

# DX MONITOR

PUBLISHED BY  
THE INTERNATIONAL RADIO CLUB OF AMERICA

DECEMBER 1, 1973      VOLUME 11, NUMBER 10

### DX CALENDAR

All times in Eastern Standard Time

Sat. Dec. 1	0000-0100	KWOC	930	Poplar Bluff, MO	5kw	U2
Mon. Dec. 3	0200-0300	WBVP	1230	Beaver Falls, PA	.25kw	U1
	0300-0330	KMAV	1520	Mayville, ND	.25kw	D1
Tues. Dec. 4	0100-0110	WVAM	1430	Altoona, PA	5/1kw	U2
Mon. Dec. 10	0130-	WHLM	550	Bloomsburg, PA	1kw	U4
	0300-	WRUF	850	Gainesville, FL	5kw	U2
Sat. Dec. 15	0300-0400	KWED	1580	Seguin, TX	1kw	D1
Mon. Dec. 17	0200-	KINY	800	Juneau, AK	5kw	U1
	0200-0210	KXOX	630	St. Louis, MO	5kw	U4
	0430-	WDAF	610	Kansas City, MO	5kw	U1
Thurs. Dec. 20	0230-	KFKA	1310	Greeley, CO	5/1kw	U2
Mon. Jan. 7	0100-0530	KBUC	1310	San Antonio, TX	5kw	D2
	0300-0330	KPCA	1580	Marked Tree, AK	.25kw	D1
Mon. Jan. 14	0200-	WDLC	680	Escanaba, MI	10/1kw	U1
	0600-0800	WKRT	920	Cortland, NY	1kw	U2
Mon. Jan. 21	0300-0400	KABQ	1350	Albuquerque, NM	5/.5kw	U2
Mon. Jan. 28	0400-0500	KGRA	1320	Sacramento, CA	5/1kw	U4
	0515-0545	WTSO	1070	Madison, WI	10/5kw	U1
Mon. Feb. 11	0200-	WHIS	1440	Bluefield, WV	5/.5kw	U4
Sun. Feb. 24	0230-0300	KGVO	1290	Missoula, MT	5kw	U3

**KWOC**-- no program details available. Reports go to Leland D. Shaffner, General Manager, KWOC, Valley Plaza Shopping Center, Poplar Bluff, MO 63901. Arranged by Jim Lovell, NNRC.

**WBVP** will feature music and announcements. Write James Roush, Chief Engineer, WBVP, 1400 Seventh Ave., Beaver Falls, PA 15010. Arranged by Gene Peterson, NNRC.

**KMAV**-- no program details given. Send reports to Austin Kramer, General Manager, KMAV, Box 918, Mayville, ND 58257. Arranged by Carl Dabelstein for NNRC.

**WVAM** will give extra IDs during its usual frequency check. Reports go to Chief Engineer Bruce McCray Schiller, 2727 W. Albert Drive, Altoona, PA 16602. Arranged by Gene Vonderembse for NNRC.

**WHLM**-- no program details available. Send reports to A. F. Hogg, WHLM, 107 W. Main St., Bloomsburg, PA 17815. Arranged by Gene Vonderembse for NNRC.

**WRUF** will have an equipment test with station IDs, tones, and recorded music. Write E.A. Slimak, CE, WRUF, P.O. Box 14444, Gainesville, FL 32601. This is a University of Florida station. Arranged by Gene Vonderembse for NNRC.

**KWED** will use MoR music with many IDs. Reports go to E. Huffman, KWED, P.O. Box 989, Seguin, TX 78155. Arranged by PAUL S. HIGLEY for IRCA.

**KINY** probably won't get out too well, as the CE told Larry Ledlow, Jr. of NNRC who arranged the test at the station lost its tower 10 years ago, and is now using a 1/4 wave lead-in. No details on programming available. Write Dave Moore, CE, KINY, Fairbanks, AK 99801.

**KXOX**-- no details on programming available. Send reports to Art Jablonsky, Chief Engineer, KXOX, 4255 South Pine Blvd., St. Louis, MO 63108. Arranged by Jim Lovell for NNRC.

**WDAF**-- will have suitable announcements made, according to the Program Director. Write Chief Engineer James P. Schmidt, WDAF, Signal Hill, Kansas City, MO 64108. Arranged by Jim Lovell for NNRC.

THE INTERNATIONAL RADIO CLUB OF AMERICA-- a non-profit club devoted to listening to distant radio stations on the broadcast band (540-1600 khz). IRCA is a member of the Association of North American Radio Clubs (ANARC), dedicated to promoting cooperation between the radio clubs in North America.

**CLUB OFFICERS:** President: Richard C. Evans, Box 2048, Gary, IN 46409 (219-981-2121); Secretary-Treasurer: Carl Dabelstein; Board of Directors: Father Jack Pejza (chairman), Bob Foxworth, Nancy Gantzer, Percy Kesteven, Ed Krejny, Bill Nittler, John Zorilo. Membership dues in IRCA: \$2 a year.

**DX MONITOR** is the official magazine of IRCA, published 34 times a year by IRCA. Weekly from November to March, 3 times in October, twice in September, April, and May; and once in June, July, and August. Publishing staff: Executive Editor: Father Jack Pejza, 3266 Nutmeg St., San Diego, CA 92104 (714-282-0076 or 282-2184). Publisher: Grant Manning, 12536 Arabian Way, Poway, CA 92064 (714-566-1264); Dave Stroup, Albert Lobel, Randy Seaver, John Kolb.

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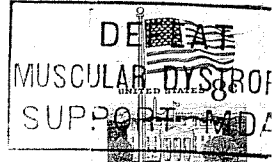
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DX Monitor is printed by San Diego Printers, San Diego, CA.

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POWAY, CA 92064

Address correction requested



Michael G. Worst  
3608 Phinney North  
Seattle, WA 98103

# FIRST CLASS

KFKA-- no program details available. Write to J. Roger White, Staff Announcer, KFKA, 1025 Ninth St., P.O. Box K, Greeley, CO 80531. Arranged by Gene Vonderembse for NNRC.

KEUC will test with 30/50/100/400/1000/5000/7500/10,000 hertz tones with different modulations; C:W music, and many IDs. Program will test the 5 kw main transmitter as well as the 500 watt PSA power. Reports go to Howard E. Hettinger, KEUC, Box 20267, San Antonio, TX 78220. Arranged by Artie Bigley for IRCA.

KPCA -- Skip Dabelstein, who arranged the test for NNRC, will suggest to the station that the test consist of a series of one minute TTs, C:W music, and code IDs. V/s is Dale Sanders, KPCA, Box 550, Marked Tree, AK 72365. Mr. Sanders is quite enthusiastic about the test, so give it a try.

WDLG -- no program data, but the station will use 10,000 watts for the test. Write Robert Haslow, WDLG Radio, P.O. Box 419, Escanaba, MI 49829. Arranged by Eugene Vonderembse for NNRC.

WKRT will also broadcast on 99.9 mhz FM. The program will consist of regular programming material, during regular station hours, but IDs and mentions of NNRC will be added to assist in identification. Reports go to Bruce L. Mackey CE, WKRT, 292 Tompkins St., Cortland, NY 13045. The same program will be on AM and FM; Mr. Mackey is especially eager to get FM reports. Arranged by Ken Tenner, NNRC.

KABQ is a Spanish language station, but will give IDs in both English and Spanish. The station operates with 500 watts with a null 190° west of true north. Write Hubert Beavers, CE, KABQ, 1309 Yale, S.E., Albuquerque, NM 87106. Arranged by Eugene Vonderembse for NNRC.

KCRA will play Beatles records with IDs in CW and voice. They will mention NNRC. Reports go to Gary L. Wann, KCRA News, Radio 132, 310 Tenth St., Sacramento, CA 95814. Arranged by NNRC by Eugene Vonderembse.

WTSO -- no program details available. Write to Sherman Stern, Chief Engineer, WTSO, 5721 Tokay Blvd., P.O. Box 44, Madison, WI 53701. WTSO tries to have a 15 minute test every Monday morning starting at 0530 EST. Arranged by Eugene Vonderembse for NNRC.

WHIS -- no program details available. Write Chief Engineer, WHIS, Broadcast Center, East Cumberland Road, Bluefield, WV 24701. Arranged by Eugene Vonderembse for NNRC.

KGVO will use adult contemporary music, with full station ID between records. This is a normal on-the-air time for KGVO, which signs off at 0300. But the station will give extra IDs to help DXers and other information as in a test. The CE is very interested in reports. Send reports to Tom McGinley, Chief Engineer, KGVO Radio, Drawer M, Missoula, MT 59801. Arranged by Eugene Vonderembse for NNRC.

## Daylight-only radio stations due relief

WASHINGTON (AP) — Federal Communications Commission said it is prepared to grant "appropriate temporary relief" to daylight-only radio stations, which are concerned about the impact on them of proposed year-round daylight saving time. Details were not announced.

Congress is considering instituting daylight saving time year round as a way of conserving energy by pushing ahead the time of sunrise and adding an hour of daylight to late afternoon or evening.

Some 350 stations are allowed to broadcast only between sunrise and sunset and have protested that if farmers and others go to work an hour earlier, they will miss the market and other information they need. And, the stations say, they will be unable to broadcast early school-closing in inclement weather. The big technical problem is letting the stations

go on the air an hour before dawn so that their signals carry farther in darkness and might interfere with clear-channel stations authorized to broadcast nationwide with higher power during hours of darkness. Both types of stations use similar frequencies.

