

# Propagation Predictions – P29 (Papua New Guinea) to UK, 20/10/09 – 10/11/09

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## Introduction:

I have based these predictions on a solar flux of 76. This may be slightly optimistic. Our recent high of 75-76 came on 22/9 – 24/9, although the sunspot had faded significantly by the time it had gone out of view. On the 27-day solar rotation this could come back into position around 18-23/10, although I wouldn't put money on it.

The latest SOHO images don't show any new sunspots on the sun's limb. The "behind" satellite in the STEREO pair doesn't show anything remarkable coming around either.

What could happen in the period 20/10 – 10/11 is anyone's guess!

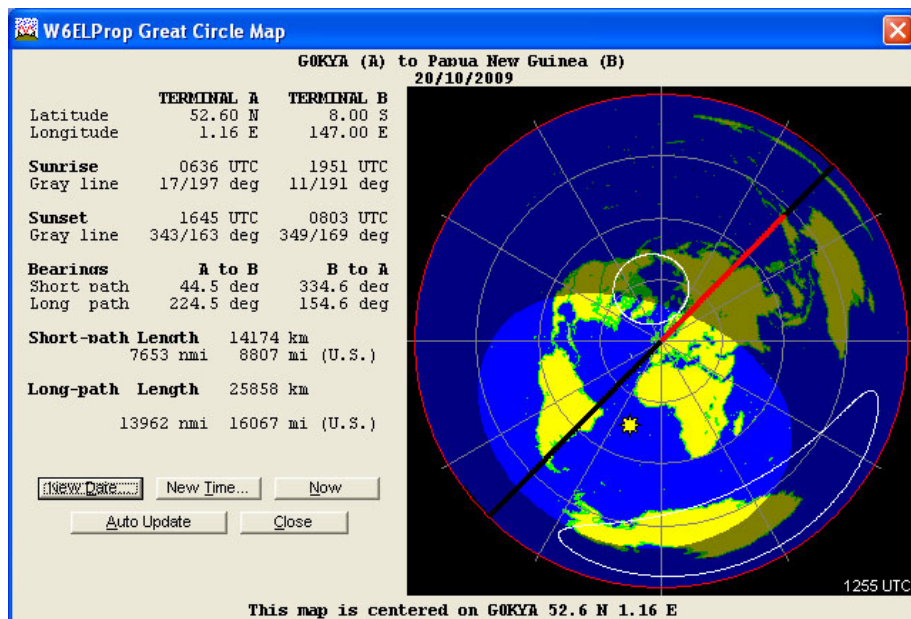
There is the possibility of an LF window, which improves as the Dxpedition goes on. Don't ignore the Long Path on HF, which shows better probabilities at times - even the possibility of a 10m opening.

