

The Wellsian



The Journal of the H.G. Wells Society

No. 29, 2006

The Wellsian: The Journal of the H. G. Wells Society

No. 29 (2006)

Copyright 2006 © The H. G. Wells Society, ISSN 0263 1176

Editorial Address

Dr John S. Partington, Editor, *The Wellsian*
13 Little Street, Reading RG 1 7PB, England
E-mail: <J_S_Partington@hotmail.com>
(Please send submissions as email
attachments in Word or RTF)

Referee Panel

Dr Philip Coupland, History, University of Glasgow
Dr John Hammond, English, Nottingham Trent University
Dr Sylvia Hardy, English, University College Northampton
Dr. Simon James, English, University of Durham
Dr Steven McLean, English, University of Derby
Dr Richard Nate, English, University of Eichstiitt
Prof. Patrick Parrinder, English, University of Reading
Dr John S. Partington, History, Waterstone's Booksellers
Prof. Elmar Schenkel, English, University of Leipzig

Printed by: Impress Print & Design 50-52 Station Hill, Reading RG1 1NF, UK

Contents:

Editorial , by John S. Partington	1
Notes on Contributors	1
Thomas Gangale and Marilyn Dudley-Rowley, 'When Was the War of the Worlds?'	2
Kimberley Jackson, 'Vivisected Language in H. G. Wells's <i>The Island of Doctor Moreau</i> '	20
Hiroshi So, ' <i>The Wheels of Chance and the Discourse of Improvement of Health</i> '	37
Book Review: Anne Holden Rønning, <i>Hidden and Visible Suffrage</i> [John S. Partington]	47
Book Review: Glenn Yeffeth, ed., <i>The War of the Worlds</i> [John S. Partington]	51
Book Review: Gordon D. Feir, <i>H. G. Wells at the End of His Tether</i> [John S. Partington]	56
Letter to the Editor: Patrick Parrinder	62
New Books and Articles on H. G. Wells	63

When Was the War of the Worlds?

Copyright © 2006

Thomas Gangale and Marilyn Dudley-Rowley

And early in the twentieth century came the great disillusionment.

In H. G. Wells' novella, *The War of the Worlds*, Victorian civilisation, with its exuberant faith in progress and technology, was suddenly humbled in the dust by a technologically more advanced, inhuman invader from another world. The story was first serialised in British and American periodicals in 1897, and published as a book the following year. Probably in order to imbue his tale with a timeless quality, Wells declined to specify the exact date of the attack from Mars. However, given his penchant for detail, is it possible that Wells wrote his terrifying vision of the future with just such a specific date in mind? There are a number of subtle clues throughout his story that suggest such a date. In the course of the past century, a number of works of fiction based on Wells' original tale have assigned various years to the war. Which of these, if any, are correct? Is it possible to gather together all of Wells' clues and determine definitively when the war occurred? Did Wells weave an elaborate puzzle into his story that has gone unnoticed and unsolved for more than a century?

All but one of the works listed in Table 1 are contributions to the 1996 anthology, *War of the Worlds: Global Dispatches*, edited by Kevin J. Anderson. The exception is the 1975 collection of related stories, *Sherlock Holmes's War of the Worlds*, by the father and son team of Manly Wade Wellman and Wade Wellman. Where the date of the war is not stated explicitly in these tales, it can be derived from facts in the text (shown in parentheses).

Table 1
Proposed Dates for the War of the Worlds

Author	Title	Date
Mike Resnick	"The Roosevelt Dispatches"	July 1898
Gregory Benford and David Brin	"Afterword: Retrospective"	1898
Gregory Benford and David Brin	"Paris Conquers All"	1898 (28 years after the fall of Sedan)
Don Webb	"To Mars and Providence"	1898 (H. P. Lovecraft at age 8)
Dave Wolverton	"After a Lean Winter"	August 1899
Janet Berliner	"The True Tale of the Final Battle of Umslopogaas the Zulu"	1899 (Winston Churchill in South Africa)
Daniel Keys Moran and Jodi Moran	"Roughing It During the Martian Invasion"	1899 (Mark Twain at age 64)
Robert Silverberg	"The Martian Invasion Journals of Henry James"	June 1900
Allen Steele	"A Letter from St. Louis"	July 1900
Doug Beason	"Determinism and the Martian War, with Relativistic Corrections"	1900 (Albert Einstein at age 21)
M. Shayne Bell	"To See the World End"	1900
Daniel Marcus	"Blue Period"	1900 (Pablo Picasso at age 19)
Walter Jon Williams	"Foreign Devils"	1900 (Boxer Rebellion)
Connie Willis	"The Soul Selects Her Own Society: Invasion and Repulsion: A Chronological Reinterpretation of Two of Emily Dickinson's Poems: A Wellsian Perspective"	1900
Mark W. Tiedemann	"Resurrection"	1901 (after Josef Stalin left the Tiflis Physical Observatory)
Manly Wade Wellman and Wade Wellman	<i>Sherlock Holmes's War of the Worlds</i>	June 1902

In addition to the titles listed in Table 1, the 1998 CD ROM and Sony PlayStation computer games based on *Jeff Wayne's Musical Version of the War of the Worlds* begin the action in September 1898. In this scenario, the Martians launch a second invasion, this time targeting Scotland. Although these games do not specify a date for the Martians' initial failed attempt to conquer Earth, the inference is that this occurred earlier that same year. It certainly is no accident that these computer games were released during the centennial of the publication of *The War of the Worlds* as a book.

Three stories from *War of the Worlds: Global Dispatches* also place the action in 1898, whilst three others place it in 1899. However, the famous first paragraph of Wells' account ends with, "And early in the twentieth century came the great disillusionment." The first of Wells' clues immediately eliminates 1898 and 1899 as possible dates for the Martian invasion. Indeed, since the 20th century actually began with 1901, the year 1900, having been the last year of the 19th century, should also be eliminated from consideration. This would disqualify all but one of the dates proposed in *War of the Worlds: Global Dispatches*.

