

PART 3: SPECIAL STUDY!

Special Study: **A Star Shall Come Out of Ya'akov** **(Or, How Goodly is Your Tabernacle of the Sun, Ya'akov)**

I see Him, but not now; I observe Him, but not near. A Star shall come out of Ya'aqob, and a Sceptre shall rise out of Yisra'el, and shall smite the corners of Mo'ab, and shall destroy all the sons of Sheth. (Numbers 24:17-The Scriptures 1998)

Last week we explored I hope some interesting astronomical connections with the “walking dedicated men” of the Tanakh who seemed to have special insights and training while spending long periods of time absorbing what I can only describe in both senses of the word as heavenly information.

We saw, for example, how the trees in Eden mimicked the solar year and how the math regarding intervals between the numbers of days of the solar year (365), the time between equinoxes (187) and the mathematical half of the 364 day “practical year” (182) were encoded in the section of Genesis about Enoch, his son and his grandson.

We also saw how Abraham was designated as the father of the stars because his descendants were compared to that, how Isaac represented the horizon at 180 degrees by dying at age 180 and now it's time to talk about Jacob, who is specifically called a star by Balaam in this week's parsha.

The first and most relevant question to ask about the star coming out of Ya'akov is of course, which star is he meant to represent? I believe the patriarch himself gives the answer to that question directly here:

Yoseph dreamed a dream, and he told it to his brothers, and they hated him all the more. He said to them, "Please hear this dream which I have dreamed: for behold, we were binding sheaves in the field, and behold, my sheaf arose and also stood upright; and behold, your sheaves came around, and bowed down to my sheaf."

His brothers said to him, "Will you indeed reign over us? Or will you indeed have dominion over us?" They hated him all the more for his dreams and for his words.

He dreamed yet another dream, and told it to his brothers, and said, "Behold, I have dreamed yet another dream: and behold, the sun and the moon and eleven stars bowed down to me."

He told it to his father and to his brothers. His father rebuked him, and said to him, "What is this dream that you have dreamed? Will I and your mother¹ and your brothers indeed come to bow ourselves down to you to the earth?"

¹ One interesting possibility is worth noting. It is possible that Jacob slightly misinterpreted Joseph's dream because of his great love for Rachel. If Jacob's story teaches us anything it is regarding the danger in playing

His brothers envied him, but his father kept this saying in mind. (Genesis 37:5-11, AESV Torah)

Therefore the “star” of Jacob is actually the sun, because this dream that Jacob himself interprets puts himself, Rachel and his sons as the sun, moon and stars respectively.

It is also significant I think, and worth making the point again, that these were individual stars and not constellations that Joseph dreamed about because Abba YHWH did not want the patterns in the sky to be turned into the images of false deities.

As a result, it was the brightest stars in each Zodiac constellation and not the constellation itself as a whole that pointed to the 30 degrees of dark space, and this dark space in turn represented the heavenly inheritance of the 12 tribes of Israel.

But what can we tell of Jacob as representing the sun and how did this help the Hebrews keep track of time? Well first let’s see how Abba YHWH’s covenant with the universe is directly related with His covenant to Jacob’s sons:

‘See, the days are coming,’ declares יהוה, ‘when I shall establish the good word which I have promised to the house of Yisra’el and to the house of Yehudah: ‘In those days and at that time I cause a Branch of righteousness to spring forth for Dawid. And He shall do right-ruling and righteousness in the earth.

‘In those days Yehudah shall be saved, and Yerushalayim dwell in safety. And this is that which shall be proclaimed to her: ‘יהוה our Righteousness.’ “For thus said יהוה, ‘For Dawid there is not to cease a man to sit on the throne of the house of Yisra’el. **‘And for the priests, the Lēwites, there is not to cease a man to offer burnt offerings before Me, to kindle grain offerings, and to slaughter continually.’**”

And the word of יהוה came to Yirmeyahu, saying, “Thus said יהוה, ‘If you could break My covenant with the day and My covenant with the night, so that there be not day and night in their season, then My covenant could also be broken with Dawid My servant – so that he shall not have a son to reign upon his throne – and with the Lēwites, the priests, My attendants.

favorites amongst family members. The nation of Israel actually had 4 mothers, and so if each of Jacob’s sons is represented by a star, it stands to reason that each mother would be somehow representing the moon. Leah is the eldest daughter of Laban, the first to marry Jacob, the first to bear children for Jacob and the one who bore more sons than anyone else. For all those reasons and more, since Leah is the beginning of Jacob’s strength, it makes sense she represents the beginning of the lunar month. Equally certain I believe is the identification of the full moon with Rachel. Renown for her great beauty, the full moon is compared to the glow of a lovely woman’s skin (Song of Songs 6:10), and Jacob’s great love for her literally eclipses all the others. The two remaining mothers, Bilhah and Zilpah are really concubines or “half wives” and so it seems logical to have them represent the two half-moons of the month we call 1st quarter and Last Quarter.

