



SUMMITS ON THE AIR

and New Methods of Portable Operating

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May 18, 2019

TOPICS

- **WHAT IS SOTA?**
- **WHAT IS A SUMMIT?**
- **WHAT'S IN SOTA FOR ME?**
- **FUN GEAR!**
- **COOL TOOLS!**
- **PEERING INTO THE FUTURE.....**



Photo courtesy HB9FGV

WHAT IS SOTA?

- Started on March 2, 2002, “SOTA is an award scheme for radio amateurs that encourages portable operation in mountainous areas.” <http://www.sota.org.uk/>.
- “SOTA has been carefully designed to make participation possible for all Radio Amateurs and Shortwave Listeners - this is not just for mountaineers!”
- Operations in nearly 100 countries. 165 distinct geographical areas comprise SOTA “associations,” 1,179 regions.
- SOTA is NOT a club – no dues, no members.
- 42 states have summits!
- **Any** mode/band (no repeaters).
- **No** generators/grid power, motorized vehicles, trespassing!



Photo courtesy WD9F

WHAT IS A SUMMIT?

- Key terms:
 - Prominence
 - Col
 - Key col
- A summit must have sufficient “**topographic prominence**” – “the difference between the elevation (altitude) of the summit and of its key col [saddle point].” The minimum is usually 150m (P150), ~492’.
<http://www.sota.org.uk/Blog/2017/06/19/Finding-Summits---Part-1>
- “**Prominence** characterizes the height of a mountain or hill's summit by the vertical distance between it and the lowest contour line encircling it but containing no higher summit within it.”
https://en.wikipedia.org/wiki/Topographic_prominence

WHAT IS A SUMMIT

THE MEANING OF “COL”

- A “**col**” is “a stationary point in the topography” that is a minimum in one direction and a maximum in another direction. Also known as saddle point, pass, gap, notch or cut.
- “A peak's **key col** is a unique point on this [lowest] contour line....”
https://en.wikipedia.org/wiki/Topographic_prominence

WHAT IS A SUMMIT?

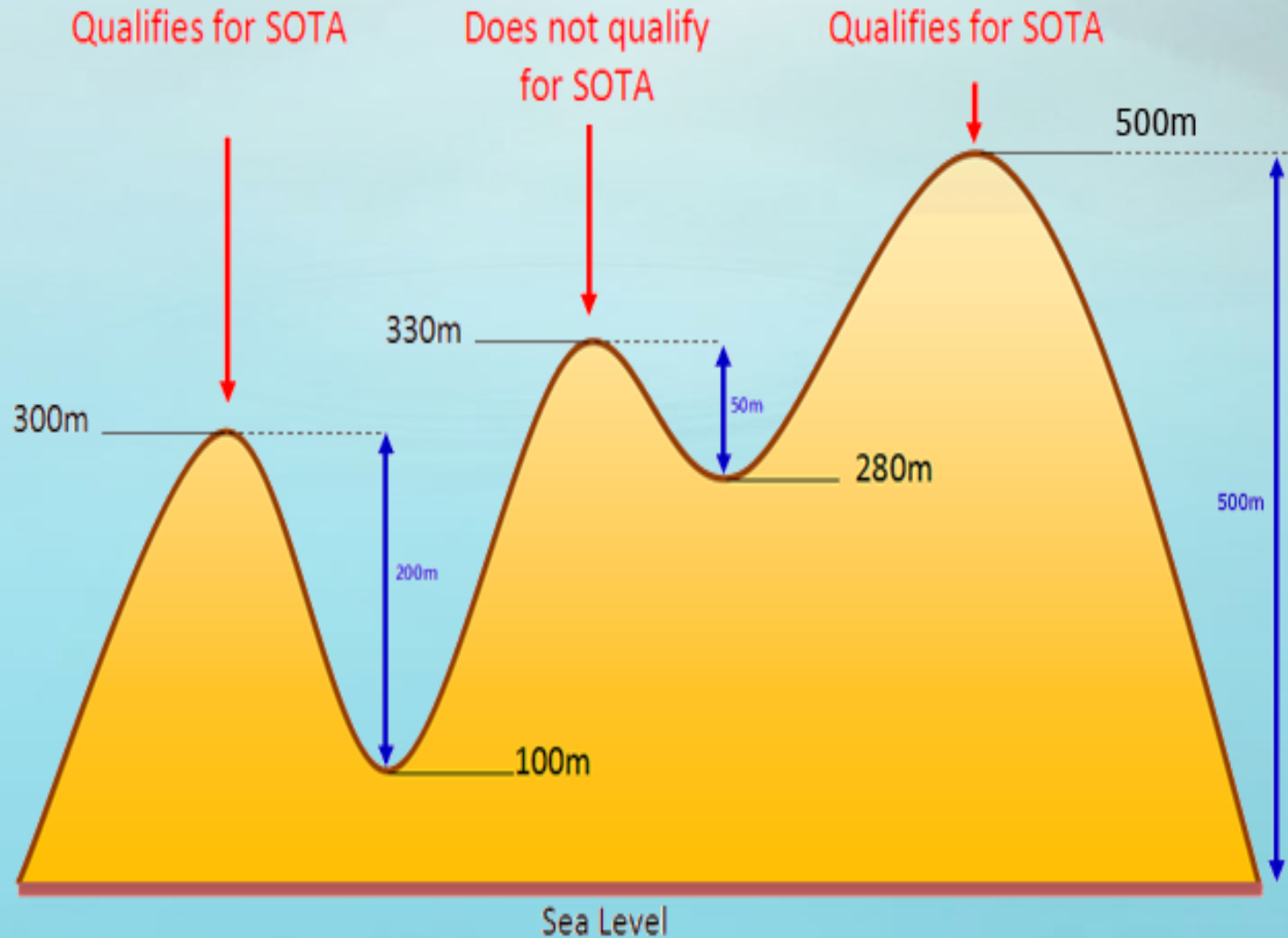


Illustration courtesy of <https://www.vk5pas.com/what-is-prominence.html>

WHAT IS A SUMMIT?

