



DX News

OFFICIAL PUBLICATION OF THE
NATIONAL RADIO CLUB
P. O. BOX 99
CAMBRIDGE, MASS. 02139



OLDEST
MEDIUM WAVE
DX CLUB
Established 1933
34 issues per year
\$13.25 Airmail
\$10.00 First Class
\$7.50 Third Class

VOLUME 37

NUMBER 25

"I just wish to add a personal word of gratitude for the tremendous job you have done in getting DX NEWS out faithfully and full of the hottest news and best features the hobby could offer. Nothing can pay you for the devoted efforts, but 'thanks a million'". (Curt Engberg, Mass.)

IN THIS ISSUE ...

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- Report on Eclipse and Auroral Attack - G. Nelson
- MW Signal Paths, Part III: Auroral and M.w.A. Absorption - G. Nelson
- Verification Signers - Ernie Cooper
- NRC Time Policy Poll - HQ

NEW MEMBERS!

- *Lawrence P. Muller, 4032 Harvard Lane, Apt. 111, Kansas City, Mo. 64113
- *Robert H. Rosen, 83-55 Woodhaven Blvd., Woodhaven, N.Y. 11421
- *Robert Wilkins, Box 171, Martinez, Ca. 94553 (Rejoins)
- *Dave Schneider, 77 Pearl St., Kingston, N.Y. 12401
- *Buddy Everts, 2030 Sunrise Blvd., Eugene, Ore. 97405
- *Gary Steele, 290 Elmside, Benton Harbor, Mich. 49022

RENEWALS...

- | | | |
|-----------------|--------------|-----------------|
| Ev Johnson | Curt Engberg | Bill Menke |
| Ed Wyman | Bob Hoffman | Bill Alisaukas |
| Roger Horie | Jerry Bond | Herb Foster |
| Mike Northam | Warren Brown | Bob Seifert |
| Fr. Jack Pejza | Dough Juen | Rich Cochran |
| Lynn Brooks | Marv Garber | Mike Hardester |
| Richard Russell | Doug Meyer | Bob Cooper, Jr. |
| | Dave Roys | |

ALL BETS ARE OFF... (see page 2); local postal workers have gone off the job and we will be unable to mail this issue for an indefinite period; we'll have to hold onto it until mail service is restored. Next week's long-planned Easter skip will be used by the printer to install his new press; next issue will be 4/4 or 4/11 or perhaps even later...

POSTAL STRIKE MAY K.O. DX NEWS...

As we write this the postal situation looks very grim indeed. New York, New Jersey, and Connecticut are already under embargo and there's a good chance that the entire country may get hit by Monday. Phone calls from all around the country indicate that the last two issues, dated 3/7 and 3/14 arrived by First Class mailing on or before the 16th and thus missed the first of the strike. Our printer apologizes for the problems which caused number 23 to go out late. We have rearranged our printing schedule and DX NEWS will now be printed on Saturday and mailed on Sunday; this gives Randy and I more time to compose DX NEWS and gives us a bit more breathing space for copy to arrive here. The editors will be advancing their deadlines a day or so to take advantage of the rearranged publishing schedule.

This of course assumes that the country has a mail service - a point somewhat in question at the moment. We are going to try to get this issue mailed at South Postal Annex as early as possible on Sunday in an attempt to get it out of Boston before the strike is expected to begin here on Monday; if the strike hits earlier or spreads throughout the country all bets are off...

Phil Sullivan will be taking a number of copies of this issue into beleaguered New York City for the IEEE show and will distribute them to those NRC'ers who happen to pass the G.R. booth...

We're completely uncertain about the next issue of DX NEWS; three of our editors are in Metropolitan New York and your reports can't get in and their copy can't get out to us. We may have to postpone the next issue until the strike is cleared up or put out an all features issue or ...? Remember that the issue of the 28th is a regular skip; see front page for tentative schedule.

NEW NRC LOG NEARING COMPLETION

We're now in the final stages of production of the new 1970 NRC log. Lon Berman's got the computer print-out programs ready to go and the paper has been ordered by the printer. The Boston Area members are doing the final difficult job of comparing the keypunched information with Russ Edmunds' master updated NRC Log; if the mail strike does not foul up communications we expect to go to press within about three weeks. The new log will be offset printed from the computer prepared copy and feature a plastic spiral-type binding and attractive covers. The price for NRC members has not been worked out yet but it will be offered to NRC'ers at a discount.

ANOTHER RADIO NEDERLAND BROADCAST COMING UP

The next NRC broadcast on MW DX'ing will be aired by Radio Nederland on April 30th. The first broadcast was a fantastic success and the response has astonished both HQ and Radio Nederland. Here at HQ we received almost 200 enquires from listeners interested in learning more about the NRC and MW DX'ing. One new member who became aware of the NRC through the last Nederland broadcast is located in the remote and exotic area known as Back Bay, Boston...

Gordon Nelson

SPECIALS

Mon. April 13 KPIR 1270 Sweet Home, Oregon 1,000 watts 3:30-4:30am EST.
(re-sched of 2/23 TEST which did not materialize, says IRCA)

ECLIPSE

We received word "ipso facto" on some Eclipse-Tests which were scheduled by David Thomas, with the info relayed to us by RLA. These stations conducted tests on both March 6 and March 7 (the day before and the day of, the eclipse):

XIMI-1080, Mimitatlan, Mexico, 500 watts 11:30-11:45am EST.

WPRY-1400, Perry, Florida, 1,000 watts, 1:05-1:23pm EST.

WGAJ- 910, Valdosta, Georgia, 5,000 watts, 1:10-1:25pm.

WQIZ- 810, St. George, South Carolina, 1:18-1:33pm, 5,000 watts.

WALD-1330, Walterboro, South Carolina, time not specified, but probably about the same as WQIZ.

WPRY was to have used football march music and IDs, including latitude/longitude. WGAJ was sked to run marches, TTs & special IDs. WQIZ used 1,000-cycle TT w/ voice IDs every 45 seconds, and WALD was to be either marches or TT w/special IDs. Maybe some of you happened across something corresponding to the above - we hope so. The info got here the afternoon AFTER the eclipse took place.

ERNEST R. COOPER - 438 East 21 Street - Brooklyn, New York - 11226

One verie in, v/f from WNCT-1070, which has been on this channel for about a year w/10,000 U-4. CX this half-week have been 100% Auroral but nothing new added. But even with the Aurora, nothing new was noted, or hardly any unIDs either - just a blah-type Aurora, hi. Too bad WRAN & Russ Edmunds wound up with such a poor DX CX morning - maybe they'll be able to come back again next Winter. Hey gang - we've had a lot of "First Musings" lately - let's not forget to send Seconds! And Thirds! And, we'd like to hear from you others who have long been members, but have long been in deep slumber at least as far as DX NEWS is concerned. When you participate, you'll notice that suddenly your chosen hobby becomes even more fun! C U N 14.

For the issue of 4/18/70, we will be forced to close out Musings with Saturday's mail (April 11). No issue next week - C U N 14! This one closed out with the mail of Friday March 13th to try to get the printer caught up with himself-& us

FOR SALE SECTION...

Hammarlund HQ-180. Mint condition. Purchased 12/68 and used about 6 months until I got the Collins R-390A. Asking \$325 shipped collect REA Express. I have not experienced overload problems with this one even with WGTO-50 kw less than 4 miles. Call 813-422-5378 or write Jerry Conrad at Box 952, Haines City, Fla. 33844.

Wire for NRC Altazimuth loop. Lew Collins bought a 500' roll of the #12 wire used in the loop and will sell the required 125' segments to other members at cost (3 and a fraction cents per foot); he also runs across quite a few good HQ-180 bargains and will pass them along to interested NRC'ers. Contact Lew at Box 61121, Houston, Texas, 77061.

Unique articles on MW DX'ing. 35 articles and plans from back issues of DX News containing information not available anywhere else. Write HQ for free list of available reprints. More than 2800 pages have been sold in the last 4 months so they've gotta be good!

MUSINGS of the Members

Ernest R. Cooper
438 East 21st Brooklyn, NY 11226

STAN MORSS - Route 3 - Bradford, Massachusetts - 01830

3/2- Guatemala ER all over the dial - 825, 880, 1210, (reported) & 670 (reported). Most announced as Cadena Popular de Radio, but didn't seem to be // . WBT-1110 off 1:50am. CHSC-1220 a powerhouse this AM - power boost or something? WERE again off this MM, WMAK strong. CJRP off 4am or too weak to hear. WIXE verie in promptly. 3/9- WENZ-1450 Highland Springs, Va. top of the channel 1:17. WTXI-DX strong, 1:20. WALE-1400 Fall River test 1:25. WRAN-1510 DX from Dover, N.J. easy o/u CJRS/WLAC 1:37 & on. Now if WHTG would test! WHIH-1400 covering all AM after WALE s/off test. WHYN-560 Holyoke AN again w/phone call show. Colombian on 830 @ 3:20. WBIG-1470 s/on 4. Colombian on 960 @ 4 mentioning Barranquilla - HJHN.

RICHARD CLARK - 144 North Dithridge Street - Pittsburgh, Pennsylvania - 15213
Hi gang. Well, back to Pittsburgh again for two weeks & then, back to Florida. I must say John Shannon & I were very disappointed in the eclipse. All that I got was WABC a little stronger in the daytime. I guess you have to be in the center of the eclipse before you get anything. Maybe some of you did better than we did. Also this week my Mechanical Filter has come! After a long wait, thanks to Nelson for his help in trying to get the filter to us. I am really glad to get them, & the first time my radio ever had three mechanical filters in it. Now to get all these TAs that everybody else gets. Not much on new stations, but I did log CHLO-1570 St. Thomas Ont. on 3/2 around 11:30pm. It seems that 1570 is not a clear channel any more w/CFOR/XERF/CKIM/CHUB. Also a log on unID SS on 1155, R. Captain, @ 10pm, clear to good. Who? R. Fiesta on 1590 and some call like AQD?? @ 10:30, anyone know who? Good DX to all.

DICK TRUAX - 5101 Tamarock Drive - Charleston, West Virginia - 25312

I'm sitting here listening to a beautiful tape of the CFFB-1200 Special of 2/23 from Fish in Neb., so I guess they really did show up in fine style for someone. Blast the Cuban anyway! DX since last Muse has been above average in numbers, if not in quality, 25 since 3/1 and it is now 3/5. Totals here in W. Va. since starting on 12/1/69 are 645 loggings, including 43 states & I-don't-know-how-many countries. I forget what an Aurora is like. I find myself wishing one would occur to bring a new group of loggings to the SW. Normal to above average CX seem to be the rule the past few months. To DX: MM 3/2- WPLB-1380 Mich. on r/c @ 12:03am w/IDs @ 12:09 & 12:14am; WINU-1510 Ill. on r/c @ 2:20am u/CJRS. WCFL-1000 & WLS-890 both noted on past 2:30am, what gives? And who was on ET w/mx a la HI AN on 1540 o/KXEL @ 1:55 through 2:25am tuneout? Only announcement was time given @ 2am, but no ID. (ZNS-1? -ERC) SSS has proven to be outstanding at the start of a new month & later s/off times. 3/2- KHOZ-900 Ark. s/off @ 7:13pm & then KPAL-900 Mo. s/off @ 7:15 for two newies, KWPC-860 Ia. w/CJBC null'd @ 7:07pm w/ID & mx, & KYAL-1600 Tex. s/off @ 7:30pm o/WWRL nicely. 3/3- WGCK-900 Ala. s/off @ 7pm, KITI & KTUI-1560 Mo. both s/off @ 7:15pm w/WQXR null'd. 3/4- KCLO-1410 Kans. o. WING/KQV duo nicely w/religious mx & ID @ 7:25 pm. I must be the last to finally log KSKY-660 Tex. w/s/off @ 7:30pm even w/WNBC. I am looking forward to the eclipse 3/7, and the chance of a lifetime to observe what happens to BCB DX. More in 7.

GEORGE KELLY - 15 Chester Street - Apt. 1 - Cambridge, Massachusetts - 02140
Please note new address; new location is vastly superior for DX Belmont. My DXing may be slightly curtailed by up-and-coming events. Just a few this time: 2/25- Beromunster-1562 Switzerland noted fair/good @ 1:15 in CG, then into Glen Miller type mx, yecch! 3/6- WEGN-1070 Waltham pirate heard for

5
first time in new location @ 1:45pm, just as strong as in Belmont, even though I'm two miles farther away. 3/9- WTXL-149 Mass. DX heard very strong on Auror--al type CX, three IDs heard @ 1:30am, then rr. No WRAN heard here, really rotten CX that night. Thanks for the cards & letters concerning Stagshaw, gang - really appreciated.

