



DX News

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APRIL 26, 1969

NUMBER 26

NO OTHER CLUB

Can provide the MW DX'er with information such as we've got this week. The center 8 pages, designed to be removed and kept handy for reference, are explained on the inside back page - which can also be removed without losing any DX information. A companion project, scheduled for this summer, will be a set of carefully drawn maps showing times of sunrise and sunset in North America for various dates.

bugs & things

Our frontpage masthead format is now finished and the printer's done a great job! Whichever member first figures out our color schedule wins a free guided tour of our local electric output board factory. ERC's new ribbon looks very good (a couple of lines in Hauser's Musing are light on the copy) and ought to put an end to the recent epidemic of "breakup". Our thanks are extended for your patience as we continue to learn the ropes of offset production - look at how many bugs we still had in the mimeo operation after 35 years of experience, hi. If you have missed a copy of the offset bulletin for one reason or another, or have gotten a blank page, drop a note to HQ and you'll get a prompt replacement. But allow sufficient time for mail delays, please! Single exception to the March 1st issue for which we haven't got even a single spare due to a printing accident.

last month rescheduled

The mechanical letter order was supposed to arrive 4/10, the shipping bill has but the package hasn't. . . How to Listen to the World, scheduled for completion on 3/15, still hasn't arrived. . . The Copyright Office in still fumbling with the loop plans. . . Government Printing Office is still trying to palm off old FIP's logs on the unsuspecting public. . . And the Post Office. . .

This being the last weekly issue of Volume 36, I'd like to express the thanks of the entire membership to the "background" members of the Publishing Committee whose efforts make DX NEWS possible; Tom Holmen for keeping track of finances and the mechanics of mailing, Ray Moore and Randy Kane for showing up every week to help with stamping and mailing, Pete Taylor for handling the tags, and all the others who've stopped in to give us a hand!

Adapted from

MUSINGS of the Members

Ernest R. Cooper
438 East 21st. Brooklyn, N.Y. 11226

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SPECIALS

Mon. May 5	W M A Y	970	Springfield, Illinois	1,000	1:15 - 1:30	RLA-r/c
	K A A A	1230	Kingman, Arizona	1,000	3:00 - 7:30	IRCA
Sat. May 10	K B R B	1400	Ainsworth, Nebraska	1,000	1:01 - 2:00	IRCA/r/c
Mon. May 12	K I J V	1340	Huron, South Dakota	1,000	12:01 - 12:30	IRCA/r/c
	K X R A	1490	Alexandria, Minnesota	1,000	12:30 - 1:00	IRCA/r/c
	K S V C	980	Richfield, Utah	5,000	2:30 - 3:00	IRCA/r/c
Sat. May 17	W S M E	1220	Sanford, Maine	1,000	12:15 - 12:30	NNRC ET
	K R O E	930	Sheridan, Wyoming	1,000	1:01 - 2:00	IRCA ET
Mon. May 19	K X L R	1150	North Little Rock, Arkansas	5,000	1:20 - 1:30	IRCA ET
Wed. May 21	W C C N	1370	Neillsville, Wisconsin	5,000	12:01 - 12:45	IRCA ET
Mon. May 26	W F L N	900	Philadelphia, Pennsylvania	1,000	4:15 - 4:30	IRCA/r/c
Mon. June 2	K D B M	1490	Dillon, Montana	1,000	2:00 - 2:30	IRCA/r/c

NOTES:

WMAY-970 This is their r/c-TT & ID's will probably be made every minute, with phonetic words used also. RLA member Matt Robinet says the date is May 5, & at same time says it's their r/c, find SUNDAY, so try May 4 also. The words used are the key to your verifying this one. Verie may be late due to their moving. Address as in the NRC LOG.

KAAA-1230 presents an all-morning afloat for IRCA, w/the first half hour their r/c. Reports to Wallace E. Stone, President, KAAA, Box 549, Kingman, Ariz. 86401. A crowded channel, but give it a try. Don Erickson of IRCA.

KBRB-1400 This date/time is tentative. Reports go to Larry Rice, KBRB, 122 East Second Street, Ainsworth, Nebraska, 68001. Also, Don Erickson of IRCA. No details on the May 12th IRCA Tests other than the date/time, above.

IRCA says HECK-1530 was deluged with reports on their 1/20/69 TEST - more than 60 received, four of them from New Zealand. Joseph Moell asks all DXers please to be patient and he'll verify. He's got two stations in Lincoln besides being a fulltime college student, so you can see he's a bit on the busy side. Please do not pester him with follow-ups, men, but instead, let's exercise patience.

CHANGES IN LICENSE DATA - F.C.C.

(Purchased from Cooper-Trent Division of General & Essei Co., Washington, D.C.)

930	Cabo Rojo, Puerto Rico	1,000 D-1*	Lebanon, Pennsylvania	1,000 D-1*
*- Replaces the WMAA D-1 permit for Baltimore, deleted.				
1340	K Q I L	Grand Junction, Colo.	5,000 U-3	West Warwick, RI, fr WWRI
1360	W I X Z	McKeesport, Pa.	5,000 U-3	Pullman, Wash., from KWSC
800	C J B Q	Bellefonte, Pa.	1,000 U-3	move XR site.
1100	K F A X	San Francisco, Cal.	5,000 U-3	Moves from present XR site to two different sites, one for day, one for night use. In 50kw, directional day, non-directional from SSS to s/off.
1320	W U N O	Rio Piedras, Puerto Rico	1,000 U-1	Move XR S.W.
1070	K N X	Los Angeles, Cal.	50,000 U-1	night changes in daytime directional pattern (is non-directional at night).
1250	K W S U	Pullman, Wash.	5,000 U-3	move XR S.W.
1500	W F I F	Milford, Conn.	5,000 U-3	Wine pattern changes.
1310	W X X X	Hattiesburg, Miss.	1,000 U-1	move XR S.E.
630	C K O V	New York, N.Y.	1,000 U-1	New XR site
1230	K V O C	New York, N.Y.	1,000 U-1	On w/10,000/1,000 U-4
1340	W T R N	New York, N.Y.	1,000 U-1	ALL SUMMER LONG AS ALWAYS IN STANDARD TIME! AVOID CONFUSION! EST!
1410	C F Y K	New York, N.Y.	1,000 U-1	
1400	C F U N	New York, N.Y.	1,000 U-1	
1400	K D I R	New York, N.Y.	1,000 U-1	

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DICK TRUAX - 3472 Dixiana Drive - Lexington, Kentucky - 40502

First of all, the newest station in Kentucky hit the air RS 4/8, WEKG-810, Jackson, Ky. It is fairly strong up here in Lexington, 95 miles NW. It should be an easy catch @ SSS for anyone in the SE or Mid-South. Programming is rr & c/w DX this past week has been above average. 4/4- KTRY-730 La. w/SID & rr @ 7:35pm all alone. 4/6- WMTN-1300 Tenn. w/rr @ 6:50pm w/local WBLG nulled. Then at 8:30pm a real surprise w/KVSH-940 Nebr. s/off o/WINZ, then @ 8:31pm WFNC-940 N.C. w/rr on top of WMTN. 4/7- KMKI-1150 Iowa on @ 1:30 for a/c, NRC list, TT & ID each minute till off @ 1:45am. CJOC-1220 Alta. s/off @ 2:06 w/GSQ, WBOW-1230 w/ET & ID @ 2:10am, WQUA-1230 Ill. noted on @ 2:30am & most of AM w/IS mx, WTML-1240 Ga. ID & rr @ 2:31 am on top of mess, WTRY-980 N.Y. o/WONE @ 3:35am w/rr, & best this MM, ZBVI-780 B.V.I. n/on @ 5am w/GSQ. 4/11- KSTL-690 Mo. @ 7:24pm o/Cuban w/c/w, WHOW-1520 Ill. n/off @ 7:30pm, KTUL-1560 Mo. ID & c/w @ 7:34pm o/WQXR. A real nice night for a change from predominantly Auroral to hearing the Midwest again. No sign of the outlaw WWIN on 1610 since last Muse, evidently FCC got 'em. More in 7.

RICHARD RICHMAN - 14 East Cheshire Plzce - Staten Island, New York - 10301

A most interesting week DX-wise, w/a big surprise on 1380 to start things off. 4/5, checking @ 9pm, to see who was atop 1380, I found local WENX-1380 off. In its place was CKPC-1380 Ont. Enough was logged for a good report, before WENX came back, approximately ten minutes later. If only a few other NY stations would disappear for a while evenings! 4/6, CHIN-1540 Ont. @ 6:58pm o/off. Best new one in same time came the same night @ 11:10 when my farthest North & farthest East was logged: CHT-140 Nfld. w/sports & WX. n/off was at 11:20. The NRC Log gives it as 10:40. Five provinces now logged; only five to go. Canada continued to be hot DX-wise MM 4/7. CJRN-1600 Ont. heard w/MOR, while local WBL-1600 NY was on, so logging was not easy. MM also gave me WPAK-700 Va. @ 1:50am w/III & NX @ 2am. One puzzler was a station on 1560 after WQXR n/off. There was much un-interrupted mx, quiet. I thought it might be KPNC but I thought I heard the NRC Monitor Beacon after the 1am NX so I guess it was WDXR. 4/8 brought my only N.C. station other than WHP, WNET-1590 @ 10:30-11pm. There was a sign of WHP-1590 Conn. 4/9 I found quite a different situation on 1590. From 11:30pm on, WEST-1590 Pa. was there w/c/w. The same night found WEST-1400 Pa. atop the graveyard for my first logging there other than WTPC. 4/11 brought in a new country. After WHP n/off @ 10pm, CMCA was heard on 810. Nothing n4w, so I left the 810 open. Some force however pushed my hand, & I was back at 830, & there was R. Belize w/1000 NX. This was followed by commercials for laxogen, for a British cigarette, & Gillette blades. A mx program followed. By 10:20 WCCO was there. R. Belize in my neighborhood catch w/the exception of RIB. The same night @ 11:07, WMMN-920 w/commercials for a jewelry store n/r. 4/12 found three new ones on 630 @ 1am battling each other (no list). I couldn't get a log on any; WPRO, WMAL & an unID Canadian. Two new W.Va. stations in two days turned out to be the case when the s/off of WHP was heard @ 6:20pm on 1400. W/then off, WING was heard @ 7 w/CBS NX. All in all, quite a week, w/two of my most wanted- CHT & R. Belize logged. My most wanted now are KOB-FE-1000. Some MM, hopefully! Verie are coming in: v/q- WILK CUMS WPEA (after five years I guess the 10¢ Special Delivery stamp did it, hi), WROW. v/1- WYAM WMD. An they say in Asheville NC, "WISE" "where is Summer Employment?" I've got my third endorsement. 7/30.

ROY H. MILLER - Box 851 - Everett, Washington - 98201

KBOL-1490-DX test was barely loggable in 4:40-4:45am moment 4/11, w/ KBB dominant, but a welcome addition as 1490 is my weakest graveyard channel w/c/w

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logged, 37 verified. No trace of WADE-1210 PoP same AM, but I did add HJFF, Pereira, Colombia "La Voz Amiga" from 1-1:41am while trying for WADE. I am sending ERC a list of the Seattle Pilots AL BB network; I hope space can be found for same in this of next issue. I suggest caution be used in IDing stations heard carrying Pilots' BB; there are frequencies w/more than one station of the net listed. 560 has KPQ & KMON; 550 has KBOW & KENI; as examples, not to mention the graveyarders where five hold forth on 1230 as another example. Then too, there are a number of daytime stations on the net, which adds to problem of ID if logging is made during hours of operation of such; here 790 is an example w/Daytimers KUTA & KBRW on as well as full-time KGHL. Of the 50 stations on the net I see two that are unlogged here plus five more that are unverified, so I shall see if I can do anything w/this myself. 73.

CHUCK SADOIAN - 382 Vermont Avenue - Dinuba, California - 93618

Greetings all. Although this is my first Muse, I have been a member of the NRC since 1/69. So, here's an intro: I'm 16, & a sophomore at Dinuba High School (a town of about 5,000 persons, about 50 miles SW of Fresno). I have been DXing for just under a year now, starting on 5/1/68 w/a v/q from good ole WWL. In those days I used a simple Heath Gr-24 six transistor radio for DXing, w/no external antenna. Not much, but it netted 22 states & about 80 stations in six months of off & on listening. I purchased a used HQ-100 from FISH in 12/68 & am now a full-time BCB DXer. Stats up to now: 35/31 states; 5/5 provinces; 10/5 countries; and 134/89 total stations. I am also a member of the IRCA & ASWLC (Editor of QSL Corner in this one). The new DX NEWS is great, & I like the class it gives to a club. ASWLC is going to offset sometime this Summer, I think. The publisher is really loaded down w/work because the club is now 0/350, too much to mimeo. Offset will decrease workload a lot, so that's why we're going to it. One gripe against offset, though: Those light pages & blank pages sneak in a little bit too often, but I guess that's due to the newness of offset to the Club. I didn't DX during 3/24 Aurora, but did on MM 3/31 & effects of that storm were still noted as CKLG-730 B.C. never did become audible until 4/4; usually 8-9 here. I also noted some loss of signals from regulars KOB KOA KTWO WHAM WBZ & WWL. MM 4/7 was great as I logged WBAL-1090, KAAV-1090, WRVA-1140, & re-logged some others. Details will appear in DDXD. 73. (Welcome to NRC, Chuck! We hope you'll Muse often & clue us in on your DX, & that you'll double-space many an interesting DX-filled Muse! -ERC)

FRANK WALDRON - 65 Lakeridge Drive - Matawan, New Jersey - 07747

I spent two great DX sessions thanks to Dave Roys & his HQ-180. DX: 4/4 PM- WDMV-540 in easily at Dave's w/WLIX off, also WBMD-750 audible on ground-wave. WLIX came back on late that afternoon. 4/5- This AM looked pretty dead till we heard the new KOBY-1550 Reno on ET/mx 1125-4:30 & on. They were o/WAAY but u/stro strong OC, & it was the only WC station heard that night. That's State #43 for me. Also WKDO-1560 r/c-TT loud @ 4:20, WPRT-960 ending r/c-TT @ 4:45 strong. 4/6- Back home, I heard WIL-1430 c/w in/out w/CKPH @ 8:38, WIRE/WVAM not apparent. MM 4/7 at Dave's was my best MM ever. Umm KVOO-1170 weak @ 12:35. CSB4-1594 @ 12:47 in PP, fair signal, low audio, also country #25. They were the only TA audible that AM. report & tape sent. WACO-1460 rr & NX @ 1125, u/Sacred Heart Hour which IDED @ 1:30 as KENO, so strong I probably could've heard 'em even on my RX, hi. Then KPMC-1560 @ 2 w/Message for America w/WQXR OC on, weak. A station on 1550 w/cl mx fair signal presumed to be KKH. UnID OC ET-1000 giving a code ID @ 2:40. OC-770 during WABC SP, unkn: KGA-1510 again @ 3 w/ID & Hour of Decision, CJRS off & unIDQRM. Also WACO s/off 2:58 w/SSB. Carrier detectable on 650 @ 3:30 but no audio. UnID N.C. station on 1060 s/on seconds before KYW s/on @ 5:30, unID because I forgot to plug tape recorder back in, hi. 4/8- WIRY-1340 atop @ 12:22 w/Wiry Secret Sound. WCVB-1490 r/c-TT @ 1:20. I heard the TT to KQHR-1350 r/c, but no ID u/mess. 4/9- WAKS-1460 ET/mx/OC strong @ 1:29. 4/10- WLOP-1370 r/c-oldie rr 1:45-2 o/u WFEA. WKXV-900 r/c-DT 3:30-3:45, but IDs so slurred not reported. Veries: v/q- WTAC-600. v/1- WTOW-1570 WKAM-1460 WDCJ-1220. Also I discovered I had a v/q from CBY-990 that I never knew had been received. Somebody must've snatched it from the mail about a

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month ago and placed it in w/the rest of my v/qs. And I was about to send them another f/up, hi! I plan to be at the next Middletown get-together, probably at the end of June. A suggestion to anyone attending is to be good at roof-climbing, so start getting in shape NOW. 73.

