Astronomical Dating of "The Poem of the Man-God"

The "Poem of the Man-God" is unfortunately lacking in internal references to "historical" events or other calendars that would permit unambiguous dating of the narrative. For the most part, such a dating project would only represent a piece of academic pedantry anyway. The gospels have already given us the principal characters and events of Jesus' ministry, so the precise dates are not of any major importance, per se.

On the other hand, an accurate chronology would serve to help authenticate the visions, connecting them with other historical and biblical sources. Also, every study showing internal consistency reinforces our confidence that the visions came to her and hence to us from a higher than human source. A study of the dating evidence is not then entirely useless.

As it happens, if we make use of a number of incidental bits of information the Poem provides in various places about the skies, we can *unambiguously* date the narrative solely by astronomical calculations. The only internal inconsistencies encountered are occasional confusion about the precise phase of the moon. That is, in at least one place, Valtorta, seeing a half-disk of the Moon in the sky calls it first quarter when subsequent developments show it to be actually in third quarter. Such irregularities in interpretation in no way threaten the validity of the Poem; the actual observed conditions are all self consistent.

The dating which we can derive from the astronomy does conflict with the account given by Josephus Flavius, the late first century historian of the Jews. Aulagnier in his book "The Diary of Jesus" has already caught a mistake of one year in Josephus' counting which he could correct on internal evidence alone. The astronomical facts, as I shall lay out, give a total discrepancy of five years relative to Josephus, which becomes four years after Aulagnier's correction is included. It is very interesting in this regard that Josephus' reckoning, and that of other authors of the time, was carried out in olympiads, periods of four years. It is also interesting that Josephus suffers from a reputation for technical inaccuracy.

The astronomy of the Valtorta account places Jesus' birth in December, -0001, the death of Herod in the spring of 0002, and Good Friday on April 21, 0034. Biblical historians will find these dates unacceptable. If their case could be truly proven, it would show that the Poem is only a brilliant invention of a spiritually gifted mind, or at least contains invented elements (which amounts to almost the same thing, it being impossible then to separate invention from the rest). Such proof is unlikely, considering the long history of effort on this question and the continuing lack of agreement among various authors. Thus it will require some additional datum or event, outside of the visions of Maria Valtorta but also outside the current body of historical data, to reconcile the secular historians with those believing the Valtorta visions come from the Author of Truth.

It is ironic, but true, that the astronomy of the visions should hinge upon Jupiter, Venus and Mars. Vision #356 takes place on a housetop in the town of Gadara in early March (or barely possible, February). Among all the visions of the Poem, this one is unique in its catalogue of objects in the sky. Venus, Mars, Jupiter, Betelgeuse, Rigel, the Pleiades, the constellations Orion and Andromeda are given.

The following elaborations are not actually necessary to the argument; one can simply run any one of a number of excellent planetarium programs on a personal computer and verify that there are only two possible years for the vision.

As seen from the Earth, the planet Jupiter approximately executes a 13 year cycle against the background of the stars. From one year to the next, Jupiter moves ahead - eastward - in the sky by one month. In mid-March, 0030, Jupiter and the Sun were at about the same spot in the sky, the same angle along the ecliptic. Each year thereafter found Jupiter 1 hour and 51 minutes (= 24 hrs/13) further ahead of the Sun. In March, 0031, for example, instead of setting with the sun as it had the previous year, Jupiter set 111 minutes after sunset. In years prior to 0030, back to 0024, Jupiter was a morning star, rising and setting before the Sun, not appearing in the sky until after midnight. In the vision at Gadara, Valtorta sees Jupiter in the

early evening sky. The scene in Gadara is thus dated later than 0030, between 0031 and 0038 at most.

Mars has an orbital period of 23 months. Seen from Earth, every two years Mars appears near the same spot but a little behind, slipping backwards - westward - by one month every biennium. On alternate years, Mars is on the other side of the sky. Mars was visible evenings in March, 0031, and therefore in odd numbered years of the early fourth decade. In the even years, it was a morning star in winter.

