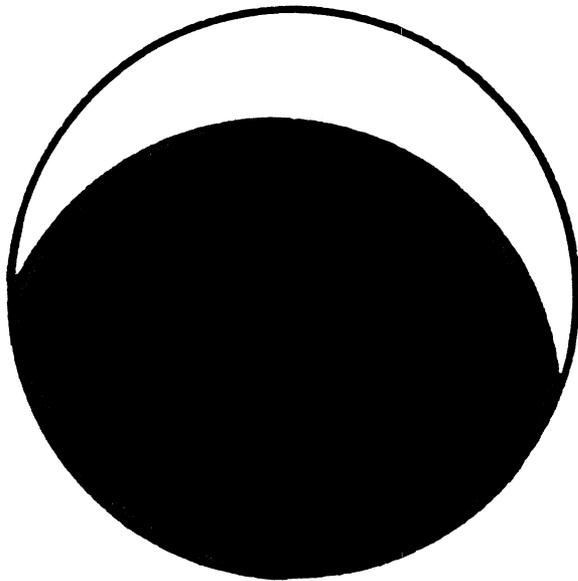


**PRESS RELEASE**

**ECLIPSE OF THE SUN - MAY 30, 1984**



**Plans for the viewing of the partial eclipse of the Sun from the Toronto area.**

**Toronto Centre of the Royal Astronomical Society of Canada**

=====

**GENERAL RELEASE**

Around the noon hour on Wednesday May 30th, Toronto and the rest of North America will experience a partial eclipse of the Sun.

The Moon will cover 81% of the Sun as seen from Toronto. The entire eclipse itself will last three hours, with the maximum coverage occurring at 12:47 pm.

Observing a partial solar eclipse can be dangerous. Extreme caution must be used to prevent damage to the observer's eyes. There are safe ways to view a partial eclipse of the Sun, the easiest being a pinhole camera.

Representatives from the McLaughlin Planetarium as well as from the Toronto Centre of the Royal Astronomical Society Of Canada will have telescopes set up at Nathan Phillips Square and in front of the Planetarium to provide the public with a safe view of the eclipse. A briefing will be held for the media prior to eclipse day to set up interviews and demonstrate the safe viewing of the Sun.

=====

---

## Background Information

The Sun is eclipsed when the Moon passes between it and the Earth, forming a straight line. There are three types of solar eclipses: partial, total and annular (see Figure 1).

