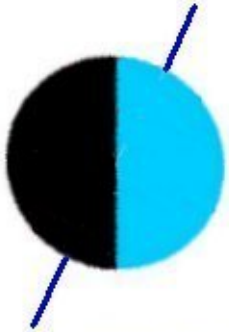
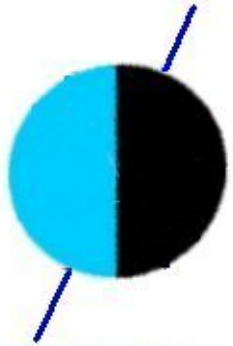
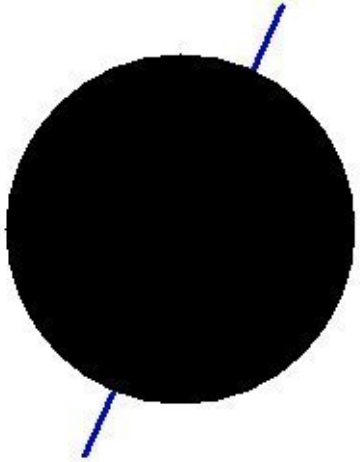
VERNAL EQUINOX (SPRING)
MARCH 21



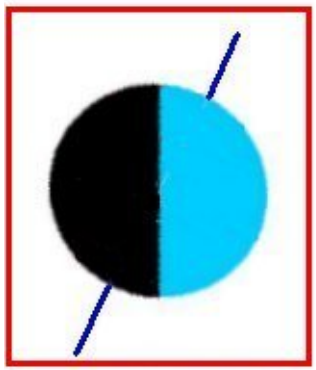
SUMMER
SOLSTICE
JUNE 21



WINTER
SOLSTICE
DECEMBER 21

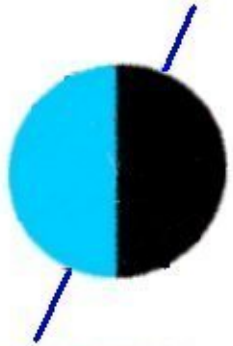


AUTUMNAL EQUINOX (FALL)
SEPTEMBER 21

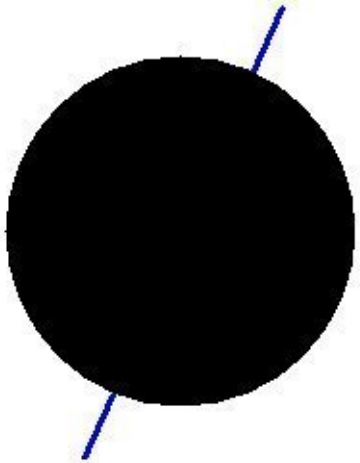


SUMMER
SOLSTICE
JUNE 21

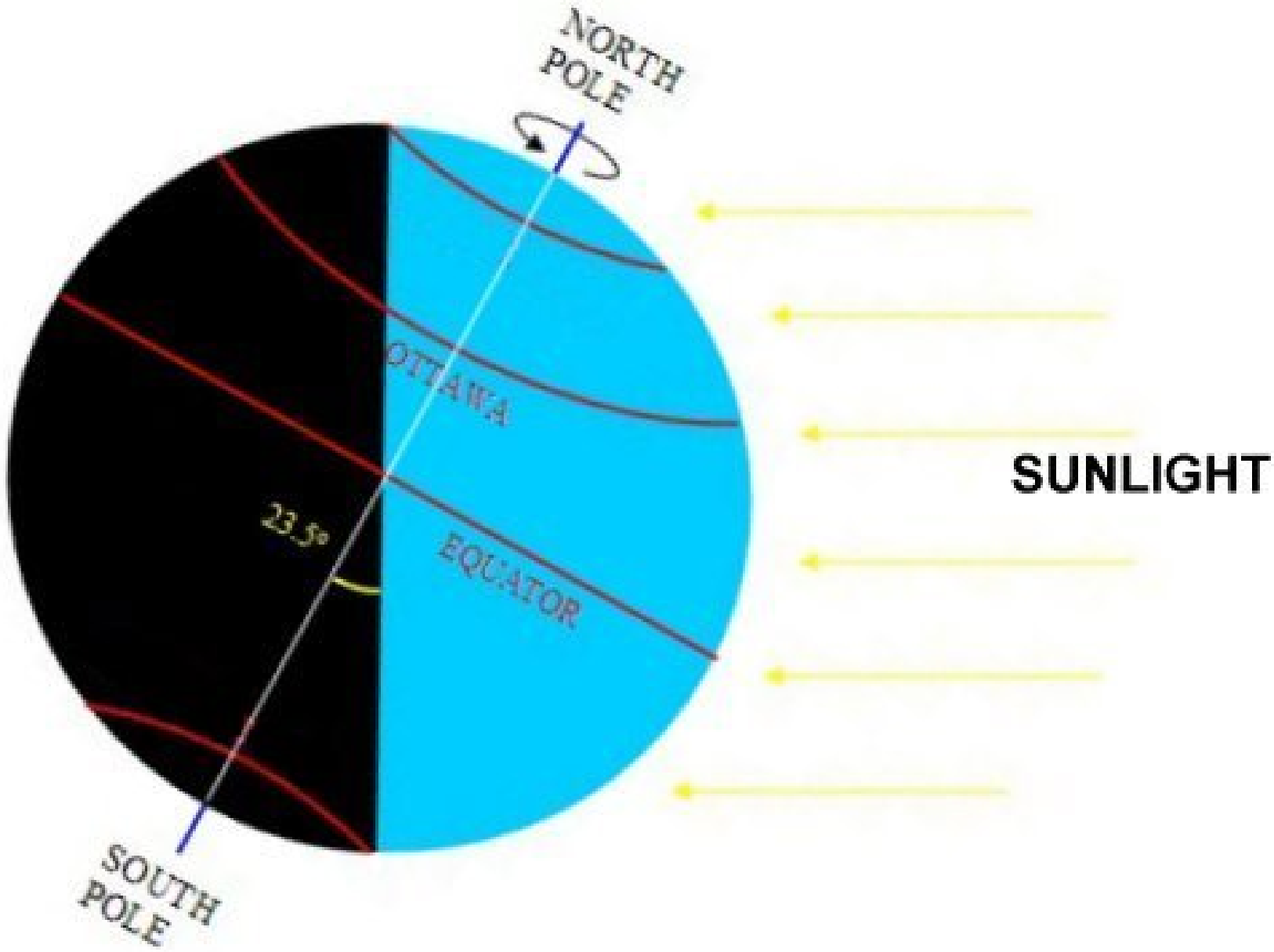
VERNAL EQUINOX (SPRING)
MARCH 21



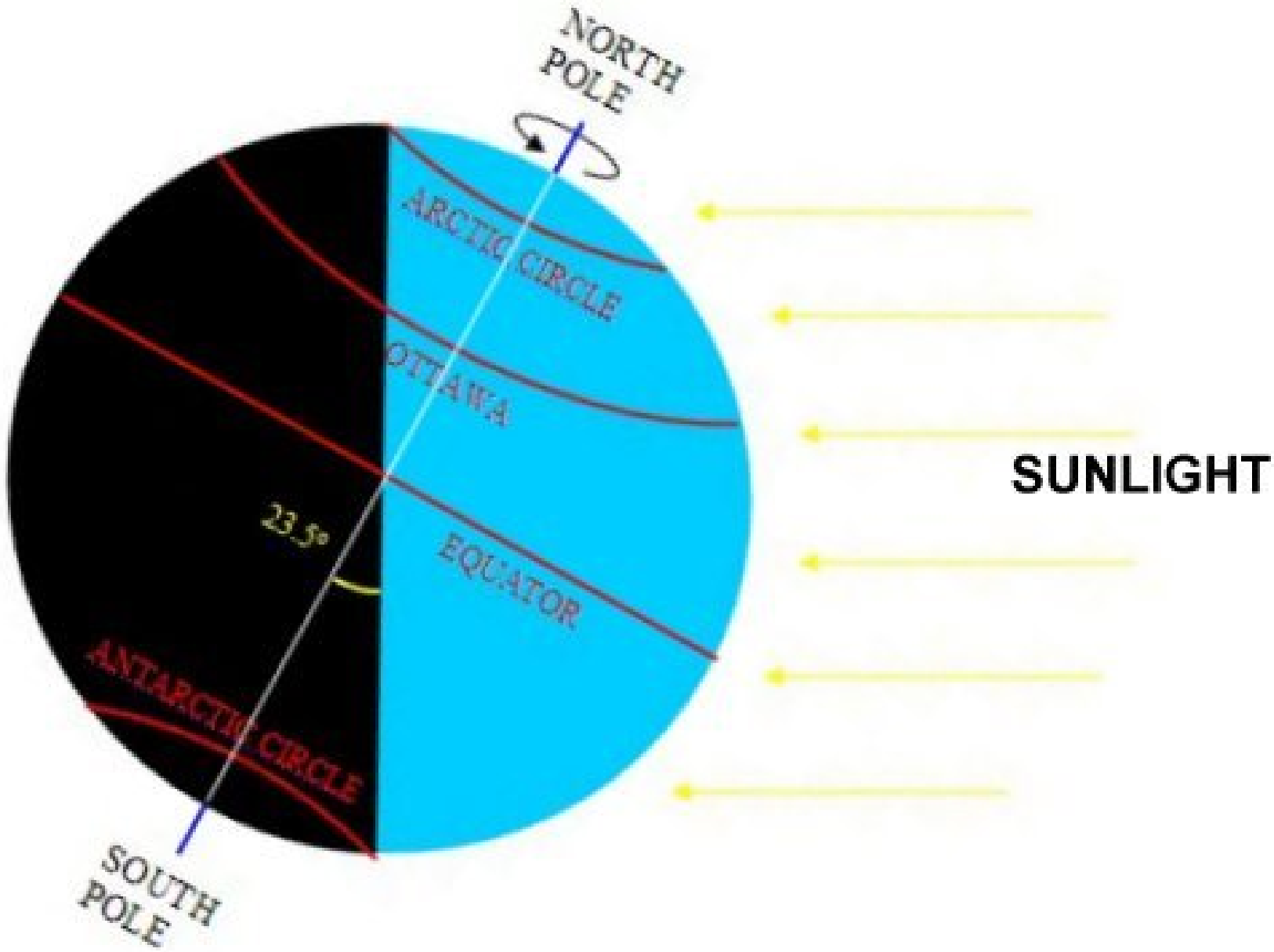
WINTER
SOLSTICE
DECEMBER 21



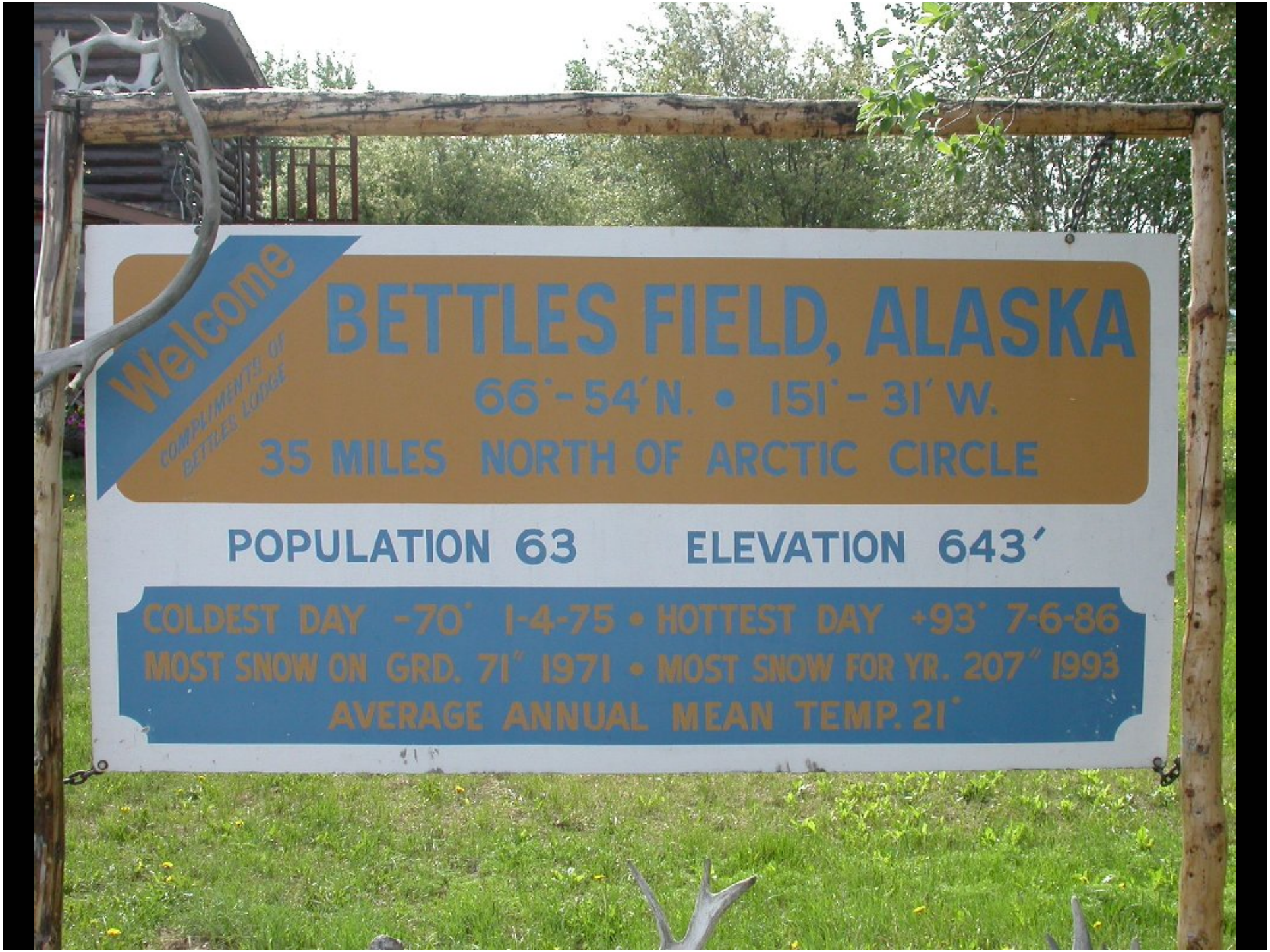
AUTUMNAL EQUINOX (FALL)
SEPTEMBER 21

