Glossary of terms for the data available in the N0NBH solar banners (© Paul L Herrman 2012)

ITEM	ELEMENT	DESCRIPTION
SFI	Solar Flux Index	DRAO Penticton reported value from 62.5 to 300. Intensity of solar radiation measured at 2800MHz (10.7cm). Good indication of the F layer ionization (layer that gives us most of our DX on HF). The higher the number, the greater the level of ionization is, and the higher the frequency. Measured three times daily, and the last received value is reported.
SN	Sunspot Number	NOAA reported value from 0 to 250. Daily Sunspot Number provided by NOAA is computed using a formula [R=k (10g+s)] by Rudolph Wolf in 1848, where **R** is the sunspot number; **g** is the number of sunspot groups on the solar disk; **s** is the total number of individual spots in all the groups; and **k** is a variable scaling factor (usually <1) that accounts for observing conditions and the type of observing device. SN does loosely correlate to SFI. Updated once daily.
A	Planetary A Index	NOAA reported value from 0 to 400. Provides a daily average level for geomagnetic activity. Uses the average of eight 3 hour K-Index values (magnetic value measured in nanotesla or nT) to provide the level of instability in the earth's geomagnetic field. When used with K-Index: Both high indicates geomagnetic field is unstable, and HF signals are prone to sudden fades, and some paths may close while others open up abruptly and with little warning. High K index/Low A indicates a sudden, abrupt disturbance in the geomagnetic field, which can cause an intense but brief disruption in HF propagation, but can cause an auroral event. Updated once daily.
K	Planetary K Index	NOAA reported value from 0 to 9. Measures disturbances in the horizontal component of earth's magnetic field. Value in nT is measured using a magnetometer during a three-hour interval, and then converted to a factor. Use with A-Index – sees above to determine HF conditions. Updated eight times daily.
X-Ray or XRY	Hard X-Rays	NOAA reported value from A0.0 to X9.9. Intensity of hard x-rays hitting the earth's ionosphere. Impacts primarily the D-layer (HF absorption). The letter indicates the order of magnitude of the X-rays (A, B, C, M and X), where A is the lowest. The number further defines the level of radiation. Updated eight times daily.
304A	304 Angstroms	NOAA reported value from 0 to unknown. Relative strength of total solar radiation at a wavelength of 304 angstroms (or 30.4 nm), emitted primarily by ionized helium in the sun's photosphere. Two measurements are available for this parameter, one measured by the Solar Dynamics Observatory, using the EVE instrument, and the other, using data from the SOHO satellite, using its SEM instrument. Responsible for about half of all the ionization of the F layer in the ionosphere. 304A does loosely correlate to SFI. Updated hourly.
Pnt Flx or PF	Proton Flux	NOAA reported value from 0 to unknown. Density of charged protons in the solar wind. The higher the numbers, the more the impact the ionosphere. Primarily impacts the E-Layer of the ionosphere. Updated hourly.
Elc Flx or EF	Electron Flux	NOAA reported value from 0 to unknown. Density of charged electrons in the solar wind. The higher the numbers (>1000), the more the impact the ionosphere. Primarily impacts the E-Layer of the ionosphere. Updated hourly.
Aur	Aurora	NOAA reported value from 0 to 10++. Indicates how strong the F-Layer ionization is in the polar regions. Higher values cause auroral events (including northern/southern lights) to move to lower latitude. Updated hourly.
n	Normalization	NOAA reported value from 0 to 5. When < 2.0, high confidence in Aurora measurement. When >2, low confidence. Updated hourly.
Bz	Bz Component	ACE reported value from +50 to -50. Strength and direction of the interplanetary magnetic field as impacted by solar activity. Positive is same direction as the earth's magnetic field, and negative is the opposite magnetic polarity. Cancels out earth's magnetic field when negative, which increases the impact of solar particles in the ionosphere. Updated hourly.

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ITEM	ELEMENT	DESCRIPTION
SW	Solar Wind	ACE reported value from 0 to 1000. Speed (kilometers per second) of the charged particles as they pass earth. The higher the speed, the greater the pressure is exerted on the ionosphere. Values greater than 500 km/sec have impact on HF communications. Updated hourly.
Aur Lat	Aurora Latitude	Calculated value from 67.5 to <45.0. Calculation from NOAA utilizes the current Aurora measurement. Used to estimate the lowest latitude impacted by the auroral event. Updated hourly.
Aur	Aurora	DX-Robot reported event (used with permission). Reports Band Closed for No/Low Auroral activity, High LAT AUR for Auroral activity >60°N, or MID LAT AUR for Auroral activity from 60° to 30°N. Updated every ½ hour.
EsEU	Sporadic E Europe	DX-Robot reported event (used with permission). Reports Band Closed, High MUF when 2M only is open, or 50/70/144MHz ES when the respective band is reported open. Updated every ½ hour.
EsNA	Sporadic E North America	DX-Robot reported event (used with permission). Reports Band Closed, High MUF when conditions support Es, and 144MHz ES when the band is reported open. Updated every ½ hour.
EME Deg	Earth-Moon-Earth Degradation	Make More Miles reported value (used with permission). Reports EME path attenuation as Very Poor (>5.5dB), Poor (4dB), Moderate (2.5dB), Good (1.5dB), Very Good (1dB), Excellent (<1dB). Updated every ½ hour.
MUF	Maximum Usable Frequency	Make More Miles reported value (used with permission). Provides the Maximum Usable Frequency in a colored bar. Gray indicates No Sporadic E (ES) activity , blue indicates ES reported @ 6M, green indicates ES reported @ 4M, yellow indicates conditions support 2M ES, and red indicates reported @ 2M. Updated every ½ hour.
MS	Meteor Scatter	Make More Miles reported value (used with permission). Provides the Meteor Scatter activity, blue (low), green, yellow, orange, to red (high) activity in a colored bar. Updated every ½ hour.
GeoMag Fld	Geomagnetic Field	Calculated value. Indicates how quiet or active the earth's magnetic field is based on the K-Index value. Reports as Inactive, Very Quite, Quiet, Unsettled, Active, Minor Storm, Major Storm, Severe Storm, or Extreme Storm. Higher indications can cause HF blackouts and auroral events. Updated every three hours.
Sig Noise Lvl	Signal Noise Level	Calculated value. **I**ndicates how much noise (in S-units) is being generated by interaction between the solar wind and the geomagnetic activity. A more active and disturbed solar wind, the greater the noise. Updated every ½ hour.
MUF <loc>	Maximum Usable Frequency	NOAA reported value from 0 to 100MHz. Provides the maximum usable frequency in MHz at one of 11 locations worldwide. Updated every 15 minutes.
CME	Coronal Mass Ejection	NOAA/SWPC predicted date and time (in UTC). Provides the date and time of a predicted earth bound CME event. Color coded for severity, where green is minor, yellow is moderate, and red is severe. Updated when predictions are received from NOAA/SWPC.