JOHN HOOGERHEIDE - Box 941 - Marquette, Michigan

MM3/31 was a complete & absolute dud; nothing interesting noted. Excellent CX to NE noted around 11pm 4/1 w/FF all over. FF noted atop both 1230 & 1240 but I have no idea who it would be on CX like this. Also atop 1220 1150 900 1370 1250 & two on 1280; still no luck on Quebec on 970 or 1480 however. And I try every night! 12:05 s/off of WLBZ-620 w/SSB after NBC NX again noted. Try this as it's the best bet for Maine in the MW if you can null out WTMJ. WVMT again w/c/w show & NBC NX & s/off-SSB @ 12:13. They're still in almost nightly for a very easy Vermont log. Things are surely slow, it's been nine days now without a new log. I will set alarm for 4am tonight & try some s/ons. Also WPRO well atop by midnight. I wook up at 2:30am so I tried some DX, excellent NE CX continued. Funny stations like CBK whose 2:30 s/off was s weak, & CKCK-620 were completely non-existent. WFEA-1370 noted behind powerhouse WSPD. I tried for almost an hour to catch ID behind this pest. MoR mx looping NE but @ 3:10 I was rewarded w/an SID during a fade-out of WSPD. This is another good bet for N.H. lads, unless WSPD is just too much for you. Without them, WFEA would have had a very fine signal indeed. And so to bed. No DX for 12 days. Today, 4/13, Sunday, brought the Mexican on the late show on 1550 behind & occasionally over the rest of the domestics. This at 1:30-2. I tried 870 & caught "R. Crystal" the Ecuadorian I&C, even atop occasional WWL TT bursts. Another SS in/out but I assume the Cuban. KDDA-1560 Dumas, one ID @ 2:30, but no TT or modulation. Trying 1540 for WANL TEST brought only a weak WPTR & a loud orchestral soft mx station looping N/S. No IDs between selections. I had assumed this to be ZNS from 2 tune-in until I caught TT (very harsh tone) @ 2:25 & @ 2:34 a man said "---- now leaves the air." I wonder if any of our other NRCers caught this & would let me know who it was that I heard testing.

MARV GARBNER - 2539 Kessler Boulevard - Lincoln, Nebraska - 68502

DX: 4/11- KBWD-; 380 @ 1:25am w/post-game wrap-up of the Astros-Padres BB game. 4/12- KISD-1230 dominating most of the time w/rr after local KFOR's lam s/off, KBRB-1400 heard w/r/c ID @ 1:25, probably using only 250w as they weren't very strong; KBIX-1490 EP OC w/ID @ 1:52 w/1,000w, then drop to 250. 4/13- KORA-1240 good o/KAKE w/rr w/WINN also in there in/out w/the mess @ 1:23. MM 4/14 was almost a complete nothing. The static was really severe that signals below an S-7 were totally unreadable. I did manage to catch these: KLIF-1190 was off for a while so I got one ID out of KEX @ 1:15am - they were very weak; WCAL-770 TEST in w/an excellent signal from 2:03-2:25 tuneout - had cl mx; either KIL0 or KQRS on late for flood info @ 2:35 - I didn't catch an ID but gave info on North Dakota River CX; this on 1440k; KFSC-1220 TEST in well w/SS mx & EE/SS IDs after each record, heard 3:29-3:40 tuneout; no CKWW-580 DX, only KMJ & CKY. And an unID TTR which might have been CKWW, but it was way u/KMJ - was CKWW using TT? KCKY-1150 DX heard u/CKOC FROM 3:55 am- they are unkn as I heard them on their 2/24 DX, but alas, no veris in yet after seven weeks. I'm making it a habit every Monday to sit down & write a Musing in to good ol' ERC - how about you? GPN- I sure do like your Geomagnetic Charts - they are real interesting - keep up the good work! That's another NRC first! I'm making my plans to be in ST. LOUIS this Summer - I hope everyone else is. 73 & good DX.

CLIFF RENO - 75 Parish Road - New Canaan, Connecticut - 06840

Greetings all! I had a Musing all lined up to send but since I just had a very fine phone conversation w/Ernie, I decided to write it over. With my editing I feel it won't hurt, hi! DX: 4/8- Umm XBOY-1000, HJCY-810, CKVI-850. 4/9- No DX because I went to a concert by Iron Butterfly. It was FANTASTIC, believe me. If you like rock mx, the underground thpe, you have to see this group. They are something to see in person (especially when I was in the sixth row). Well, back to

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the subject of DX. 4/10- Umm HJDM--830. 4/11- WABJ-1490 for report. Veries: v/1- WJAR in six days; WDF (more of a v/f) in about 2 1/2 weeks. v/q- XERB-1090 (this was a regular v/q, not a scribbled "verified" on my report. It was sent from Box 2735; San Ysidro, Cal. 92073) WPTT-1540 in three months; CJMS-1280 in eight days; WFBR-1300 nine days; WAVZ-1300 in six days; WHDH-850 in eight days (nice card in day-glo) Well, all for now. 7e & good DX. I enclose some v/s. (Right, Cliff! -ERC)

JERRY K. CONRAD - Box 952 - Haines City, Florida - 33844

Say, the front page of the bulletin looks really sharp. The two color printing is nice. Latest DX is still not too much. I just logged my old pest WMBD-1470 Peoria, Ill. & a possible KPBC-1510, Port Sulphur, La. 3/12 @ SSS. If they have activated their permit for lkw I know it was. If not it was Prentiss, Miss., but I heard the announcer say La. during the s/off. Report out. Also reports to WGUL-1510 New Port Richey & WWBC-1500 Cocoa, both Fla. Veries in from WING CFRB (first Canada from Fla.) WPCF WKIZ XELO. WKIZ says their farthest report is from Connecticut. They s/off @ midnight so some of you guys get at them. They are directional to NNE right up the coast. "Verie" friendly station w/no r/c. 1500 is a rough frequency here almost always dominated by WTOP & WKIZ just u/them. I've been on that channel for many hours & no sign of BOA's Anguilla station. I failed to mention I too have built the Transistor AF Pre-Amp in EI March '69. It gives a tremendous boost to weak signals & gives a lot of much-needed gain on the HQ-50T. It is of very little use on the HQ-180 though I get overload problems on the HQ-180 when I use it on any but the weakest stations. Several periods of good TAs noted especially 3/31 when most of the high band channels were in very loudly. I still want to know, who is Countryopolitan on 1270 at night? I can't get an ID on this one. I just recognize the jingles. Boys, I am very much against any blacklist. The main reason is I have veries from some of the worst verifiers around like KAYO KACY KFYR. Somebody owes me a WCBS verie, hi! As they say in Pennsylvania, Shamokin, that is, "WISL" - "Where Is St. Louis?" 73.

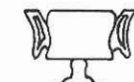
RICK MARR - 6912 West Park Drive - Hyattsville, Maryland - 20783

DX in this den is now coming in at a very slow pace due to such things as warm WX, school work at U. of Md., working as a NX commentator w/the campus station WMUC-650, activities w/the TV Workshop at college, & a two-act play I've been writing. However, as I continue my daytime DX journey up the dial, here is what I've been logging: 3/5- WWIN-1400 Md. @ 1:57pm w/Soul mx, weak & difficult to pull in because of heavy QRM from WEAM-1390; WHAG-1410 Md. w/ABO Ai NX @ 3pm, poor signal; WKCW-1420 Va/ w/c/w & ID @ 3:30pm, strong; WNAV-1430 Md. w/ID @ 3:35pm after MBS NX. 1440 nil due to heavy splash from both WNAV & WOL. 3/30- Local WOL-1450 DC w/Soul mx @ 2:47pm; WPRW-1460 Va. w/ID @ 3:30 before MBS NX. 4/7- WTR-1470 Md. @ 1:30pm, also w/ID before MBS NX; 1480 & 1490 nil because of terrible splatter from 50,000w WTOP whose XR is located just a few miles from my location. Total number of stations logged here now stands at 66 from all states & DC, daytime reception only. Locally, WTOP-1500 DC, as I'm sure most of you know by now, is airing its ALL-NX format 24 hours a day w/help from 70 newsmen in the Washington Metro area. Obviously, WAVA-780 Arlington, Va. which is also ALL-NX isn't too happy about WTOP's present format because of the latter's huge watt power & monopoly in this large government market. In addition, I recently toured WNAV-1430 Annapolis, Md. one day while visiting my good friend and new NRCer, Rod Freeman, who works at that station on weekends. Finally, I think that the new format of DX NEWS is GREAT, & special thanks & praise must go out to the BPC, ERC, & everyone else responsible for this fine weekly publication. Incidentally, there's a rumor going around that Chester Von Schmidt (formerly known as Dave) has turned into a vampire & that he now rises out of his coffin only when the moon is full on MMs long enough to DX. Is there any truth to this? Till next time, 73, Peace, & long live Barnabas Collins!

LET'S KEEP DXING AND KEEP MUSING. NEXT ISSUE WILL BE IN TWO WEEKS, AND THE DEADLINE IN BROOKLYN WILL BE MONDAY, MAY 6. PLEASE DOUBLE SPACE! GIVES DATES & TIMES!

SUPREMACY RATINGS

Norm Maguire
1420 Columbia Drive NE
Albuquerque, N.M. 87106



#	DXer	Location	T.V.	Ctys.	VAS	VCP	For.	Africa	Best
41	L. Kruse	Iowa	3988	15	?	?	77	--	
33	W. Routzhan	Pennsylvania	3083	46	50	10	367	--	
36	N. Maguire	New Mexico	2837	52	50	10	390	1	Alciers 1176 50k
34	W. Stone**	Ontario	2807	32	50	?	2197	--	
52	E. Johnson	Illinois	2753	23	49	10	283	--	
40	G. Allen	California	2661	53	49	8	479	1	R.Senegal 764
50	E. Wittler**	Colorado	2327	40	?	?	193	1	Dakar 764
59	S. Drake	Pennsylvania	2317	54	50	10	303	2	Sierra Leone 1210
31	F. Wheeler	Pennsylvania	1594	23	50	9	180	--	
33	R. Sperry	Connecticut	1575	38	49	?	232	1	?
?	R. Anderson	Virginia	1434	98	49	?	419	26	WIND, Novasser, 400k
60	A. Rugg	Quebec	1363	53	47	10	1182	?	Cairo 773
33	D. Reynolds	California	1328	74	50	?	440	?	Dakar 764 20k
39	C. Freeman	California	1282	60	45	?	320	1	Dakar 764
53	A. Merriman	Virginia	1133	78	49	10	222	6	Sierra Leone 1200
58	E. Wesolowski*	Nebraska	1010	20	47	?	110	1	Dakar 764
?	H. Gustafson	Illinois	817	89	?	?	273	16	CR6R7, Angola 872
54	J. Starr	Ohio	763	40	50	8	135	2	Aradir 935
64	E. Reynolds	Missouri	713	22	44	8	87	--	
63	J. Conrad	Florida	589	33	47	?	90	1	Dakar 764
?	D. Whatmough	Ontario	584	8	49	9	508	--	
53	D. Phillips	Alabama	540	25	43	2	38	1	Senegal 764
65	J. Kadet	Maryland	530	12	49	10	41	--	
59	A. Slater	England	524	129	33	?	516	52	Djibouti
63	G. Scrimgeour	Ontario	486	44	50	?	407	?	Senegal
58	E. Dangerfield	Pennsylvania	403	105	?	?	328	27	Pietermaritzburg
65	E. Raczko	Ohio	369	37	48	10	61	2	Dakar 764
65	R. Hays	Kentucky	353	20	33	?	37	1	Dakar 764
64	K. Sorensen	Ontario	310	?	37	?	235	--	
65	D. Carlson	Missouri	304	10	41	5	31	--	
?	H. Wilkinson	California	299	54	?	?	293	1	Dakar 764
66	T. Hartloff	New York	290	?	31	?	46	--	
?	J. Neff	New York	280	28	42	9	84	1	Senegal 764
66	M. Northam	Oregon	253	13	39	?	51	--	
39	H. Robie	Massachusetts	252	81	48	10	138	3	R. Sp. Sahara 2K
62	R. Edmunds	New Jersey	213	9	42	?	49	--	
64	The Haneikos*	Pennsylvania	191	12	37	?	26	--	
63	D. Eggert	Indiana	191	8	45	?	19	--	
63	F. Kilroy	Washington DC	165	26	42	9	36	1	R.Senegal 764
58	W. Rogers	Florida	158	12	24	?	22	--	
68	J. Pejza	California	128	11	31	5	19	--	
?	C. Reno	Connecticut	93	22	25	4	53	--	
67	E. Floden	Ontario	92	15	24	8	64	--	
?	J. Renfrew	Connecticut	80	5	26	4	55	--	
68	R. Schneider	Wisconsin	29	3	?	?	?	--	

Welcome to Jim Renfrew and Robert Schneider. # = year started DXing. VAS = verified all states, VCP = verified all Canadian provinces. Next month, best Europeans. Will be back in New Mexico during May and June. In June listing, we will list "heard" totals and total countries heard as well as our usual verified totals of each member. Please send me your heard totals to New Mexico before mid-June. Mahalo. 73 and Aloha, Norm.



