ONEDAY NATIONAL WORKSHOP on Contemporary Issues and Challenges on Prayer Times and Moon Sighting
Kaduna Sun. 15th Sha’aban 1437H (22nd May 2016G)
Held at Dialogue Computer Institute Ali Akilu Road Kaduna
The Sharia & Astronomical Views of Moon Sighting

Delivered at the ASQIN

ONE DAY NATIONAL WORKSHOP on Contemporary Issues and Challenges on Prayer Times and Moon Sighting

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By

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OUTLINE

➢ Introduction: Unity of the Ummah
➢ The Challenge
➢ Importance of Astronomy to Muslims
➢ Sun and Moon in the Qur’an
➢ Moon sighting issues, past and present
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➢ Criteria for Crescent visibility.
➢ Why different lunar calendars?
➢ Moon sighting in different countries.
➢ Conclusions
O you who believe! Fear Allah as He should be feared and die not except in a state of Islam. And hold fast, all of you together, to the Rope of Allah and be not divided.
O you who believe! Fear Allah as He should be feared and die not except in a state of Islam (as Muslims with complete submission to Allah).

And hold fast, all of you together, to the Rope of Allah and be not divided among yourselves, and remember Allah's Favour on you, for you were enemies one to another but He joined your hearts together, so that, by His Grace, you became brethren (in Islamic Faith), and you were on the brink of a pit of Fire, and He saved you from it. Thus Allah makes His Ayat (proofs, evidences, verses, lessons, signs, revelations, etc.,) clear to you, that you may be guided (Al-Imran 101 – 102).
Minding The Fundamentals

أبي هريرة - رضي الله عنه - قال رسول الله ﷺ: (إِنَّ اللَّهَ عَزِّ الْجَلَّالَـِّينَ)
قال: مَنْ عَادَى لِي وَلَيًا، فَقَدْ أَذْنَتْهُ بِالْحَرْبِ، وَمَا تَقْرَبَ إِلَيْيَ عَبْدِي بِشَيْءٍ أَحْبَبَ إِلَيْيَ مَمَّا افْتَرَضَتْ عَلَيْهِ، وَمَا يَزَالُ عَبْدِي يَتَقْرَبُ إِلَيْيَ بِالْقَوَافِلِ حَتَّى أَحْبَبَهُ، فَإِذَا أَحْبَبْتُهُ، كُنْتُ سَمَعَةُ الَّذِي يَسْمَعُ بِهِ، وَبَصَارَةُ الَّذِي يُصَرُّ بِهِ وَيِدَّ الطَّيِّبَةُ إِلَيْهِ، وَرِجْلَةُ الَّتِي يَمْشِي بِهَا، وَإِنْ سَأَلْنِي لُؤْسِيَّةً، وَلَٰكِنْ أَسْتَعْدَانِي لأُعْيِذَنِي، وَمَا تَرْدَدُتْ عَنْ شَيْءٍ أَنْ أَفَاعُلْ تُرْدُدُ عَنْ نَفْسِ عَبْدِي الْمُؤْمِنِ، يَكْرُهُ الْمَوْتَ، وَأَنَا أَكْرُهُ مَسَاءَتِهِ.)
Unity of Ummah – Its implications

• Unity in brotherhood (like one body)
• Unity in Fundamentals
• Unity in Diversity (within the prescribed limits)
  (e.g. in Salat times)
  – Different times for different countries
  – Different times for different cities
  – Different times for different mosques
• (e.g. in Ramadan)
  – May start on different days for different countries – but must not be more than one day difference across the globe.
Muslims started **Ramadan 2005 on four solar days/dates** (instead of one lunar day/date).

Oct. 3 Monday: Nigeria (some Sunday, Oct. 2 also)
Oct. 4 Tuesday: S. Arabia, M East, followers of Saudi dates)
Oct. 5 Wed.: Australia, Indonesia, Malaysia, Brunei, Turkey, Africa, Europe, Americas
Oct. 6 Thurs.: Bangladesh, India, Pakistan, Central Asia

**Eid al-Fitr 2005 was celebrated on four different days/dates:**

Nov. 2 Wed: Nigeria, Libya
Nov. 3 Thurs.: S. Arabia, M East, Indonesia, EU, USA (ISNA)
Nov. 4 Friday: S. Africa, UK, Canada, USA, India, Pakistan
Nov. 5 Saturday: Northern India, etc.
IMPORTNACE OF ASTRONOMY TO MUSLIMS

DEFINITIONS:

• ASTRONOMY: The branch of physics that studies celestial bodies (sun, moon, planets, stars) and the universe as a whole through observations and using mathematical calculations, to gain insights and scientific facts and figures about them.

• ASTROLOGY: The art of predicting or determining the influence of the planets and stars on human affairs

HENCE: ASTRONOMY (√), ASTROLOGY (✗)

• 1. WordWeb 4.5a http://wordweb.info/contact.html Copyright Antony Lewis 2005
• 2. The New Lexicon Webster’s Encyclopedic Dictionary of the English Language
Why do Muslims need to study astronomy?

