

The Anthropic and Temporal Conditions for the Mormon God's Residence near the Star Kolob

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*If you could hie to Kolob in the twinkling of an eye,
And then continue onward with that same speed to fly,
Do you think that you could ever through all eternity,
Find out the generation where Gods began to be?¹*

According to the Church of Jesus Christ of Latter-day Saints, God resides near the star Kolob. In evaluating claims about the Mormon God's residence, Evangelicals may be knocking down a straw man if they attempt to show that the anthropic conditions for the Mormon God's planet are not life permitting. Instead, Evangelicals need to focus on the Mormon claim that other stars borrow power from Kolob. We will attempt to address the claim in this paper.

An obscure theological topic in Mormonism that warrants more discussion concerns the Mormon God's residence and the star Kolob. Kolob is thought to be the nearest star to God's residence (cf. Abraham 3:2), it is the first of God's creation (cf. Abraham 3:16), it "governs" other stars like ours (cf. Abraham 3:16; Facsimile 2:5), and it may be in the center of the universe or the center of the galaxy (cf. Doctrine and Covenants 88:13).²

¹ William Wines Phelps, "If You Could Hie to Kolob," in *Hymns of the Church of Jesus Christ of Latter-day Saints*, (Salt Lake City: Church of Jesus Christ of Latter-day Saints, 1985), 284 [on-line]; accessed 25 October 2008; available from <http://www.lds.org/churchmusic>.

² Former Brigham Young University professor, Lynn Hilton, holds that Kolob is at the center of our own galaxy. Lynn M. Hilton, "The Kolob Theorem: A Mormon's

For the sake of conversation, we will assume that the star Kolob, the Mormon God, and his residence are real. We will also assume that Facsimile Two in the *Book of Abraham* has been accurately translated.³ In sections 1 and 2 we will show that one day for the Mormon God is equal to one thousand years. In sections 3 and 4, we will discuss the uninhabitable anthropic conditions on the Mormon God's planet given a thousand-year diurnal rotation. In section 5, we will deny the work we did in sections 3 and 4 because the Mormon God has a perfected body and can live anywhere. So, in sections 6 and 7, we will refocus and examine the claim that *stars borrow light from Kolob*.

1. Thousand-year Days for the Mormon God

We are given insight about the Mormon God's residence in a few places in the Latter-day Saint's Holy texts. On the surface, it seems that three easy steps can explain the Mormon God's relation to his residence and the star Kolob.

The first easy step is from the translation of Facsimile Number 2, Figure 1 from the *Book of Abraham*. It states,

Kolob, signifying the first creation, nearest to the celestial, or the residence of God. First in government, the last pertaining to the measurement of time. The measurement according to celestial time, which celestial time signifies one day to a cubit. *One day in Kolob is equal to a thousand years according to the measurement of this earth, which is called by the Egyptians, Jah-oh-eh.*⁴

View of the Starry Universe" (Orem, UT: Granite Publishing, 2006), 86 [on-line]; accessed 24 October 2008; available from http://hickmanmuseum.homestead.com/the_kolob_theorem.pdf; Internet.

³ See Edward Ashment, "Reducing Dissonance: The Book of Abraham as a Case Study," in Dan Vogel, ed. *The Word of God* (Salt Lake City: Signature Books, 1990): 221-35. Michael Rhodes, "A Translation and Commentary of the Joseph Smith Hypocephalus," *BYU Studies* 17 (Spring 1977): 259-74. Naomi Woodbury, "Letters to the Editor," *Dialogue: A Journal of Mormon Thought* 3, no. 3 (Autumn 1968).

⁴ Joseph Smith, Jr., *Pearl of Great Price* (Salt Lake City: Church of Jesus Christ of Latter-day Saints, 1981), Abraham Facsimile 2:1. Emphasis mine.

The first insight is that *one day on Kolob is equal to one thousand Earth years, and God lives near Kolob.*

The next insight about Kolob comes from Doctrine and Covenants 130:4-5.⁵ These verses state, “⁴In answer to the question—*Is not the reckoning of God’s time, angel’s time, prophet’s time, and man’s time, according to the planet on which they reside?* ⁵*I answer, Yes. . . .*” So, the second insight is that *time is relative to the planet on which one resides.*

The third step is to tie the star Kolob’s time to the Mormon God’s residence. There are two verses that help us with this. Abraham 3:4 states,

And the Lord said unto me, by the Urim and Thummim, that Kolob was after the manner of the Lord, according to its times and seasons in the revolutions thereof; that *one revolution was a day unto the Lord, after his manner of reckoning, it being one thousand years according to the time appointed unto that whereon thou standest.* This is the reckoning of the Lord's time, according to the reckoning of Kolob.