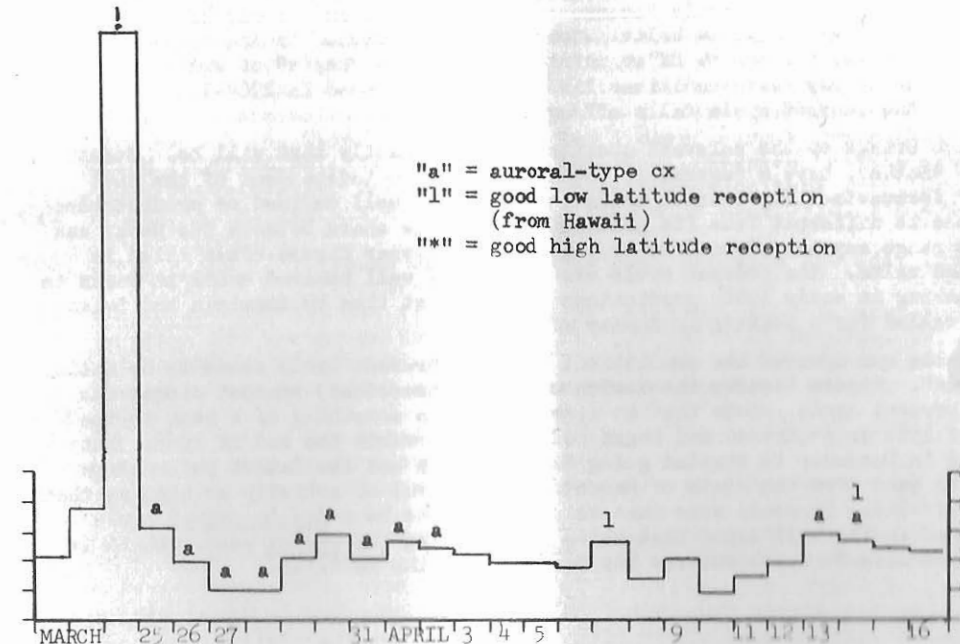
Propagation & Features:
Gordon Nelson, 19 Irma Ave.
Watertown, Mass. 02172

DX conditions here in the Northeast continue to be generally auroral most nights - but not outstandingly so. Some of the high power high-band TA's have been quite good and traces of some mid-banders have also shown up some nights around 2000. No traces of South Africans or of 4QD. The reports and maps describing the auroral event 3/24 - 3/28 will appear separately as an IDX feature this issue or next (depending upon whether or not the printer thinks the maps will photograph ok). We resume our running commentary on conditions as the auroral blanketing layer began to break up and cx began to return to some semblance of "normal":

- 3/29 Cx returned to near normal (Merriman, Va.)
- 3/30 Cx near normal; Nice-1554 strong. (Merriman, Va.) Ugh. (Edmunds, N.J.)
- 3/31 CSE4-1594 the only TA audible. (Merriman, Va.) TA's began to return. (Dangerfield, Pa.) Strong TA's above 1400. (Conrad, Fla.) Worst AM I have ever noted; only a few ground-wave locals audible. (Kaskey, Calif.) As if the mid-March swing to Southern Hemisphere had never happened. KFRB in well and hosts of North Americans to the East Coast (WCAU, etc.); new WRVA. Colombian and Venezuela good but nothing south of Equator except Tahiti. Texas the dominant state; KPDN-1340 for first Texas graveyarder. Only few Asians. (Wood, Hawaii)
- 4/1 Spotty but New England and Canada back. (Edmunds, N.J.) Everything north of mid-Kansas weak; still auroral. (Hart, Texas) Still auroral. (Nall, Ky.)
- 4/2 Generally poor but some Japanese weak (700, etc.); LA's good. (Kaskey, Calif.)
- 4/3 Moderate; WBZ noted but North America only average; Tonga fair, 3 or 4 Zedders, some Asia. (Wood, Hawaii)
- 4/4 Some fair high-band TA's. (Dangerfield, Pa.)
- 4/7 Very patchy and localized reception; many Canadians; KOMA good. (Edmunds, NJ) CSE4-1594 the only TA audible. (Waldron, Conn.) Outstanding night with a beautiful opening to Chile at fine strength; Florida good; ECNA to WBZ; Asia as far as Cambodia-1434; Philippines on 1550 and 1140 best of the year; several DU's. Surinam new. (Wood, Hawaii)
- 4/8 Lacked the sparkle of 4/7 although WBZ, etc. still noted; no Chile or deep South America but some Colombia; a few DU's; Asia still very good. (Wood)
- 4/10 Good for North America; 500 watt daytimer in Dumas, Ark. logged. (Wood, HI)
- 4/13 Good but not excellent to NA; WCBS, WCAU, and KFAR noted; other regions moderate, DU fairly poor. (Wood, Hawaii)
- 4/14 Cx crummy; some Canadians; hi noise level. (Edmunds, N.J.) Very good to NA; WCAL special in well; WLAC for 35th state; best reception ever from WABC; new CBE. Few DU's, but best Pacifics were Midway, Kwajalein, and Majuro. Other areas average. (Wood, Hawaii)

-
- *CZECHOSLOVAKIA. According to a broadcast from Prague, Radio Vltava ceased operation on 2/14 (1430 kHz). (E1)
- *SWITZERLAND. Beromunster-529 plans to increase power to 500 kw soon; Sottens-764 expects to go to 500 kw by the end of the year. (WRB)
- *SYRIA. Tartus now measured on 785.35; right in the TVI. (EBU, special to NRC)
- *USSR. Richard Wood's new Mayak programmed Russian on 1080 not audible in Europe; this is consistent with the tentative Siberian localization. (EBU)

Geomagnetic/auroral activity has stayed relatively low since the storm of 3/24; the absorption produced by that event has died away enough so that TA's on low latitude paths can come through; likewise for Alaskans to the West Coast and Hawaii. Daylight in high latitudes should rule out high latitude paths through the rest of summer, low auroral activity or not. The following graph of the Fredericksburg A index of geomagnetic/auroral activity gives a measure of the rate of production of high latitude MW absorption (not PCA's however). A period of geomagnetic quiet is a necessary but not sufficient condition for high latitude MW propagation, e.g., Europe-West Coast and Far East- East Coast.



*Let's see how a press clipping from the 4/8 N.Y. Post shows up (de Foxy):

Lima Radio Station Invaded

LIMA, Peru (AP) — Three armed and masked men invaded a Lima radio station today and forced the announcer to broadcast an appeal for attacks on American property in Peru.

The men, armed with two submachine guns and a revolver, entered Radio Expreso at 7:20 a.m. and ordered the personnel to broadcast what they called a declaration of the Revolutionary Leftist Movement.

Included in the declaration was a fight against "Yankee imperialism." After five minutes, the men fled in a waiting car. Police set up roadblocks and were questioning station personnel.

NOTES TO PEOPLE:

RICHARD WOOD: Please supply me w/ times and relative strengths for Alaskans and Canadians on 4/11, 4/12, 4/13, and 4/14. Tnx.

CESAR OBJIO: "AO" stands for "Airmail - Other" which is a special type of 3rd class mail especially for international mailing of printed matter; saves money but goes same speed as airmail.

RUSS EDMUNDS: Is it true that ox are so poor where you are that you're reduced to DX'ing your NYC spurs? IALS? Logged All Local Spurs?

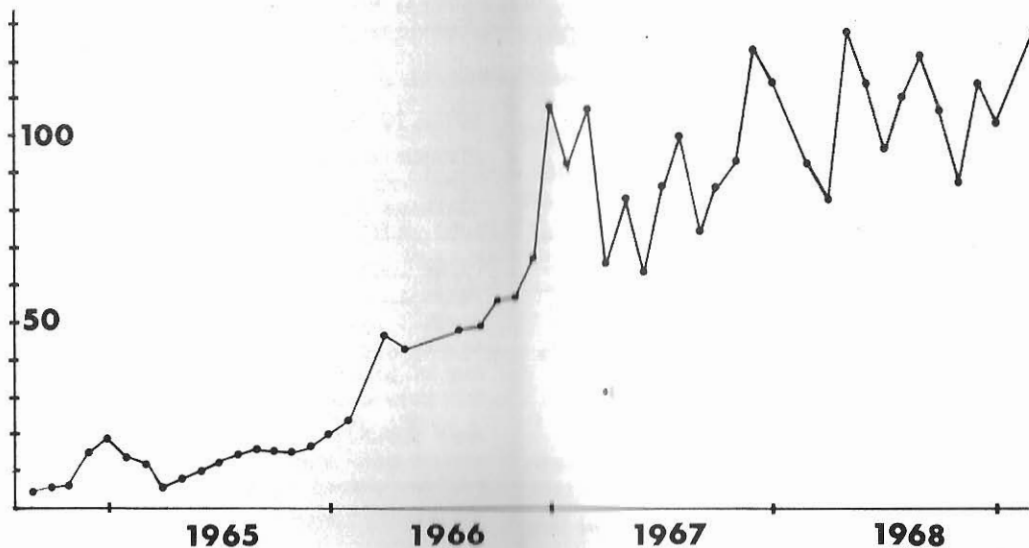
TV DX, ANYONE?

To some of our veteran members the term "good old days" means the 1930's and 1940's before the advent of all nighters. To some of us who don't go back quite as far, though, the "good old days" were in 1964 and 1965 when Cairo-773 used to murder WABC on the car radio and the West Coasters could listen to Peking-1040 on the way to work in the morning. The culprit, of course, is the 11-year cycle in sunspot and solar activity.

The connection between sunspots and poor MW conditions is very complex and not fully understood, primarily because of the influence and involvement of the so-called Van Allen radiation belts. This will be discussed in the upcoming article on Aurora; for the MW DX'er uninterested in the "why's" of solar influence it'll suffice to say that conditions like those experienced in 1964-1965 won't be back until the sunspot cycle falls off again.

Which brings up the relevant question of when exactly that will be. Sunspots, like the weather, have a remarkable tendency to behave independent of the best "expert" forecasts. The sunspot cycle isn't truly well defined or predictable; each cycle is different from its predecessors and the space between the peaks can actually range anywhere from 8 to 16 years - the 11-year figure often cited is an average value. The present cycle was relatively well behaved until it began to start peaking in early 1968; predictions made at that time by American and Swiss experts called for a peaking in Summer of 1968.

But the sun ignored the predictions and this present cycle seems to be acting a bit "odd". Figure 1 shows the Zurich monthly (unsmoothed) sunspot counts for the now present cycle. Note that it seemed to reach something of a peak in the summer of 1968 as predicted and began falling off towards the end of 1968. But beginning in December it started going back up again and the latest information we have on hand (for the month of March) shows a level of activity as high as that in June of 1968. It would seem that this is going to be a double-peaked cycle like we had in the 1930's and that we're now entering the second peak. Which is fine if you like to watch auroras but bad news for the MW DX'er.



IDXD Monitor Reports 11

Members' Loggings:

Bob Foxworth, GPO Box 2111

New York, N.Y. 10001

Telephone Tip No.: (212)-582-0844. All times in DX News are E.S.T. Deadline is Monday at present. Urgent tips may be phoned in Monday evenings; collect accepted. Mail deadline is preferably a Sunday box arrival. Please report with either postcards or 8.5x11 paper, both sides are OK.

Items designated by ** are either changes (of frequency, slogan, etc.), new stations recently in operation, or unusual receptions. In any case, such starred items are felt to be of unusual interest to the DX community.

- 660 Dom. Rep. HIAM, Santiago hrd with rx while Cuban silent, 1831 to 1838 on 4/6. (Walt Rogers, Hialeah, Fla.)
- 690 Dom. Rep. To Sheldon MILLER: Your station here (MR: 4/5) can surely be Radio Guarachita, Santo Domingo as it is still on the air 0500-2400 with 5 kW. This is the first time I have heard of this station being received outside the country due to R. Progreso, Havana and Radio Barquisimeto, Venezuela, both powerhouses on this freq. (Objio, DR)
- 690 Venezuela. R. Barquisimeto, YVBR hrd atop WTIX w/nx 2326-2338 4/11. (Walt Rogers, Fla.)
- 700 Costa Rica. TIMB, Radio Reloj en Costa Rica hrd with few ads, lots of mx 2153-2208 4/6. (Rogers, Fla.)
- 725 Guatemala. Re TGN: See item in "veries" section, this issue.
- 725 Surinam. SRS strong as usual 2200-2215 3/25 with EE records, Dutch pgm and contest. When sending a report, don't spell the country name as "Suriname" on the envelope; confuses the post office. (Reno, Conn.)
- 755a UnID. Possibly YNX; gal ancr in SS 2200 4/14. (Reno, Conn.)
- ** 780 Dom. Rep. Radio Constanza, HIPO, Constanza, here ex-1450. Heard here for first time 4/13. (Objio, D.R.)
- 810 Colombia. Radio Sutatenza, HJCY, Bogotá hrd for the first time at 1910 4/12 almost as strong as PJB. They are requesting reports of reception conditions, but only from Colombia. These reports, from Colombia, will participate in a lottery for a free house and other gifts. Hrd their call letters, HJCY, mentioned at s/off. (Objio, Dom. Rep.) HJCY was way in front of WGY-KCMM 2230 4/15 on transistor portable. (Reno, Conn.)
- 834 Br. Hond. Belize hrd here, IDing at 2333 4/12, good level. (Objio, D.R.)
- 890 El Salvador. YSIA, Radio Musical, Santa Ana loud and clear after HIJP s/off, 2358-0017 evening of 4/11. Ax and TC's. (Rogers, Fla.)
- 910 Honduras. HRVS, Radio Catolica w/church service 1825-1830 4/5, then a loud signal from YVRQ taking over. (Rogers, Fla.)
- 970 U.S.V.I. WSTX with SS (?) ads during C&W-mx pgm 2025-2050 4/7. (Rogers)
- 1010 Dom. Rep. To Alan MERRIMAN: Your log of Radio Comercial HIJP (MR: 4/5) is correct; I checked it with my friend Luis Cambero who works there and he was on duty at the time. (Objio, D.R.)
- 1040 Colombia. Radio Tropical with good s-4 signal and "ranchero" mx 0135-0147 4/12. Nice clear ID at 0137 but no call letters given. (Rogers)
- 1040 Hawaii? EE stn with HST TC's (e.g. 8.07 hrd at 0107) but no call hrd 0107-0122 o/u Radio Tropical until 0122 when a Cuban came on with "R. Nacional" etc. and mx. Logged MM 4/14; hrd five TC's which matched HST. (Rogers, Fla.)
- 1045 Panamá. HOJ2 Ondas del Canajagua was RS on Easter morning. (Rogers, Fla)
- ** 1060 Cuba. This channel now named Radio Revolución, another change of name. ID hrd 2030 4/13. (Objio, D.R.)
- ** 1077 Dom. Rep. Radio Programas Quisqueya, HIMC Santo Domingo drifting here from their assigned 1080. (Objio, D.R.)
- ** 1100 Neth. Antilles. Radio Caribe, PJL-3, Willemstad, Curaçao moved here

(Caribe) from 1050 kc, hrd 4/13. (Objio, D.R.)

- 1237 Colombia. WJIL, La Voz de las Américas, Medellín at 0540 4/11 in religious. (Wood, Hawaii)
- ** 1240 Panamá. Radio David, HOM56, David IDing at 0015 with this name, giving TC as "12.14"; name change from R. Relej, hrd 4/13. (Objio, D.R.)
- 1250 Venezuela. NA hrd at 0406 MM 4/14, a slow vocal version, 0408 march and s/on but couldn't catch ID. Which? (Hauser, Col.)
- 1280 Puerto Rico. DEN s/off with LSB 2200 4/7; is this regular? (Rogers, Fla)
- ** 1550 Colombia. Su Voz Fortaña, HJAX, "La Onda Penetrante de la Costa" in Barranquilla. New station and testing here on 4/13, requesting reception reports and offering a CSI card and color pennant. Address is: Apto Aéreo 1643, 11f.: 44942 and 42750, Cable: "VOZ PORTEÑA". They announce free in kilonertz. Sent a taped report to help them. (Objio, D.R.) (This the sta hrd by Sheldon Miller...hope they don't go AN..Ed.)
- 1560 Mexico. Radio Chamizal, XEJFV, believed Cd. Juárez, Chih. at 0700 s/on 4/9 with frequent ID, and using name and call-letters. (Wood, Hawaii)
- 1570 Mexico. XERF powerful with only QRM from unID GC (probably CKLM); EE C&R record show and record offer with Del Rio, Texas address. At 0226 went into SS, hrd 4/14. (Rebo, Conn.)
- 1594 Portugal. SS-4 hrd in 11 CO47 MM 4/2, only TA audible that night. Prd at Roys' QTH, on his HG-180. (Waldron, N.J.)

