

Solar Indices & What They Mean

- Three of them are
- Solar Flux Index
- A Index
- K Index
- 10,000' view for SSB and CW

dx.qsl.net/propagation

Current Solar Indices from WWV

21-Mar-2023 at 1505 UTC

SFI = 156 A = 13 K = 1

Conditions during the last 24 hours

No space weather storms were observed for the past 24 hours.

Forecast for the next 24 hours

No space weather storms are predicted for the next 24 hours.

SDXA Homepage

May 4. 2023

Practical Hints and Tools and Field Day Planning

In-Person (Shadle Park Spokane Library Studio) and Hybrid Meeting

1. Practical Hints with Mike Buettner K7STO



Coax marking, small battery backup for cell phone & antenna analyzers, how to crimp on PL-259 connectors, the basic tools needed for installing PL-259 and Power Poles connectors.

2. Field Day Planning with the Idaho Renegades

SDXA Library
Spokane Area Library Sites


Solar-Terrestrial Data
16 Mar 2023 1642 GMT
SFI: 136 SN: 84
A: 29 K: 0
X-Ray: B7.8
304A: 149.6 @ SEM
Ptn Flx: 4610
Elc Flx: 6840
Aurora: 1/n=1.99
Bz: 2.4 SW: 452.9

HF Conditions

Band	Day	Night
80n-40n	Fair	Good
30n-20n	Good	Good
17n-15n	Good	Good
12n-10n	Fair	Poor

VHF Conditions

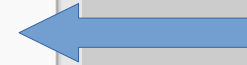
Aur Lat 67.5°
Aurora Band Closed
6m EsEU Band Closed
4m EsEU Band Closed
2m EsEU Band Closed
2m EsNA Band Closed
EME Deg Very Poor
Solar Flare Prb 10%

MUF 
MS 0 MIN 6 12 18 Utc MAX

Geomag Field INACTIVE
Sig Noise Lvl 50-51
MUF US Boulder 32.31

<http://www.n0nbh.com>
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SFI: 136
A: 29
K: 0



WS7I Cluster

- sh/wwv/5
- WWV tab and 5 Spots

The screenshot displays the WS7I Cluster interface. At the top, there are navigation tabs: Settings, Country, State, Bands, Users, DX = 3, WWV (selected), Login, Ann, Wx Plus, and Mail. Below the tabs is a table with the following columns: Date, Hour, SFI, A, K, Forecast, and a column for call signs. The table contains five rows of data for March 16, 2023. To the right of the table is a sidebar with the following information: Sunrise 14:00Z, Sunset 01:54Z, and three buttons: 'Get Sun', '5 Spots', and '25 Spots'. The '5 Spots' button is circled in red.

Date	Hour	SFI	A	K	Forecast	Call Sign
16-Mar-2023	15	136	29	1	Moderate w/G2 -> Minor w/G1	<UE7CC>
16-Mar-2023	12	136	29	1	Moderate w/G2 -> Minor w/G1	<UE7CC>
16-Mar-2023	9	136	29	1	Moderate w/G2 -> Minor w/G1	<UA6AAA>
16-Mar-2023	6	136	29	3	Moderate w/G2 -> Minor w/G1	<UA6AAA>
16-Mar-2023	3	136	29	4	Moderate w/G2 S1 -> Moderate w/G2	<UA6AAA>

