

Suggested Global Islamic Lunar Calendar

By Khalid Shaukat, prepared for

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There are so many Ayaat in Qur'an emphasizing the Calculations (Hisaab) of the motions of the sun and moon:

هُوَ الَّذِي جَعَلَ الشَّمْسَ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَرَهُ مَنَازِلَ لِنَعْلَمُوا عَدَدَ السِّنِّينَ وَالْحِسَابَ مَا خَلَقَ اللَّهُ ذَلِكَ إِلَّا بِالْحَقِّ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ {يونس 5}

الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ {الرحمن 5}

يَسْأَلُونَكَ عَنِ الْأَهْلِةِ قُلْ هِيَ مَوَاقِيتُ لِلنَّاسِ وَالْحَجِّ (البقرة 189)

The Prophet –peace be upon him– in explaining these rules told us how to begin and end the Islamic months.

سَمِعْتُ أَبَا هُرَيْرَةَ رَضِيَ اللَّهُ عَنْهُ يَقُولُ قَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ أَوْ قَالَ قَالَ أَبُو الْقَاسِمِ صَلَّى اللَّهُ عَلَيْهِ عَنْ نَافِعٍ عَنْ عَبْدِ اللَّهِ بْنِ عُمَرَ رَضِيَ اللَّهُ عَنْهُمَا أَنَّ رَسُولَ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ ذَكَرَ رَمَضَانَ فَقَالَ لَأَتَّصِمُوا حَتَّى تَرَوْا الْهَيْلَالَ وَلَا تُفْطِرُوا حَتَّى تَرَوْهُ فَإِنْ غَمَّ عَلَيْكُمْ فَأَقْدُرُوا لَهُ (البخارى 1773)

The Prophet –peace be upon him– wanted that Muslims should make sure that the month has begun before they start their 'Ibadah of fasting so that they be united in their observance of this act of worship together. He also told us that we should make sure that this month has ended so that we may have our celebration of Eid together.

Muslims in general continued sighting the Crescent (Hilal) to begin and end their month of Ramadan and celebrate Eid. It is reported that among the great Tabi'in Mutarrif ibn Shikhhir held the opinion that calculations of Hilal can be used for Ramadan. Imam Taqiuddin al-Subki a great Shafi'i jurist even said that calculation were more reliable than eye sighting. When Muslims learned writing and calculations and became more knowledgeable about the Moon and its various phases, more voices were raised to rely on the calculations of the Hilal instead of its physical sighting. Most jurists did not accept calculations because they were not sure whether the calculations were correct or could be trusted. With the development of astronomical sciences in the last one hundred years more and more voices are being raised by jurists in support of calculations. One of the famous Muhaddith Shaikh Ahmad Muhammad Shakir wrote a long article emphasizing that calculation is the most appropriate method of determining the lunar months and it is permissible.

The astronomical sciences are highly advanced today and more reliable methods are available to know the beginning of the lunar months. On the basis of the principles of the Shari'ah just as the timetable for Salah and Siyam are prepared, it is possible to prepare the calendars for the lunar months. This knowledge is now available and can be used.

Suggested Approach for Global Islamic Lunar Calendar

The following approach was suggested in the First Experts Meeting in Rabat in 2006 as a combined position from Dr. Jamal Eddine Abderrazik (Morocco) and Khalid Shaukat (USA), and received consensus from Abdul-Aziz Al-Mermesh (Saudi Arabia), Hayman Mutawalli (Egypt), and Alireza Movahednejad (Iran). Islamic month begins with conjunction and it is desirable to have Hilal formation:

Three things are needed to construct a Global Islamic Lunar Calendar:

1. Moon must have completed its cycle around the earth (conjunction has occurred, i.e., New moon must be born).
2. Hilal must be formed and could be sightable somewhere on earth.
3. Synchronizing with the day convention is desirable so that all Muslims in the world observe religious duties on the same week day that starts from International Date Line (IDL).

With these considerations a suggested Global Islamic Calendar is as follows:

- If the moon is born between 0:00 - 12:00 Universal Time (UT), the Islamic month begins at sunset of that day of the week everywhere in the world.
- If the moon is born between 12:00 - 23:59 UT the Islamic month begins at sunset of the next day of the week everywhere in the world.

Why cut-off is chosen as 12:00 UT?