Veries

- 725 GUATEMALA. V/a and letter rcvd. 3/26 for report of 2/20 on 725 kc. Mr. Wayne Berger, the engineer who signed the verie sends the following information: They (C&R) were on 725 for several days, with Government permission, to try to escape severe QRM from XEX, a problem that is with them day and night. They suffer QRM not only from the XEX signal but also from a 30 cps het. Mr. Berger says that he has found it impossible to lock T&R's transmitter exactly even with XEX, thus the het. while on 725 they ran into and from a 463-000 spur. They planned more testing on 725 as soon as the 463 spur was cleared up and they will possibly make a permanent switch to 725. Fine only the 2nd MW DX-report they have on record, where are the rest of you? My first Guatemala verie and country #78 verified. (Alan Merriman, Fairfax, va.) (Nice-Ed)
- 610 COLOMBIA. Radio Sutatenza sent v/a listing all outlets, gave HJGY at 10 kw power. (Ed. note-believe that was a printer's typo; my info shows calls as HJCY and believe that is correct.) Gave verie text and info on other stns in SS and SS, 40 days by airmail, v/s unreadable but is with engineering Dept. (Waldron, N.J.)
- 830 HAITI. 4VEC Cap Haitien sent v/a, form letter and pgm sked. Rcvd 4/15 for reception of 2/18 which was a TEST OF THEIR NEW 10-KW XMTR. (Caps nine-Ed.) Report sent to Haiti, but verie material received from New York City, actually Jamaica, Queens. Country #10. (Gene Mattocks, Calif.) (This is perhaps their time-broker who is sending material from foreign country in order to save postage costs. Inclusion of mint stamps, rather than IRCs, incidentally, will in some cases get a direct reply much sooner. Stamps may be purchased from Sax Ringler's "DX Stamp Service" 466 Weaver Rd., Webster, N.Y. 14581-send SASE for price list-Ed.)
- 645 ITALY. Standard R/I v/a with specific message, specifies 845 kc., for 1/11 reception, rcvd. 4/1. Rome-11 station. (Sullivan, Mass.)
- 1000 MEXICO. V/a from XERB, same as Edmunds', even same spelling error. (Reno)
- 1324 ALBANIA. V/a from Tirana, approx 135 days, v/s unreadable, is with the ubiquitous "Foreign Language Department." (Waldron, N.J.)

Jay Murley advises that our description of stamps were the "Postal Tax Stamps" and we'll reprint his description, which is interesting to read, next time. The only decline in ex is evident in our abbreviated section this week. Hope you will all stay at the dial this spring. Good DX! **73 bob**

SUNRISE AND TWILIGHT

LOCAL MEAN TIME OF SUNRISE AND BEGINNING OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Date	Lat.	SUNRISE (UPPER LIMB)												
		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
Jan.	0	5 59	6 16	6 35	6 55	7 08	7 22	7 38	7 59	8 08	8 19	8 32	8 46	9 03
	5	6 01	6 18	6 36	6 57	7 09	7 22	7 38	7 58	8 08	8 18	8 30	8 44	9 01
	10	6 04	6 20	6 37	6 57	7 09	7 22	7 37	7 56	8 05	8 16	8 27	8 40	8 56
	15	6 06	6 21	6 38	6 57	7 08	7 20	7 35	7 53	8 02	8 12	8 22	8 35	8 49
	20	6 07	6 22	6 38	6 56	7 06	7 18	7 32	7 49	7 57	8 06	8 16	8 28	8 41
Feb.	25	6 09	6 23	6 37	6 54	7 04	7 15	7 28	7 44	7 51	8 00	8 09	8 19	8 31
	30	6 10	6 23	6 37	6 52	7 01	7 11	7 23	7 38	7 45	7 52	8 00	8 10	8 21
	4	6 10	6 22	6 35	6 49	6 57	7 07	7 18	7 31	7 37	7 44	7 51	7 59	8 09
	9	6 11	6 21	6 33	6 46	6 53	7 01	7 11	7 23	7 28	7 34	7 41	7 48	7 57
	14	6 11	6 20	6 30	6 42	6 48	6 56	7 04	7 14	7 19	7 24	7 30	7 36	7 44
Mar.	19	6 11	6 19	6 27	6 37	6 43	6 49	6 56	7 05	7 09	7 13	7 18	7 24	7 30
	24	6 10	6 17	6 24	6 32	6 37	6 42	6 48	6 56	6 59	7 02	7 06	7 11	7 16
	29	6 09	6 15	6 21	6 27	6 31	6 35	6 40	6 46	6 48	6 51	6 54	6 58	7 01
	5	6 08	6 12	6 17	6 22	6 24	6 27	6 31	6 35	6 37	6 39	6 41	6 44	6 47
	10	6 07	6 10	6 13	6 16	6 18	6 20	6 22	6 25	6 26	6 27	6 28	6 30	6 32
Apr.	15	6 06	6 07	6 09	6 10	6 11	6 12	6 13	6 14	6 14	6 15	6 16	6 16	6 17
	20	6 04	6 04	6 04	6 04	6 04	6 04	6 03	6 03	6 03	6 03	6 02	6 02	6 02
	25	6 03	6 01	6 00	5 58	5 57	5 56	5 54	5 52	5 51	5 50	5 49	5 48	5 47
	30	6 01	5 58	5 55	5 52	5 50	5 47	5 45	5 41	5 40	5 38	5 36	5 34	5 31
	4	6 00	5 56	5 51	5 46	5 43	5 39	5 35	5 30	5 28	5 26	5 23	5 20	5 16

BEGINNING OF ASTRONOMICAL TWILIGHT

Date	Lat.	BEGINNING OF ASTRONOMICAL TWILIGHT												
		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
Jan.	0	4 44	5 01	5 15	5 30	5 36	5 43	5 51	6 00	6 02	6 06	6 10	6 14	6 18
	5	4 46	5 03	5 18	5 31	5 38	5 45	5 52	6 00	6 03	6 07	6 10	6 14	6 18
	10	4 49	5 05	5 19	5 32	5 39	5 45	5 53	5 59	6 02	6 05	6 09	6 12	6 16
	15	4 51	5 07	5 20	5 33	5 39	5 45	5 51	5 58	6 01	6 04	6 06	6 09	6 13
	20	4 54	5 08	5 21	5 32	5 38	5 44	5 49	5 55	5 57	5 59	6 03	6 05	6 08
Feb.	25	4 55	5 10	5 21	5 32	5 37	5 42	5 46	5 51	5 54	5 55	5 58	5 59	6 01
	30	4 58	5 10	5 21	5 31	5 35	5 39	5 42	5 46	5 48	5 50	5 51	5 53	5 54
	4	4 58	5 10	5 20	5 28	5 31	5 35	5 38	5 41	5 41	5 43	5 44	5 45	5 46
	9	5 00	5 10	5 18	5 25	5 28	5 31	5 32	5 34	5 35	5 35	5 35	5 36	5 35
	14	5 00	5 10	5 17	5 22	5 24	5 26	5 27	5 27	5 27	5 26	5 26	5 26	5 24
Mar.	19	5 01	5 08	5 14	5 18	5 19	5 19	5 20	5 19	5 18	5 17	5 16	5 14	5 13
	24	5 00	5 07	5 11	5 13	5 14	5 14	5 12	5 09	5 08	5 07	5 05	5 02	5 00
	29	5 00	5 05	5 08	5 08	5 08	5 06	5 04	5 00	4 58	4 55	4 53	4 49	4 45
	5	4 59	5 03	5 05	5 04	5 02	4 59	4 55	4 49	4 46	4 44	4 40	4 36	4 30
	10	4 58	5 00	5 01	4 58	4 55	4 51	4 46	4 39	4 35	4 31	4 26	4 21	4 14
Apr.	15	4 57	4 58	4 56	4 51	4 48	4 43	4 37	4 27	4 23	4 17	4 12	4 05	3 57
	20	4 56	4 55	4 52	4 45	4 40	4 34	4 26	4 15	4 10	4 04	3 57	3 49	3 39
	25	4 54	4 52	4 48	4 39	4 33	4 26	4 16	4 03	3 57	3 50	3 41	3 31	3 20
	30	4 53	4 49	4 42	4 32	4 25	4 17	4 05	3 50	3 43	3 34	3 25	3 13	2 59
	4	4 51	4 46	4 38	4 26	4 17	4 08	3 54	3 36	3 28	3 18	3 06	2 53	2 36

SOUTHERN LATITUDES (July to October)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Date	July	1	6	11	16	22	27	Aug.	1	Aug.	7	12	17	22	28	Sept.	2	Sept.	7	12	17	22	27	Oct.	2	Oct.	8
Use	Jan.	0	5	10	15	20	25	Jan.	30	Feb.	4	9	14	19	24	Feb.	29	Mar.	5	10	15	20	25	Mar.	30	Apr.	4
Apply		+1	0	-2	-3	-4	-6		-7		-8	-9	-10	-11	-12		-13		-14	-14	-14	-15	-15		-16	-16	-18

SUNSET AND TWILIGHT

LOCAL MEAN TIME OF SUNSET AND END OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Date		Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
SUNSET (UPPER LIMB)															
Jan.	0		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
	5		18 07	17 49	17 31	17 10	16 58	16 44	16 27	16 07	15 57	15 46	15 34	15 20	15 03
Feb.	25		18 16	18 02	17 47	17 30	17 21	17 10	16 57	16 41	16 34	16 25	16 16	16 06	15 54
	30		18 17	18 04	17 50	17 35	17 26	17 16	17 04	16 49	16 42	16 35	16 27	16 17	16 07
Mar.	5		18 15	18 11	18 07	18 02	17 59	17 56	17 53	17 49	17 47	17 45	17 43	17 40	17 38
	10		18 15	18 11	18 08	18 05	18 04	18 02	18 00	17 59	17 57	17 56	17 54	17 53	17 50
Apr.	15		18 12	18 11	18 10	18 08	18 08	18 07	18 06	18 05	18 05	18 04	18 04	18 03	18 02
	20		18 11	18 11	18 11	18 11	18 12	18 12	18 12	18 13	18 13	18 13	18 14	18 14	18 15
END OF ASTRONOMICAL TWILIGHT															
Jan.	0		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
	5		19 22	19 04	18 50	18 35	18 29	18 21	18 13	18 06	18 02	17 59	17 56	17 52	17 48
Feb.	25		19 29	19 15	19 03	18 53	18 49	18 44	18 39	18 35	18 33	18 30	18 29	18 27	18 25
	30		19 29	19 17	19 06	18 57	18 53	18 49	18 45	18 41	18 40	18 39	18 38	18 36	18 35
Mar.	5		19 24	19 21	19 20	19 21	19 23	19 26	19 31	19 37	19 40	19 43	19 47	19 52	19 58
	10		19 23	19 21	19 21	19 24	19 28	19 32	19 37	19 45	19 49	19 53	19 58	20 05	20 11
Apr.	15		19 21	19 21	19 23	19 28	19 32	19 37	19 44	19 54	19 59	20 04	20 10	20 17	20 25
	20		19 20	19 21	19 24	19 31	19 37	19 43	19 51	20 03	20 08	20 15	20 23	20 31	20 41

SOUTHERN LATITUDES (July to October)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Date	July 1	6	11	16	22	27	Aug. 1	Aug. 7	12	17	23	29	Sept. 4	Sept. 7	12	17	22	27	Oct. 3	Oct. 8
Use	Jan. 0	5	10	15	20	25	Jan. 30	Feb. 4	9	14	19	24	Feb. 29	Mar. 5	10	15	20	25	Mar. 30	Apr. 4
Apply		+1	0	-2	-3	-4	-6	-7	-8	-9	-10	-11	-12	-13	-14	-14	-15	-15	-15	-15

SUNRISE AND TWILIGHT

LOCAL MEAN TIME OF SUNRISE AND BEGINNING OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Date		Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
SUNRISE (UPPER LIMB)															
Apr.	4		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
	9		6 00	5 56	5 51	5 46	5 43	5 39	5 35	5 30	5 28	5 26	5 23	5 20	5 16
May	29		5 54	5 43	5 32	5 19	5 11	5 03	4 52	4 40	4 34	4 28	4 21	4 13	4 03
	4		5 53	5 42	5 29	5 15	5 06	4 57	4 45	4 31	4 25	4 18	4 09	4 00	3 50
June	24		5 53	5 38	5 21	5 02	4 51	4 38	4 22	4 03	3 54	3 44	3 32	3 19	3 03
	29		5 54	5 38	5 20	5 00	4 48	4 35	4 18	3 58	3 48	3 38	3 25	3 11	2 54
July	23		5 57	5 40	5 21	4 59	4 46	4 31	4 13	3 50	3 39	3 27	3 13	2 56	2 35
	28		6 00	5 42	5 23	5 01	4 48	4 33	4 15	3 53	3 42	3 30	3 16	2 59	2 39
BEGINNING OF ASTRONOMICAL TWILIGHT															
Apr.	4		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
	9		4 51	4 46	4 38	4 26	4 17	4 08	3 54	3 36	3 28	3 18	3 06	2 53	2 36
May	29		4 43	4 31	4 16	3 54	3 39	3 22	2 58	2 25	2 07	1 44	1 11		
	4		4 42	4 29	4 12	3 47	3 32	3 13	2 48	2 10	1 49	1 19	0 15		
June	24		4 39	4 22	3 59	3 29	3 09	2 43	2 06	0 58					
	29		4 40	4 22	3 58	3 26	3 06	2 38	1 58	0 32					
July	23		4 42	4 22	3 57	3 22	2 59	2 28	1 40						
	28		4 44	4 24	3 59	3 25	3 01	2 30	1 43						

SOUTHERN LATITUDES (October to January)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Date	Oct. 8	12	17	22	27	Nov. 1	Nov. 6	11	16	20	25	30	Dec. 5	9	14	19	23	28	Jan. 1	Jan. 7
Use	Apr. 4	9	14	19	24	Apr. 29	May 4	9	14	19	24	29	June 3	8	13	18	23	28	July 3	July 8
Apply		-15	-15	-15	-14	-14	-13	-12	-12	-11	-10	-9	-7	-7	-6	-4	-3	-2	0	0

SUNSET AND TWILIGHT

LOCAL MEAN TIME OF SUNSET AND END OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Date	Lat.	SUNSET (UPPER LIMB)												
		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
Apr.	4	18 06	18 11	18 15	18 21	18 24	18 27	18 32	18 37	18 39	18 42	18 44	18 48	18 51
	9	18 05	18 11	18 17	18 24	18 28	18 32	18 38	18 44	18 47	18 51	18 55	18 59	19 03
	14	18 04	18 10	18 18	18 27	18 32	18 37	18 44	18 52	18 56	19 00	19 05	19 10	19 16
	19	18 02	18 11	18 20	18 30	18 36	18 42	18 50	19 00	19 05	19 09	19 15	19 21	19 28
	24	18 01	18 11	18 21	18 33	18 40	18 48	18 57	19 08	19 13	19 19	19 25	19 32	19 41
May	29	18 01	18 11	18 23	18 36	18 44	18 53	19 03	19 16	19 22	19 28	19 35	19 44	19 54
	4	18 00	18 12	18 25	18 39	18 48	18 58	19 09	19 23	19 30	19 37	19 45	19 55	20 05
	9	18 00	18 13	18 27	18 42	18 52	19 03	19 15	19 31	19 38	19 46	19 55	20 06	20 18
	14	18 00	18 14	18 29	18 46	18 56	19 07	19 21	19 38	19 46	19 55	20 05	20 16	20 30
	19	18 00	18 15	18 31	18 49	19 00	19 12	19 27	19 45	19 53	20 03	20 14	20 27	20 41
June	24	18 00	18 16	18 33	18 52	19 03	19 16	19 32	19 51	20 00	20 11	20 23	20 36	20 52
	29	18 01	18 17	18 35	18 55	19 07	19 20	19 37	19 57	20 07	20 18	20 30	20 45	21 02
	3	18 02	18 18	18 37	18 58	19 10	19 24	19 41	20 02	20 12	20 24	20 37	20 52	21 11
	8	18 03	18 20	18 38	19 00	19 13	19 27	19 45	20 07	20 17	20 29	20 43	20 59	21 18
	13	18 04	18 21	18 40	19 02	19 15	19 30	19 48	20 10	20 21	20 33	20 47	21 03	21 24
July	18	18 05	18 22	18 41	19 03	19 16	19 31	19 49	20 12	20 23	20 35	20 50	21 06	21 27
	23	18 06	18 23	18 42	19 04	19 17	19 33	19 51	20 13	20 24	20 36	20 51	21 07	21 28
	28	18 07	18 24	18 43	19 05	19 18	19 33	19 51	20 13	20 24	20 36	20 50	21 07	21 27
	3	18 08	18 25	18 44	19 05	19 18	19 32	19 50	20 12	20 22	20 34	20 48	21 04	21 23
	8	18 09	18 25	18 43	19 04	19 17	19 31	19 48	20 09	20 19	20 31	20 44	20 59	21 18

