Solar Eclipse

A solar eclipse, while not a rare event, is uncommonly seen from populated areas of the earth. Unfortunately, without proper protection, a solar eclipse can be very dangerous to the eye. Specifically, direct viewing of the sun, whether partly eclipsed or not, will result in a retinal burn if protective equipment is not used.

An additional problem with such an injury is that there is no pain when the retina is being burned, and the resulting visual symptoms may not be noticed for several hours after the injury has occurred. However, once the burn has occurred, there is no reversal of the damaged retinal tissue. The burned area of retina is forever without sight. Depending upon the size of the burn, the affected individual can lose one or two lines of vision, or may end up legally blind (less than 20/200 with best correction).

The only totally safe way to watch a partial eclipse is by viewing indirectly, using some form of projection, or with specially made solar filters. The latter are best obtained from a reputable, telescope manufacturer or retail store which sells telescopes (the exact description are beyond this FAQ).

Materials that should *not* be used for direct viewing of a solar eclipse can include:
sunglasses
photographic neutral density filters smoked glass
polarizing filters
photographic film

Children under 10 should only watch a solar eclipse on television, or with an indirect viewer. All children should be closely supervised while watching the eclipse. In fact, children when young should be warned about not looking directly at the sun at any time.

Retinal burn in macula from staring at an eclipse without protection.