Abraham 5:13 rebuffs this thought when it states, “. . . Now I, Abraham, saw that *it was after the Lord’s time, which was after the time of Kolob;* for as yet the Gods had not appointed unto Adam his reckoning.” So, these two verses reveal the third insight that God’s time is the same as Kolob’s time. That is, one revolution on the star Kolob is equal to one day on the Mormon God’s residence. *So, since one revolution on Kolob is one thousand years, deductively, one day for the Mormon God is one thousand years.*⁶

⁵ Joseph Smith, Jr., *Doctrine and Covenants* (Salt Lake City: Church of Jesus Christ of Latter-day Saints, 1981), 130:4-5. Emphasis mine.

⁶ In correspondence with John Tvedtnes and Kent Wallace (6/11/1996) at the Foundation for Ancient Research and Mormon Studies (a.k.a. FARMS), it was contended that God’s time ratio of 1 day:1,000 years is speculative. As a proof text, Wallace cited Alma 40:8 which states, “. . .all is as one day with God, and time only is measured to men.” I argued that the time may *seem* like one day with the Mormon God, but since he had a beginning, he is merely potentially infinite and thus coeval with us. Since he is potentially infinite, time only approaches zero for him as he grows in his progression.

2. Mormon Church Fathers' Interpretations of Kolob

During the late 1800s, during the nascent stages of Mormon thought, the Mormon church fathers interpretations about Kolob seem consistent. To them, the Mormon God resides near the star Kolob, and one day is equal to one thousand of our years on his planet.

For example, Joseph Smith, Jr., in *History of the Church*, states, “. . . and thus there shall be the reckoning of the time of one planet above another, until thou come nigh unto Kolob, which is after the reckoning of the Lord's time.”⁷ Orson Pratt, who was on the original Quorum of the Twelve Apostles, offers more insight about the thought that God's time and Kolob's time are the same when he states that,

According to this new revelation, this is a certain great world, called Kolob, placed near one of the celestial kingdoms, whose diurnal rotation takes place once in a thousand of our years; and that celestial time was measured by those celestial being, by the rotations of Kolob, hence one day with the Lord was a thousand of our years.⁸

Quorum member, Orson Whitney, also made similar comments in 1920 when he said, “Joseph taught that there is a great planet named Kolob, nearest the Celestial Throne, and that it revolves once in a thousand years. That is one day with God.”⁹

This is expressed as $\lim 1/x \neq T_0$, ($x > 0$). Where, T_0 = timelessness or zero time, $T_0 = 0$ and; X = duration of a God's progression measured in positive, possibly exponential, integers.

⁷ Brigham Henry Roberts, ed., *History of the Church of Jesus Christ of Latter-day Saints*, vol. 4 of *History of Joseph Smith, the Prophet* (Salt Lake City: Deseret News, 1908), 30:529. Also found in Abraham 3:8.

⁸ Orson Pratt, “The Creation: The Seven Thousand Years and Events Which Are to Follow the Period of the Millennium” (22 November 1873), in vol. 16 of the *Journal of Discourses*, 312; “True Christmas and New Year” (29 December 1872), in vol. 15, 253 [on-line]; accessed 24 October 2008; available from http://journalofdiscourses.org/Vol_16/JD16-312.html and http://journalofdiscourses.org/Vol_15/JD15-253.html respectively.

⁹ Orson Whitney, *Conference Report* (April 1920), 123. Here Whitney calls the star Kolob a planet. Also see Orson Whitney, *Collected Discourses* 1 (August 19, 1888).

The early church leaders are very consistent in their language and thought about Kolob. Since one day is equal to one thousand years, let's consider some problems with the anthropic conditions on the Mormon God's planet.