NOT ALWAYS THE HIGHEST POINT!

CHARLES MOUND 1,235'
Highest natural point in Illinois



BUT ALL 9 ILLINOIS SOTA SUMMITS ARE LOCATED HERE

WHAT IS A SUMMIT?

- The key col for Denali (Mt. McKinley) is 3,000 miles away – in Nicaragua!
- The key col for the highest point in the Appalachian Mountains – Mt. Mitchell – is in Chicago!!



Photo courtesy Andrew Sen

WHAT'S IN SOTA FOR ME?



WHEN YOU CHASE SUMMIT ACTIVATORS, YOU CAN:

- Enjoy making contacts and qualifying for awards without needing a super-station.
- Improve your ability to tune in, hear and work weak signal stations.
- Help activators log the required minimum 4 QSOs to qualify for activation points.
- Understand how to use APRS.
- Diversify your ham radio experience while chasing new awards and other shack knot-hole covers.

WHAT'S IN SOTA FOR ME?

WHEN YOU ACTIVATE SUMMITS, YOU CAN:

- Complete your 10,000 steps/day AND have time to play radio.
- Feel the satisfaction of building a portable station you can carry anywhere.
- Meet the challenge of setting up an effective temporary station in various surroundings.
- Experience being the receiving end of a pile-up, and hone your skills managing multiple callers.
- Enjoy the thrill of making QSOs (including DX!) with a handful of watts and simple antennas.
- Learn how to navigate using maps, GPS, compass and surrounding features.
- Understand how to use APRS.
- Diversify your ham radio experience while chasing new awards and other shack knot-hole covers.
- Share your enthusiasm with people around the world.
- Take in great views from awesome heights!
- See wildlife – in the wild!
- Breathe fresh air!!



FUN GEAR!

NOT LIKE THIS



Photo courtesy WA0TTN

FUN GEAR!

RADIOS

- Lightweight and small
- Battery/solar powered
- Multi-band/mode/feature
- FT817/818, KX1/2/3, MTR3-4-5B, HB1-B



FUN GEAR!

RADIOS

- Kits: QCX single band
- Homebrew
- HT



FUN GEAR!

POWER (internal/external)

- AAA (Eneloops)
- 9V
- LiPo/LiFePo4
- Solar



FUN GEAR!

ANTENNAS

- 20-26 ga Teflon wires supported by telescoping fishing poles/masts/hiking poles/trees
- Loops
- Verticals
- Elecraft AX-1



Photo courtesy EA1AER

FUN GEAR!

ANTENNAS



<p>AXT1 TRIPOD ADAPTER</p> <p>Adapter zur Montage der AX-1 auf ein Stativ mit 1/4"-Aufnahme.</p> <p>ELECRAFT AXT1 CHF 34.90</p>  <p>Markstück Tripod CHF 35.90</p>	<p>AXB1 WHIP BIPOD</p> <p>Einfacher "Klappmast" zum Aufstecken der AX-1 direkt an den TRX. Höhenverstellbar und damit für KX-2 und KX-3 geeignet.</p> <p>ELECRAFT AXB1 CHF 39.90</p> 
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FUN GEAR!

WHERE'S THE ANTENNA?



Photo courtesy KX0R

FUN GEAR!

