

## Understanding Alaska's Midnight Sun

How would you feel... If you watched the sun set for the last time, disappearing from sight for the next 67 days? The people of Barrow, Alaska experience it every winter. At the other extreme, imagine the thrill of your first glimpse of the returning sun in spring or the joy of experiencing the burst of life fueled by the never-ending days of summer. Above the Arctic Circle, the length of day ranges from zero to 24 hours. At the heart of this phenomenon is the tilt of the Earth's axis, an imaginary line running from the North Pole to the South Pole around which the Earth spins once every 24 hours. The Earth's axis is not upright, but maintains a tilt of approximately 23.5° while the Earth revolves around the sun. The length of day varies depending on whether the Earth is currently tilting toward or away from the sun.

Arctic

Circle

## The Spring Equinox

tions due to local terrain.

March 21st (approx.)
Equal sunlight and darkness

day may differ slightly in some loca-

The tilt of the Earth's axis is perpendicular to the sun. The sun is seen above the horizon for 12 hours from all points on Earth, although the length of N

## The Summer Solstice

June 21st (approx.) Longest day of the year

Sunlight bathes the north both day and night as the pole points toward the sun. On the summer solstice, you may view the midnight sun at, or north of, the Arctic Circle. (Note: The

mountains north of the Arctic
Circle viewing deck on the Dalton
Highway block the view of the Midnight
Sun. You will need to drive about 17
more miles north to Gobbier's Knob
for a good view.) The farther north you
travel above the Arctic Circle,
the more days you will experience
without a sunset.

The Winter Solstice

December 21st (approx.) Shortest day of the year

In winter, the northern hemisphere tilts directly away from the sun. The sun remains below the horizon for one day at the Arctic Circle and as long as six months at the North Pole. The arctic winter sky is ruled

by the stars, moon and northern lights. Only short periods of twilight break the darkness. After the winter solstice, the days begin to grow longer in the northern hemisphere and shorter in the southern hemisphere.

Arctic Circle
(latitude
66° 33' N)

Sun

The Fall Equinox
September 21st (approx.)
Equal sunlight and darkness

With the tilt of the Earth's axis once again perpendicular to the sun, 12 hours of daylight is experienced around the world for the second time in the year. Following the fall equinox, daylight fades and temperatures drop as the arctic region begins to point away from the sun.