3. Anthropic Conditions on a "Simple Interpretation" about God's Residence

Maybe the early leaders of Mormonism were right. After all, it seems that on a simple interpretation of the Mormon scriptures, God lives near a star called Kolob, and his time is the same as Kolob's time. That is, one day for God is equal to one thousand of our years on Earth.

If the simple interpretation is the correct reading, then from my limited evangelical perspective, when I read about the one-day to one-thousand-year ratio, my thoughts immediately turn to several anthropic problems with the living conditions on the Mormon God's planet. For example, some of the temporal and anthropic problems may include: (3.1) The problem that the Kolobian galaxy may be moving through the universe at a faster rate of time than other galaxies; (3.2) anthropic problems with a large Mormon-god planet and a small Mormon-god planet; (3.3) anthropic problems with long days and long nights on the Mormon God's planet; (3.4) general anthropic problems. Let's briefly survey some of these simple interpretation problems.

3.1. The Problem of a Fast-moving Kolobian Galaxy

One day as measured on Kolob equaling one thousand years on Earth could denote that Kolob, granting it's existence, would be moving away from T_0 (i.e., time zero of the Big Bang event) faster than the Earth or any other planet. That is, the reason that Kolob would have such a slow time ratio as compared to other stars would be because that it is approaching the speed of light. Therefore, according to the Special Theory of

Relativity, measurable time would be moving slower. It is true that the outer edge of the universe seems to be moving away from us at a greater rate than other planets. However, if space is curved, then objects that are farther away from us *appear* to be moving away from us at a faster rate.¹⁰ So, this is to say that despite our observations of some galaxies moving away from us at faster rates than others, no galaxy has even been measured as moving away from us at velocities resembling the speed of light. Therefore, it seems unlikely that a fast-moving Kolob accounts for its time constant.

3.2. The Problem of Gravity on a Large or Small Mormon God's Residence

A second problem with a simple interpretation is that if one day on the Mormon God's residence is equal to one thousand years on Earth, then the size of the Mormon God's planet is going to have an effect on its gravity. According to Newton's Universal Law of Gravitation, the effect of gravitational pull on the surface of the Mormon God's planet must be either phenomenally great or deficient, depending on the size of the planet. Newton realized that the gravitational force between two objects is proportional to their masses and inversely proportional to the distances between them. Newton's formula is $F = G (Mm/R^2)$. See Table 1.¹¹

Table 1: Newton's Universal Law of Gravitation

¹⁰ Space being curved is an easy concept to imagine. Take a balloon and draw a representation of the Milky Way galaxy on a part of the balloon. Make sure to draw our galaxy somewhat dense. Then draw another less dense galaxy away from our galaxy and a third galaxy even further away from ours. When you blow up the balloon, this represents the expansion of the universe. Notice that the further away the galaxy, the faster it appears to move away from us.

¹¹ William Hartman, *Astronomy: The Cosmic Journey* (New York: Wadsworth, 1991), 76.

$F = G (Mm/R^2)$	
F	Force of gravitational attraction between two bodies
G	Gravitational constant
M	Mass of larger body (i.e., the <i>star</i> Kolob)
m	Mass of smaller body (i.e., the Mormon God's <i>planet</i> near the star Kolob)
R	Distance between the centers of M and m

Unfortunately, the Book of Abraham does not provide “R” or “m,” and we can only speculate about “M.” However, given that it is probable that “M” would be a tremendously large and cool star in comparison to this Earth, we may speculate that *if the gravitational pull on the Mormon God's planet is too much*, it would either crush or overheat most living creatures or underscore the fact that man is not in the literal image of the Mormon God. Conversely, *if the gravitational pull is too little*, then it is possible that the planet would lose its atmosphere and thus be unable to sustain life. Either way, even if it is argued that the Mormon God has a perfected or supernatural or incorruptible body, the planet he lives on is unfit for natural life. We will address this later as a viable option.

3.3. The Problem of Long Days and Long Nights on the Mormon God's Residence

A third problem with a straightforward reading is as follows. Imagine a day on the Mormon God's planet. Day would last about 500 years and night would last about the same duration of time. So, there is a very hot side of the planet and a very cool side of the planet. This is exactly how astronomer Hugh Ross sees it. Ross speculates that the hot side of the Mormon God's residence would be greater than 621° F (i.e., the melting point of lead) and the cool side would be around -460° F (i.e., absolute zero).¹² Again,

¹² Hugh Ross, *KOLOB, the Mormon Masterplanet*, Reasons to Believe pamphlet, no date. Also see Ross' correspondence with SHIELDS [on-line]; accessed 24 October 2008; available from <http://shields-research.org/Critics/Kolob.htm>; Internet.

this indicates that the Mormon God's planet is unfit for natural life.

