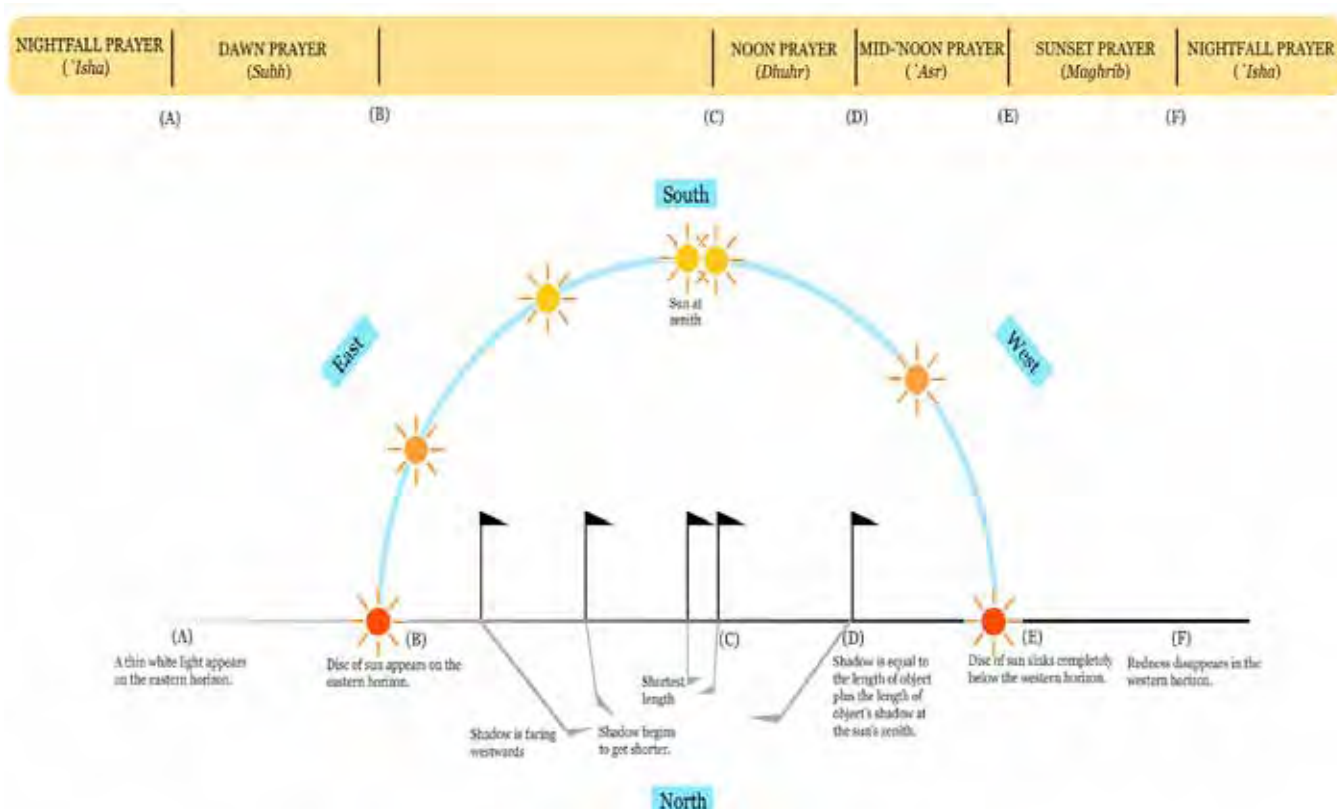


# THE CAMBRIDGE PRAYER TIMETABLE PROJECT



## SUMMARY

Cambridge Prayer Times Project

Summer 2004 Summary Report

<http://www.prayer-time.org.uk>

[contact@prayer-time.org.uk](mailto:contact@prayer-time.org.uk)

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## **In the Name of Allah, the Compassionate, the Merciful.**

All praise is due to Allah Who guided us to Islam and caused ritual prayer (*salah*) to be the pillar of our faith. Allah the Exalted says, "Truly the prayer is a scheduled injunction upon the believers." (Qur'an 4:103). I bear witness that there is no god but Allah and that Muḥammad is His slave and Messenger, may the mercy and peace of Allah be upon him, his family, and his companions.

