to Chronology, Vols. 1 and 2. The publication is part of the series titled Scholarly Monographs in the Russian Language, Vols. 6-7. Lewiston,

- **BOOK TWO, PART TWO: Methods-2.**


[Meth2]:3. A revised version of the book was published as the last volume in a series of three in the USA (in Russian) under the title: Fomenko A. T. *Antiquity in the Middle Ages (Greek and Bible History),* the trilogy bearing the general name: Fomenko A. T. *New Methods of the Statistical Analysis of Historical Texts and their Chronological Application.* The publication is part of the series titled *Scholarly Monographs in the Russian Language.* Lewiston, Queenston, Lampeter, The Edwin Mellen Press, 1999. 578 p.

- **BOOK THREE: Methods-3.**


• **Book Four: Russia, Britain and Rome.**


• **Book Five: The Empire.**


• **Book Six: The Biblical Russia.**


· **BOOK SEVEN: Reconstruction.**


We have to point out that the publication of our books on the New Chronology has influenced a number of authors and their works where the new chronological concepts are discussed or developed. Some of these are: L. I. Bocharov, N. N. Yefimov, I. M. Chachukh, and I. Y. Chernyshov ([93]), Jordan Tabov ([827], [828]), A. Goutz ([220]), M. M. Postnikov ([680]), V. A. Nikerov ([579:1]), Heribert Illig ([1208]), Christian Blöss
and Hans-Ulrich Niemitz ([1038], [1039]), Gunnar Heinsohn ([1185]), Gunnar Heinsohn and Heribert Illig ([1186]), Uwe Topper ([1462], [1463]).

Our research attracted sufficient attention to chronological issues for the Muscovite publishing house Kraft to print a new edition of the fundamental work of N. A. Morozov titled Christ, first published in 1924-1932.
Sources in Russian


Moscow, The State Museum of History, Department of Visual Arts, the Architectural Graphics Fund, 1917 (with an additional written before 1942).


[36]. *The Chronicler of Archangelsk. A complete collection of Russian chronicles,*


[46]. Balandin, R. K. *A Miracle or a Scientific Enigma? Science and Religion*


[50]. Baronius, C. The Ecclesial and Secular Annals from the Birth of Christ and until the Year 1198. Typography of P. P. Ryabushinsky, from Baronius, Annales ecclesiastici a Christo nato ad annum 1198. Moscow, 1913.


[68]. The Bible. Books from the Old and the New Covenant in Russian Translation with Anagoges and Appendices. Moscow, Moscow Patriarchy Press, 1968. There are numerous re-editions in existence, for instance, the one published by the Russian Biblical Society in Moscow, 1995.


[70]. The Bible, or the Books of the Holy Writ from the Old and the New Covenant with Anagoges. 2nd edition. St. Petersburg, Synodal Typography, 1900. Reprinted by the Russian Biblical Society in Moscow, 1993. (This version of the Bible dates to
the 1st half of the XVIII century and is therefore occasionally called Elizabethan.)


[76]. Blair, G. Chronological Tables Spanning the Entire Global History, Containing Every Year since the Genesis and until the XIX Century, Published in English by G. Blair, a Member of the Royal Society, London. Vols. 1 and 2. Moscow University Press, 1808-1809. The English edition: Blair’s Chronological and Historical Tables, from the Creation to the Present Time, etc. London, G. Bell & Sons, 1882.

[77]. Bobrovnitskaya, T. A. The Royal Regalia of the Russian Rulers. The Kremlin in Moscow. Published to Commemorate the 500th Anniversary of the State Coat of Arms and the 450th Anniversary of the Inauguration of the First Russian Czar Ivan the Terrible. Moscow, The Moscow Kremlin State Museum and Reserve for History and Culture, 1997.


[80:1]. Boguslavskiy, V. V. The Slavic Encyclopaedia. Vols. 1 and 2. Moscow,


[86]. *The Great Catechism*. Moscow, 7135 (1627 ad). Reprinted by the Royal Grodno typography in 7291 (1683 AD).


[111]. Boutromeyev, V. *Global History in Individual Personalities. Late Middle Ages*. Moscow, Olma, 1999.


London, 1851.


[125]. Venelin, Y. News of the Varangians as Related by Arab Scribes; their Alleged Crimes as Seen by the Latter. The Imperial Moscow University Society for History and Russian Antiquities Readings, Book IV, Section V: 1-18. 1870.