3.4. General Anthropic Problems with the Mormon God's Planet

Besides the general dynamics stated above, Hugh Ross has catalogued a checklist of forty-four factors (plus twelve he does not mention outright) that must be cosmically juggled to perfection in order for life to be sustained.¹³

It is common knowledge that there are far more life-prohibiting planets than life-permitting planets.¹⁴ The lack of life-permitting planets poses a "real estate" problem

¹³ Hugh Ross, *The Creator and the Cosmos* (Colorado Springs: NavPress, 2001), 111-114. The first twenty-five conditions he lists are: Strong nuclear force constant, a weak nuclear force constant, a balanced gravitational force constant, electromagnetic force constant, a balanced ratio of electromagnetic force constant to gravitational force constant, balanced ratio of electron to proton mass, balanced ratio of protons to electrons, uniform expansion rate of the universe, balanced entropy level of the universe, balanced mass density of the universe, constant velocity of light, middle age universe, initial uniformity of radiation, fine structure constant, average distance between stars, decay rate of the proton, balanced Carbon-to-Oxygen energy level ratio, balanced ground state energy level for Helium, balanced decay rate of Beryllium, balanced mass excess of neutron over the proton, balanced initial excess of nucleons over anti-nucleons, "luke warm" polarity of the water molecule, balanced supernovae eruptions, timely balanced white dwarf binaries, and balanced ratio of exotic to ordinary matter. Also see Hugh Ross, *The Fingerprint of God* (New Kensington, PA: Whitaker House, 1989), 129-131. The number of stars in the planetary system, the parent star birth date, the parent star age, the parent star distance from the center of the galaxy, the parent star mass, the parent star color (concerns photosynthesis), surface gravity, distance from parent star, axial tilt, rotation period, gravitational interaction with a moon, magnetic field, thickness of crust, albedo, oxygen to nitrogen ratio in atmosphere, ozone level in atmosphere, atmospheric electric discharge rate, oxygen quantity in atmosphere, and seismic activity.

¹⁴ See P. D. Ward and D. Brownlee, *Rare Earth: Why Complex Life is Uncommon in the Universe*, 1st ed. (New York: Springer-Verlag, 2000); Guillermo Gonzalez and Jay W. Richards, *The Privileged Planet* (Washington, DC: Regnery, 2004); Stephen H. Dole, *Habitable Planets for Man*, 2nd ed. (New York: American Elsevier Publishing Co., 1970); 1st ed. (New York: Blaisdell Publishing Company, 1964) also on-line; accessed 24 October 2008; available from http://www.rand.org/pubs/commercial_books/2007/RAND_CB179-1.pdf; John Leslie, "The Prerequisites of Life in Our Universe," in *Newton and the New Direction in Science*, ed. G. V. Coyne, M. Heller, and J. Aycinski (Vatican City: Specola Vaticana, 1988) [on-line]; accessed 24 October 2008; available from <http://www.leaderu.com/truth/3truth12.html>.

for the potentially infinite number of Mormon Gods. Life-permitting real estate is in high demand unless one wants to conjecture the possibility of a multiverse.¹⁵

4. Mormon Responses to the Anthropic Problems on a Simple Reading

Mormons are not ignorant of the anthropic problems of a straightforward reading. In fact, Mormon astrophysicist R. Grant Athay directly acknowledges the problems of a literal reading:

In order for a planet to sustain life there are certain conditions which must be met. Consider some of the more obvious ones. The planet must be at such a distance from its star that water remains liquid most of the time. If the planet is too far away, the water will freeze; if it is too close the water will evaporate. Thus, the planet must have a nearly circular orbit at a proper distance from its star. The gravity at the surface of the planet must not be too large or too small. If it is too large, land masses will not rise above the oceans. Even if they did, animals would not be able to move about erect. If the gravity is too small, the atmosphere will escape into space. The planet we seek must therefore be approximately the size of the earth.