‘As the host of the heavens is not counted, nor the sand of the sea measured, so I increase the descendants of Dawid My servant and the Lěwites who attend upon Me.’ ”

And the word of יהוה came to Yirmeyahu, saying, “Have you not observed what these people have spoken, saying, ‘The two clans which יהוה has chosen have been rejected by Him’? So they have despised My people, no more to be a nation before them.

“Thus said יהוה, ‘If My covenant is not with day and night, and if I have not appointed the laws of the heavens and earth, then I would also reject the descendants of Ya’aqob and Dawid My servant, so that I should not take of his descendants to be rulers over the descendants of Abraham, Yitsḥaq, and Ya’aqob. For I shall turn back their captivity, and have compassion on them.’ ” (Jeremiah 33:14-26, The Scriptures 1998)

So we see here the descendants of Ya’akov, both Levi and David, have their covenants linked to the fixed orders of the heavenly cycles. This is why both the Levites and the priests are each divided into units of 24, one unit for every hour of the solar day (1 Chronicles 24 and 25).

Therefore the “star of Ya’akov”—the sun—is also keyed into the processes, special knowledge and special access of the priests. So it should not be surprising then as we follow this chain of Scripture “precepts upon precepts” that we should find amazing solar astronomical data in the Tabernacle and dress of the high priest himself.

To begin with, Aaron’s name is most often taken to mean *mountain of strength* but there are several other intriguing secondary meanings to his name as well, one of these being *illuminator*—very apt since the priesthood in its way represents the sun, as well as for the fact that the high priest is charged with lighting the lamps of Tent of Meeting at night (Numbers 8:1-3). So maybe we should look at what this illuminator does to mirror the cycles of the sun!

But before going deeper into this, let’s first turn our attention to a great Biblical astronomer named King David and his amazing astronomical treatise known as Psalm 19:1-7. From there we can return to the connection with Aaron a little bit later: David begins with this statement:

The heavens are proclaiming the esteem of Ėl; and the expanse is declaring the work of His hand. (Psalm 19:1, The Scriptures 1998)

So the *shmayim*, or “heavens, physical universe” exists to proclaim the glory of our Elohim and the works of His hand. Since Father Yah created everything, this must refer to all space, but soon it will focus on our own “practical space”, or that part of the universe we use on earth to count time.

Day to day pours forth speech, and night to night reveals knowledge. There is no speech, and there are no words, their voice is not heard. (Psalm 19:2-3, The Scriptures 1998)

Here we see that the “speech” and “knowledge” are not verbal, but nevertheless are communication that comes from “day to day” (the sun) and “night to night” (stars). Their collective message or testimony about Father Yah’s glory must therefore come from observing their cycles!

Their line has gone out through all the earth, and their words to the end of the world. In them He set up a tent for the sun... (Psalm 19:4, The Scriptures 1998)

The Hebrew word for “line” is *qav* which means “a cord or line for measurement”. It can also refer to a string on a lyre which puts forth a fixed frequency or sound. I believe the former meaning, which is of a fixed tether, is the intended one. This is a perfect description of gravity that tethers the earth to the orbit of the sun. That gravitational force is also in direct proportion to the mass of the sun, as both Newton and Einstein proved. Later lines in this Psalm will prove this interpretation.

However, unseen forces like gravity, or perhaps dark matter, are referenced elsewhere in Scripture:

He stretches out the north over empty space and hangs the earth on nothing. (Job 26:7 NAU)

Getting back to Psalm 19 though, this line in turn that measures from the earth out into the cosmos attaches the earth to the sun but also points us to what I just called *practical space* above. That practical space is a “tent” that is “pitched for the sun”.

The Hebrew word for *tent* is *ohel*, which is a pretty generic term. However, there is one time where David builds a “tent” that has a very interesting application:

So they brought the ark of יהוה in, and set it in its place in the midst of the Tent that Dawid had pitched for it. And Dawid brought burnt offerings before יהוה, and peace offerings. (2 Samuel 6:17, The Scriptures 1998)

So David took a golden box with two angels on the cover and set a fire right near it to offer burnt offerings under a tent! The Ark, in many cases including here, is often a metaphor for the golden sun, and the burnt offerings beside it and angels above it only reinforce the heavenly metaphors.