The FCC said that in response to its order of Nov. 14, the commission's Broadcast Bureau has provided a draft proposal.

The commission said it will provide the relief and "initiate rule-making proceedings... consistent with congressional action."

The FCC said it will "afford relief to daytime-only stations which are presently ineligible for pre-sunrise authorization, where such action is consistent with treaty commitments, and with due regard to the protection of nighttime services rendered by U.S. clear-channel stations during the pre-sunrise hours."

EVENING TRIBUNE

(2)

San Diego, Saturday, November 24, 1973



### DAYLIGHT SAVINGS TIME

It appears that Daylight Savings Time will soon be in force again in this country, in an attempt to save energy. According to an Associated Press release, the gist of which was forwarded by Bill Hardy, DST will start on the first Sunday, three weeks after the bill is passed by Congress and signed by the President. States will not have the option of adopting DST or not. DST would last until the last Sunday in October 1975. When DST takes effect, reports to DX Roundups should be in DST.

### GEOMAGNETIC INDICES

Nov. 14-20 6 6 10 15 16 2 4

Dave Fischer has informed us that Bernard Macholan of Lincoln, NE has died. Bernard was a transmission engineer with Lincoln Tel and Tel, and worked with Fish on the NE BI antenna project a few years ago. May he rest in peace.

### FLASH TIPS

WTUP-1490, Tupelo, MS, has a frequency test every 4th Wednesday starting at 0230 EST, according to Mike Heppie. The station's address is Natchez Trace Trace Inn, Tupelo, MS. Jeff Brasier reports the KBND test was not heard.

KPPC-FM was bought by KROQ; the AM side, which operates only two days a week was bought by another group for \$50,000, according to Bill Hardy, via Broadcasting

Jon Pearkings reports that the new calls of CFUN-790 in Newcastle, N.B. are CFAN. They changed calls at the same time as KCVN took over CFUN again.

# DX ROUNDUPS

### EASTERN

Editor: Mike Mitock, 975 Osborn Ave., Lorain, OH 44052. Deadlines, Tuesday

### OF SPECIAL INTEREST:

- 950 \*WXLW\* IN INDIANAPOLIS: Very good SM 11/11 and MM 11/12 w/ET's (0530 and 0300 respectively) using rr and DJ Pat Martin. asking for request from DXers 11/12. Killing channel here, hardly any QRM... (JMP) (underline mine...mrm)
- 1160 KSL UT SALT LAKE CITY; Fair to poor w/WNEW cross mod., and WWA slop on "Nite Cap" show. 0310-0400 11/17. New! (PRM)
- 1350 WZIX PA YORK; noted on new call letters 11/18 @ 1130 w/automated "Hit Parade" format. WKLY looped. (ex-WORK) (DWS)
- 1420 WBEC MA PITTSFIELD; Noted SM 11/11 w/s/off at 0500, to return at 0730....is this one AN-SP SM now???? (JMP)
- 640 WHLO OH AKRON; Fair-good w/some WNBC QRM w/ rr mx 1849-55 11/12. (PRM)
- 310 \*WKBC\* NC NORTH WILKESBORO; ran PoP w/different cycle TT's and apparently no ID's until at least 0100 plus, 11/17. I heard the fairly weak TT u/WGY and started calling up the possibles,

- 820 WBAP TX which were limited, and WKBC said it was them. FORT WORTH; 0414-31 11/10. Fair w/QRN..line noise?.. w/c&w mx and long fades. New. (PRM)
- 860 \*KWRF\* AR WARREN; was a lead pipe cinch on their r/c TT (1st Tue.) 11/6 frm 0145-0200
- 900 \*WSWN\* FL BELLE GLADE; was the PoP w/different cycle TT's starting 0000 and running past 0100, 11/5. ID'ed by same method as WKBC above. Aren't many 900's that could have been that weak!
- 940 WFNC NC FAYETTEVILLE; coming in as early as 1644 on 9 November. Some mixing w/ CBM. Local WINE s/off @ 1630.
- 960 WBEU SC BEUFORT; very good w/ s/on o/mess 0602 11/11, long wanted here. (JMP)
- 970 WCHN NY NORWICH; Very pleased to catch this one w/ s/off 1645 11/8, just o/ din of WWDJ/WWSW. A most wanted! (JMP)
- 1010 \*WINS\* NY NEW YORK; off 11/15 w/ ET-TT @ 0305. (PRM)
- 1060 \*KHVM\* TX GILMER; was easy on their test, 0324 11/5, u/ apparent KYW OC. Not to often I hear a station asking for collect phone calls, hi!

3

1070 WHPE NC HIGH POINT; Powerful o/ everyone w/ s/off 1714 11/8. s/off was voiced o/ "My Country 'Tis of Thee". another surprise! (JMP)

1110 WJSM PA MARTINSBURG; Very good o/u/ WBT, w/ s/off following inst. mx and AM-FM ID 1658 11/10. Only 2nd time heard. (JMP)

1150 CKOC ON HAMILTON; fair with "American Band" to 0300 then "CKOC Total News". WNEW slop, QRN. New. (PRM)

1230 WNVY FL PENSACOLA; Noted AN MM 11/5 w/ c&w mx. WCWA off this AM., (1st MM SP???)

WKBO PA HARRISBURG; First time noted on NSP sked 11/12 @ 0105 w/rr. (DWS)

1250 WDVA VA DANVILLE; fair thru WTAE w/c&w truckers show, local spots. Long fades. 0103-19 11/13. (PRM)

1310 WGH VA NEWPORT NEWS; fair w/nx 1658-1700 ID, then gone in QRM...Pattern change? 11/16. (PRM)

WSLW WV WHITE SULPHUR SPRINGS; spot for bank, and ID atop freq., 1715-1716 then gone into mess. also 11/16. (PRM)

WISE NC ASHVILLE; fair in/out w/mess 1726-1748, 11/16. Spot for suit store, mention of WI-SE Good Guy, ID @ 1726. (PRM)

1450 WNAT MS NATCHOZ; Came booming in w/ID @ 0400 "Good mx from WNAT" mixed w/ WTBO (?)...only ID was "Maryland", and many ads. 11/11.

WOL DC WASHINGTON; Music and ID sounding like WROL, so presumed it was this one, at 1930.

1460 WCMB PA HARRISBURG; rr mx, and s/off w/ SSB 0100 11/11, mixed w/ un-ID SS station and WOKO.

WRAD VA RADFORD; Am I the last? (???.mrm) Finally remembered to look for this one 0100 s/off, 11/12. Just faded up for s/off w/SSB. (JMP)

WBNS OH COLUMBUS; noted s/on 11/12 @ 0132. (DWS)

1470 WBIG NC GREENSBORO; noted playing MoR 0053, 11/6, during fortuitous (???.mrm) gap of dead air on local WOHO's "Rap" talk show which runs AN week-days. WOHO was back to talking by 0058, however.

WPNC NC PLYMOUTH; Fair-Poor o/u/ WSAW w/ s/off 1700 11/9. Very low read, hard to copy. Nonetheless, a surprise. (JMP)

1480 \*WIGS\* MI TAWAS CITY; Noted on their r/c TT w/ code ID's 0036 (r/c runs 0030-0045). I don't know code, but was able to catch the "...OS" because it's part of S O S, which I do know, hi!

\*WSAR\* MA FALL RIVER; another ET w/rr noted 11/12, in progress @ 0045. They're really a pest...hi! (DWS)

\*WMAX\* MI GRAND RAPIDS; amazing signal, killing everything on freq., 11/12 w/ET 0235-0300. Only a +40/60 over S-9 w/one slight fade! (DWS)

1500 WBRI IN INDIANAPOLIS; very weak here, behind OC (or OC's) 0310 11/5 w/hymns.

KOKN OK PAWHUSKA; noted on for emergency programs evening of 11/8, until at least 2200 plus. Played MoR mx, and anncing after every song that some convicts had escaped and people shld beware. Stated that they were asked to return to air after SS s/off by the police. Fair signal, equalling WDEE.

1520 \*WSLT\* NJ OCEAN CITY; ran FC/TT 0030-0045 (15 minutes later than 1973 FC list), giving ID's every 2 minutes. It's great to be able to hear something else on 1520 for a change.

1520 \*WTTO\* OH TOLEDO; has been noted w/ s/off nightly 2400 since the last week of Oct. s/on time unknown (0600?) and ET's w/OC, usually, and few or no ID's are common between 0000 and 0200.

1540 WDON MD WHEATON; Finally w/c&w and spots for metro Washington, 1646-52, 11/11 when covered by usual WPTR mess. (JMP)

CHIN ON TORONTO, w/Italian programs all PM. Heard 12 Nov. @ 1518 o/WADK.

KXEL IA WATERLOO; Religious prgms u/WPTR 0038, 11/11. Fair strength.

1550 \*WEXT\* CT WEST HARTFORD; concluded ET w/ instrumental mx 0120 11/7, started at ????. u/ Un-ID TT'er. (WTCD?)

\*WTOD\* NC WINSTON-SALEM; noted ET'ing w/ country - gospel 0200-0210 11/7. Test concluded 0210. They may or may not have been the earlier TT w/ WEXT.

1580 \*WSUP\* NY PATCHOGUE; Noted ET'ing w/ c&w mx 0100-0115 11/6 w/ID after every song.

