

Some interesting facts about time zones

+10:00 or **UTC/GMT +10:00** - means that a current place is **10 hours ahead** of UTC (Universal Time Coordinated) or GMT (Greenwich Mean Time). For example, Vladivostok standard time is **08:00** or **UTC/GMT - 08:00** - mean that current place is **8 hours behind** of UTC (Universal Time Coordinated) or GMT (Greenwich Mean Time).

1. Some places/countries use time offsets not an integral number of hours from UTC/GMT.

Examples:

- Newfoundland (Canada) is UTC/GMT - 03:30 (summer -02:30)
- Australia (Northern Territory) is +09:30
- Australia (South Australia) is + 09:30 (summer +10:30)
- India is +05:30
- Iran is +03:30 (summer +04:30)
- Afghanistan is +04:30
- Burma (Myanmar) is + 06:30
- Marquises Islands is - 09:30
- Norfolk Isl. (Australia) is +11:30
- Lord Howe Island (Australia) is + 10:30 (summer +11:00)

2. Some places use quarter / hour offset from UTC/GMT.

Examples:

- Nepal is UTC/GMT +05:45
- Chatham Island (New Zealand) is UTC/GMT + 12:45 (summer UTC/GMT + 13:45 or winter in the northern hemisphere).

3. Usual Daylight Saving Time (Summer time) rule is- altering the clocks ahead by one hour.

There is an exception:

- Lord Howe Island (Australia) advances its clocks by half an hour in the summer. Lord Howe Island is UTC/GMT + 10:30 during local winter and UTC/GMT +11:00 during local summer.

4. Australia has both horizontal and vertical time zones in summer.

Queensland, the Northern Territory and Western Australia do not observe DST, however middle of Australia (Northern Territory and South Australia) use half an hour offset from nearby Western Australia and eastern states of Australia.

Additionally, Northern Territory does not use DST and South Australia does.

In this instance, for example, two places Nullarbor and Darwin, located in relatively same longitude in the middle of Australia have the same time during local winter (1 hour and 30 minutes ahead of Perth time, Western Australia).

However, during local summer, Nullarbor and Darwin maintain 1 hour difference. Darwin is 1 hour and 30 minutes ahead of Perth time and Nullarbor is 2 hours and 30 minutes ahead of Perth time (Western Australia).

5. Prior to 1995, International Date Line split the country of Kiribati. The result was that the eastern part of Kiribati was a whole day and two hours behind the western part of the country where its capital is located.

In 1995 Kiribati decided to move the International Date Line far to the east- which placed the entire country into the same day.

- Kiribati is UTC/GMT +12:00 (Tarawa)
- UTC/GMT +13:00 (Phoenix Islands) and
- UTC/GMT +14:00 (Christmas Islands).

Now eastern Kiribati and Hawaii, which are located in the approximately same area of longitude, are a whole day apart.

6. If two places are located in the northern hemisphere and both places use DST- for example Moscow (Russia) and New York (USA) the time difference between those two places can be 1 hour offset during a year.

This takes place because Europe shifts to daylight saving time one week earlier than the U.S. in the spring- the time difference between New York and Moscow most time of the year is + 08 hours (Moscow time is 8 hours ahead of New York time), however for 1 week in the spring- the time difference is + 09 hours.

Same situation can be applied between most of the cities in Europe and North American

cities during that week.

7. If two places are located in opposite hemispheres and both places use DST- the time difference between those two places can be 0-3 hours offset during a year.

For example

New York (northern hemisphere) and Chile (southern hemisphere) could have:

- 0 hours difference (time is the same in both places)
- - 1 hour (Chile time is 1 hour behind NYC time) and
- - 2 hours (Chile time is 2 hours behind NYC time)

A similar example is the time difference between local time in New York and local time in Rio de Janeiro (Brazil). Rio de Janeiro time could be +1, +2 or +3 hours ahead of New York time depending on the time of the year.

8. Equatorial and tropical countries (lower latitudes) usually do not observe Daylight Saving Time as the duration of day / night are very much the same - 12 hours. However the exception to this rule took place in 1999, when Fiji UTC/GMT+12:00 and kingdom of Tonga UTC/GMT +13:00 introduced DST before the global millennium celebration.

This placed Fiji +13 hours ahead of UTC/GMT and

Tonga +14 hours ahead of UTC/GMT.

Both countries no longer use DST time after millennium celebration.

9. Although Russia is geographically spread over 12 time zones, it officially observes only 11 time zones:
 - UTC/GMT +2 to UTC/GMT +12 in winter time and
 - UTC/GMT+3 to UTC/GMT+13 in summer time.

During the Soviet era (USSR), Moscow time (UTC/GMT +3) was the prevailing time used within the Kalininigrad, Ukraine, Belarus and Baltic republics.

Currently, Kaliningrad (Russia), Ukraine, Belarus and Baltic republics use time zone UTC/GMT +2 or

1 hour behind Moscow time (UTC/GMT+3).

Far northeastern Chukotka region observed UTC/GMT+13 (thus entirely existing within its own time zone).

Currently, the Chukotka region (originally +13 UTC/GMT) no longer observes its own time zone but was combined into the Magadan region UTC/GMT +12, basically collapsing 2 geographic time zones into one.

10. Usually, when one travels in an easterly direction - a different time zone is crossed every 15 degrees of longitude (which is equal to one hour in time).

However, there are exceptions.

For example

Since Japan is located to the east of Vladivostok (southern part of Russian Far East) one would assume that Japan time would be either similar or ahead of Vladivostok time.

In this case the situation is completely opposite:

- Japan time is 1 hour behind Vladivostok time during winter and
- Japan time is 2 hours behind Vladivostok time during summer.

(Vladivostok uses DST and Japan does not).

During summer time- Japan uses same time as region of Lake Baykal in Siberia part of Russia, 2 hours behind Vladivostok.

11. Mongolia once used to have 3 time zones- now it uses one time zone UTC/GMT + 08:00.
12. China observes one time zone UTC/GMT + 08:00 - which makes this time zone uncommonly wide. In the extreme western part of China the sun is at its highest point at 15:00, in the extreme eastern part - at 11:00.
13. "Daylight Saving Time" (DST) is the name commonly used in North America. Some regions (Europe, Russia, S. America) more commonly use the name "Summer Time". This could create some confusion in the meaning of some timezone abbreviations, as ST could stand for "Summer Time" +1 hour (Europe, Russia, S. America) and for "Standard Time" (North America).
14. Brazil sets its Summer time by decree every year. Some states / counties observe Summer time on a year to year basis.
15. The state of Arizona does not observe DST. However the Navajo Reservation (see USA map) does change to Daylight time. The Hopi Reservation is within the Navajo Reservation and does not observe DST (as rest of the state).
16. Some countries use different rules to start and end DST. For example, a law in Israel requires that summer must last at least 150 days.
17. Greenwich time (Greenwich Lab is located in London) has the same time as London time during winter time, however London is 1 hour ahead of GMT during summer time.
18. The military of some nations refer to time zones as letters, for example: Z (Zulu) = Zero Meridian (UTC or GMT). Letters A to M moves eastwards and N to Y moves westwards. The letter J (Juliet) is skipped and refers to current local time of the observer.
19. Antarctica Amundsen-Scott South Pole Station use New Zealand's time zone +12:00 hours during local winter and +13:00 hours - during local summer (which is winter in the northern hemisphere).
20. The International Space Station uses UTC/GMT.