END OF ASTRONOMICAL TWILIGHT

Date	Lat.	END OF ASTRONOMICAL TWILIGHT												
		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
Apr.	4	19 15	19 21	19 29	19 42	19 51	20 01	20 15	20 33	20 42	20 52	21 04	21 19	21 36
	9	19 14	19 22	19 32	19 46	19 56	20 07	20 23	20 43	20 53	21 06	21 21	21 38	22 00
	14	19 14	19 21	19 33	19 50	20 01	20 14	20 31	20 55	21 07	21 21	21 38	22 00	22 30
	19	19 12	19 23	19 36	19 54	20 06	20 21	20 40	21 07	21 21	21 37	21 58	22 26	23 15
	24	19 12	19 23	19 38	19 58	20 12	20 29	20 50	21 20	21 36	21 56	22 22	23 04	
May	29	19 12	19 24	19 41	20 03	20 17	20 36	20 59	21 34	21 53	22 16	22 53		
	4	19 12	19 26	19 43	20 07	20 23	20 43	21 09	21 48	22 10	22 42			
	9	19 12	19 27	19 46	20 11	20 29	20 51	21 19	22 04	22 31	23 20			
	14	19 13	19 29	19 49	20 17	20 35	20 57	21 29	22 21	22 57				
	19	19 13	19 30	19 52	20 21	20 40	21 05	21 40	22 39	23 43				
June	24	19 14	19 32	19 55	20 25	20 45	21 11	21 50	23 00					
	29	19 15	19 34	19 58	20 29	20 51	21 18	21 59	23 30					
	3	19 17	19 35	20 00	20 33	20 55	21 24	22 07						
	8	19 18	19 37	20 02	20 36	20 59	21 29	22 15						
	13	19 19	19 39	20 04	20 38	21 02	21 33	22 20						
July	18	19 20	19 40	20 05	20 40	21 03	21 34	22 22						
	23	19 21	19 41	20 06	20 41	21 04	21 36	22 24						
	28	19 22	19 42	20 07	20 41	21 05	21 36	22 25						
	3	19 23	19 42	20 08	20 41	21 04	21 34	22 19						
	8	19 24	19 42	20 06	20 39	21 02	21 31	22 14						

SOUTHERN LATITUDES (October to January)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Date	Oct. 8	12	17	22	27	Nov. 1	Nov. 6	11	16	20	25	30	Dec. 5	9	14	19	23	28	Jan. 2	Jan. 7	
Use	Apr. 4	9	14	19	24	Apr. 29	May 4	9	14	19	24	29	June 3	8	13	18	23	28	July 3	July 8	
Apply	-15	-15	-15	-15	-14	-14	-13	-12	-12	-11	-10	-9	-7	-7	-5	-4	-3	-2	0	0	+1

SUNRISE AND TWILIGHT

LOCAL MEAN TIME OF SUNRISE AND BEGINNING OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Date	Lat.	SUNRISE (UPPER LIMB)												
		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
Jan.	3	6 00	5 43	5 25	5 07	4 50	4 36	4 18	3 56	3 46	3 34	3 20	3 04	2 44
	8	6 01	5 45	5 26	5 05	4 53	4 39	4 21	4 00	3 50	3 38	3 25	3 10	2 51
	13	6 02	5 46	5 28	5 08	4 56	4 42	4 26	4 05	3 55	3 44	3 32	3 17	3 00
	18	6 03	5 47	5 30	5 11	4 59	4 46	4 30	4 11	4 01	3 51	3 39	3 25	3 09
	23	6 03	5 48	5 32	5 13	5 03	4 50	4 35	4 17	4 08	3 59	3 48	3 35	3 20
Aug.	28	6 03	5 49	5 34	5 16	5 06	4 54	4 41	4 24	4 15	4 06	3 56	3 45	3 31
	2	6 03	5 50	5 36	5 19	5 10	4 59	4 46	4 30	4 23	4 15	4 05	3 55	3 43
	7	6 02	5 50	5 37	5 22	5 14	5 04	4 52	4 38	4 31	4 23	4 15	4 06	3 55
	12	6 02	5 51	5 39	5 25	5 18	5 08	4 58	4 45	4 39	4 32	4 25	4 16	4 07
	17	6 01	5 51	5 40	5 28	5 21	5 13	5 04	4 52	4 47	4 41	4 35	4 27	4 19
Sept.	22	5 59	5 51	5 42	5 31	5 25	5 18	5 10	5 00	4 55	4 50	4 44	4 38	4 31
	27	5 58	5 51	5 43	5 34	5 29	5 23	5 16	5 07	5 03	4 59	4 54	4 49	4 43
	1	5 57	5 51	5 44	5 37	5 33	5 28	5 22	5 15	5 12	5 08	5 04	5 00	4 55
	6	5 55	5 50	5 45	5 40	5 36	5 32	5 28	5 22	5 20	5 17	5 14	5 10	5 07
	11	5 53	5 50	5 46	5 42	5 40	5 37	5 34	5 30	5 28	5 26	5 24	5 21	5 18
Oct.	16	5 52	5 50	5 48	5 45	5 43	5 42	5 40	5 37	5 36	5 35	5 33	5 32	5 30
	21	5 50	5 49	5 49	5 48	5 47	5 46	5 46	5 45	5 44	5 44	5 43	5 42	5 42
	26	5 48	5 49	5 50	5 50	5 51	5 51	5 52	5 52	5 53	5 53	5 53	5 53	5 54
	1	5 46	5 49	5 51	5 53	5 55	5 56	5 58	6 00	6 01	6 02	6 03	6 04	6 05
	6	5 45	5 48	5 52	5 56	5 59	6 01	6 04	6 08	6 09	6 11	6 13	6 15	6 17

BEGINNING OF ASTRONOMICAL TWILIGHT

Date	Lat.	BEGINNING OF ASTRONOMICAL TWILIGHT												
		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
July	3	4 43	4 26	4 00	3 27	3 04	2 33	1 47						
	8	4 44	4 27	4 03	3 30	3 07	2 38	1 54						
	13	4 48	4 29	4 05	3 33	3 11	2 43	2 02	0 25					
	18	4 48	4 31	4 08	3 37	3 16	2 49	2 11	0 58					
	23	4 50	4 32	4 11	3 41	3 21	2 56	2 20	1 20					
Aug.	28	4 50	4 34	4 13	3 45	3 26	3 03	2 30	1 38	0 59				
	2	4 51	4 36	4 15	3 50	3 32	3 10	2 40	1 55	1 26	0 29			
	7	4 50	4 36	4 18	3 54	3 38	3 17	2 50	2 10	1 46	1 13			
	12	4 51	4 38	4 21	3 58	3 43	3 25	3 00	2 24	2 05	1 39	1 00		
	17	4 50	4 39	4 23	4 02	3 49	3 31	3 09	2 38	2 21	2 00	1 33	0 44	
Sept.	22	4 50	4 39	4 26	4 07	3 53	3 38	3 18	2 50	2 37	2 19	1 50	1 27	0 23
	27	4 48	4 40	4 27	4 11	3 59	3 45	3 27	3 02	2 50	2 35	2 17	1 54	1 21
	1	4 48	4 40	4 29	4 14	4 04	3 51	3 35	3 13	3 03	2 50	2 35	2 16	1 52
	6	4 46	4 41	4 31	4 17	4 08	3 57	3 43	3 24	3 15	3 04	2 51	2 35	2 16
	11	4 45	4 40	4 32	4 21	4 13	4 03	3 50	3 34	3 26	3 17	3 06	2 53	2 37
Oct.	16	4 43	4 40	4 33	4 24	4 18	4 09	3 58	3 44	3 36	3 29	3 19	3 09	2 56
	21	4 41	4 39	4 35	4 27	4 21	4 14	4 05	3 53	3 47	3 40	3 32	3 23	3 12
	26	4 39	4 39	4 36	4 30	4 26	4 20	4 13	4 02	3 57	3 51	3 44	3 36	3 27
	1	4 38	4 39	4 38	4 34	4 30	4 25	4 19	4 10	4 06	4 01	3 56	3 49	3 42
	6	4 36	4 38	4 39	4									

SUNSET AND TWILIGHT

LOCAL MEAN TIME OF SUNSET AND END OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Table with columns: Date, Lat., 0°, +10°, +20°, +30°, +35°, +40°, +45°, +50°, +52°, +54°, +56°, +58°, +60°. Rows for July, Aug., Sept., Oct. showing sunset times.

END OF ASTRONOMICAL TWILIGHT

Table with columns: Date, Lat., 0°, +10°, +20°, +30°, +35°, +40°, +45°, +50°, +52°, +54°, +56°, +58°, +60°. Rows for July, Aug., Sept., Oct. showing end of twilight times.

SOUTHERN LATITUDES (January to April)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Table with columns: Date, Jan, Feb, Mar, Apr. Rows for Use and Apply with correction values.

LOCAL MEAN TIME OF SUNRISE AND BEGINNING OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Table with columns: Date, Lat., 0°, +10°, +20°, +30°, +35°, +40°, +45°, +50°, +52°, +54°, +56°, +58°, +60°. Rows for Oct., Nov., Dec. showing sunrise times.

BEGINNING OF ASTRONOMICAL TWILIGHT

Table with columns: Date, Lat., 0°, +10°, +20°, +30°, +35°, +40°, +45°, +50°, +52°, +54°, +56°, +58°, +60°. Rows for Oct., Nov., Dec. showing beginning of twilight times.

SOUTHERN LATITUDES (April to July)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Table with columns: Date, Apr, May, June, July. Rows for Use and Apply with correction values.

SUNSET AND TWILIGHT

LOCAL MEAN TIME OF SUNSET AND END OF ASTRONOMICAL TWILIGHT—MERIDIAN OF GREENWICH

Date	Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		SUNSET (UPPER LIMB)												
Oct.	1	17 53	17 51	17 48	17 46	17 44	17 42	17 41	17 38	17 38	17 36	17 35	17 34	17 33
	6	17 51	17 48	17 44	17 40	17 37	17 34	17 31	17 28	17 26	17 24	17 22	17 20	17 18
	11	17 50	17 45	17 40	17 34	17 30	17 27	17 22	17 17	17 15	17 12	17 09	17 06	17 03
	16	17 49	17 43	17 36	17 28	17 24	17 19	17 14	17 07	17 04	17 01	16 57	16 53	16 48
	21	17 48	17 40	17 32	17 23	17 18	17 12	17 05	16 57	16 53	16 49	16 45	16 40	16 34
Nov.	26	17 47	17 38	17 29	17 18	17 12	17 05	16 57	16 48	16 43	16 38	16 33	16 27	16 20
	31	17 47	17 37	17 26	17 14	17 07	16 59	16 50	16 39	16 33	16 28	16 22	16 15	16 07
	5	17 47	17 36	17 24	17 10	17 02	16 53	16 43	16 30	16 25	16 18	16 11	16 03	15 54
	10	17 48	17 35	17 22	17 07	16 58	16 48	16 37	16 23	16 16	16 09	16 01	15 52	15 42
	15	17 48	17 35	17 20	17 04	16 55	16 44	16 31	16 16	16 09	16 01	15 52	15 42	15 30
Dec.	20	17 49	17 35	17 19	17 02	16 52	16 40	16 27	16 10	16 02	15 54	15 44	15 33	15 20
	25	17 51	17 35	17 19	17 01	16 50	16 38	16 23	16 05	15 57	15 48	15 37	15 25	15 11
	30	17 52	17 36	17 19	17 00	16 49	16 36	16 20	16 02	15 53	15 43	15 32	15 19	15 04
	5	17 54	17 38	17 20	17 00	16 48	16 35	16 19	15 59	15 60	15 40	15 28	15 14	14 58
	10	17 57	17 40	17 21	17 01	16 49	16 35	16 18	15 58	15 49	15 38	15 26	15 11	14 55
	15	17 59	17 42	17 23	17 02	16 50	16 36	16 19	15 58	15 49	15 38	15 25	15 10	14 53
	20	18 01	17 44	17 25	17 04	16 52	16 38	16 21	16 00	15 50	15 39	15 26	15 11	14 54
	25	18 04	17 47	17 28	17 07	16 54	16 40	16 23	16 03	15 53	15 42	15 29	15 14	14 57
	30	18 06	17 49	17 31	17 10	16 58	16 44	16 27	16 07	15 57	15 46	15 34	15 19	15 02
	35	18 09	17 52	17 34	17 14	17 02	16 48	16 32	16 12	16 03	15 52	15 40	15 26	15 10

END OF ASTRONOMICAL TWILIGHT

Date	Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		END OF ASTRONOMICAL TWILIGHT												
Oct.	1	19 02	19 01	19 01	19 05	19 08	19 12	19 19	19 28	19 31	19 35	19 40	19 46	19 54
	6	19 00	18 58	18 57	18 59	19 01	19 04	19 08	19 15	19 18	19 22	19 26	19 31	19 37
	11	18 59	18 55	18 53	18 53	18 54	18 57	18 59	19 04	19 07	19 10	19 13	19 17	19 22
	16	18 59	18 53	18 50	18 48	18 48	18 49	18 52	18 54	18 56	18 59	19 01	19 04	19 07
	21	18 58	18 51	18 46	18 43	18 42	18 42	18 43	18 45	18 46	18 47	18 49	18 51	18 53
Nov.	26	18 57	18 49	18 43	18 38	18 37	18 36	18 35	18 36	18 36	18 37	18 38	18 39	18 41
	31	18 58	18 49	18 41	18 35	18 33	18 31	18 29	18 28	18 27	18 28	18 28	18 29	18 29
	5	18 58	18 48	18 39	18 31	18 28	18 26	18 23	18 20	18 21	18 19	18 19	18 19	18 18
	10	19 00	18 48	18 38	18 29	18 25	18 21	18 18	18 15	18 13	18 12	18 11	18 10	18 09
	15	19 01	18 48	18 36	18 27	18 22	18 18	18 13	18 09	18 07	18 06	18 04	18 02	18 00
Dec.	20	19 02	18 49	18 36	18 25	18 20	18 15	18 10	18 04	18 02	18 00	17 58	17 56	17 53
	25	19 05	18 49	18 36	18 25	18 19	18 13	18 07	18 01	17 58	17 56	17 53	17 50	17 47
	30	19 06	18 51	18 37	18 24	18 18	18 12	18 05	17 59	17 56	17 53	17 50	17 46	17 43
	5	19 09	18 53	18 38	18 25	18 18	18 12	18 05	17 57	17 54	17 51	17 48	17 44	17 40
	10	19 12	18 55	18 39	18 26	18 19	18 12	18 04	17 57	17 54	17 50	17 47	17 42	17 39
	15	19 14	18 57	18 42	18 27	18 21	18 14	18 06	17 57	17 55	17 51	17 47	17 43	17 38
	20	19 16	18 59	18 44	18 30	18 23	18 16	18 08	18 00	17 56	17 53	17 48	17 44	17 40
	25	19 19	19 02	18 47	18 32	18 25	18 18	18 10	18 02	17 59	17 55	17 51	17 47	17 43
	30	19 21	19 04	18 50	18 35	18 29	18 21	18 13	18 06	18 02	17 59	17 56	17 51	17 47
	35	19 24	19 07	18 52	18 39	18 32	18 25	18 18	18 10	18 08	18 04	18 00	17 57	17 53

SOUTHERN LATITUDE (April to July)

For dates on first line below, enter tables above with dates on second line, and apply the correction (in minutes) given on the third line.