Venus has a nearly like cyclic behavior, even though it moves much faster than Mars. It repeats its angular position relative to Earth every year and seven months. Every two years, Venus reappears near the same spot, but advanced by 2 1/2 months. Venus was an evening star in the winter of 0031 and again in 0033, two and a half months ahead of its 0031 position, but by 0035, it was five months ahead and no longer in the evening sky. In 0031, its appearance in the March sky was earlier than its maximum brilliance (which occured later in the spring). By 0033 its position in the March sky was well advanced from maximum, and it was drawing back closer to the horizon in the evenings. (The sky one month earlier was spectacular; all the visible planets were spread across the ecliptic from horizon to horizon and in order.)

Thus the only possible years for the winter vision at Gadara are 0031 and 0033. The presence of Andromeda in the sky confirms that the opening of the vision takes place fairly early in the evening, for Andromeda sets early. Late in the evening, Valtorta reports the Moon rising in a sky which it itself lights. It is a third quarter Moon that rises after sunset and before dawn. Thus there can be no question about - say - Venus or Jupiter being seen as morning stars; they appear before moonrise. The three planets are visible in the winter evening sky over Gadara in these two years and in no others for decades either later or earlier.

Jesus and the apostles leave Capernaum after sundown of the Sabbath. They land at Hippo, and walk to Gadara, arriving in the afternoon. The vision of that evening must take place on Sunday night, March 13, 0033, or Sunday, March 2, 0031. There may

possibly have been a stopover in Hippo; the visions often give no clue concerning their continuity. No matter of importance hangs on the possibility that the night might rather be Monday.

There are several problems with the second date, March 2, 0031. We can try to fix them by considering other Sundays, but in the end, we run out of excuses. In 0031, the Jewish date 15 Nisan, the (approximate) date of Passover, fell on Tuesday, March 25 by the modern reckoning of Jewish dates. Tuesday is the problem, for vision #~~xxx~~ 375, "The Sabbath of Unleavened Bread", shows that Passover that year of the Gadara vision was celebrated on Saturday. March 25 is fairly close to the equinox, (March 22, 0031) so it is not at all impossible that the year 0031 might have been declared embolismic under the more flexible rules of the time. This would put Passover on Saturday, April 26, and the Gadara vision one lunar cycle later on Sunday, March 30. This turns out to be a relatively poor night for seeing Jupiter. While Venus and Mars are prominent, Jupiter is only about 10° from the Sun. By the time the sky had darkened enough to make Jupiter a bright object, it must nearly have set. So on that night, Jupiter was very low in the west, relatively inconspicuous against a still bright sky. Technically, however, the sky still meets the conditions of the vision. Perhaps the atmosphere to the west was unusually clear that night.

Note that either 0031 or the following year 0032 must be embolismic. The modern Jewish calendar would make it 0032, but in either case, the April full moon, the Paschal moon of 32, fell on Sunday, April 11, 0032. And if the Gadara scene happens in 31, then 32 is the year of Holy Week. Indeed, vision #589, "The Evening of Palm Sunday", seems to substantiate 0032 as the correct year. Valtorta opens the vision with the observation, "It is evening. A tepid evening with a full moon." As we shall see, it is likely that the Moon was not yet truly full on that evening. But more important, this comment absolutely rules out the possibility that for some reason the Passover of the first Easter might have been celebrated in Judea before the Nisan full Moon. Had this scene occurred one week earlier, so that Passover might fall just before the full moon, the Moon would have been only a half disk with no chance of being described as "full".

This seems like a minor detail, but it proves crucial.

In the year 0034, the full moon fell on Thursday, April 20, not long after midnight. This fact favors 34 over 32 since we know from the gospels that the Passover seder was celebrated on Thursday evening. This is quite reasonable in 34, but would have required a wait of 5 days from the Paschal moon if the year were 32.