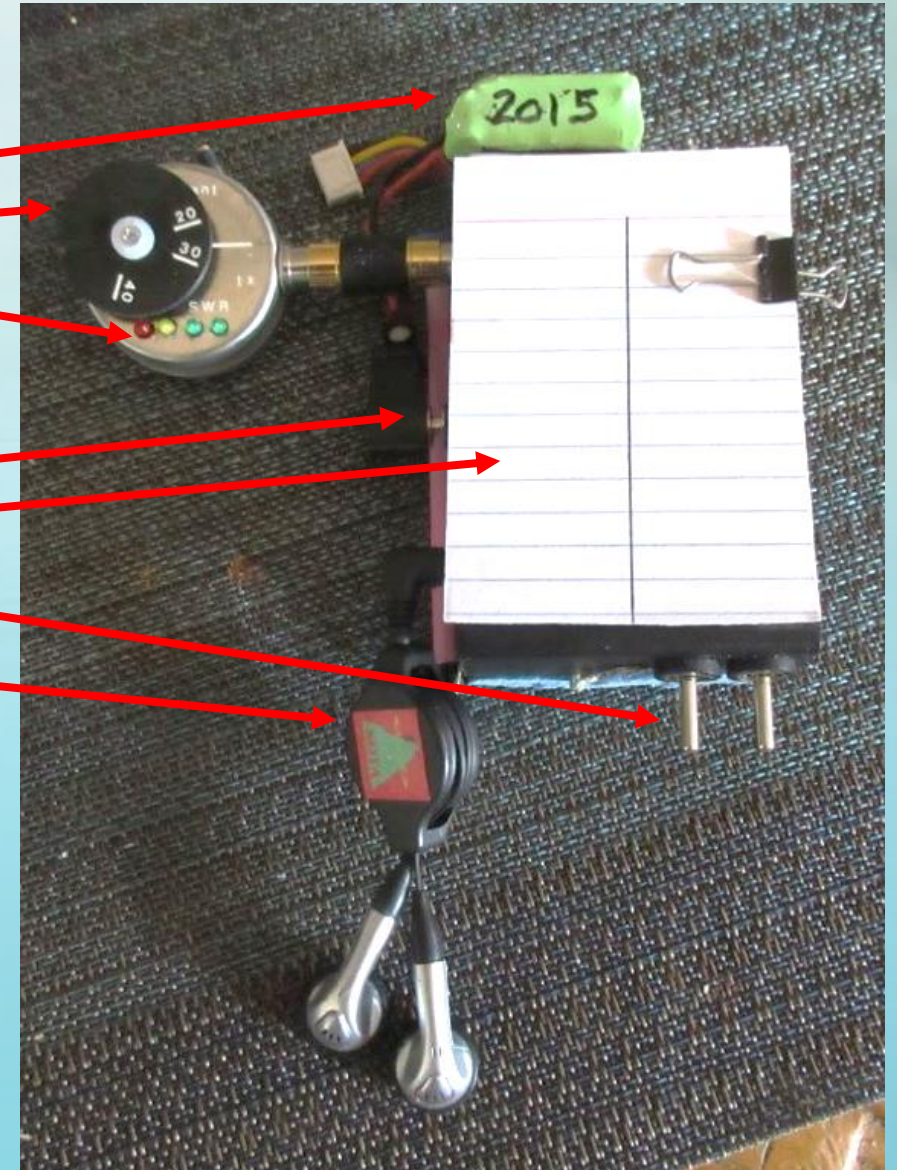
ULTIMATE PEDESTRIAN PORTABLE by KT5X

- Battery
- Tuner
- SWR indicator

- Radio
- Log
- Touch paddle
- Earbuds



#28 wire antenna uses homebrew mini-traps weighing 2 grams each and is supported by 9 oz. 20' fishing pole that collapses to 18".



COOL TOOLS!

SOTA WEBSITE:

- SOTAwatch – spots and alerts.
- Includes RBNHole
 - Compares RBN spots with alerts posted on SOTAwatch.
 - When there is a match meeting certain criteria, RBNHole posts a spot on SOTAwatch to indicate that call sign X has actually been heard calling CQ on frequency Y.
- SOTA Spotter
- SOTA Goat (iOS)
- SMS (text)

SOTAwatch2

Logged in as K9IR | [Log out](#) | [Edit Account](#) | [FAQs](#)

[Home](#) | [Spots](#) | [Alerts](#) | [Reflector](#) | [Website](#) | [Summits](#) | [Recent Summit Info](#) | [Database](#)

[Video](#) | [Photos](#) | [Shop](#) | [Mapping](#) | [Facebook](#)

This page refreshes every 1 minute. Last updated 01:48:13 UTC.

Latest Spots

>> [more spots](#) | [new spot](#)

Wed 01:37	JA4RQO/4 on JA/OY-003 *[RBNHole] at BG7IBS 19 WPM 3 dB SNR (Posted by RBNHOLE)	14.063 cw
Wed 01:23	JA4RQO/4 on JA/OY-003 *[RBNHole] at 9M2CNC 19 WPM 4 dB SNR (Posted by RBNHOLE)	18.0861 cw
Tue 21:43	KF7HIZ on W7O/CE-188 (null) (Posted by KF7HIZ)	14.31 SSB
Tue 21:19	KK6KSD on W6/SN-045 First activation... new ham... calling CQ (Posted by KK6KSD)	14.347 ssb
Tue 19:54	KI4TN on W4T/SU-058 *Spot[KI4TN]: [SOTA Spotter] (Posted by SMS_NA)	10.111 cw
Tue 19:46	KI4TN on W4T/SU-058 *Spot[KI4TN]: [SOTA Spotter] (Posted by SMS_NA)	14.060 cw

Upcoming Activations

>> [more alerts](#) | [new alert](#)

Wed 01:00	JA4RQO/4 on JA/OY-003 time +/- (Posted by JA4RQO)	10-cw, 18-cw
Wed 09:00	OE6FEG/P on OE/ST-348 MTR3b & Fuchsanterne, QSW non-integer freq, e.g. 7.03040 (Posted by OE6FEG)	7.030-cw, 10.118-cw, 14.060-cw
Wed 10:00	2W0FLW on G/DC-003 Met dependant (Posted by 2W0FLW)	145-fm, 144-ssb
Wed 12:00	OE6FEG/P on OE/ST-134 MTR3b & Fuchsanterne, QSW non-integer freq, e.g. 7.03040 (Posted by OE6FEG)	7.030-cw, 10.118-cw, 14.060-cw
Wed 14:00	WG4I on W4G/NG-065 +30 min (Posted by WG4I)	3.985-ssb, 7.285-ssb, 14.342-ssb, 146.52-fm
Wed 17:00	KW4JM on W4C/CM-052 (Posted by KW4JM)	14.06-cw, 7-cw, 10-cw

Reflector Latest

- [Input to SOTA News April 2018](#)
by G0VOF, #2 by G0VOF, 8hrs ago
- [Workin' On Gear](#)
by VA4SR, #3 by VE6IXD, 40mins ago
- [BNC binding post antenna for €](#)
by KN3O, #11 by KX0R, 108mins ago
- [DX S2S attempt - Easter Saturd](#)
by M1EYP, #17 by VK2AOH, 4hrs ago
- [Variable HF conditions produce](#)
by VK1DA, #14 by VK1DA, 4hrs ago
- [Qcx qrp rig](#)
by MOVED, #70 by G4AZS, 6hrs ago
- [W2SE Super Sloth!](#)
by W12W, #26 by KE6MT, 6hrs ago
- [KX2 sensitivity vs FT857 or FT](#)
by G8CPZ, #8 by VK1DA, 8hrs ago
- [W4T/SU-005 and W4C/EM-001](#)
by N6JFD, 9hrs ago
- [Gallivanting in Galloway](#)
by MM0FMF, #12 by 2M0NCM, 13hrs ago
- [Interesting new SOTA vertical :](#)
by MM0TAL, #17 by DD5LP, 15hrs ago
- [QRP Guys adding another new](#)
by KN3O, 15hrs ago
- [W4t/rv-002 & w4t/rv-001](#)
by WF4I, #6 by N6JFD, 24hrs ago

>> [more topics...](#)

SOTA DATABASE SUMMIT ENTRY

Summits on the Air

Joining In

Online Resources


Associations and Summits

Blog

Contact

About SOTA

 Edit Account

 Logout

W9/WI-006 1865 - 568m, 6 Points

Quick links: [Back to W9 Association](#) | [Back to WI Region](#)

Summit reference

Association: USA Region: Wisconsin

Latitude: 46.4274 , Longitude: -90.3599

QTH Locator: EN46tk


Today's Sunrise: 11:51 UTC , Today's Sunset: 00:22 UTC

Summit coordinates and grid square

[Google Map](#) | [Google Earth](#) | [OpenStreetMap](#) | [SOTA Map](#)

Various online maps

Resources

Feel free to add External Links  and Articles relating to this summit that activators and chasers may find useful or interesting. Please read the disclaimer notice at the bottom of the page.

