

Bismihee Ta'aala

OBSERVATIONS For The Beginning Of FAJR And Setting Of SHAFaq

PREFACE

The aim of this document is, mainly, to compile in one place, the actual observation times of, beginning of Fajr, and setting of red and white glow after sunset, to help the honored scholars of Islam, in deciding the correct timings of Salats, and ending Suhoor. It also includes the history of observations, the need for making observations and the requirements and conditions of observation sites. All this is needed for making the correct decisions for regions with extra long days and nights. The objective of this document is not to say who is right or who is wrong, or to declare as to which time is correct and which one is not. The right to make that decision rests only with the honored scholars. We have to abide by their collective decision.

The writer, Hakeem-Ullah Ghauri, has participated in most these observations from the beginning of Muslims' settling in North America. He has substantial amount of knowledge and information about astronomy.

Hakeem-Ullah Ghauri
Toronto (Canada) (905) 721-9170

NEED And CONDITIONS For OBSERVATIONS

In the beginning era of Islam and up to about 1200 years, the beginning of Fajr and setting of red and white glow, after sunset, for Isha, were decided by eye observation. Watches and degrees were not in use. There were no electric lights in homes or on roads. Cities were also small. The nights used to be very dark. The observations were easily made. Some well-learned scholars, after much research, had written in their books, that the Subha Sadiq starts when the sun is 18 degrees below horizon. Most places the decisions for Salats etc. were still made on observations. When the clocks became common, some trust worthy people, after making many observations, made calendars for all Salats, for the whole year. These calendars were made for all major cities. Most of the Muslims in those years lived in moderate zones where the length of the day and night did not vary by much, during summer and winter. These calendars are still being used in all Masajid in India and Pakistan, without any complaints or objections.

In the past, the regions where the days and nights are extra long, human populations were very small. Very few Muslims were living there. Now the populations in these regions have increased tremendously and many Muslims have also migrated here. Cities have become large. In the cities, there is a lot of electric light at night. The horizon never becomes dark. Over the cities, there is a thick layer of smoke, dust and industrial pollution. At night, except for a few bright stars and planets, the sky is almost lost in the haze of lights and smog.

OBSERVATION SITE SELECTION and THE PROCEDURES

1. The observations for the beginning of Fajr and setting of red glow and white glow cannot be done correctly, from within the city. If we go 30 to 80 km away from a large city, we find the sky, full of stars and the Milky Way is also visible. On the horizon, the sky and the land are completely dark.
2. The observation site has to be elevated. There should be no hill or trees in the direction of observation. The horizon should be at eye level or lower. In the direction of observation, there should be no town or road, to become an obstruction. The dim glow of a small town even 15 to 20 km away can become an obstruction.
3. For the observation of the beginning of Fajr (Shafaq Abyed), the nights before 12th of lunar month, are suitable. The moon will have set before the observation time and its light will not interfere.
- 4 For the observation of setting of red and white glow, the evenings after the 16th of lunar month are suitable. The moon will not rise before the observation finishes.
5. Suitable sites for observations can be found, about 80 km away from large cities. These places have to be searched and decided during the day. It is better if, in the direction of observation, there is big lake or sea.
6. It is best if, at the time of observation, the sky is completely clear. Even if there are a few strips of clouds on the horizon, a reliable observation can be made.
7. The observing persons must have good eyesight. There should be one or two experienced observers.
8. The observation should be done from outside the car.
9. Before going for the observation of beginning of Fajr, you must consult an astronomer, or check in some moon program in a computer, to determine the location and compass degrees of the point where the light will appear. You must have a reliable compass with you so that you will search for the light at the right place.
10. The light of Subha Sadiq, after appearing, spreads along the horizon, rises up very slowly and starts to shift towards the south.
11. The observers should stand away from each other. Everyone should have a watch.
12. The times taken out from the computer for different degrees for that date should not be told to the observers. This is to avoid pre set mental bias.
13. At the time of observation, look to the right and left, and up, and then look down towards the horizon. The central part of eye retina (fovea) is best for sharpest vision, but areas around it are more sensitive for dim light.
14. Everybody should write down their observed time and should not declare that he has seen the light.
15. After observation, the times can be compiled. Later on, these times should be compared with the 18 and 15 degrees times, from computer program.

To determine the correct times, a number of observations have to be made in different months.

The rising and setting times of red and white glow, are affected by the following factors, and can change from day to day. No decision can be made on the bases of one observation.

1. The solar calendar date of the observation.
2. The latitude and longitude of the observation site.
3. Relative humidity in the air.
4. The amount of dust and smoke etc. in the air.
5. The height of humid air, and dust and smoke etc. in the atmosphere.

The History Of Observations And Existing Salat Calendars In North America

In 1967 I was appointed as Imam at The Islamic Centre of Quebec (I.C.Q.) in Montreal. When the month of Ramadhan approached, I had to prepare a calendar for the ending of Suhoor. That year, the Ramadhan was to be in the month of December. In order to find out the times for the beginning of white light at Subha Sadiq, I contacted the astronomers at McGill University and University of Montreal. University of Montreal has an observatory on a mountain about 200 km east of Montreal. They told me, that when the sun is 18 degrees below horizon, its white light spreads on the eastern horizon, and we cannot observe the stars near the horizon. This white light keeps spreading slowly. They call this phenomenon, ASTRONOMICAL TWILIGHT.

On December 3, 1967, this time was 1 hour and 41 mints before the sunrise. I read various books and magazines on this subject. I also studied available charts and graphs on the sun course, angles and periods. I had discussions with the astronomical experts at Dow Planetarium in Montreal.

I, therefore, made the calendar for Montreal Suhoor ending time, based on 18 degrees times. The time for Isha Salat was also fixed, based on 18 degrees times. Calendars based on this criterion were used for many years, without any objections or complaints. However, when Ramadhan started to come in summer months, the gap between 18 degrees times and the sunrise, started to approach 2 ½ hrs. Because of very long fast hours, some people started to grumble. At about the same time Islamic Society of North America (ISNA) which was called M.S.A. (Muslim Students Association) at that time, published a calendar for Salat times. Most of the responsible brothers in this organization were not Ahnaaf. They fixed the Isha Salat time, according to Shafi'ee Mazhab, at the setting of red glow (Shafaq Ahmer), which is near 15 degrees time. For some reason, for the beginning of Fajr, they took the same gap i.e. 15 degrees time (Shafaq Ahmer), before sunrise, and the ending of Suhoor was also to be the same. Shafi'ee Isha is correct at the Shafaq Ahmer setting time, but Shfi'ee Fajr is not at the beginning of Shafaq Ahmer, but at the beginning of Shafaq Abyedh (astronomical twilight, 18 degrees), just like the Ahnaf.