1590 WCSL NC CHERRYVILLE; noted w/ s/on 0559 11/5, far atop WAKR and everybody for a nice surprise. Don't underestimate those 500w PSA's!!

WETT MD OCEAN CITY; w/ continuous beautiful mx 12 Nov. @ 0305. Only a few wx and time checks each hour. Some WAKR QRM and Un-ID TT.

WZUM PA CARNEGIE; fair w/ s/off 1700, 11/11. o/ WQQW/WAKR, etc. 2nd time hrd! (JMP)

THIS WEEKS r/c'S

1st Tue; 860-KWRF AR (Merrill)  
1480-WIOS MI (Merrill)  
1st Fri; 1520-WSLT NJ (Merrill)

THIS WEEKS CONTRIBUTORS:

(PRM) Paul Mount, Teaneck NJ 07666  
Michael Nadeau, Cheshire CT 06410  
Frank Merrill Jr., Toledo, OH 43612  
(JMP) Jim Poterba, Yardley, PA 19067  
(DWS) Dave Schmidt, New Castle, DE 19720  
Richard Shaftan, N.Y.C., NY 10010

And, that ends another week! The time has come for me to set down a few guidelines, I guess.

There are a few reports which have crossed my path recently, which I really shoud have sent back and not even bothered with, but in the interest of a good informative column, I "Decoded" them as best I could. But no more! Your reports should be sent to me exactly as they appear in your DXM. List in order by frequency, call, etc. Reports should be single space, except double space between each separate tip.

I don't have time to sort cut maybe 20 separate tips and put initials at the end. PLEASE put your initials at the end of each separate tip. If you don't care if anybody knows you sent in that particular tip, then I don't either! So, if you don't put down your initials, I won't either! Times in EST please! I have got reports in GMT, and even the stations local time! And lastly, please list your r/c's seperatly, at the end of your report! I don't want to sound hard headed, but you'll soon see that if you help me in these areas, the EDXR will not only be the biggest and best Roundup, but the most informative!

73, and Good DX!

**CENTRAL** Richard C. Evans  
Box 2048, Gary, Indiana 46409

As a reminder, times in DX Monitor are in the 24 hour clock. 11:55 AM is 1155, 11:55 PM is 2355. 15 minutes past midnight is 0015. I'm getting tired of not being sure on your times while I'm proofreading reports. -30-

\*\*\*\*\*  
570\*\*WNAX\*\*SD\*\*Yankton, 10/29 0352 w/ET, ID weak under WKBN ET. (RSK)

580 CKPR ONT Thunder Bay, 11/10 RR Mx by G. Harrison and Steven Stills, ID'd at 1925, 1930. (PB)

610 WSGN AL Birmingham, 11/12 0300-0345 WTMJ s/off @ 0100, fair, WIP looped out, occ. WBAF ORM. (GT)

620 WHEN NY Syracuse, 11/12 0345-0351, fair, w/WSUN & CKCK, WTMJ off air. (GT)

630 WLAP KY Lexington, 11/7 w/ads, ID 2011, DJ said he had an insect running around in his equipment. RR Mx. (PB)

640 WNAD OK Norman, 11/10 1811-1813 good w/ID & CW Mx (no Cuban this time.) (JA)

680 KNBR CA San Francisco, 10/29 0342-0420 good, faded to poor & vg, Mexican & WPTF ORM, WMAQ off. MoR Mx.(GT)

KFEQ MO St. Joseph, 11/12 1654-1700 poor o/u CFTR w/ID, C&W then CBS NX(JA)

WMPS TN Memphis, 11/12 1701 fair w/end of Nx, ID, start of RR oldies, then gone from pattern change. (JA)

710 CJRN ONT Niagara Falls, 10/29 0300-0315 fair, occ. WOR & tone QRM, nulled WOR w/loop, MoR Mx. (GT)

730 WJMT WI Merrill, 10/26 1830-1915 s/off, fair, FF QRM, WGN completely nulled w/IRCA loop.(GT)

740 KCBS CA San Francisco, vry pr 10/14 2317 w/Nx, Ads, v/c. (KRB)

790 WAKY KY Louisville, 11/12 0433-0450, WBBM looped out, WTAR ORM. (GT)

830 KBOA MO Kennett, 10/28 1800 w/Mo.Nx, in good wav o/WCCO. (RSK)

860 KONO TX San Antonio, 11/12, 0500-0530, Poor to fair, got rid of most of XEUN QRM w/loop. My farthest lkw. 1110 mi from Milw. (GT)

910 CKLY ONT Lindsay, clear 10/14 2336 w/Mx, ID, v/l. (KRB)

920 KARN AR Little Rock, poor 0100 11/12, in enuf to know out WJAR for 10 min. w/Mx, ID in middle of Mx. (KRB)

WJAR RI Providence, good 11/12 0053 with Mx, IDs, Faded 0100 back 0110(KRB)

950 WKAZ WV Charleston, 11/16 0058 strong.(MH)

960\*\*WRFC\*\*GA\*\*Athens, 10/15 0024 ET in good. 5 min ET w/2IDs and 2 Mx, both Georgia. v/l. (KRB)

\*\*KWYK\*\*NM\*\*Farmington, 11/5 0230½ w/tone. A special arrangement w/enqr made positive ID possible. If any of you hrd the tone go on and off about every 1½ minutes, then you got them. (RSK)

WTCH WI Shawano, 10/26, 1545-1615, poor, o/u WSBT on loop. (GT)

970 WHA WI Madison, 11/13 1730 s/off,weak.(MH)

980 CFPL ONT London, end of Nx 0408, 11/19, extremely poor u/WONE/KMBZ. (rce)

WRC DC Washington, 11/7 thru heavy QRM, ID 2002, RR Mx, promo for "Double-Cash Jackpot". (PB) 11/5 0215 in fair o/everything, WONE for some reason was very weak. (RSK)

990 KTKT AZ Tucson, 10/29 0308 w/ID in fair, fighting it out w/the Mexican(RSK)

1020 KGBS CA Los Angeles, 10/29 0015-0100,fair, o/KDKA OC (KDKA s/off 0013), CFRB splash; "Involvement" talk Show(GT)

WPEO IL Peoria, 10/26, 1415-1430, poor, low sig. level, WCFL splash, religious Mx. (GT)

1030 KTWO WY Casper, 10/29, 0100-0130, fair, occ. Mexican QRM, o/WBZ OC & occ. TT, (WBZ s/off 0007), slang K-2, MoR Mx. (GT)

1080 KRLD TX Dallas, 10/29 s/off 0158 good.(GT)

1250 WGL IN Fort Wayne, 11/11 1754 w/spot thru WTAE/WEMP. Even AWO reading a Wx report was hrd. (RSK)

1260 KWHK KS Hutchinson, 11/9 0657 w/SSB, then into s/on barely audible thru WNDE:

1270\*\*WTSN\*\*NH\*\*Dover, was not on for test (RSK) per call to stn. The guy there didn't even know about it. (RSK)

1280 KNEY AR Newport, 11/9 0659 w/s/on, good(RSK)

1320 ~~KFLW~~ AR Walnut Ridge, 11/10 1746-1751 fair to good topping mess w/ID during loc. Nx, C&W Mx. (JA)

1330 KFH KS Wichita, Nx bulletin 1919 11/7 about death of a 12-year-old boy in Wichita, New for me. (PB)

1350 CJLM PQ Joliet, 11/10 1800 in briefly w/FF talk. (RSK)

1360 WISV WI Viroqua, 11/3 0701 w/SSB, then into s/on, good. (RSK)

1380 WPHM MI Port Huron, 11/12 1629 fair o/WMEE but brief w/ment. of Pt. Huron then covered by WMEE. (JA)

1390 WFBL NY Syracuse, 11/11 slipping thru WNUS w/RR Mx, ID 2009. (PB)

1400 WGIL IL Galesburg, 11/11 1840-1843 weak to fair o/WRJN w/YL playing RR oldies:

WKNR MI Battle Creek, 10/22 0100½ (JA)\* most wanted Mich. stn good with s/off. (RSK)

KJCF MO Festus, 11/12 0057 w/Wx then into s/off over everything. (RSK)

1410 WPOP CT Hartford, 11/4 1812 in fighting WOTT and losing w/Wx. (RSK)

WOTT NY Watertown, 11/4 1755 in xlt with paid political announcement. (RSK)

1420 WPLY WI Plymouth, 11/3 0659 w/SSB, then into s/on. (RSK)

1460 WXOK LA Baton Rouge, 11/5 1754 poor w/ Mutual Black Nx. (JA)

WPON MI Pontiac, 11/4 0605½ in fair o/u KSO w/PSA. (RSK)

WAXC NY Rochester, 11/11 1827 thru KSO w/ PSA for a Rochester Youth Center. (RSK)

1480\*\*WJBM\*\*IL\*\*Jerseyville, 11/6 0600 w/ET TT good. (RSK) 11/12 1616-1618 fair w/remote from car dealer. C&W(JA)

WNKY KY Neon, 11/5 0558 w/s/on amnt, then into SSB over WMAX. (RSK)

WMAX MI Grand Rapids, 0559 w/s/on fair(RSK)

WHOM NY New York, 11/4 2105 fair o/WHBC w/ID in EE, rest of prog. in SS. Same as WADO. (JA)

WCIN OH Cincinnati, 11/10 0820-0822 fair on top of mess w/loc. ad, ment. downtown Cincinnati. (JA)

