

On the beginning of the Christian era (A.D.) and the miscount of Dionysius

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Abstract. The beginning of the Christian era (A. D.; common era; our era; new era) is connected with Christ's birth. It is the usual practice that Dionysius Exiguus made a miscount by determining the years of Jesus' birth and Crucifix. In the present work we make an attempt to determine this miscount through astronomical computations of the newmoons (The Crucifix is on Friday, the day before the Jewish Passover i.e. on the 14-th day of the Moon). It was found that the miscount of Dionysius is 9 years regarding Christmas and 11 years regarding the Resurrection (the first Easter). The obtained results are in accordance with St. John's Gospel and with the information of competent ancient annalists as Eusebius of Caesarea.

Key words: chronology; the years of Christ's birth and the Resurrection.

За началото на нашата (новата) ера и грешката на Дионисий Васил Умленски

Първата година на нашата (новата) ера е свързана с раждането на Иисус Христос. Според общоприетото днес мнение Дионисий Малки (Мали) е допуснал грешка при определянето на годините на Рождество и Възкресение. В настоящата работа е направен опит да бъде оценена тази грешка, като се пресмятат моментите на новолунията (Разпятieto е в петък, денят преди еврейската Пасха, т. е. 14-ти ден на Луната). Грешката на Дионисий за Рождество се оказва 9 години, а за Възкресението - 11 години. Този резултат е в съгласие с Евангелието от Йоан и със сведенията на авторитетни древни историци като Евсевий Кесарийски.

Introduction

The contemporary system of chronology (A. D.; common era; our era; new era) is connected with the year of Christ's birth as a man. This system was submitted by the Roman monk Dionysius Exiguus. According to Dionysius Christ was born as a man in the first year before our era (B. C.) on December 25th. The Crucifix is in A. D. 31 on Friday, March 23rd. The Resurrection is in the third day after Crucifix, on Sunday, March 25th. All dates are according to the Julian calendar. Unfortunately the years indicated by Dionysius cause debates which continue many centuries already. An anonymous chronicle from A. D. 1680 is telling us that there are more than 40 opinions about the year of Christ's birth. The commonly accepted opinion today is that Dionysius had made a miscount. Academician N. Boneff [Boneff N., 1949] cites F. Ginzel, who writes: "During the Middle Ages and in more recent time, many people crushed their minds to correct the mistake of Dionysius but the accessible subsidiary tools are powerless". Probably this mistake is due to the inexactitude of the Metonic cycle.

1 "Subsidiary tools" and data

"The subsidiary tools" are the astronomical computations, because the Resurrection is in the days nearly the Jewish Passover that is connected with the first full Moon after the vernal equinox (the fourteenth day of the Moon).

These "subsidiary tools" are more powerful today. This is the reason for the new attempt in the present work to determine the miscount of Dionysius. Regarding the data - the years of Christmas and the Resurrection should be in accordance with the church tradition (1, 2) and St. John's Gospel (3):

- 1) According to the church tradition the Resurrection is on Sunday, March 25th;

2) The age of Christ as a man is 33 years;

3) The Crucifix is on Friday, the day before the Jewish Passover i.e. on the 14-th day of the Moon [Bible, 1992].

From (1) and (3) it follows that Good Friday (14-th day of the Moon) was on March 23rd. Therefore the first day of the Moon was on March 10th, and the new Moon was most likely on March 9th.

2 Computations and results

We start the search from the year of Resurrection because there are more data about it. The earliest hypothetical year of Resurrection is A. D. 19 (if Halley's Comet in 12 B. C. is interpreted as the Star of Bethlehem). Beginning from A. D. 19, we look for the year which satisfies two conditions:

1) March 25th is on Sunday;

2) The computed new Moon in March is on March 8th, on March 9th or on March 10th (if we take into account the possible errors of the astronomical programs for such a long period of time).

The calculations show that the first year which satisfies simultaneously these requirements is A. D. 42: March 25th is on Sunday (see Table 1) and the computed new Moon is on March 9th according to [Dobrev I., 1976] or on March 10th according to the computer program (Table 2).

Table 1. Calendar for March A. D. 42

Day	Date
Mo:	** 05 12 19 26
Tu:	** 06 13 20 27
We:	** 07 14 21 28
Th:	01 08 15 22 29
Fr:	02 09 16 23 30
Sa:	03 10 17 24 31
Su:	04 11 18 25 **

Table 2. Some phases of the Moon in A. D. 42

Phase	Date and Hour
New moon	- 10 March 10:27 UT
First quarter	- 17 March 07:02 UT
Fool moon	- 25 March 10:26 UT

Consequently A. D. 42 is a likely year of Resurrection. According to the church tradition the age of Christ is 33 years; in this case the year of Christ's birth is A. D. 9.