This gave an opportunity to the seekers of ease, and many people, especially Arabs started to continue eating Suhoor up to 15 degrees times.

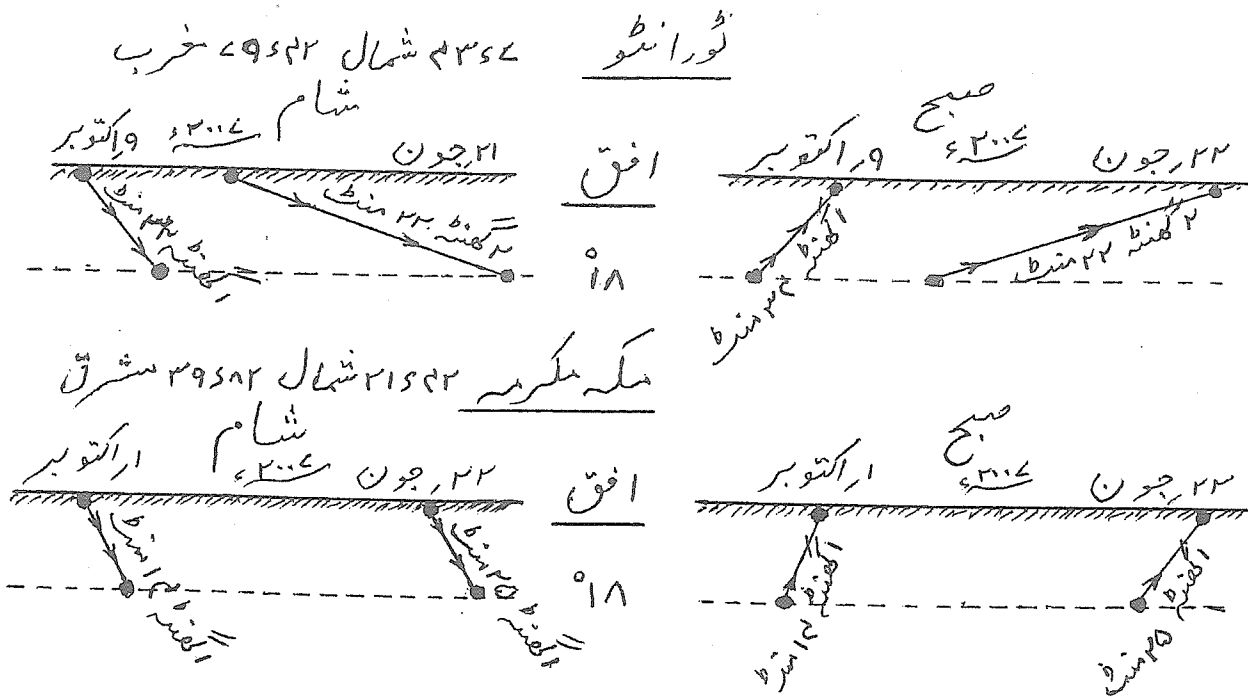
In order to get clarification and correct guidance, a number of Brothers wrote letters to various Islamic institutions and respected Mufies in different countries. Because this was a new Mas'ala, and most of the Islamic institutions and respected Muftees did not have detailed and reliable information about the geography and astronomical phenomena in the regions with extra long days and nights, differing answers came from various Islamic institutions and Muftees. The matter, instead of getting resolved, got more tangled up. Arab brothers adopted the M.S.A. 15 degrees times, but non- Arabs stayed firm on the I.C.Q. 18 degrees times.

SUN Orbit, And Time Between SHAFQAQ And Sunrise Or Sunset

The more we go away to the north or south from the equator, the orbit of the sun becomes more and more slanted. During the summer and winter the angle of slant increases. Because of this slanted orbit, the time gap between the sunset and 18 degrees below horizon, and from 18 degrees below horizon to sunrise, becomes longer.

Most of the Muslim countries are close to the equator and therefore, this gap is smaller. Also the difference in Salat times, during summer and winter is small.

The following diagrams can explain this point more clearly:



Toronto ----- the longest gap on 22 June: 2 hrs. 22 mnt
 " ----- " shortest " " 09 Oct : 1 " 34 "
 Difference: 48 "

Makkah Mukarrama – the longest gap on 22 June: 1 hr. 25 "
 " " " shortest " " 01 Oct : 1 " 14 "
 Difference: 11 "

The difference in gap, on the longest day, between Toronto and Makkah: 57 mnt

Makkah Mukarrama: Latitude 21:25 N, Longitude 39:49 E
 London: " 51:30 N, " 00:10 W
 Montreal: " 45:30 N, " 73:56 W
 Toronto: " 43:42 N, " 79:25 W

Because of the slanted orbit of the sun, at latitudes more than 48.5 degrees N and 48.5 degrees S, in summer times, the horizon never becomes dark. As soon as the sun reaches 18 degrees below horizon after sunset, it starts to rise up. **All the cities of England are situated in such regions.**

From 48.5 degrees N to 66.5 degrees N, in summer time, the sun does rise and set, but the nights get shorter and shorter.

As the distance from the equator increases to the north or south, then, because of the sun orbit being slanted, the difference between the 18 degrees and 15 degrees times increases. In the summer this difference is larger and in the winter it is smaller.

In Makkah, the difference between 18 and 15 deg. times on 22 June --- 15 mnt

" Montreal " " " " " " " " " " " " --- 39 "

" Toronto " " " " " " " " " " " " --- 32 "

" London the sun does not reach 18 deg. below horizon " " "

TWILIGHT CONDITIONS ON THE HORIZON

There is a lot of red glow (Shafaq Ahmer) on the horizon, at the time of sunset. Then, slowly it starts to get lower and dimmer, and eventually disappears. The white glow (shafaq abyedh) remains, and as time passes, it becomes lower and dimmer and is left as a faint white dome on the horizon. After a few minutes it disappears. From the time of sunset to the end of white glow, the light shifts to the right.

Before the sunrise time, first the faint white glow (shafaq abyedh), appears and the sky becomes visible from the dark ground. This white light starts to spread to the right and left and up wards. After some time, the red glow (shafaq ahmer) appears on the horizon faintly, and very slowly becomes stronger and spreads up wards.

The times of appearance and setting of the white glow and red glow, in the morning and evening, are reverse of each other.

The times of the appearance and setting of red and white glows are not exact on 18 or 15 degrees, but can vary 2-3 minutes, either way, depending on the atmospheric conditions. However the times are never more than 18 or 15 degrees times, therefore it is safer to adopt the 18 and 15 degrees times.

At the time of sunset, some days the red glow is very strong and widespread, and other days it could be weak and not too high.

In desert areas, because of low relative humidity, the red glow is small and weak.