Now it is important to remember that for the days before the Moon is full, it will set before dawn. Whereas after the full moon, the Moon is still in the sky at sunrise. Vision #590 settles the matter. Jesus rises early with the Moon in the western sky, encounters the guard at the gate, and goes to meet His Mother. They visit Annaleah's mother, Eliza. When Jesus walks back to the gate, the Moon has set, and the streets are dark. Of the conversation with the younger guardsman that takes place on the return trip Valtorta writes, "The shadow envelopes their faces and bodies in complete darkness." The argument is complete; this sentence could not have been written about Monday, April 12, 0032, the day following a full moon, when either the Sun, the Moon, or both would have been in the sky. Of the two Monday mornings, only on Monday, April 17, 0034 did the Moon set before sunrise.

The year 0034 must have been embolismic. Since we have seen that either 0031 or 0032 was embolismic, 0033 would not have been. The modern reckoning puts 15 Nisan in 0034 on Tuesday, March 21, and delays the embolismic year to 0035. That dating would put the Paschal moon of 34 actually a few hours prior to the equinox, an unlikely circumstance. It would also cause a problem with the day of the week for Passover, whereas making 0034 embolismic seems to resolve all the problems. Whether or no, the full moon would still follow Monday morning, not precede it.

Thus the only date for the Gadara vision consistent with the astronomy of the planets and a dark predawn sky on Holy Monday is Sunday, March 13, 0033. Good Friday fell on April 21, 0034 and the first Easter on April 23, 0034. All dates are given in Gregorian.

Now we can count backward to Jesus' birth. He mentions in

several places that he is 33 years old during His last spring. Valtorta also hears him say twice that He was born on 25 Chislev. That day, by the modern count, was Saturday, December 9, -0001. (Note that there is, by convention, no year 0). Again by the modern count, that year was embolismic. There may be some problem with the exact day, for Valtorta seems to suggest, without however actually saying so, that the Moon was much nearer to full than would be consistent with a date of 25 Chislev (or a date of 25 of any other Jewish month since the full moon is always within a day or so of 15.) That the year is -1 is firm.

It is interesting that the astronomy of the visions points to late -1 as His birth year. Modern scholarship claims to have discredited the ancient tradition for the start of our calendar, which now Valtorta's visions would reestablish. Skeptics could say that this is evidence that Valtorta's visions are in fact literary inventions, that she simply and naively counted backward to place the Nativity where it "belongs" according to our demonstrably erroneous calendar. Under that hypothesis, she must be heartily congratulated for the elaborate calculations she secretly and accurately performed and hid from her confessor, calculations that placed the proper planets in the sky in the correct month 32 years later and consistently put the moon set ahead of dawn early on that Monday 33 years later.

There is more.

According to vision #5, Mary was born in the fall. She was 15 at the time of Her betrothal and at Jesus' conception. At His birth in the wintertime, She would therefore have been 16 years old. This places Her birth in the fall of -17. The Moon was somewhat short of full by the calendar according to remarks by the observers on the scene; its complete fullness is considered remarkable by those in the vision, but it lacks only 3 days. Mary is born at the end of a storm of exceptional violence, followed by a gigantic rainbow, one end of which rises out of the very peak of Mt. Hermon. The neighbors also observe a "star" while the sun is not yet set, evidently the planet Venus.

From Nazareth, the peak of Mt. Hermon has a bearing 57° north of east. The angle between the direction of the Sun's rays

and the apparent direction of the rainbow's arc is always 42°. If the Sun were directly on the horizon, observers would see 180° of bow. Under the described conditions, the Sun then would necessarily have had a bearing of 270° - 57° + 42° = 255°. As the Sun is assumed to be higher above the horizon, the consequent rainbow sinks below the opposite horizon until, with a Sun imagined above 42° from horizontal, no part of its rainbow is against the sky. The formula for locating the bearing of a Sun above the horizon using the location of one end of the arc becomes slightly more complicated.