1. Daily Salats are tied to movements of the sun.

   And establish regular prayers at the two ends of the day and at the approaches of the night. [Quran 11: 114]

2. Daily Salats are tied to the direction of Qibla

   Turn then Thy face in the direction of the sacred Mosque: Wherever ye are, turn your faces in that direction. [Quran 2: 144]
3. Movement of moon determines months and years.

It is He Who made the sun to be a shining glory and the moon to be a light (of beauty), and measured out stages for her; that ye might know the number of years and the count (of time). [Quran 10: 5]

4. Islamic calendar is based on the moon

They ask thee concerning the Crescent Moons. Say: They are but signs to mark fixed periods of time in (the affairs of) men, and for Pilgrimage. [Quran 2:189]
In summary: Four out of the Five pillars of Islam rely on movements of the sun and moon

- **Sun**: Salat times fixed to movements of the sun
- **Moon**: Fasting, Hajj, Zakat fixed to movements of the moon
- **In Qu’ran**: Sun mentioned 32 times, Moon mentioned 27 times
And from among His Signs are the night and the day, and the sun and the moon. Prostrate not to the sun nor to the moon, but prostrate to Allâh Who created them, if you (really) worship Him.
And by the sun and its brightness;

And by the moon as it follows it (the sun);

And by the day as it shows up (the sun's) brightness;

And by the night as it conceals it (the sun);
Verily! In the creation of the heavens and the earth, and in the alternation of night and day, there are indeed signs for men of understanding.

Those who remember Allâh (always, and in prayers) standing, sitting, and lying down on their sides, and think deeply about the creation of the heavens and the earth, (saying): "Our Lord! You have not created (all) this without purpose, glory to You! (Exalted be You above all that they associate with You as partners). Give us salvation from the torment of the Fire.
Points to ponder

• How many of us today belong to the group of ‘Ulul Albab’ (men of understanding), who ponder over the wonders of creation of the Heavens and earth as commanded by Allah in Surat Al-Imran?

• With the exception of the very few who do care to think about the universe and study its wonders regularly, most have lost touch with the Universe.

• Majority simply go about their daily routine affairs (Leaders, civil servants, traders, preachers, engineers, politicians, teachers, farmers, lawyers, mechanics) each engaged with their pursuits of livelihood.

• Quiz ?: i. Names of lunar months in Islam ii. Lunar date iii. Last time looked for new moon.
Two classes of creation:

*Fixed and predictable*: Phenomena in nature that are regular and guaranteed. They are beyond human control e.g. movement of sun, moon, and stars, which follow fixed rules. (no need to seek or pray for as these are fixed by Allah (SWT)).

*Variable* Phenomena that are not predictable with certainty. Weather, wealth, health, human behavior, success in endeavors etc are examples of the unpredictable. (These should be sought and prayed for).

*All the major acts of worship are tied to the fixed and predictable phenomena.*
Moon sighting issues: Past and Present

Discussions on moon sighting are not new

From *(Fatawa Al-Subki: 1/211)*:

- “And let it not be believed that the sacred law (shar’) has invalidated acting on the dictates of mathematical calculation (hisab). Nay! That hasn’t come. And how could it when [mathematical] calculation is employed in matters of inheritance (fara’id) [or in the compulsory acts] and other things? And writing and [mathematical] calculation were [both] mentioned in the hadith. Writing isn’t forbidden. So the same goes for calculation.”
• “And no explicit text (nass) from the sacred law has come to us [stating] that the testimony of every two witnesses must be accepted equally if what is testified to is true or false. And the obligation of fasting and the rulings about the month do not result from the mere report or testimony to the point that we say [that] the criterion (‘umda) is the Lawgiver’s saying: “Fast whenever someone informs you [he has sighted the moon].” For, if such a thing had existed, we’d accept it without hesitation. However, such a thing has never come in scripture. Rather, it is our obligation to ascertain [the truth] in accepting the report until we know its true nature firstly.
And there is no doubt that some of those who testify to seeing the hilal, often don’t see it and has a miscalculation, or he sees something he thinks is the hilal, while it is not the hilal. Or his eye makes him see what it [actually] didn’t see. Or he’ll deliver the testimony after days and error occurs with respect to the [actual] night that he had seen [something] in it. Or his ignorance is so grave that it leads him to believe that there is a reward in him driving the people to [start the] fast. Or he might be one who aims at establishing his trustworthiness [to people], so that he’s [then] taken that as a means to be given accolades and become accepted in the eyes of the judges. And all of these types, we have already seen and heard of.”
Sphericity of the of the earth
Acknowledged/discussed over 900 years ago in tafsir of the Qur’an!!!

Fakhr Ad-din Ar-Razi, (544-606/1149-1209):
Philosopher, Historian (he wrote the “History of the Dynasties”), and theologian, he belonged to the Shafi’i School of Law and was a defender of orthodox views in his book, *Kitab Al-Muhassal*. His commentary of the Qur’an called the Mafatih Al-Ghaib, (“The Keys of the Unseen”), itself a quotation from the Koran (6:59. “With him are the Keys of the Heaven”). He was born south of Tehran and died in Herat (Rahimahullah).

