

GENERAL GUIDELINES CONCERNING CORRELATION OF PROPAGATION INDICES TO ACTUAL MF/HF PROPAGATION CONDITIONS-

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1.) Dropping indices numbers are better.

2.) A solar flux of 150 or higher, 200+ best, for medium frequencies under 100, fewer than 70 best.

Keep in mind though that the 10.7 cm (2800 mhz) solar flux index is not a "reliable" gauge of ionization in our atmosphere for F layer medium frequency refractions, as the energy of photons at this frequency is too low on the order of one million times. However most are used to solar flux and sunspot number and it's a hard habit to break. A better indicator is the background X-Ray Flux. See #7 below.

3.) A solar flux in the mid 100's for routine stable formation of the E Valley/F Layer ducting mechanism.

4.) Previous 24 hour Ap index under 10, fewer than 7 for several days consecutively are best.

5.) Previous 3 hours Kp index fewer than 3 for mid latitude paths, fewer than 2 for high latitude paths, 0-1 for several days consecutively is best.

6.) Energetic protons no greater than 10 MeV (10+0).

7.) Background x-ray flux levels less than A1 for several days consecutively.

8.) No current STRATWARM alert.

9.) Interplanetary magnetic field (IMF) Bz with a (positive number) sign, indicates a lesser chance of high latitude path Aurora absorption/unpredictable refraction or scattering of medium frequency RF signals, when the Kp is above 3.

10.) A -20 or better towards a positive number Dst index during the recovery time after a Geomagnetic Storm, as related to the equatorial ring current. A positive number is best.

11.) Rising positive T index number. The T Index tracks with the F2 layer critical frequency (foF2) and sunspot number (SSN) and indicates the capability of the F2 layer to refract RF signals