BILL STONE - Box 97 - Claremont, Ontario

Once again I am living in a DXer's dream - farmhouse (internally refurbished - all conveniences - over 1/4 mile N of road - two miles (as crow flies) SW of Claremont, 186 acres, so like Siloam, this Summer some real longies will be wired up. Anyone DXing 3/2 had a perfect chance to add to his log - BCB was excellent for DX. I got the cue from KIX-1070 @ 7am 3/1, broad daylight outside, still coming in S-8 solid, using less than 50% of RX potential. 1600 1:03-1:30am was KSGT Fresno ET/TT right through CJRN/WWRL. By the way, CJRN was AN 3/1-2, was off every SM & MM in Feb. 1:45-2:07, CMJG-1270 RS along w/CJCB on AN. 2:11-2:30 WKCY-1300 ET/TT, KQXI-1550 2:30-2:40 topping slot w/mx; 2:45-3 WMOB-840 ET/TT, along w/KGO, Cuban topping frequency when WMOB was off TT. On these Cubans, they give positive ID about 2-3 minutes after network ID, or have done so in past month. I went down to 630 to take in KGVW f/c @ 3:30 - only one I didn't hear! I stayed on 630 from 3:30-4:30am solid, following heard: Top station CHEC AN. Right behind, CKOV w/CBC network, local programs. 3:35-3:40, WMAL f/c-TT. 3:43, WPRO gave ID on w/OC only w/full IDs; 4am on button, man said KXOK St. Louis Mo. testing w/OC; 4:01-4:12, all CHED/CKOV. CKOV gave Kelowna NX 4:06 am. 4:11:40, male announcer said "This is KIDO in Boise Idaho testing", rr & IDs. CMKU Santigo, easily copied behind Canadian stations. 4:18, WMAL w/ID again, 4:20 strong testing station, rr, ID @ 4:20 "This is WLAP Lexington Ky. testing." There were two IDs I heard but didn't copy - one @ 3:50am I think KGVW, 4:14 another unk, giving CHED & KIDO distortion. It's there - just got to find it. Verie arriving daily: I too got WUPR verie from DX, also Anguilla. WUPR was six-page w/1. 3/2- WCKL-560 topped frequency, above CFOS-550 6pm s/off. Question - is Norman Maguire in N.M. or Hawaii? Veries in: KXRB WIXE WKIX CMDV CHIC KGHK KIRL WJAM WVAB WRIB WFIR WSNT WMAJ Anguilla-NNRC DX YVNN YNT WWLE WCSJ WJG WJWL WKND CJET WKOQ HJDK WSLV WUNR KILR KFDI XENU WITO WJSM WUPR WKAP WINT WBYX WREO KOBV WBTE WCCR WNRK KFKF. Total veried: 2,880, 2,900 by 6/1/70, hi.

CHARLES R. RADER - 22 Robert Street - Hamburg, New York - 14075

My DX for the last half of the month of Feb. consisted of the following: 2/13- WNUH-1580 r/c noted @ 12:12 w/TT & alternating IDs every ten seconds. 2/15- Nothing heard of the WSN0-1450 DX. WCVR-1320 on w/another of their TESTS, strong here o/WJAS w/instrumental c1 mx @ 1:15. 2/16- WKOG-1560 testing 1:10-1:31 s/off w/c/w. Someone u/o WKOG was also testing with "No Time repeated over & over, but had no time to give an ID, hi! I think that this might have been the new WADD?? KIXZ-940 conducting ETs 2:48-2:58 w/NN oldies. Then briefly the KFRE-940 DX 3:02-3:06, just enough to know they were on. Local WBEH-930 came on to test & their OC covered 940 here. No WHBC DX heard. 2/17- SSS listening gave WANN-1190 R&B @ 4:23. WHWB-1000 @ 4:33, & WEMD o/WPDX-750 @ 4:50. The latter two are both c/w. 2/19- WDEH-800 u/CKLW w/broken dial tone @ 1:24-1:30 w/e/c. 2/20- WTVB-1590 concluding ETs 1:07-1:09 s/off w/low-cycle TT. SSS produced WBER-1350 w/CBS NX @ 5:04. WMAJ-1300 s/off w/instrumental SSB @ 5:45. 2/22- WJOL-1120 off abruptly @ 6:30pm after running 45 minutes over Feb. s/off time. They had carried NBC Monitor up till then. 2/23- WTON-1240 r/c-TT noted @ 12:49 w/ID. WIXE TEST on clear channel 1190 in very nicely 1:06-1:31 & loner w/recent oldies & a number of voice & recorded IDs. A nice t st, Harry Helms Jr.! I lucked onto a DX for RIA/NRC from WTXL-1490 from 2:35-2:56 (my log) Actual TEST was 1:30-1:30 & will be run again on 3/9. They played contemporary mx & had many IDs. (No advance word of this in any Club bulletins). KHEY-690 noted weakly w/fluctuating TT for r/c 2:08-2:12. CJRN-1600 TT @ 3:10, but back on RS 3:25. Weak SS-1200 where hopefully CFFP's DX might have been. 2/25- WEAG-1470 ET/TT 2-2:05. v/1- WEND-TEST (Thanks, Pat Flanagan) WTXL. v/q- WVAB-TEST. Welcome to the NRC & the Buffalo Area Clan, Ernest Burkman! 73s.

DAVID SHAPIRO - 1812A Hillsdale Road - Lynchburg, Virginia - 24501

Hello everyone. I received many new catches & one verie thus far. 3/3 brought KFAB @ 7-7:15am w/a real clear signal o/WBT-1110. 3/5, @ 2:30 was WLAY-1450. This was the best catch & also my first graveyard on 1450, report sent. Later on, at SRS, WCMS-1050 was heard from 7 to 7:09am. I heard this station while on a trip in nearby Roanoke, & WBRG wasn't even heard during this catch. Reports out to WLAY & WCMS. v/q received already from KFAB. Thanks to the efficient cr w on DX NEWS, & to Stewart Drake of Phillie Pa. for the WBRG tip. Sure enough, I turned on my RX & I heard them. I can receive their signal on 1530k during the daytime. They have a rr format w/few commercials between records. For any DX-ers who haven't heard them yet, this I think will be a good catch. I will send a report to them after I close my Musings. I wonder if Bernie Duffy found his lost Hawaiian veries? Two Mexicans in this side of the border heard this week. Last night XERP-1570 heard clearly @ 9 to about 10:30pm, & XEG heard on 3/9 @ 8pm. Money-hungry preachers were heard on both stations. Report sent to XERP. In a recent issue of "Billboard" magazine I read that WKDA-1240 will switch to c/w format & will use the slogan "The Now Sound of Nashville". They will start on 3/15. Does-KCTA-1030 verify reports? 73s for now.

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

Two veries in so far, WCVR-1320 Vt. for State #45 verified, & v/1 from WIXE-1190 N.C. WCVR mentions that WVOJ seems to cominate on the EC, judging from reports. CE says his antenna system is located in a swamp which gives him a little trouble when checking meter readings. (Those alligators DO have such sharp teeth -ERC) 3/3- WTOP-1500 noted off @ 2:35am, also on 3/7 @ 1:55am. 3/7 on 1610 I noted a Frank Sinatra record @ 1:58am. QRM too much for an ID but quite possibly R. Nordsee International. The eclipse was a "bust" here. I had to work that day. I did manage to get out for 1/2 an hour and listen on the car RX. The only peculiarity noted was some extremely rapid fluttering of stations o/100 miles away. Stations noted were WHVR-1280 Pa. @ 1:03m w/the sun half eclipsed. Also WHAG-1410 Md. @ 1:20pm, WPEB-950 Pa. @ 1:25 mixing w/an unID. Total eclipse (visual) here was 1:36pm. 3/9- HCFA2-540 good @ 2:40-2:45am. WINZ-940 was S-9 @ 3:20am w/MoR. HJKC-850 had ID @ 3:27am. 3/11- THHR-700 R. Mundial 12:10am mixing w/JBC & World Tomorrow, no sign of WLW. They must have had some proton flares to eliminate WLW & the 50kw. Chicago stations. R. ABC-540 armchair copy from 12:22-1am w/good, light mx, Brazil 66, etc.

MARVIN GARBBER - 2539 Kessler Boulevard - Lincoln, Nebraska - 68502

Greetings, group. DX: WIXE-TEST in sporadically: o/KLIF from 1:30-1:55am, 2'03, w/very SIDs & rr. CFFB TEST in weakly at various times from about 1:25-4. I didn't notice anything from that AFPS on the channel, only QRM was from a weak-audioed SS. I got a perfect ID @ 3:47 (code, voice, etc.) & then into rr. I think as the test wore on they put some rr into the show because I heard 'em around 2:30 w/an Iron Butterfly tune. This may well have been the CFFB DX Ernie heard w/the Cuban. Another report off to CFFB w/a tape. MM 3/2, KLAJ-1600 was off so I logged & reported CJRN w/its "Mx Till Dawn" show from 2:38-3. WWRL was also in there w/its usual soul mx show & many IDs. MM 3/9 was very Auroral indeed. Starting from 1230k here where the dominants: 1230 - KNUZ Tdx. 1240-KSOX Tex. 1250-WTAE & an SS (WTAE very weak) 1260-SS; 1270-KFJZ Tex.; 1280-KPLK & SS; 1290-KOIL 1300-KVET 1310-WRR 1320-KCPX & SS, 1330-KFH 1340-KOCC Okla.; 1350-WMB & SS, 1360-KRYS/KRUX. 1370-SS 1380-SS 1390-KCBC weak 1400-SS (unID, maybe an XE) 1410-WING weak, 1420-XEP, 1430-SS 1440-SS, 1450-WMBH/WLAY. 1460-WPNX. 1470-XR??, 1480-KBOX & 1490, KXOW, Tex. Just about everything from the CE was inaudible, including the WRAN TEST (it if was on). Veries: KSON Lisbon-665 CJRN & CHLO. Totals: 368 veries from 41 states, seven provinces, and 20 countries. C U N 14 nopefully. 73.

IS EVERYTHING RECEIVED HERE THROUGH FRIDAY MARCH 13th. NOW THERE ARE THREE ISSUES OF MUSINGS OUT FROM HERE WHICH I HAVEN'T SEEN IN PRINT YET, hi.

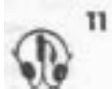


EDITOR: T.J. GORDON BOX 946 WAYNE, N.J. 07470

Greetings once again, folks. Ex continue today due to aurora with signals generally depressed signal-strength-wise, and even locals such weaker than normal. A full report on the reports received on the "IT" test will be forthcoming in the next issue, which, currently, will be 4/1, as we are, I think, skipping the 3/26 date entirely.....

midnight to sunrise

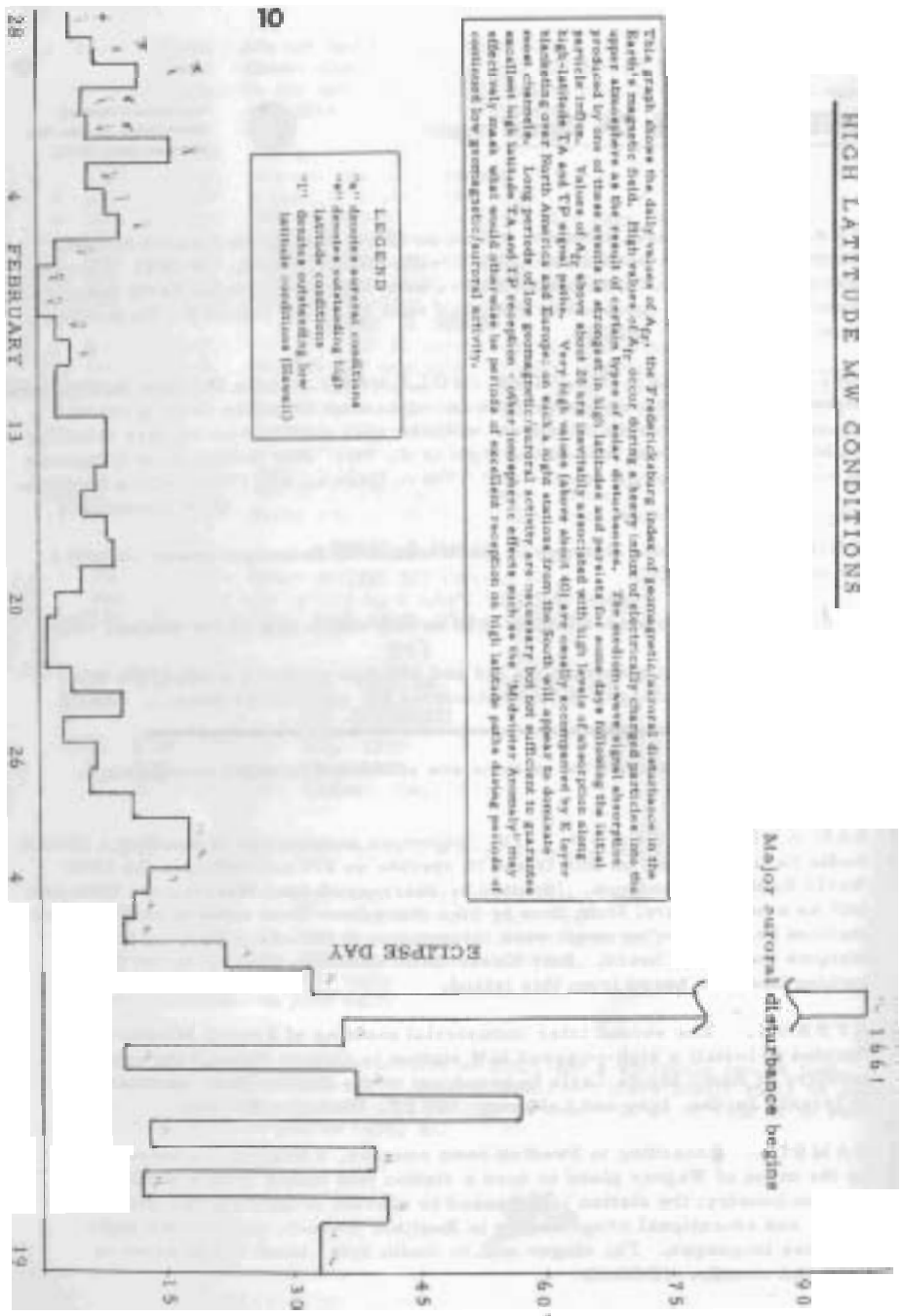
- * 370 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
610 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
730 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
790 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
940 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1070 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1080 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
+ 1170 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1190 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
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1260 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1360 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1400 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
+ 1150 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1150 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1170 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1180 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1190 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1500 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1510 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
1550 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)
X 1540 WJMS-Id Hrd w/ MoR 0415 3/10 (Jerry Starr, Youngstown, Ohio)