A substantial portion of a life-sustaining planet must be alternately exposed to sunlight and darkness at a reasonable rate; otherwise, the dark side will be unbearably cold. The atmosphere would cool into liquid form and drain off the atmosphere from the hot, exposed side. This means that the planet must have its axis of rotation nearly at right angles to the plane of its orbit. Furthermore, it must rotate at such a rate that the days and nights are of reasonable length.

In other words, for a planet to sustain life similar to that found on earth, it must be similar to the earth in several essential respects. In all, about nine such requirements can be identified. Each requirement decreases the chance of finding such a planet, and nine is a rather large number. Suppose, for example, that the probability of fulfilling any one of these requirements is one in ten; that is, for each star with planets the chance of finding a planet at the proper distance is 1/10, etc. The chance of finding a star with a planet having all nine of the required characteristics would be $(1/10)^9$, or one chance in a billion. Only one star of each billion would have such a planet and only a few would be found in our galaxy.¹⁶

¹⁵ An acquaintance of mine from SHIELDS (Scholarly & Historical Information Exchange for Latter-Day Saints) proposed that gods live in an actually infinite number of multiverses. In reply, I referred him to Hilbert's Hotel absurdities.

¹⁶ R. Grant Athay, "Worlds Without Number: The Astronomy of Enoch, Abraham, and Moses," *BYU Studies* 8, no. 3 (1968): 263-64.

Even though Athay as an astrophysicist, acknowledges the anthropic problem, later in the article, he goes on to speculate that maybe the Mormon God does not need everything that a carbon-based life would need. Maybe he is correct in this assessment.

5. Getting in the Mormon Mindset—God Lives on a Sea of Glass and Fire

While the life-prohibiting anthropic conditions on the Mormon God's planet seem like a slam-dunk for Evangelicals, we may be knocking down a straw man.¹⁷ This is because the Mormon God has a body that is perfected like Jesus' in classic Christianity (cf. *Doctrine and Covenants* 130:22). *So, unfortunately, the anthropic arguments that we presented above do not apply.*

Let's try to get into the Mormon mindset by adding a few more verses to our mix. Mormons believe that God lives on a sea of glass and fire. Where do they get this?

Revelation 15:2 states, "And I saw as it were a sea of glass mingled with fire: and them that had gotten the victory over the beast, and over his image, and over his mark, [and] over the number of his name, stand on the sea of glass, having the harps of God." Most Mormons take Revelation 15:2 literally. In fact, *Doctrine and Covenants* 130:7 goes on to say, "But they reside in the presence of God, on a globe like a sea of glass and fire, where all things for their glory are manifest, past, present, and future, and are continually before the Lord."

Even further in this line of thought, God is said to live in "everlasting burnings."¹⁸ The *Encyclopedia of Mormonism* explains that,

¹⁷ Evangelical cosmologist, Hugh Ross, ran into this problem. See John Tvedtnes' (FARMS) response to Hugh Ross's anthropic arguments against Kolob [online]; accessed 25 October 2008; available from <http://www.shieldsresearch.org/Critics/Kolobjat.htm>; Internet.

¹⁸ Daniel H. Ludlow and Rodney Turner, eds., "Everlasting Burnings," in

Moses described God as a “consuming fire” (Deut. 4:24), his glory consuming everything corrupt and unholy (D&C 63:34; 101:23-24). The Prophet Joseph Smith explained, “God Almighty Himself dwells in eternal fire; flesh and blood cannot go there, for all corruption is devoured by the fire,” but a resurrected being, “flesh and bones quickened by the Spirit of God,” can (Tpjs, pp. 326, 367; cf. Luke 24:36-43; 1 Cor. 15:50). Heaven, not hell, is the realm of everlasting burnings, a view contrasting with the popular conception of hell as a place of fire, brimstone, and searing heat. Heat is a characteristic of God's glory (D&C 133:41-44).

After getting over the surprise of the unorthodox statements, we should try to understand the Mormon mindset. Again, to the Mormon, since God is a glorified being, his living on a naturally fiery uninhabitable planet is not a problem for them.