It should be borne in mind that, by the change of location and date, the gap between Subha Sadiq (white glow) and the sunrise, changes, but at the time of Subha Sadiq, the sun is nearly 18 degrees below the horizon. This fact is clearly mentioned in the old Islamic books.

In order to arrive at a decisive conclusion in this matter, Islamic Centre of Quebec (I.C.Q.) arranged programs for observations.

OBSERVATIONS FOR SUBHA SADIQ IN MONTREAL

On July 2, 1982, Ramadhan 11, 1402 we went, with our Suhoor, to an observation site, situated on a mountain road (Rouge Mont) 80 km east of Montreal. Myself, Imam Hafiz Mueen Ghauri Sahib, Manzoor Khan Sahib and a few other Brothers had gone. This site is on a fairly high point. There is no city or a main road in the view direction. I had found this site earlier in the daytime. That day the sky was completely clear. The horizon was pitch dark. The edges of sky and ground were lost in the darkness. There was no light from any nearby houses. When we arrived there, the moon was hanging in the western horizon. By the time we finished our Suhoor, the moon had set. It became so dark, that if a man, wearing even white dress, moved away 15-20 ft, he could not be seen.

We took our watches, note pads and pens and spread out. As soon as the edge of the sky became visible from the dark ground, we individually noted down our observed time. This white light (Shafaq Abyedh) did not disappear, but kept on spreading and increasing. With the help of a flash light, we compared the observed times, and found that, except for a difference of one or two minutes, all times were close to 18 degrees time. When I later verified the observed times with computer program times for this location and date, these times were for 17.87 degrees. The white light (Shafaq Abyedh) kept on increasing. After about half an hour, the red glow (Shafaq Ahmer) appeared.

Near the same site, Br. Manzoor Khan and some other Brothers made another observation earlier, but I did not participate in that observation. The Subha Sadiq time in that observation was also close to 18 degrees time.

The information of this observation was given to all the Muslims in Montreal and also to M.S.A. In spite of this, the Arab Brothers continued eating their Suhoor up to 15 degrees time.

When Mufti Muhammad Shafi Sahib (R.A.) was approached in this matter, he had a few observations done out side Karachi. These observations proved that the Salat time calendars being used in the Masajid of India and Pakistan are correct and they show Fajr times close to 18 degrees time. Mufti Sahib wrote a full book entitled "Subha Sadiq, Subha Kazib" on this topic. The details of the observations are given in this book.

The seekers of ease were still not satisfied and they kept on writing to different places for Fatwas to get a Fatwa of their liking. After some time, Mufti Abdurrasheed Sahib (R.A.) had some observations done in Pakistan. He gave a Fatwa that Subha Sadiq is at 15 degrees time and 18 degrees time is Subha Kazib. This topic was included in his book of Fatawa. This book is very popular and Maulana Khaleel Sahib of Madina Masjid in Toronto also has a copy.

When Mufti Abdurrasheed Sahib (R.A.) was informed about the observations arranged by Mufti Muhammad Shafi Sahib (R.A.) and references were given from his book "Subha Sadiq, Subha Kazib", he took back his stand of 15 degree for Subha Sadiq. The information about his taking back was not publicised much, and people still give reference from his book, that Subha Sadiq on 15 degrees is correct. The verification for his taking back of 15-degrees stand can be obtained from his son.

Two conferences were held in England on this topic. The gist and consensus of these conferences was also that Subha Sadiq time is between 17 and 18 degrees and is closer to 18 degrees. These conferences were attended by a number of Ulema and astronomers.

Maulana Mazhar Alam Sahib of Cornwall Madrassa has made a number of observations and he also stops eating Suhoor at 18 degrees time.

In Buffalo, Dr. Isma'il Memon Sahib has a substantial amount of material regarding this topic and he is also convinced of 18 degrees.

At the time of two world Tableeghi Ijtimas in North America, where Akabireen Ulema from many countries had come, they observed their Isha and Tahajjud Salats by 18 degrees times. These Ijtimas were held in the month of July in 1980 and 1985.

On 23, Aug. 2004 and 01, Sep. 2004, two observations were made at a site 70 km northwest of Montreal. This site is in a small village, St. Philips, near the town of Lachute.

Shafaq Ahmer setting times were at the sun 13.74 and 13.77 d. below horizon.

" Abyedh "" " " " " " 17.61 " 17.87 " " "

Observation detail sheets are attached.

SUBHA SADIQ OBSERVATION NEAR SHERBROOKE CITY

I made another observation for Subha Sadiq from a small village Lennox Ville near Sherbrooke. This city is located in a mountainous region 140 km east of Montreal. There is one Masjid in Sherbrooke. Most of the Brothers, who make Salat there, are Arab students and the Masjid administration is all Arabs. I was there during the Ramadhan of 2002. The people there were following I.S.N.A. calendar and were eating their Suhoor up to 15 degrees time. I informed the administration that in Montreal we had made a number of observations and had found that the time of Subha Sadiq was between 17 and 18 degrees times and was closer to 18 degrees. I told them that we were planning to make an observation near Sherbrooke.

Therefore in the last Ashara of Ramadhan, **on 28, Nov. 2002, 23, Ramadhan 1423**, my self and my son in law Noor Khan, who lives there, arrived at the observation site, before Suhoor time. This site is quite a bit out side Sherbrooke and is situated on a hill. After eating our Suhoor, we made the observation.

The paper with the details is attached.

Although this site and lunar date were not 100% suitable for an observation, but in spite of this, at the time of 17.4 degrees the white glow (Shafaq Abyedh) was observed.

I gave all the details of our observation to the administration and invited them to come and make an observation with us. They accepted the validity of our observation and said that next Ramadhan we will change the times. But surprisingly, even up to 2007, they are still following 15 degrees times for Suhoor and Fajr.

In Montreal, the observed times for white glow (Shafaq Abyedh), were from 17,4 to 17.87 degrees.

RED GLOW AND WHITE GLOW SETTING-TIME OBSERVATIONS IN MONTREAL

The times for Isha, in the Islamic Centre of Quebec (I.C.Q.) calendar in Montreal, were based on 18 degrees times. In summer time, when the days started to be very long and beginning of Isha time was approaching to 2 1/2 hrs after sunset, some Brothers raised the point that according to the verdict of Imam Yousuf (R.A.) Isha Salat is allowed when the red glow sets. They said, that when the days are very long, for about two months, why we don't make our Isha at red glow (Shafaq Ahmer) setting time. There was some disagreement about the Shafaq Ahmer setting time being at 15 degrees. Some Brothers reported seeing the Shafaq Ahmer setting at 1 hr 40 mints. It could not be confirmed where and on which solar date this sighting was done. For 22 Dec. this time is correct, but not for the whole year. The red glow setting time changes every day.