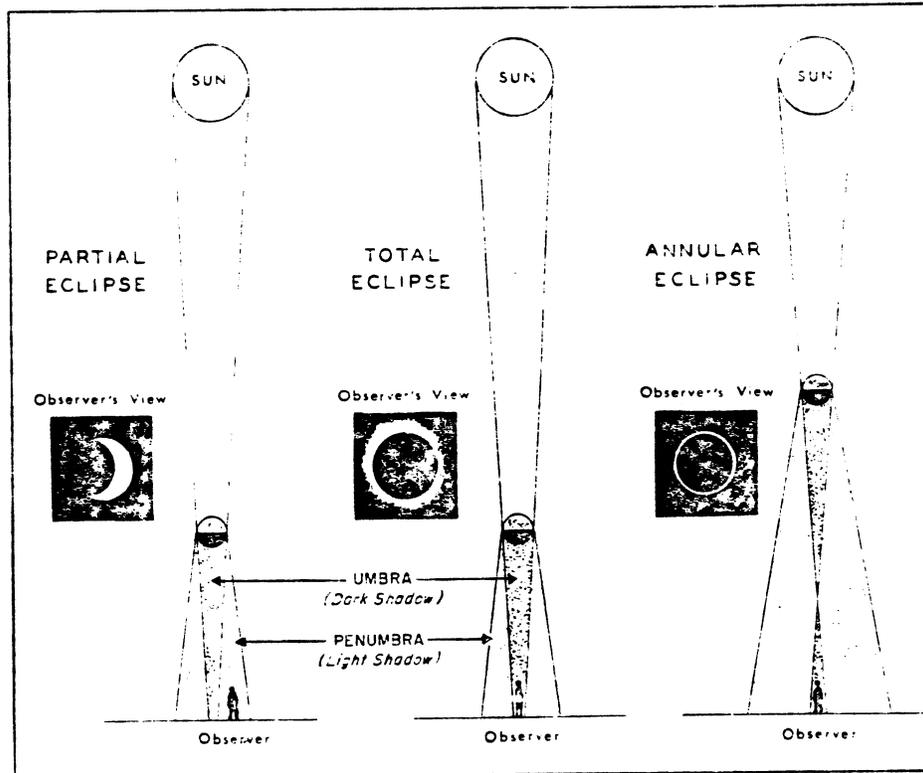


Figure 1

During a partial eclipse, an observer sees only a portion of the Sun covered by the Moon. During a total eclipse, the Moon covers the Sun completely. This period of time, called "totality", varies from eclipse to eclipse, from a few seconds to several minutes. To see a total eclipse, the observer must be situated within the long, narrow path of totality, where the Moon's shadow touches the surface of the Earth. This path is approximately 160 km. wide and several thousand km. long. An observer outside this path sees a partial eclipse. The last total eclipse of the Sun visible from Canada took place on February 26, 1979. Winnipeg and Brandon, Manitoba were situated on the path of totality.

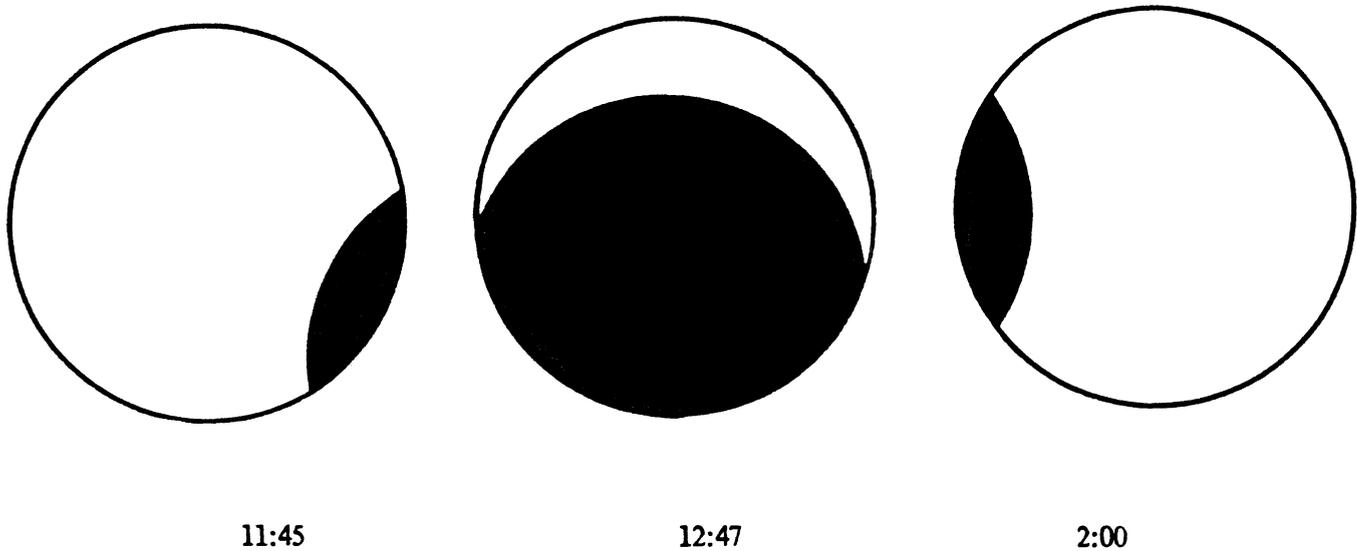
An annular eclipse is similar to a total eclipse. However, during an annular eclipse, the Moon is at a greater distance from the Earth and appears smaller than the Sun (see Figure 1). During an annular eclipse, the Moon does not totally cover the Sun, but is surrounded by a ring, or "annulus" of sunlight. Again, as for a total eclipse, one must be situated along a narrow path to see the annular phase. Outside the path of annularity, one sees a partial eclipse. The 30 May eclipse will be an annular eclipse.

---

=====

A partial eclipse lasts approximately three hours. From Toronto, the Moon will first appear to take a "bite" out of the Sun at 11:22 am. It will take increasingly larger bites until, at 12:47, the maximum partial eclipse will occur and the Moon will cover 81% of the Sun. The Moon will then move off the Sun until at 2:17 pm, it will have moved off completely and the eclipse will be over. The appearance of the eclipse as seen from Toronto at three different times is illustrated in Figure 2.

Figure 2



The annular phase of this eclipse (when the Moon is superimposed over the Sun), will be seen along a 15,000 km. long X 10 km. wide path. This path crosses Mexico, the United States, the Atlantic Ocean and part of Africa. In Figure 3, this path can be seen crossing the southeastern United States.

=====