

# JOSHUA'S LONG DAY

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## Joshua's Long Day

The Bible story of what has become known as Joshua's Long Day has been hard to comprehend even for literal believers of the scriptures. However, until some simple questions can be answered, it is wise to refrain from attributing the story to fable. Did the sun really "stand still" as described in Joshua 10:12, or did the description express the way the events appeared to men on the earth? After all, every day in modern society someone mentions a "sunrise" or "sunset" even though it is not the sun's movement being observed.

Some have used faulty logic to try to debunk the description of the sun appearing to stand still. They've argued that the consequences of a stoppage of the earth's rotation would reap total destruction. Immanuel Velikovsky encountered such logic but suggested:

Exact science requires exact figures. If the earth stopped rotating suddenly or in a very small fraction of a second, unattached objects would move away at a velocity of 900 miles an hour at the latitude of Egypt since that is the linear velocity of terrestrial rotation at that latitude. But if . . . the earth decelerated within the space of six hours. . . . a man weighing 160 pounds would experience a forward push equal to 5 ounces. Of course he would not fly off into space, for his weight is much greater than the push. Nonetheless, atmosphere and oceans would be set in motion. . . .

. . . An airplane that is stopped suddenly on hitting a rocky mountain disintegrates, but one that is slowed down in the course of twenty minutes does not.<sup>1</sup>

Although the gradual stoppage of the rotation of the earth makes more sense than an abrupt one, no mechanism for such a stoppage (and re-starting) comes to mind. Velikovsky proposed an alternative which has the ring of possibility: "If rotation persisted undisturbed, the terrestrial axis may have tilted in the presence of a strong magnetic field, so that the sun appeared to lose for hours its diurnal [daily] movement."<sup>2</sup>

A number of scientists now hold to the theory that Earth's poles have shifted, tilted, or flipped. Of course, they usually attribute such events to slow processes over millions of years, but maybe ancient texts can provide some clues. An early Egyptian text, Papyrus Salt 825, contains messages with peculiar scientific implications: "O make lamentation. . . . The earth is desolate, the Sun does not come forth, the moon is reversed in her course; Nun [the watery firmament] trembles, the earth is overturned, all mortals shall weep and mourn."<sup>3</sup> (brackets by Nibley)

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<sup>1</sup> Velikovsky. *Stargazers and Gravediggers*. 1984, pp. 92-93.

<sup>2</sup> *Ibid.*, p. 93.

<sup>3</sup> Nibley. *Enoch the Prophet*, 1986, pp. 193-194.

Suppose Earth's axis tilted so the North Pole temporarily pointed toward the sun. What would conditions be like? In the northern hemisphere the sun would not set. It would appear in the sky at about the relative position where the North Star is now seen. The southern Hemisphere would be dark. What might this have to do with Joshua's Long Day? Maybe a lot. Consider the following:

And he [Joshua] said . . . Sun, stand thou still upon Gibeon; and thou, moon, in the valley of Ajalon.

And the sun stood still, and the moon stayed. (Joshua 10:12-13)

Not only have scientists ignored Joshua's description, but so have most believers. Indeed, it is extremely peculiar. But, if it is a representation of a real event, it has significant scientific implications and deserves to be studied. Charles Totten published a small book on the subject in 1877. In his introductory remarks, he addressed the lack of attention paid to Joshua's Long Day:

Most commentators regard the matter as a mere quotation from a poetical book called Jasher,<sup>4</sup> and without exception, so far as the author knows or can find out, the Theological library of to-day contains no volume in which the absolute integrity of the account is candidly admitted and fairly argued.

The result is that this battle . . . has fallen entirely out of serious thought, and now-a-days serves merely as a text wherewith to point the shaft of ridicule and doubt.<sup>5</sup>

The Book of Jasher includes an intriguing detail, absent from the Bible's account of Joshua's Long Day: "*The day was declining toward evening*, and Joshua said in the sight of all the people, Sun stand thou still" (Jasher 88:63) (emphasis added). Take note of the phrase "the day was declining toward evening," because if true, it is important to what follows.