Therefore a program for observations was made by I.C.Q.

I went in the day time to wards the north west of Montreal and found a site about 70 km away. At this site, to wards the west there is no town or highway and horizon is wide open to a far distance.

On 24, June 1992, Imam Fida-ur-Rahman Bukhari Sahib of I.C.Q., Br. AbdusSalam Elmanyawi, Br. Jamal Haider, Br. Hasan Musa'if, about 6 other Brothers and I, went for the observation. We left after performing our Maghrib Salat. In the city at that time, the sky appeared quite dark. When we arrived at the site after 45 mints the sky was glowing with red and white light in the western horizon. Almost all of us observed together that the red glow disappeared at 10:46. I checked later in the computer program that this time corresponds to the sun being 14.56 degrees below horizon for this location and that date. When we left the site, white glow was still there, but we did not stay for its setting.

In Montreal, on the longest day, going by 18 degrees, the Isha time starts at 11:17 and by Shafaq Ahmer(15 deg) Isha starts at 10:46.

Therefore the decision was made, that when the setting time for Shafaq Abyedh reaches 11 o'clock, then for 6 weeks, the Isha Salat, should be made by Shafaq Ahmer i.e. 15 degrees times. The time for Isha Jamaat should not go more than 11 o'clock.

It should be borne in mind that at I.C.Q. more than half of Musallees are Arabs.

Some time later we learned that in almost all the Masajid in Toronto, in normal months, Isha was being made at 15 degrees times, and in long summer days, for about 2 months, Isha was being made at 12 degrees times. For Fajr also 15 degrees times were being followed through out the year. A note was added at the bottom of the calendars that, if fasting, stop eating 10 mints before Fajr time. When I talked with the responsible people of some Masajid in Toronto, they said that in the Fatwa book by Mufti Abdurrasheed Sahib (R.A.), it is written that Subha Sadiq is at 15 degrees time. I told them about the observations in Montreal and suggested to them to make observations near Toronto, but no body paid serious attention.

Maulana Asim Rasheed Sahib, Imam of Madani Masjid in Montreal, where the weekly Ijtima of Dawat and Tabligh is held now, took reference from Toronto calendars and said that when concession in Isha is allowed, during long days, why not take the maximum concession. He decided to pray Isha by 12 degrees times and Fajr by 15 degrees times. The Brothers, who were following 18 degrees times for Fajr, and 15 degrees for Isha, during long summer days, raised objections and made program for observations.

A number of Brothers made observations from various sites. I participated in some of these observations with Br. Siddique Katiya. Br. Siddique Katiya has the data for his observations and he has gathered other relevant information, which is available on his WEB site --- www.as-sidq.org

A suitable observation site was found in the same area where an observation was made on 24, June 1992. This site is located on highway 148 N in a small village St. Philippe a little west of Lachute. It is 70 km and 50 mints away from Montreal. There is no large town or main road in front and the horizon is wide open until far away.

On 23 Aug. 2004 I made one observation:

Shafaq Ahmer set at 21:12 ---- this time is for sun 13.74 deg below horizon.
Shafaq Abyedh " " 21:39 ---- " " " " " 17.61 " " "

On 01 Sep. 2004 my wife and I made an observation:

Shafaq Ahmer set at 20:53 --- this time is for sun 13.77 deg below horizon.
Shafaq Abyedh " " 21:20 --- " " " " " 17.87 " " "

The paper with details is attached.

In Montreal, the observed times for Shafaq Ahmer settings were at 13.00 to 14.56 deg.

In light of these observations, ultimately, the Madani Masjid adopted 14 deg. times for Isha. They kept Fajr at 15 deg. times and put a note to stop eating Suhoor 10 mints before Fajr time.

It should be borne in mind that the gap between 18 deg (Shafaq Abyedh) and 15 deg (Shafaq Ahmer) for Toronto is 17 mints on Dec. 22 and 32 mints on June 22. This gap changes every day.

Stopping Suhoor 10 mints before Fajr is not valid throughout the year.

SHAFaq AHMER and SHAFaq ABYEDH Setting Observations Near TORONTO

In 2005 I moved to Ajax and then to Whitby. I was surprised to find out that all Salat calendars showed Isha times from beginning of May to end of Aug. at 12 deg times. Rest of the year, Isha and also Fajr are at 15 deg times. There is a note to stop eating Suhoor 10 mints before Fajr. As far as I know, there is no gap between the end of Suhoor and beginning of Fajr. Time for both is same i.e. Subha Sadiq or Shafaq Abyedh, the white glow. I gave the details of Montreal observations to some of the responsible Brothers of few Masajid and invited them to local observations

I found a suitable observation site, north of Ajax and Whitby on hwy 23 N. This site is near a small town Utica that is 35 km and 30 mints away from Ajax.

On 5, Aug. 2005 Maulana Noor-ud-Deen Ghauri Sahib and I went for the observation. The Shafaq Ahmer set at 13.9 deg time. The paper with details is attached.

At same site, on 21, Aug. 2005 Br. Yousuf Darsot and I went for observation. The Shafaq Ahmer set at 14.1 deg time. The paper with details is attached.

This site did not turn out to be 100% suitable for observation, because, in front, there is a row of far away trees and faint glow of a small town. In spite of this, reasonably reliable observations were made. For better observations, we will have to go more north and on a hill, where the horizon is below us or at eye level, and is completely dark.

After many hours of driving back and forth and up and down, Alhamdu Lillah, I have found a very good observation site, near the town of Greenbank.

This site is off hwy 12 N, and 37 km and 40 mints away from Whitby. The site is quite elevated and on the east, north and west side, the horizon is open and clear, up to very far. There is no town, village or hwy nearby. There are a few farm lights here and there.

On 30 Aug. 2007, I, Maulana Noor-ud-Deen Ghauri Sahib, Hafiz Munir Ghauri, Br. Altaf Ahmad and Br. Muhammad Sa'eed went for the observation.

At 9:02, the 12 deg time for that date, there was a lot of Shafaq Ahmer on horizon.

" 9:19, Shafaq Ahmer vanished completely. This was time for 14.7 deg belw. "

" 9:39, Shafaq Abyedh " " " " " " 17.8 " " "

The paper with details is attached.

OBSERVATIONS for the RISING OF SHAFQAQ ABYEDH NEAR TORONTO

On 02, Sep. 2005, an observation was made, from a site near the town of Burketon. This site is north of Whitby, 30 km and 30 mints away. This site did not turn out to be suitable for observation, because in front, there is a row of trees and many cars were coming on a nearby road. Also the faint glow of a far away village was an obstruction. However, for comparison purposes, times are listed below. For observation, I, Maulana Noor-ud-Deen Ghauri Sahib and Maulana Sadiq Diwangiree Sahib had gone.