6. Getting in the Mormon Mindset—The Sun Borrows Energy From Kolob

Since the Mormon God lives in fire and our anthropic arguments do not seem to work, let's try another angle with Kolob. When we read Figure 5 of Facsimile 2 in the *Book of Abraham* we read something that seems absurd. It says,

Is called in Egyptian Enish-go-on-dosh; this is one of the governing planets also, and is said by the Egyptians to be the Sun, and to borrow its light from Kolob through the medium of Kae-e-vanrash, which is the grand Key, or, in other words, the governing power, which governs fifteen other fixed planets or stars, as also Floeese or the Moon, the Earth and the Sun in their annual revolutions. This planet receives its power through the medium of Kli-flos-is-es, or Hah-ko-kau-beam, the stars represented by numbers 22 and 23, receiving light from the revolutions of Kolob.¹⁹

This text states that our sun borrows light from Kolob. Joseph Smith, in his *Egyptian Alphabet and Grammar*, confirms Facsimile 2:5 when he says, “From there [light] is

Encyclopedia of Mormonism (New York: MacMillan, 1992), 1:239. Joseph Smith, Jr. speaks of God living in “everlasting burnings” in *History of the Church*, vol. 6, 302-17 and “The King Follett Sermon,” *Ensign* (April 1971), 13-14.

¹⁹ Joseph Smith, Jr., “A Facsimile from the Book of Abraham No. 2,” *The Official Scriptures of The Church of Jesus Christ of Latter-day Saints* [on-line]; accessed 23 October 2008; available from http://scriptures.lds.org/en/abr/fac_2. Emphasis mine.

drawn by the heavenly bodies according to their proportions.”²⁰

Tenth president of the Mormon Church, Joseph Fielding Smith, concurs that the sun borrows light from Kolob:

It is my opinion that the great stars that we see, including our sun, are celestial worlds; at least worlds that have passed on to their exaltation or other final resurrected status. This is in conflict, of course, with the teachings of scientific men, who declare that the sun is losing its energy and gradually cooling off and will eventually be a dead world. I do not believe the Lord has any such thing in his plan. The Lord lives in "everlasting burnings" we are informed. President Brigham Young has said that this earth when it is celestialized will shine like the sun, and why not?²¹

Again, this seems like shooting fish in a barrel. It is common knowledge that the Sun's energy does not come from other stars. So, how do Mormon's defend the claim?

7. A Few Mormon Responses

In response to the claim that there is no evidence for a necessary causal connection or quantum vehicle for Kolob to perform energy-giving action-at-a-distance to other stars, Mormons have varied responses. Below we will discuss both symbolic and literal interpretations of Kolob giving light to stars.

7.1. Kolob as a Symbol of Giving Light to Other Stars

Some Mormons have decided to set aside the scientific issues and opt to make Kolob a symbol for something else. For example, the late BYU professor, Hugh Nibley, held that Kolob is merely metaphor for Jesus.²² For Nibley, Kolob *provides* light to the world, and Jesus *is* the light of the world. Like Nibley, former Dean of Religion at BYU,

²⁰ Jerald and Sandra Tanner, eds., *Joseph Smith's Egyptian Alphabet and Grammar* (Salt Lake City: Modern Microfilm, 1966), 25.

²¹ Bruce R. McConkie, ed., *Doctrines of Salvation: Sermons and Writings of Joseph Fielding Smith*, v. 1 (Salt Lake City: Bookcraft, 1954), 88-89.

²² Hugh Nibley, *Temple and Cosmos: Beyond this Ignorant Present* (Provo, UT: FARMS, 1992), 27-29.

Andrew Skinner, takes Kolob to be a type of Christ.²³ Similar to these two men, Professor of History of Science at Dickinson College, Erich Robert Paul, makes Kolob a symbol of “spiritual light.”²⁴ Paul takes this position because he holds that the current science about the sun’s fusion is sound. A literal interpretation of our sun “borrowing light” from Kolob is not true according to these men.

Does the symbolic interpretation have merit when considering whether our sun borrows light from Kolob? Consider *Doctrine and Covenants* 88:7-11 which says.