Suppose a body such as a large comet or asteroid with a magnetic field passed close to the earth; close enough, and large enough, to cause Earth's axis of rotation to temporarily tilt from pointing toward the North Star to pointing toward the sun. If the encounter was beyond Roche's Limit<sup>6</sup>—neither body would have broken apart. Later, as the object moved away from the earth and the influence of its magnetic field diminished, Earth's axis shifted back to its current orientation.

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<sup>4</sup> Whether the 1887 edition of the book of Jasher available today (*The Book of Jasher*. Salt Lake City: J. H. Parry & Company, 1887, Photo Lithographic Reprint 1973) is an accurate rendering of the book referred to in Joshua 10:13 is uncertain. On the Title Page, it is claimed that it is a translation from the "Original Hebrew" The full text may be found at: (<http://www.sacred-texts.com/chr/apo/jasher/index.htm>.) A number of things suggest that it is authentic. John Pratt compared many specific details in Jasher which are not in the Bible but are mentioned in scriptures brought forth in modern times (Pratt. "How Did the Book of Jasher Know?" *Meridian Magazine*, 2002. <http://www.johnpratt.com/items/docs/lds/meridian/2002/jasher.html>). His work lends credence to the authenticity of that book.

<sup>5</sup> Totten. *Joshua's Long Day*. 1968, p. 4.

<sup>6</sup> Roche limit: "named after the French mathematician Édouard Roche (1820–1883) who described the theory behind it." From: <http://www.daviddarling.info/encyclopedia/R/Rochelimit.html> (last accessed 9/4/12). Roche's Limit is a method for estimating how close two massive objects can be without one being broken apart by the gravitational pull of the other. Its formula is complex, considering mass, density, and rigidity of the objects. A simplified version is this: if two massive bodies of similar composition come within about 3 radii of the larger, the smaller will likely break apart.



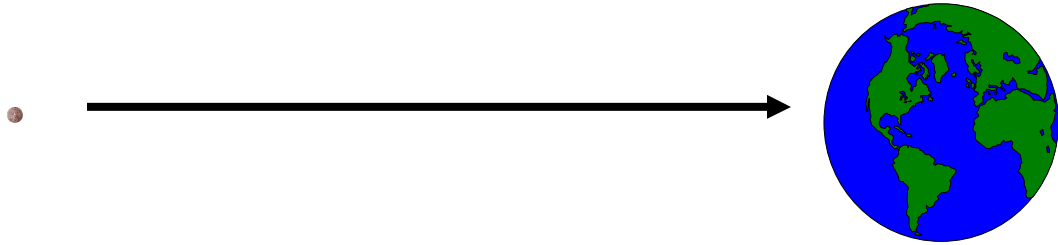


Figure 1. A depiction of the path of a direct impact.

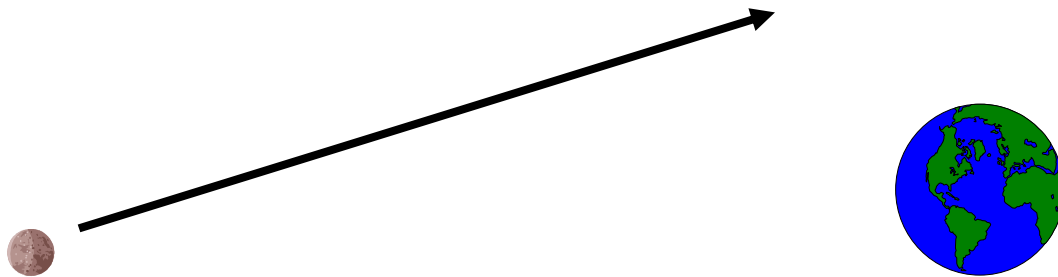


Figure 2. A depiction of one of innumerable possibilities for paths of close encounters.

### Close Encounters

Which is more probable, a direct impact or a close encounter? Although Earth seems very large to its inhabitants, it is less than tiny compared to the solar system. Thus, by a gigantic margin, more interplanetary objects miss Earth than collide with it, just as most comets are seen to fly into and out of the inner regions of the solar system without collision.