At 5:05 Shafaq Abyedh appeared. This was time for 16.7 deg below horizon.

" 5:17 " Ahmer " " " " " 14.8 " " "

The paper with details is attached.

I made one observation for Subha Sadiq, from a village Bronte near Burlington that is west of Toronto. This site is located on the northern bank of Lake Ontario. The observation there was not good because of scattered city and town lights.

On 18, Sep.2007, an observation for Subha Sadiq was made from the site near Greenbank. From the same site an observation was made earlier, for Shafaq Ahmer. For this observation, I, Maulana Noor-ud-Deen Ghauri Sahib, Hafiz Munir Ghauri and Br. Altaf Ahmad had gone.

At 05:23 the Shafaq Abyedh was seen. This was time for 17.5 deg below horizon.

" 05:42 " " Ahmer " " " " " " 14.25 " " "

If there wasn't dim glow of a far away small town and no rows of far away trees, the beginning of white light could have been perhaps seen even before 05:23.

According to the computer program, the time for 15 deg. for this location and date was 05:38. if you take 10 mints out of this, the time for Suhoor ending comes to 05:28. We observed that at 05:28 there was so much white light on the horizon, that any body who saw this, would never eat, up to this time.

Mufti Ibrahim Qureshi Sahib of Masjid Noor, made another observation along with his students, in north of Toronto in mountain region, in summer time. They told Maulana Noor-ud-Deen Ghauri that Shafaq Ahmer set 22 mints after 12 deg time and Shafaq Abyedh set at 17 deg time.

In all the observations made for Shafaq Ahmer setting, a fair amount of red glow was still present at 12 deg times and it disappeared later.

SUMMARY OF DEGREES FOR OBSERVATION TIMES

Shafaq Abyedh rising: 17.87, 17.4, 16.7, 17.5
 " Ahmer " : 14.8, 14.25,
 " Abyedh setting: 17.87, 17.61, 17.8, 17.0
 " Ahmer " : 14.56, 14.1, 13.77, 13.9, 13.74, 14.7

If any Brothers are prepared to go for an observation please contact me for arrangements.

If you find some mistakes in this document or if you want to add something to it, feel free to contact me so that corrections and improvements can be made. If you need some explanation, please call Maulana Noor-ud-Deen Ghauri or me at (905) 721-9170.

If some useful benefits come from this document, please pray for me that Allah may accept it.

وآخر دعوانا، ان الحمد لله رب العالمين

OBSERVATION FOR THE BEGINNING OF FAJR SALAT

Date: November 28th, 2002 - 23rd of Ramadan 1423

Time: Between 05:15 AND 05:35 E.S.T.

Location: Near Sherbrooke (Quebec, Canada) 45:25 North and 71:54 west
At South of Lennoxville on a hilltop called "Belvedere Heights"

We had selected the sight a few days earlier.

Sky Conditions: Very clear and calm (just one low strip of cloud on the east, which only became visible when the dawn started.) The moon was less than half and about 50 degrees above the horizon.

Horizon Conditions: Horizon was not completely dark. The moonlight was making the sky visible from the low, hilly horizon. There were also many scattered farm house lights, casting some glow on the horizon. Overall, it was almost dark for a fair observation. (Though not ideal).

We had determined the exact location of the point of the twilight with the help of "Mooncalc 6.0" program and a compass.

Ramadan Conditions: Local Sherbrooke calendar showed 05:35 as the beginning of Fajr. Sherbrooke is exactly east of Montreal and sunsets and sunrises are 9 minutes earlier than in Montreal.

The Montreal Calendar, which is based on -18 degrees and confirmed by many observations, showed the beginning of Fajr at 05:27. This should make Sherbrooke time for Fajr at 05:18.

Observers: 1. Hakeem-ullah Ghauri (Mech. engr. age 65) of Montreal. He has been a member of numerous groups, which went, far out of the city-light glow, to make observations for Fajr and Isha Salat starting time for Montreal.

2. Noor Badar Khan (age 33), a Master student of Computer Science at the University of Sherbrooke.

Observations: We arrived at the sight at 05:15. With the help of a compass we ascertained the twilight point. We observed the horizon at that point and around it, so that we could detect the change at the horizon.

At 05:22, Noor Khan observed the beginning of faint light at the horizon. (-17.4)

At 05:25, Hakeem Ghauri also observed the twilight starting. (-16.8)

At 05:27, we started to see the strip of low cloud on the horizon. (-16.5)

At 05:30, the whole sky above the horizon was glowing faint, bluish white. (-16.0)

At 05:35, there was so much light on the horizon, that nobody who saw this, would keep eating up to this time. (-15.0)

WE HAVE INFORMED THE RESPONSIBLE PEOPLE AT THE
SHERBROOKE MOSQUE OF THIS OBSERVATION.

WALLAAHU AALAMU BISSAWAAB

Tel: H. Ghauri (514) 626-2927

Tel: N. Khan (819) 823-7085 (email: khannoorb@hotmail.com)



MONTREAL

TWILIGHT OBSERVATION

Date: 01 Sep. 2004

Observer: Hakeem-ullah K. Ghauri and his wife. He has made a number of previous observations for morning and evening twilight, with other Brothers at different locations and different dates. At this site, this is his 4'th observation this year. The first two observations, done with Br. Siddique Katiya and Br. Shakeel Khan were not clear, vivid and decisive, because of late arrival on site or clouds on the horizon. Br. Siddique has documented these observations. The 3'rd observation on 23 Aug. was clear and vivid and is documented on page 1

Location: Just west of Lachute (Quebec), off hwy. 148, outside Chatham (St. Philippe), on the road going to Brownsburg. The view on the northwest side is without any obstructions, to the farthest eye-level horizon, with no city, road or farmhouse lights in front. This location is 70 km. and 50 mts. from Montreal. (Hwy. 13 N--640 W--148W--50 W--148 W--St. Philippe--right toward Brownsburg)Co-ordinates: 45:39 N, 74:20 W

Atmospheric conditions: Completely clear, with no clouds or moon.

h m s
Sunset 19: 32: 40

Observation: I had deliberately not checked the times for different degrees, for this date, to avoid pre-fixed bias.

We arrived at the site at 20:35. At this time, about half of the northwestern sky, was lit up with gray, blue, white and red glow to the horizon. With passing minutes, these lights started to get dimmer and compress towards the horizon. After some more minutes, only white and faint red glow were left. To observe, I was glancing to the right and left, and up and down and then focusing at lower horizon, to detect the very faint red glow. My wife was also watching and giving her observations. At 20:53 the red glow had vanished completely. (-13.77 deg.) The moon of 17 Rajab was rising from the east at this time.