- IDL is currently used as a reference point for beginning of every day, which has been accepted by All Muslims e.g., to pray Friday prayers all over the world on a day that starts with IDL and ends with IDL.
- 12:00 UT means, it will be 0:00 local time at IDL. This would synchronize the day convention used by the whole world to the Islamic day, such that every Gregorian dates has one corresponding Islamic date. This also means that the moon is born before the day begins at the IDL, and is sightable somewhere in the world on that day (e.g., in the Pacific Ocean just east of IDL where the age would be 18+ hours).
- If the moon is born between 12:00 to 23:59 UT, it means that the moon is born after the day begins at the IDL, and the monthly cycle of the moon is not completed yet. So, the month begins on the evening of the next day.

Strong Points of Suggested Global Islamic Lunar Calendar

- **The biggest advantage of this proposal is that it requires no calculations.** It is easy to compare 12:00 UT with the Conjunction Time that is given as UT in Almanacs and other

observatories web sites. So, any ordinary Muslim will be able to make the Islamic Calendar without any calculations. Any other criteria will require more calculations which different computer programs calculate with differences up to 2 minutes (e.g., sunset, or moon set).

- 12:00 UT means 0:00 local time at IDL, where the day starts when it is 0:00 local time. So, this method would **synchronize day of the week** convention all over the world.

Negative Points for Other Suggestions

- (1) **Conjunction Date without consideration of time:** Some people suggest conjunction should be the basis such that if it is on January 1 (Universal Date and any time), then the month begins. This will cause some places on earth to begin the month before the conjunction time when the moon is still in the waning phase.
- (2) **Calculation of Conjunction Point:** Some people suggest conjunction point should be the basis such that the world should be divided in two dates; one for the east of it and one for the West of it. This means we do **NOT** have a unified calendar. This defeats the purpose of this conference.
- (3) **Conjunction before mid-night of Makkah or Medinah:** Mid-night needs a clarification, whether it is astronomical mid-night or 0:00 Saudi Time. Astronomical midnight needs the calculation for every day of the year. This involves too many calculations. The 0:00 Saudi Time means it will be 9:00 pm UT (i.e., 21:00 UT) or 9:00 am at the IDL. So, if the conjunction is before 21:00 UT, the month starts everywhere on the globe. This is similar to my proposal, but lacks the possibility of sighting anywhere, because the age of the moon at sunset of a point just East of IDL (sunset around 18:00 local time at IDL) will be 9 hours only. This has no consideration of sighting possibility.
- (4) **Conjunction before Dawn (Fajr) of Makkah:** This will require calculation of Fajr at Makkah. Muslims calculate Fajr in many different ways (15^o, 18^o, 19^o etc.). There is no unified definition of Fajr. Even if you choose one definition, someone, at some point in time later, can prove it is not the correct definition.
- (5) **Conjunction before sunset of Makkah and moonset after sunset (Ummul-Qura):** This will require lots of calculations. Experts and computer programs sometimes differ in the results of these calculations. Moreover, this Calendar has no consideration of sightability in Makkah or anywhere in the world. It may go against actual sighting somewhere on earth, when in some month the moon will be visible in some part of the world and month in this calendar does not start on the following day, e.g., Ramadan 1430 moon will be sightable on August 20, 2009 in Polynesian Islands, and 1st day of Ramadan should be August 21, 2009, but the Ummul-Qura Calendar shows it as August 22, 2009. Similar thing will happen in Dhul-Qi'dah moon can be easily seen in Polynesian Island on October 18, 2009, and Ummul-Qura Calendar shows 1st Dhul-Qi'dah on October 20, 2009. This happens because the moon sometimes is in the Southern hemisphere, where it can be seen, but it is not above the horizon of Makkah.

(6) **Calculation of Sightability:** The calculations of sightability have not reached a stage of 100% accuracy and reasonable consensus among experts. It will never reach 100% accuracy, because of factors like human optics variability, atmospheric conditions (pressure temperature, and humidity) at the time of observation, and presence or absence of city lights on the horizon.

Conclusions

The best solution for Global Islamic Calendar is “**Conjunction before 12:00 UT.**” This suggestion has a consideration of Hilal formation, and sightability somewhere in the world, meeting the Shari’ah requirement.

Allah subhanahu wa ta’ala has given us knowledge about calculations for motions of the earth and the moon, which are moving with Hisaab. Calculated calendar meets the intent of Qur’an and Sunnah and the benefits greatly surpass the consequences faced by false sighting claims and waiting for a decision by the authorities some time even past mid-night. Suggested Global Islamic Calendar will unite all Muslims in the world for religious observances without any chaos and confusion.

We pray to Allah subhanahu wa ta’ala to keep us on the right path and help us keep our minds open for ideas that are consistent with new knowledge without contradicting the basic principles of Islam. Ameen!