Isaiah suggests an abnormal physical event that seems relevant to the long day of Joshua:

Behold, the Lord maketh the earth empty, and maketh it waste, and turneth it upside down, and scattereth abroad the inhabitants thereof. . . .

The earth is utterly broken down, the earth is clean dissolved, the earth is moved exceedingly. . . .

The earth shall reel to and fro like a drunkard, and shall be removed. (Isaiah 24:1, 19, 20)

Now, more questions to ponder:

1. Why are nearly all planets of the solar system in the same orbital plane?
2. What causes gravity?
3. Why does the earth rotate on its axis?
4. Is the earth's spin-rate constant, or does it change over time?
5. Why does the earth's axis point toward the North Star?
6. Why are other planets' axis of rotation oriented differently than Earth's?
7. What causes the earth's magnetic field?
8. Why isn't Earth's magnetic north pole the same as the rotational North Pole?
9. Is there a galactic magnetic field?

If the answers to these questions were better understood, answers to other questions might be within reach.

Now, back to Joshua's Long Day: compare Figure 3 with the description in Joshua 10:10-12.

And the Lord discomfited them before Israel, and slew them with a great slaughter at Gibeon, and chased them along the way that goeth up to Beth-horon, and smote them to Azekah, and unto Makkedah.

And it came to pass, as they fled from before Israel, and were in the going down to Beth-horon, that the Lord cast down great stones from heaven upon them unto Azekah, and they died: they were more which died with hailstones than they whom the children of Israel slew with the sword.

Then spake Joshua to the Lord in the day when the Lord delivered up the Amorites before the children of Israel, and he said in the sight of Israel, Sun, stand thou still upon Gibeon; and thou, moon, in the valley of Ajalon. . . .

. . . So the sun stood still in the midst of heaven, and hastened not to go down about a whole day. (Joshua 10:10-12)