Sunrise 14:00Z
Sunset 01:54Z
Get Sun
5 Spots
25 Spots

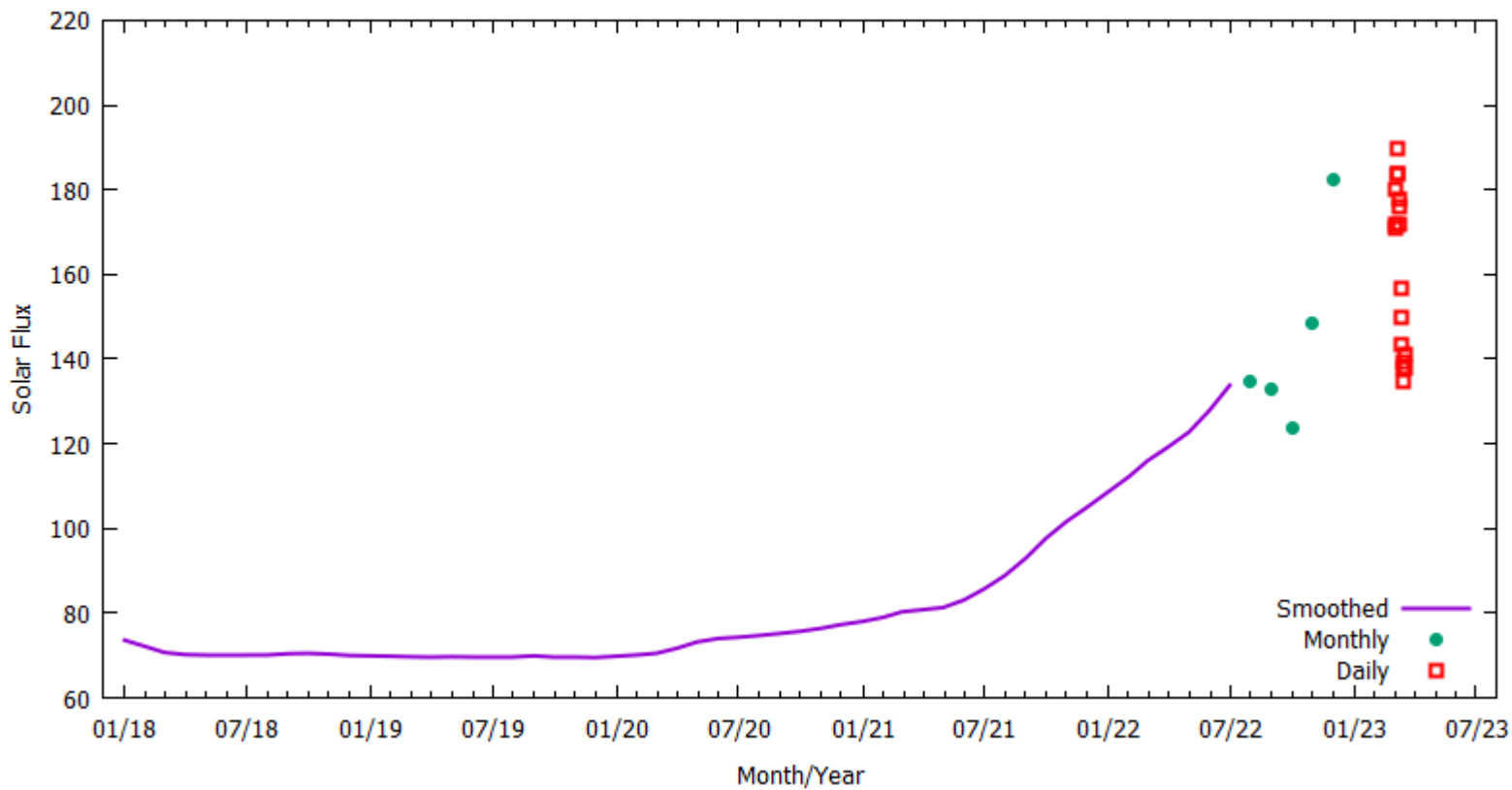
Solar Flux Index

- A measure of the 10.7 cm noise from the sun
- Similar to the sunspot count
- Varies over the course of the ~11 year solar cycle
- Varies over the course of the 27 day solar rotation