We stayed there to observe the end of white glow. The white glow disappeared at 21:20 (-17.87 deg.) and the horizon was lost in darkness

When I came home, I looked up in the MoonCalc 6.0 program for the following times:

	h	m	s
Sun 12 deg. below horizon on 01 Sep. 2004 in Lachute at	20	41	48
“ 14 “ “ “ “ “ “ “ “ “ “	20	54	30
“ 15 “ “ “ “ “ “ “ “ “ “	21	00	58
“ 18 “ “ “ “ “ “ “ “ “ “	21	20	51

HAKBEM-ULLAH KHAN GHAURI
13110 LAURIER, PIERRE FONDS,
QUEBEC, CANADA H8Z 1H5
Tel. (514) 626-2927



AJAX
WHITBY

SUNSET RED GLOW ENDING OBSERVATION

5, AUG. 2005

Observers: Maulana Noor-ud-Din Ghauri and Hakeem-ullah Ghauri. Hakeem-ullah has made numerous observations in Montreal with other Brothers, including Maulana Fida Bukhari on different dates. He also made some observations in areas north of Ajax to find a suitable site. The observations in Montreal varied in times for sun degrees below horizon as follows: 14.56, 13.74, 13.77, 13.0, and 13.27.

Location: Just east and south of a small town Utica (Ontario) off Durham route 21. The location is 35 km. and 30 mints. from Ajax. To get there, take rte. 23N (Lake Ridge rd.) to rte. 21E. (About 30 km.) And turn right. Go past Utica (3 km.) and continue 2.5 km. and turn right on a small gravel road named Gray. Go to the top of the slope up. Look back and you will see a wide-open view on the northwest side, at eye level, to the farthest horizon. There are no towns or main highways in the view direction, to cast city or head light glow on the horizon. Co-ordinates of the site are: 44:04N, 79:03W.

Atmospheric conditions: The sky was very clear. The humidity was low. There was no moon in the sky to cast its glow on the horizon. The lunar date was 29th of Jumadal Ukhra. (Possible new moon sighting). Sunset time for this date: 20:36.

Observation: I had deliberately not checked the times for different degrees, for this date, to avoid pre fixed bias.

We arrived at the site at about 9:30pm. There was vivid red, white and grey glow above the horizon. With passing minutes, these lights started to get dimmer and compressed towards the horizon. After some more minutes, only white and faint red glow were left on the horizon. To observe, we were glancing to the right and left, and up and down, and then focussing at lower horizon, to detect the very faint red glow. At 22:01 the red glow had completely vanished. We checked later, that this time corresponds to the sun being 13.9 degrees below horizon.

I looked up in the MOONCALC 6.0 program to get the following data for Utica:

Sun	12	degrees	below	horizon	at	21:48
"	14	"	"	"	"	22:02
"	15	"	"	"	"	22:09
"	18	"	"	"	"	22:33

Majority of the observations have been close to 14 degrees, and one at 14:56 degrees.

Utica is north of Ajax, and on this date, the sunset in Utica was one minute before Ajax. At Ajax today, the sun was 13.9 degrees below horizon, at 22:00

Maulana Nooruddin Ghauri



Tel. (905) 428-1339, (905) 404-9880

Hakeemullah Ghauri



Tel: (905) 428-1339

AJAX
WHITBY

SUNSET RED GLOW ENDING OBSERVATION

21, AUG. 2005

Observers: Hakeem-ullah Ghauri and Yousuf Darsot. Hakeem-ullah Ghauri has made numerous observations in Montreal with other Brothers, including Maulana Fida Bukhari on different dates. He also made some observations in areas north of Ajax to find a suitable site. The observations in Montreal and Utica, varied in times for sun degrees below horizon as follows: 14.56, 13.74, 13.77, 13.0, 13.27 and 13.9.

Location: Just east and south of a small town Utica (Ontario) off Durham route 21. The location is 35 km. and 30 mints. from Ajax. To get there, take rte. 23N (Lake Ridge rd.) to rte. 21E. (About 30 km.) And turn right. Go past Utica (3 km.) and continue 2.5 km. and turn right on a small gravel road named Gray. Go to the top of the slope up. Look back and you will see a wide-open view on the northwest side, at eye level, to the farthest horizon. There are no towns or main highways in the view direction, to cast city or head light glow on the horizon. Co-ordinates of the site are: 44:04N, 79:03W.

Atmospheric conditions: There were some horizontal bands of clouds near the horizon, but the sky was visible through the breaks. The humidity was medium. There was no moon in the sky to cast its glow on the horizon. The lunar date was 16th of Ralab. Sunset time for this date was: 20:12.

Observation: I had deliberately not checked the times for different degrees, for this date, to avoid pre fixed bias.

We arrived at the site at about 9:00pm. There was dull- red, white, and grey glow above the horizon. With passing minutes, these lights started to get dimmer and compressed towards the horizon. After some more minutes, only white and faint red glow were left on the horizon. The clouds shifted to the right to allow a good view of the lower horizon. To observe, we were glancing to the right and left, and up and down, and then focussing at lower horizon, to detect the very faint red glow. At 21:32 the red glow had completely vanished. We checked later, that this time corresponds to the sun being 14.1 degrees below horizon.

I looked up in the MOONCALC 6.0 program to get the following data for Utica:

Sun 12 degrees below horizon at 21:19

“ 14 “ “ “ “ 21:32

“ 15 “ “ “ “ 21:38

“ 18 “ “ “ “ 21:59

Majority of the observations have been close to 14 degrees, and one at 14:56 degrees.

Utica is north of Ajax, and on this date, the sunset in Utica was one minute before Ajax. At Ajax today, the sun was 14.1 degrees below horizon, at 21:31

Yousuf Darsot

Tel. (905) 720-1751


Hakeemullah Ghauri

Tel: (905) 428-1339



DAWN, WHITE AND RED GLOW, BEGINNING

02 SEP. 2005

Observers: Maulana Noor-ud-Din Ghauri, Maulana Sadiq Divangri and Hakeem-ullah Ghauri. Hakeem-ullah Ghauri has made numerous observations in Montreal and Sherbrooke with many brothers including Maulana Fida Bukhari and Hafiz Mueen Ghauri. These observations were made from different locations and on different dates. He also made some observations in areas north of Ajax to find suitable sites. The observations in Montreal, Sherbrooke and Utica varied in times for sun degrees below horizon as follows: 17.56, 17.4, 17.61 and 17.87.

Location: Just north and west of a small town Burketon (Ontario) on route 19. The site is 30 km. and 30 mints. from Ajax or Whitby. To get there, take rte. 12N, go past Brooklin, turn right on rte. 5E, at Raglan turn left on rte. 2N and turn right on rte. 19E. After about 7 km. you will arrive at a high point, where in front of you is a wide-open view to the northeast horizon. Do not go down the hill, stay at the top of the slope. There are no large towns or major highways in the view direction. You can park the car on the side of the road. Coordinates of the site are: 44:04N, 78:52W.