That is also why, in part, Moshe was told “see that you make everything according to the pattern you saw on the mountain”, meaning according to heavenly design (Exodus 25:40) which is also about heavenly courses.

In other words, the entire course the sun runs from our view on earth takes place in this “tent” which has various chambers, gates and windows to track the sun throughout the year. Let’s get more details on how the “tent” is constructed:

And it is like a bridegroom coming out of his room, it rejoices like a strong man to run the path. (Psalm 19:5, The Scriptures 1998)

The bridegroom eagerly comes out his chamber or room to begin running “the path”—*orach* in Hebrew—which indicates the solar orbit. The “man” here is vigorous and strong, and his emergence is dated from the time of his “marriage” which in solar terms is the start of spring or Vernal Equinox, at which time there is a fixed “chamber” he stays and returns to, as the next lines show:

Its rising is from one end of the heavens, and its circuit to the other end; and naught is hidden from its heat. (Psalm 19:6, The Scriptures 1998)

This language is especially precise and critical. Notice first that only the *rising* of the sun is mentioned, not its setting, because this is an instruction to track the dawning sun throughout the year.

Such an idea is confirmed in 19:7 where we are told, “The Torah of YHWH is perfect, converting the soul” and similar praises to the end of the Psalm. Apparently, part of the Perfect Torah is keeping track of the heavenly cycles that, in their turn, reveal His glory!

On the other hand, “night after night reveals knowledge” (19:2) could also be about tracking the setting of the sun in addition to the rising of the stars, and I believe this to be the case.

In any case, getting back to Psalm 19:6, the rising at one end of the heavens and its “circuit” to the other end is another way of describing its yearly path, which is an east-west trajectory. Also the word for “circuit”—*tekuwfah*—is well defined by Barnes who said:

And his circuit - The word used here - תקופה *ṯēqûphâh* - means properly a coming about, or a return, as of the seasons, or of the year. It is found only in [Exo 34:22](#), “At the year’s end;” [1Sa 1:20](#), “When the time was come about” (Margin, in revolution of days); [2Ch 24:23](#), “At the end of the year” (Margin, in the revolution of the year). The word here does not refer to the fact that the sun comes round to the starting-point on the following day, but to the sweep or circuit which he makes in the heavens from one end of it to the other - traveling over the entire heavens.-Albert Barnes Bible Commentary (1834)

So now a fuller picture emerges of tracking the rising and setting of the sun from its “chambers” throughout the year across the visible sky. But what kind of “chambers” are these and how would the system work? I believe the answer lies in taking this data as an overt Biblical command which would then lead to fixed laws of observational and mathematical astronomy.

Observing the sun each day from our position on the earth, we would soon discover that there are 12 “gates” (*shaar* in Hebrew) that the sun goes through each year, though technically in the Scripture system the gate is only where the sun enters into after dark, where it waits in a “chamber” and then goes out of 1 of 12 “windows” at the top of the chamber.

In pagan astrology though these “gates” or “portals” became Zodiac Signs, but the priests of Yah had no use for that and so simply divided the sky up into 12 as the Scripture directed.

Breaking Down the Chambers

But how do we know the ancient Hebrews actually recognized 12 “chambers of the sun” and what were these heavenly structures supposed to look like? The concept is actually covered by several different Hebrew words that help describe it:

- 1) *Chuppah* or “canopy”, almost like a subdivision or pocket within the overall tent. I find it very interesting that in Jewish weddings for at least the last 4,000 years, husbands and wives are married under a Chuppah, and note the use of the word “bridegroom” to describe the sun. See also Joel 2:16.
- 2) *Lishkah* defined as a “room attached to a sanctuary”, this can refer to a place where sacrificial food is eaten (1 Samuel 9:22), where scribes do their work (Jeremiah 36:12) or where the singers live (Ezekiel 40:44). It can also be rendered as “storeroom” in other cases.
- 3) *Ta*, also called a “chamber” but more correctly and precisely “guardroom”, as used by Ezekiel. What’s important about this word is that Ezekiel specifically says there are a total of 6 guardrooms for the eastern gate of the Temple (Ezekiel 40:10), 3 on each side. These 6 eastern rooms, which represent lodging areas for the sun, will become extremely important later on.