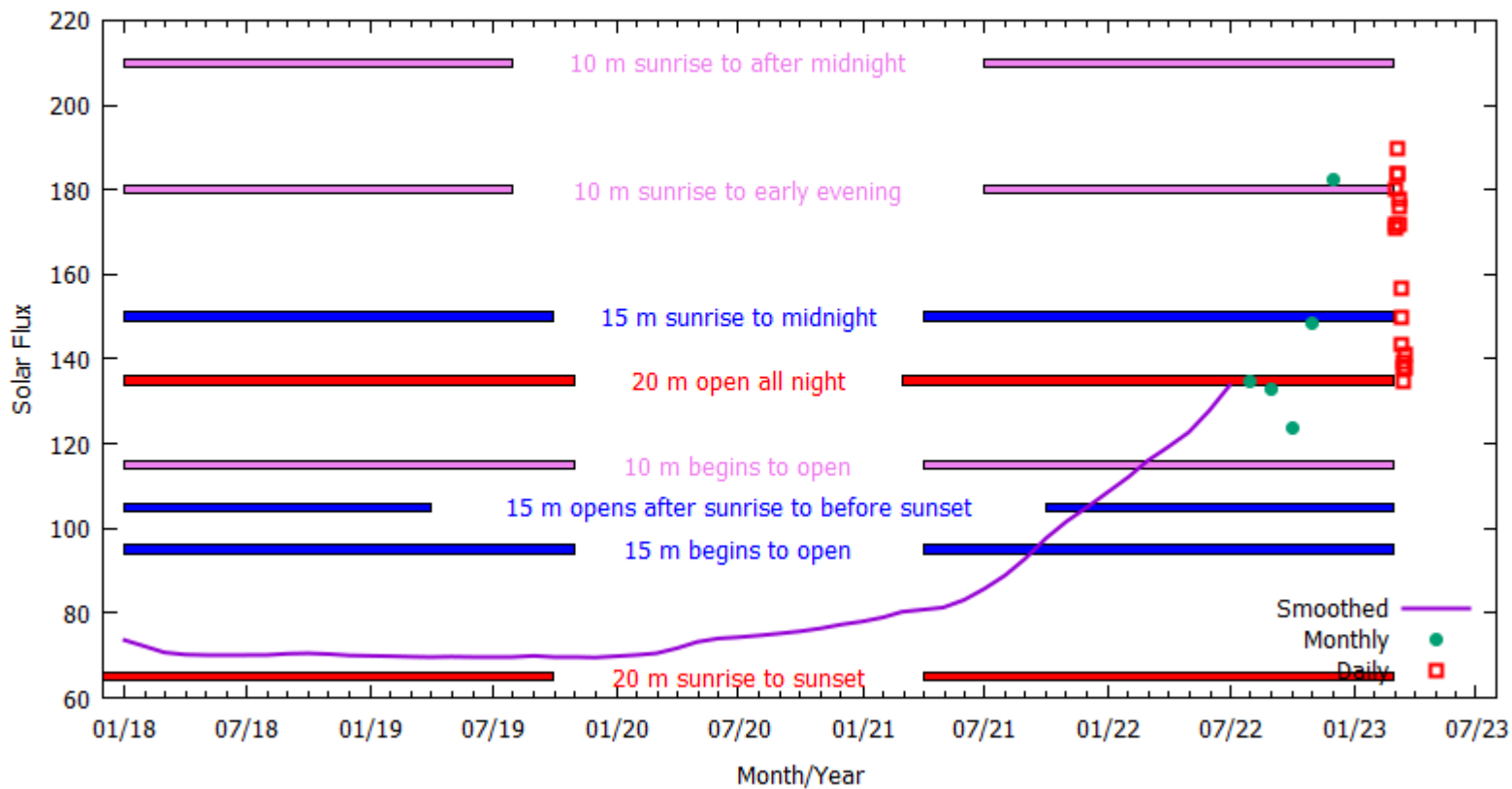
SFI – Last Few Years

- Many months with low Solar Flux values
- On the increasing portion of Cycle 25
- Let's take a graphical look

Solar Flux 2018 - 2023



Solar Flux 2018 - 2023



A and K Indexes

- Measures of solar storms
- These disturb the earth's magnetic field
- Greater impact on low bands than high ones
- A is open ended beginning at 0
- K ranges from 0 to 9

A Index

- Measured daily at several locations
- A up to 10 is best
- A in 10 to 30 is still ok
- A of 30 to 50 is Minor Storm
- A of 50 to 100 is Major Storm
- A greater than 100 is Severe Storm

K Index

- Average planet-wide conditions
- K less than 3 is good
- More than 5 not so much
- A rising K index indicates worsening HF propagation but improved VHF conditions
- A K value > 3 indicates enhanced auroral activity
- K of 5+ and A of 30+ indicates aurora likely

What to Expect During a Geomagnetic Storm

- More HF noise
- QSB
- Weak signals
- Rapid fading on polar paths

HF Summary

- Higher SFI values mean 15 and 10 m open longer
- A values less than 10 best
- A values greater than 30 means difficult copy
- K values less than 3 best
- K values greater than 3 means difficult copy

VHF Summary

- SFI values greater than 200 suggests 6 m possible
- A greater than 30 AND K greater than 5 suggest auroral propagation