The objective of the Cambridge Prayer Timetable Project is to confirm the times of prayer for Cambridge (a location of extreme latitude), *via* proper research, technical analysis and publication of the results for the benefit of the wider community.

It is also noted that the establishment of the *fajr* prayer also ends the permissibility to eat for those who fast. Concern on this matter of timing is obviously understandable, because an erroneous delay in the beginning of *fajr* would have serious implications for the beginning of the fast.

In conformance with the compassionate spirit of Islamic Law, the agreement of Muslim scholars to follow a certain astronomical data to determine the beginning of prayer timings, their rulings (*Fataawa*) regarding concession concerning praying *'isha* in the West, the findings provided by the Council of Astronomers and In accordance with

- 1) The Muslim World League Conference's resolutions in a meeting held in 1406 A.H. in Makkah al-Mukarramah to discuss prayers time calculations in parts of the world that lie on or above 45° North and South of the Equator.
- 2) The Islamic Cultural Centre, London
- 3) The International Conference for Time-table at the Islamic Cultural Centre, London, in 1984.
- 4) The Egyptian Astronomy Directorate.
- 5) The Arab Union for Astronomy and Space Sciences in Amman (Jordan).
- 6) The British Royal Observatory, Greenwich.
- 7) Her Majesty's Nautical Almanac Office

Islamic scholars of prayer times determined the following:

(Each prayer time is described in two ways, i.e., the physical astronomical phenomenon specified in Islamic Law and the corresponding astronomical calculation. The latter is expressed in terms of the position of the sun above or below the horizon.)

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- ✚ **Fajr** corresponds to the first appearance of a white light that spreads laterally across the horizon. This is referred to as true dawn and corresponds to an angle of the sun's depression of  $-17.50^\circ$  to  $-18.00^\circ$  below the eastern horizon.
- ✚ **Sunrise** corresponds to the appearance of the highest point of the sun's disc on the eastern horizon, which corresponds to when the sun is  $-0.5^\circ$  to  $-1^\circ$  below the eastern horizon.
- ✚ **Dhuhr** corresponds to the sun passing its zenith - the highest point it will reach that day. This (zenith) corresponds to the shortest shadow of an object [for that day].
- ✚ **Asr** corresponds to the position of the sun such that the length of the shadow of an object is equal to the length of the object plus the length of the object's shadow when the sun is at its zenith. The corresponding angle changes with respect to time and place.
- ✚ **Maghrib** corresponds to the complete disappearance of the sun's disk below the western horizon. This corresponds to the sun being  $-0.5^\circ$  to  $-1^\circ$  below the western horizon.
- ✚ **Isha** corresponds to the disappearance of red twilight. This corresponds to the sun being  $-17.50^\circ$  to  $-18.00^\circ$  below the western horizon.

For safety in affirmation of prayers time entry; it is sufficient to

- ✚ Add 2 [clock] minutes to the calculated time for the *dhuhr*, *asr*, *maghrib*, and *isha* prayers,
- ✚ Subtract 2 minutes from the calculated time for *fajr* and Sunrise.

Cambridge like other cities, anywhere between latitudes of  $48^\circ$  to  $66^\circ$  North or South, suffers from the absence of the features that legally define the true *fajr* and *isha* during the summer months (21<sup>st</sup> May to 21<sup>st</sup> July).

This phenomenon results in the amalgamation of *maghrib* time with *fajr* due to persistence twilight, i.e., the lingering of twilight through the start of *isha* and until the start of *fajr*. It is extremely difficult to define *isha* time, which in some days can be as short as a few minutes. This phenomenon can be seen in Table I.