When we are tracking east-west orientation, the Scriptures describe the sun’s journey metaphorically as a circle divided into 12 equal slices of 30 degrees each:

Solomon had twelve deputies over all Israel, who provided for the king and his household; **each man had to provide for a month in the year**. (1 Kings 4:7 NAU)

Now this is the enumeration of the sons of Israel, the heads of fathers' households, the commanders of thousands and of hundreds, and their officers who served the king in all the affairs of the divisions which came in and went out month by month throughout all the months of the year, each division numbering 24,000...¹⁵ The 12th for the 12th month was Heldai the Netophathite of Othniel; and in his division were 24,000. (1 Chronicles 27:1,15 NAU)

In the 1 Chronicles 27 passage, each army is of “equal strength”, that is to say, 24,000 men each. That number is significant as 24 is the number of hours in the solar day and 1,000 is the number of generations that Father Yah loves who are faithful to Him and keep His commandments (Exodus 20:6)!

Similarly the 12 deputies in 1 Kings 4:7 were also of equal strength and responsibilities, and there are other places where we see this pattern directly in circle form:

And below its rim were ornaments all around, ten to a cubit, all the way around the Sea. The ornaments were cast in two rows when it was cast. It stood on twelve oxen, three facing north, and three facing west, and three facing south, and three facing east. And the Sea was set upon them, and all their back parts were inward. (1 Kings 7:24-25)

Ezekiel and Revelation also have similar circle details:

And these are the exits of the city, the gates of the city according to the names of the tribes of Yisra'el: On the north side, measuring 4,500 *cubits*, the three gates northward: one gate for Re'ubēn, one gate for Yehudāh, one gate for Lēwi. And on the east side, 4,500 *cubits*, three gates: one gate for Yosēph, one gate for Binyamin, one gate for Dan.

And on the south side, measuring 4,500 *cubits*, three gates: one gate for Shim'on, one gate for Yissaskar, one gate for Zebulun.

And on the west side, four thousand five hundred *cubits* with their three gates: one gate for Gaḏ, one gate for Ashēr, one gate for Naphtali.

All around: 18,000 cubits. And the name of the city from that day is: יהודה is there"
(Ezekiel 48:30-35, The Scriptures 1998)

And again the circle pattern of 12 gates for Jerusalem in Revelation 21:

And he bore me away in the spirit to a mountain great and high, and he showed me the Set Apart city, Urishlim, descending out of heaven from Elohim; in which was the glory of Elohim, as a brilliant light, and resembling a very precious gem; like a jasper stone, resembling crystal.

And it had a wall great and lofty, which had twelve gates, and names inscribed on them, which are the names of the twelve tribes of the children of Israel. On the east, three gates; on the north, three gates; (on the south, three gates; and on the west, three gates). And the wall of the city had twelve foundations, and upon them the twelve names of the twelve apostles of the Lamb.

And he that talked with me had a measure, a golden reed; so that he could measure the city and its gates, and its wall. And the city stood up four square; and its length was the same as its breadth. And he measured the city with the reed to twelve furlongs of twelve thousand; and the length and the breadth and the height of it were (all) equal. **And he measured its wall, a hundred and forty and four measures of the cubits of a man, that is, of the Messenger.**

And the structure of its wall (was of) jasper; and the city was of pure gold, like pure glass. And the foundations of the wall of the city were adorned with every precious stone. The first foundation, a jasper; the second, a sapphire; the third, a chalcedony; the

fourth, an emerald; the fifth, a sardonyx; the sixth, a sardius; the seventh, a chrysolite; the eighth, a beryl; the ninth, a topaz; the tenth, a chrysoprasus; the eleventh, a jacinth; the twelfth, an amethyst. **And the twelve gates (were) twelve pearls; each (pearl) one gate, and each (gate) one pearl: and the broad street of the city was pure gold, like brilliant glass.** (Revelation 21:10-21 AENT)

144 Divisions of the Solar Year

This Revelation citation is particularly important because it gives us four witnesses to the number 144: 1) 12 gates x 12 names of the tribes of Israel = 144; 2) 12 foundations x 12 names of the apostles = 144; 3) the wall is measured to be 144 cubits high; 4) 12 gates x 12 pearls = 144.