1500\*\*WBRI\*\*IN\*\*Indianapolis, 11/5 0300 xlt on DX Test. (RSK)

KOKN OK Pawhuska, 11/8 1946-1949 good to exc. on air for police emerg. w/IDs, TC, details on manhunt for escaped prisoners. Was still on at 2300 C&W, MoR Mx. (JA) On at night 11/8 (for same as above-rce) Also read World Nx, played some C&W Mx. 1915-2001 tuneout. (PB)

1510 WAHT PA Annaville, 10/29 0615-0630, fair, w/s/on, o/WLAC on loop, Top 40 Mx. (GT)

1570 CKLM PQ Montreal, 11/10 1703 in fair WBEE looped w/FF talk. (RSK)

1580 WDOQ IL DuQuoin, 11/10 1742 w/SID. (RSK)

1590 WAIK IL Galesburg, 11/13 1742 fighting with WAKR. (MH)

1600 WNST WV Milton, 11/12 1550-1552 fair to good on top w/ment. of Milton on 1600. C&W Mx. (JA)

1630 WIBC IL Lisle, 11/4 0220 stn of Illinois Benedictine College in fair with hard rock. At first, I suspected this a bootlegger. They must have some power, because Lisle is almost 30 miles from here. (RSK) (Shouldn't have to be over 10 watts, Bob. I hrd a pirate from Cincinnati once w/10 w.-rce)

PER THE LIST:

2nd TUE: WHLN-1410 TT KY (RSK)  
4th MON: KLEO-1480 TT KS (RSK)

A TIP OF THE HAT THIS WEEK TO:

- JA -- JIM ALBRECHT, 3313 N.Well, Milwaukee, Wisc.
- PB -- PHILIP BOERSMA, 1570 Cleveland Street, Spring Lake, Michigan 49456
- KRB -- KEVIN BRAUN, 820 Fleming, Jackson, Mich.
- rce -- RICK EVANS, Box 2048, Gary, Indiana 46409
- MH -- MIKE HOGAN, 4811 Euclid, East Chicago, Ind.
- RSK -- ROBERT KRAMER, 3406 W.Pierce, Chicago, Ill.
- GT -- GARY TIMM, 5567 N. 36th St., Milwaukee,Wisc. (Thanks for the excellent report, Gary-rce)

Rog conned me into DX'ing MM 11/19 with only one new stn hrd here--CFPL-980 for #1290. Much wanted KBND-1110 not hrd here, only rock-solid KFAB with a signal like when they were non-directional a couple years ago. 1260 was only Indianapolis. Gary Timm's comment about his farthest lkw got me to looking at my list. My best domestic would be KAST-1370 on the Oregon coast, and the foreign would be HOM-22-1115 (at that time), Panama. Still, power only doesn't give that good an indication on "best hrd". On a mileage basis, surely my 86 w. from Florida would be better than the two above. I'm sure that many "old-timers" could come up with even better examples. I was sorry about the passing of Raleigh Bliss. 73.

# Western DX Roundup

Editor- Jeff Brasier - 10341 Shirley Avenue- Northridge, CA 91324

This week's supporters are:

- (BP) Bruce Portzer- 14056 5th Ave South- Seattle, WA 98168 RX- National NC-120/183 Hybrid ANT- SM-2, 4' box loop  
 (JAB) Jeff Brasier- 10341 Shirley Ave- Northridge, CA 91324 RX- Hammarlund HQ-129-X ANT- 2' box loop

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- 790 WAKY KY Louisville in fair o/u KULF, KJRB 11/19 w/KABC off. Hrd 2 spots and what was rr mx? 0629-0700. (JAB-CA)  
 KULF TX Houston was in there sometime MM 11/19 poorly u/KJRB, WAKY. (JAB-CA)  
 KJRB WA Spokane in w/rr mx and promo for \$128 giveaway on the Charlie Brown show. In gud in the null of KULF/WAKY. ID's as J-R-B. (JAB-CA)  
 860 CJBC ONT Toronto surely the loud FF 0650 10/28 thru KTAC slop. (BP-WA)  
 900 CHML ONT Hamilton in gud o/CJVI w/nx and wx for Hamilton and Toronto 11/19 0300. (JAB-CA)  
 1010 KCHJ CA Delano noted w/c&w mx 0344 11/5. AN MM's? (BP-WA) (They have a very erratic sch., sometimes s/off at 0100, other times going AN-JAB)  
 CFRB ONT Toronto a surprise atop w/nx. 0700 10/15. (BP-WA)  
 1050 CJIC ONT Sault Ste. Marie finally hrd 11/19 w/rr mx, sports and wx for Sault Ste. Marie and area. 0434-0455. Still looking for CHUM. CJIC was o/XEG. (JAB-CA)  
 1060 unID ?? Strong stn w/religious mx o/u CFCN 0310-0333 including songs by the Carpenters & J. Taylor. Male anncr w/relig talk between songs. Prob just KPAY tho KHYM supposedly had DX special at this time w/this format. (BP-WA)  
 1090 KAAT CO Denverin v. poorly 11/19 0900 w/ farm nx and wx o/u KANN util XEPRS OC at 0910. (JAB-CA)  
 KTGO ND Tioga in for 1st ND catch (I do it the hard way). XEPRS off for 4th MM in a row. Nx from 0702-0703. Then wx rpt at 0704 and then C&W mx at 0705. XEPRS OC on and off thru 0910. 250 watter. (JAB-CA)  
 KANN UT Ogden just barely in w/ ID o/KAAT. 0905 11/19. (JAB-CA)  
 1110\*\*KBND\*\*OR Bend TEST did not show. Not hrd if on. (JAB-CA)  
 1130 KLEI HI Kailua in v. gud o/CKWX w/Big Band/EL mx. 0350-0430. ID as "K-LAY everyday, chases the blues away." (JAB)  
 1200 WOAI? TX San Antonio. Weird things noted here recent MMs. 10/22 noted weak stn w/rr and "unprofessional" DJ making comments to a friend in the middle of songs and running tape past heads at high speeds 0525. Tried fiddling w/loop to get bearing 0532 and suddenly someone started bombing in followed by WOAI ID. Then on 11/5 noted rr 0340 mentioning "win a Polaroid camera from R. 1200", much weaker than WOAI usually is and very fadey. Is WOAI AN MM's, is it the below, or is it something else? (BP-WA)  
 KFUN WA Seattle pirate noted while driving through Seattle 0455-0520 11/11. 1st noted just north of Seattle and got gradually stronger until peaked ten miles (as the crow flies) later, somewhere near the Woodland Park Zoo (Hmmm...). Programming was Bill Cosby albums w/teenage anncr. Gud quality audio and stronger than local KTAC-850 at peak. Would guess pwr at 50-100 watts. Appears to be slightly off freq as there was a slight buzz against WOAI. Dominates at Dave Christensen

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- 1220 WGAR OH 's house, a couple miles away but inaudible here, 14 miles away. (BP)  
 Cleveland in gud u/XEB, CKDA w/MoR mx 11/19 0245. (JAB-CA)  
 1250 WTAE PA Pittsburgh was prob the stn rptd earlier as WGL per Charlie Keleher. S/on time and mention of FM fit for WTAE but not for WGL and calls are close enuf to be confused at this distance. Have no way of telling for sure who it was as tape has since been erased but it sure as heck wasn't WGL, hi. (BP-WA)  
 1270 KSCB KS Liberal s/on 0700 11/12 w/SSB. (BP)  
 KEPS TX Eagle Pass maybe the SSB s/on 0701 11/12. S/on was in EE but mentioned "more musica" implying SS format, which I believe matches KEPS and gave pwr as 1 kw. May have IDed as "Keps" (rhymes w/steps) but that's prob just pwr of suggestion. (BP)  
 1280 KTLK CO Denver fair w/rr u/KIT 0306 10/20. (BP-WA)  
 1330\*\*KGAK\*\*NM Gallup per stn has no set date for its r/c, but has done its r/c the 3rd or 4th FM for the past 5 times from 0200-0215. (JAB-CA)  
 1370 CFLV PQ Valleyfield s/on O Canada, then FF 0600 10/15. (BP-WA)  
 1380 WMEE IN Ft. Wayne noted w/rr 0502 10/22. KRKO off, but Tting. (BP-WA)  
 1420 WHK OH Cleveland much wanted for 6 yrs, hrd finally w/wx u/KSTN 0345 10/27. (BP-WA)  
 1430 unID ?? Someone atop 0630 10/15 w/r/lgs pgm from John Douglas, P.O. Box 4326, Dallas, TX. rr jingle and Back to The Bible followed. Jingle sounded like "1430 (chimes) WANOE." Unfortunately there aren't too many 5 letter calls on this freq, hi. Anyone have a current Back To The Bible log? (BP-WA) (How about writing to John Douglas for a stn. list?-JAB)  
 1480\*\*WMAX\*\*MI Grand Rapids 11/19 had ET same time as the WBTS r/c. WMAX played rr mx, and had ID's, that I could hear every 5 minutes. Gud o/u unID OC TTer. 0315-0330. (JAB-CA)  
 KWEW NM Hobbs s/on SSB 0655 11/5. Covered by KGCC moments later. (BP-WA)  
 1500 KXRX CA San Jose off for about 30 sex (sic) 0409 11/5 while "switching to emergency pwr for ET." Noticeably weaker after that. (BP-CA)  
 KUMU HI Honolulu o/KXRX w/soft MoR and mention of "Nocturne" on "Koomoo" 0430 11/5. (BP-WA) (Nice catch Bruce. When I visited KUMU in Sept. they said they weren't hrd on "the mainland"- JAB)  
 1530 WTTI GA Dalton noted again w/Dixie & YL s/on 0645 10/28. (BP-WA) (How do you get rid of WCKY?-JAB)  
 KECK NE Lincoln was my unID of a few issues back per Bob Mitchell & Jim Boyd. Thanks guys! (BP-WA)  
 1550 KQXI CO Arvada, if you noticed an OC 11/17 it was KQXI on their PoP. IDs every 30 minutes. Could have been on 11/18 also. Time was AN. (JAB)  
 1560 WRIN IN Renssalaer s/on 0700 11/4. (BP-WA)

Well, that does it for this time. Come on guys, let's have some support from the people that have never sent a rpt in ever or that haven't in a while. The regulars are the guys who show some concern for their column. If you don't send in, it's as good as having no column at all. Veries: v/q KHQ, v/f KRVN. Until next time, possibly, right off and '73's in '73, or '74 if you get DXM 3rd class, hi.