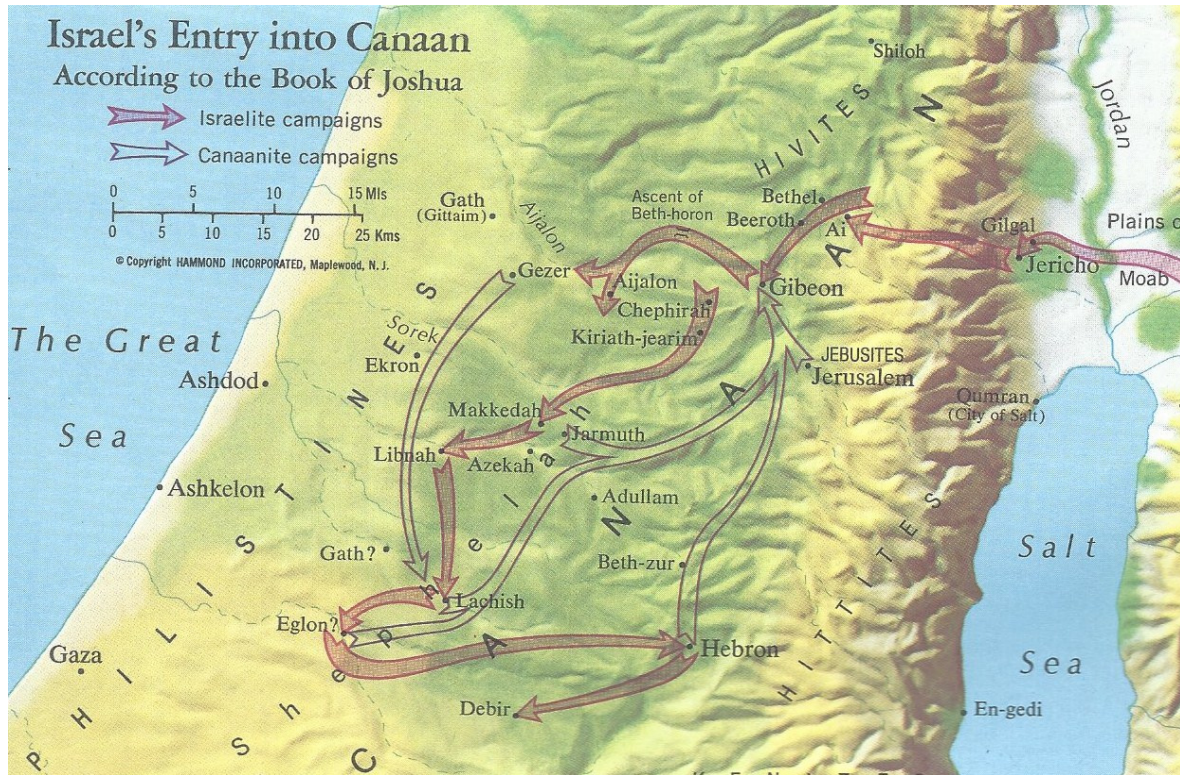


Figure 3. Sites mentioned in Joshua 10:10-12.<sup>13</sup>

<sup>13</sup> A map copyrighted by Hammond Inc. Maplewood, N.J. (now out of business). It was in the back of a Bible published in 1979. (I've been unable to find the current copyright holder although I've made numerous attempts. If anyone knows who holds the copyright, please let Tate Publishing know so they can notify me).

It appears that at the time Joshua spoke the words “Sun, stand thou still upon Gibeon; and thou moon, in the valley of Ajalon” he was in the vicinity of Makkedah and Azekah (just lower and left of center in figure 1). If so, the sun and moon would have been roughly north and northeast of his location. Since neither the sun nor the moon are normally seen in those positions—particularly at the latitude of Israel, it is singular that his description mentions those directions. This orientation—the sun observed in the northeast—would be particularly strange, if, as recorded in Jasher 88:63, “the day was declining toward evening.”

To illustrate how a temporary polar tilt could cause physical phenomena matching the description of Joshua’s long day, a small-scale demonstration may be useful:

1. An earth globe is positioned so its north pole points toward the North Star (simulated by a spot on the ceiling about 23 degrees from vertical above the globe). As the globe is slowly rotated on its axis from west to east, a flashlight is positioned at a corner of the room pointed at the world globe (simulating the sun shining on the earth).
2. As the world globe rotates on its axis, an object (representing a comet) is moved from the corner of the room opposite the “sun” and toward it. Have the object pass close to the earth globe when the “sun” is “declining toward evening” in the Middle East. As the object passes, tilt the globe so its North Pole points toward the “comet” in its path toward the “sun.”
3. While the globe’s North Pole is pointing toward the “sun,” continue the earth globe’s rotation “about a whole day.” Then, as the “comet” moves farther away, and its “magnetic influence” on the earth globe diminishes, slowly tilt the globe back to its original position with the North Pole pointing toward the “North Star” while continuing the slow spin on its axis.

The “hailstones” that caused so much destruction to the enemies of Israel are another clue that should not be ignored. Normal hailstones don’t destroy large armies, but debris from cometary interaction certainly could. When things are seen as they actually happened, it will be intriguing to learn how close this theory is to reality.

If the future is also a key to the past, Isaiah’s prophecy mentioned earlier (Isa. 24:20), and the following found in D&C 49:23, may provide important clues: “Wherefore, be not deceived, but continue in steadfastness, looking forth for the heavens to be shaken, and the earth to tremble and to reel to and fro as a drunken man.” If the earth is going to “reel to and fro” in the future, might not something similar have happened in the past? Could the “reeling” be a description of a polar tilt and reorientation? If so, this idea may have merit.

If Joshua’s Long Day actually happened as described in the scriptures, surely there would have been people in other parts of the world who observed effects of the extremely unusual phenomena. One description that may fit was recounted at a meeting of the Society for Interdisciplinary Studies in June 1996:

Margaret Grant said there is a Greek legend about two twins quarrelling over who was going to be king of Thebes and one said “if the sun goes backwards, will you agree that I should be king?” His twin said “of course, what nonsense” whereupon the sun went so far back that it actually set before it rose again. Where was that particular Thebes? Was it the same event as Joshua’s Long Day?<sup>14</sup>

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<sup>14</sup> SIS Study Group. *C&C Review*. SIS, 1997:1, p. 54.

