

chronology is commonly accepted in modern historical science. However, modern text-books contain, as a rule, only the Scaliger–Petavius years of events (and omit months, days and hours) and do not mention that almost all these dates had been *calculated* in the 16–17th centuries. Below (in Sec. 3) we suggest a possible reconstruction of Scaliger’s “method” that enabled him to mount the main landmarks of contemporary chronology.

*1.8. The Gregorian calendar reform.* Above we spoke only about the Julian calendar used in Orthodox Easter Book. This Easter Book was common for all Christians till the 16th century. But at the end of the 16th century the Roman Church changed to a new calendar, which was called Gregorian because it was introduced under Pope Gregory XIII. The Gregorian calendar is now adopted as a secular calendar (the so-called “new style”). After the adoption of the new calendar in the West, orthodox believers and catholics began to celebrate Easter on different days. The Gregorian reform of the calendar was carried out on the basis of the project of the Italian “physician and mathematician” Luigi Lilio.

“In a special bull *Inter gravissimas* of February 24, 1582, the Pope says the following: ‘Our care was not only to reinstate the equinox in its long ago nominated place from which it has deviated since the Council of Nicaea approximately by ten days, and to return the 14th moon (ecclesiastical notation of full moon—G. Nosovsky) to its place, from which it has deviated by four and five days, but also to settle such modes and rules according to which future equinoxes and the 14th moon would never move off their places ... Therefore, in order to return the equinox to its proper place established by the Church fathers of the Council of Nicaea on the 12th day before the April calends (March 21), we prescribe and enjoin concerning October of the current year, 1582, that ten days, from the third day before nonas (October 5) to the eve of the ides (October 14) inclusive, be deleted’. Thus the spring equinox was moved to March 21, “to its place”. And in order to prevent further accumulation of the error, it was decided to delete 3 days every 400 years” [335, p. 216].

The text of the bull makes a strange impression. It contains two errors of astronomical nature: first, the difference between Easters and the true (astronomic) full moons that had accumulated by the end of the 16th century was determined incorrectly; second, a wittingly unsolvable problem to correct the calendar in such a way that “equinox and the 14th moon would never move off their places” was raised. This problem is unsolvable because the date of the spring equinox and the cycle of full moons (14th moon) shift at *different rates*, so it is impossible to stop both of them. And indeed, though due to the Gregorian reform the date of the equinox became almost fixed, the 14th moon began to shift one and half times faster, though in the opposite direction (forward in the calendar). See Fig. 128.

Note that neither of these errors could have been made by a skilled mathematician of the 16th century. Perhaps, L. Lilio was only a physician?

In his bull, the pope expresses confidence in the fact that in the time of the Council of Nicaea (i.e., the First Oecumenical Council) the equinox fell on March 21. Where is this known from? Indeed, “the original text of the Nicene decree did not survive. It was already absent in the archives of the Church of Constantinople in the early 5th century” [331, sheet 212]. Evidently, this is a conclusion from the text of the Easter Book itself. Indeed, according to the Easter Book, the earliest Easter falls on March 22, and the earliest spring full moon (Passover) on March 21. Consequently, according to the rules for Easter the Church fathers who established the Easter Book had to presume that the spring equinox (in their time) occurred *not later than*