Clearly as one notices in Table I (table below), from 1<sup>st</sup> May to 21<sup>st</sup> May and from 22<sup>nd</sup> July till the middle of August the phenomena of persistent twilight exist. For instance, *isha* time is very late and *fajr* time comes very early, till the difference between them is less than an hour. Obviously, it is very difficult to perform *isha* and *fajr* prayers or to fast and perform *taraweeh* prayer in *Ramadan* during this period of time.

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## Table Number (1)

### CAMBRIDGEMUSLIMS PRAYER TIMETABLE FOR 2004

	April Fajr	April Isha	May Fajr	May Isha	June Fajr	June Isha	July Fajr	July Isha	August Fajr	August Isha
01	04:37	21:32	03:01	22:55	***.	***.	***.	***.	02:30	23:38
02	04:34	21:34	02:57	22:59	***.	***.	***.	***.	02:34	23:34
03	04:31	21:36	02:53	23:03	***.	***.	***.	***.	02:38	23:29
04	04:28	21:39	02:49	23:06	***.	***.	***.	***.	02:42	23:25
05	04:25	21:41	02:45	23:10	***.	***.	***.	***.	02:46	23:21
06	04:22	21:43	02:42	23:14	***.	***.	***.	***.	02:50	23:17
07	04:19	21:46	02:38	23:18	***.	***.	***.	***.	02:54	23:13
08	04:16	21:48	02:33	23:22	***.	***.	***.	***.	02:57	23:10
09	04:13	21:51	02:29	23:26	***.	***.	***.	***.	03:01	23:06
10	04:10	21:53	02:25	23:31	***.	***.	***.	***.	03:05	23:02
11	04:07	21:56	02:20	23:35	***.	***.	***.	***.	03:08	22:58
12	04:04	21:58	02:16	23:40	***.	***.	***.	***.	03:11	22:55
13	04:01	22:01	02:11	23:45	***.	***.	***.	***.	03:15	22:51
14	03:58	22:04	02:06	23:50	***.	***.	***.	***.	03:18	22:48
15	03:55	22:06	02:01	23:56	***.	***.	***.	***.	03:21	22:44
16	03:52	22:09	01:55	00:02	***.	***.	***.	***.	03:24	22:41
17	03:48	22:12	01:49	00:09	***.	***.	***.	***.	03:27	22:37
18	03:45	22:15	01:42	00:17	***.	***.	***.	***.	03:30	22:34
19	03:42	22:18	01:35	00:26	***.	***.	***.	***.	03:33	22:30
20	03:39	22:20	01:26	00:39	***.	***.	***.	***.	03:36	22:27
21	03:35	22:23	01:12	***.	***.	***.	***.	00:54	03:39	22:24
22	03:32	22:26	***.	***.	***.	***.	01:19	00:39	03:42	22:21
23	03:29	22:29	***.	***.	***.	***.	01:34	00:29	03:44	22:17
24	03:25	22:32	***.	***.	***.	***.	01:44	00:21	03:47	22:14
25	03:22	22:36	***.	***.	***.	***.	01:51	00:14	03:50	22:11
26	03:18	22:39	***.	***.	***.	***.	01:58	00:08	03:53	22:08
27	03:15	22:42	***.	***.	***.	***.	02:04	00:02	03:55	22:04
28	03:11	22:45	***.	***.	***.	***.	02:10	23:57	03:58	22:01
29	03:08	22:49	***.	***.	***.	***.	02:15	23:52	04:00	21:58
30	03:04	22:52	***.	***.	***.	***.	02:20	23:47	04:03	21:55
31			***.	***.			02:25	23:43	04:05	21:52

**Table Number (1) - Raw Data for Cambridge prayer timetable in Summer months**  
**\*\* \*\* Defining features of true Fajr and Isha during the Summer months are absent.**

Consequently, all those countries which are on such extreme northerly latitudes, find it necessary to adjust the prayer times for *fajr* and *isha*, within the boundary of *shariah* rules. This is to make it convenient for Muslims' day to day life.