Wells' second and third clues are a few paragraphs later in Book I, Chapter 1, where he states:

As Mars approached opposition, Lavelle of Java set the wires of the astronomical exchange palpitating with the amazing intelligence of a huge outbreak of incandescent gas upon the planet. It had occurred towards midnight of the twelfth (p. 53*)....

Opposition is an alignment of the sun, Earth and Mars, so called because Mars and the sun are on the opposite sides of the Earth. Another alignment of these three bodies, called conjunction,

occurs when Mars and the sun are on the same side of the Earth. This terminology is a holdover from a time when astronomers held a geocentric view of the solar system. In an age when we know the sun to be at the centre of the solar system, it may seem strange that when Earth and Mars are lined up on the same side of the sun, we call it opposition, and when they are on opposite sides of the sun, we call it conjunction (see Figure 1).

The implications of “midnight of the twelfth” will be discussed later.

Still later in Book I, Chapter 1, Wells drops his fourth clue, that at the time the invasion was launched from Mars, “forty millions of miles it was from us--more than forty millions of miles of void” separated the two planets (p. 54). Mars only comes within 40 million miles (64 million

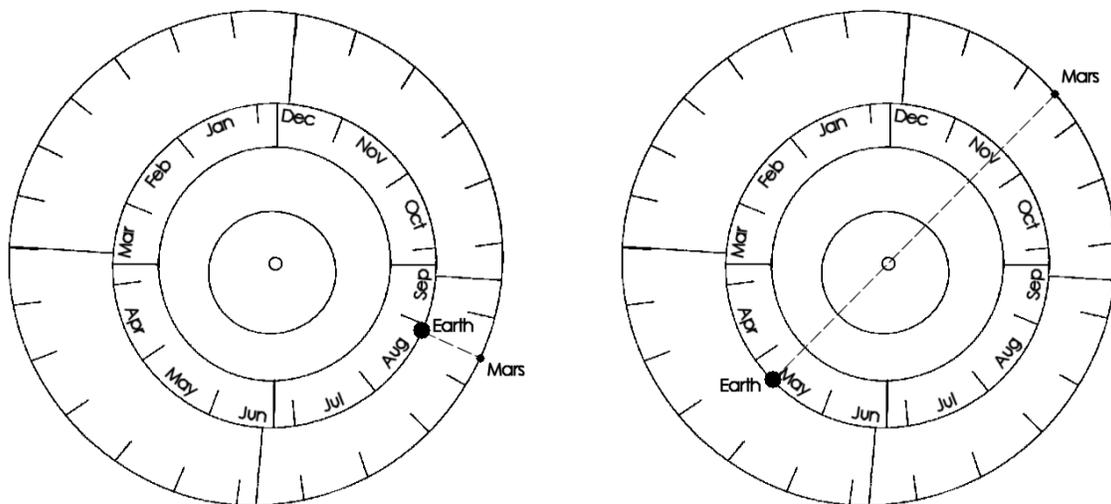


Figure 1
Opposition and Conjunction

* All page references are per David Y. Hughes and Harry M. Geduld, 1993, *A Critical Edition of the War of the Worlds*, Bloomington, Illinois: Indiana University Press.

kilometres) of Earth during the most favourable oppositions, known as perihelic oppositions, i.e. when Mars is simultaneously near perihelion--its closest point to the sun--and is in opposition with the sun as seen from Earth. It is true that Earth and Mars approach each other roughly every 780 days (25.6 months), but the distance between the two planets can vary greatly from one opposition to the next because of Mars' eccentric orbit. Earth's orbit is nearly circular, and so its distance from the sun varies by only three million miles (five million kilometres) in the course of a year. Mars, on the other hand, has the most lopsided orbit of all the planets except Pluto, so that its perihelion and aphelion (farthest point from the sun) differ by 26.5 million miles (42.6 million kilometres). At very unfavourable oppositions, when Mars is at its aphelion, the two planets come no closer than 63 million miles (101 million kilometres) to each other.

Perihelic oppositions only occur every fifteen or seventeen years. One such opposition occurred in 1877. It was in this year that the American astronomer Asaph Hall discovered Mars' two tiny moons, Phobos and Deimos, and the Italian astronomer Giovanni Schiaparelli reported seeing *canali* on Mars. The next perihelic opposition came in 1892, and the following opposition in 1894 was almost as favourable. The American astronomer Percival Lowell built his observatory near Flagstaff, Arizona in time to view Mars during the 1894 opposition, and during the remainder of his life the Lowell Observatory was primarily dedicated to the study of Mars. It is quite likely that Wells' own interest in Mars was stimulated by Lowell's observations of the 1894 opposition, published in the first of his three books, *Mars*, in 1895. In this book, Lowell laid out a very detailed and logical argument in favour not only of life on Mars, but of intelligent life, as evidenced by magnificent engineering on a planetary scale--the canals. Wells began

writing *The War of the Worlds* the same year that Lowell's book was published, and Wells set the stage for his tale by referring to the 1894 opposition in his first chapter:

During the opposition of 1894 a great light was seen on the illuminated part of the disk, first at the Lick Observatory, then by Perrotin of Nice, and then by other observers. English readers heard of it first in the issue of *Nature* dated August 2 (p. 53).

It is interesting to consider that the 1894 opposition also quite likely inspired the German writer Kurd Lasswitz, who published his novel *Two Planets* in the same year that *The War of the Worlds* was published as a serial feature (1897). In Lasswitz's novel, Earth is visited by humanoid Martians who are technologically advanced and benevolent; however, Britain provokes a war that results in the Martian occupation of Earth.

In *Sherlock Holmes's War of the Worlds*, the authors Manly Wade Wellman and Wade Wellman place the invasion in June 1902. In fact, on that date, Mars was nowhere near Earth (see Figure 2). Mars had recently passed through conjunction in March 1902, i.e., had passed behind the sun as seen from Earth, so that in June 1902 Mars was still on the far side of the solar system, 227 million miles (366 million kilometres) from Earth. Nor were the oppositions immediately before and after this date at all favourable. At the opposition of March 1903, Mars came no closer than 59.3 million miles (95.4 million kilometres) to Earth (see Table 2 and Figure 3). The opposition of February 1901 was even worse, for Mars was at that time very near aphelion, so the year 1901, which can be inferred in Mark W. Tiedemann's "Resurrection," must also be eliminated.