[125:1]. Vereshchagin V. V. Vereshchagin, the Artist. Napoleon I in Russia, 1812. Tver, the Sozvezdie Agency of Tver, 1993.


[130]. Widukind of Corvey. The Deeds of the Saxons. Moscow, Nauka, 1975. See also


[132]. *Byzantine Historians. Dexippos, Eunapius, Olympiodorus, Malchus, Peter the Patrician, Menander, Candides, Nonnos, Theophanes the Byzantine*. St. Petersburg, 1858.


[144]. *Around the Coliseum.* The Izvestiya newspaper, 18 May 1977.


[152]. *The Unified Library of Russia, or the Book Catalogue for an Exhaustive and Detailed Description of our Fatherland.* 2nd extended edition. Moscow, 1845.


[156]. Garkavi, A. Y. *The Accounts of the Slavs and the Russians as Given by Muslim Authors (from mid-VII century until the End of the X century AD)*. St. Petersburg, 1870 (1872).


[168]. Glazounov, I. *Russia Crucified.* The *Our Contemporary* magazine, Issues 1-5, 7-9, 11 (1996). This material was subsequently published as a book.


[175]. Goloubovsky, P. V. *The Pechenegs, the Torks, and the Polovtsy before the Tartar Invasion.* Kiev, 1884.


[189]. *The Ruler is a Friend of his Subjects, or Political Court Hortatives and Moralistic Speculations of Kan-Shi, Khan of Manchuria and China. Collected by his son, Khan Yun-Jin*. St. Petersburg, 1795.


[201]. Grigorovich, V. *An Account of Travelling through European Russia*. Moscow, 1877.


[212]. Gumilev, L. N. *In Search of the Figmental Kingdom (the Legend of the Kingdom of Presbyter Johannes).* Moscow, Tanais, 1994.


[255]. *Ancient Russian Icon Art*. Moscow, Kedr, 1993. From the collection of the
Tretyakovskaya Gallery.


[266]. *The Hebraic Text of the Old Testament (The Tanach)*. London, the British and
Foreign Bible Society, 1977.


[306:1]. *A Representation of the Terrestrial Globe*. Russian map from the *Rarities of Russian Cartography* series. (There is no compilation date anywhere on the map. The publishers date it to mid-XVIII century, q.v. in the annotation). Moscow, the Kartair Cartographical Association, 1996.


[322]. Historical Notes of Nicephorus Vriennius. St. Petersburg, 1858.


[330:1]. History of Moscow in the Documents of the XII-XVIII century from the Russian State Archive of Ancient Acts. The Russian State Archive of Ancient Acts,


[346]. *The Cossack Circle*. Quiet flows the Don. Special edition 1. Moscow, Russkoye


[384]. Kiriaku, Georgios P. *Cyprus in Colours.* Limassol, Cyprus, K. P. Kiriaku


[398]. *The Book of Cosmas Indicopleustes*. Published by V. S. Golyshenko and V. F. Doubrovina. RAS, the V. V. Vinogradov Institute of the Russian Language. Moscow, Indrik, 1997.


[422]. Kondrashina, V. A. The Savvino-Storozhevsky Monastery. 600 Years since the

[423]. Koniskiy, G. (The Archbishop of Byelorussia). The History of Russians, or the Lesser Russia. The Moscow University Typография, 1846.


[430]. The Ecclesial Law Book (Kormchaya) of 1620. 256/238, The Manuscript Fund of the Russian National Library (Moscow).


[440:1]. Krekshin, P. N. A Criticism of the Freshly-Printed Book of 1761 about the Origins of Rome and the Actions of its People and Monarchs. The reverse of the last sheet says: “Criticism by the Nobleman of the Great New Town Peter of Nicephor, son of Kreksha, in 1762, on the 30th day of September, St. Petersburg.” The manuscript is kept in the State Archive of the Yaroslavl Oblast as Manuscript #43 (431).


[463]. Lann, E. *A Literary Mystification*. Moscow, 1930.


[477]. Lesnoy, Sergei. Russia, where are you from? Winnipeg, 1964.


[478]. Libby, W. F. *Carbon-14: a Nuclear Chronometer of Archaeology*. The
UNESCO Courier, No. 7 (No. 139)(1968).