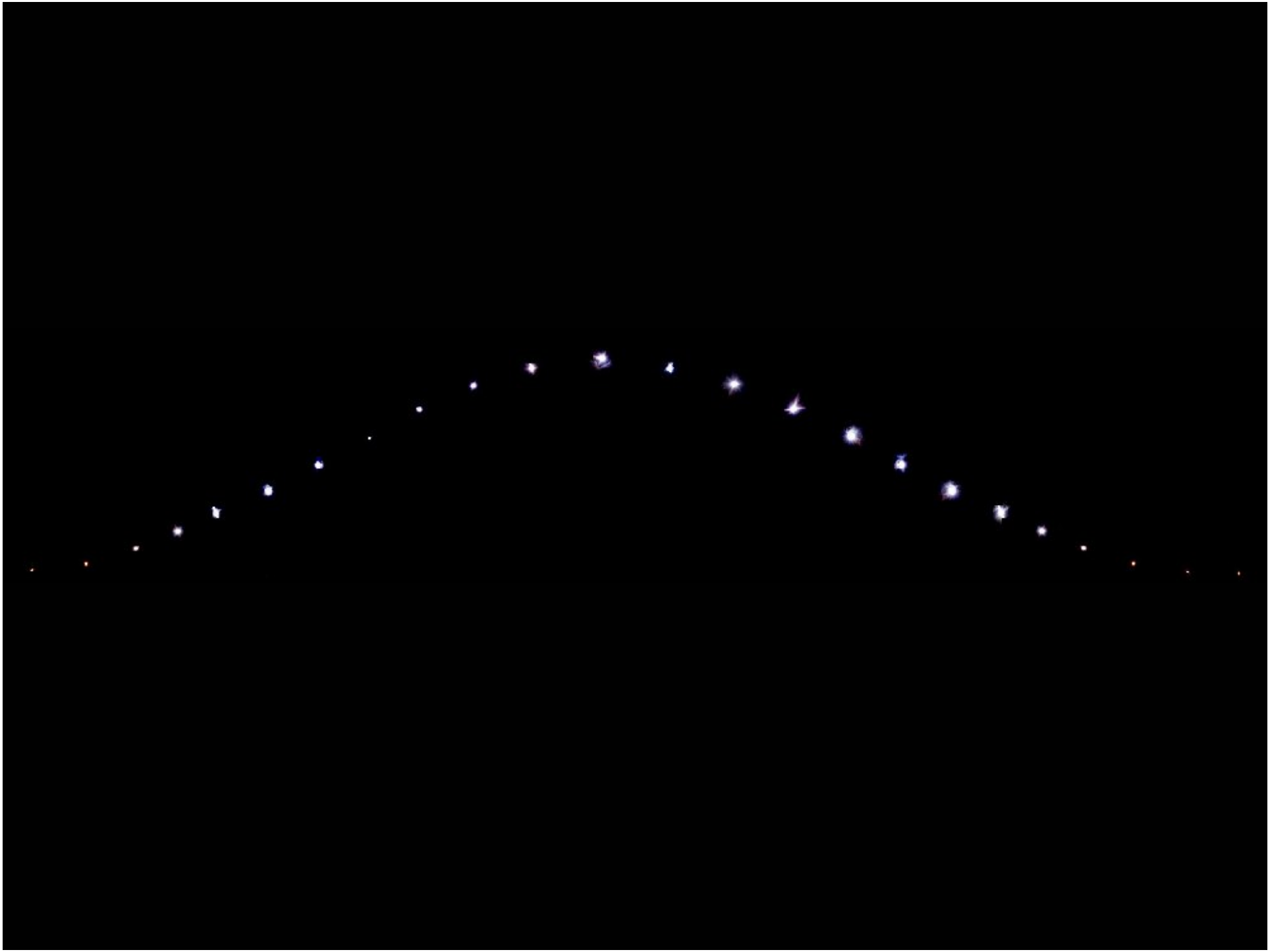

NORTH POLE
OTTAWA
23.5°
EQUATOR
SUNLIGHT
SOUTH POLE


24 HOUR
SUN


NORTH POLE
ARCTIC CIRCLE
OTTAWA
23.5°
EQUATOR
ANTARCTIC CIRCLE
SOUTH POLE
SUNLIGHT


Chukchi Sea
Barrow
Prudhoe Bay
Colville
Kobuk
BETTLES
ARCTIC CIRCLE
Nome
Yukon
Fairbanks
ALASKA
Bethel
Anchorage
Valdez
Cordova


Welcome
COMPLIMENTS OF
BETTLES LODGE
BETTLES FIELD, ALASKA
66°-54'N. • 151°-31'W.
35 MILES NORTH OF ARCTIC CIRCLE
POPULATION 63
ELEVATION 643'
COLDEST DAY -70° 1-4-75 • HOTTEST DAY +93° 7-6-86
MOST SNOW ON GRD. 71" 1971 • MOST SNOW FOR YR. 207" 1993
AVERAGE ANNUAL MEAN TEMP. 21°




Anchorage Light Speed
