



SWOT BULLETIN

THE OFFICIAL NEWSLETTER OF THE
SIDEWINDERS-ON-TWO RADIO CLUB

PROMOTING SSB, CW & DIGITAL OPERATIONS ON
144Mhz AND UP

VISIT US ON THE WORLD WIDE WEB AT:

The SWOT Homepage: www.swotrc.net
<http://groups.yahoo.com/group/sidewindersontwo>

Bulletin #308

Sept/Oct 2005

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S.W.O.T. GENERAL INFORMATION

- Send renewals and new applications for membership to Howard Hallman WD5DJT (See address above). Please make all checks payable to SIDEWINDERS ON TWO. Include your SWOT # for your renewals.
- Send your SWOT "Members Worked" from your log to, SWOT Awards manager, Wade Massey, 1016 Weiss Ave, Princeton TX., 75407 \$1.00 fee for certificate and your certificate number would be appreciated, also SASE.
- E-Mail all articles and reports to the Editors' email address listed above or you can mail them to Jim McMasters KM5PO, 2805 Shady Lane South, Arlington, Texas 76601.
- **MERCHANDISE:**
Decals and listings available for \$1.00 each for shipping and handling from the Secretary/Treasurer.
SWOT Patches are available at a price of \$4.00 Each + \$.50 for mailing
Badges are available from "The Sign Man", Rick Pourciau NV5A, <http://www.thesignman.com/menu.html>

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The Chairman's Corner

By Art Jackson – KA5DWI



One and Done

Another summer has done past us by. I think it was generally agreed that this season was not known for the great propagation. In fact, this was the worst summer (in which I had been around) for me in 14 years. I completed exactly one good Es QSO to good old Mel (N7IJ) in Idaho. Every Es opening down here this season was pretty much short and almost like meteors. Only once did I hear a DX station call CQ on a frequency other than 144.200 MHz. When conditions aren't there, no one spreads out. So I will put this season behind me and just think, "There is always next year." I shouldn't complain. One good late evening of Tropo early in the summer kept me from giving up on "2" totally.

Up and Coming

This summer has been extremely busy again. I continued my college education by taking a couple of classes. Also, I started tutoring students that needed assistance in Math. This fall I am going to the University of North Texas in Denton. I am tackling 18 hours of courses and will have a long commute to boot. They do have what appears to be a nice Satellite station sitting on top of one of the halls on campus. I will have to check it out. This might be a good opportunity for some WSJT EME. The big problem, will I ever get to use it.

I continue to be concerned what I will be able to do for SWOT over the next 4 months and better yet for the next 2 years. I will be in hot pursuit of a degree that will take a tremendous part of my time and energy. I have mentioned it in the past that this club needs help from many others. Many do help, but we need more.

Officer Nominations

I am sad to report the nominations for officers and board members remained *nil* the past two months. There still is no need to close nominations, since not all of the positions have been nominated anyway. I figure if no one wants to nominate someone, serve, or hold a position with SWOT, then a new method of selecting officers and board members is needed. Someone needs to step forward and offer their services. Folks, it is time to volunteer. If we are going to keep this running

and enjoy the benefits that the club provides, then donate your services or nominate someone else's.

Feedback

I appreciate your comments and thoughts. I also ask all of you to thank those within SWOT that give their time and efforts. Our Net Controls are our backbone and John, KM5ES and Jim, KM5PO give an "A" class effort with the Website and the Bulletin. We are doing our best to support and promote, but need your feedback on how we can improve. We look forward to further improvements and also a possible lowering of dues, but without a more active and vocal membership would anything be gained by it? Tell what you would like us to do better. If you have something to offer, share it.

Recap

Enjoy the Bulletin. As fall approaches, look for your area SWOT Net and be sure to check in.

73's Art Jackson KA5DWI

From the Vice Chairman

By John Petersen -KM5ES

Well summer is almost gone and chances for Eskip are drawing to a close very fast. Time for everyone to start getting their antenna arrays ready for winter, how time flies by!.

As far as our nets are concerned I am getting concerned. Please take time out of your busy skeds to join us on our SWOT Nets. You the member are very important to us and we love to hear from you. I know that the officers of SWOT and our NCS stations like to hear your comments and they are all welcome.

Get on the radio and checkin to our nets. Make some noise on 144.200 let the world know that 2 meter ssb is alive and kicking. If we dont use it, we will lose it.

I would like to thank all of our Net Control stations that take time out of their very busy skeds to bring to you the members our SWOT nets. They all have good stations and should be applauded for the jobs they are doing. Next time you check in tell them so, it makes for a nice feeling inside.