IDX Monitor Reports

Members' Loggings:
 Bob Foxworth, GPO Box 2111
 New York, N.Y. 10001

- Tel. Tip No.: 212-582-0844. All times are E.S.T. Receptions:
- 540 Colombia. HJKA, Radio Horizonte. 3/9 AN show, mostly light, romantic vocals. Good. (Wood, Hawaii)
 - 550 Cuba. CMAN, Pinar del Río at 0400 3/9 with La Voz de Cuba pgm // 640, 670, other freqs. (Wood, Hawaii)
 - 555 Nicaragua. Radio Tic Tac at 2253 on 2/10. They s/off at 2303 with something that sounded like Dixie. Can this be? (Isaac Eaves, Texas)
 - 570 unID. Regarding question in 2/14 DX News, believe YVLX Radio Rumbós, Caracas; have hrd slogans for several stations. Tops 570 every Tuesday morning from 0400 s/on until 0458 when WKBN back on. (Bill Stone, Ont.)
 - 580 Mexico. XEFL u/KALB s-7 at 0716 MM 3/2. (Eaves, Texas)
 - 593 Bulgaria. Not a trace of local Sundsvall, only Sofia here 3/9 afternoon during aurora. (Ericson, Växjö, Sverige)
 - 611 Yugoslavia. Sarajevo dominating thru East German 250kw only 600km south of here 3/9. (Ericson)
 - 620 Canary Islands. Santa Cruz de Tenerife had to be SS with Easterly DF with WSUN and another SS looped. Hrd 2/21 0205 to 0225 with news and talk show much like the ones previously hrd on other RNE outlets. This was a poor night for high-latitude reception, by the way. Has not been hrd at all since. (Frank Waldron, N.J.)
 - 638 Cyprus. BBC Relay good through 300kw Prague which normally like a local during 3/9 aurora. (Ericson, Sweden)
 - 650 Hawaii. KORL hrd here, first time clear enough to ID MM 3/2 at 0400. They had mood mx with female ancr at s-2 0347-0400 when male voice said, "This is KORL, Honolulu." Nx followed until WSM OC on at 0402. Noted 2 SS stns at 0500, looping SE. (Eaves, Texas)
 - 650 Venezuela. YVLH, Radio Girardot. 3/9 0530 ID "Radio Girardot de Maracay... más potencia para Venezuela." Talks for farmers. (Wood, Hawaii)
 - 656 Israel and Italy dominating here, though strong East German is normally hrd on this freq. (Ericson, Swe.) 3/9
 - 660 Venezuela. YVNA Ondas de los Médanos. 0500 s/on 3/9. (Wood, Hawaii)
 - 728 Greece. Athens noted good here 3/9 aurora, though Schwerin normally hrd like a local. (Ericson, Sweden)
 - 730 Guatemala. There is a SS religious pgm on at 0630 tune-in, usually mentioning Guatemala. At 0654 there is an OC for a few minutes and seems to be YSR s/on at 0658. Appears to be a SS s/on at 0700 mentioning Guatemala but at 0704 XEX s/on blots everything out. Have taped this freq at this time 6 times at least; can't make out the unid. That's how this freq looks in mornings. (Eaves, Texas)
 - 770 Venezuela. YVKK, Onda Metropolitana de Radio Nacional. 3/9 s/on, very good and into folklore mx. (Wood, Hawaii)
 - 830 Dominican Rep. HIJB Santo Domingo quite good at times 2/22 with AN mx pgm and often equal to WCCO. Many IDs and even some "mas musica HIJB" jingles. (Drake is taking over?-fw) Appears to be NSP. (Waldron, N.J.)
 - 840 Radio HIJB, Santo Domingo AN row and hrd, per JKC, 0155-0230 3/2 with a very distinctive ID (on cart, obviously) which has mx, anct, a promo and 2 IDs contained, and runs around 4 minutes long. TC's were about 3 minutes fast. Was hrd well, even with loop peaked towards WCCO! (Edmunds, N.J.)
 - 844 Gilbert & Ellice Is. Was not noted 3/9, which was strange, on an excellent So. Pacific night with even Solomon Is.-1030 noted. Perhaps a change, either freq or sked? Will continue to check. (Wood, Hawaii)
 - 850 Colombia. HJKC hrd way atop domestics with auroral cx 0224 3/7. (Edmunds)
 - 854 Peru. Radio Nacional, Lima. 3/9 ran AN with national mx. New Here. (wood)



- 880 Venezuela. YVMP, Radio Lara, Barquisimeto. 3/9 0535 mixed nx and wx. ID as "Radio Lara de Barquisimeto, primera en sintonia". (Wood, Hawaii)
- 895 Iran. Like a powerhouse 3/9, evening European time, aurora. (Ericson, Sw.)
- 965 Nicaragua. Radio Managua almost as strong as WWSW 2210 3/9. (Brauner, Pa.)
- 1100 Brazil. PRG-9, Radio Nacional, Sao Paulo. 3/9 jingle ID 0357, Brazilian mx., over/under Colombian. This the first Brazilian of the season, my beacon to true summer conditions. (Wood, Hawaii) (still freezing in NYC, hi)
- 1155 El Salvador. YSCF good signal on 3/11 2305-0025 s/off, few IDs. (Brauner)
- 1160 Colombia. Believed the one here at 2300 3/11, used "south america" in IDs (Brauner, Pa.) (likely so; has been hrd a bit high in freq, too.)
- ** 1180 Venezuela. YV--, Radio Petrolera, Maracaibo. 3/9. New, jnlsted, change from La Voz de Zulia. Very good, numerous IDs. National mx. News 0500 (REW) unID. Hrd a SS with nx 0220 MM 2/23 while trying for CFFB special. Looped SW, not toward Brazil or Cuba. Who? (Eaves, Texas)
- 1200 unID. AFRIS Puerto Rico hrd under Cuba 0140-0200 2/23 with rock mx, short ants between records, full AFRIS and AFCN ID 0200, then nx. The tape has instrumental mx mixed with AFRIS way under the Cuban at 0200, sounded like no other mx I've ever hrd, could this be Eskimo Dance Mx? (Waldron, N.J.)
- 1304 unID. SS, maybe Cuba, "reloj Nacional" news 0100 3/10. (Joe Brauner, Pa.)
- 1350 Hawaii. KTOH, Lihue. 3/9 MM s/off 0300. Back later with unannounced ET. This is their usual CM s/off. (Wood, Hawaii)
- 1421 Cyprus. BBC Relay coming through local Saarbrücken 3/9. (Ericson, Sweden)
- 1480 Int. Waters. Radio Hauraki. 3/7 at 1130 noisy rock mx., jingle ID's; fair not enough for a report. New. (Wood, Hawaii)
- 1510 Australia. 2NA Newcastle. 3/9 0335 light mx., only thing noted while looking in vain for WRAN test on this southern-oriented night. (Wood, Hawaii) @Traces of mx with loop to SW 0334; shortly thereafter, man apparently in Eng., at exactly 0400 had 5 pips, or tones. KSOM threw on their 10kw non-DA carrier just as my unID went to give ID, was on until 0411. EE voice again, very weak, deep-voiced and hard to understand, 0424 KSOM on again and nothing thereafter, all this 3/9 while trying for WRAN. (Garber, Neb.) (For what's it worth, your Ed. noted WRAN s/on 0104 that morning, with their test, announced using 500 watts DA at that time. If they used those facilities for the whole test, doubt many got them, hi)
- 1536.4 Colombia. HJHD Barrancabermeja, La Voz de Petroleo with news from 2200 to 2226. ID 2226 as "transmite R.C.N. La Voz de Petroleo." Also ment Barrancabermeja in ID. (couldn't miss that name, eh? -Ed.) Mx followed. Signal strong with some fading, plenty of ZNS slop. Taped. Obviously they belong to Radio Cadena Nacional, hi. Nom 1540, listed 1535. (Conrad, Fla.)
- 1569.6 Dominican Rep. Santo Domingo. HIFB, Radio El Mundo 3/10. This one was giving XERF fits from 2120 tune-in. ID as Radio El Mundo en la Republica Dominicana at 2131 followed by SS version of Beatles' "Day Tripper". Listed as only 250 watts night but was over XERF at times. Listened until after 2200 trying to get a tape but no luck. (Conrad, Fla.)
- 1575 unID. SS here at 2230 3/10. (Brauner, Pa.)
- 1595 ~~Dom. Rep. Santo Domingo.~~ Very good at times but faded deeply, IDs about every 15 minutes, usually in the middle of a fade. Hrd from 1900 to 2010 on 3/10. Gave freq in every ID; maybe a test as no ads were hrd. Just ID data, call hrd only once but sounded like HIFA but badly chewed up, so possibly not correct. Had "nice mx." Not hrd next night. (Brauner, Pa.)
- 1597 unID. (above? -Ed.) Hrd 3/10. SS nonstop mx. ID 2056 as HI-A, could be a F or S by sound. I have a good tape of slogan, call and freq for someone who speaks SS to ID. Signed abruptly at 2103 with no announcements or anything. Fair signal and strength, looped OK for a HI---. (Conrad, Fla.)
- 1610 Int. Waters. Carrier noted around 2000-2030 2/28 to 3/2, no ID but short periods of mx noted, mostly just a sound like an alarm clock ticking. Not hrd this past week. (Brauner, Pa.) (dropoff in cx then, Joe.)
- IDXD Monitor Reports -- Verification Section
- 640 Cuba. Registered airmail verification for CMQ and CMDV-1550 Santiago. CMQ report was sent to Havana, CMDV to Santiago. Verie signer is: Conchita Dumois Sotorrio, Director, International Relations Dept. Instituto Cubano de Radiodifusion 23 No 258, Radiocentro, La Habana, Cuba. Letter is in English, asking for reports. Ltr says, "We are pleased to inform you that your report coincides with our two broadcasting stations, and we hope you will continue informing us of your receptions." Letter bears ICR seal. Certificado in 1960, mailed Havana 12 Feb 1970, rcvd Montreal 2/24, 40 correos postage. (Bill Stone, Ont. via RJE)
- 665 Portugal. Beautiful v/q, sailing ship, 17 days, specific, Waldron, N.J. Lisbon finally sent one of the most beautiful v/qs for reception 11/8/69; this was the 3rd response from them. (1) Tape was returned by itself. (2) An apology for not putting Portuguese mx on the tape. (3) Finally the card. Signer unreadable. Country #20. (Marv Garber, Neb.)
- 764 Senegal. Dakar sent v/q plus complete pgm sked for both networks for the week of July 13-20, 1969, a total of 15 pages and all FF. (Waldron, N.J.0)
- 809 Scotland. BBC sent a composite v/1 for 809 and 1052 from F.B. Berrisford, for Head of Engineering Information Dept., which was Bambridge's old post. He states that 809 xmtr is located at Westerglen, Scotland, near the town of Falkirk, Stirlingshire. (Waldron) (It is the 881 xmtr, for Wales, that is located in Somerset, England, causing all the woes, hi-Ed.)
- 854 Spain. RNE Murcia, v/q and pix postcards, 2 weeks. (Fwankee, N.J.) (??-ed)
- Thailand dx report, from Glenn Hauser, Khorat, Thailand.
- 540 So. Vietnam. AFVN Saigon is back here, operating normally as of 3/1.
- 553 So. Vietnam. AFVN, local ID not hrd, but probably Saigon, hrd here 2/25 at 1414 // 547 but 6db weaker (1 s-unit), ending sports, into mx; rather unstable carrier but better audio than 547.
- 560 So. Vietnam. AFVN Fleiku back on freq as of 3/5, hrd 0745. // 540. AFVN Saigon denies that Fleiku was off freq and says Saigon xmtr power reduced to 1 kw while 50kw being repaired. They also deny that anything was on 553. ".your receiver must have been out of calibration." -Sure--
- 563 Thailand. My previous unID is HSKVS, Surin, per Back to the Bible listing which has it on 600, however. But the time matches, ending at 0726 2/25 and ID at 0728 mentioned Surin.
- 683 Yugoslavia. My first logging from here on this TA channel, believed this one...rock and pop mx, 1410 3/2 and talk in unID lang until 1431.
- 728 Greece. Athinai again, w/nx in Greek 1404 3/2 and at 1408 ID, "Edho..." and man and woman alternated.
- 780 So. Korea. AFKN "Homesteader", (alho these nicknames have never been heard), Pusan, 2/25 1359 6 even pips of TS, Metromedia news ditty, mixing with an AH (audible het) which had some audio, perhaps KSDT.
- 790 Nepal(?) with cx improving to the immediate NW, am monitoring 790 most evenings. Occasionally something QRMS Singapore, and this may be Kathmandu. On 3/5 at 1131 after Singapore off, noted music which seemed to be // 7165 but latter heavily QRMed; fair carrier but weak modulation except for occasional mike ancts; 1148, a soprano solo; evidently off at 1149.
- 805 Taiwan. The stn previously reported with lang lessons in English is definitely Taiwan, as hrd 3/6 at 1723 with LL:E, 1727 ID in CC but tape idle. Perhaps is Kuo Sheng K.T., Changhua, from 810.
- 809 India/Euro RSPSR. VUD, New Delhi 3/2 1329 excellent with Asian news in English, with Kuybyshev Mayak half-hour 8-note IS audible under; then India into local lang, anthem and off.
- 810 Malaysia. Radio Malaysia, Kuantan, West Malaysia (Malay), stn list 1731 2/6; then muezzin. (prayer call. -Ed.)