Planet Walk
Station #7
URANUS
Unusual
Unusual...
Miranda, an Unusual Moon
Uranus' Interior
Uranus Sponsored by
Chilkoot Charlie's
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Rasmuson Foundation
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Anchorage Light Speed
Planet Walk
Walk across
the Solar System
at the speed of light!
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Of course, you can hop on your bike, roller blades or skis
and travel the distance at warp speed!
As you experience the Planet Walk,
notice how small the planets are
compared to the Sun, and how vast
the distances are between them.
The Sun and 4 inner planets are contained along 5th Avenue
Jupiter
Uranus
Saturn
The 5 outer planets are
along the Coastal Trail.
Neptune
Pluto
To Neptune: 1hr 30min
To Pluto: 2hrs 48min
To Saturn: 1hr 22 min
To the Sun: 2 hr 42min


Planet Walk


ONE WAY
5TH AV
800
UBLIC
ARKING
END ONLY

Anchorage Light Speed
Planet Walk

Station #1
MERCURY
A World of Extremes

Extremely

Fast – Mercury orbits the Sun faster than any other planet; its year is a mere 88 Earth days.

Slow – Mercury rotates so slowly on its axis that sunrise to sunset takes 177 Earth's days. This means that Mercury's day is longer than its year!

Hot – Cooled by day to 800° F, lead would run like water over Mercury's surface.

Cold – Frozen by night, temperatures plunge to -300° F!

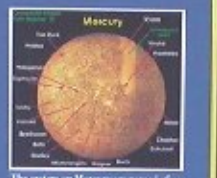
Small – Mercury is only one-third the size of Earth.

Close – The Sun appears almost three times larger in Mercury's sky than in Earth's sky.

Lonely – Mercury has no moons.

Dense – Mercury's iron core is roughly 75% of its volume.

Wrinkled – When Mercury's molten interior cooled, the planet shrank, producing wrinkles as its crust similar to the skin of a dried apple.



The craters on Mercury are named after famous artists and writers.

