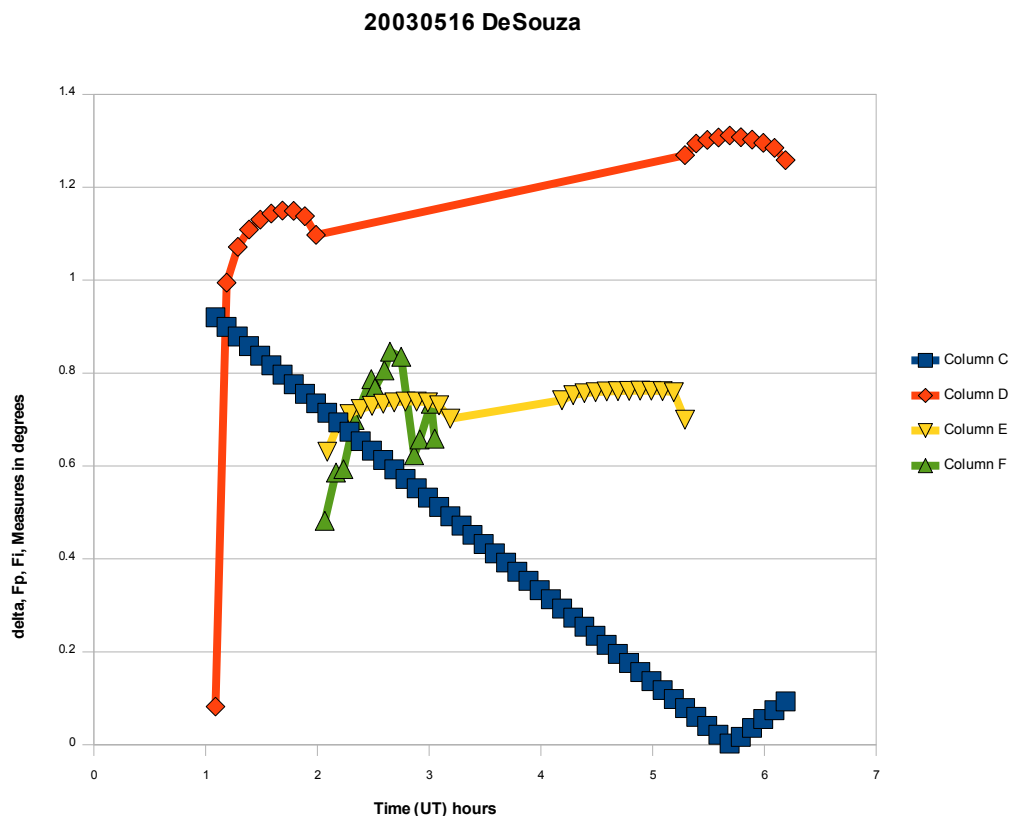


Re-analysis of Images by deSouza for two 2003 Lunar Eclipses

A large number of images were provided by *Willian Carlos deSouza* (Latitude 23°27' S, Longitude 46°37' W, 760m) for the two lunar eclipses of 2003. These have been re-analysed to compare the image measures using *Digimizer* and the predicted topocentric umbral semi-diameter (*Fi*).

For the total lunar eclipse of *20030516* the output is from the two new computer programs *ILEEP41.exe* and *ViaX8.exe*, the results are shown below:



LEGEND ONE

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

Column **D** is the computed topocentric penumbra (*Fp*) in degrees

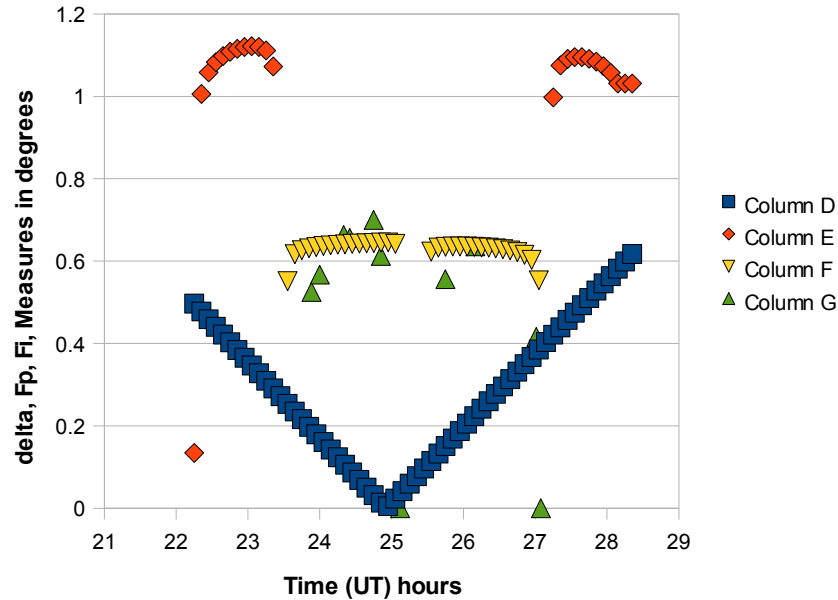
Column **E** is the computed topocentric umbra (*Fi*) in degrees

Column **F** is the measured umbral semi-diameter in degrees

For the total lunar eclipse of *20031109* the output of program *ViaX8.exe* was used with the Frame times corrected by +24 hours, as shown below¹:

20031109 deSouza

ViaX8.exe latest



LEGEND TWO

Column **D** is the computed slant angle *delta*

Column **E** is the computed topocentric penumbra (*Fp*) in degrees

Column **F** is the computed topocentric umbra (*Fi*) in degrees

Column **G** is the measured umbral semi-diameter done as a batch of calibrated images.

CONCLUSIONS

The measured umbral values compare well with those computed, although the scatter is greater than that found for [other](#) eclipses similarly analysed²

Produced by the *Isabella Plains Lunar Observatory Australia* 20090130.