- 830 West Pakistan. One with sitar mx must be Karachi, and singing 1351 3/2.
 863 Armenia. Presumably Yerevan, the one with national mx at 1354 3/2; good.
 880 China. While looking for Sikkim (anyone have sked/info on him?-gh)
 hrd 7-note piano IS over KSBK at 1543 3/4, 1545 s/on as "bud yen J.K.T."
 or the like, perhaps minority pgm from Urumchi. Strong. At 1550 repeated
 ID several times.
- 1034 Estonia (?) Once again, a non-Italian lang here at 1332 2/25, perhaps
 with an ID. Unfortunately I'm not very conversant with Estonian, but it
 is on tape...
- 1045 Clandestine. Dai Phat-thanh Keu Doh noted again, at s/off 0759 2/25, het-
 ting the Thai-1043 without MF. This taped too, s/off is always standard.
- 1124 Libya. Still putting in a good signal some 5200 miles away most nights,
 as on 3/2 at 1445 with ID and mx...all Arabic of course.
- 1133 Yugoslavia. Nice reception for tape 3/2 at 1400, TS of 3 long and wide
 tones, TC for 20ch., ID as Zagreb in Croat, w/choral march and then
 "Dobri Večer". I assume the other YU's on 1133 are sync with Zagreb,
 however, which is the most powerful.
- 1280 Afghanistan. Granting my wishes, Kabul well over the Jap 3/1 1310 with
 class. mx; 1320 talk, Kabul ment.; 1327 a curious piece of trumpet mx,
 evidently an anthem, 1329 sung a couple of stanzas, and off. 2450 mi.
- 1390 Iran. Ahwaz fair in Arabic mx 1407 2/25. 3525 mi.
- 1403 Europe. Class. mx, 3/4 at 1525; first TA logging on this freq...several
 interesting possibilities.
- 1421 Cyprus. BBC Zyvi, Outlook pgm at 1409 2/25.
- 1480 Korea So. AFKN Taejon for // 1040 with bassy mx 1327 2/25.
- 1484 Europe. 3/4 at 1451 seemed Slavic talk, mx, 1500 TS and perhaps IS.
- 1493 RFSR Euro. Leningrad, this time in a Finno-Ugric language, Radio Moscow
 Finnish listed, 1337 3/2.
- 1502 Poland. Finnish as sked, 3/4 1504, from Radio Warsaw.
- 1538 Germany W. DLF, 3/4 1506 in lang, S-C list (Serbo-Croat)
- 1592 Philippines (?) At first taken for a TA, 3/6 at 1657, mx, 1700 talk,
 chimy, perhaps hymny mx; 1704 amts in an unfamiliar lang; spoken slowly.
 A lot of this on tape...DYDR Cebu, drifting from 1590 seems a good bet.

TA conditions continue fair to good, especially on 2 March. Those of you who
 are unhappy about the size of my reports will be glad to know that I am getting
 back into SW and VHF activity, so it will be their turn to be unhappy. I have
 always felt it my responsibility as a club member to report all the DX I hear...
 what happens after that is beyond my control. I am surprised, however, that any
 real DXer would complain of too much DX. On the other hand, I certainly don't
 my reports published at the expense of omitting other people's reports; I don't
 believe this has happened. (This has not happened in NRC -Ed.) Now, may I con-
 gratulate those of you who expressed opposition to my interpretation of such
 non-MW countries as Vatican and Monaco...for an excellent job of rationalization
 to keep from losing a couple of countries! As for the discussion about time zone
 standards /in IRCA/, may I again offer GMT, as a compromise between those favor-
 ing EST and ELT...any domestic time zone shows favoritism to a certain group
 of people, while I doubt if we have any members in West Africa or the Atlantic
 where GMT is the local zone. - G.H.

Glenn's remarks about size of reports are concerned with IRCA, in whose
 bulletin there have appeared complaints alleging a violation of their Editorial
 Policy. Your MR editor feels that we are fortunate in NRC to have sufficient
 flexibility in format and available bulletin size to allow presentation of DX
 material without having to worry about a violation of an arbitrary criteria.
 Too, it is to the credit of the DXers in NRC that no one has complained about
 the fact that we have had long reports from Glenn. While much of the information
 therein may be of little or no practical use to the NA DXer, it's certainly of
 interest nonetheless, and certainly warrants presentation, I feel. It is good
 that we, as a club, are concerned with DX and not politics. That is as it should
 be. Regarding GMT, we in NRC may well make the change...see last week's section.
 A bit more on hand, but not a full page worth just yet.

ECLIPSE DX RUINED BY AURORAL DISTURBANCE

The anxiously awaited major solar eclipse of March 7th produced
 noticeable enhancements of stations in the 250 - 750 mile range but nothing'
 really spectacular was noted. We have received information on quite a few
 unusual domestic receptions in this medium distance range from DX'ers close
 to the path of the eclipse and most observers noted the asymmetry which we
 discussed in some detail in DX NEWS on February 21st. Unfortunately the
 effects of the eclipse on MW reception were greatly reduced by the unexpected
 major auroral disturbance which began on March 5th, two days before the
 eclipse. By the day of the eclipse the accumulated effect of the auroral
 activity had become quite significant - and thus we experienced daytime
 "auroral conditions" during the eclipse itself. The additional absorption due
 to the precipitation event (see article in this issue) effectively masked the
 temporary effect of the eclipse and as a result there was considerably more
 skywave absorption present than would be normal during auroral quiet.

This latest auroral disturbance began on March 5th at 0305; by the 7th
 the disturbance had increased in severity and the ATS-1 earth satellite, which
 is carrying equipment to measure the actual particle flux, reported that the
 precipitation level had exceeded 2500 particles per square centimeter per
 second. By the day after the eclipse the disturbance peaked with an A_f level
 of 166 - the highest value for a long time. Since that time the disturbance has
 continued at a moderate level and the accumulated effects have produced very
 severe effects on MW DX. High latitude paths, such as Transatlantics, have
 been almost totally wiped out since the disturbance hit with only weak carrier
 traces remaining here in Watertown.

The auroral zone of absorption extended far to the South over North
 America and Europe and resulted in "auroral conditions" with the usual
 clear channel stations severely weakened and Caribbean stations enhanced on
 some nights. On the night of the greatest disturbance we checked 737 for
 traces from Barcelona and were astonished to find that both 737 and 740 were
 empty - not a trace of CBL! At the same time Glenn Jacobs in Philadelphia
 reported that North America ended at about Hartford, Connecticut, as far
 as reception was concerned; even WBZ was blanked out. At various periods
 the layer of blanketing absorption extended so far to the South that even the
 Caribbean stations were affected - quite a rare occurrence.

ECLIPSE NOTES:

Here in Massachusetts the HQ crew moved literally a truck-load of
 receivers and tape recorders to the rural solitude of Ray Moore's location in
 Walpole, there to be joined by Foxy, Hal Robie, and Phil Sullivan. The
 eclipse produced a number of unusual receptions including a tentative on WPAL
 in Charleston, S.C., solid reception of WNCT-1070 in Greenville, N.C.,
 WWVA, WRVA, plus enhancement of the regular stations in the 300-500 mile
 range. A possible Cuban carrier was noted briefly on 640 but no audio was
 possible. We were greatly surprised by the lack of reception from CBN-640,
 as well as even traces of St Pierre-1375 and ZBM1-1235. In retrospect this
 was probably due to the auroral disturbance then under way. In summary, the
 eclipse produced much the sort of reception we'd expected - but not as strong
 or distant as would have been the case during undisturbed conditions.

In New Jersey, Bob Hoffman reports:

Initially I set my cap for no erotic (sic!) catches but concentrated instead upon 10 relatively clear channels here and CBN, St Pierre and so on. Well the thing was about 40% of a bust and there was no sweep of distant stations, nor did I log anything sensational at all. Our times were 1222 begin, 1339 peak, and 1453 end. At 1225 things began to happen which I thought was early. I had checked traffic an hour before and it was poor. Reception was a la early Spring and some of the stations that did come in only reached December signal level. Oh for an eclipse in December! (Or one without an auroral upset... GPN) At 1225 WHLO came in to S5 from S1; Cuba was S1 on 640 which is not unusual since it is often S5 in Midwinter at that time. There was a station on a bearing of 110 degrees on 550 but no ID; by 1245 WLW was up to S8, WBZ to 25 over S9, and by 1255 Cuba on 640 was S5.

There then began a reduction in signal strength when there had been an increase to 1245 and such stns as Cuba on 640 were weaker and stayed that way until 1314. This sounds unorthodox to me but it happened. At 1315 it was an interesting hour's start as signals continued to reduce in strength until 1328. At that point I was on 1140 and WRVA was S(unreadable -Ed) with a wavy S meter. Within 60 seconds WMLA in PUERTO RICO roared in and by 1334 it was S9 with a beautiful signal. Then at the same time there was S Spanish on 1020 and Cuba S6 on 640. At 1340 WTAR jumped to 20 over S9 and WFNC-940 in Fayetteville, N.C. reached S9 plus 20 and stayed there for 10 minutes. WADE pressed through WCAU on 1210 and by 1346 it was all gone. By 1350 no reception other than normal was noted. At 1420 things were really crazy. There was NO Northern DX as the thing travelled up the coast (expected auroral effect - GPN). No CBN, CBT, Maritimes, etc.

Finale: at 1420, after no signal at all when it was due, Cuba came in on 670.

In Florida, Jerry Conrad noted:

Started listening about 1130 and first noted a slight increase in Belize at 1215 which was only slight and lasted only briefly. By 1300 all medium-distance stations (200-500 miles) were much stronger than usual midday signals. I heard nothing new until 1315 when WLBB-1100 was weakly heard followed immediately by WQIZ on their test on 810. This was just past totality in the area. Rapidly stations to the North started to increase in carrier strength: WADE at 1325 sounded like 10 kw. WANN dominated 1190 over WOWO at 1330. From 1330 to 1345 there was a group of high-powered stations in the 900 mile range completely dominated their channels. None had ever been heard at midday before. In order of reception KDKA, KYW, KMOX, WBAL, WKYC, WHAM, et al. WHAM was considerably the farthest heard at just over 1050 miles; it was also the weakest of this group. The asymmetry predicted was easily observed as almost all receptions of unheard (previously) stations were after local totality. Conditions were close to normal by 1400. Stations in the medium range were like sunset skip before totality and faded rapidly afterwards.

In Delaware, Joe Jones reports:

Not much to report here on the eclipse. I don't too often tune around that time of day. Had about 95% totality here; 1080 is usually covered by WTIC but about 3-5 minutes after totality, a station with c/w or religious music was way on top for a few minutes with WTIC almost gone, then they were even a short time and then only WTIC. No ID of course but could have been WEWO or Chatham, Va. (WKBY?).

In Pennsylvania, Frank Wheeler says,

Just tuned around the band during and after the eclipse; there were a lot more stations and semi-locals were stronger. Noticed a station on 540 during the eclipse and it was gone afterwards.

* * * * *



We have pleasure in returning with
 our thanks for your interest.
 Yours truly,
 LTIB
 (Signed) W. L. Ryan,
 Manager

The New Zealand Radio Call Book shows the power of 1B1I to be 200 watts aerial and to be able to make so complete a report of reception—two tubes or ten—is a noteworthy feat. It reports not belief that in radio anything is possible and backs up our position—"If it's DX news it belongs in Radex."

In the April issue, Mr. Baskford will tell us how to conquer those terrible jamming noises and give us a diagram for building our own filter.

Reprinted from RADEX Magazine, 1934

We noted how to be sure to send in the verification from 1B1I when it was removed. This came in on January 28. As where the verification is of later date, this verification is of later date.

Following is the report of reception which is an exception as to report of this date:

Title of reception: Hokey news-1B1I, 4QJ and 2BL.

Time of reception: Hokey news-1B1I, 4QJ and 2BL, 8:00 a. m. to 8:30 a. m. in very weak, of course, 2BL being the worst and indeed very poor. However I must say he was unable to hold any of the three for a period of one minute. He did pick up 4B1I twice but couldn't hold them at all. In the case of 4B1I and 4QJ, I must say they came in so clear for their very brief time that I know the selections at all. I could have written for verification as proof of reception. However when he did pick them up, he should have been able to hold them a little longer but daylight was coming on. I am of the firm opinion that Mr. Lilley does receive Australian stations but how long is it possible for him to hold them? I feel well satisfied with the demonstration and I believe that George treated me perfectly honestly and I am being honest with him and giving him all the credit he deserves."

"After that we got all sorts of station names of which were anything exceptional. Some of them were: KGBR, WASC, KPL, KMX, WKY, W-SIX, KGB and a few more I can't remember. There really seemed to be very little on the air. However at 5:50 a. m. Lilley did get what I truly believe were three Australian stations—1B1I, 4QJ and 2BL. They were verifications (troubling!) "Never these fellows are crooks and their reputation enough to believe it." "I wonder if there is anyone who is a member. The reputation is high. We are making very great receipts from several letters of great length. We are sure we will call Mr. X, write us whom we will call Mr. X, write us One of our most eminent critics, such wild claims.

From their, against our publishing as a score of letters of protest, most hand and Australian stations brought claim of the reception of New Zealand set of his own construction. His reception of George Lilley on a two-tube set, "circling the Globe on Two Tubes." It was an account of the the story, "circling the Globe on Two Tubes" when we published last April, storm we brought down upon our article. Our readers will remember the just can't help writing this "sleeping dogs lie," but we ought to "let

After several months, we received another letter from Mr. X. "Dis-usted your stand . . . fathers?" "Why don't you send committee to investigate?" "If you had the faintest knowledge of DX you wouldn't print the things you do." "You have a wonderful magazine but you are running it completely with stories like you are printing." "I would like to see you actually challenge them." "Has that's enough. It was necessary to print the above statement in order to explain the next paragraph.

"The reception of . . ."

Mr. X himself arranged with George Lilley to witness a demonstration of that reception. When we heard of this we wrote Mr. X and asked him to tell us the results of the test. To his credit he said, "Mr. X wrote me frankly and fairly and from the letter we are making the following questions:

"I am very glad to find you are after both sides of the demonstration, which leads to the truth of the matter connected with the truth of the matter. I arrived at Mr. Lilley's home on 1211B on the morning of October 20th. The subject for some time and started to talk about 1:30 a. m. when all the big stations were on. I found the big station opened considerably and that

WCAU could be heard very plainly in the background. . . . We calculated where the Australians would come in. At 2:00 a. m. many of the big better catches. For one, we got KOH stations when we were getting storm heads when we published last April, which I thought and still think was a very good catch. It came in quite clear but Lilley had a hard time to hold it.