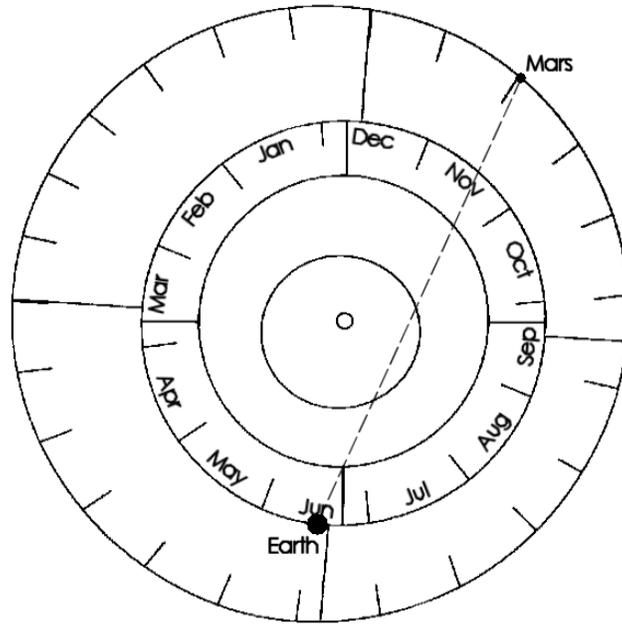


Figure 2
The Positions of Earth and Mars on 15 June 1902

Table 2
Early 20th Century Oppositions of Mars

Opposition Date	Closest Approach		
	Date	Distance (km x 10 ⁶)	Distance (mi x 10 ⁶)
22 Feb 1901	23 Feb 1901	101.34	62.97
29 Mar 1903	2 Apr 1903	95.44	59.31
8 May 1905	16 May 1905	80.27	49.88
6 Jul 1907	13 Jul 1907	60.98	37.89
24 Sep 1909*	18 Sep 1909*	58.27	36.21
25 Nov 1911	17 Nov 1911	76.47	47.52
5 Jan 1914	1 Jan 1914	93.11	57.86
9 Feb 1916	9 Feb 1916	100.95	62.73
15 Mar 1918	18 Mar 1918	98.93	61.47
21 Apr 1920	28 Apr 1920	87.23	54.20
10 Jun 1922	18 Jun 1922	68.22	42.39
23 Aug 1924*	22 Aug 1924*	55.79	34.66

*Perihelic oppositions.

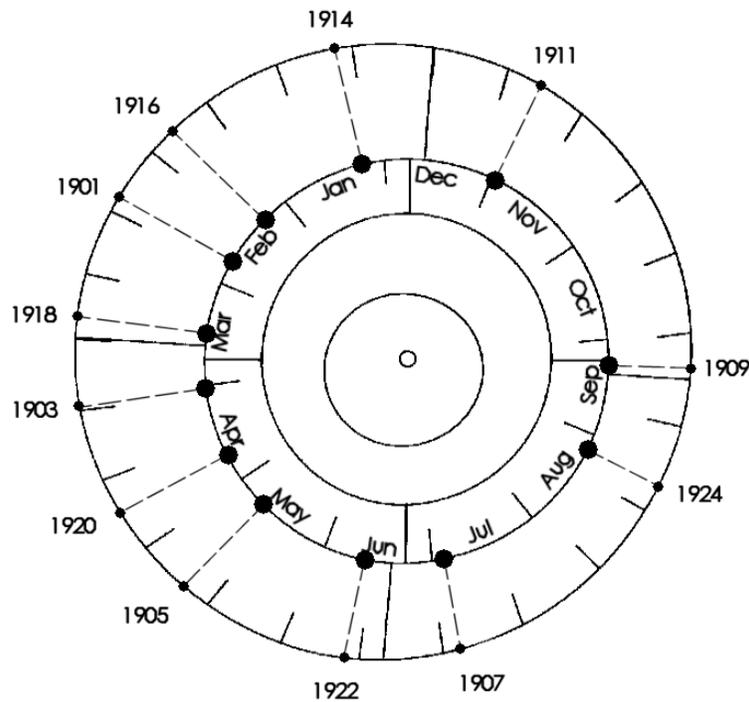


Figure 3
Early 20th Century Oppositions of Mars

Both Robert Silverberg and Allen Steele give the summer of 1900 as the time of the Martian invasion. Doug Beason, M. Shayne Bell, Daniel Marcus, and Walter Jon Williams also give 1900 as the year of the invasion without specifying the season. However, Mars was in conjunction early that year, and by that summer it was still several hundreds of millions of miles from Earth (see Figure 4). So, even if we granted special dispensation for the common mistake of considering 1900 to be the first year of the 20th century, whereas it was properly the last year of the 19th century, we would still have to eliminate 1900 on the basis of Wells' statement that Mars was about 40 million miles from Earth at the time of the invasion.

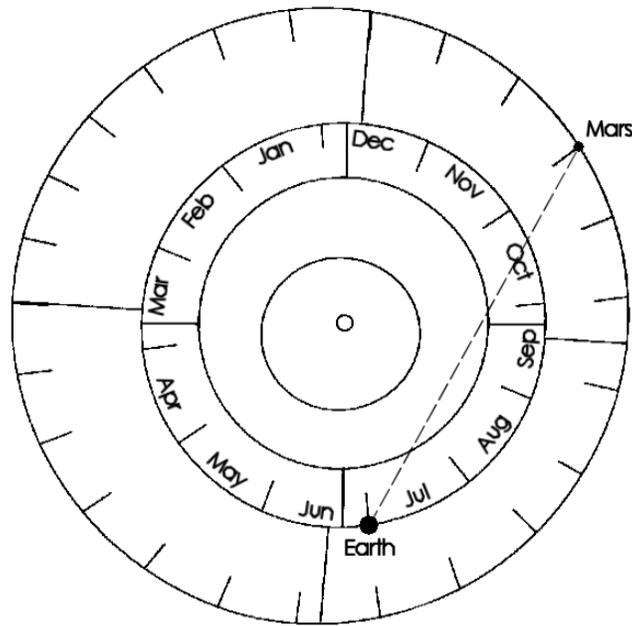


Figure 4
The Positions of Earth and Mars on 1 July 1900

At this point, we have shot down every date that has been proposed for the Martian invasion.