Standing on Mercury, you would experience a cratered world similar to our Moon. Since there is no atmosphere, the sky would always be black and the stars would always be visible. As you gaze out into space, you might see two bright objects: one is cream-colored Venus and the other is blue Earth!

Mercury's Interior

Mercury has an unusually large iron core for its size. The core is about the size of our own Moon.

Mercury Sponsored by
David and Linda Garrison
In loving Memory of David's Father
Gilbert Franklin Garrison
1910 - 2005

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Planet Walk

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The 5 outer planets are along the Coastal Trail

To Venus: 3min
To Pluto: 5hrs 27min

To the Sun: 8min

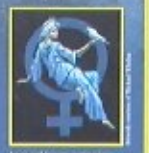

VENUS
U.S. MAIL

Anchorage Light Speed Planet Walk

Station #2

VENUS

She's Hot!



She's...

Hot – Her greenhouse effect makes her the hottest planet. Temperatures reach 900° F.

Mysterious – Her veil of carbon dioxide and sulfuric acid clouds hides her surface from our view.

Breathtaking – Her air pressure is a crushing 90 times greater than Earth's.

Dry – She has no liquid water. The rain on Venus is sulfuric acid.

Bright – Her clouds reflect more sunlight than any other planet.

Contrary – She rotates opposite to the other planets. The Sun rises in the west and sets in the east!

a Lady – All her features except one, Mt. Maxwell, are named for women.

a Star – Earth's morning and evening "star," she is the brightest object in our sky except for our Sun and Moon.

Breezy – On some parts of her planet, winds blow steadily at 210 mph.

a Mission – The United States and the Soviet Union have sent numerous spacecraft to Venus. Some flew by the planet; some orbited it; and some landed on its surface.

a Rocker – Over 100,000 volcanoes are scattered on her surface, more than any other planet.

Radar image of Venus' surface.

Standing on Venus, you would experience the optical illusion of being in a crater. Her dense atmosphere bends light, making the ground appear to curve upward. The crushing atmosphere is so thick, you could also not swim through it. One day would last 117 Earth days.

Venus' Interior - Similar to Earth's, it is composed of a metallic core, a rocky mantle, and a rocky crust. Unlike Earth, Venus shows no sign of plate tectonics. We do not know whether its core is solid or liquid. Venus does not have a magnetic field.

Venus Sponsored by Hotel Captain Cook

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The outer planets are along the Coastal Trail.

To Earth: 2min
To Pluto: 5hrs 24min

To Mercury: 3min
To the Sun: 6min


PUBLIC
PARKING
PARKING
DIAMOND
SERVICE
SINCE 1922
ONLY
ONLY
ONLY

Anchorage Light Speed
Planet Walk

Station #3
EARTH
The Right Stuff

The Right...

Distance – Earth stays within the Sun's ecosphere, or habitable zone, where temperatures never get too high nor too low to support life.

Orbit – Earth's orbit is nearly a perfect circle, so our distance from the Sun remains almost constant. If our orbit were slightly closer to the Sun our water would evaporate; if farther, it would freeze.

Tilt – Earth's tilt causes our seasons. When the northern hemisphere leans toward the Sun, we have summer. When it tilts away from the Sun, we have winter.

Atmosphere – Extending 600 miles into space, it acts as a shield by day to filter the harmful effects of solar radiation and as a blanket by night to prevent our heat from escaping. Most importantly, it has the oxygen necessary for human life.

Temperature – Earth is the only planet in our Solar System where water exists in its three states: solid, liquid, and gas.

Spin – Earth's spin on its axis in 23 hours 56 minutes, creating our day and the wind system that drives our climate.

Amount of Water – Earth is the only planet in our Solar System whose surface has liquid water. It is the essential substance for life as we know it. Water covers 71% of Earth's surface: 97% is seawater and 3% is fresh water.

Magnetic Field – Earth's strong magnetic field protects us from harmful solar radiation.

The projected International Space Station above Earth

Earth's Interior

The core is extremely hot, over 10,000° F. This intense heat causes convection currents in the outer core and mantle. The currents in turn cause plate tectonics, the slow movement of continents over the Earth's surface.

Formation of the Moon
The impact theory

A Mars-sized object may have crashed into primitive Earth, ripping it apart and sending pulverized crust material into orbit around the Earth.

These particles eventually coalesced to form the Moon. Meteor and volcanic activity on the Moon continued for nearly one billion years. Since then, our Moon has remained relatively unchanged.