Picks Up Australia

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 Yours truly,
 LTIB
 (Signed) W. L. Ryan,
 Manager

The New Zealand Radio Call Book shows the power of 1B1I to be 200 watts aerial and to be able to make so complete a report of reception—two tubes or ten—is a noteworthy feat. It reports not belief that in radio anything is possible and backs up our position—"If it's DX news it belongs in Radex."

In the April issue, Mr. Baskford will tell us how to conquer those terrible jamming noises and give us a diagram for building our own filter.

Reprinted from RADEX Magazine, 1934

We noted how to be sure to send in the verification from 1B1I when it was removed. This came in on January 28. As where the verification is of later date, this verification is of later date.

Following is the report of reception which is an exception as to report of this date:

Title of reception: Hokey news-1B1I, 4QJ and 2BL.

Time of reception: Hokey news-1B1I, 4QJ and 2BL, 8:00 a. m. to 8:30 a. m. in very weak, of course, 2BL being the worst and indeed very poor. However I must say he was unable to hold any of the three for a period of one minute. He did pick up 4B1I twice but couldn't hold them at all. In the case of 4B1I and 4QJ, I must say they came in so clear for their very brief time that I know the selections at all. I could have written for verification as proof of reception. However when he did pick them up, he should have been able to hold them a little longer but daylight was coming on. I am of the firm opinion that Mr. Lilley does receive Australian stations but how long is it possible for him to hold them? I feel well satisfied with the demonstration and I believe that George treated me perfectly honestly and I am being honest with him and giving him all the credit he deserves."

After several months, we received another letter from Mr. X. "Dis-usted your stand . . . fathers?" "Why don't you send committee to investigate?" "If you had the faintest knowledge of DX you wouldn't print the things you do." "You have a wonderful magazine but you are running it completely with stories like you are printing." "I would like to see you actually challenge them." "Has that's enough. It was necessary to print the above statement in order to explain the next paragraph.

"The reception of . . ."

Mr. X himself arranged with George Lilley to witness a demonstration of that reception. When we heard of this we wrote Mr. X and asked him to tell us the results of the test. To his credit he said, "Mr. X wrote me frankly and fairly and from the letter we are making the following questions:

"I am very glad to find you are after both sides of the demonstration, which leads to the truth of the matter connected with the truth of the matter. I arrived at Mr. Lilley's home on 1211B on the morning of October 20th. The subject for some time and started to talk about 1:30 a. m. when all the big stations were on. I found the big station opened considerably and that

Auroral Precipitation Absorption

by Gordon Nelson

In part two of this article we discussed the basic seasonal pattern in MW TA reception caused by residual daylight absorption. That slow and gradual seasonal pattern is relatively easy to describe and predict in terms of the basic physics involved. While the slow general seasonal pattern is of great importance to the year around DX'er, the seasonal effect tends to be so slight as to go unnoticed from night-to-night unless by chance the reception is right around sunrise or sunset. The rising and setting of the sun follows schedule quite closely and, once account is taken of the eccentricity of the Earth's orbit and long-term variations in solar output, the contribution of this effect in MW reception patterns is nicely predictable.

While the slow seasonal pattern is always present, it's the night-to-night variation in signal quality that really captures the attention of the MW DX'er. Experienced DX'ers know that there can be great variation in conditions from one night to the next; in exceptional circumstances auroral precipitation events can produce great changes within just a few hours. Table I lists a number of important patterns in MW DX reception associated with absorption phenomena. Notice the somewhat arbitrary but still useful distinction between long-term and short-term reception patterns. It is also important to bear in mind that long-term patterns are generally average patterns - very good conditions can still occur during the peak of the 11 year sunspot cycle, for example, although conditions may be generally poor in the overall sense. (We are not concerned with ordinary second-to-second and minute-to-minute signal fading; quick fades of that sort are the result of small scale variations in ionospheric structure, multipath phase interference, etc., and thus are excluded from this discussion of absorption effects.)

We shall now discuss the two most important sources of short-term variation in MW reception: auroral precipitation events, and the Midwinter Anomaly.

AURORAL PRECIPITATION EVENTS

While the realization that visual aurora (the Northern Lights or Aurora Borealis) disturbed shortwave radio is many years old, it has not been until quite recently that the connection between "auroral effects" and MW DX reception has been explored. While the term "auroral night" has been in common usage in the pages of DX NEWS for at least 10 years, it was a strictly empirical term used to describe characteristic nights when stations to the south were heard with unusually powerful signals; on such a night even the powerful 50 kw North American clears are often covered by Cuban and other Caribbean-area stations. Apparently some DX'ers noticed that such nights sometimes corresponded with nights of outstanding Aurora Borealis displays and so the term "auroral night" was introduced; gradually this term came to be used to describe any night with this sort of reception - whether or not visual aurora was present. While the actual connection between the Northern Lights and BCB conditions is indirect and quite complex in detail, someone at least got started on the right track quite some time ago - although the scientific information necessary to understand the connection has not become

SIGNIFICANT PATTERNS IN MW RECEPTION QUALITY DUE TO ABSORPTION PHENOMENA

Time Scale Involved	Type of MW DX Effect	Basic Physical Cause of Pattern	Resulting Effect on Earth's Ionosphere
LONG-TERM:			
22 Years (recurring)	Optimal MW cx every other sunspot minimum.	The 22 year cycle in solar activity affects various properties of solar disturbances; the basic process is not understood.	Overall MW signal absorption falls to alltime low values because of prolonged solar quiet.
11 Years (recurring)	Overall DX quality is best during years of sunspot minimum.	The well-known 11 year sunspot cycle in solar activity is only half of the basic solar cycle; underlying cause unknown.	The average absorption level and frequency of solar disturbances falls with decreasing sunspot activity.
1 Year (recurring)	Best cx during winter; poorest in summer.	Basic seasonal pattern in the amount of solar illumination due to movement of Earth around the Sun.	Residual daytime absorption reaches its highest values during the longest days of summer.
SHORT-TERM:			
25-27 days (recurring)	Periods of "auroral cx" may tend to recur every 3 - 4 weeks.	The 25 day rotation period of the Sun on its axis may return disturbances on the face to a position which will again produce precipitation events on Earth.	Production of increased MW signal absorption due to the presence of free electrons resulting from precipitation of charged particles.
days-weeks	Periods of consecutive "auroral nights" and generally poor high latitude reception.	Certain types of disturbances on the face of the Sun which affect the Van Allen belts; charged particles fall into ionosphere and produce free electrons & MW absorption.	"
day-to-day	Nights of poor cx not associated with "auroral effects"; only during winter months.	"The Midwinter Anomaly" in absorption; cause unknown.	Region of absorption resulting from increased concentration of free electrons produced by unknown processes.

available until quite recently.

The first good evidence of the connection between "auroral" effects and MW DX reception came not in association with "auroral nights" but instead showed the relation between receptions of European stations on the West Coast and the geomagnetic disturbance index, A_{fr} .¹⁰ Gray Scrimgeour was able to show that nights of good West Coast TA reception were inevitably associated with low values of A_{fr} , although there were quite a few nights with low values which did not produce TA receptions. Since the geomagnetic disturbance index is known to be connected with magnetic and ionospheric storms, as well as visual aurora and interruptions of high-latitude shortwave communications links, the author began to accumulate information on disturbances to high-latitude TA signal paths in an attempt to uncover the processes involved. One advantage to using MW TA receptions in studies of this sort became obvious from the very start - whereas shortwave signals tend to be reflected as well as absorbed by auroral structures, thus producing marked deviations from great circle propagation, our high precision MW direction finding equipment and techniques showed that TA signals continued to propagate on paths that were very close to great circles even in the presence of severe auroral disturbances. This observation permitted us to determine the basic geographical patterns in auroral MW effects with a minimum of complications and greatly aided us in the elucidation of the processes involved.

By combining data on unusual MW reception as reported in DX NEWS with reports of West Coast stations logged in Europe by members of Arctic and Medium Wave Circle (England), it has been possible to catalog quite a number of nights producing exceptional reception conditions. As part of the same study we have also kept careful records of the occurrence and severity of "auroral conditions"; these nights of enhanced reception from the South have become increasingly frequent during the past two or three years.

A great deal of scientific data is now gathered on an hourly and daily basis for the purpose of measuring various physical properties of the Sun, the Earth's ionosphere, and the space between. A complex network of ground and satellite based instrumentation supplies data to a number of international clearing centers for geophysical data; this information is subsequently published in various scientific journals for reference purposes. By comparing our accumulated MW reception data with this geophysical information we have been able to uncover many of the mechanisms linking geomagnetic activity with both high-latitude TA reception and "auroral nights".

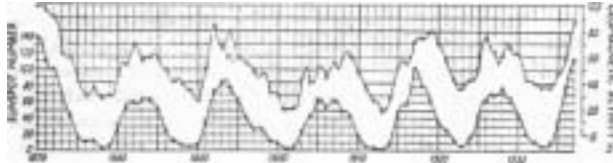
The basic sequence of events is as follows. Certain (but by no means all) types of disturbances on the face of the Sun produce a jet of highly energetic charged particles which are shot into space in the direction of the Earth. Disturbances of this kind on the Sun occur less frequently during years of low sunspot activity than during peak years; in particular the duration of solar quiet between successive upsets of this type is greatest during sunspot minimum. As the expanding shell of solar particles approaches within a few hundred thousand miles of the Earth it begins to encounter the outer fringes of the Earth's magnetic field. The pressure of the particle shockwave actually compresses the Earth's magnetic field on the Sunward side; the more severe the original solar disturbance the greater the distortion of the Earth's field.

Relatively few of the original high energy particles ejected during the original solar disturbance actually reach the Earth's atmosphere, however; most are swept aside by the Earth's protective magnetic field and are lost into deep space. If the Earth's field deflects most of the primary particles, how is that the ionosphere is so strongly affected? This point puzzled scientific investigators for many years and it was not until the first artificial satellites were placed in orbit that the indirect connection between the solar shockwave and the resulting ionospheric disturbances became known. Much scientific data has been gathered in the past few years and the picture is now fairly clear.¹¹

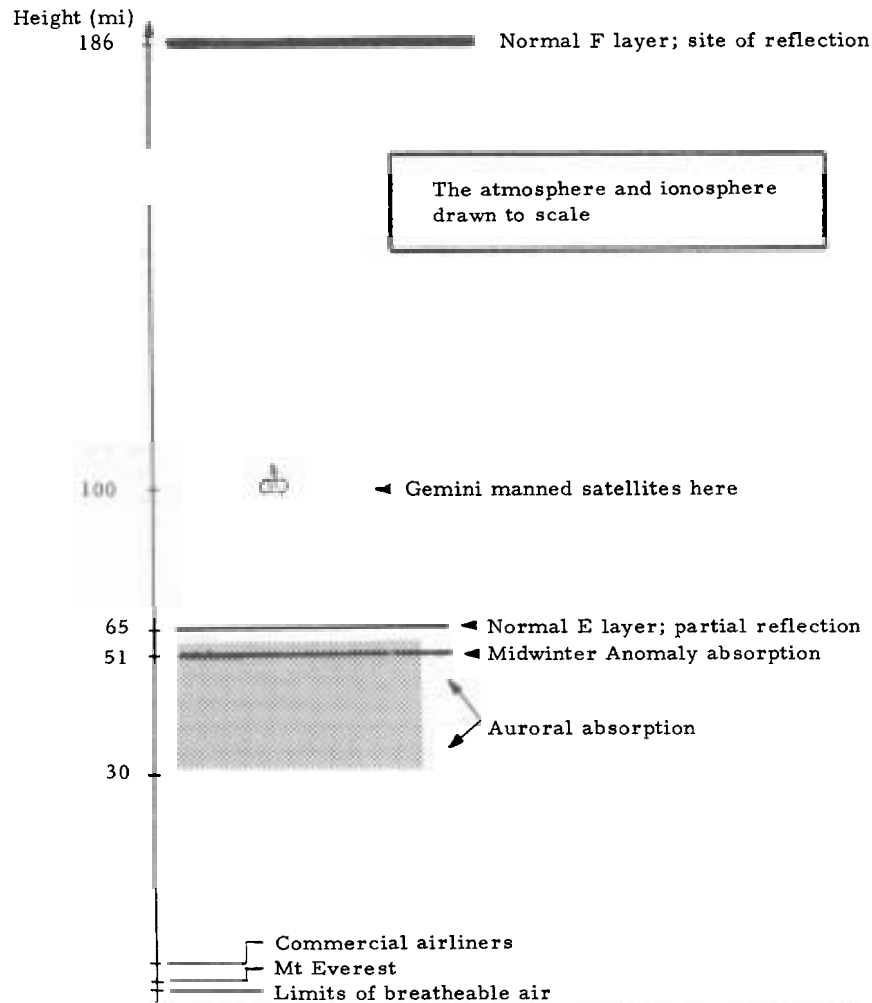
While most particles ejected from the sun are swept aside by the outer reaches of the Earth's magnetic field and never come near Earth, there are several regions inside the protected area where charged particles can become "trapped" for long periods of time. These regions are the Van Allen radiation belts and there are normally many trapped particles resident in these regions. The belts are normally kept charged with particles even during periods of low solar activity by slow replenishment from the weak "solar wind" of low energy particles emitted by the Sun at all times. Thus while the Earth is spared the effects of a direct bombardment from the high-energy shockwave by the protection of the Earth's magnetic field, we are still normally surrounded by radiation belts loaded with low-energy charged particles which are more or less permanently trapped. Barring disturbances to the Earth's field, a resident particle can remain trapped for considerable lengths of time before eventually falling into the atmosphere or migrating outward to be lost into space.

