

Make Your Own Eclipse Weather Observations

Become a Citizen Scientist for a Day with NCEI

Ready for the Great American Eclipse? Let NOAA's National Centers for Environmental Information (NCEI) help you observe possible changes in weather conditions during the brief darkness brought on by the total solar eclipse of 2017. Will the air cool? Air pressure drop? We checked our own records and found that any number of atmospheric changes may occur during an eclipse.

More than a hundred years ago, scientists and volunteers stood ready to document a variety of atmospheric conditions during the total solar eclipse on May 28, 1900. With the hope of advancing meteorological science, these teams recorded for one of the first times in history how an eclipse affects Earth's atmosphere.



Eastern path of the total eclipse of May 28, 1900, from New Orleans, Louisiana to Norfolk, Virginia.
Courtesy of Eclipse Meteorology and Allied Problems, a 1902 U.S. Weather Bureau Report.






Learn what they discovered and make your own notes today.



What Did Scientists Observe During the 1900 Eclipse?

Sixty-two Weather Bureau stations each took 25 sets of observations before, during, and after the eclipse of 1900 within 500 miles of the center of the totality. Observations included barometric pressure, temperature, vapor pressure, cloudiness, and wind speed and direction. That's over 9,000 observations just for one event!

At the time of totality, the observers saw:

-  Temperature drops of 3°F to 4°F
-  Wind speed decreases of about 1 mph
-  A slight increase in humidity
-  A temporary increase in cloudiness
-  No significant change in barometric pressure

Select Meteorological Observations at the Time of Totality, May 28, 1900

Station	Station Pressure (inches of mercury)	Temperature (°F)	Wind (mph)
New Orleans, Louisiana	29.966	76.0	3 SE
Mobile, Alabama	30.005	72.8	3 NE
Montgomery, Alabama	29.844	72.0	1 E
Charlotte, North Carolina	29.285	67.0	8 SW
Raleigh, North Carolina	29.712	71.1	4 SW
Norfolk, Virginia	30.008	68.5	5 S

Become an Eclipse Weather Observer

Describe your location. Check the temperature. Note whether it's cloudy or windy. Add special observations that mark the event.

Your Location _____

August 21, 2017

Time	Temperature (°F)	Wind/Clouds	Notes