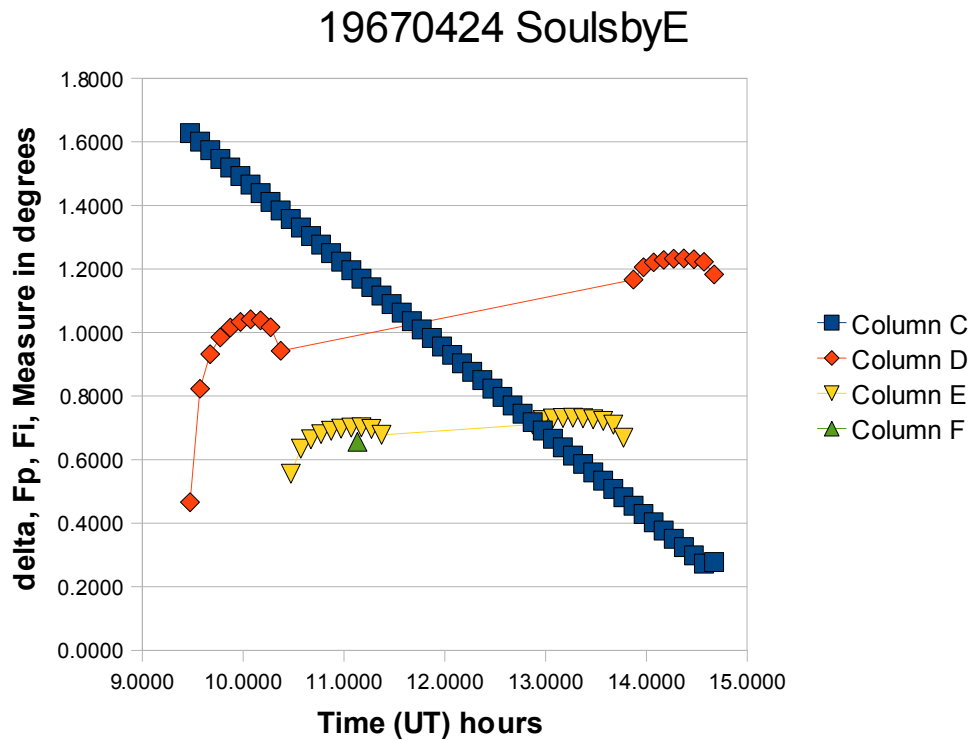


## Prediction and measurement of the umbra for the total lunar eclipse of 19670424.

One image was captured from this eclipse by **David Herald** at Box Hill Victoria.

Here is the comparison of the measurement with the predicted topocentric penumbra and umbra:



LEGEND ONE

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

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

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

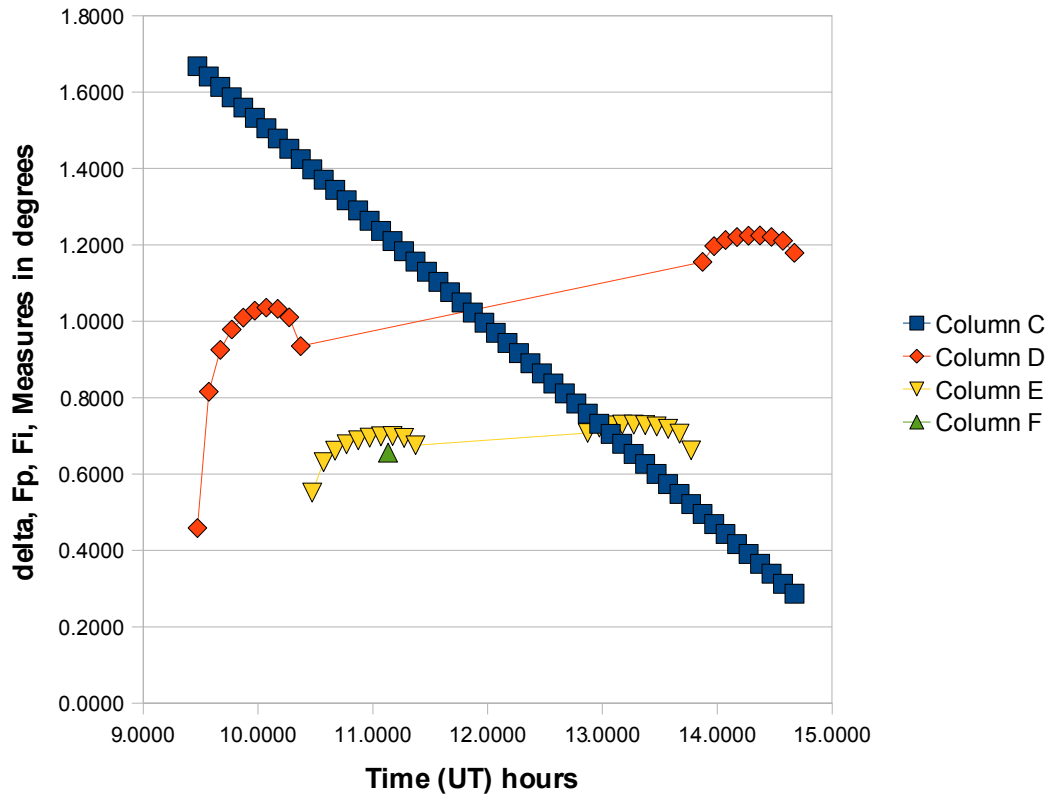
Column **F** is the measured image umbral semi-diameter in degrees.

COMMENTS

This is an interesting result as the above chart was computed for Soulsby at Elizabeth South Australia (this was a test of the software with newly generated data files Moon.DAT and Sun.DAT).

As can be seen the one measurement is below the computed value at 11h08m. The chart values were then computed for Dave at the Box Hill location with the following result:<sup>1</sup>

## 19670424 HeraldBH



### LEGEND TWO

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

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

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

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

### CONCLUSION

There is only a subtle change in *delta* (from the difference between the Elizabeth and Box Hill locations) but there is no appreciable change in the umbra and measurement comparison.

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Produced by the *Isabella Plains Lunar Observatory Australia* 20090120<sup>2</sup>.

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