We are still left with the question, “When was the War of the Worlds?” Let us continue with our examination of Wells’ astronomical clues.

The first favourable opposition of the 20th century was in early July 1907, when Mars approached to within 37.9 million miles (61 million kilometres) of Earth. The next opposition, in late September 1909, being perihelic, was even more favourable, for at this time Mars came within 36.2 million miles (58.3 million kilometres) of Earth. The next perihelic opposition did not occur until late August 1924, when Mars approached to within 34.7 million miles (55.8 million kilometres). Any of these three favourable oppositions would satisfy Wells’ two

conditions, that the invasion occurred early in the 20th century, when Earth and Mars were separated by only 40 million miles. A fourth possibility that comes close to satisfying the “40 million miles” condition is the opposition of 1922, when Mars came within 42.4 million miles (68.2 million kilometres). So, in which of these years did the Martian invasion take place? To settle on one of these four possibilities, we must look at the other clues that Wells left for his readers to discover.

In Book II, Chapter 3, the narrator refers to his fortnight of imprisonment in the ruined house in Sheen as “that terrible June (p. 155).” In early June 1909, however, Mars was still three and a half months from its closest approach to Earth on 24 September, and was more than 81 million miles (130 million kilometres) distant. In early June 1924, the perihelic opposition was two and a half months in the future (23 August), and the two worlds were separated by nearly 68 million miles (110 million kilometres).

The 1922 and 1924 oppositions are unattractive choices because the terrestrial technology that Wells describes in his account of the War of the Worlds is consistent with that of the 1890s, when he wrote his story. Brilliant futurist that he was, he surely would have foreseen that in three decades’ time the aeroplane would have been developed into a vehicle of considerable military importance, for example. He could not have been ignorant of the fact that the problem of powered heavier-than-air flight had been worked on since the 1840s and was on the verge of solution. Samuel Langley in the USA and Hiram Maxim in the UK began work around 1889-1890 and had working models by 1893-1894. Yet Wells makes no mention of aeroplanes in his account of the War of the Worlds, commenting only in passing on Lilienthal soaring-machines

(p. 152). This strongly suggests that he was describing a war nearer to his own time. Another technological clue pointing to 1907 rather than to the 1920s is that in Wells' story, nearly all private transportation was by horse-drawn carriage. He mentions motorcars only briefly during the exodus from London (p. 122). There were little more than 100,000 automobiles in the United Kingdom in 1907, so they were still rather scarce on Britain's roads, but by the 1920s the horse had been all but driven from the streets.

The only remaining alternative for the year of the Martian invasion is 1907. In early June of that year, Mars was only a month away from its closest approach, and at that time Mars was 48 million miles (77 million kilometres) from Earth (see Figure 5), although, as stated earlier, it would approach to within 37.9 million miles (61 million kilometres) in the coming weeks. So, even though the 1907 opposition was not quite as favourable as either the 1909 or 1924 perihelic oppositions, it is far and away the best fit to Wells' statements concerning the relative positions of the two planets during the War of the Worlds. Additionally, the year 1907 is more consistent with Wells' description of Earth's technology at the time of the war.

Now that we have deduced the year of the War of the Worlds, can we ascertain specific dates to the events described by Wells?

To begin, let us refer again to the narrator's characterisation of his fortnight of imprisonment as "that terrible June." Now, there are several possibilities to be examined. If one takes the narrator's phrase to mean that most of this period occurred in June, and bears in mind that the landing of the fifth Martian cylinder in Sheen, the event which triggered the days of imprisonment, occurred on Tuesday morning, that particular Tuesday could have been as early as

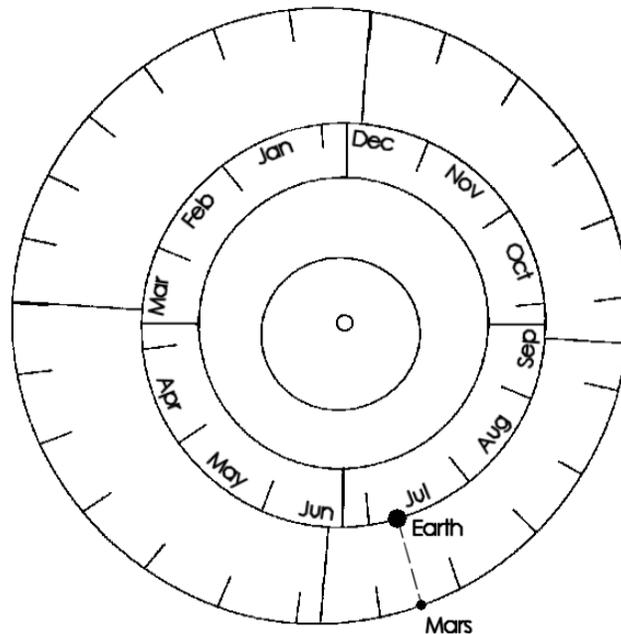


Figure 5
The Positions of Earth and Mars on 6 July 1907

28 May 1907. If the imprisonment had begun on Tuesday, 18 June 1907, it would have ended on Tuesday, 2 July 1907. These are the earliest and latest plausible dates. The two other possible Tuesdays for the beginning of the “days of imprisonment” are 4 June and 11 June 1907.