When the outer part of the Earth's field is compressed by the solar shockwave the situation changes however. The collision between the highly energetic solar shockwave and the Earth's field sets up great disturbances throughout the entire field and the Van Allen belts are strongly affected. Energy from the solar shockwave is transmitted to the particles trapped in the radiation belts and as a result the normally rather stable orbits of the resident particles are upset and consequently particles are knocked out of the belts and fall into the atmosphere along lines of the Earth's magnetic field. This dumping of charged particles from the Van Allen regions into the ionosphere is the key step in the process and various names are used to describe it, including precipitation event and dumping event. There are many terms used to describe the consequences of one of these precipitation events: auroral storm, geomagnetic storm, magnetic storm, auroral/geomagnetic disturbance, et al. The precipitation event itself is a worldwide phenomenon and takes place in both the Northern and Southern auroral zones simultaneously. (The exact mechanism by which energy is transmitted from the shockwave to the rest of the Earth's field long remained unclear; now it is known to be by means of a magnetohydrodynamical shockwave - a process unknown until recently discovered in connection with projects to control hydrogen fusion for the generation of useful power. If nothing else it's a good word to work into a casual conversation...)

Thus it is the precipitation event and its consequences that are of special interest to the MW DX'er. The more powerful the original solar shockwave the



The magnetic activity u_1 (upper curve) and the sunspot number (lower curve), annual means, 1870-1937



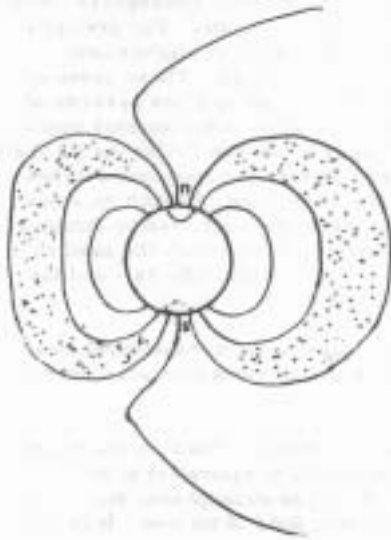
greater the number of particles dumped into the ionosphere and the greater the amount of energy that is imparted to them. Because these particles follow the lines of the Earth's magnetic field as they fall into the upper atmosphere, their descent is channeled towards the two magnetic poles on Earth. The precipitating particles reach the relevant portions of the ionosphere in slightly oval, ring-shaped regions roughly centered on the magnetic poles. **These areas are called the auroral zones** and their exact locations depend upon the severity of the precipitation event. The exact geographical location of the auroral zones at any particular time is of the utmost importance to the MW DX'er as we shall shortly. **Due to an accident of geography, the Northern auroral zone reaches its most southward extent in the direction of the East Coast of North America;** this means that DX'ers in this area of the world are more affected by dumping events than are DX'ers in other parts of the world. This makes the eastern part of N.A. the best place to conduct research into auroral effects - and the worst place to DX from during disturbed conditions!

After a prolonged period of auroral/geomagnetic quiet the auroral zones retreat quite far to the north; during a severe dumping event they may extend as far to the South as Georgia or Florida.

What are the consequences of a precipitation event? Because the falling charged particles (primarily electrons and protons) are equivalent to an enormous electrical current flowing through the upper atmosphere, the precipitation event produces a substantial magnetic field of its own. It is this particle-induced magnetic field that produces the disturbances in the Earth's stationary field that are known as geomagnetic disturbances or magnetic storms. The geomagnetic disturbance index, A_{fr} , is then a measure of the rate at which particles are actually precipitating, although it is a somewhat indirect way of determining how many particles are actually falling. It is possible to actually measure the rate of precipitation with rocket and balloon borne instrumentation, but this is not done on a regular basis at the present time. The data gathered on past flights during normal and disturbed conditions clearly show the direct relationship between the rate of precipitation and the magnitude of geomagnetic disturbances as measured by A_{fr} however; thus the precipitation flux may be confidently inferred from the attendant geomagnetic disturbance indices.

The second important event caused by the actual precipitation event is the production of very heavy ionization in the lower regions of the ionosphere (see the map of the ionosphere on adjoining page). **The ionization produced by the precipitation event has the same highly absorbent properties as that normally produced by solar illumination during the daylight hours (see part II of this article) although it may persist much longer.** The incoming particles directly dislodge some electrons from neutral gas molecules through collision-type interactions and the newly freed electron may be given enough energy to ionize still other molecules. Additional free electrons may be produced by the X-ray radiation (the "braking radiation") emitted by the falling particles. The ionization produced by the precipitation event is frequently very intense even in comparison with that present during local daylight hours and may persist for days or even weeks after the actual precipitation has stopped. Note that the geomagnetic disturbance is produced only by the movement of charged particles; once the precipitation event is over the Earth's field will return to its normal state - even though intense residual absorption may remain. 12

1 - PERIOD OF LONG SOLAR QUIET



Very slight "solar wind" of particles normally present.

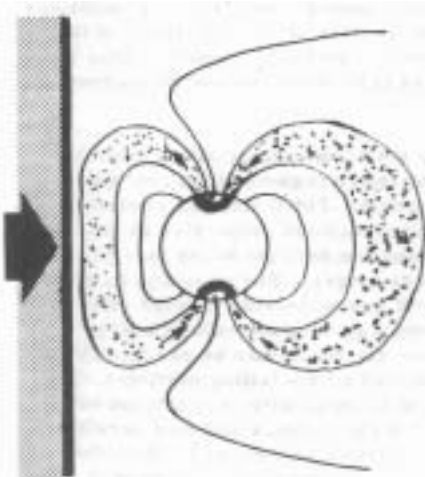
Van Allen belts loaded with trapped particles in stable orbits.

No precipitation taking place; A_{fr} very low for many days.

Auroral zone located quite far to the North; free electrons and MW absorption very slight.

High latitude MW paths open; TA's audible on West Coast, Far East on East Coast; Europeans hear West Coast stations. Examples: 1/26 - 2/1, 1970; 10/27 - 11/2, 1969.

2 - ONSET OF MAJOR DISTURBANCE



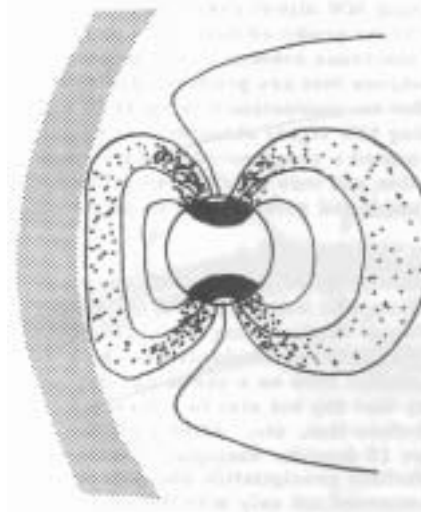
Shockwave of high-energy particles hits Earth's magnetic field 36-48 hours after being ejected from the Sun.

Outer regions of Earth's field compressed by shockwave; magnetohydrodynamical shock propagates through Van Allen region and particles begin to precipitate towards Earth.

Falling particles begin to generate a magnetic field; A_{fr} begins to rise.

Ionization and MW absorption begin increasing and auroral zones begin moving away from the magnetic poles. High latitude MW signals suddenly vanish within a few minutes. Example: 9/29/69.

3 - PEAK PHASE OF DUMPING EVENT



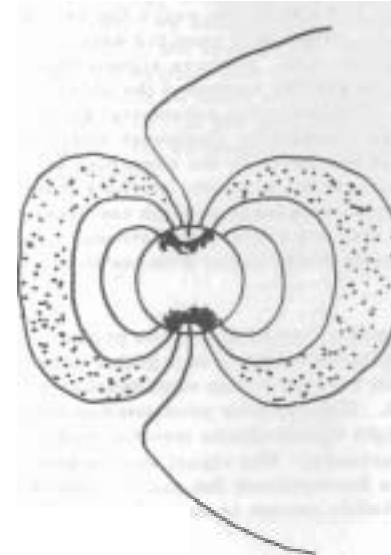
Earth's field highly disturbed; precipitation reaches peak value which may exceed 10,000 particles per second per square inch into auroral zones. A_{fr} and other magnetic indices reach maximum values.

Auroral zones extended far from the poles; Northern zone extends down over most of North America and Europe. Absorption in auroral zones reaches extremely high values.

All skywave signals which must pass through auroral zone are greatly weakened or totally absorbed. All TA and high-latitude TP signals gone.

In North America the auroral zone extends far enough South to blanket the Northern part of the continent; only those signals from the South at low angles can arrive under aurora.

4 - RECOVERY PHASE



Earth's field returns to normal shape. Precipitation ceases and A_{fr} falls back to a low value.

The free electrons produced during the dumping event slowly vanish through recombination and the absorption of MW signals begins to decline. The auroral zone slowly breaks up and the high-powered clear channel stations return. After a much longer time the TA's begin to return; those on low-latitude paths first. High-latitude conditions continue to improve, barring a new precipitation event or the appearance of the Midwinter

Anomaly.

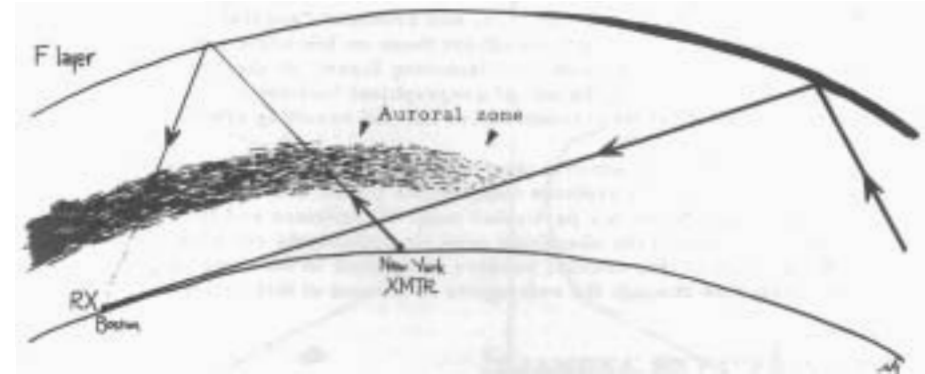
Once the actual dumping event is over and the Earth's magnetic field returns to normal, what causes the remaining MW signal absorption to disappear? As in the case of the free electrons produced during the day by solar illumination, the remaining auroral electrons eventually vanish primarily through recombination. The more free electrons that are produced during the precipitation event the longer it will take for recombination to dispose of them; hence the longer it will take for the resulting MW signal absorption to disperse. In the appendix to this article we have presented a rough solution to the model differential equation describing the production and loss of MW absorption due to auroral/geomagnetic disturbances; the predicted results are compared with actual MW absorption data.

It is important to realize that the MW absorption produced by dumping events represents a "pool" which is simultaneously being added to by new precipitation (even though it may be vanishingly slight during prolonged periods of solar quiet) and depleted by ordinary recombination mechanisms. As a result the total absorption present in the auroral zone on a particular day will depend not only on the precipitation activity that day but also to a lesser extent that of the day before, and the day before that, etc. After a major event significant absorption may remain for 10 days for example; during the time that the first absorption is decaying further precipitation may introduce additional absorption - thus we must be concerned not only with the value on a particular day but with the history of precipitation. This point will hopefully be made a bit clearer in the Appendix; it's a rather difficult concept to express in nonmathematical terms.

When the auroral zone is extended moderately far to the South, high-latitude paths will be affected but we will not experience "auroral conditions" here in North America. It is only when the extremely absorbent auroral zone extends far enough to the South to actually be overhead that we notice the loss of the stations to the North, East and West. Signals from stations to the South can graze in at relatively low angles and effectively reach the receiver site without passing through the absorption. Depending upon the exact location of the lower edge of the zone and the receiving site, skywave signals from stations to the North, East and West will be greatly weakened the more of the blanketing layer they must pass through. There is also substantial scientific data to suggest that the occupation of clear channels by Caribbean stations during such a night when North America is blanketed by the absorbing layer is actually due to a combination of two factors: the domestic stations from all all directions except the South are weakened by passage through the blanketing layer and the signals from the Caribbean stations are actually stronger than usual due to an effective increase in the reflectivity of the F-layer in tropical regions during dumping events. 13

The precipitation event may have another result also - the production of actual visual aurora. Whereas the precipitation event is of a global nature and occurs throughout both the North and South auroral zones simultaneously, a visual aurora is a much more local event. During some precipitation events local conditions may be just right and bright visual effects may be produced during the most active phases of the disturbance. The visual aurora may occupy regions only a few miles wide or a few hundred; the exact combination of circumstances necessary to produce visible aurora is not understood.

AURORAL BLANKETING: The origin of "auroral conditions" in MW reception.



This drawing shows the situation on a typical night of "auroral conditions" here in Boston. On such a night (3/8/70 for example), Caribbean stations often override New York clears such as WABC. The figure shows how this can happen. The auroral blanketing layer of highly absorbing ionization extends far to the South and the skywave from NYC must take a double pass through the auroral absorption; as a result it is much weaker than usual. The Caribbean signal is coming in at a much lower angle, however, and actually reaches Boston by skimming in under the blanketing layer - as a result it is unaffected by the absorption. Picture the same situation in 3 dimensions and it will be obvious that Chicago, Detroit, and stations to the North of Boston will also be much weaker than normal. There is evidence from satellite studies that the Caribbean signal is also actually stronger than usual at the same time because of increased reflectivity of the F-layer in the Tropical region.

In summary then, the geographical location and electron content of the "auroral zone" has a very great effect on MW DX reception. Only relatively minor disturbances are necessary to eliminate high-latitude Transatlantic and Transpacific reception; with moderate to severe activity the layer of auroral absorption extends South over the U.S. and produces "auroral conditions" by selectively masking out all signals except those on low angle paths which can successfully skim in underneath the blanketing layer. In the Appendix we offer a number of maps showing the actual geographical location of the zone of absorption under different circumstances and the resulting effects on MW DX.