[479]. Libby, W. F. *The Radiocarbon Dating Method*. The International Peaceful

[480]. Libby, W. F. *Radiocarbon: an Atomic Clock*. The annual Nauka i
Chelovechestvo (Science and Humanity) journal (1962): 190-200. Moscow,
Znaniye.

Khudozhnik, 1966.

[482]. Livy, Titus. *Roman History since the Foundation of the City*. 6 volumes.
Translation and general editorship by P. Adrianov. Moscow, E. Herbeck
Typography, 1897-1899.

[483]. Livy, Titus. *Roman History since the Foundation of the City*. Vols. 1, 2 and 3.


[486]. Lipinskaya, Y., and M. Martsinyak. *Ancient Egyptian Mythology*. Moscow,
Iskusstvo, 1983.

[487]. Lituanus, Michalonis. *On the Customs of the Tartars, the Lithuanians and the
moribus tartarorum, lituanorum et moschorum fragmina X, multiplici historia
referta et Johannis Lascii poloni De diis samagitarum, caeterorumque
sarmatarum et falsorum christianorum. Item de religione armeniorum et de initio
regimini Stephani Batori. Nunc primum per J. Jac. Grasserum, C. P. ex
manuscriptio authentico edita*. Basileae, apud Conradum Waldkirchium, MDCXV, 1-41.

[488]. *Literary legacy. V. I. Lenin and A. V. Lunacharsky. Correspondence, Reports,

[489]. Lifshitz, G. M. *Essays on Early Christianity and Biblical Historiography.*


[505]. Malinovskaya, L. N. *The Graveyard of the Khans (Mezarlyk).* Bakhchisaray, the State Historical and Cultural Reserve, 1991.


[521]. Mezentsev, M. T. *The Fate of Novels (Concerning the Discussion on the “Quiet flows the Don” Authorship Problem).* Samara, P. S. Press, 1994.


[530]. *The World of the Bible.* Magazine. 1993/1(1). Published by the Russian Society of Bible Studies.


[545]. Morozov, N. A. An Astronomical Revolution in Historical Science. The Novy Mir (New World) magazine, No. 4 (1925): 133-143. In reference to the article by Prof. N. M. Nikolsky.


[547]. Morozov, N. A. On Russian History. The manuscript of the 8th volume of the work Christ. Moscow, the RAS Archive. Published in Moscow by Kraft and Lean in the end of the year 2000, as A New Point of View on Russian History.


Moscow, Mysl, 1985.


[556]. The Andrei Rublev Museum. A brochure. Published by the Central Andrei Rublev Museum of Ancient Russian Culture and Art in Moscow, 10, Andronyevskaya Square. n.d.


[559]. Murad, Aji. The Polovtsy Field Wormwood. Moscow, Pik-Kontekst, 1994

[560]. Murad, Aji. Europe, the Turkomans and the Great Steppe. Moscow, Mysl, 1998


[568]. Nazarevskiy, V. V. Selected Fragments of Muscovite History. 1147-1913. Moscow, Svarog, 1996.


[579]. Niese, B. A Description of the Roman History and Source Studies. German edition: Grundriss der römischen Geschichte nebst Quellenkunde. St. Petersburg,


[592]. Nosovskiy, G. V. *The True Dating of the Famous First Oecumenical Counsel*


[617]. Orbini, Mavro. *A Historiographical Book on the Origins of the Names, the Glory and the Expansion of the Slavs. Compiled from many Historical Books through the Office of Marourbin, the Archimandrite of Raguzha.* Translated into Russian from Italian. Typography of St. Petersburg, 1722.


[630]. Artefacts of Diplomatic Relations with the Roman Empire. Vol. 1. St Petersburg, 1851.


[635]. Literary Artefacts of Ancient Russia. The XIV – mid-XV century. Moscow,
Khudozhestvennaya Literatura, 1981.


[646]. Pasek. *A Historical Description of Simon’s Monastery in Moscow.* Moscow, 1843.


[651]. *The Correspondence of Ivan the Terrible and Andrei Kurbskiy.* In *Literary


[655]. Plan of the Imperial Capital City of Moscow, Created under the Supervision of Ivan Michurin, the Architect, in 1739. The First Geodetic Plan of Moscow. The General Council of Ministers, Department of Geodetics and Cartography (the Cartographer Cooperative). Published together with a calendar for 1989.


