

Regarding “Mathematics and Historical Chronology”

Letters in the August 2013 issue of *Notices* regarding Florin Diacu’s article [“Mathematical methods in the study of historical chronology”, April 2013] dealt mostly with the opinions of Fomenko and his coworkers. But there are grave problems with the content of the article itself. “Mathematical methods” are emphasized in the title of the article, but Diacu’s account of them resists my attempt to understand it.

Consider the account, beginning on page 443, of the moon’s elongation and its acceleration. What is meant by “acceleration”? It is clear, even to a reader who has not specialized in astronomy, that a detailed account of the moon’s elongation must be complex. One might start from a naive model of the solar system, in which the earth moves uniformly in a circle around the sun, and the moon likewise around the earth, and moreover these circles are coplanar. In this model, the elongation increases at a uniform rate, and its acceleration is 0. To a better, Keplerian, approximation, the orbits are ellipses, the motions of the sun, earth, and moon are nonuniform, and the moon’s orbit is inclined relative to the earth’s. All of these considerations impose periodic variations on the observed elongation. A yet better model must include changes in the orbital elements caused by gravitational interactions.

In this complicated context, what is the meaning of the expression D'' in Diacu’s article? I can only conjecture that after all the accountable variations are accounted for, there are long-term changes (on a scale of several hundred years) that remain. But I cannot decipher what they are or what they might mean for chronology.

Another difficulty appears on page 445: “... the 532-year periodicity of the Easter dates. The last cycle started in 1941.” What can this mean? Surely we may mark a beginning point of any recurring cycle anywhere we like. We may begin our calen-

dar year at January 1 or (like many businesses) at July 1 or (like the ancient Romans) at March 25; it makes no difference at all to the motion of the earth.

It would be tedious to go on describing my frustration. In my opinion, the article does not succeed in communicating what the author intended.

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Response to Henrich

Christopher Henrich first complains that I do not explain what the acceleration of the moon’s elongation means. I did not provide more details because introducing the model would have taken a lot of space without adding much insight into the chronology point I was making. Henrich can learn all the details about this standard model of celestial mechanics from the works of Robert Newton and Anatoli Fomenko mentioned in the references.

Henrich also writes that cycles can be started any time, so why did I mention that the last 532-year cycle of the Easter dates began in 1941? I am afraid that he did not read my text carefully. The point I made in my article is why did the Council of Nicaea meet in AD 325 but start counting the first 532-year cycle in AD 345? In other words, it would have been more natural to start the count when the Easter book was canonized, AD 325. The 1941 start of the latest cycle is a consequence of this unnatural choice.

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AMS Should Sever Ties to NSA

I am writing this Letter to the Editor to suggest the AMS sever all ties with the NSA (National Security Agency):

With the revelations of Edward Snowden the public received, and continues to receive, specific and reliable information about the vast secret spying programs of the NSA that wildly exceed anything conspiracy theorists could imagine.

What should be done is a question not only for U.S. citizens but also for people all over the world: the NSA destroyed the security of the Internet and privacy of communications for the whole planet. But if any healing is possible, it would probably start with making the NSA and its ilk *socially unacceptable*—just as, in the days of my youth, working for the KGB was socially unacceptable for many in the Soviet Union.

The AMS regularly publishes advertisements for positions at the NSA and manages reviews for the NSA Mathematical Sciences Grants Program. The relationship between the NSA and the AMS seems to be a symbiotic one: The NSA needs mathematicians for its tasks, and the AMS has an interest in increasing research funding. But any relationship with an organization whose activity is so harmful for the fabric of human society is unhealthy. For the sake of integrity, the AMS should shun all contacts with the NSA.

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