144 is actually a kind of division for the solar year confirmed in Tanakh, where the year is divided into 12 months and the months are further divided into 12 units of 2 ½ days each. Each of these 2 ½ day periods are called “windows of heaven” (1 Kings 6:4-7, 2 Kings 7:2,19; Malachi 3:10) or “windows from above” (Isaiah 24:18) and they are attached to each of the 12 chambers of the sun. Solomon seems to have built them into his Temple wall (1 Kings 6:4-7), which had 3 tiers on each of its 4 sides.

Exhibit A: The Tabernacle's Structure and Purpose

And they shall make Me a Set-apart Place, and I shall dwell in their midst. According to all that I show you – the pattern of the Dwelling Place and the pattern of all its furnishings – make it exactly so... **So see, and do according to the pattern which was shown to you on the mountain.** (Exodus 25:8-9, 40, The Scriptures 1998)

This is a heavenly blueprint of heavenly objects that are being replicated on earth, which is exactly what Paul says also:

And he is the minister of the sanctuary and of the true tabernacle which Elohim has pitched, and not man. For every high priest is established to offer oblations and sacrifices; and therefore, it was proper that this one should also have something to offer. And if he were on earth, he would not be a priest because there are priests (there) who offer gifts in accordance with Torah: (namely) **they who minister in the emblem and shadow of the things in heaven:** as it was said to Moshe when he was about to build the tabernacle, **See and make everything according to the pattern which was showed you in the mount...For it was necessary that these, the representations of heavenly things, should be purified with those things; but the heavenly things themselves, with a sacrifice superior to them.** (Hebrews 8:2-5, 9:23, AENT)

Josephus and Philo also could not agree more with Paul here:

For if anyone do but consider the fabric of the tabernacle, and take a view of the garments of the high priest, and of those vessels which we make use of in our sacred ministration, he will find that our legislator was a divine man, and that we are unjustly

reproached by others: for if anyone do without prejudice, and with judgment, look upon these things, **he will find they were everyone made in way of imitation and representation of the universe.** (Josephus, Antiquities, 3:180)

The candlestick was placed on the southern side of the tabernacle, **since by it the maker intimates, in a figurative manner, the motions of the stars which give light; for the sun, and the moon, and the rest of the stars, being all at a great distance from the northern parts of the universe,** make all their revolutions in the south. (Philo, On Moses, 2:102)

And if any were inclined to count those five pillars of the outer vestibule in the open air separately, as being in the outer court as it was called, there will then be left that most holy number of fifty, being the power of a rectangular triangle, **which is the foundation of the creation of the universe, and is here entirely completed by the pillars inside the tabernacle.** (Philo, On Moses 2:80)

Exhibit B: The Ark of the Covenant

And they shall make an ark of acacia wood two and a half cubits long, a cubit and a half wide, and a cubit and a half high. (Exodus 25:10, The Scriptures 1998)

The Ark is a kind of “chamber” or chest, and it will be overlaid with pure gold, representing the sun or sunlight, but its measurements exactly represent the dimensions of a “window” in the sun-chamber.

In many measurements for the Tabernacle and its surroundings, a cubit equals a day, such as how the outer curtains of 30 cubits and inner curtains of 28 cubits represent the overall length of the lunar month and the time within that month when the moon is usually visible².

Similarly, the length of the ark is measured with a cubit equaling a day, so 2 ½ cubits equals 2 ½ days³, the time for the sun coming out of a window in the chamber of the sun.

Also those windows are on the top of the chamber, just as the cherubim are on the top of the mercy seat, with the feathers in their wings representing the sun’s rays. I believe this association was not lost on the prophet Malachi:

² These curtains are 20 in number, 10 outer (30x 4 cubits) and 10 inner (28 x 4 cubits); the 28 x 4 curtains are made of white, blue, purple and red materials designed with cherubim while the 30 x4 curtains are made of goats’ hair. However, there is a 21st curtain (goat’s hair) folded over the top and facing east, the direction of the rising sun. The purpose of the 21st curtain is to encode the instruction, “reset the cycles of the moon by the cycles of the sun”.

³ Actually the total is 60 hours, 52 minutes and 25.32 seconds. The latter piece of about 52 ½ minutes is what is left over, or the gap between each window. This time must eventually be accounted for and there are a variety of ways to do this. However only one method is suggested by the arrangement of the stones on the breastplate of the high priest, and that is to have 3 consecutive 30 day months followed by an extra day at the end of every third month. There would be 4 days in all that are counted outside the months and each one would be a remembrance marker for a season of the year.