## Sunrise/Sunset:

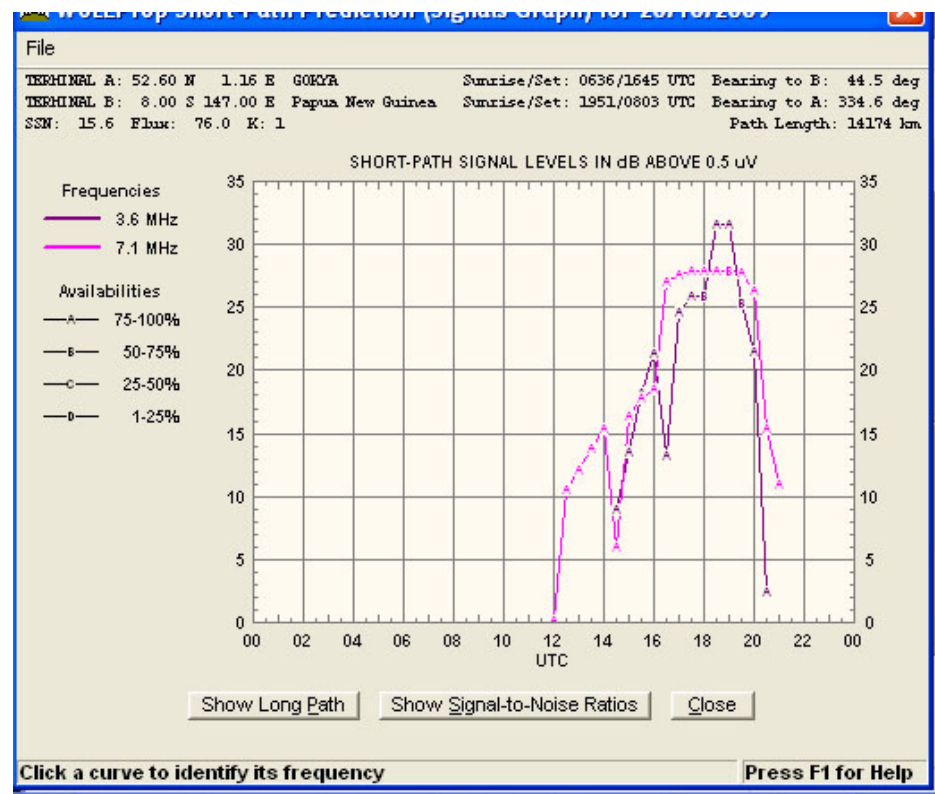
On 20 October, sunrise in UK is 0636. Sunset is 1645.  
In P2 sunrise is 1951 and sunset is 0803.

Therefore, we have period of mutual darkness **between 1645 and 1951**, which would be optimum for the lower bands.

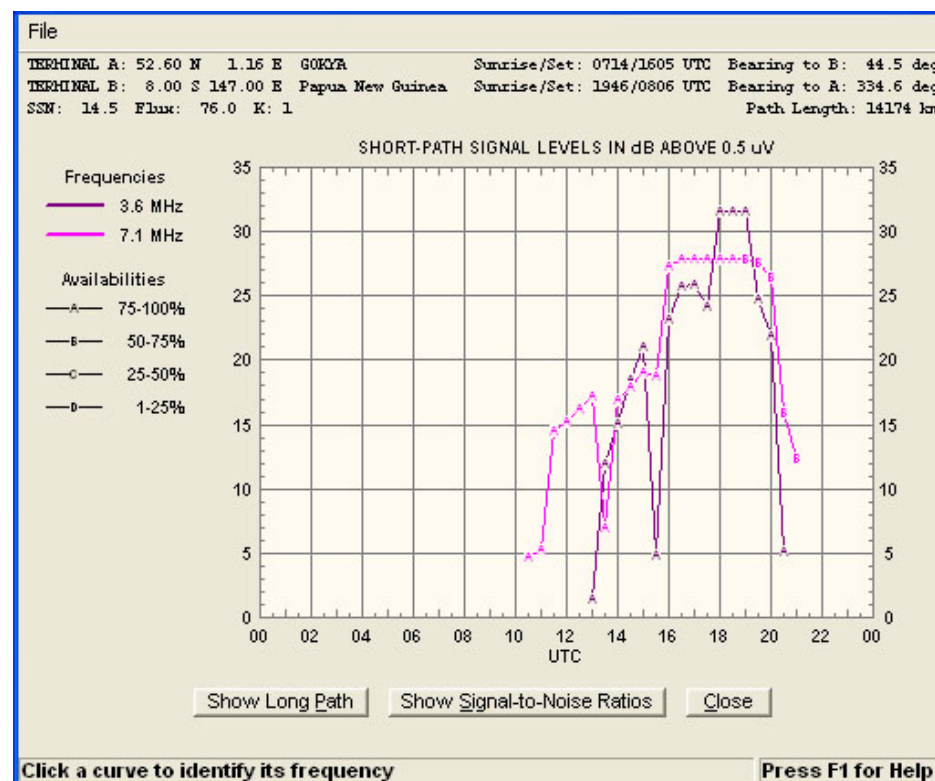
By the end of the Dxpedition, sunrise in UK is 0714, sunset is 1605.  
In P2 sunrise is 1946 and sunset is 0806. Giving a longer period of mutual darkness **between 1605 and 1946**.



