

A partial solar eclipse for northern and western Australia

March 4 2016, by Tanya Hill



The moon partly hides the sun from Lake Bolac, Victoria, April 29, 2014.
Credit: Phil Hart, CC BY-NC-ND

This Wednesday, March 9, the sun and moon will meet together in the daytime sky.

Over Indonesia, the moon will perfectly line-up with the sun, producing a total [solar eclipse](#) that [follows a path](#) across the provinces of South

Sumatra, Central Kalimantan, Central Sulawesi and North Maluku.

For a few minutes, the moon will completely block the sun from view, bringing an eerie darkness to the day. Totality will peak at a maximum of 4 minutes and 9 seconds over the Pacific Ocean.

From northern and western Australia, it will be possible to see a partial solar eclipse, where the moon takes a bite out of the sun. Darwin will have the best view, with 50% of the sun's area hidden by the moon during maximum eclipse.

The Northern Territory and most of Western Australia, Queensland and parts of South Australia have the chance to see the partial solar eclipse. However, the further south you are, the less you'll see.

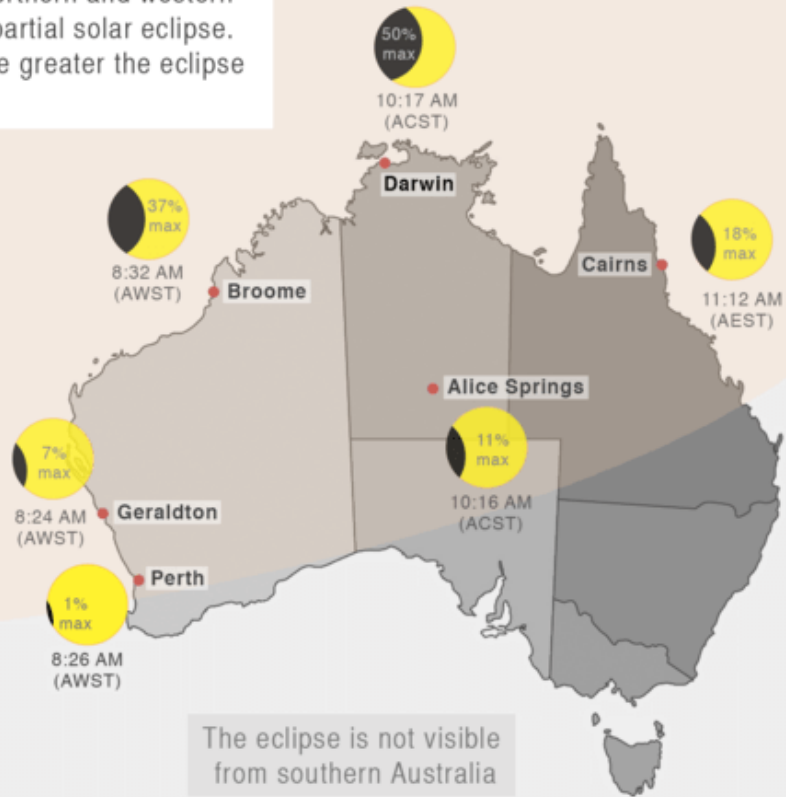
From Perth, a mere 1% of the sun's area will be blocked, while the eclipse is not visible at all from New South Wales, the Australian Capital Territory, Victoria or Tasmania.

The blinding sun

Australia's view of the solar eclipse

An indication of the appearance and timing of maximum eclipse

On March 9, 2016 northern and western Australia will see a partial solar eclipse. The further north, the greater the eclipse will appear.



An important thing to know about solar eclipses, are the precautions needed so that you can view the eclipse safely and without [risk to your eyesight](#).

During a partial solar eclipse, there'll only be a small dimming of daylight, which can be very hard to detect. It's only when a large percentage of the sun is covered, leading up to the moment of totality,

that light levels change quite strongly.

What you want to observe is how the sun's shape changes throughout the eclipse and a great way to do this is to project an image of the sun onto another surface. It's not as hard as it might sound and it works really well for younger children or as a way to share the moment with others.

A simple pin-hole camera can be assembled by making a small hole in the bottom of a plastic cup (or a piece of cardboard). With your back towards the sun, hold the cup so that light passes through the hole and onto a flat surface such as a piece of paper or a wall.

There you'll see an image of the sun, typically small and faint, but enough to reveal the sun's shape and how it changes as the moon passes by.

There are also specially designed [eclipse glasses](#) – but make sure they fit well and that there are no scratches or other signs of wear and tear. Younger children are especially at risk, so be sure to [take the right precautions](#).

The deepest shadow

During a solar eclipse, the moon comes between the sun and the earth, and the moon's tiny shadow races across our planet. From space it appears as if the Earth has a dark blemish on its surface. People within the centre of the shadow see a total solar eclipse, while those further out see a partial one.

The moon's shadow travels quickly, speeding across the Earth at around 2,000 km/h. So the timing and appearance of a solar eclipse is highly dependent on your location.

Western Australia (AWST)

Broome 37% at 8:32am

Start: 7:32am End: 9:38am

Carnarvon: 18% at 8:23am

Start: 7:38am End: 9:12am

Geraldton: 7% at 8:25am

Start: 7:50am End: 9:01am

Kalgoorlie: 2% at 8:31am

Start: 8:06am End: 8:56am

Perth: 1% at 8:27am

Start: 8:06am End: 8:47am

The time and appearance of a solar eclipse are dependent on location. The percentage figure indicates the fraction of the sun's area that is blocked by the moon at the height of the eclipse (known as the eclipse obscuration).

Northern Territory (ACST)

Darwin: 50% at 10:17am

Start: 9:08am End: 11:35am

Alice Springs: 11% at 10:16am

Start: 9:29am End: 11:06am

South Australia (ACDT)

Coober Pedy 1% at 11:16am

Start: 10:56am End: 11:37am

Queensland (AEST)

Cairns: 18% at 11:12am

Start: 10:13am End: 12:15pm

Townsville: 11% at 11:12am

Start: 10:21am End: 12:06pm

Mackay: 5% at 11:16am

Start: 10:36am End: 11:57am

Longreach: 4% at 11:04am

Start: 10:27am End: 11:43am

As a side note, the opposite is true for a lunar eclipse. In that situation, the Earth comes between the [sun](#) and the moon, and it is the Earth's much larger shadow that engulfs the moon. All of the night-side of the world sees a lunar eclipse at the same moment, and it takes a lot longer for the [moon](#) to pass through the Earth's shadow, with totality often lasting an hour or more.

When I can see it?

The timing of the eclipse is given below for a number of locations across Australia. To determine accurate circumstances for any particular location, I highly recommend the [eclipse interactive Google map](#) developed by Xavier Jubier.

With the [interactive map](#), just zoom in to a particular region and by clicking on any location, it displays the timing of the eclipse (start, maximum and end) and also provides an indication of the eclipse's appearance at its maximum moment.

Note that the times are all given in Universal Time so you will need to adjust for your local timezone: [AWST](#) +8hrs; [ACST](#) +9.5hrs; [ACDT](#) +10.5hrs and [AEST](#) +10hrs.

Best of luck with your observing and here's hoping for a sunny, cloud-free day on March 9.

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