But to you who fear My Name the Sun of Righteousness shall arise with healing in His wings. And you shall go out and leap for joy like calves from the stall. (Malachi 4:2, The Scriptures 1998)

From there I believe it follows naturally that the gap in between the wings of the cherubs, the place where Father Yah says He dwells with Israel, is a kind of center point of the entire sky, or the chamber-window rising position that represents Vernal Equinox. In other words, the Ark of the Covenant is showing a moment frozen in time, when the sun rises from the exactly correct part of the sky to indicate the start of spring⁴.

Finally the area above and beyond the Ark of the Covenant must represent “heaven” because in the middle of the gap between the angel’s wings He says, “There I will meet with you” (Exodus 25:22).

Exhibit C: The Twelve Loaves of the Showbread

And you shall make its dishes, and its ladles, and its jars, and its bowls for pouring. Make them of clean gold. And you shall put the showbread on the table before Me, continually. (Exodus 25:29-30, The Scriptures 1998)

When Moshe erects the Tabernacle in Exodus 40, the “showbread” is placed on dishes facing the Ark of the Covenant. While the text here does not specify how many loaves there are, we know there had to be 12, one for every tribe of Israel that the bread is supposed to “show” before Aaron, since he also has 12 stones as memorials for those same 12 tribes. This is confirmed in Leviticus 24:

And you shall take fine flour and bake twelve cakes with it, two-tenths of an ephah in each cake. And you shall set them in two rows, six in a row, on the clean table before יהוה. And you shall put clear frankincense on each row, and it shall be on the bread as a remembrance portion, an offering made by fire to יהוה. On every Sabbath he is to arrange it before יהוה continually, from the children of Yisra’el – an everlasting covenant. (Leviticus 24:5-8, The Scriptures 1998)

Then, after the Tabernacle is set up, Numbers 7 tells us the 12 leaders, one from each tribe of Israel, give the same contribution to the Tabernacle, the items of which include 12 golden dishes, which almost all authorities agree are to replace the original dishes and hold the 12 loaves. Again, gold represents the sun⁵.

From this point, Jewish historians Josephus and Philo make this association between the 12 loaves and the solar year:

⁴ It is also significant that the Ark of the Covenant is as high as it is wide (1 ½ cubits for each) as this provides a standard “resting area” for the sun as it is pointed to a given window.

⁵ And there are also 12 silver plates, which probably represent the moon, as it was said to also rise and set through those same 12 gates that the sun uses.

And when he ordered twelve loaves to be set on the table, he denoted the year, as distinguished into so many months. (Josephus, Antiquities 3:182)

Now, the twelve loaves that were upon the table signified the circle of the zodiac and the year. (Josephus, The Jewish War, 5:217)

And loaves are placed on the seventh day on the sacred table, being equal in number to the months of the year, twelve loaves, arranged in two rows of six each, in accordance with the arrangement of the equinoxes; for there are two equinoxes every year, **the vernal and the autumnal, which are each reckoned by periods of six months.** At the vernal equinox all the seeds sown in the ground begin to ripen; about which time, also, the trees begin to put forth their fruit. And by the autumnal one the fruit of the trees has arrived at a perfect ripeness; and at this period, again, is the beginning of seed time. **Thus nature, going through a long course of time, showers gifts after gifts upon the race of man, the symbols of which are the two sixes of loaves thus placed on the table.** (Philo, The Special Laws, 1:172)

Exhibit D: The High Priest's shoulder buttons

However, if the 12 loaves represent the 12 solar months, I believe this other feature, having to do with the clothes of the High Priest, speaks more to a daily cycle of the sun's rising and setting.

And these are the garments which they make: a breastplate, a shoulder garment, a robe, an embroidered long shirt, a turban, and a girdle. And they shall make set-apart garments for Aharon your brother and his sons, for him to serve as priest to Me. And they shall take the gold, and the blue and the purple and the scarlet *material*, and the fine linen, and shall make the shoulder garment of gold, of blue and purple and scarlet *material*, and fine woven linen, the work of a skilled workman.