Date	Apr. 2	7	13	18	23	28	May 3	8	13	18	24	29	June 3	9	14	19	25	30	July 5	
Use	Oct. 6	11	16	21	26	31	Nov. 5	10	15	20	25	30	Dec. 5	10	15	20	25	30	Dec. 35	
Apply	+16 +15 +15 +14 +14 +13 +13 +12 +11 +10 +9 +8 +6 +5 +4 +2 +1 0																			

DOMESTIC DX Digest

Randall Kane
37 Myrtle Ave.
Winthrop, Mass 02152



after hours: midnight to sunrise

- 580 KMJ-Cal All that was heard while looking for CKWW DX. (Northam)
- CKWW-Ont DX 4/14 in & out w/QRM, only IDable material was IDs every 5 min. (Russ Edmunds, Hawthorne, NJ)
- unID Hrd just before CKWW Test, like 0210 w/annct: "If it makes nx, you'll hear it on --", was RR. Anybody here early enough to catch call? (Edmunds, NJ)
- 590 KSUB-Utah o/mess 0010 3/29 w/RR & sports. (Chuck Sadoian, Cal)
- 640 WECB-Mass Emerson Carrier-Current, hrd at Beacon & Berkeley Sts. S/off 0158 4/21 w/"God Bless America" by Frank Zappa.
- 770 WCAL-Minn DX hrd only 0250-0300 when WABC finally stopped TT/OCing. (RJE) DX fair 0103-0110, QRM from KOB testing. (Clam -that's Sadoian, friends- Cal) DX Began 0115 4/15 - good pgm w/march mx, strong w/WABC TT nulled. (Starr)
- 800 KINY-Alaska o/everything 4/5 0440 w/mixed mx & Midnight Sun net nx at 0500, many ads. (Clam, Cal)
- 830 KIKI-Hawaii very poor o/WCCO 0230 3/31 w/EE ID, then JJ. (Sadoian)
- 860 KONO-Texas real bad 0530 4/5, I thought XEMO usually ran AN? →
- 940 KHOS-Ariz 0320 3/30 mx, nx. (Sadoian, Dinuba, Cal)
- KIXZ-Tex 0328 3/30 w/KHOS, also mx & nx. (Clam)
- 990 KTKT-Ariz 0347 3/30 w/RR & SIDs, do dem verie? (Clam) What's your problem, son? (A)
- 1010 KD JW-Tex Excellent w/C&W, many IDs 0315 4/2. (Sadoian, Cal)
- 1090 WQIK-Fla ET/C&W 4/10, played some George Jones. Probably Reynold's unID in 4/5 DDXD, these ETs are quite regular. (Starr)
- 1130 KLEI-Hawaii noted w/Hawaiian mx, loud IDs 0402 3/30 o/GKWX; auroral no doubt. (Sadoian, Cal)
- 1150 KCKY-Ariz IRCA DX not hrd here, CJRC AN & CKOC on past listed s/off were on top. (Edmunds) CKOC reported NSP. (A)
- KRKD/KAYO Los Seattle, Caliton. (Right. A) Only stns hrd while looking for KCKY DX 0324 & 0405 4/14. SAN showed other stns on (natch), but no audio possible. (Northam, Oreg)
- KAYO-Wash Good w/C&W mx, SIDs 0504 4/6 after KRKD s/off. (Clam)
- 1220 KFSC-Colo S9 at times during very enjoyable DX Test 0329-0359 4/14. Ranchero mx, EE/SS IDs, TCs 2 min fast- WWV not audible in Denver? QRM from CKDA OC (per DF) and (presumably) CJOC intermitently. (Mike Northam, Beaverton, Oreg) DX began 0329 4/14, really this time (hi) w/fair sigs & TCs 2 min fast. (Starr, Ohio) Test not hrd here, random TT w/deep cycle TT on top. Faint talk u/it but nothing readable. (Edmunds, NJ) A low-pitched audible het between CKDA/CJOC, somebody way off. (more Northam)
- 1230 KGEE-Cal Presumably the one on top going into NBO nx 0400 4/14, C&W underneath. (Northam, Oreg)
- 1240 unID KSON-Cal may have been the one in briefly w/C&W and possibly mentions of IRCA 0340-0350 3/24 way u/KMBY-KROY. (mbn)
- 1270 KTFI-Idaho s/off 0115 4/5. (Sadoian, Cal)

- 1270 WLBR-Pa ET-mx/TT 0120-0200+ 4/10 w/plenty of that great line: "Testing testing 1-2-3". Gosh, real radio talk! (Starr) Watch out or he'll cue you up a double segway. (sk)
- KFJZ-Tex o/u CHAT w/RR 0115 4/5. (Clam, Cal)
- CHAT-Alta o/u KFJZ w/mx 0127 4/5. (Clam, Cal)
- 1280 WECB-Mass Emerson Carrier-Current X 2, at Beacon & Berkeley Sts. S/off 0158 4/21 w/"God Bless America" by Frank Zappa. S/off-SSB 0100 4/21. (sk, GJ Fox, Mass)
- +1340 WIRY-NY S/off-SSB hrd 0058 4/17. (Waldron, NJ) (mbn)
- + WHAP-Va S/off-GSQ 0405 4/7 //CKKC-1390. Fair u/presumed KMAK. 6
- + CFKC-BC Good w/MoR 0333-0345 4/7 o/very weak unID MoR stn. "Stood by" 0340-0346 "to allow 2 other stns to adjust instruments", but nothing hrd then. (Northam, Oreg)
- 1350 WSMB-La S/off-GSQ o/unID C&W 0405 4/7, //CFKC-1340. (mbn)
- +1390 CKKC-BC 0300 3/30 s/off after "Meditations". (Sadoian)
- 1440 KMED-Oreg ET/mx 0407 tune-in to 0415 tune-out 4/7. Anned as being on "for about another hour", dominant. (mbn)
- 1460 WOKO-NY ET-mx/TT 0130-0200+ 4/14, way o/weak unID RS. (RJE)
- 1480 KWIZ-Cal ET/mx 0353 tune-in till off 0410 3/24. Left OC on. (mbn)
- 1490 KAIR-Ariz 1st time hrd w/MoR & "KAIR (care) continuous mx" IDs 0416-0430 4/7 while looking for KBOL. unID C&W w/them DF N/S- KWAC? (Northam, Oregon)
- KOWL-Cal Began ET/rr 0321 4/7. (mbn)
- * KVAC-Wash F/c w/1 kc TT and C&W IDs...make that CW IDs (my error; anybody want to buy some solid correction fluid? sk) every 30 sec 0315-0330 4/7. Voice ID and s/off at 0330, poorly modulated. (Northam, Oreg)
- 1550 WEXT-Conn ET-C&W/OC 0400+ 4/14; must have been an engineer from WTYM. He gave that call once, then said "oops". (*)
- * WTHB-Ga Unlisted f/c-TT 0200-0220 4/16. (Starr, Ohio)
- WPXY-NC Wierd ET 0058 4/18, ID: "WPXY provides other stns with ideas, we charge no price for this service"! (Waldron)
- WKBA-Va Very RS-sounding MoR ET w/DJ, bad CBE QRM 0050 4/19. (sk)
- +1590 WTBY-Conn Was AN 4/19. (Waldron, NJ) Also MM 4/21, seems NSP. (sk)

schedules and other info

- + 620 KNGS-Cal AN6 w/C&W, off MM. (Sadoian, Cal)
- ** 670 WWED-Mass Westfield State College carrier-current; 1800-0000 weekdays, 1300-0200 weekends. Plans "higher power, to be hrd off campus", possibly means a switch to FM. (Phil Sulli-
- ++ 800 KINY-Alaska AN Sun, Mon AMs. (RJE) **van, Leominster, Mass**
- ++ 920 KORK-Nev CP granted for 5000/500 U2. (Edmunds, NJ)
- ++ 930 CP-PR Cabo Rojo, granted WEKO. (Broadcasting)
- ++1050 CP-NY Mechanicville, 250 D. (Broadcasting)
- ++1130 WWCM-Ind Brazil, CP here is 500 D3. (RJE)
- ++1060 WHFB-Mich Power is 5000 D1, CH 1000. (RJE)
- ++1130 CP-Ohio Addr is 505 N. Barron St., Eaton 45320. (Edmunds)
- ++1150 CJTR-Que Is not AN. (Edmunds)
- +1490 KBIX-Okla CP is on. (Edmunds)
- +1500 CP-NC Rockingham, 500 D1 (CH:250). (Broadcasting) (Waldron)
- +1550 CBE-Ont New sked: 0500-0200 Mon-Fri, 0600-0200 Sat, ?-0110 Sun.
- +1560 CP-SC Clamson, 1000 D. (Broadcasting)
- +1590 CP-Cal McFarland, 500 D. (Broadcasting)

The new symbol above- "++" -is an important one. These items are Log changes useful to all but especially directed to keypunchers, because the changes fall in the part of the Log which they already have. Please make the necessary corrections & additions, volunteers. Much held back.

73, randy

April 26, 1969

RUSS EDMUNDS - Box 291 - Hawthorne, New Jersey - 07507

Hi there, sports fans - here we go again. I have just completed updating my log w/JAC's updater, & it's some job, hi. It took me the better part of eight hours. Then I checked back issues of DDX & Cooper-Trent listings, cross-checked w/updater & found another 50-75 items, mostly from March issues after JAC printed his. Y'know if everybody submitted log changes, even addresses & skeds to DDX, & th n updated logs from there (which I'll sure as heck do from now on) we'd never have to fight a 13-page updater every 4-6 months. Anybody still wanting a copy of the NYC area images & spurs list, send an SASE, I've several left. Speaking of images, (GPN note) my image on 1070 is a QUADRUPLE mixing spur w/WJRZ/WPAT/WINS/WHN, all there. This of course isn't calculated on the list - just double mixes. Other new & exciting images include WBNXon 1170 (also not charted). At least w/the new antenna tuner, I can tune around most of them. Now just the big ones on 1070 & 1030 (WJRZ) are major problems. Recent veries include WDEL v/1; CKOY v/q & CKFH v/f Reports still out to CJSS CHSC WLOB ROMA WVOJ SRS CHIN (trying to get definite verie-) 1380 w/WBNX inexplicably off about ten minutes. Um WYNS-1150 "Radio "wins" again, 5:48. MM 4/14- A lovely WABC image on 690. WOKO-1460 had frequency tied up most of AM w/test. A weak unID W-call w/RS u/it. 1150 was all CJRC & CKOC, the latter should'n't have been there per log; 580 had CFRA, an unID rr, & an unID TTer all o/ CKWW at one time or another. Only readable part of the test was IDs every five minutes.

Reports to CKWW & CFRA. 770 had WABC pest-test till about 2:50 when I got WCAL TEST for ten minutes. Another TT there, probably KOB, also what must have been YVQQ. 1220 yielded nothing but an unID TT w/low cycle tone & a voice talking incoherently (hi) way u/it. So, two for four on TESTs. I gave up after as I'd been away & had but little sleep o/the weekend, plus a touch of virus to boot. Can't win 'em all, hi. (Spoken like a true Met fan, Russ -ERC)

DAVID E. ROYS - 7 Iler Drive - Middletown, New Jersey - 07748

Greetings, radko fans. April 2 found WRIN-1560 Ind. testing from 1:25 to 1:30am. At 1:40, KPFC was sneaking u/the Cuban, but faded quickly. On 4/5 WPAI-1560 logged on test as well as KOBT-1550 Nev. playing cl mx. 4/6- CBT-540, never heard in Iddiana by me, was easily logged atop channel. Also WCAL TEST in well for report. Report off w/crossed fingers to Vimitza-1546 Ukrainian SSR; registered letter w/written report & tape sent! I wasn't too sure if I could send a tape to USSR, but US postal laws DO permit it. Anxiously I wait new logs plans so I can start construction. I plan to build mine entirely out of plastic, which is available in all forms from plastic distributors. Cost is surprisingly low. I will hold all plans for special litz wire until then. Those who have commented about it please be patient. I am pleased to announce that the third in a continuing series of DX gatherings will be held on 6/21/69 here at 7 Iler Drive. I hope many will attend. I will repeat travel instructions later, although many of you will not need them, hi. I hope all you students who could not make it before due to classes will be able to make the scene on 6/21. I have been working on my RX console to get more things wired up, such as tape recorders. I have a control panel about the HQ-100 which oerates entire console & tape recorder. Groovy. 30.

CLIFF RENO - 75 Parish Road - New Canaan, Connecticut - 06840

Well, I'm back. I have no DX to report due to a broken RX. I'm not sure what's wrong w/it but I think it's the tubes. MM 4/14 I heard a station in EE on 770 from 1-1:15 w/MoR & cl mx w/WABC off (only occasional OC). Could this have been the WCAL TEST? With my luck it's RHR! Veries: WNTN-1550 v/1. I will check poor totals next Muse. I really don't know what a f/c is as I don't think I've heard one, however I've caught WBBM-780 Chicago every other MM @ one minute before the hour w/the announcement, "This is WBBM Chicago, testing on 780 kilohertz." Is this a f/c? One word on Ernie's Muse in 4/12 DX NEWS. True we really should'n't gripe about our poor DX (if it's so) as I have WJDX-620 Miss. lkw. on SSS (verie too) but suppose an NRCer has no reception of those or SA SS stations? He couldn't really jump for joy.

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You're still doing a FANTASTIC job ERC, if it wasn't for you we wouldn't be here, would we fellows? Do you really think it was fair to turn in the Pirate on 1610 in Ohio? Do you think the NRC should be a bunch of "Stoolies", hi. I guess it was the right thing to do but still... Well, 'tis time to say 73 & good DX, support the CPC

LEWIS WHITE - 4 Mansfield Road - Trenton, New Jersey - 08628

Remember me from BOSTON Convention? Well, I'm having a get-together that Dave Schmidt & I are co-sponsoring & I'd appreciate it very much if you'd publish the details. It will be held Sat. May 17 at my home beginning about 12:30pm. It's an easy drive for anyone as far North as Connecticut or South in D.C. area. If enough interest is shown tours of local stations can easily be arranged. Directions are as follows: From the South: From N.J. Turnpike Northbound off at Exit 7 (Bordentown-Trenton), then go onto Route 206 following signs to Trenton. Proceed on 206 which goes right into South Broad Street, follow Broad all the way up until large battle monument, then follow signs to Route 31 North. Proceed on that road & make your first left after the Trenton Reservoir (you can't miss it, a very large hill on your right) on Parkway Avenue. Stay on Parkway Ave. past General Motors' plant, then after GM, turn right at next traffic light. Proceed up Bear Tavern Road until you reach Gulf Station at which point you turn left, then make first left, then first right onto Mansfield Road (second house on right). From North: Take Route 1 past Princeton to Howard Johnson's onto Route 546. Then follow signs to Mercer County Airport which will eventually lead you off Route 546 onto Scotch Road. On Scotch Rd. take first right on Nursery Road & follow it to the end & make a right on Bear Tavern Road at which point follow same directions as Southbound. I'd appreciate it if anyone coming either write me or phone me (609-883-5476 after 6pm please, so proper arrangements can be made. Both the Penn & Reading RR stop in Trenton if you care to travel that way. If so please phone so someone can pick you up. This will probably be the last area get-together before the ST. LOUIS Convention, so we're expecting a good-sized turnout.