[Alternative route to summit](#) Submitted by K9IR on (18 Mar 2018)

 Edit  Delete

[Access to 1865 and options](#) Submitted by K9IR on (17 Mar 2017)

 Edit  Delete

[+Add new external link](#) | [+Add new article](#)

Articles and outside links

Summit Activity

Total Activations: **2** [View All](#)

Latest By:

K9IR on 15 Mar 2018

K9IR on 16 Mar 2017

First Activated by:

K9IR on 16 Mar 2017

Activated by You on:

15 Mar 2018, 16 Mar 2017

66 QSOs on these bands:

40m	28	42%
-----	----	-----

30m	8	12%
-----	---	-----

20m	30	45%
-----	----	-----

DISCLAIMER: The SOTA programme and its Management Team is not responsible for the content of external internet sites or for information added by third parties to this website. Please contact the SOTA Management Team if you have concerns about submitted content. The existence of information relating to a particular location does not confer or imply any right of access. Participation in the SOTA Programme is at the risk of the participant.

WEB PAGE FOR SOTA MAPPING PROJECT



[mapping](#)
[extras](#)
[contact](#)
[overview](#)
[about](#)

main

Choose Association: Multi
 W9 - USA

Choose Region: Multi
 W9/WI - Wisconsin (42 summits)

Choose Summit: --- Please choose ---
 Sort Summits: By code

37

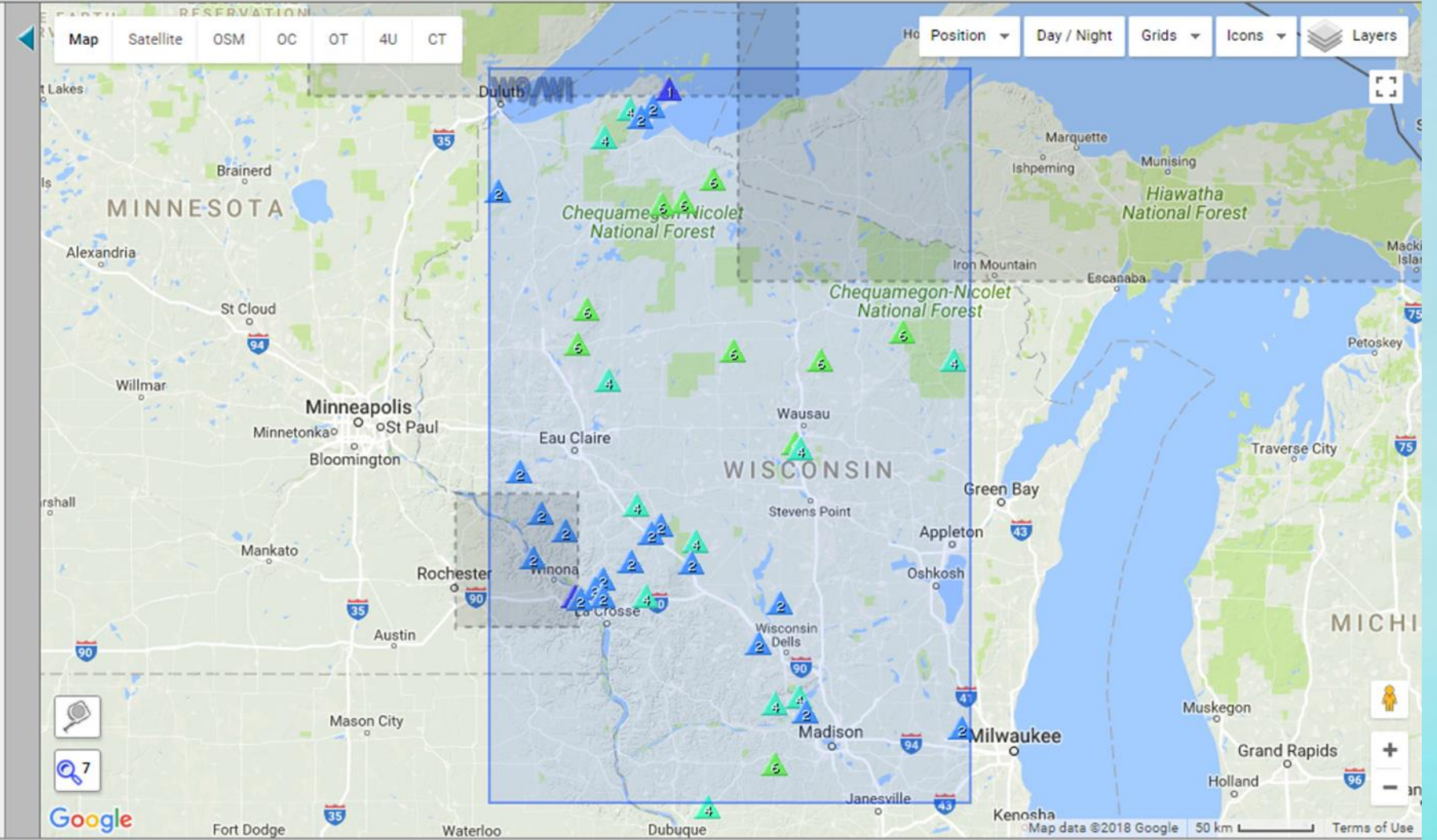
Chosen Summits Listing

Show: All summits in Region Load »