The second point: It has been established by evidence that the earth is spherical and that the sky surrounds it and there is no doubt that the sun is in its orbit.....
MUSLIMS HAVE HAD GREAT ASTRONOMERS

few Muslim Astronomers (9th - 12th Centuries)

• Al-Farghani (Alfraganus) (d.861) wrote on the astrolabe, explaining the mathematical theory behind the instrument and correcting faulty geometrical constructions of the central disc, that were current then.
• Al-Battani's (Albalegnius) (d. 929) work included timing of the new moons, calculation of the length of the solar and sidereal year, the prediction of eclipses and the phenomenon of parallax.
• Al-Sufi (903-986) made several observations on the obliquity of the ecliptic and the motion of the sun (or the length of the solar year). He also made observations and descriptions of the stars, setting out his results constellation by constellation ...
• Al-Biruni (973-1050) claimed that the earth rotated around its own axis. He calculated the earth circumference, and fixed scientifically the direction of Makkah from any point of the globe.
• Ulugh Beg (Ulugh Beigh), born in 1394 CE, constructed a magnificent observatory in Samarkand equipped with astronomical instruments of excellent make and accuracy.

From: An Overview of Astronomy in Islam - By Qamar Uddin, York (UK) [ICOP]
BASICS OF ASTRONOMY
(A lot has been known about the universe)

SOME CLARIFICATIONS

- There is only one sun (Shams)
- Every day there is sunrise and sunset
- There is only one moon (Qamar)
- Everyday there is moonrise and moonset
- Planets are solid bodies in the heavens
- Stars are burning ‘lamps’ in the heavens
- Seven Heavens are not same as planets
- Everything in the universe is in motion
- Astronomy is not controlled by kuffar
Space View of Sun Moon & Earth

NOTE
Sun light always fall on the moon and the same side of the moon always faces the earth. However, at the instant of New Moon (conjunction), no light from the moon reaches the earth (Mahaq).

It is He Who made the sun to be a shining glory and the moon to be a light (of beauty), and measured out stages for her; that ye might know the number of years and the count (of time). [Quran 16:5]
Criteria for visibility after conjunction

1. **Age** (of the moon after conjunction): About 17 hours or more

2. **Elongation** (angular separation from the sun): At least eight (8) degrees

3. **Altitude** (height above the horizon): At least 10 degrees

4. **Time Lag** (difference between sunset and moonset): At least 22 minutes

- **Note:** Other factors also affect the visibility of the crescent (e.g. atmospheric conditions) and so it may not necessarily be visible even if the above conditions are met.
Photographs of crescents at various Ages and altitudes

Moon age 22h 42m, Elevation 1.72 degrees

Moon age 23h 33m, Elevation 6.1 degrees
Photographs of crescents at various Ages and altitudes
Cont......

Moon age 25.4 hrs, Elevation 2.9 degrees

Moon age -27 hrs, Elevation 7.6 degrees
Photographs of crescents at various Ages and altitudes
Cont ......
Why Moon Calendars Differ?

- **Calendars depend on criteria used:**
  - By a visible moon (India, Pakistan, Bangladesh, Morocco, S. Africa)
  - Moonset after the sunset (Saudi Arabia, Egypt and the M. East)
  - Conjunction (Libya, Tunis, etc.)
  - Moon’s fixed elongation or altitude (Indonesia, Malaysia, Turkey, etc.)
<table>
<thead>
<tr>
<th>Country</th>
<th>Moon Sighting Committees/Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saudi Arabia</td>
<td>Moon Sighting Committees, but final say with Judicial Council</td>
</tr>
<tr>
<td>South Africa</td>
<td>Large groups</td>
</tr>
<tr>
<td>Pakistan, India, Bangladesh</td>
<td>Large groups</td>
</tr>
<tr>
<td>Morocco</td>
<td>Government Structure – 16 states, each with viewing points, (total of 278) at each point with over 100 observers including Scholars, Judges and Astronomers.</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Sultanate Committee (network of Emirates), National Moon Sighting Committee, ASQIN, individuals.</td>
</tr>
</tbody>
</table>
Conclusions

- All knowledge is from Allah (SWT) (ayatul Kursiyyu).
- Beginning of lunar months must be based on actual naked-eye sighting. Calculations can only be used as guide.
- Our esteemed scholars and Muslim leaders need not be apprehensive about science and astronomy. It's like any other branch of knowledge e.g. agriculture, medicine etc.
- Muslims have qualified faithful astronomers to consult for on issues of fiqh.
- Muslims should develop the habit of looking for the crescent every month.
- Nigeria should develop a coordinated structure and streamlined system of crescent sighting and adopt a Fiqh criteria for analyzing/accepting crescent sighting reports.
Assalamu Alaikum

Whatever we say that is right is by Allah (SWT)’s Grace and whatever we say that is wrong is from shaitan and we seek His forgiveness.

و آخر دعوانا ان الحمد لله رب العالمين والسلام عليكم ورحمة الله