**Below: 40m and 80m propagation to UK at the start of the period.**



**Below: 40m and 80m propagation to UK at the end of the period.**



## 80/40m

The VOACAP-based programs are notoriously bad at predicting 80m openings, so I have used W6ELProp (Raymond Fricker-based).

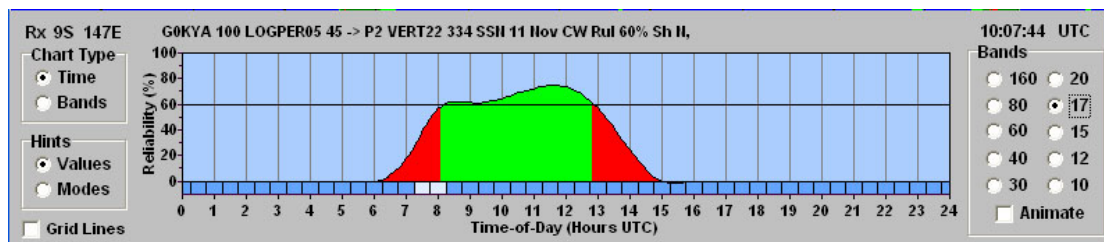
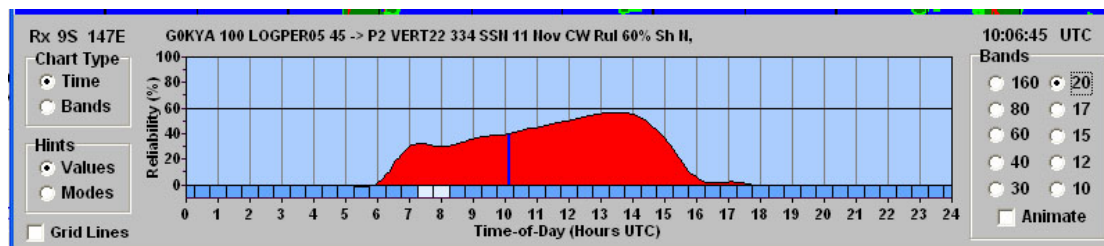
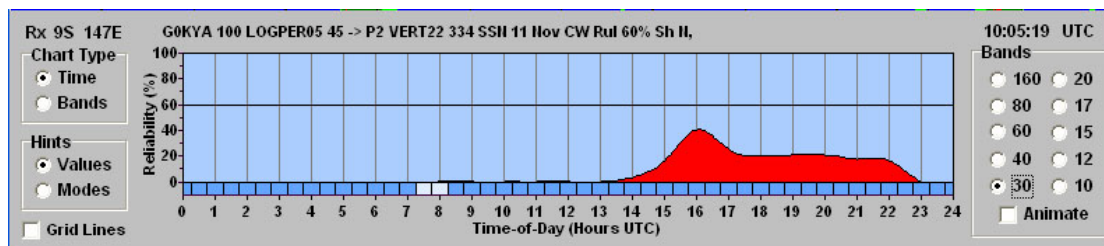
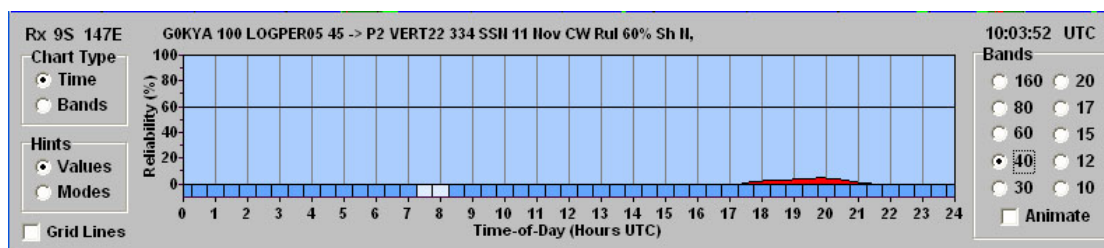
This plus the information on the dark path suggests that optimum 80m conditions back to the UK will be around 1800-1900hrs.