Again we are face with four options. How do we choose between them? Wells gives us another astronomical clue in Book I, Chapter 13, following the Battle of Weybridge, which occurred on a Sunday:

High in the west the crescent moon hung faint and pale above the smoke of Weybridge and Shepperton and the hot, still splendour of the sunset (p. 105).

This passage describes a moon that is three to six days old, i.e. the number of days since the dark of the moon. At an age of less than three days, the moon would have been low in the west at

sunset. A moon older than six days would have been more to the south than west at sunset. At seven days, the moon is half illuminated, not a crescent, and at eight days or later it is a gibbous moon. In June 1907, the dark of the moon occurred on the 10th, and the following Sunday was the 16th, when the moon was six days old. We must conclude, therefore, that the Battle of Weybridge took place on Sunday, 16 June, and that the narrator's "days of imprisonment" began on the following Tuesday, 18 June 1907. Book I, Chapter 8 (p. 74) mentions the day of the landing of the first cylinder in Horsell Common as being the previous Friday, which was 14 June 1907.

Returning to Book I, Chapter 1, the launch of the first cylinder was observed "towards midnight of the twelfth." The question is, the twelfth of what? Another passage in this chapter tells us, "Hundreds of observers saw the flame that night and the night after about midnight, and again the night after; and so for ten nights, a flame each night (p. 54)." People on Earth observed all ten launches before a single landing occurred, and thus at least ten nights must have elapsed between the first launch and the first landing. Since the first landing occurred on Friday morning, 14 June 1907, the latest date for the first launch would have been ten days earlier, or 4 June 1907. Since the Martians launched their first cylinder "towards midnight of the twelfth," this could have been no later than the night of 12 May 1907.

But why couldn't the Martians have launched their invasion before 12 May? Why not on 12 April, for instance, 54 years (to the day) before the human race launched its first invasion of outer space? If the launch of the first cylinder took place on the night of 12 May (actually the midnight which began 13 May), from that night to the landing of that cylinder at midnight on 14

June 1907 would have been a span of 32 days. In *Sherlock Holmes's War of the Worlds*, Dr. Watson pointed out a mathematical error in Wells' first chapter, where he described the Martian cylinders as "drawing nearer every minute by so many thousands of miles (p. 54)." If the cylinders had travelled at, for instance, 9,000 miles per minute, they would have crossed the 40 million mile gulf in only three days (40 million mi. / 9,000 mi. per min. = 4,440 min.). To cross the interplanetary void in 32 days, the cylinders must have had a relative velocity of only about 870 miles per minute (40 million mi. / 46,080 min.), not "many thousands." If the invasion had been launched on 12 April, 62 days before the landing of the first cylinder, the invasion fleet would have travelled 55 million miles at a relative velocity of about 620 miles per minute (55 million mi. / 89,280 min.) (see Figure 6). Earlier launch dates would make Wells' "many thousands" description even more erroneous.

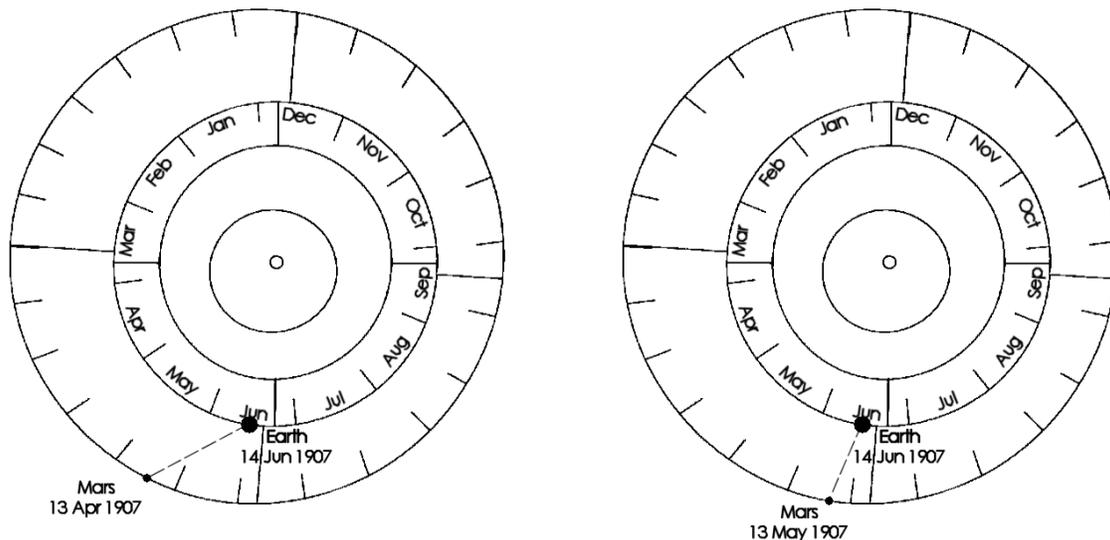


Figure 6
62-Day and 32-Day Flights From Mars to Earth

A final set of astronomical clues deals with the time of the narrator's writing of his account of the War of the Worlds. In Book I, Chapter 1 he states, "The storm burst upon us six years ago now (p. 53)." This would place the writing of his account in 1913. In the last chapter (Book II, Chapter 10), he tells us, "At present the planet Mars is in conjunction (p. 192)." This must be interpreted loosely, since a conjunction cannot take place exactly six years after an opposition. Oppositions come at roughly 780-day intervals, and conjunctions follow oppositions by about half that interval, or 390 days. The conjunction occurring closest to the six-year point after the 6 July 1907 opposition was on 31 October 1912, about 5.3 years later. We can infer that the narrator completed the writing of his account of the war early in 1913, when Mars was still on the far side of the solar system.

Also in the last chapter, as he reflects on the possibility that the Martians had landed on Venus in preference to mounting a second invasion of Earth, the narrator tells us, "Seven months ago now, Venus and Mars were in alignment with the sun; that is to say, Mars was in opposition from the point of view of an observer on Venus (p. 192)." Such an alignment took place on 31 August 1912, which would put the narrator's writing at the end of March or the beginning of April 1913, nearly six years after the War of the Worlds.