Summit Code	Summit Name	All Act.	My Act.	Pts.
W9/WI-001	Timms Hill	17	0	6
W9/WI-002	Sugarbush Hill	13	0	6
W9/WI-003	Lookout Mountain	7	0	6
W9/WI-004	Rib Mountain	12	0	6
W9/WI-005	Whittlesey, Mount	3	0	6
W9/WI-006	1865	2	0	6
W9/WI-007	1825	2	0	6
W9/WI-008	Meteor Hill	4	0	6
W9/WI-009	Rusk County HP	5	0	6
W9/WI-010	Blue Mounds	45	0	6
W9/WI-011	McCaslin Mountain	0	0	4
W9/WI-012	Mosinee Hill	2	0	4
W9/WI-013	Sauk Point	9	0	4
W9/WI-014	Flambeau Ridge	2	0	4
W9/WI-015	Happy Hill	3	0	4
W9/WI-016	1475	0	0	4
W9/WI-017	Platte Mounds	11	0	4
W9/WI-018	1426	0	0	4
W9/WI-019	Wadels Hill	0	0	4
W9/WI-020	Jackson County HP	0	0	4
W9/WI-021	Saddle Mound	5	0	4
W9/WI-022	1395	0	0	2

42 Summits ★ = Tracks available for summit

[Help...](#)
[Search...](#)
[Settings...](#)
[Export...](#)



SOTA FINDER

SOTA Finder
EN52WC - 200 miles (10)

78.8 miles, North
Holy Hill
W9/WI-031 USA

108.4 miles, North West
Blue Mounds
W9/WI-010 USA

113.3 miles, North West
Gibraltar Rock
W9/WI-037 USA

119.5 miles, North West
Sauk Point
W9/WI-013 USA

124.9 miles, North West

SOTA Finder
EN52WC - 200 miles (10)


78.8 miles, North
Holy Hill
W9/WI-031 USA

108.4 miles, North West
Blue Mounds
W9/WI-010 USA

113.3 miles, North West
Gibraltar Rock
W9/WI-037 USA

119.5 miles, North West
Sauk Point
W9/WI-013 USA

124.9 miles, North West

 **Blue Mounds**

Wisconsin
USA

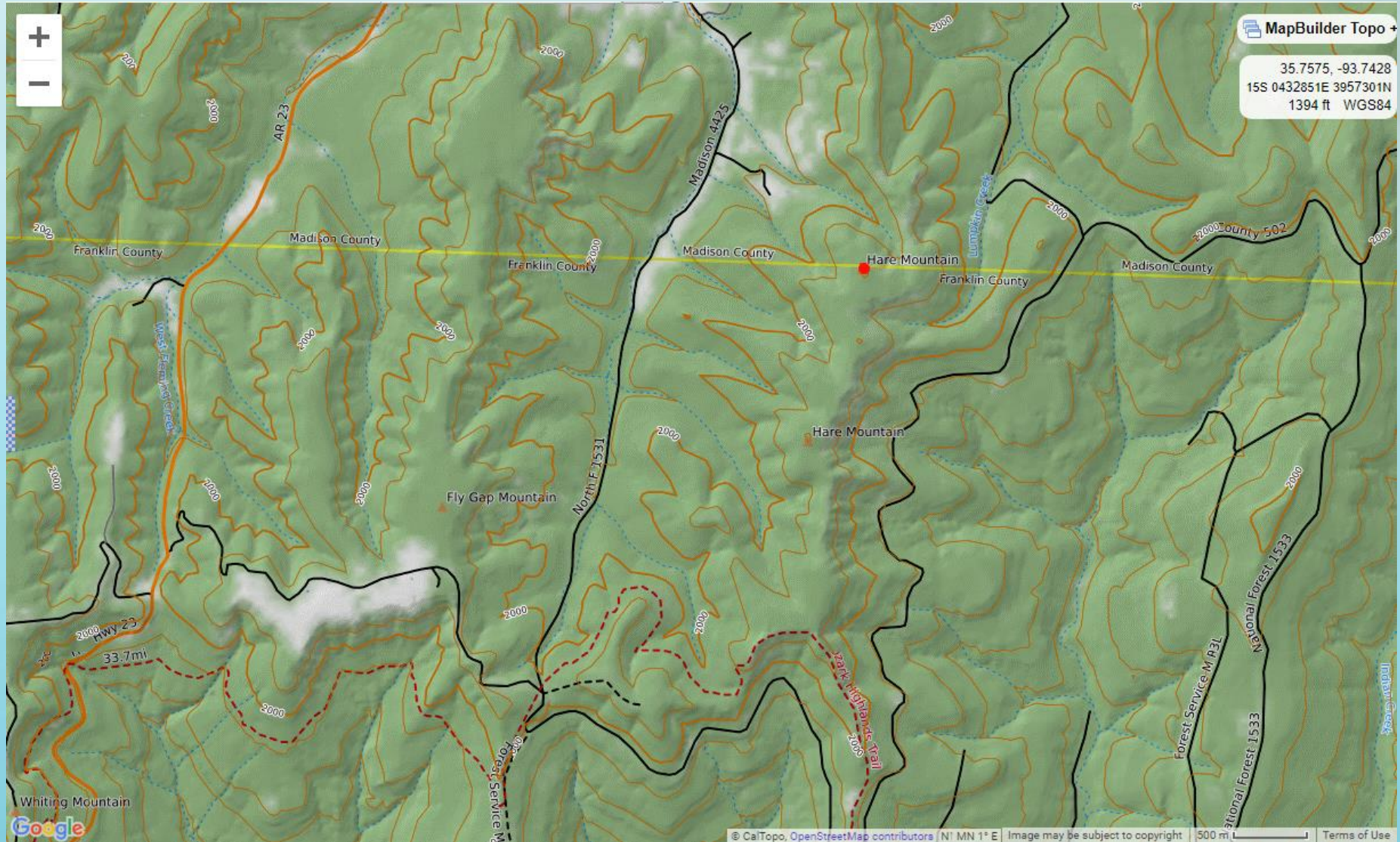
Summit : W9/WI-010
Altitude : 524m
Latitude : 43.0282
Longitude: -89.8527
Locator : EN53BA
Heading : North West
Distance : 108.4 miles