In the fall of -17, full moons fell on August 27, September 26, and October 26. Since the day of the vision is notably sultry and Joachim worries during the storm for crops still in the field, we must rule out the full moon of November 25. On August 24, the Sun was too far to the north all afternoon; it set still well north of 255°. September 23, a full moon - 3 days, seems a possibility. However, although the Sun did lie as far south as 255° in the early afternoon, it was then much too high in the sky for a rainbow arc to rise out of Mt. Hermon. That day it came close, but never actually got within 10° of the necessary position. 10° is a substantial angular shift which would not permit the Valtorta observation, even if it were fairly sloppy. Given the distance from Nazareth, the rainbow would apparently miss the peak by over 8 miles, so not appearing above the peak at all.

At 4:40 pm on October 23, three days before the full moon, the setting sun was 4° above the western horizon. Its bearing was then 254°, <u>precisely</u> the bearing necessary to illuminate a rainbow springing from Mt. Hermon. 15 minutes later it was too far north, and 15 minutes prior it was too far south to fit the description. At this same time, the planet Venus stood 20° above the horizon at a bearing of 245°. This is almost as far from the Sun as Venus ever reaches, so observing conditions were nearly optimal. The peak of the arch of a 172° rainbow lay fully 38° above the horizontal. The rainbow takes its light from the sun, not the sky behind it. Against an evening eastern sky already darkening as the Sun set, it had to have been a spectacular sight. Lacking 3 days of full, the apparently full

Moon was 33° from the center of the bow, inside the arch, rather to the south of the vertical center line. When Heaven Itself chooses to decorate the firmament in celebration, we may expect a truly magnificent show.

We should also note that if the Gadara planetary vision were placed in 31 instead of 33, Mary's birth would move to -19. That fall, Venus was west of the Sun (about 10°), setting before it, and lost in the glare. Thus the appearance of Venus in the evening sky of Mary's birthday, fully consistent with the skies of 33 and 34 we have discussed, also rules out 31 as the year of the Gadara night and confirms 34 as the year of the crucifixion.

This exhausts the information I have been able to tease from the astronomy of the Poem, saving a few mentions of moon light that would be consistent with many different dates (always including those indicated by the dating we have found). The calculations which have led to such precise answers have been performed on a personal computer using one of a number of available planetarium programs. This wonderful software has more than simplified the chore of reducing Valtorta's accidental mentions of celestial objects to a definite calendar, it has made it the work of a few evenings rather than a long career. Although I am by profession a theoretical physicist and trained in such mathematical manipulation, the sheer bulk of it would have been daunting. I doubt that the work would have been done without the computer.

Consider the possibility that the Poem was Valtorta's own clever invention. She would have faced not merely the task of verifying the consistency of these scenes, as is done here, but of searching a much greater realm of possibilities in order to find unique astronomical situations to bury in the narrative to support her chosen system of dates. This would have been necessary whatever choice of years she had made. She nowhere calls any attention whatever to the implications of her offhand astronomical observations, apparently confident that someday, somewhere, some mathematician, physicist or astronomer would eventually uncover their perfect internal consistency.

The brief observation that the rainbow rises from the top of Mt. Hermon is remarkable less because we are able here to recover a unique date and hour from it, but more that there was ever any time in the history of Earth and sky when this constellation of sights could have been assembled. That Valtorta, who was by all accounts mystified by a slide rule, and had no personal computer nor any other sort of calculating engine to use, could have carried out the sea of arithmetical operations necessary not merely to verify but actually to discover the Marian rainbow, all the while managing to keep permanently concealed the hundreds of pages of scratch sheets that anyone uses who does these things, must tax the credulity of even the immovable atheist more than the alternative that Jesus showed it to her. In the words of Sherlock Holmes, when you have eliminated the impossible, that which remains, however merely improbable, must be true.