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Some of the Islamic Centres in the United Kingdom have different prayer timings. This is mainly due to different opinions in “estimating” (*taqdeer*) prayer timings during that period when the *shariah* phenomena is interrupted or absent completely.

The Cambridge Prayer timetable Project uses the “*Daruri*” *shariah* rules, which indicate that if anything is permitted under “extreme necessity” the permission should only be confined within that terminology and not beyond. And those exceptional cases should not be generalised. Accordingly, if we have to estimate some prayer times – when the *Shariah* phenomena is difficult to implement and interrupted or absent, we should only confine our estimation under these circumstances.

Here in Britain, the *shariah* phenomenon (i.e., the absence of persistent twilight) is present for about for about eight months. We therefore need only to estimate, change or adjust any of the prayer times for the period when the *shariah* phenomenon is absent or difficult to implement.

In some prayer time-tables the timings for prayers are changed all year round without any valid reason. We only need to estimate the prayer timings if the *shariah* phenomena is absent or difficult to implement. We follow and abide by the Islamic *shariah*'s rules in order to determine the prayer timings in the period where the *shariah* phenomena is stable, consistent and is implement able.

We would like to draw your attention to the following:

- ✚ Prayer times provided by astronomical calculations are only approximations. During a calculation, the minutes of a prayer time might be rounded up or down depending on the fraction that follows them. It is unwise to start or terminate praying or fasting at precisely the scheduled time. While the decree suggests a two-minute margin of safety, an additional few minutes would provide some insurance.
- ✚ A prayer offered before its prescribed time does not count whereas a prayer offered, for example, ten minutes after the start of its time is valid. Erring on the side of slightly delaying a prayer is safer than starting it slightly early.
- ✚ In terms of fasting, it is better to err on the side of slightly hastening the calculated time for *fajr* and slightly delaying the time for *maghrib*.
- ✚ Many schedules provide the time for the sun's zenith and label it as *dhuhr*. Praying at *zawal* (while the sun is at its zenith) is not permissible. *Dhuhr* begins when the sun has *passed* its zenith, at least two minutes later.
- ✚ The time for *asr* according to the Hanafi school is when the shadow of an object is *twice* the length of the object plus the length of its shadow when the sun is at its zenith.

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- ✚ In general, it is best to offer prayers at their earliest possible times. When fasting, it is best to delay the pre-dawn meal and hasten breaking the fast. Unless there is a *fiqh* reason to do otherwise, one should only depart from this practice if one fears invalidating his prayer or fast. Therefore, one should not use unrealistically large margins of safety.
- ✚ The Islamic Society of North America (ISNA) endorses the view that both *fajr* and *‘isha* start when the sun is 15° below the horizon. The Council of Astronomers who provided guidance for the eighth Muslim World League decree feels that 15° does not reflect reality. And Allah knows best.
- ✚ Many prayer timetables compute *‘isha* as being 1.5 hours after *maghrib*. While this is true in Mecca and some other equatorial areas, it is not a universal ruling.
- ✚ According to Sheikh Ahmad Kutty one is allowed to pray *‘isha* one hour after *maghrib* without incurring sin, especially if he/she has to go to bed early in summer when *maghrib* time is somewhat late or in such places where there is no much gap between *‘isha* and *fajr*.<sup>1</sup>
- ✚ This is also maintained by the prominent Azharite scholar Sheikh ‘Abdul-Majeed Subh, who adds: “One can, as long as he is driven by necessity, pray *maghrib*, then wait for one hour and perform *‘isha* afterwards. This ruling is special to Muslims living in the West who find it very difficult to stay awake for *‘isha* prayer.”<sup>2</sup>
- ✚ Sheikh Yusuf al-Qaradawi, an eminent Muslim scholar concludes:<sup>3</sup>
  - 1) “Originally, Muslims are required to perform prayer at their appointed times. However, the case of Muslims living in the West may necessitate them to get up early in the morning to reach their work on time. With this, they find it difficult to stay up late to perform *‘isha* at its appointed time.
  - 2) If we force people to perform *‘isha* at its appointed time, then we are ordering them to do something beyond their capability.
  - 3) It stands to reason that Islam is the religion of ease. It tends to remove hardship from its followers. Thus, Muslims living in the West who face such difficulty may be allowed to combine both *maghrib* and *‘isha* together.
- ✚ To follow a certain school of jurisprudence does not mean that others are not reliable or sound. Moreover, according to *shariah* rules, a scholarly opinion does not breach other scholars’ opinion, obviously only in the area where people can seek scholar’s opinion, e.g.,

