

The Lunar Eclipse, Neil Armstrong and Beyond

-Rabbi Gideon Shloush

On the night of September 7, many of us stepped outside to witness a rare astronomical event: a total lunar eclipse. During this phenomenon, the Earth's shadow completely covered the Moon, giving it a striking deep red color. All across Israel, people gathered with family and friends to watch the spectacle unfold. The eclipse lasted for over an hour and was visible across much of Europe, Asia, Africa, and Australia.

The awe and fascination with that night's celestial event recalls another lunar moment, one of the most unforgettable milestones in modern history: The first human landing on the Moon.

For those who witnessed it live, Neil Armstrong's walk on the moon remains an unforgettable moment etched in memory for a lifetime. It was 1969, and people watched the historic moonwalk on bulky, often black-and-white television sets.

Seeing Neil Armstrong, in his puffy white astronaut's suit, descending from the lunar vehicle to set his foot on the moon's surface, was transcendent.

There on the moon he famously said: "That's one small step for man, one giant leap for mankind." People around the world stood outside, gazed at the moon and marveled in pride and awe.

Consider how much has been achieved in space exploration since then! Satellites. Shuttles. Space Stations. Interplanetary spacecraft. As we speak, a rover named "Curiosity" - the size of a car - is combing the surface of planet Mars. Mounted with seventeen cameras, it is studying the geology, chemistry and possible biological life of Mars.

NASA currently employs several probes and many active missions throughout the solar system. Some are on their way to explore Mercury, Jupiter, Saturn, Pluto, various asteroids as well as the interstellar void beyond the planets.

In the rush of our daily lives, we so rarely pause to *look up* at the night sky and appreciate the quiet majesty above us.

Several years ago, I had a remarkable experience. During a family trip to Ontario, Canada, our eldest son and I visited Algonquin National Park (three and a half

hours north of Toronto), where there is a place that hosts the second largest telescope in Canada and is open to public viewing. It turns out that a distinguished astronomer, renowned author, and astrophotographer, Terence Dickinson, was making the presentation that night. He began his talk by holding a ballpoint pen in one hand and a golf ball in the other hand. He said: "Earth is the size of the tip of this pen. This golf ball, that's the size of the Sun."

He reminded the attendees that when we see the stars in the night sky, we must always remember that each star is a sun on its own. Each star is a massive ball of hot gas, primarily hydrogen and helium, undergoing nuclear fusion — just like our Sun. The nearest star, Alpha Centauri, is the same size as our Sun. Some stars are bigger and brighter than our Sun. They appear dim because they are a tremendous distance away. This also means that around each one of the stars in the sky, there are many planets as well.

How many stars are there? Dickinson said that if I took a big dump truck's-worth of sand and inserted it into the pile and lifted out four thousand grains of sand, that four thousand is all we see in the sky. The rest of the sand in dump truck is the number of stars that we don't see in our own Milky Way galaxy.

But the stars aren't the size of a grain of sand. The typical star is one thousand times the size of Earth.

Next, he took us outside. We were a group of around thirty people. Before he had us look into the telescope, he asked us to look up at the open sky.

What we saw was stunning. We were in the middle of nowhere. There was no light pollution. We could see a magnificent purple carpet straight across the sky. The image is seared in my mind. "That, my friends, is the Milky Way," he said. "We are on the edge of our galaxy, much like the edge of a tire."

While we were getting a glimpse of our galaxy, Dickinson reminded us that the Hubble telescope had photographed *hundreds of thousands* of galaxies. NASA astronomers say this is a "core sample" of what's out there.

Another highlight of our visit was seeing the International Space Station stream across the night sky. No use of a telescope. No binoculars. More than 230 miles above the earth, it circles our planet every ninety minutes. He told us where and when to look, and it appeared much like a star...a little light... moving across the sky! Awesome!!!

I've often wondered: the universe is enormous; beyond anything we can truly comprehend. Why did God create something so immense? What Divine purpose lies in this vastness, when we humans inhabit just a minuscule fragment of it?

One possible answer is that G-d wants us to be in awe of Him. Our studying the solar system enhances our ability to ponder the greatness of its Creator.

