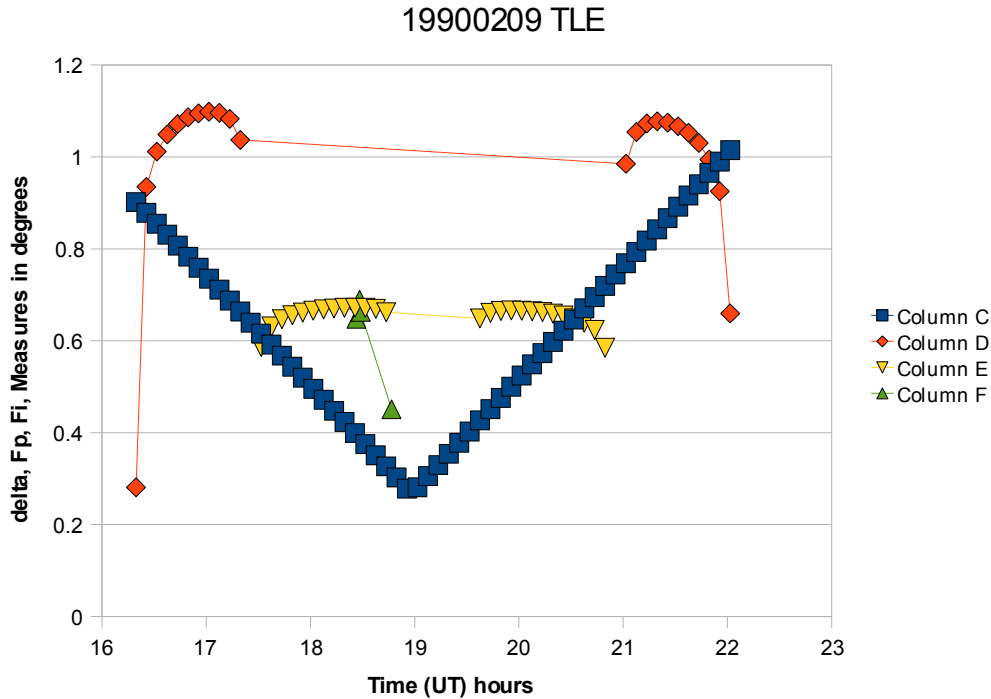


Analysis of images from VHS Video of the 19900209 Total Lunar Eclipse

A VHS video of the total lunar eclipse of *19900209* has been dubbed to a DVD and a small number of captured images have been measured with *Digimizer*. Programs *ILEEP41.exe* and *ViaX8.exe* were used to predict the expected penumbra and umbra size for the observing site at Paradise, South Australia.

The results are shown in the graph below.



LEGEND

Column **C** is the slant angle *delta*

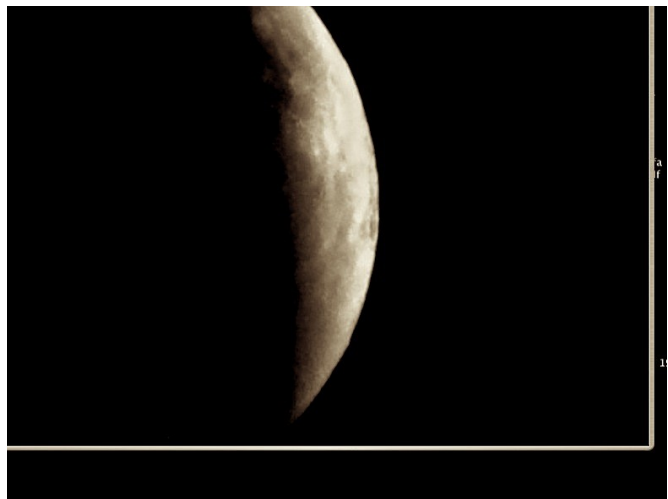
Column **D** is the computed size of the penumbra (*Fp*) in degrees.

Column **E** is the computed size of the umbra (*Fi*) in degrees.

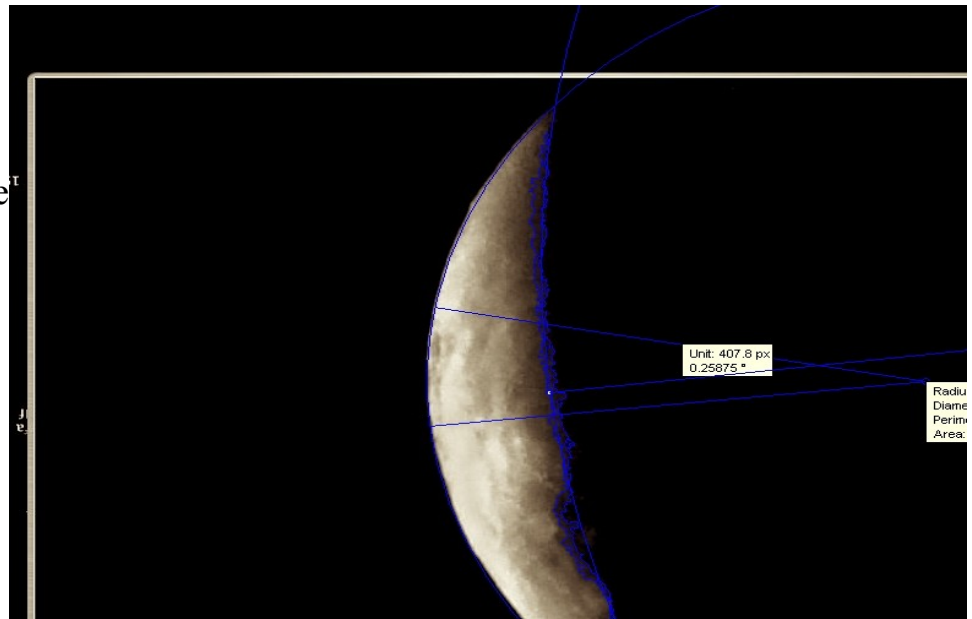
Column **F** is the measured size of the Umbra images in degrees.

COMMENTS

The measured values of the umbra are good for the four values just before and near second contact where the images were of good shape for measurement, as shown here for one image taken from the video at 18h48m21s.



This image of the above was saved from *Digimizer* and illustrates in blue, the calibrated edge of the Moon and the best fit curve to the umbra edge and its measurement at 0.663° .



CONCLUSION

It is possible to transfer old VHS records to DVD and subject the captured images to modern analysis. Unfortunately this is the only old record retained, but this project illustrates the value of the prediction programs and the reasonable fit of several measured images of the umbra to the size predicted.

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