

SOLAR ECLIPSE SAFETY CODE

Any eclipse of the Sun is an interesting spectacle and a total solar eclipse is one of Nature's greatest wonders.

But looking at the Sun is dangerous and can result in serious eye damage or blindness. The danger is NOT because of the eclipse – it is dangerous to look at the Sun at any time.

The Sun is the brightest object in the sky. In addition to the visible light, it sends out huge amounts of invisible infrared and ultraviolet rays which can harm your sight. To view the Sun safely, these rays must be blocked out by special filters.

The instructions in this safety code are intended for those viewing an eclipse of the Sun with the unaided human eye, e.g. WITHOUT any optical aid. They do NOT cover the use of special solar filters in conjunction with telescopes or binoculars.

A TOTAL ECLIPSE is when the Moon completely covers the brilliant disk of the Sun. A PARTIAL ECLIPSE is when any part of the Sun's brilliant disk, however small, can be seen. You MUST always protect your eyes during the partial eclipse.

An eclipse CAN be observed safely with the unaided human eye by following the DOs and DON'Ts of the SOLAR ECLIPSE SAFETY CODE, but DO supervise children closely at all times.

WHILE THE SUN IS IN PARTIAL ECLIPSE:

DON'T ever look at the Sun without proper eye protection.

DON'T view the Sun through sunglasses of any type (single or multiple pairs), or filters made of black & white or colour photographic film, or any combination of photographic filters, crossed polarisers or gelatin filters, CDs, CD-ROMs, or smoked glass. These are NOT safe.

DO view the Sun ONLY through special filters made for safe solar viewing, e.g. aluminised mylar filters, or black polymer filters, identified as suitable for direct viewing of the Sun, bearing the CE mark AND a statement that it conforms to European Community Directive 89/686/EEC, or use a welder's glass rated at No. 14 or higher. Always read and follow the manufacturer's instructions carefully.

DO check filters thoroughly for any damage BEFORE use. DON'T use them if they are scuffed, scratched or there are pinholes in them.

DO place the special filter firmly over your eyes BEFORE looking up at the Sun, and DON'T remove it until AFTER looking away.

DO use the special filters to view the eclipse while any part of the Sun's brilliant disk, however small, is still visible. This will apply at all times if you are not within the path of the total eclipse and are viewing only a partial eclipse.

DON'T stare through the special filter for more than 3 minutes at a time. Intermittent use of the filter for the duration of the partial eclipse is the best way to view the event.

Even with the special filter placed firmly over your eyes, DON'T ever look at the Sun through any optical instrument, e.g. telescope, binoculars or camera. Such devices concentrate the Sun's harmful radiation and will cause severe eye damage in a fraction of a second. Filters identified as suitable for direct viewing of the Sun are NOT safe for use in conjunction with any optical instrument. If you are not certain that a filter is approved and safe, or you have any other doubts, DON'T USE IT.

AND ALSO:

DO observe the Sun INDIRECTLY by "pinhole projection". Make a small (4 mm diameter) hole in the middle of a large piece of card and use it to "project" an image of the Sun onto another (preferably white) card screen positioned 1-2 metres away. DON'T look through the hole – look ONLY at the projected image on the (white) card screen.

WHILE THE SUN IS IN TOTAL ECLIPSE:

IF you are within the narrow path of totality, during a total solar eclipse, the Moon will for a short time (usually only a few minutes) COMPLETELY cover the Sun's brilliant disk.

AT THAT TIME ONLY:

DO view the totally eclipsed Sun directly without any filter. ONLY at this time can the faint and beautiful corona – the Sun's pearly-white outer atmosphere – be appreciated.

BUT:

DO be alert to the reappearance of the Sun's brilliant disk at the end of the total eclipse. As soon as the first light of the Sun has reappeared (the spectacular 'diamond ring'), you MUST look away immediately and use the special filters once more.

REMEMBER that even within the path of the total eclipse, there will be a partial eclipse for about one-and-a-quarter hours before and after the brief total phase. You MUST always use the special filters during the partial eclipse.

NOTE:

On 20 March 2015, the eclipse will only be total within the narrow path of totality which passes between Iceland and the Outer Hebrides. NOWHERE in the British Isles will witness a total eclipse on that date, so the instructions for viewing a partial eclipse MUST be followed.