[700]. Book of Psalms. Moscow, 1657. (Private collection.)
[701]. The book of Psalms with Appendices. Published in the Great City of Moscow in the Year 7160 [1652 AD], in the Month of October, on the 1st Day. New edition: Moscow, The Vvedenskaya Church of St. Trinity Coreligionist Typography, 1867.


[727]. Rich, V. Was there a Dark Age? The Khimia i Zhizn (Chemistry and Life) magazine, No. 9 (1983): 84.


Marx Typography, n.d.


[734]. Rozanov, N. *History of the Temple of Our Lady’s Birth in Staroye Simonovo, Moscow, Dedicated to its 500th Anniversary (1370-1870).* Moscow, Synodal Typography on Nikolskaya Street, 1870.


[737]. Rossovskaya, V. A. *The Calendarian Distance of Ages.* Moscow, Ogiz, 1930.


[744]. Roumyantsev, N. V. *Orthodox Feasts*. Moscow, Ogiz, 1936.


[772:1]. The Scythians, the Khazars and the Slavs. Ancient Russia. To the Centennary since the Birth of M. I. Artamonov. Report theses for the international scientific conference. St. Petersburg, State Hermitage, the State University of St. Petersburg, the RAS Institute of Material Culture History.


[780]. Skrynnikov, R. G. *Russia before the “Age of Turmoil.”* Moscow, Mysl, 1981.


[795]. *A Collection of State Edicts and Covenants.* Moscow, 1894.

[796]. *The Soviet Encyclopaedic Dictionary.* Moscow, Sovetskaya Encyclopaedia,
1979.


[802]. The Reports of the Imperial Orthodox Society of Palestine. April 1894. St. Petersburg, 1894.


[809]. Spirina, L. M. The Treasures of the Sergiev Posad State Reserve Museum of


[813]. Sobolev, N. N., ed. The Old Moscow. Published by the Commission for the Studies of Old Moscow of the Imperial Archaeological Society of Russia. Issues 1, 2. Moscow, 1914 (Reprinted: Moscow, Stolitsa, 1993).


[816]. Stepanov, N. V. The New Style and the Orthodox Paschalia. Moscow, 1907.


[824]. Sytin, P. V. *From the History of Russian Streets*. Moscow, Moskovskiy Rabochiy, 1958.


[835]. *The Works of Nicephor, the Archbishop of Constantinople*. Moscow, 1904.


[844]. Tokmakov, I. F. *A Historical and Archaeological Description of the Moscow Stauropigiial Monastery of St. Simon*. Issues 1 and 2, Moscow, 1892-1896.


[860]. Ousanovich, M. I. *The Scientific Foresight of N. A. Morozov. The Successes of


[871]. Fedorov-Davydov, G. A. Eight Centuries of Taciturnity. The Nauka i Zhizn (Science and Life) magazine, No. 9 (1966): 74-76.


[880]. Florinsky, V. M. *Primeval Slavs according to the Monuments of their Pre-Historic Life*. Tomsk, 1894.


Fomenko, A. T. Global Chronology. (A Research of Classical and Mediaeval History. Mathematical Methods of Source Analysis.) Moscow, MSU Department of


[957]. Chertkov, A. D. *A Description of Ancient Russian Coins.* Moscow, Selivanovsky Typography, 1834.


[967]. Shakhmatov, A. A. *Manuscript Description. The Radzivilovskaya Chronicle, or the Chronicle of Königsberg*. Vol. 2. Articles on the text and the miniatures of the manuscript. St. Petersburg, Imperial Antiquarian Bibliophile Society, CXVIII, 1902.


[979]. Schlezer, A. L. *Public and Private Life of Augustus Ludwig Schlezer as Related


Sources in foreign languages


Secrétariat Général. Musée de la Porte de Hal Bruxelles. 1937.


[1018]. Palairet, Jean. *Atlas Méthodique, Composé pour l’usage de son altesse sérénissime monseigneur le prince d’Orange et de Nassau stadhoudier des sept provinces unies, etc. etc. etc.* Se trouve à Londres, chez Mess. J. Nourse & P. Vaillant dans le Strand; J. Neaulme à Amsterdam & à Berlin; & P. Gosse à La Haye. 1755.


[1050:2]. British Museum. *A Guide to the Fourth, Fifth and Sixth Egyptian Rooms and the Coptic Room. A series of Collections of Small Egyptian Antiquities, which illustrate the Manners and Customs, the Arts and Crafts, the Religion and Literature, and the Funeral Rites and Ceremonies of the Ancient Egyptians and their Descendants, the Copts, from about B.C. 4500 to A.D. 1000*. With 7 plates and 157 illustrations in the text. British Museum, 1922.