Atmospheric conditions: The sky was very clear and full of stars and Milky Way. There was no moon in the sky. It was the 27th of Rajab. The horizon was not completely dark. There was some scattered glow and faint domes of light, from some far away small towns were visible. Sunrise time for this date was: 06:39.

Observation: We arrived at the site at about 4:45 am. and it was very dark on the ground. We stood outside the car and marvelled at the star-studded sky. One homeowner saw us strangers and was shining flashlight at us. Earlier in the day I had gone to the house to inform them, but there was nobody home. One dome of faint town light happened to be very close to the point where the dawn light was to appear first. At 5:11 am Maulana Noor-uddin observed that white light of Subha Sadiq had appeared. The twilight had spread over the dome of town light. The light started to spread left and right and up, and become brighter. At 5:19 we saw the very thin crescent rise above the horizon and it appeared pink. According to the astronomical data, the moonrise on this date was at 5:13. This indicates that we are losing about 6 mints (1 degree) in the starting times, because of far high ground and forests. At 5:23 we observed the beginning of red glow at the bottom of the horizon.

These times, according to MOONCALC 6.0 program, correspond as follows:

At 5:11 the sun is 15.8 degrees below horizon

" 5:23 " " " 13:9 " " "

For 2 Sep. the Fajr time in Toronto

For a more accurate observation of the faint beginning of white light, we have to find a better site on a large water body, where the view is at eye level and horizon is completely dark. *calendar is 5:19*

The sunrise at Ajax and Whitby is one minute later than at Burketon.

Maulana Noor-ud-din Ghauri (905) 428-1339, (905) 404-9880

Maulana Sadiq Divangri (905) 404-9880 Hakeemullah Ghauri (905) 428-1339

محمد سادق دیوانگری

Hakeemullah Ghauri



30 August 2007 m

16 Sha'baan 1428 h Observation Of Setting Time For Red And White Glow Near Toronto

Observers: Maulana Nooruddin Ghauri, Hafiz Munir Ghauri, Altaf Ahmad and Muhammad Sa'eed.

Location: North of Whitby, on hwy.12N near a small town Greenbank.

This observation site is 37 km. from Whitby and 40 mins. away. The site is quite elevated, and on the east, north and west side, the horizon is clear to the farthest point. There is no city or small town, or a main road to cast a glow to interfere with the observation. There were a few farm lights visible here and there.

The co-ordinates of this location are: 44.08N and 79.02W.

The way: From hwy. 401 in Whitby, take Brock Str. North. (Route 12N). After 33 km., passing Manchester, you will reach the small town of Greenbank. In Greenbank, opposite to a church on the right side, turn left on Cragg Road., towards the west. When the houses of the town finish, the road turns to a gravel road for about 3 km. Here the road goes up and turns right to join Marsh Hill road. Immediately after turning right, towards north, on Marsh Hill Road, at the peak of the slope, is the observation site. On the west side of the road, there is a 3-4 ft. high ridge. Climb up on that ridge for a better view to the west.

Atmospheric Conditions: The sky was clear. The western horizon was wide open. The moon had not yet risen from the east.

Observation: From the computer program, by putting in the co-ordinates of Greenbank, and the date, I had found out the times for -12, -15 and -18 degrees. I had not told these times to other observers.

We left for the site, after praying our Maghrib at Port Perry. We arrived at the site at about 8:30. There was deep and high red glow on the horizon. There were a few patches of light clouds on the western side, but they were not an obstruction for the observation.

At 9:02 which is the -12 degrees time, there was a lot of red glow left on the horizon.

At 9:19 the red glow finished completely. This time corresponds to -14.7 degrees.

From the east, the moon of 17 Sha'baan had risen, and it's light was spreading on the sky.

The white glow was slowly becoming dim, was contracting towards the lower horizon and shifting towards the north.

At 9:39 finally the white glow set completely. This time corresponds to -17.8 degrees. After this, there was some faint whiteness was left on the western horizon. This was probably dim glow from a far away town.

When we compared the observed times, with computer program times, we found the following:

Sun Degrees	Computer Time	Observation Times
Sunset	19:59	
-12	19:02	Lot of red glow remaining
-15	19:21	Red glow setting 19:19
-18	19:40	White glow setting 19:39

Signatures: Maulana Nooruddin Ghauri Hafiz Munir Ghauri Altaf Ahmad

Muhammad Sa'eed

Hakeem-Ullah Ghauri

18 September, 2007 m.

6 Ramadhan, 1428 h. Observation Near Toronto For Subha SadiQ (White Twilight) And Red Glow

Observers: Maulana Nooruddin Ghauri, Hakeem-Ullah Ghauri, Altaf Ahmad.

Location: North of Whitby, on hwy.12N near a small town Greenbank.

This observation site is 37 km. from Whitby and 40 mins. away. The site is quite elevated, and on the east, north and west side, the horizon is clear to the farthest point. There is no city or small town, or a main road to cast a glow to interfere with the observation. There were a few farm lights visible here and there.

The co-ordinates of this location are: 44.08N and 79.02W.

The way: From hwy. 401 in Whitby, take Brock Str. North. (Rout 12N). After 33 km., passing Manchester, you will reach the small town of Greenbank. In Greenbank, opposite to a church on the right side, turn left on Cragg Road., towards the west. When the houses of the town finish, the road turns to a gravel road for about 3 km. Here the road goes up and turns right to join Marsh Hill road. Immediately after turning right, towards north, on Marsh Hill Road, at the peak of the slope, is the observation site. On the west side of the road, there is a 3-4 ft. high ridge. Climb up on that ridge for a better view to the west.

Atmospheric conditions: Sky was clear and full of brilliantly shining stars. The horizon was not completely dark. The sky was dimly visible from the dark ground. Towards the north from the east, the dim light of a small town, about 15 km. away, was visible like a dome.

Observation: From the computer program, by putting the co-ordinates of Greenbank, and the date, I had found out the -18 and -15 degree times, and the compass degree, where the morning twilight (Subha sadiq) would appear, so that we would search for the beginning of the white light, at the correct location. I had not told the other observers, the degree times, to avoid the pre-set bias.

We arrived, with our Sehri food, at the site at about 4:50. At the point of observation on the horizon, there was no farm light or small town glow. It was so dark, where we were standing, that if we moved farther from each other, we could not see each other's faces.

At 5:23 Maulana Nooruddin saw the beginning of the white light. This light kept on increasing very slowly, and was rising higher above the horizon. Near the horizon, a few strips of clouds, became visible. We could see each other's faces. The white light kept on increasing, and was slowly shifting towards the south east to the right.