This discussion of auroral phenomena has been highly simplified but is qualitatively correct and explains many facets of MW DX reception. The exact relationship between a particular solar disturbance and the eventual location and content of the absorbing zone is particularly complex and is far beyond the scope of this article; readers interested in the topic can get a start into the literature through the references at the end of this article.

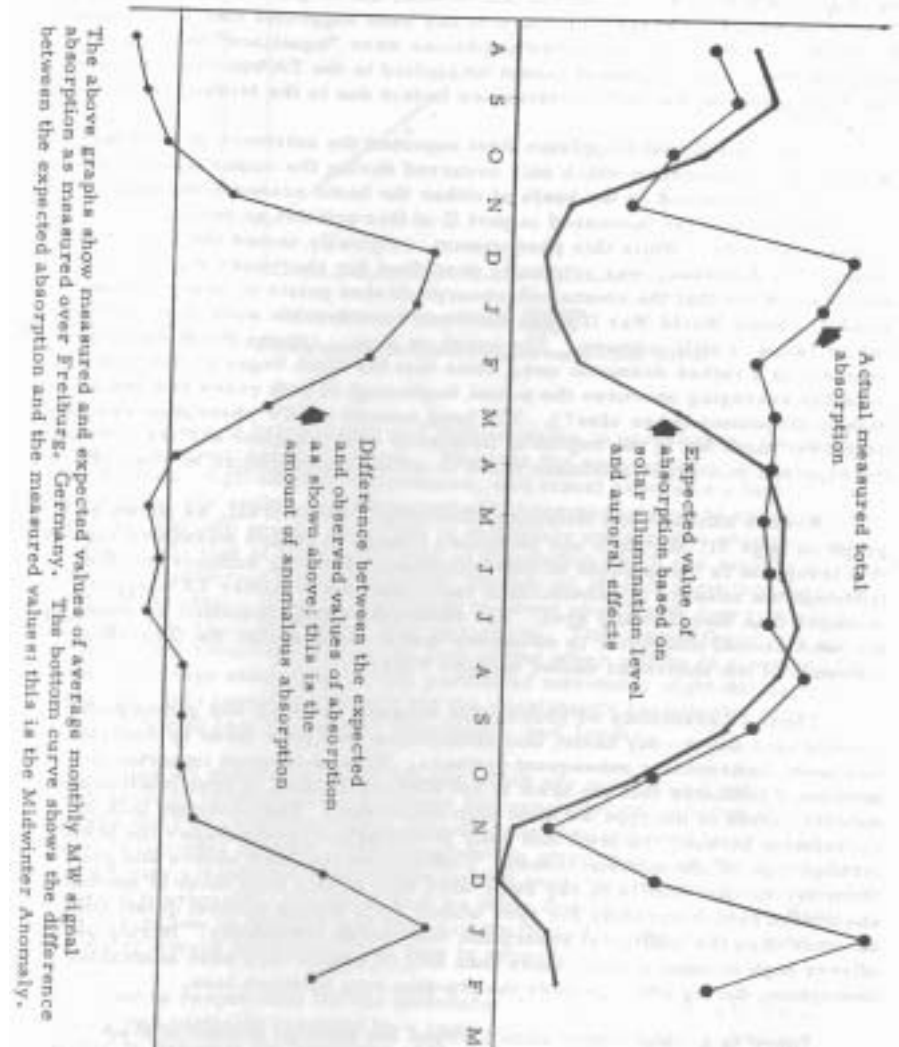
THE MIDWINTER ANOMALY.

Based upon what we've presented so far it would appear that the basic sources of MW signal absorption had been accounted for in at least a qualitative manner. But there is one additional pattern conspicuously superimposed upon the basic seasonal and auroral patterns. During the past half dozen years spanning the peak of the present sunspot cycle we have noticed what appears to be a recurring pattern in TA reception. During the fall season. As the summer wears on and the seasonal absorption falls off, TA reception improves steadily through September and into October. After a period of outstandingly good receptions late in October (often producing some of the year's best DX), TA conditions fall off very noticeably in November. While there are some good nights from time-to-time, only rarely is reception as good as it is during late October; even more significantly, the continued improvement which is expected as the days grow shorter is not evident. Particularly remarkable is the fact that TA conditions around the time of midwinter - December 21st - have been consistently mediocre at best; the very long distance receptions that would be expected during the extended darkness hours just haven't materialized in spite of lengthy periods of auroral quiet.

A similar pattern has been observed in monthly reception from stns in Australia, New Zealand and the South Pacific. Randy Seaver searched through DX News and DX Monitor for the period from 1962-1965 and came up with the following figures for these receptions in North America by month:

month:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
number of stns hr:	10	21	16	21	16	13	13	8	14	31	15	12

He observes, "The North American totals have two peaks, March and October. The March peak does not show in the station-heard list above, but is very obvious when the total number of reception instances is compared (e.g., a station could be heard 6 times in March but would only get 1 point in above list; this is the case in March)."



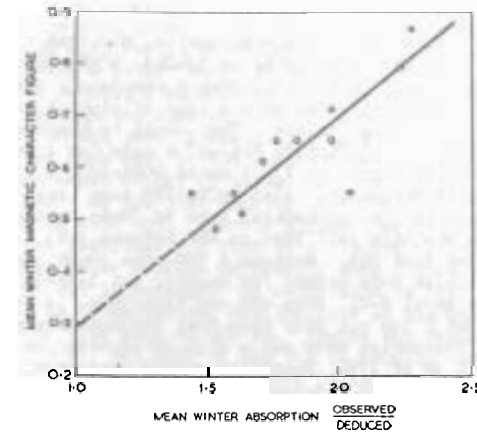
The first interpretation of Seaver's data was that DU reception tended to be improved during the spring and fall because the length of the day is equal in both hemispheres at the equinoxes; it has been suggested that Transequatorial reception was thus improved when conditions were "equalized" between the hemispheres. **This argument cannot be applied to the TA situation, however, and it may well be that both patterns are in fact due to the Midwinter Anomaly.**

In 1937 Sir Edward Appleton first reported the existence of a strange type of radio wave absorption which only occurred during the winter months and could not be explained on the basis of either the basic seasonal variation in solar illumination (as discussed in part II of this article) or auroral/geomagnetic activity. While this phenomenon, originally named the Midwinter Anomaly by Appleton, was originally described for shortwave signals, later work has shown that the anomalous absorption also exists on lower frequencies as well. Since World War II there has been considerable work done on the MWA but its cause is still unknown. The graph on page shows the Midwinter Anomaly in a rather dramatic way. Note that the MWA began in November (monthly averaging obscures the actual beginning) in both years and reached its peak in Midwinter (when else?). **The total amount of MW absorption reached its lowest value not in the region of December 21st but much earlier; instead of the expected midwinter minimum there is actually a maximum in absorption.**

What is known of the Midwinter Anomaly? First of all, as shown on the graph on page 31, the MWA can be severe enough to reduce midwinter signals to a level that is comparable to those experienced during summer months (although the absence of summertime static may make winter TA's appear stronger than they actually are). **The additional signal reduction produced by the MWA around midwinter is so severe that it can override the favorable influence of the shortened winter daytime hours.**

There is absolutely no correlation between the MWA and geomagnetic activity on a day-to-day basis; this observation was first made by Appleton and has been confirmed by subsequent workers. This is of great importance because it indicates that the MWA is not directly related to precipitation and auroral events of the type we have been discussing. **The observed lack of correlation between the MWA and daily precipitation levels makes the MWA a strange type of phenomenon indeed. Furthermore the MWA comes and goes from day-to-day; that is to say some days may have a high value of anomalous absorption (which accounts for poor winter TA's during auroral quiet) and on other days the additional absorption will vanish completely. During years of very high sunspot activity more than 80% of winter days have anomalous absorption; during other periods the fraction may be much less.**

There is a rough correlation between the average amount of MWA absorption and the average geomagnetic disturbance on a yearly basis however. The graph at the top of the next page shows the amount of yearly average MWA absorption plotted against the yearly average geomagnetic disturbance. **This indicates that the MWA is more severe in years with high magnetic activity; since magnetic activity is directly related to the sunspot cycle (see graph on page 24), this means that the MWA is worst in years of high sunspot activity. It is important to realize that this does not mean that geomagnetic activity and the MWA are necessarily connected; they may both simply be produced by processes influenced by overall solar activity.**¹⁴



Variation of anomalous absorption at Slough with magnetic activity, 1943-54.

In addition to being spotty and unpredictable in occurrence, the MWA shows an odd geographical pattern. Whereas the auroral precipitation event is a worldwide high-latitude disturbance, and visual aurora is a highly local phenomenon, the region of high anomalous absorption seems to cover an area of at least 300,000 square miles but is definitely not a global phenomenon. Its behavior is that of a large "cloud" of absorption which can rapidly form and disappear in different areas overnight. Statistical studies show that there is a significant tendency for high absorption to occur over North America when there is a low value in Europe, and vice-versa. This means there is a good likelihood that either one end of the path or the other will be in a region of anomalously high absorption on any particular midwinter night during sunspot maximum - this may well account for the consistently (relatively) poor reception during last November, December, and January.

Unlike all auroral-related effects which are most important in regions of high latitude because of the tendency for precipitation to follow the Earth's magnetic field lines into the polar regions, the MWA appears to occur at moderate latitudes as well. **This observation strengthens the suspicion that the MWA may actually be responsible for the seasonal pattern in DU reception discussed previously. DU paths such as those from Australia to the West Coast are so low in latitude that they are unaffected by the auroral zones even under severe conditions; see map in appendix.**

What is responsible for the Midwinter Anomaly absorption? This question was partially resolved by a number of scientific experiments designed to examine the structure of the ionosphere on midwinter days with and without anomalous absorption. **Rockets, equipped with ion probes to measure the number of free electrons, were shot into the ionosphere on a number of normal days and on a day with severe Midwinter Anomaly absorption. The graph on the top of the next page shows the results of this experiment.**

(To be completed
next issue...)

34 JOHN W. HOOGERHEIDE - 3 Marquette Drive - Marquette, Michigan - 49855
 3/2, what a surprise on 1240K! WCEM, Cambridge, Md. nice-ly atop for about 30 minutes from 10:45-11:20pm & completely readable. How a graveyard could stay atop so long at such a time of night & at such a distance sure proves that radio does funny things. They could be heard I&C two rooms away. They s/off @ 11:20 w/vocal "Lord's Prayer" & said 6am s/on - Md. #8. Driving back to Black River Falls Wis. on 3/3 I noted WOKL-1030 @ 7:15pm s/off w/orchestral SSB; needed in Marquette. Also KMCD-1570 same time. Interesting s/off @ 7:30pm on 1570 playing few orchestral bars of "Home on the Range." Does someone in the SW know who this is? TTer on 860 between 1:45 & 1:55am, I believe KNRF, so tentative sent out. Mexican & QRN were rough. All the hullabaloo about DXing the eclipse sure proved for naught. At 1:15-1:30 only a few signals like WNL-970 were about S-2. Even WSB was inaudible. A few Ontarios like CHIN/CJBC/CBL were about S 3-4 but only then that absolutely nothing on interest noted & general most frequencies show not a sign of anything on them. Real weird CX on PM of 3/8 & AM of 3/9. Reception seemed concentrated on a line passing through Grand Forks, N.D., Marquette, and out into northern N.Y. Stations like KNOX-1310 & CHCO-1390 all alone @ 11pm. Ground wave CX were n until 10:30pm w/travelers up to 80 miles away being all alone. WJAS-1320 s/off 1. Said 6am s/on. Also WTAQ-1300 @ 1 w/SSB; WCAZ-990 r/c-TT 1:15-1:30. Horrible CX still prevailing @ 1:30. Most frequencies devoid of anything & WAKR is off for the first time ever for me. There's someone behind in the mess w/soft pop mx behind an OC believed to be WAKR. A very loud TT on 1570 @ 1-1:15 I assume was new CHLO, but only a guess there. I tried for WTXL DX. Only CHYM & WOLF noted there. With 1,000w I feel they should have reached into Marquette if on. WHIO/KOIL/WFBG all noted @ 2 on RS. WFBG seemingly on AN RS. WHIO was on test. WLAC s/off @ 2 & WRAN-1510 DX made it in, poor, but audible.