Robert H. Chappell, Jr. discussed some other accounts that seem to refer to Joshua's Long Day from different vantage points.<sup>15</sup>

Laplace<sup>16</sup> discussed and described what he envisioned the effects would be if a large comet passed close to Earth: "He said that for his own generation the chances of such an encounter must be very small, but 'the small probability . . . must accumulate during many centuries and will become very great. . . . 'The axis and the movement of rotation would be changed.'"<sup>17</sup>

The theory of polar shift, if considered at all, is commonly attributed to ages millions of years ago. In 1958 Charles Hapgood described:

The occurrence of this kind of polar shift has seldom been supposed, for the reason that no force capable of shifting the axis has ever been imagined, other than, possibly, a major interplanetary collision. . . .

. . . The principal obstacle to a shift of the earth on its axis lies in the existence of the earth's equatorial bulge, which acts like the stabilizing rim of a gyroscope. The early writers on this question, such as Maxwell and George H. Darwin, all recognized that a shifting of the planet on its axis to any great extent would require a force sufficient to overcome the stabilizing effect of the bulge. But they were unable to see what could give rise to such a force, and dismissed the idea.<sup>18</sup>

Hapgood noted that the dismissal of the idea "left the evidence unaccounted for" and he continued:

Fortified by their very strong conviction that a shift of the planet on its axis was impossible, astronomers and geologists insisted that all this evidence, . . . simply must be interpreted in accordance with the assumption that the poles had never changed their positions. . . . This placed quite a strain upon generations of geologists. . . . They were fertile in inventing theories to account for warm climates in the polar zones at the required times, but these theories were never based on substantial evidence.<sup>19</sup>

Later in his book, Hapgood pointed out the weak position of assuming that the poles were permanently fixed in their orientation:

The sum total of the contradictions in this theory, and in the various theories advanced to explain ice ages, mountain formation, the history of continents and ocean basins, or evolutionary theory, will appear as we proceed, to be essentially the result of the *impasse* between the evidence and the doctrine of the fixity of the poles. The necessity of reconciling the constantly accumulating facts in a number of fields with a basic error has produced a multiplicity of theories which are, in fact, a veritable cloud castle of conjectures, without substance.<sup>20</sup>

Gordon Williams wrote of a late-1600s reference to polar shift made by Thomas Burnet:

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<sup>15</sup> Chappell. "The Day the Sun Stood Still." *Catastrophism and Ancient History*, Vol. 13, July 1991, pp. 102-112.

<sup>16</sup> "Pierre-Simon, marquis de Laplace (23 March 1749-5 March 1827) . . . was a French mathematician and astronomer whose work was pivotal to the development of mathematical astronomy and statistics."  
[http://en.wikipedia.org/wiki/Pierre-Simon\\_Laplace](http://en.wikipedia.org/wiki/Pierre-Simon_Laplace).

<sup>17</sup> Velikovsky. *Stargazers and Gravediggers*. 1984, pp. 106-107.

<sup>18</sup> Hapgood. *Earth's Shifting Crust*. 1958, pp. 24-25.

<sup>19</sup> *Ibid.*, p. 25.

<sup>20</sup> *Ibid.*, p. 31.

Before the geological timetable was established to suit the Uniformitarian School,<sup>21</sup> [Burnet] found the following “observation or doctrine among the Ancients”:

“They say, The Poles of the World did once change their situation, and were first in another posture from what they are now, till that inclination happen’d; this the ancient Philosophers often make mention of.”<sup>22</sup>

## Conclusion

If the descriptions in Joshua 10:10-12 and related sources are reasonably accurate representations of real events, anyone who ignore them is missing crucial clues about things that actually happened, how they happened, and at what rates.

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<sup>21</sup> The “uniformitarian school” is a reference to the dominant assumption in geology that things happened in the past at the same rates and by the same processes as can be seen in modern times.

<sup>22</sup> Williams. “Our Tilted Earth.” *C&C Workshop*. SIS, 1994:1, p. 9.