⁷Which truth shineth. *This is the light of Christ.* As also he is in the sun, and the *light of the sun*, and the power thereof by which it was made. ⁸As also he is in the moon, and is the *light of the moon*, and the power thereof by which it was made; ⁹As also the *light of the stars*, and the power thereof by which they were made; ¹⁰And the earth also, and the power thereof, even the earth upon which you stand. ¹¹And the light which shineth, which giveth you light, *is through him* who enlighteneth your eyes, which is the same light that quickeneth your understandings;

These verses state that Jesus is the light of the sun, moon, and stars. By-and-large, most Mormons interpret the “light of Christ” in these verses to be symbolic (although Hyrum Andrus interprets it literally).²⁵ According to the *Encyclopedia of Mormonism*, the “light of Christ” in these verses is typically taken to mean a “governing

²³ Andrew Skinner, “The Book of Abraham: A Most Remarkable Book,” *Ensign* (March 1997), 16.

²⁴ Erich Robert Paul, *Science, Religion, and Mormon Cosmology* (Chicago: University of Illinois Press, 1992), 103.

²⁵ Hyrum Andrus, on the other hand, does take Jesus being light to the stars literally. Hyrum L. Andrus, *God, Man, and the Universe* (Salt Lake City: Bookcraft, 1968), 249-250 citing Benjamin F. Johnson, “An Interesting Letter,” unpublished letter from Johnson to George S. Gibbs, April to July, 1903, Brigham Young University Library, p. 9. He states, “...the glory of the Father, Elohim, which is manifest through Christ constitutes the light of the sun and the power by which that glorified sphere was made. The same is true of the stars, and of the moon and the earth. Joseph Smith is reported to have taught “that all light and heat are the ‘Glory of God,’ which is His power, that fills the ‘immensity of space,’ and is the life of all things, and permeates with latent life, and heat, every particle of which all worlds are composed.”

power” or personal “enlightenment.”²⁶ So, it seems true that *Doctrine and Covenants* 88 should be read symbolically—but what about Kolob giving light to stars in Facsimile 2:5?

While the attempts to make Kolob metaphorical are interesting, it still seems that when combined with the verses cited previously, Facsimile 2 Figure 5 should still be read literally for at least four reasons. First, all of Facsimile 2 is read literally—so why not Figure 5 as well? Second, the translation of the *Book of Abraham* by Joseph Smith and the quotations from the founders of the Mormon faith indicate that Kolob is more than a mere symbol. Third, the statements about Kolob do not read symbolically as do sections of Biblical books like Daniel or Revelation. Fourth, most Mormons consider Kolob to be a real planet that gives light to other stars.

7.2. Literal Interpretations of Kolob Giving Light to Other Stars

Most Mormons take Kolob giving light to other stars to be literal. While the approaches to what the literal interpretation actually is may differ, most literal interpretations tend to be more science based. For example, John Gee, William Hamblin, Dan Peterson, Michael Rhodes, and Ward Moody take a more historical-academic approach. While Gee, Hamblin, and Peterson take the view that the *Book of Abraham* reflects ancient geocentric astronomy, Rhodes and Moody take the view that the *Book of Abraham* reflects a modern and scientifically accurate heliocentric astronomy.²⁷

7.2.1 Appeal to the future. Many Mormons hold that Kolob is literal and that

²⁶ Daniel H. Ludlow, ed. and Rodney Turner. “Light of Christ,” in *Encyclopedia of Mormonism*, 1, (New York: MacMillan, 1992), 835. Also, Bruce McConkie, “Light of Christ,” in *Mormon Doctrine* (Salt Lake: Bookcraft, 1992), 446.

²⁷ John Laurence Gee and Brian M. Hauglid, *Astronomy, Papyrus, and Covenant* (Provo, UT: FARMS, 2005).

science pertains to it. For example, Lynn M. Hilton, in his work called *The Kolob Theorem*, appeals to the future when he states, “Latter-day Saints suspect that the sun (indeed, all suns) is generously replenished by radiations from Kolob through the medium of Kae-e-van-rash, and in due time, we may come to understand this process.”²⁸ Hilton also assumes that the action is actually occurring at a distance and that we will find a necessary causal connection or even quantum connection one future day.

