

Propagation on Higher Frequencies

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Everyone seems puzzled as to why conditions are not so hot on the upper frequencies during this "peak" of the sunspot cycle. First of all, on the upper frequencies, DX occurs via F2 between the months of Sept thru April, for the Northern Hemisphere. We here in the midwest experienced our first F2 opening of this cycle on 6M on Nov 8th 1999. We were working 9J2BO with low power for 3 days in a row. Using a combination of Es-link-to-TEP, multi-hop Es and a little F2, I worked 34 DXCC countries on 6 in 1999, and was heard in several more: Europe, Africa, Central America, South America, Alaska, Hawaii, South Pacific. All this from Missouri, where we are farther from the DX by one hop than the coastal stations. What more can you expect from 6M? This band was specifically chosen over a proposed 42 Mc allotment, after WW2, by the ARRL, to supply us with a "challenge". That was their philosophy, and it worked. 42 Mc would have been "just another low band", per an article in QST in 1946. In the summertime we see Es openings on 6 and 10, and these are not as intense during the peaks as they are during the nulls. In 95-96, we were tearing up 6M with European openings in June and July (4 hops for me).

Even during the peak months, there will be waxing and waning days. These occur on a 5 day and 27 day sub-cycle. This effect is more noticed on 6 than 10, as the MUF generally still goes above 30 Mc but not as high as 50. On 6 especially there are also specific times of the day that are better for specific paths, depending on your location, and has to do with the angle of the sun between you and the target DX. Also different types of propagation will arrive at different angles from the horizon, making the performance of the antenna a big factor. Most successful 6M ops have at least 2 antenna systems, one for Es (high angle) and one for F2 (low angle). I have 3 systems, and can be elevated in its orientation to the horizon and it, and one other, are changeable in height from as low as 12 feet to as high as 85 feet. I use a single 11 el at 105 feet as a reference. A good compromise 6M antenna is 5 to 9 elements at 55 feet. An ideal antenna would be two 5 to 9 element beams stacked at 48 and 60 feet, and have variable phasing. This would catch either Es or F2.

Also 6M prop is better on the downward side of the peak than it is on the upward side, so watch out for the next few years for reports of spectacular DX being worked with low power on 6M.

I have followed these patterns for over 35 years and have come up with a "Magic Calendar" for 6M that shows the most likely days that DX may occur from my area, and use this to plan vacations, trips etc, with pretty good results. There is a lot more order to the supposed randomness of VHF DXing than generally recognized. (I include 10M in the term VHF as it has many of the same characteristics as 6, and indeed before the definitions were changed after WWII, anything above 30 Mc was considered UHF, so I guess 10M was truly VHF then..)

Remember 50.100 to 50.125 for INTERCONTINENTAL DX QSOs only.