Kremlin de Moscou, 1990.


Batavorum, 1967.


[1073]. Claudii Ptolemaei Pelusiensis Alexandrini omnia quae extant opera. 1551.


[1082]. Crowe, C. *Carbon-14 activity during the past 5000 years.* Nature, Volume


[1091]. Davidovits, Joseph. No more than 1,400 workers to build the Pyramid of Cheops with manmade stone. 3rd Int. Congress of Egyptologists. Toronto, Canada: paper AA-126, publié dans Appendix 3 de Davidovits, 1983.


[1118]. *Encyclopaedia Britannica; or, a Dictionary of Arts and Sciences, compiled upon a new Plan. In which the different Sciences and Arts are digested into distinct Treatises or Systems; and the various Technical Terms, etc. are explained as they occur in the order of the Alphabet. Illustrated with one hundred and sixty copperplates. By a Society of Gentlemen in Scotland. In 3 volumes*. Edinburgh, A. Bell and C. Macfarquhar, 1771.


[1152]. Gassendi. *Nicolai Copernici vita*. A supplement to the edition titled *Tychoonis Brahei, equitis Mani, astronomorum copyrhaei vita*. XDCLV.


[1154]. Ginzel, F. K. *Spezieller Kanon der Sonnen- und Mondfinsternisse für das Ländergebiet der klassischen Altertumswissenschaften und den Zeitraum von 900 vor Chr. bis 600 nach Chr*. Berlin, Mayer & Müller, 1899.


[1162]. Grienberger, C. *Catalogus Veteres affixarum longitudiues et latitudines cum novis conferens.* Romæ apud B. Zannetum, 1612. (The Pulkovo Observatory Library.)


[1172:1]. *Haack Geographisch-Kartographischer Kalender.* Germany, Haack Gotha,


[1187]. Heintze, C. *Objects rituels, croyances et dieux de la Chine antique et de


[1209]. Isidori Junioris. *Hispalensis episcopi: De responsione mundi*. 1472. (The Pulkovo Observatory Library.)


[1247]. de Austria, Leupoldus. *Compilatio de Astrorum Scientia*, cuts. 1489. (The Pulkovo Observatory Library.)


[1256]. Lubienietski, S. *Theatrum Cometicum, etc* Amstelodami, 1666-1668. (The Pulkovo Observatory Library.)

[1257]. Lubienietski, S. *Historia universalis omnium Cometarum*. Lugduni Batavorum, 1681. (The Pulkovo Observatory Library.)


[1271]. *Germany*. Michelin et Cie, 1996.


L. Friederichsen, 1907.


[1283]. *National Geographic,* Volume 176, No. 4 (October 1989).


American Philosophical Society, 1959.


[1295]. Newcomb, S. *Tables of the Motion of the Earth on its Axis and around the Sun*. Astronomical Paper. V.VI, Pt.1. 1898.


[1301]. Newton, Isaac. *Abrégé de la chronologie des ancien royaumes*. Trad. Deel
Anglois de Mr. [Andrew] Reid, Geneve, 1743.


[1316]. Oppolzer, Th. Tafeln zur Berechnung der Mondfinsternisse. Wien, 1883.


[1318]. Orbini, Mauro. Origine de gli Slavi & progresso dell’Imperio loro. Pesaro, 1606.

[1319]. Orontij, Finai Delphinatus. Canonum Astronomicum. 1553. (The Pulkovo Observatory Library.)

[1320]. Orontii, Finaei Delphinatis. Fine Oronce, etc. 1551. (The Pulkovo Observatory Library.)


[1332]. Venetus, Paulus. Philisiphiae naturalis compendium clarissimi philosophi
Pauli Veneti: *una libro de compositione mundi, etc.* Paris, J. Lambert (s. d.), n.d.


[1354]. [Ptolemaeus, Claudius]. *Clavdii Ptolemaei Pelusiensis Alexandrini omnia quae extant opera, praeter Geographiam, etc.* Baseliae, 1551.


[1356]. Ptolemy, C. *Claudii Ptolemaei opera quae extant omnia.* Ed. J. L.Heiberg et al. 3 volumes. Leipzig, 1898-1903,.