73 & good DX - John

Weather maps – Part 2

Jim McMasters

In the last issue of the *SWOT Bulletin* we looked at basic weather map symbols and what they mean. Watching cold fronts and warm fronts move across the country can make us more aware of the weather situation around us and our nearby and distant 2 meter friends. Weather maps using these symbols can be found at various internet sites (see accompanying images with links) or on many TV weather programs.

The band can open up for DX contacts alongside the advancing weather front. The openings are typically for short times and in limited areas. Warm fronts, if very long or slow moving may provide good DX but usually only improved local conditions exist for 3 or 4 hours along and directly ahead of the warm front. Cold fronts on the other hand, can produce improved conditions right after the front passes and the atmosphere calms down. The improvement typically lasts only a few hours.

Temperature inversions occurring in large high pressure weather systems give us the best DX conditions. These weather conditions are never more prevalent than late summer – early fall. An atmospheric high has stable air within it because the air is sinking. This sinking air is important to the creation of strong inversions. The downward moving air is compressed, heated, and dried, creating layers of warm dry air at various altitudes. Several inversions may exist, but we are interested in the area of 1500 to 6000 ft. above ground. The net result is that warm air aloft sits on top of cooler air below. These conditions cause an improvement in the refraction of radio waves in the area between layers of air with different temperature and moisture content. Some high pressure weather areas can be very stable holding their position for several days. Radio DX conditions can improve as days pass with a nighttime reflex action that strengthens the inversion. Contacts will also take place directly over the high pressure area from end to end as well as to the south and southwest of the pressure area.

An example of a mild temperature inversion took place in late July with good DX conditions present for paths between Mississippi, Alabama, and Georgia north to Iowa, Illinois, Indiana, Wisconsin, and Michigan. Figure 1 shows some of these contact paths. We can

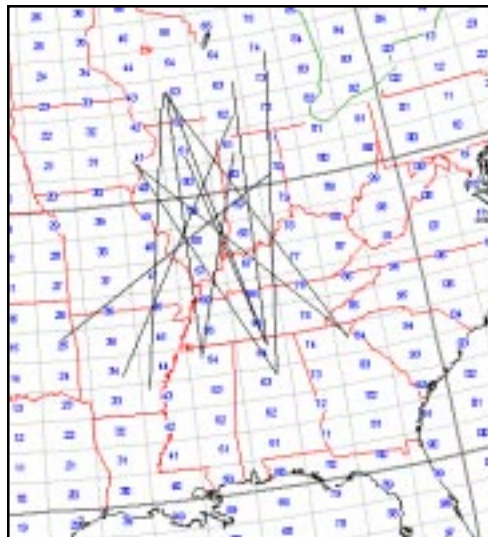


Figure 1. Some of the contacts made in late July 2005 as the result of a temperature inversion.

study this by first a cursory look at the surface map at that time (Fig. 2) where we see a high pressure area on the earth surface in the east Tennessee, west Carolinas

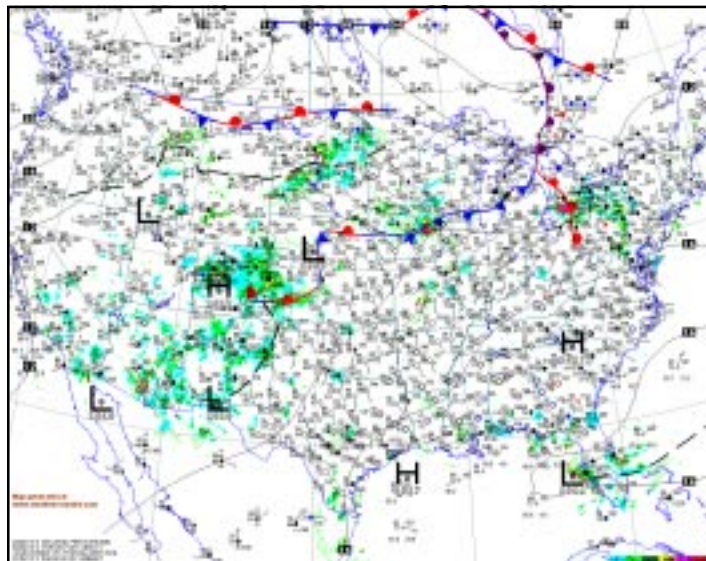


Figure 2. Surface Map at the time of opening. High pressure is centered over east Tennessee, west Carolinas. Click image for current version of map

border. Next in figure 3 we see the upper-air picture which shows the high pressure area aloft is located farther to the west than what is measured on the ground. This is typical of the “leaning” to the west or southwest of this type weather system. Comparing between the contacts map of figure 1 and the surface map of figure 2, we see that few 2 meter contacts