As we say every morning in the *Vayevarech David* prayer, before the *Az Yashir*:

אַתָּה עָשִׂיתָ אֶת הַשָּׁמַיִם שָׁמַי הַשָּׁמַיִם וְכָל צָבָאָם – “*You created the heavens and all their hosts*”, these billions of stars and countless galaxies.

וְהָאָרֶץ וְכָל אֲשֶׁר עָלֶיהָ – “*the earth and everything on it*”. You chose this little speck of dust called “Earth.”

וְאַתָּה מְחַיֶּה אֶת כָּלָם – “*and You give them all life*”. You are the constant source of life. All these exist only because You sustain them.

What an artist G-d is. “*Ein Tzur Kelokein*.” As the Talmud in *Berachot* teaches us: Don't read the verse as אין צור - *Ein Tzur* (*there is no Rock* [like Hashem, the Creator]) but rather אין צייר - *Ein Tzayar* (*there is no Artist* [like Hashem, the Creator]).

The thought of creating and sustaining the universe and all its galaxies should have us awe-struck. And even just to revel in the wondrous creations that exist on our own planet should leave us spellbound: The Grand Canyon, the Colorado Rockies, the Canadian Rockies, the Swiss Alps, Iguazu Falls, Mount Everest, the Atacama desert in Northern Chile (supposedly the best spot on earth to view the celestial sky). Each one an opportunity to say *Mah Rabu Ma'asecha Hashem* - how glorious are Your creations, Hashem.

What greater moment than **the days between Rosh Hashana and Yom Kippur** to contemplate: *Hayom Harat Olam* - today the world was created. To be humbled before our Father in Heaven.

A second possible reason for G-d's creating this glorious universe can be appreciated on a more Kabbalistic level. Try to imagine that all these creations are singing to G-d in praise.

In Psalm 148, King David visualizes *the entire universe* singing out in praise to Hashem. Rabbi Shimon Schwab likens the spectacle depicted in this Psalm to that of a conductor directing his baton at the various sections of the orchestra in front of him – the strings, the winds, the percussion and a host of other instruments.

הַלְלוּ יְיָ הַלְלוּ אֶת ה' מִן הַשָּׁמַיִם הַלְלוּהוּ בַּמְרוֹמִים - *Praise Hashem from the heavens. Praise Him in the heights.* All His angels, praise Him. Sun and moon, praise Him. All the stars, praise Him.

הַלְלוּהוּ שָׁמַי הַשָּׁמַיִם - Praise Him, heaven of heavens. Rabbi Schwab says this refers to super-galaxies. King David directs ALL of these creations to join in the symphony of praise, because Hashem is the Source of their existence.

וַיַּעֲמִידִם לְעַד לְעוֹלָם חֶק נָתַן וְלֹא יֵעָבֹר - They will remain as long as the universe exists.

הַלְלוּ אֶת ה' מִן הָאָרֶץ - Now King David points the baton at the physical earth. At the fire, water, snow, hail, cedars, volcanoes, mountain ranges, sea creatures, land animals. All carrying out what they were created to do.

מַלְכֵי אֶרֶץ וְכָל לְאָמִים... בְּחוֹרִים וְגַם בְּתוֹלוֹת זָקֵנִים עִם נְעָרִים - Kings, nobleman, elders and youth.

יְהַלְלוּ אֶת שֵׁם ה' כִּי נִשְׁגָּב שְׁמוֹ לְבָדּוֹ - Let them praise the Name of G-d for He is exalted.

But a third, and perhaps the most important reason why G-d created this breathtaking universe was to direct our attention to a curious three-year-old boy named Avram, who would grow up to teach humanity about the existence of G-d.

Avraham taught that the universe did not always exist. There was a time when there were no sunrises and sunsets. He informed the world that G-d formed the heavens and earth and all that we see, *Yesh M'Ayin* – something from nothing. Avram taught of a Living G-d... at work.

Avram demonstrated that *Kulam B'Chochma Asita* – everything was created with immense wisdom. And isn't it true? The more we study nature the more we discover the incredible intelligence behind it.

G-d said it was worth all this Creation to produce one little Avram. And this Avraham remained faithful even though for nearly a century his faith was tested.