[1363]. Ranson, C. L. A Late Egyptian Sarcophagus. Bulletin of the Metropolitan Museum of Art. 9 (1914): 112-120.


[1377]. Roquebert, Michel. L’épopée Cathare, 1209-1229. (On the Crusade against


[1382]. Rundsicht der Stadt Wien zur Zeit der Türkenbelagerung, 1529, Niklas Meldemann, Nürnberg 1530. HM Inv. Nr. 48068. Faksimile 1994, Museen der Stadt Wien Druckerei Gert Herzig, Wien. (Mediaeval plan of Vienna of the XVI c. depicting the siege of Vienna by the Turks in 1529.)


Schliemann, Heinrich. *Troja. Ergebnisse meiner neuesten Ausgrabungen auf
der Baustelle von Troja, in der Heldengräbern Bunarbaschi and an anderen Orten
in der Trojas im Jahre 1882.* Leipzig, 1884.

Schilgen, Jost, and Martina Wengierek. *So schön ist Trier.* Grasberg,

Schjellerup, H. C. F. G. *Description des étoiles fixes composée au milieu du 
Xe siècle de notre ère par l’astronome persan abd-Al-Rahman Al-Sufi.* St.
Petersburg, 1874.

Schram, R. *Tafeln zur Berechnung der naheren Umstände der 
Sonnenfinsternisse.* Wien, 1886.

Schram, R. *Reductionstafeln für den Oppolzerischen Finsternis Kanon zum 
Übergang auf die Ginzelschen Correctionen.* Wien, 1889.

Schedel, Hartmann. *La chronique universelle de Nuremberg.* L’édition de 
Nuremberg, colorée et commentée. (L’édition 1493, colorée et commentée).
Introduction et Appendice par Stephan Füssel. Taschen GmbH. (Köln). Köln,

Schram, R. *Kalendariographische und chronologische Tafeln.* Leipzig, 1908.

Schroten, J. *Spezieller Kanon der zentralen Sonnen- und Mondfinsternisse.
Kristiania, 1923.


Schwahn, P. *Mathematische Theorie der astronomischen Finsternisse.
Leipzig, 1910.


Serrus, Georges, and Michel Roquebert. *Cathare Castles.* Toulouse, Editions 
Loubatières, 1993.

Severy, Merle. *The world of Suleyman the Magnificent.* National Geographic, 

Siebeck, H. *Zur Chronologie der platonischen Dialoge.* Halle, 1873.

Simon, J. L., P. Bretagnon, J. Chapront, M.,Chapront-Touze, G. Francou, and 
J. Laskar. Software for the calculation of heliocentric coordinates, radial vectors and 
immediate speeds for the 8 main planets of the Solar System (the PLANETAP


[1412]. Steeb, J. *Coelum sephiroticum Hebraeorum, etc.* (The Pulkovo Observatory Library). Mainz, 1679.


[1429]. Stryjkowski, Maciej. *O Pocztakh, wywodach.... Of the Beginnings, Sources, the Deeds of the Knights and the Home Affairs of the Glorious Peoples of Lithuania, Zhmuda, and Russia, an Original Tale Inspired by the Lord and the Author’s Own Experience.* Warszawa, 1978.


[1441]. Teutsch Astronomei. *Astronomia*. Woodcuts, 1545. (The Pulkovo Observatory Library.)


[1449]. *The English version of the polyglot Bible with a copies and original selection of references to parallel and illustrative passages*. London, S. Bagster and Sons.

[1450]. *The Holy Bible, containing Old and New Testaments: Translated out of the original tongues; and with the former translations diligently compared and revised, by His Majesty’s special command. Appointed to be read in Churches*. London, British and Foreign Bible Society, Instituted in London in the Year 1804.

[1451]. *The Holy Bible, containing Old and New Testaments: Translated out of the original tongues; and with the former translations diligently compared and revised, by His Majesty’s special command. Authorized King James version*. Salt Lake City, Utah, Church of Jesus Christ of Latter-Day Saints, 1992.


[1459]. *The World Encompassed*. An exhibition of the history of maps held at the


[1479]. Williams, John. Observations of Comets from B.C.611 A.D. to 1640, extracted from the Chinese Annals. 1871.


[1483]. Wolf, R. Handbuch der Astronomie, ihrer Geschichte und Literatur. Bd. II. Zürich, 1892.


1986.