Table 3 recaps the list of clues we have examined.

Did H. G. Wells really write *The War of the Worlds* with a definite year in mind? The evidence in favour of this is certainly intriguing, if not conclusive. The facts that Wells sprinkled throughout his tale are entirely consistent with the war having been fought in 1907. Could it be merely a matter of coincidence that eight separate facts randomly point to a specific set of dates?

Table 3
Recap of the Evidence

Source Text	Quote
p. 51	“And early in the twentieth century came the great disillusionment.”
p. 53	“The storm burst upon us six years ago now.”
p. 53	“As Mars approached opposition”
p. 53	“a huge outbreak of incandescent gas... occurred towards midnight of the twelfth”
p. 54	“Forty millions of miles it was from us--more than forty millions of miles of void”
p. 54	“drawing nearer every minute by so many thousands of miles”
p. 54	“and so for ten nights, a flame each night”
p. 74	“all the strange and wonderful things that happened upon that Friday...”
p. 94	“the day would have seemed very like any other Sunday.”
p. 105	“High in the west the crescent moon hung faint and pale above the ... hot, still splendour of the sunset.”
p. 132	“Of the falling of the fifth cylinder I have presently to tell.... On Tuesday....”
p. 155	“that terrible June”
p. 192	“At present the planet Mars is in conjunction.”
p. 192	“Seven months ago now... Mars was in opposition from the point of view of an observer on Venus.”

It seems unlikely. On the contrary, it is more believable that Wells deliberately penned an obscure mystery into his tale for his readers to solve. Now, more than half a century after his death, we can only speculate, of course. Perhaps a future admirer of H. G. Wells will be able to step into a Time Machine and fly back into the past to ask him. One cannot choose but wonder. What will his answer be?

We express our thanks to Greg Brooks, who has been working on his own War of the Worlds project, for the many thoughtful questions he posed to us.

Table 4
Chronology of the War of the Worlds

Time and Date	Event
Saturday 28 July 1894	Nice Observatory astronomer Stephane Javelle observes a luminous projection in the region of the southern terminator of Mars.
Monday 30 July 1894	Henri Joseph Anastase Perrotin, director of the Nice Observatory, sends the following telegram: "Projection lumineuse dans région australe du terminateur de Mars observée par Javelle 28 Juillet 16 heures Perrotin."
Thursday 2 August 1894	<i>Nature</i> reports the observation of Stephane Javelle. "If we assume the light to be on the planet itself, then it must either have a physical or human origin; so it is expected that the old idea that the Martians are signalling to us will be revived." Wells' narrator later speculates, "I am inclined to think that this blaze may have been the casting of the huge gun, in the vast pit sunk into their planet, from which their shots were fired at us."
Tuesday 20 October 1894	Opposition of Mars. Minimum distance 40.1 million miles (64.6 million km).
Thursday 10 December 1896	Opposition of Mars. Minimum distance 51.7 million miles (83.1 million km).
Friday 20 January 1899	Opposition of Mars. Minimum distance 60.5 million miles (97.3 million km).
Friday 22 February 1901	Opposition of Mars. Minimum distance 63.0 million miles (101.4 million km).
Sunday 29 March 1903	Opposition of Mars. Minimum distance 59.5 million miles (95.7 million km).
Monday 8 May 1905	Opposition of Mars. Minimum distance 50.5 million miles (81.2 million km).
00:00 Monday 13 May 1907	The Martians launch the first of ten cylinders toward Earth.
00:00 Tuesday 14 May 1907	The Martians launch the second of ten cylinders toward Earth.
00:00 Wednesday 15 May 1907	The Martians launch the third of ten cylinders toward Earth.
00:00 Thursday 16 May 1907	The Martians launch the fourth of ten cylinders toward Earth.
00:00 Friday 17 May 1907	The Martians launch the fifth of ten cylinders toward Earth.
00:00 Saturday 18 May 1907	The Martians launch the sixth of ten cylinders toward Earth.
00:00 Sunday 19 May 1907	The Martians launch the seventh of ten cylinders toward Earth.
00:00 Monday 20 May 1907	The Martians launch the eighth of ten cylinders toward Earth.
00:00 Tuesday 21 May 1907	The Martians launch the ninth of ten cylinders toward Earth.
00:00 Wednesday 22 May 1907	The Martians launch the last of ten cylinders toward Earth.