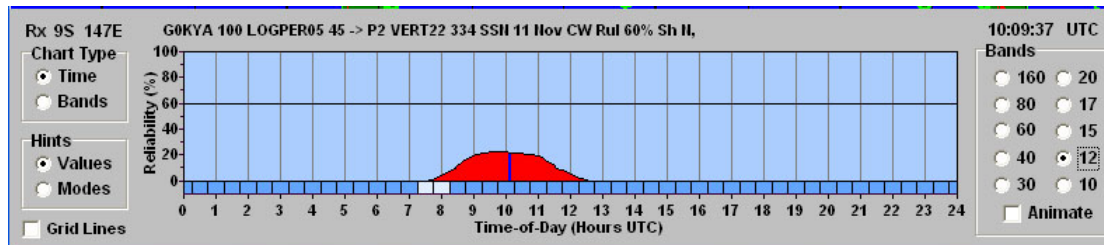
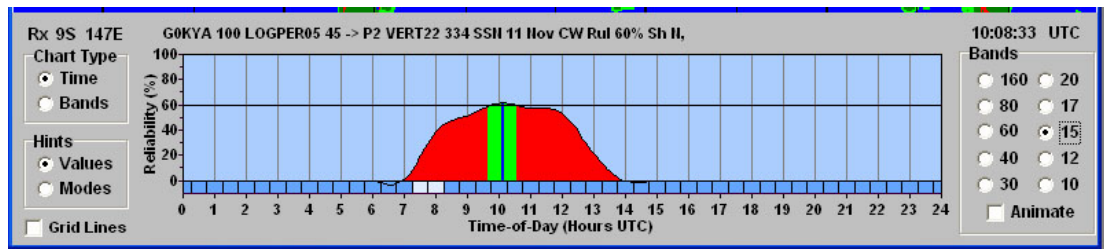
40m is longer around, perhaps, 1600 – 1900hrs.

These are both based on the short path.