It was found that the years A. D. 9 and A. D. 42 which we found by astronomical calculations are the Alexandrian years respective to Christ's birth and to the Resurrection ([Grumel V., 1958]). The competent annalists, as the founder of church historiography Eusebius of Caesarea [Old Bulgarian literature, 1992], George Sinkel, Theophanes (Theofan) Confessor, Maxim the Confessor and Anastasius Bibliothecarius (Librarian) [Dobrev I., 1976] tell us the same years.

According to Eusebius Jesus was born as a man in the 13th year of the Sun and 10th year of the Moon. Eusebius had used the Alexandrian system of chronology therefore it

conforms to A. D. 9 [Grumel V., 1958]. He specifies the day of Christ's birth too - the fourth day of the week [Old Bulgarian literature, 1992]. At that time the week began on Sunday and the fourth day of week was Wednesday. And December 25th in A. D. 9 is Wednesday, indeed (Table 3).

Eusebius tells us that the year of Christ's Passions is indiction 15th and the day of Resurrection is Sunday, March 25th [Old Bulgarian literature, 1992]. The year calculated above (A. D. 42) satisfies these conditions therefore it is implicitly confirmed by Eusebius.

Table 3. Calendar for December A. D. 9

Day	Date
Mo:	** 02 09 16 23 30
Tu:	** 03 10 17 24 31
We:	** 04 11 18 25 **
Th:	** 05 12 19 26 **
Fr:	** 06 13 20 27 **
Sa:	** 07 14 21 28 **
Su:	01 08 15 22 29 **

Eusebius was the bishop of Caesarea by Palestine about 1700 years ago. He is a founder of the church historiography and a follower of the Alexandrian school (we remind that the Orthodox Church uses the Alexandrian list of Christian Passovers untill now). His information is accurate and exact.

Here are some citations of eminent ancient annalists [Dobrev I., 1976]. They corroborate: Jesus was born in A. D. 9:

George Sinkel: "Year ... 88 of God's Incarnation. The Senate deprived Domitian's honours". The Incarnation was 9 months before Christmas therefore 88 of Incarnation is 87 of Christmas. But Domitian was emperor till A. D. 96. It is evident: George Sinkel considers that Christmas was in A. D. 9 ($96 - 87 = 9$).

Theophanes Confessor: "Year ... 277 of God's Incarnation (276 of Christmas), first year of Diocletian ...". According to contemporary historians the first year of Diocletian is A. D. 285; $285 - 276 = 9$.

Maxim the Confessor: "In ... year 316 of Christ a Council was held at Nikea ...". We know that the Council at Nikea was in A. D. 325; $325 - 316 = 9$.

Anastasius Bibliothecarius: "In year ... 709 of God's Incarnation (708 of Christmas) Leo became emperor of Byzantines ...". Leo the Isarian (Syrian) became emperor in A. D. 717; hence $717 - 708 = 9$.

3 About the years of the emperor Tiberius

The most valid objection against A. D. 9 as the year of Christmas is connected with the years of the emperor Tiberius. St. Luke the Evangelist tells us that John the Baptist began his activity in the fifteenth year of Tiberius (Luke 3:1; 3:2). According to the contemporary historians Tiberius Claudius Nero was emperor during A. D. 14 - 37, therefore the fifteenth year was A. D. 28/29. Shortly after that Jesus was baptized and began His service. At that time He was about 30 (Luke 3:23). In this case it follows that Jesus was born about the beginning of our era, i.e. we come to the year pointed out by Dionysius. But it is the usual practice that this year is wrong. The astronomical computations confirm this opinion.

Probably the accepted years of the emperor Tiberius have been determined in the Alexandrian system of chronology (like the citations above). According to Maxim the Confessor and George Sinkel Tiberius became emperor in year 5515 of the Creation.

They used Alexandrian era of the Creation (5493 B. C.). Because of that 5515 of the Creation is not A. D. 14/15 but A. D. 23/24. Tiberius was emperor 22 years, till A. D. 45/46. In such case there is no contradiction with our conclusions.

Conclusion

The miscount of Dionysius about the beginning of our era is 9 years (if St. John the Evangelist, Eusebius of Caesarea, George Sinkel, Theophanes Confessor, Maxim the Confessor and Anastasius Bibliothecarius tell us the truth). We must celebrate 2000 years from Christmas in 2009 on December 25th. The astronomical data corroborate this conclusion.

References

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