7.2.2 Purely scientific answers. Some Mormons address the problem of stars borrowing power from Kolob directly and scientifically. For example, Melvin Alonzo Cook and Melvin Garfield Cook address the problem in their book *Science and Mormonism*:

Recently, however, Fred Hoyle described accretion of matter on the sun; this is a process in which the sun actually borrows some of its light from external (celestial) sources. There is a sharp difference between scientific theory based on accretion and the conventional Bethe-Gamov theory of solar energy. A sound reason for rejection of the conventional theory and looking for another, such as the accretion model of Hoyle, is modern revelation. The source of light, as far as modern revelation is concerned, is the Celestial Kingdom via Kolob, and is thus exterior to the sun.²⁹

While Cook and Cook would have you believe that Hoyle’s accretion is a good reason for rejecting the nuclear fusion process in the sun, the authors have extended what Hoyle actually says. In a series of articles, Hoyle says that adding mass to a star by accretion is via a “hydrogen...cloud in the neighbourhood of the star.”³⁰ In a later article

²⁸ Lynn Hilton, *The Kolob Theorem: A Mormon’s View of God’s Starry Universe* (West Orem, UT: Granite Publishing and Distribution, 2006)

²⁹ Melvin Alonzo Cook and Melvin Garfield Cook, *Science and Mormonism: Correlations, Conflicts, and Conclusions* (Salt Lake City: Deseret Book Company, 1986), 21-22. Thanks to John Tvedtnes for sending this information.

³⁰ Fred Hoyle and R.A. Lyttleton, “On the Physical Aspects of Accretion by Stars,” *Proc. Cambridge Phil. Soc.* 36, (1940): 424; “On the Accretion Theory of Stellar

he even describes the mechanism by which hydrogen is acquired by the star.³¹ Maybe they are talking about Hoyle's book, *Action at a Distance in Physics and Cosmology*, but even here action-at-a-distance refers to electricity, gravity, or quantum actions and not to stars receiving energy from other stars.³² Cook and Cook have misrepresented Hoyle.

Another scientific approach is from Mormon astronomer R. Grant Athay. With concern about Kolobian action at a distance, Athay says,

The legend accompanying Facsimile No. 1 [*sic*] in the Book of Abraham states that the sun borrows its energy from Kolob. As an astronomer, I do not understand what meaning this might have. The sun generates its own energy from nuclear fusion deep in its interior. The processes are known and understood. The sun has no apparent need to borrow energy from another star, and science knows of no process by which such energy can be borrowed.³³

Athay goes on in the article to speculate that perhaps the Egyptians in Facsimile 2 meant that the sun owes "its origin and its nuclear fuel to an earlier generation of stars" or "to a mother cloud of stellar matter."

This is a clever move by Athay. As a scientist, he is looking for a scientific answer. So, it seems appropriate when he proposes that maybe our Sun is a chunk of early Kolobian star or part of young Kolobian cloud. If we graciously grant the existence of Kolob and the accuracy of the translation in Facsimile 2, then Athay's answer seems plausible. Given previous reputable cosmological theories, Athay's theory seems to be Evolution," *Monthly Notices of the Royal Astronomical Society* 101, (1941): 227-36 [online]; accessed 1 November 2008; available from <http://articles.adsabs.harvard.edu/full>

³¹ F. Hoyle and H. Bondi, "On the Mechanism of Accretion by Stars," *Monthly Notices of the Royal Astronomical Society* 104 (1944): 273.

³² Fred Hoyle and J. V. Narlikar, *Action at a Distance in Physics and Cosmology* (San Francisco: W. H. Freeman, 1974).

³³ R. Grant Athay, "Worlds Without Number: The Astronomy of Enoch, Abraham, and Moses," *BYU Studies* 8, no. 3 (1968): 265.

the most acceptable pro-Kolob theory—but that is a lot to grant.

8. Conclusion

In this paper we have shown that since the Mormon God is believed to have a perfected body, he could live on any planet (cf. *Doctrine and Covenants* 130:22). In fact, it is held that he lives on a planet of glass and fire (cf. *Doctrine and Covenants* 130:7). Instead of attacking the anthropic problems of the Mormon God's residence, evangelicals need to call into question the claim that Kolob provides power and light to our Sun (cf. Facsimile 2:5). The claim is to be taken literal since the rest of Facsimile 2 is taken literally. Since Mormons cannot show any measurable effects from Kolob's actions, and since they cannot show any necessary causal connection or quantum vehicle for Kolob's light-giving action-at-a-distance, it seems that there is no correspondence between their claim and what is actual. So, it appears that the claim that "stars borrow light from Kolob" is false.