## HF – Short Path

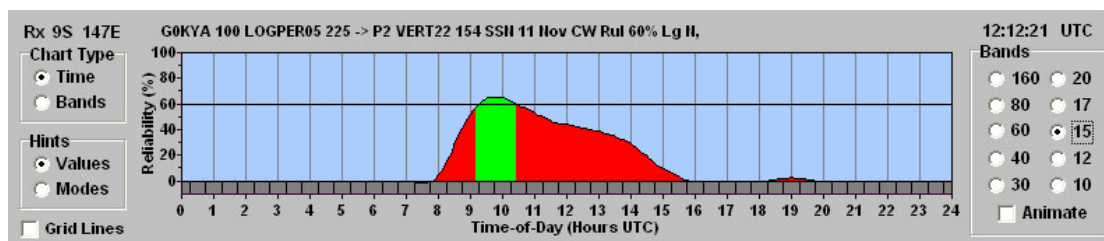
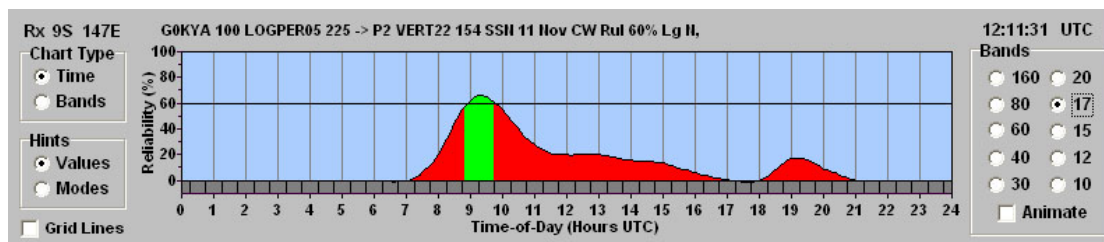
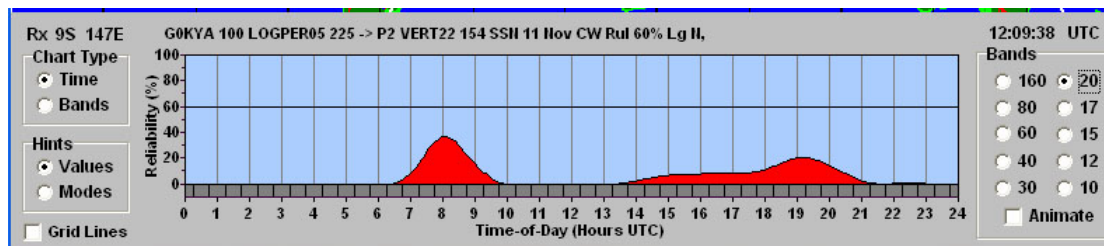
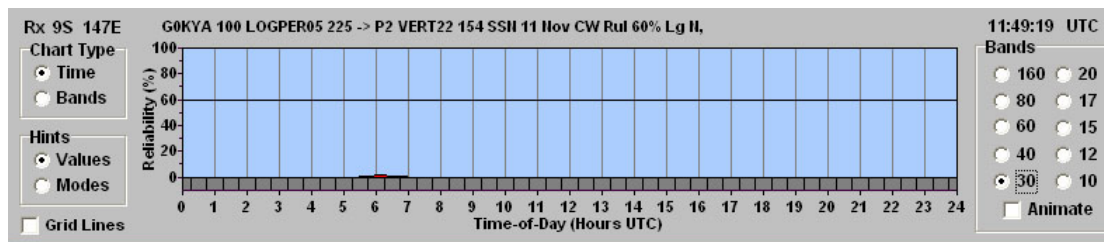
Please see the plots from Ace-HF below – based on a well-equipped UK station and some element of gain at P2 from the beach-mounted antennas. These are all shortpath, beaming 44 degrees from UK.

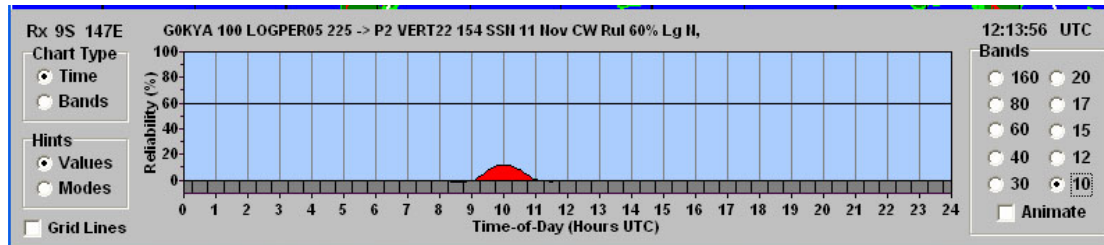
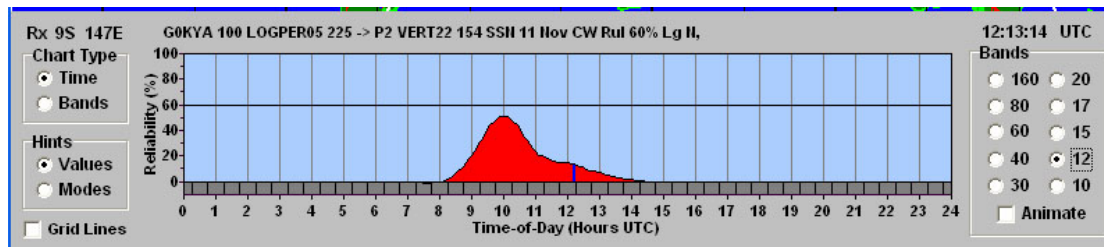




## HF Long Path

Beam heading from UK is 224 degrees.





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