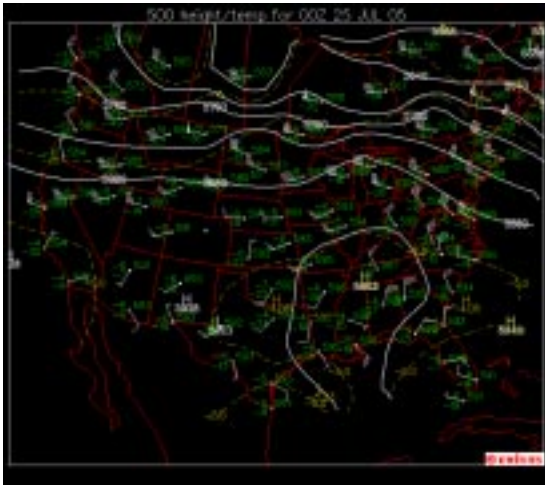


Figure 3. Upper Air Data. The high pressure area “leans” to the west and southwest as is typical. Click image for current version of map

ventured farther north than the cold and warm front boundaries and most appear to have crossed over the high pressure center (as shown by the upper air chart of figure 3) or were to the west of it. As a side note, the APRS map in figure 4 shows activity both in the high pressure area and directly behind the advancing northeast – southwest cold front situated from Nebraska to Michigan.

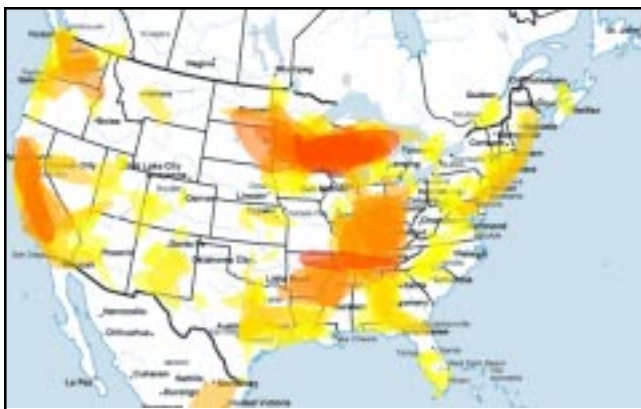


Figure 4. APRS map shows activity resulting from the temperature inversion and activity behind the cold front in the north. Click image for current version of map

Of further interest are the upper air soundings which were recorded at the time of the opening. These charts show the relationship between the temperature and humidity at various altitudes. Normal conditions will find the temperature dropping as altitude increases. Inversions will be indicated by the reverse.

In figure 5, which is the upper air sounding taken at Lincoln, Illinois during the opening; we see a series of colored lines. The right white line is the temperature while the left white line is the dew point profile. As indicated in the figure, the inversion for purposes of radio wave refraction is at an altitude of about 2082 meters. Here the temperature and dew point move sharply in opposite directions. The temperature is shown as rising which is contrary to normal conditions. There is a second inversion on the chart at approx 4000 meters. All upper air soundings taken around the perimeter of the opening show similar inversion data while soundings taken outside the area (like where I live in the Dallas – Ft. Worth area) do not show an inversion.

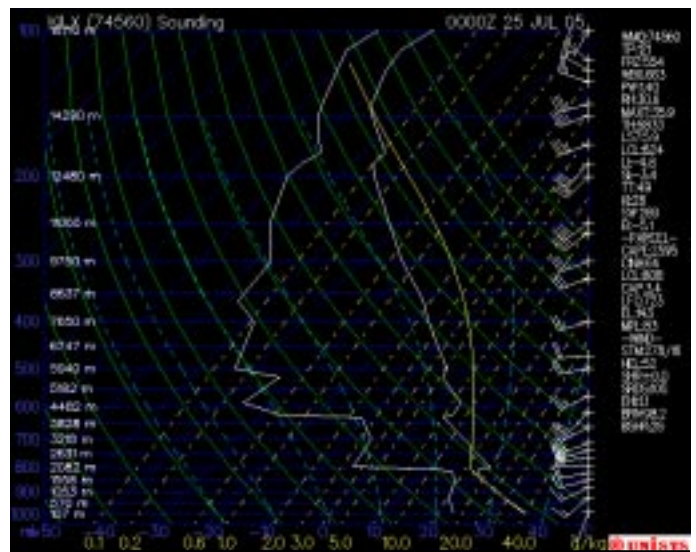


Figure 5. Upper Air Sounding from Lincoln, Illinois at the time of the opening.

It is interesting to study the conditions with these tools. Sometimes knowing that propagation should be possible (like keeping an eye on the APRS map) makes us get noisy on the call channel and often this leads to recognition of an opening. Sometimes knowing that an inversion simply does not extend to your area keeps you from wearing out your voice and in the mean time you can be a spectator!