Points\Bonus: 6\3
Activations : 27
Last Activation: 19/10/2016
Last Activator : KB9ILT

Close

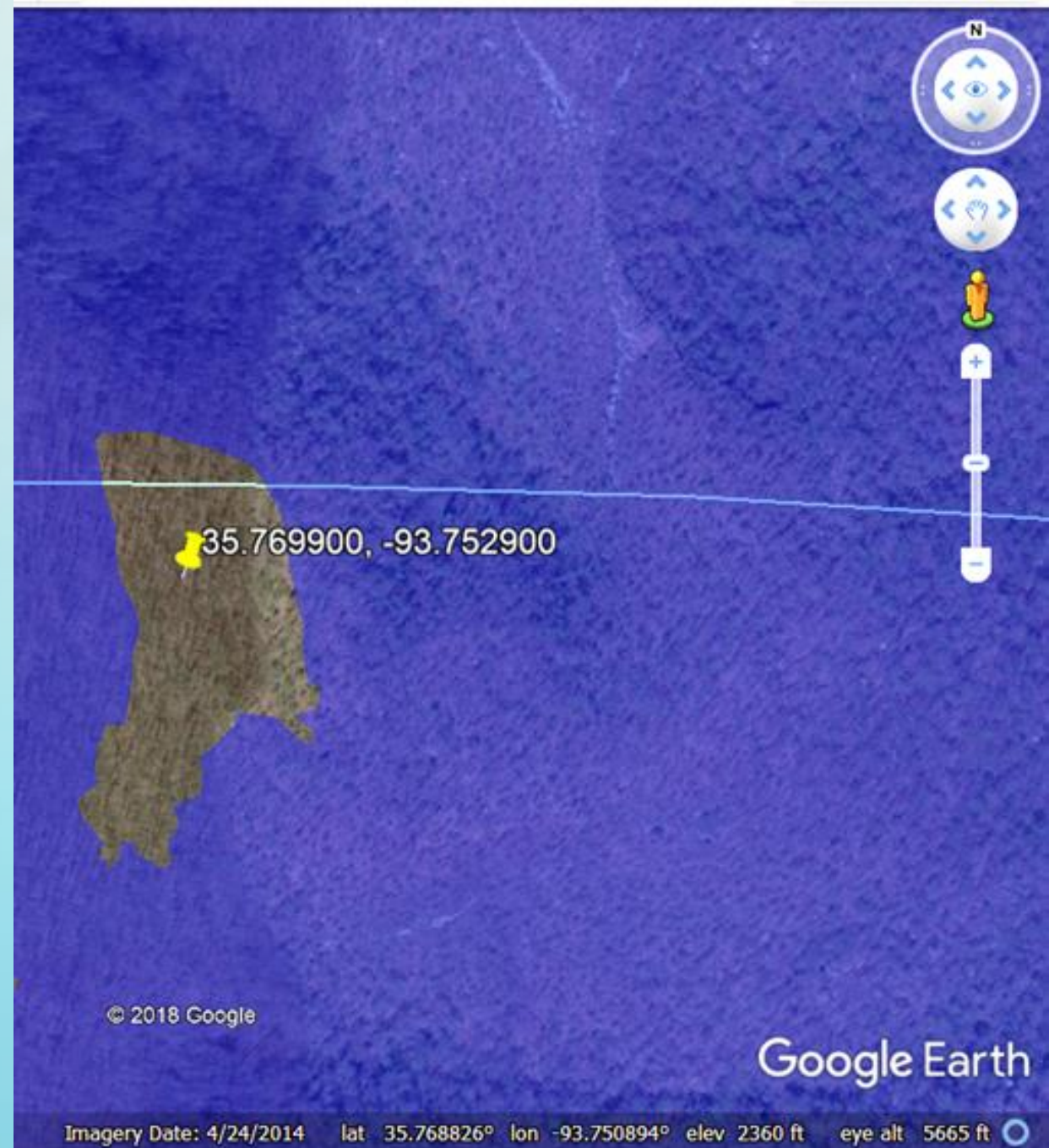
COOL TOOLS!

WHERE'S THE ACTIVATION ZONE (AZ)?



COOL TOOLS!

GOOGLE EARTH
WITH
FLOOD.KMZ
HIGHLIGHT THE
AZ



COOL TOOLS!

APRS (Automatic Position Reporting System)

Track by call sign the activator's progress to the summit via aprs.fi and openaprs.net.

Web page for aprs.fi

The screenshot displays the aprs.fi website interface. The main map shows the location of WA9STI-9 near Medora, Oregon, with a popup window providing details: "2019-05-11 20:46:00", "43 km/h 64° alt 765 m", and "146.52 or Local Repeater". The right sidebar contains a "Start" button, search fields for "Track callsign" and "Address, city or Locator", and a list of "Other SSIDs" including WA9STI-1 through WA9STI-8. A "Station info" section lists various data views like "Raw packets" and "Status packets". At the bottom, there is an "Information" section with links to "Stations currently moving", "FAQ", "Blog", and "Terms of Use".

COOL TOOLS!