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<sup>1</sup> <http://www.islamonline.net/fatwa/english/FatwaDisplay.asp?hFatwaID=77784>

<sup>2</sup> See the link above.

<sup>3</sup> See the link above.

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timings for praying and fasting according to a certain school of jurisprudence does not mean the prayers and fasting of others are not valid.

Thus, it has become clear after reading the above opinions of scholars that there are two opinions. The first states that Muslims who face such a difficulty in the West can wait one hour after performing *maghrib* and then perform *`isha* prayer. The other opinion states that those Muslims can combine both *maghrib* and *`isha*, if they are driven by the same necessity. Thus, one can choose the opinion that best suit your case, keeping in mind that Islam is the religion of ease.

Furthermore whilst bearing in mind the permissibility of combining both *maghrib* and *`isha*, we are concerned of the formation of habit which may lead to difficulty when the *shariah* phenomena is again stable, consistent and implementable. We therefore favour the scholarly opinion that states that Muslims who face such a difficulty in the West can wait one hour after performing *maghrib* and then perform *`isha* prayer.

This also support our recognition that the upper limit in terms of the latest time for the start of *`isha* is 10.30 PM, thus offering respite to our fellow brethren who find it difficult to perform the *Isha* and *fajr* prayer at its appointed time, and to get up early in the morning to reach their work on time or to fast and perform *taraweeh* prayer in *Ramadan*. This compounded by the need to go bed early in summer when *maghrib* time is somewhat late or/and that there is not much gap between *`isha* and *fajr*.

It stands to reason that Islam is the religion of ease, with this it facilitates those in need to get up early in the morning to reach their work on time. This allowance further remove hardship, especially for the elderly, the sick, the weak, students and children coming of age who may be experiencing hardship in putting off their fixed time for sleep, as well as those who are in dire need of going to bed early because of their studies or job situations.

We recognise the need to estimate the prayer timings only if the *shariah* phenomena is absent or difficult to implement.

✚ Sheikh Muhammad Rida, the great Muslim thinker (1865 – 1935) concluded:

- 1) As Islam has been propagated in countries in high latitudes, then people living there should estimate the times of prayer depending on their personal reasoning, as pointed out by the Prophetic *hadith* about *al-Dajjal*.

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- 2) But what countries should they follow for their fixed times of prayer? One opinion is that the fixed times of prayers in areas of moderate latitudes in which religious rules were prescribed, such as Makkah and Medina, should be the criteria on which times of prayers should be estimated.
- 3) Another opinion is that times of prayer in high latitudes should be estimated according to the timing of the nearest moderate latitude areas. Anyway, acting on either of these two opinions is permissible, for both of them are drawn by *ijtihad* (personal reasoning that is not based on religious texts).

✚ According to Sha`afi school of jurisprudence, if one's location does not have one or more of prayer times, e.g., due to extreme northerly latitude, in that case, one should pray and fast at the same time as the nearest city that has the true times (*Aqrab al-Beldan*).