It is to have two shoulder pieces joined at its two edges, and so it is joined together. And the embroidered band of the shoulder garment, which is on it, is of the same workmanship, made of gold, of blue and purple and scarlet *material*, and fine woven linen. And you shall take two shoham stones and engrave on them the names of the sons of Yisra'el, **six of their names on one stone, and the remaining six names on the other stone**⁶, according to their birth. With the work of an engraver in stone, like the engravings of a signet, engrave the two stones with the names of the sons of Yisra'el. Set them in settings of gold. **And you shall put the two stones on the shoulder pieces of the shoulder garment as stones of remembrance for the sons of Yisra'el. And Aharon shall bear their names before יהוה on his two shoulders,** for a remembrance. (Exodus 28:4-12, The Scriptures 1998)

In this case, notice the image these stones present on Aaron's shoulders. There are six names on

⁶ It is also possible that the same functionality and process is evoked with the mountains of Gerizim and Ebal, oriented towards the western setting sun, where 6 tribes are on one peak and 6 tribes are on the other along with altar stones for each tribe (Deuteronomy 11:29-32; 27:4-10). Gerizim and Ebal form a nearly perfect north-south line, much like the arrangement of the trees of Eden bisecting the enclosure of the garden.

each side, and in between them is Aaron's head crowned by a turban. Also we should note the interesting use of 5 colors:

- Blue→Representing the sky
- White→Representing clouds (undyed linen is always white)
- Gold→Representing the rays of the sun
- Purple→Representing the sea or oceans
- Red→Representing fire, such as is needed in burnt offerings

So to be sure the names of the sons of Israel are to be remembered on these stones, but there are a whole lot of other things they are remembering as well!

However, another purpose to this design is to show how there are 6 eastern gates through which the sun rises every day and 6 western gates through which it sets every day.

The way this rising and setting pattern works is that from winter solstice to summer solstice, the sun spends 30 days rising in gates 1,2,3,4,5 and 6. Then from summer solstice to winter solstice, the sun reverses course and spends time in gates 6,5,4,3,2 and 1.

But it's our last item that ties everything together.

Exhibit E: The 12 Stones on the Breastplate

It is here we will literally see the formula "12 squared":

And you shall make a breastplate of right-ruling, a work of a skilled workman, like the work of the shoulder garment. Make it of gold, of blue and purple and scarlet *material*, and fine woven linen. **It is square, doubled, a span its length, and a span its width.** And you shall put settings of stones in it, four rows of stones... **They are set in gold settings. And the stones are according to the names of the sons of Yisra'el, twelve according to their names,** like the engravings of a signet, each one with its own name, for the twelve tribes. (Exodus 28:15-17a; 20b-21, The Scriptures 1998)

The linen is "squared" or doubled over, and the 12 stones are put in gold settings, with each stone bearing a name of a tribe of Israel. The term "squared" is used in a double sense, first to refer to the folded over linen and second because all the sides are of equal length.

And of course, the number 12 is also used twice, once to refer to the stones and the other time to refer to names of the tribes on those stones. I should also point out that the arrangement of the stones themselves makes a perfect square as well, four rows of three stones each. ***Add it all up and it sure sounds like a powerful picture for the 12 windows in each month, as 12 squared is 144!***

Also, the idea that these are sun-windows is reinforced by the fact that the settings for each stone are also square, like windows, and they are made of gold, once more representing the sun.

Technically speaking, I believe the set in squares are meant to be the windows, multiplied by the number of stones that are meant to be the months.

Applied Physics

If we take the number 144 and multiply it by $2\frac{1}{2}$, the length of a “window” we get 360 degrees for a full circle, and one might be tempted to also say this is 360 total days as well, but that would be a mistake.

The reason is, while the sun does travel in a 360 degree circle, it still takes 365 days, 5 hours, 48 minutes and 45 seconds for it to make that *orach* or *tekuwfah*, that is to say, its orbit. So where are the $5\frac{1}{4}$ extra days once we run out of 360 days/degrees?

For the answer, we need to return to Aaron’s breastplate with the 12 stones, and look this time at another detail:

“And you shall put settings of stones in it, four rows of stones: The first row is a ruby, a topaz, and an emerald; and the second row is a turquoise, a sapphire, and a diamond; and the third row is a jacinth, an agate, and an amethyst; the fourth row is a beryl, and a shoham, and a jasper. They are set in gold settings.

“And the stones are according to the names of the sons of Yisra’el, twelve according to their names, like the engravings of a signet, each one with its own name, for the twelve tribes. (Exodus 28:17-21, The Scriptures 1998)

The key detail is that these are four rows of three stones each, and so each “row” represents a season of the year.