104 West Eighth St., Lexington, Nebraska 68850

880 KC 50,000 WATTS

# DX FORUM

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EASTERN

EDITOR: BRUCE HEIMBURGER, 1710 CAMBRIDGE RD., ANN ARBOR, MI 48104

Michael Nadeau - 73 Academy - Cheshire, CT 06410  
Greetings from New England! This is my 1st DXF 'cos I've just joined the IRCA. I'm 20 & studying foreign languages at SCSC in New Haven. Weekends you can find me at WATR (the scourge of 1320) engineering. Which means I've got plenty of free time while I'm there. So if you want a verie out of us (which are generally few & far between), send your rot to the above address. Tony Tary, CE, says he's not really interested in reports. But Fred Santore over at WQQW would be tickled pink to get a few letters. Letters welcome. 73.

Dave Fischer - Box 489 - Hickory, NC 28601  
A hint to save space in your logs and possibly noteworthy for DXM! We continually write 1430 WMNC, 750 WSMX. The zero in frequency is essentially useless - so drop it. Now also omit the space between the freq. & the call & write freq., call & channel class all in one very readable sequence (eliminates use of two columns in log keeping, etc.) by using R-for regional, C-for clear & L-for local. Thus 1430 WMNC becomes R143WMNC & 750 WSMX would become C75WSMX etc. Think of all those "O" plus extra spaces that occur in DXM every year. Getting back to fials finally after few years and hope to input EDXF/EDXR/DXWV plus a few more technical articles. DX! de Fish (Dave Fischer). (Nice to have you back Dave. 1 question: why include a letter for channel class. One very quickly learns to associate a freq. w/a class. And it saves an extra space, hi-Brh)

Charles Berman - 2901 Ocean Parkway  
Brooklyn, NY 11235

Hi there everyone. I guess you've all been wondering about me. First, a re-intro is in order. I'm 22, single, & will be graduating from Fairleigh Dickinson U. this coming Dec. I've been in the IRCA for over a year now & have been DXing since '66. Didn't start QSLing until 9/71. Well to start things off, I was working up at Grossinger's Hotel in Liberty, NY this past summer (the same place where I worked last summer). DX came virtually to a standstill while I was working up there because every night when I came home, I fell right to sleep! Now it's starting to pick up again. Latest veries: v/q-WPRO WFBL+CM; v/f-WJAR; v/l-WKNE. Tried to get the WTSN Test. No such luck! WXYZ QRM was really heavy. Presently, totals are as follows: 32/24, 158/55 & 1/1; have to get busy on those Canadians! The totals are in hrd/veried form. Which reminds me: QKB-what ever happened to the ND/SD SoM? Last time I saw it for its deadline was 3/31/73. Also, I took Tim Saltmarsh's advice in getting WFEA veried. Only thing is, the CE will sign your reception rot & mail it back to you. Brh-what is the abbreviation for that? (Dunno-Brh) 73s in 73.

Eric Floden - 13 Parkside Crsecent  
Ottawa, Ont. K2G 3B6

Because I was fortunate enough to be exposed to a good (?) rx for a minimum of bucks, I rejoin you. The rx is a SX-25 that I know nothing about (except that its range is 590-1550 on BCB & the stn I want to hear is on 1560). Paid the man 40 silver dollars for it. I would really like to hear from anyone who can give me an evaluation of the model (it's my 1st decent rx), & tips for improving reception. Pse drop a card of give a mention in DXF. As far as I go I'm 22 and taking a year off from B. Sc. math pgm, trying to: 1) improve my 43 states, 8 provs., & 19 cntys hrd on an 8-xstr Hitachi, & 2) make my Royal Enfield into a café racer. Nice to be back.

Larry M. Abraham - 3839 Sherman  
Bridgeport, MI 48722

It has been at least 1 1/2 yrs since I've written to EDXF. Spending much time DXing SW, I've not had much interest in domestic BCB DXing. Not until the IRCA Domestic Contest came along that is. I thought it might be fun to try & relog some of the 1260 stns logged here. In the process I've even logged some new ones from time to time. My interest in foreign BCB DX has never waned however entering last year's contest & many prior to that.

I still send for veries if the stn is new or rare. It seems that no one has mentioned the fact that the Venezuelan election will be held this Dec. (if my memory serves me correctly, they are held every 5 yrs). Recalling 1968, all I had available was a car rx, & yet the dial was almost 1/2 ER. Many new YV stns were logged that MM. If anyone has definite info on the date I would hope that it be printed soon. Best of DX to all, & a special hello to Dave Williams, Pat Martin, & Bill Block. Ray Arruda - 6 Wilbur Ave. - N. Dartmouth, MA 02747  
DX has been good lately & I hope it has been for everyone else. MM 11/5: WBRI Test was hrd weakly & rptd, KWYK tried but not hrd. WELI conducting ET at the same time. The following morning WVAM f/c was in fairly well w/WNJR & rptd. Has anyone received a verie from the WGOE Test of last March? Did not try for WGIR or WTSN Tests as they are not needed here but many good ones are coming along that I hope to log. Letters are back from WTMR & KRNY for Test of 3/26. This is Neb. #4 veried. Rec'd a sample copy of NRC's publication entitled DX News. There are some seasoned veterans in that club. IRCA has many experienced members also. 73

Paul R. Daplyn - 830 Denison Crescent  
Ottawa, ON K2A 2N5

Haven't been doing too much DXing lately. Have been mostly scanning clears for ETs & r/cs. A couple of foreign goodies (CBC Barbados & WRSJ Puerto Rico) did trickle in though. Any SCers interested in getting 10 year old CKEY SCs? I have 29 left & if you want some, just send me a SASE. The WBRI Test made it here, but not very well. 73

Paul Mount - 471 Emerson - Teaneck, NJ 07666

Hi gang. Funny how I get DX w/out trying. Thought I was listening to WICC until they started singing WHLO. So I start to log them & they fade out. Such are the breaks. Then I receive a letter from our DXR editor telling of a SSS auroral condition (whatever that is). (An opening to the S. at sunset caused by auroral cx-Brh) So I just set my dial around 1310 & w/in a 1/2 hour, 1658-1728, hear 3 new ones: WGH WSLW & WISE. Does WGH go to nite antenna at 1700? They disappeared at that time. Veries this week: WFEA v/r; WPRW v/l; WZIX v/f on WORK letterhead. They changed on 10/29. Cx must be something today, 10/17 0300. Have just hrd CKOC w/total news & KSL w/address Box 60 SLC, & I don't think WHAS would image on 1160, hi. (??-Brh) That's something like 6 new stns in 24 hrs. Too bad they don't want to stick around for me to log. (you mean to verie??-Brh) Now for KOA KFI (and KDKA, WRVA). This wasn't meant to look like a DXR rpt. DX is getting to be occasionally fun.

\*\*\*\*\*  
Just another short reminder: Deadlines are Tuesdays or Wednesdays, depending on my work load. Keep up the good support! - Brh  
\*\*\*\*\*

CENTRAL

EDITOR: John Zondlo, Shales Hall, Box 120, Muncie, IN 47306

No copy received as of press time. FJP

WESTERN

Michael G. Worst, 3608 Phinney N., Seattle, WA 98103  
Deadline Wednesdays

Albert S. Lobel, P.O. Box 1818, El Cajon, CA 92022

Phone: 714-440-2544. I've just renewed my membership in IRCA for another year so perhaps a re-intro is in order. I am 26 years old (not quite, a little less than a month away from my 26th birthday), and have been married for 4 1/2 years. I have been a DXer since Dec. of 66, Dec. of 70 seriously. I have been a member of IRCA since Dec. of 70. I am currently helping IRCA on the SDPC. While my main DX concern is BCB DXing, I also DX the shortwave and TV bands on occasion. In addition to IRCA I am a member of the Radio Canada Shortwave Club. At present my only receiver is a Realistic DX-150-A. I hope, in the not too distant future to purchase a better receiver. Of course, that good old thing known as M-O-N-E-Y will have a great influence on that. Anyone who is interested in selling a receiver is welcome to send details to me, but remember I'm not in the immediate market for one. Tell me what you think of the receiver (you have in mind to sell), what your results have been with it, and the price you are selling it for. Well that's 15, so 73's and good DX.