Stay alert for both types of openings described here as they are very common at this time of year. Good luck!

DX-pedition to EM24 - Perseids meteor shower!

N5OSK/Jerry & KM5ES/John

We left EM25 around 4:30 am and arrived at EM24sm at 6:15 am and started putting the 13B2 antenna together and the computer. It was very warm and humid at 2200 ft above sea level. Once the antenna system was setup we worked KC5TER in EM26 and

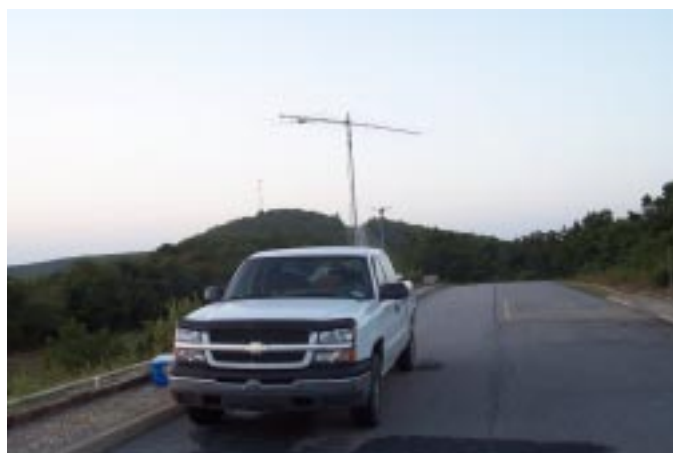


Sunrise dawns on Jerry and John and a Perseids morning of meteor scatter begins.

then started running WSJT and looking for MS contact's.

We worked AI XE2AT in DM81 in Mexico first then a short break checked into the Pineywoods Texas SWOT Net. Jim was 30 over on the mountain and we heard all of the checkin's.

John KM5ES worked AE5B in EM02 to give him a new grid then went back to working random hour on



The *Meteor Scatter Express* locked and loaded for action. 13B2 is positioned to spray meteor trails.

144.140 on MS. We worked N9LR,N8OC,WA5UFH,and KC0HLN.

We heard many stations during random hour. K1JT,WA4HFN,WW2R,AF4O and many others. Our trip did not bring in as many contacts as we did in January but it was fun. By 10am temps on the mountain were approaching 96 degrees so we broke down the station and headed home.



Beautiful view from high atop Talimena Scenic Trail in EM24.

**Northern CA "Grip and Grin"
Amateur SWAP Meet
3 Sept 2005
Saturday
8am until noon**

Amateur equipment only... No Computers, Bed room sets, or such... Bring Radios, mic, feed line, watt meters... amateur radio stuff....

Bob, is in charge of the testing, so if your in a mood to upgrade please follow up with him...

03-Sep-2005

Sponsor: **VACA VALLEY RADIO CLUB**

Time: 1:00PM (Walk-ins allowed)

Contact: ROBERT G HEWITT
(707)448-5665

Email: K6HEW@ARRL.NET

VEC: ARRL/VEC

Location: PRIVATE RESIDENCE
7372 PADDON RD
VACAVILLE, CA 95688

SWOT member DX accomplishments:

From the log of W5UWB John, EL17ax (144Mhz- 1500w, 1-M2-8WLHD/21 ele/55' boom @ 60' AGL)

Perseids	2005				
Date	Call	Grid	Prop	Band	Note
11 Aug	W0AH	DM78	MS	144	861 mi
	W0AH	DM78	MS	222	861 mi
12 Aug	K0XXX	EM46	MS	144	681 mi
	N5BO	EM50	MS	50	570 mi
	KC0HLN	EN32	MS	144	1048 mi
	N0PB	EM39	MS	144	868 mi
	K4YMQ	EM60	MS	50	727 mi
	N4UFP	EM94	MS	144	1107 mi
13 Aug	N8OC	EN83	MS	144	1330 mi
	KE7NR	DM43	MS	222	968 mi
	AG4ZF	EM83	MS	50	1015 mi
	W8WN	EM77	MS	144	969 mi
14 Aug	W8LON	EN73	MS	144	1261 mi
	WA7ADK	DN31	MS	144	1216 mi
	W0IOH	DM78	MS	144	846 mi
	XE2AT	DL81	MS	144	494 mi
	NQ7R	DM42	MS	144	885 mi

“I spent too many hours running long haul skeds on 2 and 222 (>1300mi) with many partial QSOs. I think the Perseids are slowly getting worse since the parent comet passed perihelion. Next up the Leonids and Geminids. Another example on how to pick up grid squares if you are chasing them” 73's - John, W5UWB, EL17ax

DX report from John Petersen KM5ES-

As far as conditions have been on 2 meters the band has been pretty flat here. Very little tropo has been noted. No Es, AU or any other enhancements.

