The Arboretum
State Botanical Garden of Kentucky

UK MacAdam STUDENT OBSERVATORY

The Arboretum, the MacAdam Student Observatory, and the Bluegrass Amateur Astronomy Club present:

Standing in the Shadow of Venus

Dr. Stella Cottam: Thursday, May 31st, 7:30 p.m. Room 155 Chem-Phys Building

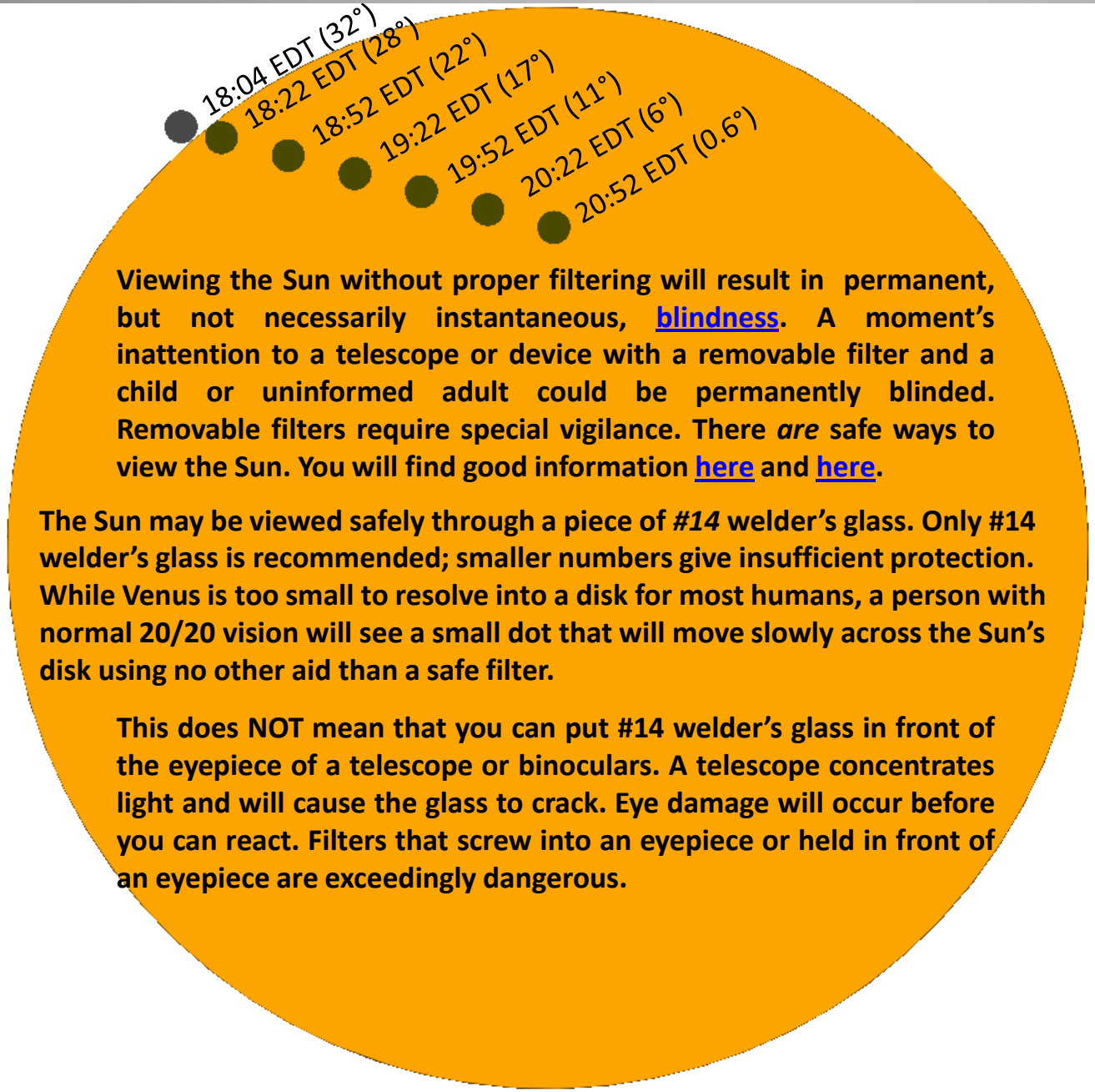
Safely See the Transit: Tuesday, June 5, 2012 UK/Fayette Arboretum

A *transit* of the Sun occurs when a solar system object moves exactly between the Sun and the observer. Transits of Venus are particularly rare, occurring at intervals of 8, 105 ½, 8, 121 ½, 8… years as viewed from Earth. The last one was in June, 2004 and the next one will be in December, 2117.

Viewing the Sun improperly will result in permanent, but not necessarily instantaneous, blindness. Your eyes can suffer permanent damage that isn't apparent until hours after it is too late.

Join the Bluegrass Amateur Astronomy Club's presentation of the historical importance of past transits of Venus. This informational meeting begins at 7:30 P.M. in the University of Kentucky's Chemistry-Physics Building. You may leave your vehicles in parking structure #2 and walk across Rose Street to Chem-Phys, Room 155.

Then, weather permitting, join us at The Arboretum to safely view the Sun while Venus casts its shadow on you. The Arboretum is located at 500 Alumni Drive, in Lexington, KY. The transit begins at 6:04 P.M. EDT and ends when the Sun sets below our horizon, ~ 8:40 P.M.



Viewing the Sun without proper filtering will result in permanent, but not necessarily instantaneous, blindness. A moment's inattention to a telescope or device with a removable filter and a child or uninformed adult could be permanently blinded. Removable filters require special vigilance. There *are* safe ways to view the Sun. You will find good information here and here.

The Sun may be viewed safely through a piece of *#14* welder's glass. Only #14 welder's glass is recommended; smaller numbers give insufficient protection. While Venus is too small to resolve into a disk for most humans, a person with normal 20/20 vision will see a small dot that will move slowly across the Sun's disk using no other aid than a safe filter.

This does NOT mean that you can put #14 welder's glass in front of the eyepiece of a telescope or binoculars. A telescope concentrates light and will cause the glass to crack. Eye damage will occur before you can react. Filters that screw into an eyepiece or held in front of an eyepiece are exceedingly dangerous.

North is up in this composite image of the June, 2012 Transit of Venus across the face of the Sun, and represents what could be visible from Lexington, KY, weather permitting.

Except for the first interval, the spacing between frames is 30 minutes.

June 5th, 2012: Viewed from Lexington, the transit begins at 6:04 PM EDT and ends, for us, when the Sun sets.

The labels adjacent to Venus are the local time and altitude of the Sun.

Timings are to the nearest minute and do not include effects like the ***black-drop***.

Venus is in reality less than 1% the diameter of the Sun, but appears three times larger because during the transit it is three times closer to the Earth than the Sun.

N
E
W 84.4994 deg N38.0278 deg

Solar image with Venus created with Guide 8 for the MacAdam Student Observatory.