Continued on Page 8



D X W W

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DECEMBER 1, 1973

Ron Schatz \$ Box 2814, AMF \$ Miami, FL 33159  
 AC305-945-4915 eves \$ Deadlines: Tuesdays

IN MEMORIAM  
 RAWLEIGH A. BISS  
 1908 - 1973

This edition of DXWW is being dedicated in memory of a good personal friend. I am humanly incapable of composing a decent eulogy for Rawleigh, and those of us in the hobby who have had the honour of knowing him will understand. My sympathies are extended to his wife, Vera, and to his children during these days of sorrow.

\$ \$

Trans-Pacific DX Roundup

38 items from Al Lobel (S. Diego), Grant Manning (S. Diego), Father Jack Pejza (S. Diego), Art Peterson (SFO), and Bruce Portzer (Seattle). Malaysia is widely heard:

- 530 JAPAN, Miroka, JOQG in good w/female in JJ & JJ mx 11/12 1222 on (Manning, San Diego)
- 548 RSFSR, Vladivostok, strong carrier, weak audio, in & out 11/12 1230 on (Manning, S.D.) \$ Presumed to be the weak audio MM 11/15 1114; only a carrier 11/12 1206 (Pejza, S.D.)
- 655 KOREA-N, Pyongyang in strong 11/12 1235 in KK (Manning, San Diego) w/KK talk 11/12 1211 bad het from 656 (Pejza, San Diego)
- 723? UnID carrier, but never got any audio out of the beast, something to watch for (Manning)
- 725 KOREA-N in w/male 11/12 1215 fair (Manning) Pyongyang good w/KK talk by YL & Oriental mx 11/12 1213 (Pejza, San Diego)
- 735 KOREA-N, Pyongyang // 725 11/12 (Manning) 77 655 11/5 1124 but not as good; not // 11/12 1214 w/KK talk (Pejza, San Diego)
- 785 KOREA-N, good carrier w/woman in ?? (maybe CC?), don't think KK anyhow, 11/12 1210 (Manning, San Diego)
- 830 JAPAN, Osaka, JOBB w/JJ talk 11/12 1218. Few Japs in these 2 MM's (Pejza, San Diego)
- 835 CHINA, Nanchang w/CC woman talking 11/5 1134 strong het 11/12 1220 presumed from Belize carrier (Pejza) In w/singing 11/12 1347, good signals (Manning)
- 840 AUSTRALIA, Rockhampton, Qsld., 4RK 11/12 w/pips 1400 & male ID, believe s/off, but 840 pretty crowded by then, & couldn't tell if carrier off or not (Manning, San Diego)
- 860 NEW ZEALAND, Rotorua, 1YZ probably the one w/accented EE play 1005 11/5. Heavy slop fm local KTAC-850 (Portzer, Seattle)
- 870 JAPAN, Fukuoka, JOLB 11/14 1215 in very faintly for just a few minutes(not long enough for a report) w/JJ male, Much QRM de WWL (Lobel, San Diego)
- 877 KOREA-N, Wonsan in good as usual in KK (male) 11/12 1245 & real strong 1430 (Manning) W/ talk in KK & mx 11/5 1137; YL talk in KK 11/12 1221 (Pejza, San Diego)
- 880 CHINA, Urunchi in w/female & neat het, good 11/12 1415 (Manning, San Diego)
- 890 KOREA-S, Pusan presumed w/Oriental mx 11/12 1255, YL in KK, melody on stringed instrument, then combination of pips - 5 monotone from one station, ... from other. Second station very faint under. Could have been Japan instead of Korea, I guess (Pejza, San Diego)
- ...? UnID female talk in some Oriental lgg, was in all alone until 1440 fade to sunrise 11/12. Sounded Fiji, but all info says they are off then, Don't think JJ, maybe KK? (Manning)
- 935? UnID, classical opera mx w/slow male ann in ???. WRTH says Thailand, but power wrong. Didn't sound RR, but could have been - 11/12. 1257 KHJ opened up, & that was it for the audio (Manning, San Diego)
- 1030 SOLOMON IS., Honiara, VQO possibly the one w/what sounded like man talking in British EE 1013 10/5. too weak & too much QRM to make

- any sense of it. There was a continuous series of noise pulses all morning that blanketed the entire dial, going "brrzzzzzap" for up to 15 seconds at a time, w/pauses for up to 10 seconds between pulses. This, combined with one of the most outstanding DU openings I've ever experienced, made MM 10/5 an ordeal I won't forget for a long time (Portzer, Seattle)
- 1040 CHINA, Shanghai 11/14 1235, weak but constant w/WHO QRM. Man in CC sounded like he was giving a news b'cast, made mention of Pres. Nixon (Lobel, S.D.) W/JJ fgn svc 11/5 1150, mx 11/12 1229 (Pejza) In like a local on long-wire 11/12 1410 (Manning)
- 1250 RSFSR noted faintly w/Kremlin chimes, anthem & woman talking in Oriental lgg (Portzer)
- 1385 PHOENIX IS., Canton, WXLE noted w/weak signal 11/12 1000. One of these days I'll get a verifiable tape! (Peterson, San Francisco - Oakland area) Just a snatch of audio 11/5 1 1201, apparent mention of AFRTS (Pejza)
- 1440 JAPAN, Sapporo, JOWF presumed to be the JJ fighting it out w/domestics 10/28 1045 w/ talk by M & F (Portzer, Seattle)
- 1475? MALAYSIA, Sabah, Kota Kinabalu, tent. the one in strong w/IS 1130 11/12 followed by pips, followed by nx w/female in EE or Tagalog? (5 pips, many mentions of Manila & Philippine etc. S-7 at tx, also mentions of Kuala Lumpur. S/off w/NA at 1200 (Manning) Presumed to be the one first heard w/15-note chime (or xylophone IS) 1055 11/5; talk & Western MoR mx after the hour. Again on 11/2 w/IS, Western style MoR mx interspersed w/talk (in what Manning feels is Tagalog); 3 chimes (like the first 3 of the Gilette "to look sharp") repeated 4 tx followed by 5 pips 1130, then talk straight thru until 1200 (news apparently 1130-40 - one mention of Nixon & Kissinger) 1145, mention of Kuala Lumpur; also at 1158; anthem at 1159, off at 1201. Lgg almost sounded like EE at tx (Pejza) I will have to eat my words of last time (chomp, chomp!) when I was suspecting USSR. This is definitely Malaysia; thank you, CAT, for confirming this ID in 11/10 DXWW. KNDE was much less of a pest this week. 15-note IS noted 1055-1100 11/12. A strong carrier preceeded the chimes. After 1.5 minutes of talk went to soft, smooth vocal selections. At 1124 I was startled hearing in EE "P.O. Box 1074, Kuala Lumpur" which is address given in WRTH. Mx continued until 1129 when 3-tone chimes (NEC pitch sequence) were repeated 4 times followed by 6-pip time signal at 1130, which is 1900 Malaysia proper time. A woman talked until 1140 when a man took over & continued to almost 1159. At 1200 carrier apparently cut because there was no carrier detectable by 1202. Signal was strong at tx, but the announcer's voice was very mushy, as has been the case on other Pacific-area stations such as WXLE. I would agree w/CAT that power must be at least 100 kw. Report sent! Get it while it's hot, gang! (Peterson, SFO)
- ....? UnID, If the Russian isn't back here then something sure is. Tuned in 1115 10/15 & caught what sounded like a pgm of MoR vocals w/ women talking between songs in Oriental lgg. Songs appeared to be sung in an Oriental lgg, but had a definite Western rather than Oriental flavor to them. What appeared to be 3 short pips at 1130 (but which could have been slop from domestics) was followed by what sounded like newx in KK. Heavy slop from KGCC -1480, + others, during this pd. Must keep an eye on this freq. (Portzer, Seattle)
- 1500 HAWAII, Honolulu, KUMU, a shock w/Safeway spot & ID as "Koo-moo" 0930 11/5 way over KXRX (Portzer, Seattle) / (Portzer):
- 1510 AUSTRALIA, Newcastle, NSW, 2NA noted several tx in passing after 0900 11/5 w/good signal.
- 1550 AUSTRALIA, Emerald, Qsld., 4QD, exc. signal badly chopped up by noise (see 1030 above). MoR mx 0850, wx for various areas 0853, newx mentioning Australia & various Aussie cities 0855, definite Aussie accent, pips 0900, talk by man followed, this on 11/5 (portzer)

Please excuse the typos this week; our house guest took over my room - & several needed supplies (correction tape, references, etc). I'm presently in danger of running out of film ribbon, at which time I'll send in what I have up to that point. Thank for understanding.

Trans-Atlantic DX Roundup

19 items from Glenn Hauser (OK) and Elliot Strauss.