Earth

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The Alaska Railroad

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Anchorage Light Speed Planet Walk

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As you experience the Planet Walk, notice how small the planets are compared to the Sun and how vast the distances are between them


Anchorage Light Speed
Planet Walk
Station #1
MARS
Less than Ideal
Less than Ideal...
Water supply – Mars has no liquid water; however, it can be extracted from ice in the soil.
Atmosphere – Mars' thin atmosphere is mainly carbon dioxide. Humans would need to extract oxygen from compounds in the ground to survive.
Gravity – Less than 1/3 of Earth's, it is not strong enough to hold oxygen in its atmosphere.
Temperature – Similar to Antarctica's, the average Martian temperature is -70° F, with a range of -225° to 68° F. Mars receives only half as much solar heat as Earth.
Land Area – Mars is half the size of Earth, but its land surface area is about the same. Why? No oceans!
Weather – The air on Mars is dry with occasional wispy clouds. Seasonal winds blow great volumes of powdery red dust sometimes covering the entire planet in the storm.
Moons – Phobos and Deimos, named after Mars' mythical dogs, are tiny and most likely captured asteroids.
THEN – Was Mars once covered in water? In this artist's conception we see how Mars may have looked millions to billions of years ago. The large white volcano is Olympus Mons. At three times the height of Mt. Everest, it is the highest peak in the Solar System.
Standing on Mars
Viewing the images from Mars Rover, it's easy to imagine hiking across the Mars landscape. Mars is the only other planet on which humans can live, but it has a harsh environment. Temperatures are a frigid -70F F, and there is no oxygen to breathe. You would need an expedition parka and an oxygen tank for your trek.
NOW – Over billions of years, Mars' atmosphere stripped, causing its water to evaporate. Dry riverbeds, dry banks and even shorelines remain as a testament to the rivers, lakes and oceans that may have once existed. This drawing is of Valles Marineris, the deepest canyon in the Solar System. It is ten times longer and three times deeper than the Grand Canyon!
Planet Mars
In Memory of Our Mother:
Carol Walsh Treadwell (1958 - 2002)
Adventurer, Pioneer and Advocate
for Science Education
- Timothy, William and Natalie Treadwell
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The 5 outer planets are along the Coastal Trail.
Jupiter
Uranus
Saturn
Neptune
Pluto
To Jupiter: 30min
To Pluto: 5hrs 17min
To Earth: 4.8min
To the Sun: 13min

Anchorage Light Speed
Planet Walk
Station #5
JUPITER
Super-Sized
Super...
Jupiter's Moons
Anchorage Light Speed
Planet Walk
Walk across the Solar System at the speed of light!
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As you experience the Planet Walk, notice how small the planets are compared to the Sun, and how vast the distances are between them.
Jupiter
Uranus
Saturn
The 5 outer planets are along the Coastal Trail.
Neptune
Pluto
To Saturn: 37min
To Pluto: 5hrs 47min
To Mars: 30 min
To the Sun: 43min
Jupiter
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Rotarians
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Anchorage Rotary Club


Anchorage Light Speed
Planet Walk
Station #6
SATURN
Extraordinary
Extraordinary...
Anchorage Light Speed
Planet Walk
Walk across
the Solar System
at the speed of light!
As you experience the Planet Walk,
notice how small the planets are
compared to the Sun, and how vast
the distances are between them
The 5 outer planets are
along the Coastal Trail.
Uranus
Saturn
Jupiter
Neptune
Pluto
To Uranus: 1hr 22min
To Pluto: 4hrs 10min
To Jupiter: 37 min
To the Sun: 1 hr 20min
Saturn
Sponsored by
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Anchorage Light Speed
Planet Walk
Station #7
URANUS
Unusual
Unusual...
Miranda, an Unusual Moon
Uranus' Interior
Uranus Sponsored by
Chilkoot Charlie's
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Jupiter
Uranus
Saturn
The 5 outer planets are
along the Coastal Trail.
Neptune
Pluto
To Neptune: 1hr 30min
To Pluto: 2hrs 48min
To Saturn: 1hr 22 min
To the Sun: 2 hr 42min