I have been working a few contacts using WSJT to fill in the void of no regular tropo and so forth.

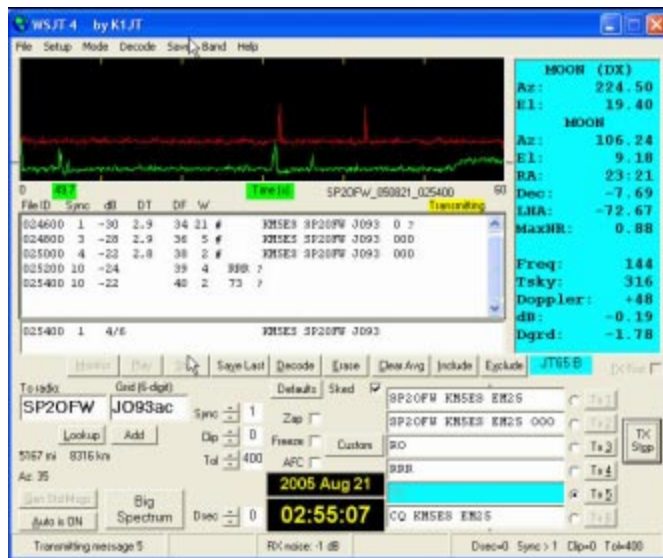
I have finally gotten up to 240 grids on 2 meters and have 11 initials on EME. I have worked Russia, Germany, Slovenia, Poland, Spain-Balearic Islands, Switzerland and several US grids off of the moon.

You are probably thinking that I have a big station... well it is not so. I run a 17B2 18 db gain antenna and 200 watts, everything I work off the moon is either on moonrise or moonset. There are many stations smaller than mine that are making EME contacts. It sure beats setting and listening to static on 144.200.

I have worked K9KNW Joe who is running portable across the United States and have picked up 10 new grids from him on meteor scatter. He has gone from Florida up thru the Midwest then up into the Dakotas and Rockies and now in Washington state. Hopefully on his way back I can pick up more grids that I need. Watch the pingjockey page at <http://www.pingjockey.net/cgi-bin/pingtalk> for watching for

new grids. Buy you a rigblaster or some other rig interface and try some of the digital modes on MS or EME. You will have a blast.

73 for now and good dx - [John KM5ES](#)



Click image for full size server version

What to expect Sept - Oct Meteors:

Arietids Mid August - Sept 18, peak Sept 1, 15zHR

Pisceans Sept 9-18, peak Sept 10, 6zHR

Sextanids Sept 19 - Oct 8, peak Sept 29, 5zHR

Arietids S Oct 5 - Oct 15, peak Oct 11, 5zHR

Orionids Oct 12 - Oct 9, peak Oct 22, 25 zHR

[Full Meteors calendar](#)

Tropo:

Watch for:

1. Upper Air High Pressure systems building from Northern Mexico, the Gulf of Mexico or Southern Florida.
2. Pacific Fronts passing across the U.S. with a strong High Pressure ridge wedged between them.

Always keep an eye on:

the [Hepburn Forecast](#).

the [APRS Real time VHF propagation map](#).

the [Presence of radar reflectivity \(false echos\) HERE](#)

the [Green Page \(144 Mhz Propagation Logger\)](#)

the [Surface Map](#) (there are many choices)