- 638 SPAIN, La Coruña, RNE heard briefly 0605 w/ news by OM in SS, RNE mentioned (Strauss, NJ)
- 656? Sp. SAHARA, carrier noted 11/11 0632, a bit N of E-W, nominal 70.5°. No Dakar-764 in at this time (Hauser, OK) 11/12 0620 def. in SS w/OM announcer. Not too bad signal, heard "Esta es Radio ....." & at that moment WNBC decided to "power on". Heard mentions of "Sta. Maria", still on 0730 when mentions of Valencia & La Palma heard. I don't know if Sp. Sahara ID's in this way, also WRTH lists s/on at 0700, & the cities mentioned are all in Spain. Could it be possible that RNE has a new outlet? Or does Sp. Sahara s/on earlier? I am writing to RNE to see (Strauss, NJ)
- 665 PORTUGAL, Lisboa, ENR heard 0615 while WNBC off for tests. PP songs, talk 11/12 (Strauss)
- 845 ITALY, Roma, RAI w/soft It. ballads at 2400 11/12. Heavy QRM & noise (Strauss, NJ)
- 854 SPAIN, Murcia, RNE 11/8 0700-10 SS OM tx, mentioned Barcelong, Malaga, Valencia. Getting better 0710 (Strauss, NJ)
- 926? UnID w/instrumental mx, could be Belgium, but WRTH list says not on this time. No lgg hrd & faded fast (Strauss, NJ) Tunisia? (RFS)
- 935 MOROCCO, Agadir 0645-55 11/8 w/AA chants, good signal on 2'nd consecutive good TA night.
- 1034? UnID, something noted in SS or PP 11/12 0650 low level (above 2 Strauss, NJ) Likely Portugal - a regular here (RFS)
- 1196? UNK. BBC World Radio Club 11/9 says this is a new freq. for Italian BBC pgm at 2100-2200. Some DX pgm! - they neglected to say where the XR is! (Hauser, OK)
- 1376 FRANCE, Lille 11/12 2250 w/Instrumental pop mx, FF OM tx, very good signal (Strauss, NJ)
- 1385 SPAIN, Madrid, "R. Centro" 2341 11/12 to 2353 w/SS vocals. 2352:30 "Transmite Radio Centro" (Strauss, NJ)
- 1394 ALBANIA, Tirana 11/8 0535 in Polish I believe, very strong signal w/news read by YL, signal =led only by RNE-683 this season. 0537 end of news, pgm continued w/OM talk, heavy noise.
- 1457? UnID in FF 2245 w/YL talk (2 above, Strauss, NJ) My guess, BBC European Svce. (RFS)
- 1466 MONACO, Monte-Carlo first time noted this season 2240 & 2340 in EE w/TWR rel. pgm, fair 11/12 (Strauss, NJ)
- 1538? GERMANY-W het noted 10/31 0425 when 1586 was also in (Hauser, OK)
- 1578 ITALY, Genova 2315-34 ID by OM at 2332, pop songs all in EE, announcements in Italian 11/12 (Strauss, NJ)
- 1586 GERMANY-W, Langenburg, WDR, Welk-polka like mx noted 10/31 0425 (Hauser, OK) 2259:15 7 chimes, repeated at 40.8 56 seconds 6 time pips. 2300 s/on followed by OM in GG w/world news, exc. signal (Strauss, NJ)

My f/up on the last item shows because of no correction tape - sorry. And I have just run out of IBM ribbon, which can't be used over. I have no choice but to hold the PADXR, containing no extraordinary items this week, until next time. All is locked in my room with my sleeping guest. The weirdest things happen to poor RFS, hi

To be continued .....



AM-1560 • FM-103.9 Meg.

"Contemporary Young Sound"

Bay Avenue and 31st  
Hoquiam, Washington 98550  
Tel. (206) 532-1200

Dan Sys, Apt. #3, 8 E. 18th Ave., Vancouver, B.C., Canada  
Greetings. I decided to rejoin IRCA after I heard most of the hassles were resolved. I originally joined back in 1967 and quit last year, anyways I'm 21 currently working as a record and 8 track distributor. I've totally given up DXing from Vancouver, as we have 9 locals that are either 10 or 50kw of which 8 are NSP, but I do my DXing from my cabin at a place called D'Arcy, B.C., way up in the wilderness mountains of B.C. and the closest locals are the 2 Kamloops stations which are 200 miles away. The situation creates some pretty incredible DX - but the problem is I have to use battery radios as there is no power up there, but I'll report regularly to DXR in the Spring (I can't get up there during winter as it's snowed in). Any Vancouver IRCAnites please drop by and anybody passing through Vancouver look me up, I want to get back into the old IRCA ways again. How about the 1974 Convention in Vancouver?

Wm. Larry Cowles, 362 W. Marcus Drive, Tucson, AZ 85706  
Been a while since my last report. DX CX seemed to get pretty good the first week of Oct. but got worse the rest of the month. First week of Nov. a little better but not as good as early Oct. Latest veries: v/1 WKIG WORV WVCG KVEC KXIT KFAL KWOA KHOB KVFC KOWH KRMC KYSS KLMB; v/q CKDM KSD KWGO KGHK WOKJ WTIC CFRB KAAAY Radio Belize; v/r KPOS KLLL; v/f KRNY; v/pp KWOW. If the power crises keeps getting worse I hope to see some radio stations go off NSP skeds as a public service rather than staying on as a "Public Service." Till next time 73's.

Bruce Portzer, 14056-5th Ave. S., Seattle, WA 98168  
Haven't reported for a while so I thought I'd give Mike something to do for a change. Last June I graduated from the U.W. and have been working for Boeing since then. I'm working in radio communications; it's at the other end of the dial though, in the microwave region. Financial state has changed considerably since last June, as illustrated by recent additions to the shack: Heath AR-1302, SM-2, and Koss PRO-4 headphones. Plus a Heath SB-620 spectrum analyzer on order. One interesting effect I've gotten is to place the box loop near the SM-2. Gain and selectivity improve and deeper nulls can be obtained; when the LW is connected to the loop it helps even more. I bought Paul Petersky's NC-183 for \$10 after a couple coils in the front end burned out. Haven't gotten it fixed yet, but the I.F. and audio sections are okay so I connected the output from the NC-120 2nd I.F. to the input of the NC-183 1st I.F. and presto! a hybrid rx with 5 I.F. stages! It's not as great as it sounds but it's a big improvement over using just the NC-120. Does it really rain all the time in Seattle? No it doesn't but don't take my word for it. Vote for a Seattle convention in '74 and then come and find out for yourself! 73.

## FCC Monitor 'Historic Place'

GRAND ISLAND, Neb. parent of the FCC, he says. (AP)—The Federal Communications Commission monitoring station west of Grnd Island, already the oldest and largest facility of its kind in the country, has added another chapter to its colorful history which dates back to 1930.

The station recently was added to the Department of the Interior's Register of Historic Places.

Over the years, the station has helped track planes lost at sea, played a major role during World War II in detecting spies and tracked down illegal broadcast operations.

John McKinney, station director, says the station was once the only monitoring facility in the country.

Radio broadcasting dates back to at least 1922 and within six or seven years after that it became evident that the country needed some "listening ears," he explains.

The first attempt to monitor the airwaves was by the Federal Radio Commission, the grand-

parent of the FCC, he says.

The commission developed a concept of "mobile monitoring" and set up tracking units in 1925 and 1927 Packard limousines to detect illegal stations on the air. Most were located in downtown business districts and the effectiveness was limited to spot checking, McKinney says.

Then came a plan to establish a central station to police the air waves of the entire country.

McKinney says a mobile Packard was assigned to the three-state area of Kansas, Iowa and Nebraska for the purpose of detecting illegal operations.

Grand Island was chosen, McKinney explains, because reception there was excellent and it was located on two main arteries in the country at that time — the Lincoln Highway and the Union Pacific Railroad.

McKinney says he was at the Grand Island station the morn-older Pearl Harbor was attacked. "We learned about it on a them will say they were trained here."

short wave radio band. For the next week our machines went day and night transmitting war orders," he recalls.

For the duration of the war, the Grand Island station monitored the airwaves for attacks by enemy planes and ships as well as carrying out special assignments.

McKinney, who became director in 1968, says the station employs 20 persons, comparable to three or four of the largest monitoring stations in the nation.

He says in recent years, short-range operations (mobile units and ham operators) have forced the FCC to return to mobile monitoring and the Grand Island station now is dispatching vehicles to monitor 10 Midwest states.

In the near future, McKinney says an historical plaque will hang on the station's wall to honor its role in the development of communications.

"Just ask any of our (FCC) personnel about Grand Island," he says. "At least half of them will say they were trained here."



COMPUTATION OF SUNRISE AND SUNSET TIMES

Father Jack Pejza

The worldwide sunrise/sunset maps published by IRCA a few years ago (and now available as IRCA Reprints) provide approximate values (within 15 minutes) of the times of sunrise and sunset. However, a DXer might want to know more accurately the time of sunrise or sunset. The tables which follow and which will be published in future issues as space allows permit such calculation. They are taken from Useful Tables from the Practical Navigator, published by the U.S. Hydrologic Office, 1938.

The world is divided into 24 standard time zones (plus some small areas using variations). Unless you live exactly on one of the meridians on which the time zones are centered, your local time will not agree perfectly with standard time. If you live east of the standard meridian, local noon (the time when the sun is highest in the sky) will occur before standard noon. For instance, San Diego local noon occurs about 11 minutes before noon PST; El Paso, TX, west of the CST center meridian, has noon 66 minutes after standard noon, and really should be in the Mountain Time Zone.

Time zones are generally centered on multiples of 15°. From the map of time zones, you can find what meridian your time zone is centered on. You also can multiply the number of hours difference between GMT and your zone by 15° to find the center meridian.

The tables which follow show the time of local sunrise and sunset. In order to put them to practical use, it is necessary to convert the times to standard times.

Method of Computation:

1. Find the difference between the longitude of the place you are interested in and the center meridian for that time zone. From Table 1, find the difference in minutes.
2. From table 2, find the date in which you are interested and the nearest degree of latitude. Convert the sunset time to a 24 hour clock by adding 12 hours.
3. If the city is east of the center meridian, subtract the number found in Table 1 from the number found in Table 2. If the city is west of the center meridian, add the two numbers.
4. To convert to GMT, add or subtract the appropriate number of hours (as indicated on the edge of the time zone map) to the standard time.