JOHN SAMPSON - 4148 Wycliff Drive - Winston-Salem, North Carolina - 27106

The month at home while recuperating from surgery resulted in lots of loggings of some of our daytime regulars, but lots poorer results in returns. Out of 50 reports sent out, only 20 answered - so it's f/up time in a while. Those that did verify included WHPE-1070 High Point NC, WNRV-990 Varrows, Va.; WMEV-1010 Marion Va.; WAYN-900 Rockingham, NC; WJCW-910 Johnson City, Tenn.; WRRZ-880 Clinton, NC; WKIX-850 Raleigh; WMYN-1420 Mayodan, NC; WDMC-620 Durham; WLFC-1370 Gastonia; WSAT-1280 Salisbury, NC; WCOY-910 Roanoke; WADA-1390 Shelby, NC; & WAGR-1580 Lumberton, NC. There are about 150 stationx loggable here during the daytime, so that is keeping me busy in itself. I did get up this last SM 4/13 to log WLOS-1380 in Asheville NC from 6am s/n until 6:17 fade-out & WMCT-1390 Mountain City Tenn. @ 6 s/on. Local WLOB, which covers both frequencies most of the day doesn't s/on until 6:30 SMs, giving a good chance to get some "rare" loggings here. On MM 4/14, I heard the WCAL TEST in poorly @ 2am to 2:30 but very strong @ 2:50. WABC (I suspect) was testing, too, but seemed to go off later on. It was lots of fun to hear the TEST from the town of "Cows, Colleges, & Contentment" as I went to school at Carleton, across the river from St. Olaf. Tests from CKWW & KPBC not heard - rather static night. I did hear WAYS-610 Charlotte running AN 100 - I don't know when their SP is if they have one. Also I heard WNEK-1400 Macon, Ga. w/AN program but unfortunately not enough to log. The 1340 1400 1450 & 1490 graveyards have so many AN stations on MM that loggings are rarely possible. NRC Magazine continues to look real fine here. I have been receiving it on Monday of late. Keep up the fine work, all concerned;

GLENN HAUSER - Box C 8638 - Lowry AFB, Colorado - 80230

KFML has turned over the reports and tapes for their test to me. There were only 13, of which only one was atrocious. The geographical spread: seven from Cal., two from Wash., two from Colo. (both Denver, including mine) & one each from Idaho & Florida. Most distant was Jerry Conrad in Florida, 1,540 miles. Next

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was by Roy Millar in Washington at 1,025 miles. Two tapes came from Sheldon Goodman & Roy Millar. Thanks! I was a bit disappointed that there were no reports from NE of Denver. If the Californians could manage through KGER, & Conrad through the Cuban... Fully five of the letters were on IRCA stationery; one was on NRC stationery. Everybody should have received veries by now. A few choice comments: "I would like to thank you, and the station, for airing the test, very very much. It was nice to hear something besides KOA." Bill G. Powers. "It was certainly a pleasure to hear your station, the first time ever for me, & to find KFML received fairly easily through 5 kilowatt KGER." Donald K. Kaskey. "...many thanks for your consideration! KFML was actually the best 1390k catch I've logged since moving into "KRKO Country" some seven years ago." Roy H. Millar. I hope to have similar reports on the KBOL & KPSC TESTS, both of which were aired as scheduled. 73.

RICHARD E. WOOD - 1630 Ruth Place - Honolulu, Hawaii - 96816

Verifications: KWFT- 620 Tex., first from Hawaii; KPOJ-1330 Ore.; WIBW-580 Kans.; KFJZ-270 Tex.; KGHL-790 Mont.; KTCM-1380 Cal.; KPUR-1440 Tex. The WCAL Special came through nicely; I liked the juxtaposition of the classy harpsichord mx & the earthy NX item of skunks in Wyoming. Thanks to the CPC for arranging the Special when the channel was clear nation-wide. The others didn't make it. Others reported are KDDA-1560 Ark., a 500w daytimer which I count as my rarest U.S. catch; KRMG-740 Okla.; KCBS-740 Cal.; KEPR-610 Wash.; KLEO-1480 Kans.; KOIN-970 Ore. KSCO-1080 Cal.; KMYC-1410 Cal.; KLAK-1600 Col.; CBE-1550 Ont., KERN-1410 Cal.; KCRG-1600 Ia. I now have a new loop, physically a lot bigger than my old one; it is 7' x 7'! 3 1/2 turns on a frame of two 10' 2x2s. Only a fixed capacitor is required. At present, it scrapes both floor & ceiling and occupies a commanding position in the living room. Soon, it will be transferred to a rotor on a tower. The smaller loop is kept for mobile use. The bit loop has good gain & produces a fair null on the locals. It does things which the old loop could not, e.g., nulling usually booming KFRC-610 to log KEPR. My logging of WLAC-1510 brought me my 35th state heard, Tenn. Still needed are Ala. Miss. N.C. S.C. W.Va. Ind. Wis. N.J. Del. & New England except Mass. Here in the sub-tropics, there is no great difference between Winter & Summer CX, & if things continue it looks as if I will be able to penetrate right to the EC throughout the Summer. My present DXing location is exceedingly favorable for NA, including Alaska, but if I want to repeat last Summer's loggings of the South Pacific it looks as if I will have to continue to use my mobile set-up. I find the friendliest U.S. verifiers to be those in Kansas & adjacent states of the Mid-West, and down into Texas.

ALEX BOWAB - RD/A Class 50A - Great Lakes, Illinois - 60088

I regret that I'll have to cancel the DX TEST I was going to do from WANL. The Navy postponed my transfer date ten days - and this would put me in Ala. about the same date the CE's wife is to have their first child - and he can't be at the station 40 miles away in the middle of the night at a time like that. Well, maybe some other time. I will transfer from here, incidentally, to Norfolk, which will be my home port, though I'll be at sea aboard the Forrestal most of the time. Any DX gatherings coming up in the Va.-Md.-N.J. area? Hey - my first MM DX in years! We had 3/31 off for the Day of Mourning, & the following were noted: KIZ-560 all alone @ 1:45 - never was heard in Ala. WOKJ-1550 alone, believed to s/off @ 2. Locally, WACA-1270 s/off 2:03 at conclusion of NN church service. Who was the Soul/R&B station on 1430? Sounded like a C call. (That's CKFH, Alex - ERC) Usually s/w here, on 1430, w/WIL/WIRE. Interesting to note WONE-980 blasting away w/new s/w format. WGSB-1480 s/off 2am to return @ 6:30. KFTI-1560 Mo. announcing ending EP/TT, I didn't record time, but about 2:15. How about this? My new roommate here at Rad-ar School turns out to be Paul Ellis of Mass.; an ex-NRCer. I was in NRC 1959-1965 & rejoined in '69 - he was a member in '67-'68, so we never had heard of each other!

NEXT ISSUE IN TWO WEEKS. LET'S MAKE IT A REALLY BANNER ISSUE, AND THAT WILL MEAN, OF COURSE, THERE WILL BE A MUSING FROM Y-O-U IN THAT EDITION! AM I RIGHT?

THE DX SHOWCASE

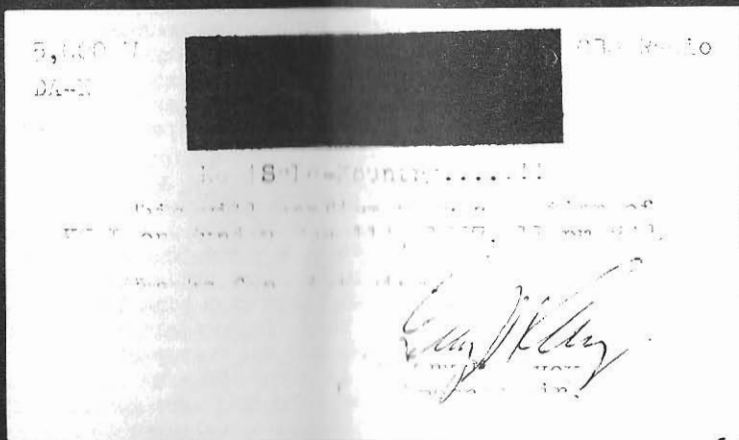


QSL RADIO PROGRESO

Infanta 105 Habana

670 Kc. 680 Kc.
690 Kc. 700 Kc.

HABANA - CUBA - TERRITORIO LIBRE DE AMERICA



Cuba - easy to hear (and how!) but hard to QSL - Dave Carlson of Missouri is proud of this 1966 card from Radio Progreso (black and orange lettering). Roger Winsor counts this KHSL reception as a once in a lifetime because of the early hour and fact that WIRL and KOIL were still on the air; logged from Indiana.

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MARTIN BLUMENTHAL - 10 Cutler Street - Worcester, Massachusetts - 01604

First, my belated thanks to Russ Edmunds & Marc DeLorenzo for the info on WIXZ-1360 which really had me bugged for a while there. Well, the DX season is not quite over, not yet anyway. CX have improved markedly of late, so maybe we can call this the second season. New catches: WAWZ-1380 fighting it out w/ WSYB @ 6:45pm on 4/8. 4/9 saw WCHE-1520 good @ 6:38pm w/no trace of WKBW as this amazing as this amazing April Pa. reception continues. I wonder if Stew Drake is getting good Mass. reception? WVOB-1520 s/off close on the heels of WCHE's s/off. On 4/12 I got up early to try for some early s/ons, but I was so horrified to see almost total daylight @ 5am that I quickly crawled back to bed. Anyway, 4/12 SSS was the best since the Aurora. Tennessee really coming in strong. WSKT-1580 local-like @ 6:50pm, WLIL very well o/CKAC-730 @ 6:55. WARO-540 good @ 7pm s/off. Big surprise was much-wanted WDXN-540 for a few minutes @ 7:17pm f/a report, tillqRN took over. MM 4/14 best in a month, WAKY-790 noted RS u/WFAR @ 1:40am, WAMO-860 ending an ET @ 2:23, mentioning they test weekly. WCAL-770 TEST in fairly well after WABC finally ended ET @ 2:41. I actually had them u/WABC for brief periods prior to this. And of course another mystery station, this one on 1090 after 3am. Someone very loud on RS w/rr, & ads for places in Los Angeles. Looped due West. A tentative sent to KING as the only possibility. But a station in Seattle running ads for Los Angeles? Egad! What's this country coming to? (KING is directional away from that area, Martin- wouldn't it be XERB? -ERC) I sure hope CX hold up till MM 4/21, as it's a holiday in Mass. & I'll be able to pull an AN session. The only other times I could do this, 11/11 & 2/17 were both terrible busts. Maybe the third time's the charm. Veries: Well, I did get v/l's from WVAR-1110 & WLEE-1480, & AhHah! Oh Boy! v/q's from Algeria-529 & 890, & Albania-1394. Nothing like a few foreign veries to brighten up the week, hi. 73s.

JEFF KADET - 8047 Park Overlook Drive - Bethesda, Maryland - 20034

Veries: v/l- WAYD WAOA KIXZ WTAI WKMG KMAM WKRA WMJM WENR WCOX KCAD. v/q- WMOO. v/r- WAEW. DX: MM 4/15 brought us three new loggings, all Specials: WCAL-770 in very well 1:19-1:45am & on u/WABC's intermittent TT/OCs. CKWW-580 3:11-3:25, & KFSC-1220 3:36-3:50 o/u another SS. This brings domestic totals to 1,620/690. Overall add 247 foreign stations (not including Canada) which I stopped logging three years ago. I hereby grant JAC permission to reproduce my WCAS verie, although knowing my luck that week's bulletin wouldn't arrive either. WCAS verie still not received. I'll be staying at the U. of Md. dorms beginning this Fall so the ham radio will probably suffer, but I see no reason why BCB should. I hope to be working in Bosstown this Summer but I might also visit Buffalo again, & there's a chance I just might be going cross-country w/some IRCA friends, so look out. By the way, local WHMC-1150 "The 5,000 watt flower pot" is now AN-6 w/SP on MM 3100-5130. 73.

FRANK WALDRON - 65 Lakeridge Drive - Matawan, New Jersey - 07747

Hi there. DX: 4/13 PM- WENX-1380 noted off & on w/OC @ 11, left a strong CKPC, an FFC, probably CFDA, & a rr w/Jack Armstrong Show to 12, WAMI, I guess. MM 4/14- 12:59 WDAD-1450 s/off-SSB. OC-880 @ 1:30, KIVN maybe? TT on 980, CKCY either it or off. CKWW-DX-580 @ 2:25, IDs every five minutes alternating rr & TT. WABC s/off earlier than usual but of course had to TT till 2:45, after which WCAL TEST was heard, but very poorly due to horrible TVI right on 770. I'm glad to hear they got out coast-to-coast. 4/1r WGAP-1400 r/c-TT heard 1:17-1:25 but some times completely lost in the mess. WEAS-900 r/c-TT @ 2:12, wanted BASE in return for a verie. 4/16- A really big surprise, CJBQ-800 momentarily I&C o/all @ 12:03 w/ NX, then faded out to CKLW/CJAD, no trace afterwards. 4/17- WHAP-1340 Va. rr @ 12:16 then NX & s/off-SSB @ 12:58. Veries are picking up a bit, in both quantity & quality. v/q- Tirana-1394 from Dec., KPMC-1560. v/l- WAKS-1460 & CM, WTAI-1560 WABC-1450 on f/up & new WCVR-1320 believes most distant report. They were very apologetic for taking a month to answer! v/f- WACO-1460. Now 882/520 43/41 9/9 25/17. Best verie: KEOS-1290. Worst: WABC. I rigged up yet another antenna, a 100' V-shaped LW pointed S so I'm prepared for next Invasion from Outer Space. 73.

April 26, 1969

LEN KRUSE - 2675 Glen Oak Street - Dubuque, Iowa - 52001

I'm continuing to enjoy the weekly issues of the NEW "DX NEWS"; really like the "colored" mastheads in recent issues! Again my sincere thanks to Admiral Nelson and his fine staff for an outstanding job for the NATIONAL RADIO CLUB. The latest loggings at this DX Den included 50kw. daytimer CHIN-1540 in Toronto, Ont. on 3/16 from 6:28 to 7am on RS, just before the regular s/on of local KXEL. Station WRPM-1530 Poplarville, Miss. was logged with a test program on 3/17 from 2-2:30am, for the first time; some interference was noted during the period from WAAO on r/c, & an occasional test from WCKY. On 4/3 Station WTCO-1450 Campbellsville, Ky. was logged from 3:30-3:45am w/a f/c-TT for a new logging. Then on 4/6 I logged for the first time Station WADM-1540 Decatur, Ind. w/its RS s/on & programs from 7-7:30am, & just about monopolizing the spot. The RS SM s/on & programs of Station KZYX-1220 Cape Girardeau, Mo. was heard from 7:27-7:45am, for another one heard for the first time. Latest verifications came from CHIN WRPM KMBZ & WADM. CHIN said "Dubuque, Ia is the farthest west that we have had a DX report from." While a nice v/l from WADM tells how happy they were to receive a report from "the heart of the tall corn country" & stated that WADM will join the MRS network on 4/28/69.