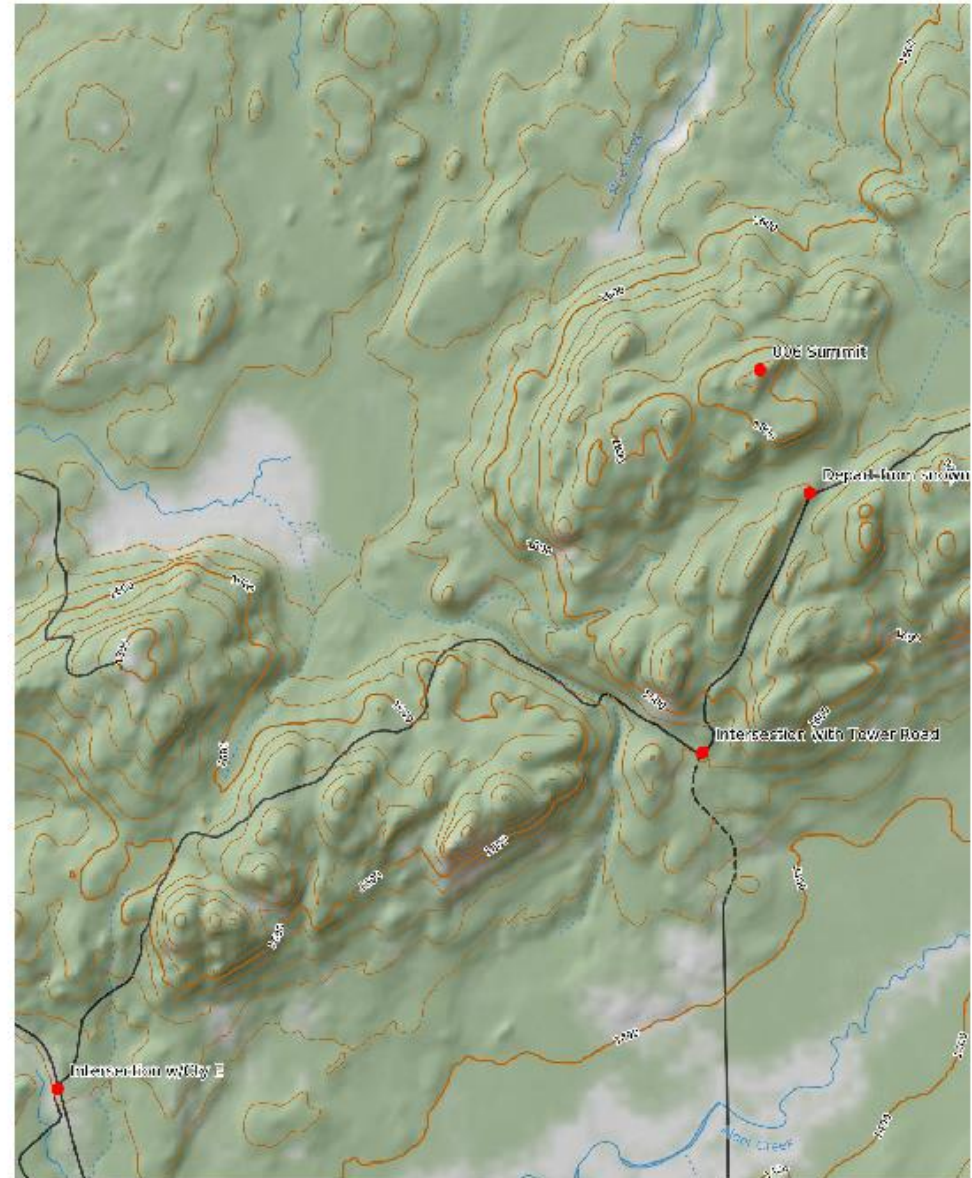
MAKE YOUR OWN MAPS USING

- CalTopo (www.caltopo.com)
- Avenza
- Tablet or phone with GPS

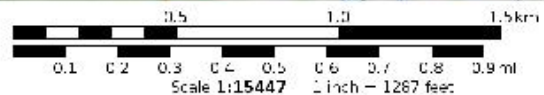
CALTOPO MAP SHOWING AREA SURROUNDING W9/WI-006

The screenshot displays the CalTopo web application interface. At the top, the navigation bar includes 'CalTopo', '+ Add', 'Import', 'Export', 'Measure', 'Print', 'Conf', and a search bar containing '46.4274, -90.3599'. The left sidebar contains options for 'Unsaved Map', 'Sign in with Google', 'Share this map', and a 'Preset Layers' menu with items like 'MapBuilder Topo', '7.5' Topo Maps', 'Forest Service', 'Aerial Topo Hybrid', 'Hybrid Satellite', and 'Slope Angle Shading'. Two items in the sidebar, '+ Add New Object' and '+ Add New Layer', are circled in red. The main map area shows a topographic view with brown contour lines, blue water features (Alder Creek), and white road lines (Town Line Road, Valley Road). A 'MapBuilder Hybrid' info box in the top right corner displays coordinates: 46.4218, -90.3871; 15T 0700777E 5144231N; and 1506 ft WGS84. The bottom of the map features a Google logo, a scale bar (500 m), and copyright information: '© CalTopo, OpenStreetMap contributors N1 MN 3° W Image may be subject to copyright Terms of Use'.

FINAL GEOSPATIAL PDF MAP WITH MARKERS ALONG PROPOSED ROUTE AND INDICATING SUMMIT.

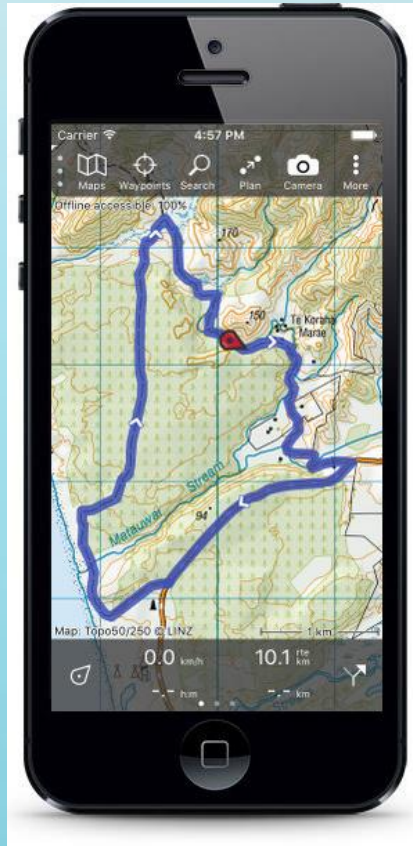


Vertical Projection
WGS84
USNG Zone 18TMY
CalTopo.com



COOL TOOLS!