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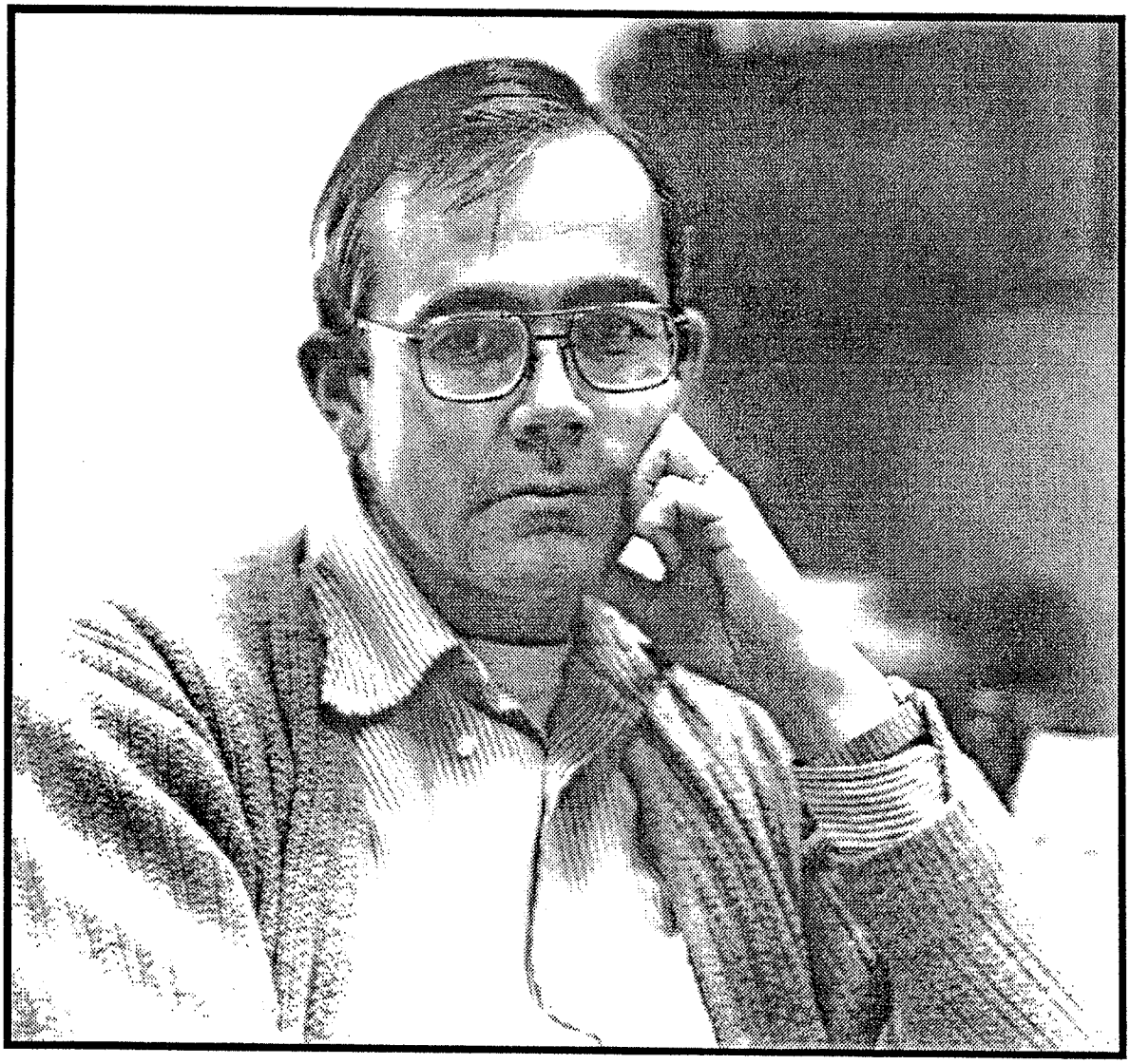
1937 - 1995



Reminiscences by Friends and Colleagues

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