EXAMPLES: December 3 used for all examples.

San Diego, CA (117°07'W, 32°40'N)  
 Longitude diff. 120° - 117°07' = 2°53'  
 Time diff. (Table 1) 11 min  
 Local sunrise 6:46 AM = 0646  
 Local sunset 4:55 PM = 1655  
 Standard sunrise 0646 - 0011 = 0635  
 Standard sunset 1655 - 0011 = 1644

Osaka, Japan (135°27'E, 34°40'N)  
 135°27' - 135° = 27'  
 2 min.  
 6:50 AM = 0650  
 4:53 PM = 1653  
 0650 + 0002 = 0652  
 1653 + 0002 = 1655

TABLE 1

Reduction of Local Civil Time to Standard Meridian Time, and the reverse.

[If local meridian is east of standard meridian, subtract from local civil time, or add to standard meridian time. If local meridian is west of standard meridian, add to local civil time, or subtract from standard meridian time.]

Difference of longitude between local meridian and standard meridian.	Reduction to be applied to local civil time.	Difference of longitude between local meridian and standard meridian.	Reduction to be applied to local civil time.
0 00 to 0 07	0	7 23 to 7 37	30
0 08 to 0 22	1	7 38 to 7 52	31
0 23 to 0 37	2	7 53 to 8 07	32
0 38 to 0 52	3	8 08 to 8 22	33
0 53 to 1 07	4	8 23 to 8 37	34
1 08 to 1 22	5	8 38 to 8 52	35
1 23 to 1 37	6	8 53 to 9 07	36
1 38 to 1 52	7	9 08 to 9 22	37
1 53 to 2 07	8	9 23 to 9 37	38
2 08 to 2 22	9	9 38 to 9 52	39
2 23 to 2 37	10	9 53 to 10 07	40
2 38 to 2 52	11	10 08 to 10 22	41
2 53 to 3 07	12	10 23 to 10 37	42
3 08 to 3 22	13	10 38 to 10 52	43
3 23 to 3 37	14	10 53 to 11 07	44
3 38 to 3 52	15	11 08 to 11 22	45
3 53 to 4 07	16	11 23 to 11 37	46
4 08 to 4 22	17	11 38 to 11 52	47
4 23 to 4 37	18	11 53 to 12 07	48
4 38 to 4 52	19	12 08 to 12 22	49
4 53 to 5 07	20	12 23 to 12 37	50
5 08 to 5 22	21	12 38 to 12 52	51
5 23 to 5 37	22	12 53 to 13 07	52
5 38 to 5 52	23	13 08 to 13 22	53
5 53 to 6 07	24	13 23 to 13 37	54
6 08 to 6 22	25	13 38 to 13 52	55
6 23 to 6 37	26	13 53 to 14 07	56
6 38 to 6 52	27	14 08 to 14 22	57
6 53 to 7 07	28	14 23 to 14 37	58
7 08 to 7 22	29	14 38 to 14 52	59

Conversion to GMT:

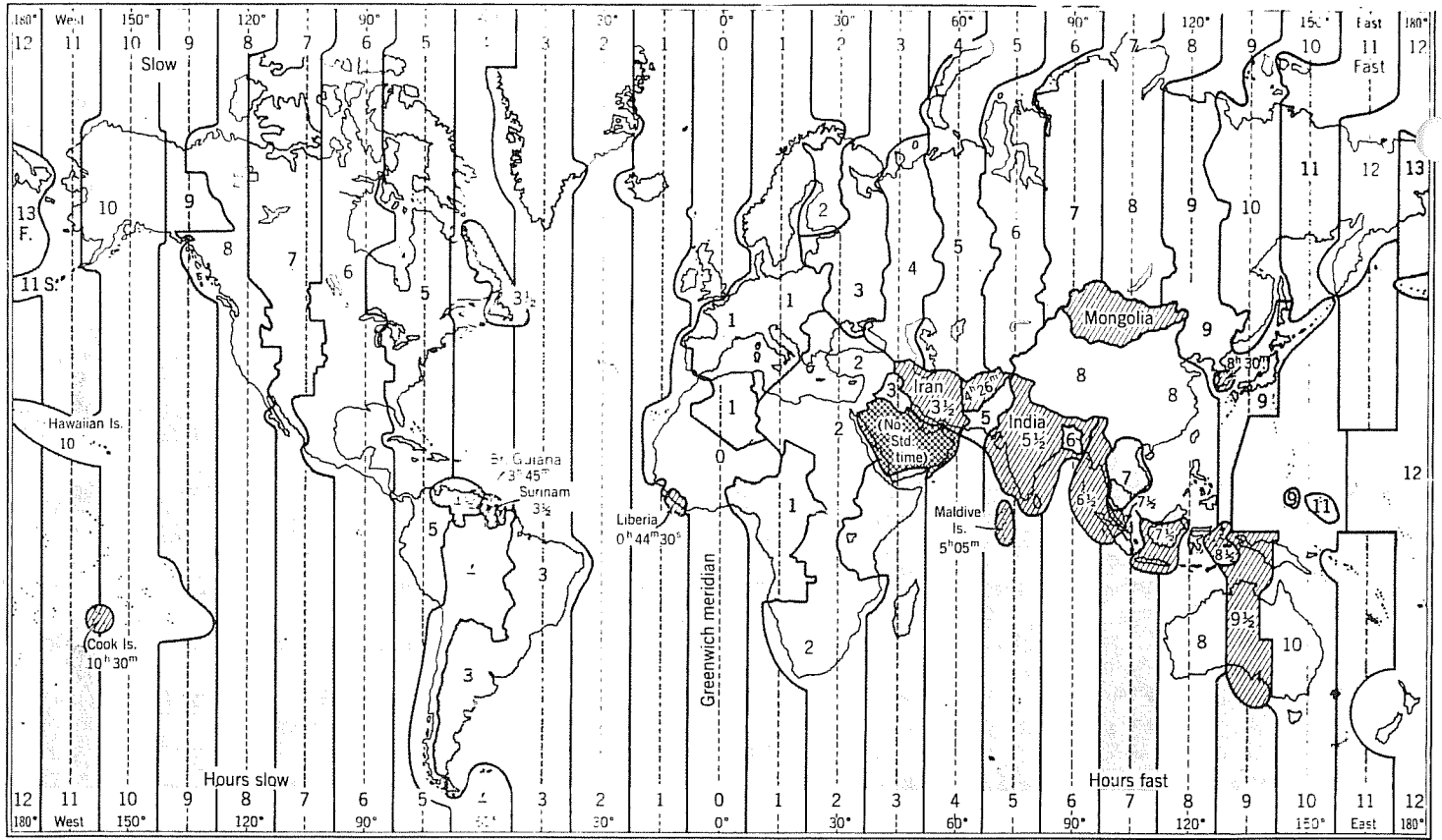
San Diego:  
 SR 0635 + 0800 = 1435  
 SS 1644 + 0800 = 2444  
 = 0044

(When it's Sunday evening in S.D, it's already Monday morning GMT)

Osaka:  
 SR 0652 - 0900 = 2152  
 SS 1655 - 0900 = 0755

(When it's Monday morning in Japan, it's still Sunday evening GMT)

In a case like the Osaka SR, add 24 hours to the smaller number, then subtract; e.g, 0652 + 2400 = 3052 - 0900 = 2152.



Time-zone map of the world. (After U.S. Navy, Hydrographic Office, No. 5192.)

**TABLE 2**

Local Civil Time of Sun's Visible Rising and Setting.

North Latitude: 0° to 20°—September 23 to December 22.

[R—Local civil time of sun's visible rising. S—Local civil time of sun's visible setting.]

Lat. N.	Approx. date.	SEPTEMBER.			OCTOBER.											NOVEMBER.							DECEMBER.			Approx. date.	Lat. N.		
		23	20	28	1	4	6	9	11	14	17	19	22	25	28	31	3	6	10	14	17	22	27	3	11			22	Dec. S.
		0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	20°	21°	22°	23°	27°	Dec. S.		
0	R. S.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	R. S.	0	0
1	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	1	1
2	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	2	2
3	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	3	3
4	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	4	4
5	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	5	5
6	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	6	6
7	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	7	7
8	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	8	8
9	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	9	9
10	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	10	10
11	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	11	11
12	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	12	12
13	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	13	13
14	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	14	14
15	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	15	15
16	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	16	16
17	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	17	17
18	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	18	18
19	R. S.	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	5 31	5 30	5 29	5 28	5 27	5 26	5 25	R. S.	19	19
20	R. S.	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 42	5 41	5 40	5 39	5 38	5 37	5 36	5 35	5 34	5 33	5 32	R. S.	20	20

North Latitude: 21° to 40°—September 23 to December

[R—Local civil time of sun's visible rising. S—Local civil time of sun's visible setting.]

Table for North Latitude 21° to 40°. Columns include months (SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER), approximate dates, and local civil times for sunrise and sunset. Rows are labeled with latitude from 21° to 40°.

North Latitude: 41° to 60°—September 23 to December 22.

[R—Local civil time of sun's visible rising. S—Local civil time of sun's visible setting.]

Table for North Latitude 41° to 60°. Columns include months (SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER), approximate dates, and local civil times for sunrise and sunset. Rows are labeled with latitude from 41° to 60°.