DISPLAY MAP ON YOUR CHOSEN DEVICE



PEERING INTO THE FUTURE....

BE THE FIRST!

- **Discover new summits**
 - ~ 125,251 a year ago, now 12,046 more (137,297).
 - Imagine identifying 12,000 new DX entities – in one year!
- **Activate summits for the first time**
 - ~27,916 activated as of a year ago, now 3,087 more (31,003).
 - Imagine 3,000 DX entities activated in one year – for the first time!

PEERING INTO THE FUTURE....

OLAVTOPPEN ANYONE?

3Y/BV-001, Olavtoppen - 780m, 10 Points

Quick links: [Back to 3Y Association](#) | [Back to BV Region](#)

Association: **Bouvet Island** Region: Bouvetøya (Bouvet Island)

Latitude: -54.4104 Longitude: 3.3565

QTH Locator: JD15qo

Today's Sunrise: 07:25 UTC , Today's Sunset: 16:00 UTC

Summit Activity

Total Activations: **None yet!**

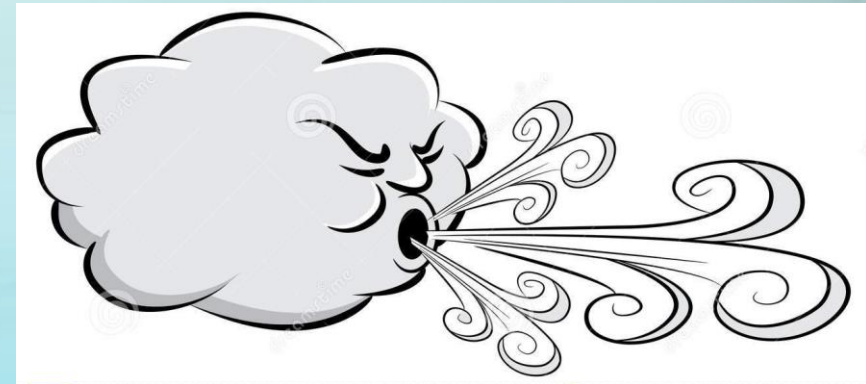
ARRL LETTER, FEBRUARY 22, 2018:

Members of the 3Y0I DXpedition to Bouvet Island will be doing more than handing out contacts to the world's community of DXers.... [I]t will includea trek to the top of the island's glacier, Olavtoppen, at 760 meters (nearly 2,500 feet) above sea level....

PEERING INTO THE FUTURE....

CONTINUED SYNERGY BETWEEN QRP, POTA AND SOTA COMMUNITIES

- Smaller, lighter radios
- Even more compact power sources
- New power sources. Summits can be *windy*....
- Ever-lighter antennas and accessories
- More kits



PEERING INTO THE FUTURE....

- **SOTA participation growth:**
 - ~over 6,000 activators and 6,300 chasers a year ago, now nearly 7,000 activators and over 7,000 chasers
 - 4,441 do both, nearly 500 more than last year!
- **More SOTA activity** above 440MHz and on digital modes
- **Greater use** of higher bands (17M – 6M)
- **Increased multiple awards** – 2+ Mountain Goats, Shack Sloths, Super Sloths



Photo courtesy K0NR

PEERING INTO THE FUTURE....

- **Biathlon for Geeks – the ultimate RadioSport!**
 - Different countries each year
 - Summits identified in advance
 - Teams and individuals
 - Multiple summits in one day
 - Multiple days
 - Single/multiple bands/modes
 - Kit “weight classes”
- **SOTA Marathon – ??**

LINKS

A non-exhaustive list of links to related information

- SOTA
 - Website: <https://www.sota.org.uk/>
 - Alerts: SOTAwatch <http://www.sotawatch.org/index.php>
 - Spots:
 - ❑ SOTAwatch <http://www.sotawatch.org/index.php>
 - ❑ APRS2SOTA (requires signup) https://www.sotaspots.co.uk/Aprs2Sota_Info.php
 - ❑ SMS (requires signup) <http://www.intermoose.com/SMSBOT-usage.txt>
 - ❑ SOTA Goat: database and spotting (iPhone)
 - Alternative spot site (when main site is down):
https://www.sotamaps.org/post_alerts.php

LINKS

- SOTA

- Database (summit info, QSO totals, etc.):

- ☐ SOTAwatch <http://www.sotadata.org.uk/>

- ☐ Pocket SOTA (iPhone and Android)

- Reflector: <http://reflector.sota.org.uk/>

- North America reflector (NASOTA): <https://nasota.groups.io/g/main/topics>

LINKS

- Portable station equipment
 - Antennas, masts, tuners, wire, wire winders, various accessories:
<https://www.sotabeams.co.uk/>
 - Antennas, radios:
 - <https://www.lnrprecision.com/> (End fed & loop antennas, LD-5/LD-11, MTR3B/4B/5B)
 - www.elecraft.com (KX2, KX3)
 - www.yaesu.com (FT-817/818)
 - <https://qrpguys.com/>
 - <http://www.qrpme.com/>
- Clothing, insect repellents, etc.: REI www.rei.com

LINKS

- Software/tools
 - Logging programs and file conversions: <http://www.on6zq.be/w/index.php/SOTA/Software>
 - CSV Log Editor: https://www.g0lgs.co.uk/soft_info.php?AppName=sotacsveditor
 - Caltopo maps: www.caltopo.com
 - Avenza (Android offline mapping app): <https://play.google.com/store/apps/details?id=com.Avenza&hl=en>
- Automatic Position reporting System (APRS)
 - APRSdroid (and OSM versions): <https://aprsdroid.org/download/builds/>
 - APRStrack: www.aprstrack.com