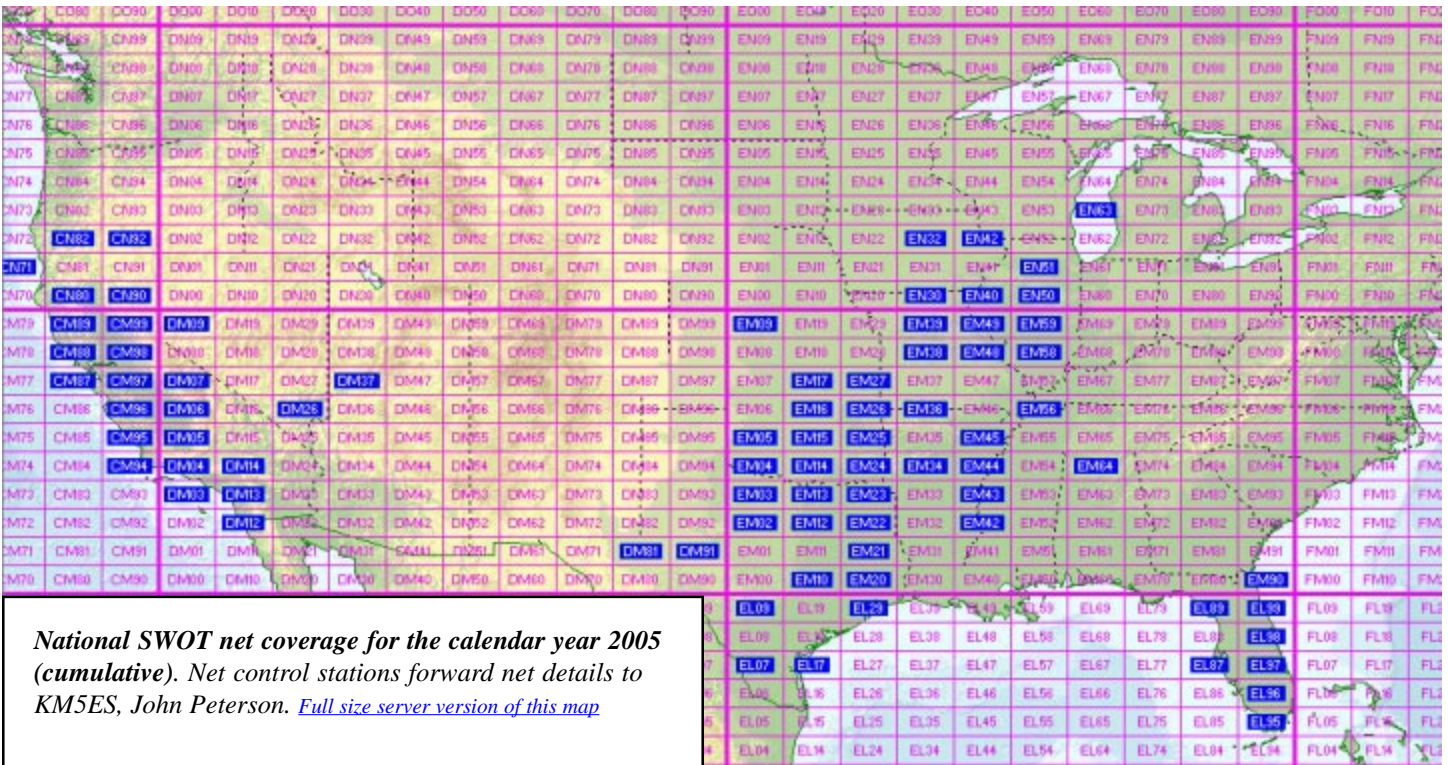
Moon:

WSJT JT65 contacts are possible any time of the month however, see the moon-graphs on the last page of the bulletin, and look for minimum downgrade days when CW contacts may be made.

Best Weekends:

Sept 17-18 (Also the weekend of the ARRL EME contest)

Oct 15-16



SWOT Net Reports

Here are the net reports for July/Aug 2005

Northern California W6OMF (Sunday)

Date	Check-ins/Grids
July 3	no net
July 10	77
July 17	74
July 24	64
July 31	67
Aug Week 1	61
Aug Week 2	63
Aug Week 3	81

14 Grids for August 2005

Northeast Missouri NOPB (Monday 8pm)

Date	Check-ins/Grids/States/SWOT
07/04	no net
07/11	32 - 17 - 10 - 7
07/18	35 - 17 - 10 - 9
07/25	38 - 20 - 8 - 9
08/01	28 - 13 - 7 - 7
08/08	36 - 18 - 10 - 7
08/15	33 - 18 - 8 - 9
08/22	38 - 17 - 7 - 6

North Texas W5FKN (Wednesday 9pm)

Date	Check-ins/Grids/SWOT/States
07/06	40 - 18 - 23
07/13	31 - 17 - 14
07/20	41 - 17 - 17
07/27	36 - 18 - 17
08/03	34 - 13 - 15 - 4
08/10	35 - 16 - 20 - 3
08/17	41 - 20 - 17 - 3
08/25	29 - 15 - 20 - 3 (sub-KM5PO)

Northeast Oklahoma KDSZVE (Tuesday 9pm)

Date	Check-ins/Grids/States/SWOT
07/05	28 - 12 - 4 - 12
07/12	20 - 11 - 5 - 9
07/19	25 - 11 - 5 - 15
07/26	no net (weather)
08/02	23 - 10 - 4 - 10
08/09	20 - 8 - 4 - 9
08/16	22 - 9 - 4 - 11
08/23	29 - 12 - 4 - 13

Eastern Oklahoma KM5ES (Thursday 9pm)

Date	Check-ins/Grids/States
07/07	29 - 9 - 3
07/14	24 - 12 - 5
07/21	32 - 13 - 5
07/29	26 - 10 - 4
08/04	22 - 8 - 4
08/11	30 - 11 - 3
08/18	23 - 9 - 4
08/25	33 - 11 - 3