At about 5:42 the red glow appeared. Red glow increased and spread very very slowly.

When we compared our observation times with the computer times, following were the results:

Computer time when the sun is 18 degrees below horizon-----5:20

Observed time when the white glow started-----5:23

Computer time when the sun is 15 degrees below horizon-----5:38

Observed time when the red glow started-----5:42

If the sky had been completely dark at the horizon, and there were no rows of far away trees, the observation time could have been even earlier than 5:23.

15 degree computer time, for this location and date, was 5:38. If you subtract 10 mts from this, you get 5:28 time for starting the Fast.

According to the observation at 5:28, so much white light had spread on the horizon, that anybody who saw this, would never eat up to this time.

Signatures: Maulana Nooruddin Ghauri

Hakeem-Ullah Ghauri

Altaf Ahmad

Observation of 'Isha timing

Date observed: June 16, 2004 Wednesday

Present were: Brother Hakimullah Ghouri and Siddique Katiya

Location observed: Lachute Quebec near Saint-Alexi-de- Matapdia about 100km north west of City of Montreal

Latitude 45.6341 Longitude 74.3324W

Weather condition: was clear;

	City of Montreal Latitude 45.31 Longitude 73.33W	Lachute Quebec Latitude 45.6341 Longitude 74.3324W
Sunset time	8:48	8:48
Twilight at 12°	10:19	10:19
90 minute after sunset	10:18	10:18
Observation	10:25	10:25 (note)
Twilight at 13°	10:29	10:29
Twilight at 14°	10:39	10:39
Twilight at 15°	10:51	10:51
Twilight at 16°	11:03	11:03
Twilight at 17°	11:16	11:16
Twilight at 18°	11:31	11:31

We arrived at the point of observation around 10:25 (after twilight at 12 degree) we hardly see any redness in the sky. **al shafaqu'l ahmar** Brother Ghori an experience observers said in order to see this phenomena we should have arrive little bit earlier 10 to 15 minute or not later than one after the magrib time

MONTREAL

OBSERVATION RECORD SHAFaq-UL-AHMAR SUMMAR 2004

Date observed	June 5	June 10	June 16	June 19	June 20	June 23	
Location	Cape st. Jacqu	Rigaud	Lachute	Dorion	Cape st. J	Cape st. J	
Sunset time	20:39	20:43	20:45	20:46	20:46	20:47	
Time disappearance of redness Shafaq-ul-ahmar	22:15	22:18	22:25	22:25	Not clear	22:27	
Difference in time	1hr 36 m	1 hr 35 m	1 hr 40m	1 hr 40m	N/a	1hr 40 m	
Estimated degree	13°	13°	13°	13°	N/A	13°	
Observed by	SK+MM+MQ	SK	HG+SK	SK+MM	SK+MM	SK+MM	

SK= Siddique Katiya
 MM= Moulana Mangera
 HG= Hakimullah Ghori
 MQ= Moulana Qayum

(574) 620-3056

Lachute 45:39N 74:20W T2:-5.0 Ht:300m JD:2453541.5				Topo	Refrac	ON
Mag Dec:	-15.126	-15d	07m 32s approx	Date:	Mon 20	June 2005
Delta T (TD-UT):	0h	01m	11s approx	Time:	22h	32m 01s*LI
Apparent Sunrise:	5h	03m	46s*LI	Apparent Sunset:	20h	54m 06s*LI
1 of 4						
Moon Alt:	14.496	14d	29m 45s	Moon Azi:	161.446	161d 26m 47s
Moon Dec:	-27.615	-27d	36m 54s	Moon RA:	16.894	16h 53m 40s
Sun Alt:	-13.266	-13d	15m 58s	Sun Azi:	325.669	325d 40m 10s
Sun Dec:	23.439	23d	26m 19s	Sun RA:	5.988	5h 59m 15s
Rel Alt:	27.762	27d	45m 43s	Rel Azi:	-164.223	-164d 13m 22s
Elongation:	164.640	164d	38m 25s	Moon Age:	-369.51h	-15D 9H 30M
Phase:0.9821	Mag:-12.33	Width:32.34m	Semi-Diam:0.274	Distance:	364548.08km	
Moon Rise:	19h	44m	18s*LI	Azimuth:	128d	56m 51s
Moon Set:	3h	18m	30s*LI	Azimuth:	234d	36m 39s
Sunrise-Moonrise:	14h	40m	32s	Sunset-Moonset:	-17h	35m 35s
New Moon:	6	July	2005	JDE: 2453558.0025	12h	03m 39s TD
Full Moon:	21	July	2005	JDE: 2453572.9592	11h	01m 11s TD
Perigee:	23	June	2005	JDE: 2453544.9928	11h	49m 37s TD
Apogee:	8	July	2005	JDE: 2453560.2363	17h	40m 18s TD

Montreal 45:30N 73:56W T2:-5.0 Ht:0m JD:2453541.5				Topo	Refrac	ON
Mag Dec:	-15.311	-15d	18m 40s approx	Date:	Mon 20	June 2005
Delta T (TD-UT):	0h	01m	11s approx	Time:	22h	29m 01s*LI
Apparent Sunrise:	5h	06m	44s*LI	Apparent Sunset:	20h	47m 56s*LI
1 of 4						
Moon Alt:	14.571	14d	34m 17s	Moon Azi:	161.146	161d 08m 46s
Moon Dec:	-27.608	-27d	36m 30s	Moon RA:	16.893	16h 53m 33s
Sun Alt:	-13.251	-13d	15m 04s	Sun Azi:	325.352	325d 21m 07s
Sun Dec:	23.439	23d	26m 19s	Sun RA:	5.987	5h 59m 15s
Rel Alt:	27.822	27d	49m 21s	Rel Azi:	-164.206	-164d 12m 20s
Elongation:	164.618	164d	37m 06s	Moon Age:	-369.56h	-15D 9H 33M
Phase:0.9820	Mag:-12.33	Width:32.34m	Semi-Diam:0.274	Distance:	364556.28km	
Moon Rise:	19h	46m	13s*LI	Azimuth:	129d	33m 43s
Moon Set:	3h	13m	28s*LI	Azimuth:	234d	02m 32s
Sunrise-Moonrise:	14h	39m	29s	Sunset-Moonset:	-17h	34m 28s
New Moon:	6	July	2005	JDE: 2453558.0025	12h	03m 39s TD
Full Moon:	21	July	2005	JDE: 2453572.9592	11h	01m 11s TD
Perigee:	23	June	2005	JDE: 2453544.9928	11h	49m 37s TD
Apogee:	8	July	2005	JDE: 2453560.2363	17h	40m 18s TD

Last observation

Montreal - 22:29
 Lachute = 22:32 } 3 min dif