00:00 Friday 14 June 1907	The first Martian cylinder lands on Horsell Common, east of Horsell.
05:00 Friday 14 June 1907	Ogilvy the astronomer locates the Horsell cylinder.
06:00 Friday 14 June 1907	Ogilvy informs the London journalist Henderson of his discovery, and together they return to the cylinder.
08:00 Friday 14 June 1907	A number of boys and unemployed men start for the common.
09:00 Friday 14 June 1907	A crowd of approximately twenty people gather at the edge of the pit.
(Afternoon) Friday 14 June 1907	Ogilvy, Henderson and Stent (the Astronomer Royal) direct workmen in the task of excavating the cylinder.
19:00 Friday 14 June 1907	Approximately 200-300 people are gathered at the pit when the cylinder opens. At the sight of the Martians the crowd disperse from the edge of the pit.
19:45 Friday 14 June 1907	Their confidence somewhat restored by the lack of visible activity in the Pit, the crowd begin to slowly advance upon the Pit once more.
20:30 Friday 14 June 1907	The Deputation, comprised of Ogilvy, Henderson, Stent and a number of others, advance upon the pit, waving a white flag. There is a flash of light, and an invisible ray of heat flashes from man to man, and each bursts into flame, killing about 40 people. The crowd flees in panic.
23:00 Friday 14 June 1907	A company of soldiers passes through Horsell and deploys along the edge of the common to form a cordon. A squadron of hussars, two Maxims, and about four hundred men of the Cardigan regiment start out from Aldershot.
23:30 Friday 14 June 1907	A second infantry company marches through Chobham to deploy on the north side of Horsell Common.
00:00 Saturday 15 June 1907	The second Martian cylinder lands on the Addlestone Golf Links.
(Morning) Saturday 15 June 1907	Newspapers report: <i>The Martians, alarmed by the approach of a crowd, have killed a number of people with a quick-firing gun. Formidable as they seem to be, the Martians have not moved from the pit into which they have fallen, and, indeed, seem incapable of doing so. Probably this is due to the relative strength of the earth's gravitational energy.</i>
15:00 Saturday 15 June 1907	Royal Army begins shelling the Addlestone cylinder.
17:00 Saturday 15 June 1907	A field gun reaches Chobham for use against the first group of Martians.
18:00 Saturday 15 June 1907	A battle commences between the Martians and soldiers around the first pit on Horsell Common. The Oriental College is struck by the Heat-Ray. The evacuation of Woking begins. Hussars enter Maybury Hill.
19:00 Saturday 15 June 1907	The 12th Horse Artillery Battery arrives in Horsell Common. The Horsell party of Martians moves toward the Addlestone cylinder in a crouched fighting-machine, which then rises into an erect posture. The battery is destroyed before it can be deployed. In the only infantry engagement of the war, a battalion of the Cardigan Regiment rushes the pit in skirmish order and is annihilated by the Heat-Ray. The hussars are out of range of the Heat-Ray during the battle. The Maxims are silenced. The fighting-machine then destroys Woking and also a train northeast of the town, thereby cutting rain communication with Waterloo Station. The Martians deploy a second fighting-machine, and the two depart for the Addlestone cylinder.

19:30 Saturday 15 June 1907	The narrator, his wife, and their servant depart Maybury Hill for Leatherhead.
20:00 Saturday 15 June 1907	London newspapers report the loss of telegraphic communication about the area of Horsell Common, believed to be due to burning trees falling across the lines. One of the fighting-machines returns to Woking.
21:00 Saturday 15 June 1907	The narrator, his wife, and their servant reach Leatherhead.
23:00 Saturday 15 June 1907	The narrator departs Leatherhead for Maybury Hill.
00:00 Sunday 16 June 1907	The third Martian cylinder lands north of Pyrford, completing the Surrey Triangle. A hailstorm passes through Surrey, lasting a few hours.
00:15 Sunday 16 June 1907	The narrator returns to Maybury Hill. Two Martian fighting-machines from the Horsell cylinder link up with the Pyrford cylinder.
03:30 Sunday 16 June 1907	Three fighting-machines are observed at the Horsell Cylinder.
04:30 Sunday 16 June 1907	Fires burn around Chobham.
05:00 Sunday 16 June 1907	Six 12-pound guns are deployed in a meadow between Woking and Byfleet. Batteries are also positioned at Shepperton. The 8th Hussars are detailed to clear civilians from the area between Woking and Byfleet.
(Morning) Sunday 16 June 1907	London newspapers report: <i>About seven o'clock last night the Martians came out of the cylinder, and, moving about under an armour of metallic shields, have completely wrecked Woking station with the adjacent houses, and massacred an entire battalion of the Cardigan Regiment. No details are known. Maxims have been absolutely useless against their armour; the field guns have been disabled by them. Flying hussars have been galloping into Chertsey. The Martians appear to be moving slowly towards Chertsey or Windsor. Great anxiety prevails in West Surrey, and earthworks are being thrown up to check the advance Londonward.</i>
12:00 Sunday 16 June 1907	Five Martian fighting-machines advance down the Wey River to the confluence of the Thames. Royal Artillery batteries engage the Martians, destroying one fighting-machine, but Weybridge and Chertsey are destroyed by Heat-Ray. The Martians then withdraw to the Surrey triangle, carrying the wreckage of the destroyed fighting-machine.
(Afternoon) Sunday 16 June 1907	The Martians transfer all of their equipment from the Addlestone Golf Links and Pyrford to the original pit on Horsell Common in preparation for the assault on London. Meanwhile, artillery is assembled around Kingston and Richmond, and scouts with heliographs carefully approach the pit on Horsell Common to warn of any Martian activity. Guns are in rapid transit from Windsor, Portsmouth, Aldershot, Woolwich, and from the north.
17:00 Sunday 16 June 1907	Carriage trucks bearing huge guns and carriages, and crammed with soldiers, pass through Waterloo Station from Woolwich and Chatham en-route to Kingston.
(Evening) Sunday 16 June 1907	London newspapers give the first inkling of the power of the Martians: <i>Fighting at Weybridge! Full description! Repulse of the Martians! London in Danger!</i> Descriptions are given of "vast spiderlike machines, nearly a hundred feet high, capable of the speed of an express train, and able to shoot out a beam of intense heat." One hundred sixteen guns are reported in position or being hastily placed.
20:00 Sunday 16 June 1907	Three fighting-machines advance from Horsell through Byfleet and Pyrford towards Ripley and Weybridge.

