YOUR ATTENTION PLEASE! SOLAR ECLIPSE IN AUGUST 2017

By George Plohn, who many many years ago, in the old country, had seen a total solar eclipse, a sui generis experience when suddenly on midday everything turned pitch dark, dogs barked madly, temperature dipped, birds hushed and streetlights came on. It was an eerie and quite a sinister feeling…

Solar eclipses, when the Moon passes in between the Earth and the Sun, are a rare and special event. And our country will be soon host to that event. This will be first solar eclipse to move across the entire mainland of America since 1918.

On mid-August 2017 people from all over the world will begin to converge on the United States, people who make it a point to travel to wherever the Moon's shadow is going to touch the earth, and position themselves in a spot carefully chosen - sometimes years in advance - to ensure they see the sight. These people will travel through miles of desert or forest or frozen wasteland, braving the harshest of conditions for a short glimpse at the eclipsed Sun.

These people will be coming to America, because for the first time in 26 years, a total solar eclipse will occur in our great country, and we will play host to the world's eclipse-chasers. For those of us who already live here, but have never seen an eclipse, this is the opportunity of a lifetime to see the most beautiful thing on the planet!

Cities along the path who have decided to create official eclipse viewing areas will have their focus set to logistics, ensuring the comfort, enjoyment and safety of their guests. People who have converged on those sites to view the eclipse will begin the countdown to eclipse day, as final preparations are made to ensure that photography equipment, filters, chairs, tables, telescopes, TV monitors, webcast equipment, hats and sunscreen are all at the ready for the big day!

Last-minute weather forecasts are checked, and anyone with the slightest fear of clouds on eclipse day will invoke their travel contingencies. Weather monitoring will proceed around the clock, with live updates issued hourly so as to best prepare eclipse-chasers who will need to move at a moment's notice. Nothing will stand in the way of seeing the eclipse!

The party begins....

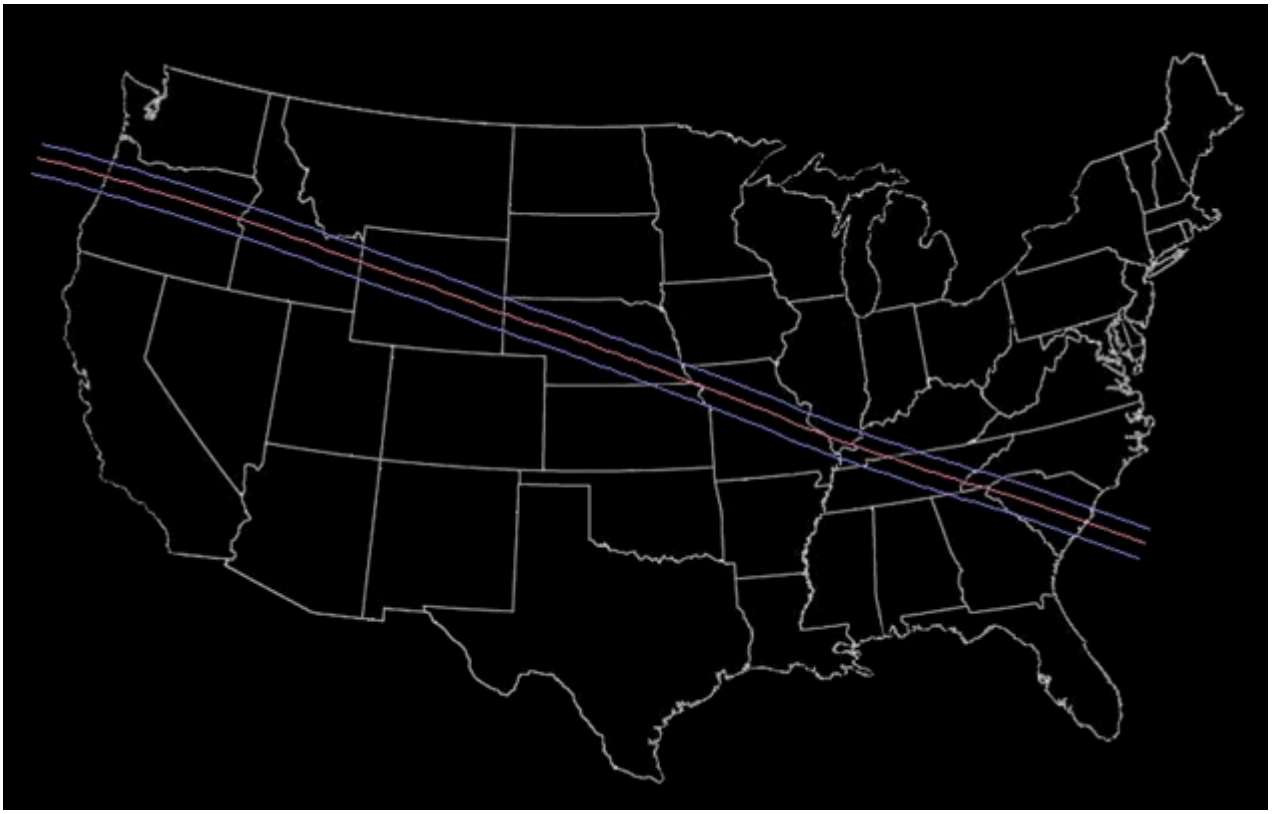
Last-minute arrivals will get in place, together with those who have had to fight their own travel glitches, and make alternate arrangements to get here. Scientists and amateur photographers who will be recording the event go over their preparations one last time. All batteries will be replaced with new ones. All film, batteries and memory cards will be double- and triple-checked. Everything will be set up, taped down, sealed against the dew and put to bed for the last time. Tomorrow is the big day, and nothing can go wrong.

