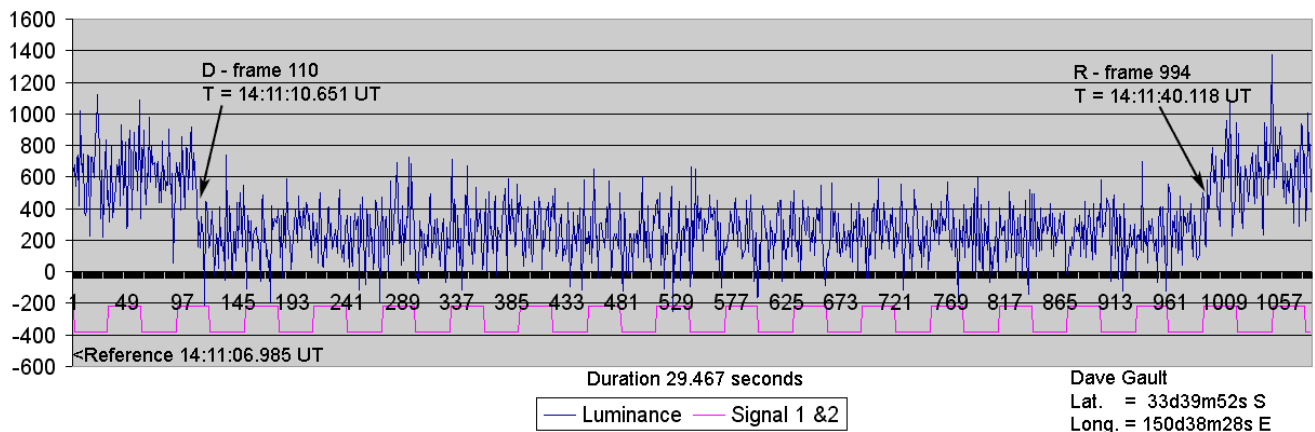


Occultation of TYC 0026:00863 by 51 Nemausa

The movie can be downloaded from <http://www4.tpgi.com.au/users/daveg/astrovideos/videos.htm>

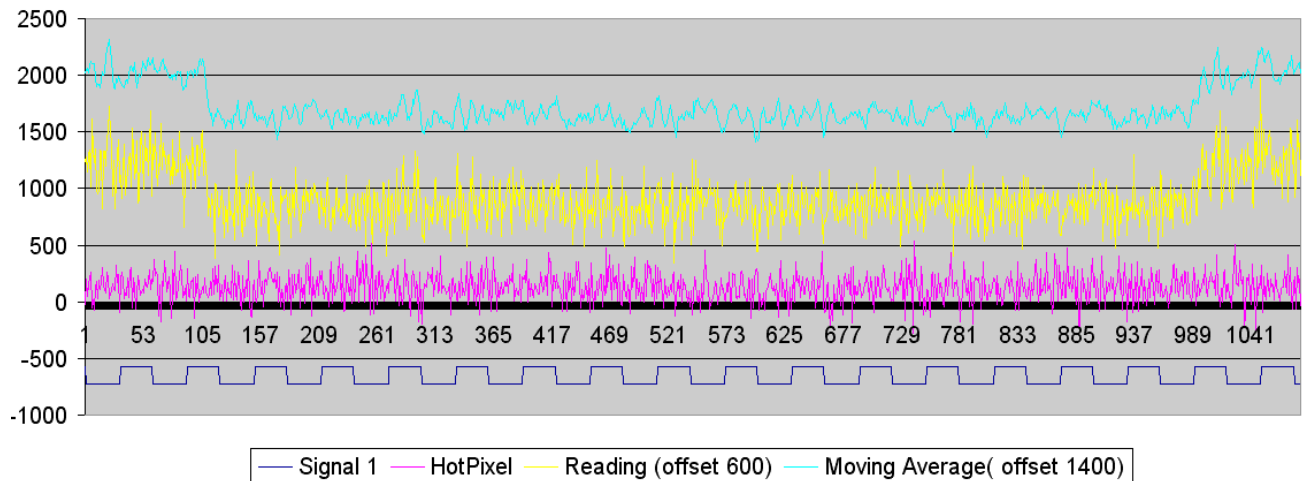
Initial analysis of the event by use of limovie revealed the following plot showing a 29.47 second duration.

MP Occultation - 51 Nemausa
21st August 2005



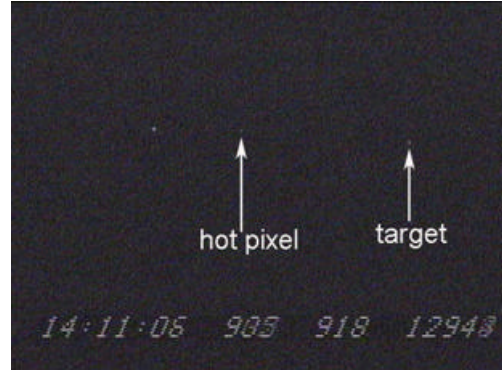
Following comments referring to the luminance variation and the non instantaneous nature of the reappearance, I decided to take another look at my recording. The plot is below.

Nemausa Occultation



Note the following features:

- blue line – Signal 1 -The numbers are simply inserted at convenient values where a higher number represents an EVEN second and a lower number represents an ODD second and values start from the reference frame... 14:11:06.985UT.
- pink line – Hot Pixel - My camera has a hot pixel (see photo) and I ran a limovie plot on that and the luminance values are as shown. I made the limovie aperture as small as I could and still confirm that it was covered correctly. As it's a hot pixel, it is not subject to atmospheric disturbance, optical variations in the telescope or detection issues in the ccd chip, so it's luminance variations can only be a part of the digital conversion or measurement methods.
- yellow line The same as the first plot but with the values offset by 600 for clarity.
- blue line A running average of the leading and trailing two frames.



Here is a close up of the events.

The disappearance is instantaneous, however the reappearance seems to occur over the duration of 6 to 8 frames.

There is a rise in the hot pixel value at the same time as the rise in the value of the star, which may give the illusion of the long duration. I don't know if this is real or just a chance happening of the oscillations of the luminance values.

Comments welcome

DaveGee (Gault)