20:30 Sunday 16 June 1907	Batteries deployed at Ripley and St. George's Hill engage the enemy. The Ripley gunners fire one wild, premature, ineffectual volley, and abandon their position. The battery at Painshill Park is destroyed. The St. George's Hill battery damages one fighting-machine, but is then destroyed.
21:05 Sunday 16 June 1907	The damaged fighting-machine is repaired. Four more machines carrying Black Smoke launchers are brought up, and launchers are also distributed to the other three fighting-machines. All seven Martian fighting-machines fan out along a curved line between St. George's Hill, Weybridge, and the village of Send. Four of the fighting-machines cross the Thames, two of which position themselves to face Sunbury and Staines. Batteries are deployed at Staines, Hounslow, Ditton, Esher, and Ockham.
21:30 Sunday 16 June 1907	The Martian discharge Black Smoke across the valley of the Thames, advancing through Street Cobham and Ditton.
23:00 Sunday 16 June 1907	The siege guns at Richmond Hill and Kingston Hill fire chance shots towards Hampton and Ditton. Fighting-machines incinerate these batteries within fifteen minutes. Richmond, Kingston, and Wimbledon are destroyed.
00:00 Monday 17 June 1907	The fourth Martian cylinder lands in Bushey Park, beginning the West End Triangle.
00:30 Monday 17 June 1907	The Martians advance in a line from Hanwell in the north to Coombe and Malden in the south. Organised resistance by the British forces collapses. A lightning storm moves south of London.
04:00 Monday 17 June 1907	News begins to travel through London of approaching Martians. Extra editions of the newspapers report: <i>The Martians are able to discharge enormous clouds of a black and poisonous vapour by means of rockets. They have smothered our batteries, destroyed Richmond, Kingston, and Wimbledon, and are advancing slowly towards London, destroying everything on the way. It is impossible to stop them. There is no safety from the Black Smoke but in instant flight.</i> The Exodus from London begins. Approximately half of the members of the government gather at Birmingham. Large quantities of high explosive are prepared for use in automatic mines across the Midland Counties.
(Morning) Monday 17 June 1907	The Martians go to and fro over the North Downs between Guildford and Maidstone, using the Black Smoke to eliminate any artillery batteries located there.
10:00 Monday 17 June 1907	Police organisation in London breaks down.
12:00 Monday 17 June 1907	The railway system collapses. A Martian fighting-machine is seen at Barnes. Black Smoke drifts over Ealing and the flats of Lambeth.
13:00 Monday 17 June 1907	The remnants of a cloud of the Black Smoke appears between the arches of Blackfriars Bridge. The ships which had until then been gathered in the Pool of London depart in a panic.
14:00 Monday 17 June 1907	A fighting-machine appears beyond the Clock Tower and wades down the river.
21:00 Monday 17 June 1907	A Martian fighting-machine is observed in Kew.
00:00 Tuesday 18 June 1907	The fifth Martian cylinder lands in Sheen, and the sixth Martian cylinder lands in Wimbledon, completing the West End Triangle. The narrator and curate are trapped in a house collapsed by the impact of the Sheen cylinder.
05:00 Tuesday 18 June 1907	A Martian fighting-machine stands sentinel over the still-glowing Sheen cylinder.

12:00 Tuesday 18 June 1907	The Martians gain complete possession of London. Fighting-machines are seen in Highgate and Neasden.
(Afternoon) Tuesday 18 June 1907	A fighting-machine stands deserted at the Sheen cylinder as a handling-machine extracts components from the wall of the cylinder. Later, a second and third machine arrive. The narrator and curate observe an aluminium extractor and the completion of a second handling-machine.
2100 Tuesday 19 June 1907	The narrator and curate observe the Martians draining humans of blood and injecting it into themselves.
00:00 Wednesday 19 June 1907	The seventh Martian cylinder lands in Primrose Hill, where the invaders establish their new headquarters.
09:00 Wednesday 19 June 1907	The Midland Railway Company replaces the desertions of the previous day, and resumes traffic, running northbound trains from St. Albans. There are rumours of Martians at Epping, and news of the destruction of Waltham Abbey Powder Mills in a vain attempt to blow up one of the invaders.
17:00 Wednesday 19 June 1907	<i>HMS Thunder Child</i> makes a suicide run at three fighting-machines the mouth of the Blackwater to cover the escape of passenger vessels. Two fighting-machines are destroyed. <i>Thunder Child</i> is also destroyed.
21:00 Wednesday 19 June 1907	A Martian aircraft is observed from a passenger ship steaming for Ostend, Belgium.
00:00 Thursday 20 June 1907	The eighth Martian cylinder lands (unreported).
Thursday 20 June 1907	A fighting-machine destroys Leatherhead, with every soul in it.
00:00 Friday 21 June 1907	The ninth Martian cylinder lands (unreported).
Friday 21 June 1907 or Saturday 22 June 1907	The Martians vacate the Sheen cylinder except for one fighting-machine and one handling-machine.
00:00 Saturday 22 June 1907	The last Martian cylinder lands (unreported).
Sunday 23 June 1907	The narrator begins rationing food.
Wednesday 26 June 1907	The narrator knocks the curate insensible, and a Martian handling machine drags his body from the ruined house.
Saturday 29 June 1907	The Martians abandon the Sheen pit. The entire cylinder has been dismantled.
(Evening) Monday 1 July 1907	The artilleryman observes a Martian aircraft from Putney Hill.
Tuesday 2 July 1907	The narrator emerges from the ruined house.
(Morning) Wednesday 3 July 1907	The narrator encounters the artilleryman on Putney Hill.
(Morning) Thursday 4 July 1907	The narrator leaves the artilleryman and heads for the centre of London.
20:30 Thursday 4 July 1907	The narrator observes a wailing, stationary fighting-machine in Regent's Park.
21:00 Thursday 4 July 1907	The narrator discovers a wrecked handling-machine between Baker Street and St. John's Wood, and a silent, stationary fighting-machine near the Zoological Gardens.

04:00 Friday 5 July 1907	The narrator locates a third stationary fighting-machine on Primrose Hill. Upon climbing the rampart erected by the Martians, he discovers nearly fifty dead Martians among a number of fighting-machines, handling-machines, and a flying-machine.
Saturday 6 July 1907	Opposition of Mars. Minimum distance 38.2 million miles (61.5 million km).
Monday 8 July 1907	After wandering in a demented state since discovering the dead Martians, the narrator finds himself in a house of kindly people.
Friday 12 July 1907	The narrator takes a train to Byfleet, then travels by road to Maybury Hill to find that his wife and cousin have returned.
Friday 24 Sep 1909	Perihelic opposition of Mars. Minimum distance 36.4 million miles (58.6 million km).
Friday 25 Nov 1911	Opposition of Mars. Minimum distance 48.1 million miles (77.3 million km).
Sunday 31 August 1912	The Martians land on Venus during its alignment with the sun and Mars.
Thursday 31 October 1912	Mars in solar conjunction.
April 1913	The narrator finishes writing his account of the War of the Worlds.