✚ In addition, in its twelfth session,<sup>1</sup> the Board of Grand Scholars in Saudi Arabia issued a *fataawa* that Muslims living in extreme latitudes should estimate the times of prayers in accordance with the nearest moderate latitude area in which the times are easily distinguishable.

Dr. Mohammad Hawari, who has researched the methods of prayer computation for the past twenty-five years and feels that the methods outlined above are the only ones that are consistent with *fiqh* principles and astronomical phenomena.<sup>2</sup>

We see that both opinions are equally correct and beneficial, on condition that all Muslims living in any of those areas agree on choosing one particular town to follow in estimating times of prayers, so that the times of prayer are not different in one town, in the sense that one group of people follow the timing of Makkah while others follow the timing of the nearest moderate latitude area, for thus dissension and disputes might arise among Muslims, which are prohibited. And Allah knows best.

The Cambridge Prayer Timetable Project, in consultation with the Cambridge Muslim Welfare Society, Cambridge Muslims and others, favour the scholars' opinion that Muslims living in Cambridge (extreme latitudes) should estimate the times of prayers in accordance with the nearest moderate latitude area in which the times are easily distinguishable.

Moreover after seeking advise from

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<sup>1</sup> <http://www.islamonline.net/fatwa/english/FatwaDisplay.asp?hFatwaID=93144>

<sup>2</sup> Prof. Dr. Mohammad Hawari, Islamic Centre, Aachen. He headed the Council of Astronomers to the Muslim World League Conference in a meeting hold in 1406 A.H. in Makkah Al-Mukarramah to discuss prayers time calculations.



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✚ Dr. Steve Bell, Her Majesty's Nautical Almanac Office.

✚ Dr M.S.M Saifullah, University of Cambridge.

✚ The Islamic Cultural Centre, London.

We have elected on the use of data for the city of Alecon, France; which fits the requirement perfectly.

In order to make it easier for our fellow brethren, we have tried to blend the times between the presence and absences of the *shariah* phenomena; this allows no sudden jumps in time in either direction. (see Table No 2)