East Tex. Pineywood KM5PO (Saturday 7am)

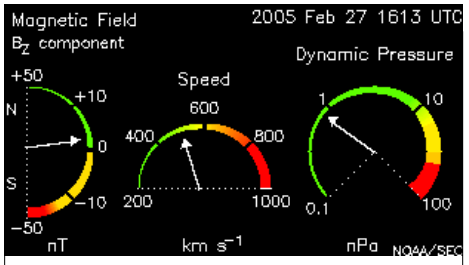
Date	Check-ins/Grids/States/SWOT
07/02	18 - 11 - 4 - 10
07/09	16 - 10 - 4 - 7
07/16	19 - 10 - 4 - 10
07/23	22 - 12 - 4 - 9
07/30	23 - 13 - 4 - 10
08/06	27 - 18 - 4 - 12
08/13	14 - 12 - 4 - 7
08/20	21 - 13 - 3 - 9
08/27	26 - 13 - 4+Mexico - 12

Daytona Beach Florida KU4VQ (Wednesday 8pm)

Date	Check-ins/Grids/SWOT
07/06	6 - 2 - 1
07/13	9 - 3 - 1
07/20	7 - 2 - 2
07/27	11 - 1 - 2
08/03	9 - 2 - 1
08/10	9 - 2 - 2
08/17	15 - 3 - 1
08/24	11 - 3 - 2

Southern Utah Weak Signal Net WA0YPL (Wednesday 8pm)

Date	Check-ins/Grids
07/13	3 - 2
07/20	2 - 2
07/27	2 - 2
08/03	1 - 1
08/11	2 - 2
08/17	0
08/24	0



Real time Magnetic Field dials (Aurora)

WSJT6 is coming!

As this issue of the bulletin goes to press we have word that Joe Taylor, K1JT, is about to release version 6.0 of WSJT. This will be a beta version but has many improvements including a built in waterfall display and of special interest to the meteor scatter op, a click and decode immediately after the ping feature. The quick click feature will allow an operator to decode a ping and prepare the next message before the next automatic transmit sequence begins. This could shorten the time required for contact!

WSJT main website: <http://pulsar.princeton.edu/~joe/K1JT/index.htm>

WSJT is a computer program for VHF/UHF communication using state of the art digital techniques. It can decode fraction-of-a-second signals reflected from meteor trails, as well as steady signals more than 10 dB weaker than those required for conventional CW. WSJT is freely available to radio amateurs for non-commercial purposes.

Getting started with WSJT!

WA5UFH email : wa5ufh@ykc.com

WA5UFH webpage : <http://www.ql.net/wa5ufh/>

WSJTGROUP :

<http://www.ql.net/wa5ufh/WSJTGROUP/WSJTGROUP.htm>

Ping Jockey: <http://www.pingjockey.net/cgi-bin/pingtalk>

Just a reminder to all concerning our SWOT Nets during the storm season in which we are now in. It will be at the discretion of the net controls in the event of severe weather that the SWOT Nets may be cancelled for that particular evening or morning. Especially during storms with a lot of lightning activity. Do not put yourself at risk and use common sense.

John Petersen KM5ES
SWOT Vice Chairman #3331
SWOT Net Manager



John, KM5ES does it again! First Place Spring 2005 North American High Speed Meteor Scatter contest.

Spotlight on Southern Utah

Bill, WA0YPL is making noise. He has started a new SWOT net called the Southern Utah Weak Signal Net and he is the net control station. Bill's QTH is Beryl, Utah... sorta. There's really two Beryls, one called Beryl Junction which is the intersection of two highways and the other called Beryl town which is basically a ghost town at a place on the train tracks that used to be a train stop. So the SWOT net control station is located 10 miles northwest of the junction and about 7 miles southeast of what's left of the town, ie. the middle of nowhere! Bill states "It's not the end of the world, but on a clear day you can see it... HI HI". This area does not see a lot of tropo enhancement but typical coverage from Bill's QTH is into Phoenix, Las Vegas, and DM14 (Southern California). "I know a few guys that have those rigs that will go from DC to UHF" Bill says, and he'd sure like them to join him on 2 meters.

Bill's station consists of a FT767GX with the 2 meter module and a RFC 2-317 amp. This feeds about 100 watts into an array of two phased homebrew quagis (basic N6NB design) at about 17'. Bill plans to add two more quagis to the setup and possibly move the amp to the antenna mast position.

So far the net has attracted a very small group. Spread the news about this net! Could the coverage extend from Beryl into Flagstaff, Salt Lake City? It could happen provided there are active 2 meter operators in those areas..