Hashem commanded Avraham: "Go outside and count the stars. Just as you will not be able to count them, so shall be the number of your offspring."

God wished to show Avraham that, as the endless skies above are filled with wonders beyond understanding, so too is the promise made to him. Though at the time he had no children, his lineage will grow into a mighty and everlasting nation.

This awe-inspiring universe transcends explanation, and likewise, so will the legacy of his descendants. The enduring existence of the Jewish people stands as one of the profoundest mysteries of the world. Hashem wanted Avraham to know: your children will be precious in my eyes, and they will defy history.

Indeed, often we feel small and helpless; insignificant, as tiny as stars in the night sky appear to us. But the Torah reminds us: In your eyes you may think you are small. But from My vantage point up here, I see that the stars are huge! Much the same, you are very consequential, beautiful and important in my eyes.

Why does G-d love the People of Israel?
Why did He make this promise to Avraham?

Because Avraham put himself on the line for G-d. He had faith. He performed tremendous acts of chesed. He opened his home to guests. He blessed G-d before he ate, and encouraged others to do the same. He sang G-d's praises. He was a source of light in every possible way.

What a privilege we have, to be the descendants of Avraham. The beauty of a star is its ability to give off light. The greatness of the Jewish People is the 'light' we produce.

On these High Holy Days, the days when we feel most humbled before our Creator, it is fitting to ask ourselves:

Are we a source of pride and *nachat* to our Father in **Heaven**?
Are we following in His ways while we are here on this **Earth**?
"Are we observing the Shabbat in a way that brings **light** to our home?"

“Am I a good **controller** of myself when it comes to my commitment to the laws of keeping kosher both in and out of my home?

As I **rove this planet**... am I a source of pride and honor to my family?

Am I fulfilling **my mission** to raise my children in a way that would make those who came before me proud?

Is giving 10% to charity **on my radar** and a source of merit for me?

Am I a **hero** when it comes to Synagogue attendance, making it a priority for me to pray daily and be close to G-d?

Is Torah Study on my **map** whereby I am continuously **exploring** G-d's sacred teachings?

As a descendant of Avraham, *am I giving my all* so as to be deserving of G-d's blessings?

Neil Armstrong was the commander of the Apollo 11. One editorial pointed out that Neil Armstrong was the right man for this larger-than-life experience. He was the consummate professional engineer and what especially stood out about him was that he *always* credited his colleagues for his success.

Speaking at NASA's Johnson Space Center, Armstrong said: “The success of our mission was because of every person on the project. Every builder. Every assembler. Every inspector. Every tester. And when you have hundreds of thousands of people all doing their job - a little better than they have to - you get an improvement in performance. And that's the only reason we could have pulled this whole thing off.”

As members of *Klal Yisrael*, we too are on an important mission. Are we contributing 100% of ourselves? Ask yourself: where can I do better?

On this **Yom Kippur 5786**, we each come to Shul with our own personal needs, wants and concerns.

Many face significant financial challenges. Some worry about paying last year's taxes and others are concerned about supporting family members in need.

Some are yearning to find their soulmate. Others find themselves in imperfect marriages. There are those who long for children and others who struggle with communicating with their children.

There are individuals who so badly would like to find work and others who are exhausted from being overworked. Some are anticipating the results of a test and others are trembling about their next doctor's visit.

We have a lot on our minds, and we have so much to pray for. And of course, we are all concerned about the security situation here in Israel, the safety of our soldiers and hostages, and the well-being of Jewish people around the world.

The greatness of *Am Yisrael* is our ability to be there for one another. To support each other. To extend a hand. To offer a kind word of encouragement. To share helpful advice and to join together both in good times and difficult ones.

Let us all rise to the occasion and each do our part! May it not be said about any one of us that we didn't give our all in crying out to Hashem, in heartfelt Teshuvah, in honorable distribution of *Tzedaka* and in reaching out to others.

When Neil Armstrong passed away thirteen years ago, his family issued a statement which ended with the following request:

"Honor his example of service. Honor his example of accomplishment. Honor his example of modesty. And the next time you walk outside on a clear night and see the moon smiling down at you... think of Neil Armstrong and give him a wink."

With best wishes to you and your families for a year of blessing, safety, health, happiness and success.

Shana Tova!