Table Number (2)												
CAMBRIDGEMUSLIMS PRAYER TIMETABLE FOR 2004												
	May Fajr	May Imsak	May Isha	June Fajr	June Imsak	June Isha	July Fajr	July Imsak	July Isha	August Fajr	August Imsak	August Isha
01	02:59	02:59	21:48	02:11	02:11	22:15	01:56	01:54	22:29	02:47	02:28	22:05
02	02:55	02:55	21:48	02:08	02:08	22:15	01:58	01:56	22:29	02:48	02:32	22:05
03	02:51	02:51	21:49	02:06	02:06	22:18	02:00	01:58	22:29	02:48	02:36	22:04
04	02:47	02:47	21:50	02:04	02:04	22:19	02:03	02:01	22:28	02:48	02:40	22:04
05	02:43	02:43	21:51	02:02	02:02	22:20	02:05	02:03	22:28	02:48	02:44	22:03
06	02:40	02:40	21:52	01:59	01:59	22:21	02:07	02:05	22:28	02:48	02:48	22:03
07	02:36	02:36	21:53	01:57	01:57	22:22	02:10	02:08	22:28	02:52	02:52	22:03
08	02:36	02:31	21:54	01:55	01:55	22:23	02:12	02:10	22:27	02:55	02:55	22:03
09	02:36	02:27	21:55	01:53	01:53	22:24	02:15	02:13	22:27	02:59	02:59	22:02
10	02:36	02:23	21:56	01:52	01:52	22:25	02:18	02:16	22:26	03:03	03:03	22:02
11	02:36	02:18	21:57	01:50	01:50	22:25	02:20	02:18	22:25	03:06	03:06	22:01
12	02:36	02:14	21:58	01:48	01:48	22:26	02:23	02:21	22:24	03:09	03:09	22:01
13	02:36	02:09	21:59	01:47	01:47	22:27	02:24	02:24	22:23	03:13	03:13	22:00
14	02:36	02:04	22:00	01:46	01:46	22:27	02:26	02:26	22:22	03:16	03:16	22:00
15	02:36	01:59	22:00	01:44	01:44	22:28	02:29	02:29	22:21	03:19	03:19	21:59
16	02:36	01:53	22:00	01:43	01:43	22:28	02:32	02:32	22:20	03:22	03:22	21:59
17	02:36	01:47	22:01	01:43	01:43	22:28	02:34	02:34	22:19	03:25	03:25	21:58
18	02:36	01:40	22:02	01:42	01:42	22:29	02:37	02:37	22:18	03:28	03:28	21:58
19	02:36	01:33	22:03	01:42	01:42	22:29	02:40	02:40	22:17	03:31	03:31	21:57
20	02:36	01:24	22:04	01:42	01:42	22:29	02:43	02:43	22:16	03:34	03:34	21:57
21	02:36	01:10	22:05	01:42	01:42	22:30	02:45	02:45	22:15	03:37	03:37	21:56
22	02:36	02:36	22:06	01:42	01:42	22:30	02:45	01:17	22:14	03:40	03:40	21:56
23	02:33	02:33	22:07	01:43	01:43	22:30	02:45	01:32	22:13	03:42	03:42	21:55
24	02:31	02:31	22:08	01:43	01:43	22:30	02:45	01:42	22:12	03:45	03:45	21:54
25	02:28	02:28	22:09	01:44	01:44	22:30	02:46	01:49	22:11	03:48	03:48	21:54
26	02:25	02:25	22:10	01:46	01:46	22:30	02:46	01:56	22:10	03:51	03:51	21:53
27	02:23	02:23	22:11	01:47	01:47	22:30	02:46	02:02	22:09	03:53	03:53	21:53
28	02:20	02:20	22:12	01:49	01:49	22:29	02:46	02:08	22:08	03:56	03:56	21:52
29	02:18	02:18	22:13	01:50	01:50	22:29	02:47	02:13	22:07	03:58	03:58	21:51
30	02:16	02:16	22:14	01:52	01:52	22:29	02:47	02:18	22:06	04:01	04:01	21:51
31	02:13	02:15	22:15				02:47	02:23	22:05	04:03	04:03	21:52

**Table Number (2) - Original Cambridge timetable in Summer months**  
 White font defining features of blending the times between the presence and absences of the shariah phenomena and the move from Cambridge data to Alecon data \*\* Imsak time is the time at which fasting starts (e.g. during Ramadan).\*\*

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For those who want to strictly abide by the school of jurisprudence that states that when the *shariah* phenomena is there then one should follow it no matter how difficult. We have a table, which is available upon request.

The Cambridge Prayer timetable Project would further like to record their thanks and appreciation to all, who contributed directly or indirectly, for all the help, guidance, support and advice extended; we recognise that without their generous help this project may not have been possible.

Just as they have helped to make things easy for us, may Allah (SWT) grant them ease in all their affairs in this life and the next.

May Allah, the Most High, bless Prophet Mohammed, his companions and all those who follow the guidance. Ameen.

Finally, we would like to say *alhamdulillah* for everything Almighty Allah has blessed us with. If we have misinformed or misrepresented anything, may Almighty Allah forgive us and bless us with friendship of those who would correct us. And anything that has benefited someone, may Allah's blessings go to those teachers who transmitted the knowledge to us. May Almighty Allah have mercy on us and Ummah of Mohammed (SAW).

**"Hold on altogether to the rope that Allah extends to you and do not disperse."**

**Allah is the Possessor of correctness.**

## Cambridge Prayer Times Project

Summer 2004 Summary Report

<http://www.prayertime.org.uk>

[contact@prayertime.org.uk](mailto:contact@prayertime.org.uk)

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