DUANE GIESE - Box 69 - Columbia, Missouri - 65201

It has been some time that I sent a Musing but that's due to little DXing which is due to the onset of Spring. DX since last report is: MM 3/17- No KFSC-1220 TEST but a test from CHSC who IDed @ 3:57. This is the one that y'all hear & as you can tell the call letters are about the same & I almost got the idea it was KFSC but it looped N/S so it couldn't have been. 3/24- KMAM-1530 TEST in I&C 3:35-4. 4/2 AM- No try on KPCR-690 TEST as CX were not right to make it in here. MM 4/7- CJOC-1220 2:06 s/off w/GSQ. WBOV-(wow)-1230 f/c from 2:35 TT to 2:45 TO. (TT- Tune-in; TO- tune-out), also sorry for the bowwow joke, hi). WIBG-990 2:50. WKXY-930 TEST for RLA #:10-3:30. KYXI-1520 4:28. 4/13 AM- WANL-1540 TEST not heard but a f/c from WBFJ from 2:28-2:36. I hope that WANL shows up this SM 4/20. MM 4/14- WCAL-770 TEST in I&C from 1:19-2:04 w/WABC testing w/TT off & on I believe, or it was WEW, as no call heard. A very find test from WCAL. KCJB-910 2:30 w/c/w mx which was on due to the floods. Also KPOE-1420 2:42 for the same. That is the only two I heard that were on but there may have been more. CKWW-580 DX 3:11, boy, did I have sore ears when I got done listening to them! The static was very bad at that end of the dial that MM. KFSC-1220 on this time for TEST. The test started 3:28 & the tape was two minutes fast. I noticed that WAGO-690 had an ET on 3/24. Boy, I wish I knew it as this station is from my old home town. Are they on RS now, & if so, when did they first start? I have not got word from up there from a person who was to let me know when they go on & what type of programs they have. I'll be going up Memorial Day weekend & I may stop in & see if they can have another test this coming Winter. I don't think it will snow this time as it did when I went up in January, hi. I hope y'all are planning on ST. LOUIS over Labor Day as there is sure to be a good time had. Also if anyone is passing through Central Mo. this Summer, drop me a line & I'll let you know where my hide-out is. LXXIII.

PAUL KILROY - 2113 Fort Davis Street S.E. - Washington, D. C. - 20020

April 4 brought more solar flares but there has been some calming since. Work sked has cut into the DX time & I have missed almost all the Specials. Bill Cheatham sold the SX-28 several months ago. I will call him soon. According to NNRC (Page Taylor) a CP exists for a new station in the Virgin Islands, 500-D on 1090. In the mail department a v/l & tape returned for BBC-881 reception of 2/24. Experiencing some Summer-type DX: 4/11- WVOW-1290 W.Va. 11:30pm NX. WBEM noted w/ NX @ 11:52 but into mx @ 12:45. Hopefully they won't go the way of WTOP. 4/12- Last year's Pop mx noted behind WCFL @ 12:20pm but unable to ID. 4/13- WVKO-1580 @ 2:25am w/ET/TT. 4/13- An unID TT on 1540 @ 2:33am w/ID @ 2:35. Used DT w/recording "beep" heard every 20 seconds. Was this WANL's TEST? Keep Musings like it is! (We sure will, Paul, & thanks - you can hear WCFL @ 12:20pm??? -ERC)
NEXT ISSUE IN A FORENIGHT. WHY NOT MAKE BURE RIGHT NOW THAT YOU'LL BE IN IT?

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FRANK MERRILL Jr. - 10673 Saline-Milan Road - Milan, Michigan - 48160

Again, it's been a very long time. Since I've heard about 80 new ones since last Muse, I'll list only my better ones. MM 12/16- KIRO-710 @ 3am, KFAX-1100 3:28 w/WKY ET/mx!, KUAT-1550 heard @ SSS. 12/17- KUSH-1600 OK @ s/off-SSS u/WAAM. 12/18- KNCB-1600 L.A. u/WAAM SSS. 12/19- KYAL-1600 TX @ s/off-SSS u/WAAM. 12/20- CSB5--1578. MM 12/23- XEUR-1530 12:55 "R. Onda", WFO TEST, KTKT-990 o/WIBG & @ SSS KBJT-1570, KROF-960 KCAS-1050 250w! 1/4- WYSI-1480 is now WSDS so I logged new call. 1/11- KGFX-1060 S.D. @ SSS. 1/26- KCTO-1540 L.A., KIBS-1410 SSS. 1/27- CJWA-1240 AN, RJR-580/770 w/cricket & WKAQ-580 u/RJR/WIBW. 2/2- WJKM-1090, KIMN-1530 @ SSS, also I think I had KGLA-1540 L.A. but I blew it (I'm not counting it) by tuning back seconds too late. 2/3- Beromunster-1562 (NOT Veronica as I had thought earlier) Veronica told me it wasn't they & they were also kind enough to send me their SC! XEOC-560 "Regalada Medianoche" up to 2, s/off @ 2:03; ???-1065 AN, probably Ecuador but I won't count it, HCM21-1120 "R. Minutera" AN. 2/9- YVMD-900 "R. Mara" & XELT-920 "R. Tapatia" both AN, in fact XELT subsequently was heard on a MM so maybe NSP. Of my five SSS the only on3 worth mentioning is a real goodie, KIUC-1140 Las Vegas s/off u/WVVA @ 8:15pm! I never thought I'd do it, since I don't have a loop. Am I the furthest East? 3/30- KCAW-1510 s/off. MM 3/31- WGAN-560 ID snuck through WIND ET/mx @ 4. MM 4/7- WEZQ-1300 f/c-TT 1:15 (Dan Myers heard WKCY at same time) KTWO-1030 1:33 w/NBC's "IS" & KYXI-1520 @ 4. 4/11 SSS- WNAE s/off accidentally while listening to WKNR. One verie, KIRO for MM 12/16 re-ption. I very rarely send repo to any more. Since last Muse I've seen Bill Racsko & Dan Myers on many occasions, & we've gone a few places together: (1) Battle Creek, Kalamazoo, Ft. Wayne & NW Ohio. (2) Flint. (3) Marquette, also stopping at about every station along the way from Clare on up, including both WNBW & WFIQ; (4) Lansing/East Lansing & Jackson (w/George Greene & Tim Davison who spent the weekend up in Toledo). The Marquette trip originally precipitated for SCing reasons, but it turned out to be almost like a regular station-visiting trip, w/18 stations visited. It's now official- Mich. is going to stay on EST all Summer! But by the time the recount was completed EDT lost by only 488 votes of 4,000,000 cast! That's it, 73s.

DAN MYERS - Box 311 - Toledo, Ohio - 43601

(419)-726-4348 after 5pm. 4/18, 6pm. I don't know if this will make it to ERC in time for the 4/25 DX NEWS or not. Too bad if not, hi. Since this is my second Musing, a think a re-intro is in order. I'm 18, out-of-school, & working full time. I plan to go into the Service some time this Fall (after ST. LOU, hi) I've been DXing since 8/67, & have heard only 484 stations. Totals are 4/4/30; 39/27. I have been without a RX for several months (since my uncle's HQ-129 conked out last Oct.) having just gotten an HQ-180 this 3/25. I can't really say that I've been too active since then, since I've only heard 28 newies on it. Some of those have been: 3/25- 7:25pm, KLPR-1140, 8pm WFBK-1300; 3/26- 1:41am, CKOC-1150 RS, 2:04 KTSB-550 RS, 7:03pm WPIX-690 at SSS (very strange, since I usually get the Cuban by this time), 7:11-7:30 s/off KPFD-1580, 7:29 s/off KOIS-1570, 9:48 WHOO-990. 3/28- WIXZ-1360. 3/30- WLKR-1510 (my ex-closest unheard, hi). 3/31- WPBL-1390 2 (all AM) 2:09 WOKO-1460 f/c, WLEE-1480 RS, 2:30 WDAS-1480 f/c (not NSP?) & WIBG-990 @ 2:51 (no WNOX, they off?) 4/1- CJRN-1600 7:34pm S-7. 4/6- WVKO-1580 on top of WIBJ (usually on top) @ 12:38pm. 4/7- WKCY-1300 1:02am (all AM) f/c, 1:39 KBRK-1430 on late for floods in Brookings area, report sent), 1:57 s/off WGSB-1480; 1:58 RS WIBM-1480, 2 WIL-1430, 2:35 WACO-1460. I talked w/G. DeLorenzo, & he said Marc heard them also, no more MM SP? 4/14- WCAL-770 TEST @ 2:35am. If you arrange a CPC TEST, be sure to have these stations ID fairly often. I had yo hang onto this one for almost ten minutes! And almost lost it due to WJR-760 splatter. Would you believe there's too many images on my RX, hi" FM & I will be in Chicago & ST. LOUIS, I hope to et in a Musing every week from now on, so you can all suffer from my rambling on, hi.

BEN DANGERFIELD - 202 Governor's Drive - Sproul Estates - Chester, Penna. 19013

I agree, Auroral CX can produce some very unusual reception, but at this point, I say enough's enough! How about an opening into the South Pacific,

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for example? (How about a pair of tickets, hi -ERC) Or maybe Angola? So much for reveries. Here's what I've been hearing the past month. 3/15- FF on 830 between 8 & 9pm; most likely 4VEC. 3/18- Splits all over; NA-LA-TA. 3/23- Upper end blank except for locals & a few others such as CMKT, all alone on 1520 @ 8:29pm. WXPW-730 plus, at the U. of Pa., way on top of frequency @ 7:35pm. MM 3/24- KMAM-1530-TEST S-7 signal at 4:20am. ZBVI-780 finally logged @ 5am s/on. WEEZ-1590 off as it has been every morning for past few weeks & until further notice. A big break here. 3/27- ZFBI-960 atop most of evening. MM 4/7- KKHI-1550 good signal w/cl mx to 3:28 s/off. HON-21, R. Minutera, Panama on 1120 @ 3:45am, up from 1115. At 11pm, same night, some TAs including W. Germans on 1268 & 1538. The same two heard about the same time on 4/10, along w/various TAs, including Vienna-1475 which wasn't bad @ 11 pm s/on. MM 4/12- KNX-1070 atop @ 3:54am. KFSC-1220 TEST fairly good to s/off just before 4am. Later that evening, WNOP-740 was topping CBL @ 6:59pm. 4/15- A mixed bag early evening: Some Portugal, some Morocco, & Dominica-695. 4/17- Mostly static traces of TAs now & then. The way things are going, a guy could get a little frustrated. See you next time. 73s.

RALPH M. JOHANNIS - 501 Ellicott Street - Apt. 2 - Buffalo, New York - 14203
v/q- WIBC-1070 a newer type, Indianapolis-info front & time/date on back. v/1- WBNS-1460, says 4/7 was a test by new XR; they started in '22 w/WCAH & '33 were WBNS-1230, then 1430, & now 1460k, w/Mon-Fri. AN & Sat. & Sun. nights to 1am. 4/17 I noted CBE-1550 on to 2:04am s/off RS, last week they done it also. 4/14- I was surd I'd hear ERC's voice on WABC's test, but he done his on-air talk at home. I tried to hear Ernie, but that young fellow at WCAL TEST talked too often this was 1:05-1:45. Checking @ 2:35, WCAL was alone & phone 507-645-9311. WKAP-1320 s/off ET @ 1:58 & then CKKW ANer came (he's off SM); WKNX-1210 had f/c-TT @ 12:20. 4/16, I noted a f/c-TT @ 12:27-1am by WFLS Va. 4/7 BG mentioned finally 1110 50kw., old KRLA IS 10kw. N U-4, given to R.E. Levett, "Voice of Pasadena, Inc." Other Pasadena stations, KPCC-1240 runs only Sun. 18 hours & four hours on Wed. w/religious programs, other is SS KWKW-1300. CKLW-800 got orders by CRITC to "change to Canadian ownership or get out of business (1½ years to get it done). WACA-1590 S.C. got the full 10K fine for using its full day power on pre-SRS last year. WITO of-ferred owners to Shepard Bg. Corp. (three people); WPEN-950 got sold to Field Bg. Co. WFMI-1000 Ala. to H. Rau; WEHW Conn. to the Three Dawsons; KFH-1330 sold to six people; WPDQ Fla. to G. Mooney & so w/EDT nowk keep an I on your Mayflowers. 73 4 now

DAVE CARLSON - 516 Hickory Hollow - St. Louis, Missouri - 63122
Only a little bit of recent DX: 4/10- Good Southern night (in other words, a USUAL night nowadays, hi). WJAX-930 Fla. was heard way o/usual pest WKY @ 11:10-11:20pm. A big surprise on adjacent 920 where WMMN was ruling the channel around 11:50pm until midnight when WGST Atlanta again took over. Only new veries re v/f from KMAM & WGLB-1560 for DX TESTS. Totals here are 940/308, 45/41 states, 6/5 provinces, & (only) 18/11 countries. Holdouts this year- WADE-1210 (from 1/6 ET) KECK-1530-TEST, WRFM-1530 KIML-1270 WMOP-900 & KUDL-1380. The CONVENTION is only four months away. As they might say in San Salvador, YSC - "Y'all Should Come" to ST. LOUIS in '69. About it for now so 73s.

Dr. JOHN W. RICHARDSON - 2460 Fairmount Boulevard - Cleveland Heights, Ohio - 44106
Error in DX NEWS, Vol. 36, #25, page 3, under new stations. 1130, Eaton, Ohio, should be Lorain, Ohio. Error originated in Broadcasting Year Book. (That's the way we got it from Cooper-Trent's FCC releases -ERC)

"AN" SITUATION: OFFS: 1320 CKKW MMs ONS: 920 XELT SPU, on MMs, SS
1350 WCVU BMs
1590 WEEZ
1530 KPDK 3am s/off (temporary, unfortunately)

NEXT ISSUE IS TWO WEEKS AWAY. BE SURE TO SIT DOWN - WHY NOT RIGHT NOW? - AND DASH OFF A CONTRIBUTION TO THIS MORNINGS SECTION. MAKE IT NEWSEY- MAKE IT DX-EX!

SUNRISE - SUNSET TIMES

These tables will permit the DX'er to determine the exact time of sunrise or sunset for any station in the world within an accuracy of about 1 minute; they have been prepared by the U.S. Naval Observatory. Sunrise is defined as the instant that the first part of the solar disc rises above the horizon; sunset as the time the last part of the disc disappears.

EXAMPLE: Wish to know sunrise time of a station at 42°30' N, 123° W (About Eureka, California) on April 29th:

Looking in the sunrise table for that date, we find that the local mean time for that latitude is midway between the values for 40° and 45° or about 0457½. To convert the local mean time there to EST, make use of the fact that each degree of longitude west of the Prime Meridian (0°) is equal to 4 minutes of time:

$$123^{\circ} \times 4 \text{ minutes} = 492 \text{ minutes} = 8 \text{ hours and } 12 \text{ minutes};$$

this means that mean local time at the station is 8 hours and 12 minutes earlier than GMT; 0457½ plus 8 hours and 12 minutes = 1309½ GMT. This is the sunrise time expressed in GMT; since GMT is 5 hours ahead of EST, just subtract off 5 hours to get 0809½ which is the sunrise time at the desired point in EST.

EXAMPLE: Wish to know sunset time at a point 35° S, 150° E (about Canberra, Australia) on April 23rd. Since this is in the Southern Hemisphere, we must first look in the small table at the bottom of the page for the equivalent Northern Hemisphere time (since the table is so constructed). The sub-table shows that the sunrise time for our Australian location is the same as for October 31st plus an additional 14 minutes. Looking in the table under October 31st, we find that sunset at 35° is at 1707 mean local time. But we must add the 14 minute correction factor from the sub-table; actual sunset time is then 1721 mean local time. We must now convert mean local time at that point into EST; again we'll first go to GMT for the sake of clarity (it's useful to look at a map while you're doing this). The time difference between 150° East and GMT is

$$150^{\circ} \times 4 \text{ minutes} = 600 \text{ minutes} = 10 \text{ hours exactly.}$$

This means that sunset in Australia happens 10 hours before it does in GMT; 1721 less exactly 10 hours is 0721. Sunset at the desired point thus occurs at 0721 GMT or, subtracting 2 hours, at 0521 EST.

HINTS: Use a map along with the table at first so that you can get a feel for what's actually being done. If the station is located south of the Equator, use the small sub-table first to find the equivalent date; look up the equivalent date in the table; and add the correction. Then convert to GMT and subtract 5 hours to get EST. The only tricky part is the direction of the time correction for longitude; that's where a map is useful. Remember that the shadow boundary curves from east to west on the surface of the earth and that it gets steeper as you go west.

* the small correction is for the fact that the earth's orbit is not strictly but elliptical.