Anchorage Light Speed
Planet Walk
Station #8
NEPTUNE
Surprise!
Surprising...
Discovery – Neptune was the first planet discovered by mathematics. Irregularities in Uranus' orbit suggested a more distant object was tugging on it. Calculations were made, and telescopes pointed to the predicted spot. Within hours, Neptune was discovered!
Familiarity – Neptune could be Uranus' twin. Their diameters, color, atmosphere, and internal make-up are almost identical.
Orbit – Discovered in 1846, Neptune will not return to its discovery position until 2011. A section of Pluto's orbit crosses inside the orbit of Neptune, and so for 20 years of Pluto's 248-year orbit, Neptune becomes the farthest planet. This last occurred between 1979 and 1999 and will not occur again until 2226.
Winds – The Great Dark Spot, the windiest place in the Solar System, is an earth-sized cyclone generating winds up to 1,200 mph!
Heat – Neptune gives off more heat than it receives from the Sun. As a result, its atmosphere is as warm as Uranus' even though Neptune is much farther from the Sun.
Not Surprising – Neptune is appropriately named for the god of the sea. Its exterior consists largely of frozen water.
This photograph of Neptune taken by Voyager 2, shows The Great Dark Spot accompanied by bright white clouds. To the south is the bright feature nicknamed "Scooter." Farther south is "Dark Spot 2," which has a bright core. All these features are rapidly moving storms in Neptune's upper atmosphere.
Core
Mantle
Outer Envelope
Triton
Neptune's largest moon is one of only three moons with an atmosphere. At -401° F it is one of the the coldest known bodies in the solar system. Astronomers believe Triton is a captured object because it orbits Neptune in a backward direction.
Neptune, in Memory of
Beth and Doctor Joe Deisher,
Alaskan Homesteaders
- Sponsored by the Deisher Children,
Joseph B. III, Jon (Chris), Philip H.,
and Tashna M. Deisher
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The Sun and 4 inner planets are stationed along 5th Avenue
Jupiter
Uranus
Saturn
The 5 outer planets are along the Coastal Trail
Neptune
Pluto
To Pluto: 1hr 18min
To Uranus: 1hr 30 min
To the Sun: 4 hr 12min

Anchorage Light Speed Planet Walk

Station #9

PLUTO

Last But Least

Last...

Planet – Pluto is the most distant planet and the last to be discovered.

Relic – Pluto and its moon, Charon, may be leftover material from the formation of the Solar System and may hold secrets about how planets form.

Visited – Pluto is the only planet that has not been visited by a spacecraft. The New Horizons mission to Pluto and beyond is scheduled for launch in 2006 and will fly by Pluto in 2015.

Least...

Planet – At one-sixth the size of Earth, Pluto is smaller than all the other planets and seven of their moons, including ours.

Conventional orbit – While most planets orbit in the same plane, Pluto's orbit is tilted 17° from this plane. Its orbit is also extremely elongated, causing its distance from the Sun to range between 30 and 50 Astronomical Units (one AU is the distance between the Earth and the Sun). For part of its year, Pluto is actually closer to the Sun than Neptune.

Known – Little is known about the littlest planet. Astronomers hope the New Horizons mission will solve some of Pluto's mysteries.

Distance between a planet and its Moon – Pluto and Charon, locked together like two spinning dancers, always face each other. Charon never changes position in Pluto's sky and vice versa.

Detail on the discovery images of Pluto showing the tiny planet's movement against the background of distant stars. Pluto is the unmarked, almost stationary, object.

Discovering Pluto

Pluto was the only planet to be discovered by an American, Clyde Tombaugh, a 24-year-old lab assistant hired by Lowell Observatory to search for "Planet X," a presumed giant planet beyond Neptune.

Tombaugh painstakingly compared images of the sky taken several weeks apart. On February 18, 1930, Tombaugh discovered a tiny object that had changed position between two images. Although it was too small to be "Planet X," it was a new planet. We now know that there never was a "Planet X," and Pluto's discovery was serendipitous!

Planet or Comet?

Pluto, like a comet, is composed of rock and ice. A thin atmosphere forms as Pluto approaches the Sun, then it condenses to methane and nitrogen "snow" when farther away. This is typical behavior of comets as they approach and recede from the Sun. The International Astronomical Union, however, has voted and Pluto will keep its status as a planet.

Pluto, Charon, and the USA

This image shows the approximate size of Pluto and Charon by overlaying them on a map of the United States. Pluto is 1,400 miles in diameter and Charon is 750.

Pluto Sponsored by
Julius J. and Lucy Brecht and
Jim and Marsha Fergusson

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To Neptune: 1hr 18 min
To the Sun: 5hrs 30min