Also notice that there is a significant “gap” between the stone at the end of row 1 (stone #3) and the stone at the start of row 2 (stone #4), because at the end of row 1 we need to literally circle around the back of the breastplate structure and go down to start the next row. Please see the image below:

However, that still gives us only 364 days, not the 365.2422 days we and the ancient Hebrews knew took up the entire year, so how did they account for the rest according to the Scripture? The answer, I believe, is all the way back in Genesis 1:

And Elohim said, “Let lights come to be in the expanse of the heavens to separate the day from the night, and let them be for signs and appointed times, and for days and years, and let them be for lights in the expanse of the heavens to give light on the earth.” And it came to be so.

And Elohim made two great lights: the greater light to rule the day, and the lesser light to rule the night, and the stars. And Elohim set them in the expanse of the heavens to give light on the earth, and to rule over the day and over the night, and to separate the light from the darkness. And Elohim saw that it was good. And there came to be evening and there came to be morning, the fourth day. (Genesis 1:14-19, The Scriptures 1998)

The fourth day of the week, our Wednesday, is the part of Creation Week where Father Yah chose to place the sun, moon and stars in the heavens to mark time. For those of you who have seen *Genesis Decoded*, you know I view this verse as referring to “a fourth day” rather than “the fourth day” simply because there is no “the” for days 2,3,4 and 5 in the text. We know day 1 is day 1 because it is “in the beginning” and we also know days 6 and 7 are in the right order as “THE sixth day” and “THE seventh day”, but those middle 4 may more relate to something I term *thematic order*, as opposed to *chronological order*.

Nevertheless, and in spite of the fact that I believe the ancient Hebrew priests also interpreted Genesis 1 this way, in this instance for calendrical purposes, they decided to take this as a literal reference to THE fourth day, and balanced their solar year by having it start on a Wednesday and end on a Tuesday 52 weeks or 364 days later.

For the remaining 1-2 days of the solar year however, the key would be establishing if the sun had returned to its proper rising location of chamber 4, window 1, rising 90 degrees due east after Vernal Equinox. The ancient Hebrews also knew the sun would set perfectly west that day as well, at 270 degrees, which was another fact they could easily verify visually. Once the sun set though, the stars that night would provide a third witness that spring had started, as the Pleiades cluster that kind of looks a little like a shovel, will have set in the late afternoon and disappeared that same night⁷.

As the Israelites use these witnesses over a period of many centuries however, their careful observations will give birth mathematical formulas that can be called upon should the sky get too cloudy or other facts impede any one day’s observation. From that point, if the Vernal Equinox had happened at the end of the 364th day and the start of 53rd Wednesday from when the count began, that would be New Year’s Day.

⁷ And this is why the Pleiades are mentioned twice in Job and once by the prophet Amos. It was part of a working star catalogue the priests had to track the year.

If not, this priestly mechanism would wait until the following Wednesday a week later to begin starting its 364 day count all over again and, as odd as all that may sound, this system would always work perfectly and never go out of date.

And finally, my last point on this rather detailed subject is that this process that was derived completely from Scripture was not the product of speculation. Rather, it turns out other ancient Hebrew groups in history saw these Scriptures the same exact way I did but 2000+ years earlier, and built the same calendar around it I described. I know this because their writings are still preserved in the Dead Sea Scrolls, 1 Enoch, Jubilees and other ancient literature⁸. Not only does this work in history, it also works astronomically, mathematically and, most importantly, scripturally. In sum then everything that Aaron wears, does or goes to is in some way related to remembering astronomical processes for the sun and stars, so that His calendar will never be forgotten so long as His Word also endures!

However, the most powerful evidence is in the design of the Tabernacle, its furnishings and the outfit of the high priest!

For more information on this topic, please see the Walking Dedicated Men series:

<https://www.youtube.com/watch?v=ehXEitetQPI>

https://www.youtube.com/watch?v=bG1m2_2Ui90

<https://www.youtube.com/watch?v=atoQiC3V--U>

https://www.youtube.com/watch?v=Xw_mtGZqKGQ

⁸ These include the original Zadokite priests praised by Ezekiel, the Essenes who wrote much of the Dead Sea Scrolls and the mysterious heretical Jewish-Egyptian mystical order Philo talks of, known as the *Therapeutae*. While the writings for these sources are fragmentary, what has come down to us is more than sufficient to prove that large aspects of these mechanisms were used historically. On the other hand, I also know of at least one occasion where a Jewish group deliberately misused this same calendar so that they could have a different series of Set-apart days from their Jerusalem brethren, for political purposes. Even in that case however I believe that sect still knew what the original process was and intended to get back to it eventually. The problem for them was the Romans destroyed all these groups and “eventually” never came.