

1999 TOTAL ECLIPSE OF THE SUN FACT SHEET

Date: August 11th 1999. Totality start time ("2nd contact") UK (at the Scilly isles): **11.10 am BST** 10.10 UT.

What will happen in this region

A maximum of around 95% of the Sun will be covered in Suffolk. The maximum will be at around 11.22 am BST. This will be enough to notice a drop in light level. Sunlight through the leaves of trees and bushes and colanders will produce crescent shaped images of the Sun by the pinhole camera effect. If you observe from this region and anywhere else outside the track of totality you will need filters or use binoculars or a telescope (stopped down if greater than 3 to 4 inches (75 to 100mm) aperture) to project the Sun on to a sheet of card (***Do Not Observe the Sun directly through telescopes or binoculars, serious eye damage will result***). However, unless you travel to the track of totality you will not see a total eclipse: **the total eclipse will NOT be visible, only a partial eclipse will visible from Suffolk.**

Protective mylar filters for naked eye observation

Unless you project the Sun onto a sheet of card or paper, you will need good quality mylar filters to safely observe the partial phases of the eclipse **even if you are on the track of totality (Note with larger telescope - 6 inches and above - either stop down the aperture to about 4 inches or use two layers of mylar film)** . If you are on the track of totality you will need to remove the filters during totality (up to 2 minutes) to see the corona, prominences, etc, but only while the Sun is completely covered by the Moon. While even the smallest slither of Sun is visible through the mylar filters you must keep them on to avoid serious eye damage. You should read at least one of the references given below and familiarise yourself with safe eclipse observation. **If you are not 100% sure of when and how to observe totality without filters in safety you must come up to the observatory on a Wednesday evening to discuss eclipse observation with a member who is familiar with the issue.**

Eye filters are available at £1.99 including p&p from **Eclipse99 Ltd.**, Belle Etoile, Rue du Hamel, Castel, Guernsey, GY5 7QJ. [They also have a number of eclipse books.]

NB. The society plans to bulk-buy filters which members can buy.

Sun and Sky

The Sun passed through the minimum of its 11 year cycle in 1996 and by next August should be becoming pretty active, with plenty of structure in the corona and the possibility of big prominences and coronal streamers. The Sun will be at an altitude of 45° at mid-eclipse.

Venus and Mercury will be near the Sun and Saturn and Jupiter in the sky as seen from the UK.

Weather

The Lizard peninsula in Cornwall is probably the best location in the track of totality on mainland UK so far as the weather is concerned, but being mobile will help. It has been observed that it is often cloudy on the coast and clear inland in the mornings – but sometimes the situation is reversed. Travelling a few miles/kilometers can make the difference. The chances of seeing totality in the UK have been put at 40% to 45%. Of course, it could be cloudy in Turkey and clear in Devon and Cornwall.

The weather prospects improve a little on the continent through France (when you get away from the coastal regions) and Germany and the prospect of easier travel and better availability of accommodation will draw some UK citizens over. In general, the weather improves steadily as you head east. The weather gets significantly better beyond the Alps and into Eastern Europe. The best weather prospects are in the Middle East. Turkey and Iran have the best weather prospects on the track.

Where to observe from

You don't have to be exactly on the centre line. In the UK up to 10 or 12 km (6 or 7 miles) either side gives a duration of about 2 minutes.

Try to avoid standing too close to streetlights which will come on during totality and look out for security lights which may also come on at an inopportune time. With a sea horizon or a high vantage point you may be able to see the shadow rushing towards or away from you.

For eclipse trips to Turkey and a charter train to Penzance

Explorers Tours is a travel company with many years' experience in organising eclipse trips. A number of members have traveled with them

before. They are arranging trips for the 1999 eclipse including a charter trains that travel overnight from London and Preston to arrive at Penzance (near the centre line) on the day and returning later that day. They also have itineraries covering many destinations in Europe and the Middle East including Turkey and Iran.

Explorers Tours:

223 Coppermill Rd.
Wraysbury,
Staines,
Middlesex, TW19 5NW
Tel - 01753 681999
Fax -01753 682660

Accommodation in Cornwall

Cornish Tourist Board:

Lander Building,
Daniell Rd,
Truro Cornwall TR1 2DA
Tel: 01872 274057

A lot of accommodation is already taken. Many hotels, B&Bs and guest houses are fully booked. Coach firms have booked a lot of property, so they should be advertising package trips soon. Bookings for less than a week are unlikely to be accepted except at a huge premium. Some holiday self-catering property operators are giving priority to their regular customers and will not take bookings until August or September. Some properties will be occupied by the owners during eclipse week. There are some properties still available. The week is the peak season and prices are at the maximum and surcharges between 20 and 100% are generally being applied. Some operators will be waiting until August and September before deciding how much to charge.

NB. Accommodation in Devon may be easier to come by. Totality is shorter and the weather may be a little less reliable.

Camping and caravan sites

Many campsites have already been booked. One person is reported to be block booking a large number of sites, presumably to sub-let. Many of the sites with limited amenities are reported to be still available.

Camping, caravan and dormitory accommodation for BAA members and families at Truro School:

British Astronomical Association:

Burlington House, Piccadilly,

London W1V 9AG

Tel: 0171 734 4145

As an affiliated society member you can ask for a place.

NASA publication for further information:

NASA Reference Publication 1398, can be requested free from NASA including a self-addressed, stamped envelope with postage for 12 ounces (340 grams) with your request. Do not send cash or checks!

Ask for "NASA RP 1398 -- Total Solar Eclipse of 1999 August 11" and indicate that you are an amateur astronomer or interested member of the public. Send your request to either:

Fred Espenak,
NASA/Goddard Space Flight Center
Planetary Systems Branch, Code 693
Greenbelt, MD 20771
USA

Jay Anderson
Prairie Weather Centre
900-266 Graham Avenue
Winnipeg, MB,
CANADA R3C 3V4

You can see a WWW version of the report and an order form for a paper copy at the NASA web site

Books with more information include:

Guide to the 1999 Total Eclipse of the Sun, RGO
UK Solar Eclipses from Year 1, Sheridan Williams

Maps of track

We have included some maps of the track from the NASA report 1398 in the journal. NASA give permission to copy maps and other parts of the report subject to certain conditions. Before copying the map from the journal you must refer to the copyright information at the NASA Web site, or in NASA RP 1398, or ask a committee member.