Are there other hams out there reading this that would like to turn their efforts into starting a SWOT net? All it takes is motivation! When you start your net, be sure to contact the SWOT Chairman, Art Jackson, so your new net can be endorsed and listed in the correct places.

SWOT and Selected 2-Meter Nets

Day	Local Time	Area	Net	Frequency	Net Control Station
SUN	8:00 pm	Vacaville, CA	North California	144.250	W6OMF Larry
SUN	8:30 am	Tucson, AZ	Arizona	144.250	N7SQN AI
SUN	8:30 pm	Zebulon, NC		144.220	N1GMV
SUN	9:30 pm	Holland, MI	Michagan SWAM	144.155	K8NFT
MON	7:30 pm	Albuquerque, NM	New Mexico	144.200	N5XZM Bobby
MON	8:00 pm	Colorado	Rocky Mt. VHF +	144.220	N0VSB W6OAL
MON	8:00 pm	Midwestern United States	Northeast Missouri SWOT	144.250	N0PB Phil
MON	8:00 pm	Sandusky	East Michigan VHF	144.250	W8IDT Bart
MON	9:00 pm	Tidewater, VA		144.230	
TUE	8:00 pm	California North Citys	NORCAL	144.250	KN6NG Tony
TUE	8:00 pm	Greensboro, NC		144.225	K4HC
TUE	9:00 pm	Oklahoma, Texas, Ark, Missouri	Northeast Oklahoma SWOT	144.250	KD5ZVE Jimmy
WED	8:00 pm	Central Florida	Daytona Beach Florida SWOT	144.250	KU4VQ George KI4FIA George
WED	8:00 pm	Utah, Nevada, Arizona, E. California	Southern Utah Weak Signal Net	144.250	WA0YPL Bill
WED	9:00 pm	Texas, Okla, Ark, Louisiana	North Texas SWOT	144.250	W5FKN Bob
THU	8:00 pm	California South Citys	NORCAL	144.250	KA6CHJ Paul
THU	7:30 pm	Lawton/Duncan, OK	Southwest Oklahoma SWOT	144.250	NH6CJ Mike
THU	9:00 pm	Oklahoma, Texas, Ark, Missouri	Eastern Oklahoma SWOT	144.250	KM5ES John
THU	9:00 pm	Tennessee	Upper Cumberland	144.225	N2BR Bobby
SAT	7:00 am	Texas, Okla, Ark, Louisiana	Piney Woods SWOT	144.250	KM5PO Jim

SWOT Nets in bold

Internet Links:

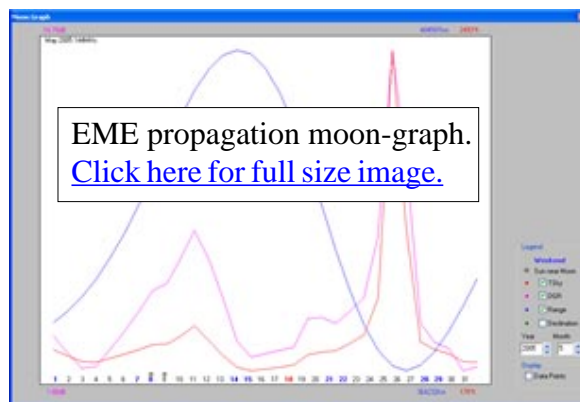
A few links that are of interest to the Weak Signal enthusiast:

WSJT Downloads (Now at version 4.9.8)

<http://pulsar.princeton.edu/~joe/K1JT>

<http://pulsar.princeton.edu/~joe/K1JT/Download.htm>

[Lots of calculations \(from Larry/W6OMF\) Amateur Radio Propagation Studies](#)



[Moon-graph](#) used by special permission to the Side Winders on Two Radio Club from David Anderson, GM4JJJ.

New moon = sun symbol.
Red data = Sky temperature.
Pink data = Downgrade.
Blue data = Range
Green data = Declination

SIDEWINDERS ON TWO ENROLLMENT OR RENEWAL FORM

NOTE: Though your membership and number are good for life you must renew annually to receive the newsletter and stay on the active list..

Enclosed find check/MO. to: New member—\$12.00_____ Renewal—\$12.00_____

Howard Hallman WD5DJT, Sec.Treas.

3230 Springfield Lancaster, TX 75134-1214

New Member. I have worked the following members:

Call: _____ SWOT No. _____ Call: _____ SWOT No. _____

Renewing: My SWOT No. is _____

Name: _____ Call _____ Grid Square _____

Street address _____

City _____ State _____ Zip Code _____

Telephone Nos. _____ E-mail _____

Receive Newsletter By Email: YES _____ NO _____