Eclipse Day!

No human action can disrupt the **incessant dance of the cosmos**, and the Moon's shadow will not wait on you if you're not ready. Like a mindless juggernaut, it plows its way through space toward a collision course with Earth. As predicted by astronomers decades in advance, the shadow arrives with perfect accuracy, and touches down in the Pacific Ocean, at Newport, Oregon. **Partial phase start:** 9:04:21 AM (PDT) , and **Totality Start:** 10:15:56 AM (PDT).**Duration of Totality:** 1 m 45 s. Further west, out in the ocean, the Sun will actually rise *while totally eclipsed*. This is a sight few people - even veteran eclipse chasers - have ever seen, and it is quite uncanny.

Then, a minute later, the entire shadow called the "umbral cone", will be racing across the country eastward at supersonic speed. The shadow of the Moon will begin over Oregon and move east to Idaho, Montana, Wyoming, Nebraska, Kansas, Missouri, Illinois, Kentucky, Tennessee, Georgia, and South Carolina and will end near Charleston, SC at 2:48 local time, in a narrow path of about 60 to 70 miles wide. A partial solar eclipse will be viewable over the rest of the US. At the center of totality

the Moon will block out the sun completely for approx. 2 minutes 40 seconds. Totality time will decrease the further you are away from the center of totality, becoming a partial eclipse. An event of this magnitude will not occur again until 2045.



As an eclipse reaches totality, the Sun's wispy outer atmosphere, known as the corona, appears to spill out from behind the moon. The ethereal crown has long puzzled astronomers: It blazes at more than a million degrees Celsius, yet the Sun's surface burns at around a mere 5,500 degrees Celsius or 9930 Fahrenheit.
Normally the corona is invisible from Earth. But it appears when the moon blocks the much brighter solar disk. Totality offers scientists their best opportunity to uncover its scorching secrets. They will investigate how light is scattered in the inner part of the corona, a property known as its polarization. The information could provide insight into how electrons inside the corona are arranged, which could help researchers understand many phenomena.
The Sun goes through an 11-year cycle, during which its activity changes from being more mellow to becoming more turbulent. This year's eclipse is happening while activity is decreasing, but the one in 2024 will occur as it is ramping up, so sunspots and solar flares are expected to be more apparent then.

The Eclipse visible in New York Metro Area
New York: **Partial Solar Eclipse**
Begins: Mon, Aug 21, 2017 at 1:23 pm
Maximum: Mon, Aug 21, 2017 at 2:44 pm

Ends: Mon, Aug 21, 2017 at 4:00 pm
Magnitude: **0.77%**
Total duration: 2 hours, 37 minutes

SPECIAL eclipse glasses needed!

Only during the time of **total eclipse** is it safe to look at the eclipse without any eye protection. In the case of a total eclipse, this will, however, only last for a few minutes before the Moon moves and the Sun will slowly begin to reappear.

The only way to safely observe a **partially eclipsed sun** is through special solar filtered glasses. Homemade filters and ordinary sunglasses are **not safe** for looking at the Sun. Glasses can be found at various online retailers and are generally inexpensive.