CARTER SCHOLZ - 3 Somerset Road - Tenafly, New Jersey - 07670
 DX since last Musing a while back: 2/9 saw excellent CX w/many unnn TAS pushing through - no new ones, however. Also fabulous CX to the W & S, bringing KIOA-940 ET 3am, WKOG-1560 Ga. 1:20 w/c/w ET (seems like everyone had that one), KFBK-1530 Cal. in solidly after many nights of speculation. CFAC-960 Alta. through CHNS quite well @ 3:47, & finally what I consider my best DX to date, KOKL in w/a solid ID, then pop mx @ 3:13, all alone. Of course, WSM decided that 3:15 would be a nice time for an ET, so there went the Hawaiian. Report for about three or four minutes sent - is KOKL a conscientious verifier? Anyway, veries are in from WKOG v/1-OM, CFAC (very quick v/q) KFI w/verification stamp, EKKO variety). 2/9 SSS: WBUX-1570 Pa. logged & reported, no sign of CKIM. 2/16 SSS: WDLA-1270 N.Y. in okay w/c/w. 2/20 found KOA-850 for the first time here. A week of skiing interrupted DX & caused me to be away for the CFFB DX. That makes me very very mad! Next DX was just randomly skipping up & down the dial, filling in regulars that I hadn't bothered to log, like WCWU-1350 WBEM-780 WITG-1410 WRCP-1540 WKDN-800 WRIV-1390, mostly in during daytime. Others include WGEI-910 Pa., WLAD-800 Conn. This all brings the log up to 273. My lackadaisical verie policy up to now has my veried totals at 28 states, three countries, five provinces and 48 veries. This is omitting non-reported regulars like Masc., M.H., Ala. etc., all LAs, many Canadians & TAs. In other words, I'm rather lax when it comes to verifying! However, this falls under my new resolutions: report as many stations as possible, get an PET loop preamp, DX every MM, & as often as possible, install a mechanical filter, get an efficient wave trap, get an Hq-180, and blow up every station XR within 100 miles of here. PEACE

PAUL K. HART - 2105 Muse - Fort Worth, Texas - 76112 (CST)
 Oh combination joy & disappointment! Letter from KSCO says they were using 250w. non-directional at the time I logged them. So the CW is retracted. Even so, the CE asked for a copy of the tape & was amazed I had copied them. KSCO is going to 5kw. directional night & is in the process of lining up their new antenna which is a three-tower array (I presume in a row w/deep null to protect KRLD). In the meantime the FCC has issued temporary authority to use

250w at night non-directional. They expect program test authority 3/23 & will then discontinue the 250w night. The joy is that after further examination of the 3/2 tape, I had also gotten WVOG-1080 s/off @ 3:06am EST for tests & caught an ID from them again @ 3:50. Calculation on their pattern shows 10w this way, but after the KSCO result, I have letters out to WKLO & WVOG for confirmation of their patterns. I listened carefully on 3/7 & was able to observe absolutely NO enhancement of CX on the BCB. I would like to add my support to the idea of going to savings time when most of the country does. The reason is not to be "in" but for the common sense object of minimizing confusion. Most stations & skeds follow savings time - we are just causing ourselves a lot of trouble & confusion insisting on staying with EST. I would suggest one step further. Musings is supposed to be conversational - I find it difficult to believe I am talking informally or reading other Musings informally when I know they have to interpolate their times to get EST in Musings. My suggestion is that we all use our local times as we would in conversation, but indicate at the head of the Musing as I have done here what time zone we are in. Anyone who wants to relate back to Eastern time can do it, but half of the fun is knowing when a station was heard at the listener's local time - now we have to interpolate back to get the listener's time. Richard Wood's Musings would be much more fun to read if they were in his local time. My Uncle is a real purist, carries GMT around on his wrist - says no other time has any significance, but some people are very rigid in their beliefs. 73. (But if the DXer didn't mention what time he was using in his Muse, then we'd have to guess if his own or EST - EST is merely a common denominator so everybody knows, & like EDT is planned to be this Summer -ERC)

PAUL J. ABBOTT - 4117 Candle Nut - Dallas, Texas - 75234
 For those of you who don't remember me from my humble Muse last Fall, I'm 15, just moved to Dallas from Fairfield Conn., & started DXing five or six months ago. I'm extremely interested in the technical aspect of the hobby as well as the actual DXing part of it. Since coming here I have only been able to listen on 2/28 & 3/1. I logged: WKY-930 KNBR-680 KCBS-740 KFI KHOW-630 @ 3:01am; WHB-710 @ 4:50am; WABC @ 4:15 w/Dan Ingram u/KOB; WMC-790 @ 4:23; KSFA-860 @ 4:25-4:41am, lkw. daytime, ET w/pop tunes & tones. WCBS-800 @ 4:49; KQEO-920 @ 4:58am in Albuquerque w/500w. Preceding was on 2/28, the following logged on 3/1: KIMN-950 @ 1:40am, KLXZ-940 @ 1:45, WBRC-960 @ 1:50 u/Mexican, WDAY-970 N.D. @ 2 s/off - new state for me; WAVE-970 @ 2:01 w/ID: WNOX-990 @ 2:13am; KDKA; KTW-1030 @ 2:45am, Wyo., new state for me; KNX-1070; CKWX-1130 Vancouver, new province; WRVA & WCAU. I logged others but I don't want to write a book. By the way, my present antenna is a 15' high, 22.7' long, short longwire. I saw David Schmidt's Muse of 2/21. I looked on my about-one-month-old QSL from WAMS & there was - Drvis Schmidt, E. I just received my v/1 from the WKND TEST a while back, very nice v/1 & apology for lateness. Does anyone own a BC-221 frequency monitor? I was thinking of getting one but where? Does anyone know? I hope to get in touch w/Paul Hart as soon as possible. I missed the eclipse but I am looking forward to the next one in 2024, when I'm the ripe old age of 70. One last thing - go EDT! 73 oder dreundsiebzig.

KEN LYON - 9415 Goodrich Road - Clarence Center, New York - 14032
 DX this week includes: 3/1- CHLO-1570 heard 12:02-1:01am w/rr, no mention of clubs or test, sounded like RS & has been heard almost nightly since, weak for 10kw, since beamed N/S, was last heard on 680 eight years ago. 3/2- CHYM-1490 on top of channel 1:49-2 & on. 3/3- WPIT-730 in @ 6:14-6:27pm s/off, first heard well enough for a good log. 3/4- WCPS-760 heard @ 6:15pm s/off way u/WJR. 3/6- KFVS-960 in well w/f/c-TT 1-1:15, WCBG-1590 o/u WAKR w/f/c-TT 1-1:15 am. WDEI-1500 heard well 1:20am & on w/ET w/c/w, WFML-1390 ET/TT 1:28am & on, ID @ 1:29; WFHG-980 w/f/c-wx 2:16-2:31am w/QRN from WRC. 3/7- KOLY-1300 w/f/c-TT 1:52-2:04 weak u/WFBR/WERE, ID @ 1:57am. Veries are KNOX w/two v/q, one postcard w/2d stamp & one w/picture of station, WCOW v/1 saying same f/c was heard in Hawaii, no doubt, Richard Wood. C U later.

SOME APRIL FUEL

BIG NEWS FROM CANADA

CFCN-1000 has been carrying the all-night Holiday Inn - Dolly Holiday Show for some time now. It has proven to be quite popular in Canada, and so it has been decided, that starting April 31, 1970, the ENTIRE C.B.C. EE network will begin carrying this program nightly. It will be relayed from the Calgary studios of CFCN.

BIG NEWS FROM CANADA

It has come to the attention of the CBC engineers that their 40 watt LPRT stations do not cover very much ground at night - some only a radius of about two miles, interference-free! So, a letter to the CBC Field Engineer in Charge in Ottawa from NRC's Publisher, Gordon Nelson, contained this great suggestion, which the CBC has decided to adopt. The interference to these stations comes largely from more powerful stations on the same frequency - so the CBC that they use split frequencies, where there will not be this problem! Gordon acknowledges that this may tend to cut down some foreign DXing for any NRCers anywhere near the Canadian border, but he feels that since their service to outlanders will be enhanced by this change, that that good far outweighs the lost DX the U.S.A. foreign DXers can expect.

SCHOOL OR DX?

We have often seen young NRCers say they had to forego DXing on Mondays due to a heavy school program. We would like to go on record as opposing this more popular point of view. We say - DXing should take precedence over school! Think of the great Monday mornings we have had his past season - those who went big for school missed out on all this - stations which may never again be heard were logged during this past fine DX season. School? You can go there any day even in the Summer when WCB DX isn't so good! Besides, if you flunk out in school these days, it's no big deal - there are plenty of jobs for ditch-diggers, porters, messengers, handymen & bricklayers just crying to be filled! And these jobs pay very well indeed. So, we recommend - cut out all the school stuff and enjoy yourselves at the dials, and let the future take care of itself!

WHAT TIME DO WE USE?

This is a difficult question. It has been suggested we stay on EST all Summer as in Winter. It has been suggested we switch to EDT for the period when it is in vogue. Another idea is to ask each member to report in his own local time, mentioning what that time is at the head of his Musing. Well, why not use the time at the station heard? Of course, this can be confusing. West Virginia is on Eastern Time, for example - we know of a station located in a VALLEY which is on Mountain Time! Or, since most members are in the northern part of the U.S.A., why not use Northern Standard Time? Which is the equivalent of Southern Daylight Saving Time.

VERIFIE SIGNERS?

These are listed - from stations that VERIFY! It has come to mind maybe we ought to list the names of the people at stations which do not verify - so if you have any such stations or names, please send in a list of the stations which did not answer, and the name of the person at those stations who did not send you a reply. Be sure to spell their names right, and please indicate whether it was a letter or card they did not send you. Thank you.

AURORA CHASE

It has been proposed that the National Bureau of Standards install a tall 1,000' tower in the N.E. part of the U.S.A. From it, an electrical charge of 17,000,000 volts will be discharged heavenward any time an Aurora settles over the land. This, it is believed, will neutralize the Aurora and in fact, dissolve it, returning BCRadio to good conditions, and insuring permanent good conditions! And remember - April Fuel!

36 CESAR CORTIJO - Calle Benigno F. Rojas 46 - Apt. 5 - Santo Domingo, Dominican Rep. HI Friends. After a week-end to Cibao (this is the name of the Northern part of my country, Santiago is the main city), here I am again to tell you about it. My first interest was to check stations in this area, as I am in the preparation of a new Dominican list of MW stations. Places visited were Santiago, Santo Cerro & La Vega. Most interested place was Santo Cerro in order to see the location of R. Santa Maria. We were met (my wife & I) by Miss Aguedita Jimenez, the beautiful secretary who gave us all the information requested, although certain important details were not able to be obtained as she did not know them. There is a complete building dedicated to the station, w/ five rooms: control & speaker room w/ amplifier, recorders, Tape cartridges, records, etc. teaching room & recording room, director's office and secretary's office. XR place is further back close to the antenna, some 100 feet high. Place is a pleasant one due to the altitude from which a large view of the Vega Real Valley can be seen miles around. More details can be read in an article specially written for DX NEWS, w/ pictures. In the files I could see reports from the U.S., Sweden, Finland, etc. Among the U.S.'s familiar names were seen such as Ernie Cooper (whose picture sitting on a table has made his known in every place), Howard Fountain & Kermit Geary, to name only a few. She said that all correct reports are replied. I hope that these friends received their verifications. (I didn't, Cesar -ERC) I showed her a part of Ernie's Musing where he mentioned that the Dominican National Anthem can be heard every evening in New York at 10:30pm & she did like that. I don't know how reception will be in this new frequency of 790 kc/s. How is it, ERNY? (I did not know about it - I doubt it - Castro, you know -ERC) Well, we returned Sunday afternoon so tired I could not listen to the radio. Next Musing will be for R. Cristal TEST on 2/23. Some reports have been received. See you soon.

HIGH RICHMAN - 14 East Cheshire Place - Staten Island, New York - 10301

The only new verie is a detailed hand-written one from WEEB. MM 3/2 found wmv WVOV 1000 Ala. testing w/ Frijid Pink mx @ 1:11am tunein. The e-clipse proved diag. signal from WTOF. Speaking of WTOF, the 3/9 issue of Broadcasting says that "effective 3/2, WTOF began s/off @ 1am Mon-Sat. Sun sked cont:nu:s 5:30am to mid-night." Auroal CH tonight (3/10) w/no sign of CKLW-800 (all PJB), ZNS all alone on 1540; many clear-channel nightly regulars are non-existent. I attended a Staten Island version of Woodstock 3/7 - we had the Friends of Distinction, & the McCops. I started March in the right way by winning a cont at on WNEC's "Big Wilson Show" /1. The prize was two tickets to the upcoming concert by Sergio Mendez & Brazil '66. Anyone w/a few spare \$\$\$ around, please write, as I'm looking for people who share my interest in purchasing a radio station. I promise that we'll have a weekly SP, hi.

STEWART CRAY - 2100 South Simpson Street - Philadelphia, Pennsylvania - 19142

Isn't it funny that when you send a tentative report asking if it was a certain station's signal you heard, they are the ones who seem reluctant to answer. I have four such entries hanging fire right now. Down to the DX: 2/23- WYFF-1190 on their TEST Special. 3/2- KATZ-1600 Mo. on what must have been an OC test w/1 @ 2:30am. 3/6- While not listening for anything special I heard CHLO-1970 on 83 @ 10:06pm. Veries in lately from KATZ & WYFF. On 3/7 I pulled the tubes on my set & ran a check only to find two dead, three weak, & on replacing the tubes my power tube started shorting out. Luckily I had five of the six in my goodie box. But I am still getting a noise like a high wind blowing. This is between the 10k spots & knocking out my splits. Does anyone have any idea what might be causing it? Maybe the high winds we've been having lately, hi -ERC) I don't know if it was ERC's typing or the printer's boo-boo but I got one of the worst-printed copies of DX NEWS since we went off-set. It reminds me of the first few issues. Today is Tues. & I haven't received my issue due yesterday so I can't comment on this one. Score here 2515/2378 or 94.3% returns. 73,000 DX.

VERIE SIGNERS

A - K. Igan	B - L. Siddens	1090	K WqJ J	Jeannie Bridgley, Trfe	D		
C - (no name)	D - R. Karchevski	1110	W Jfm L	G. H. Casey, GM	T		
E - R. Wood	F - C. Mohr	1120	W WFO L	W. Williams, CE	F		
350	C K P G	D	1130	K WqK H	F. Page, PD	A	
	K AzP Y	u/u	D	1140	W BrZ Y	G. Donahue, CE	A
340	C BqT	J. F. Baird	F	1150	C HqS J	T. R. Dowling	F
350	K P Q	G. D. Lincoln, E	E	1160	K SqL	M. J. Jones, CE	C
	C PqO S	E. Collison, CE	F	1170	K J N P	Rev. D.L.Nelson, GM	E
390	K H A R	R. M. Luck, GM	E		K L O K	H. R. Staiberg, CE	E
310	C KqY L	R. D. Rafferty, CE	E	1240	W B I R	J. R. Horton, TD	E
	K O N A	D. W. Mitchell, GM	E	1250	K SqS U	F. Coile, SuE	E
350	K QqR L	A. Paycroft, CE	D		W D V A	W. Campbell, CE	C
	K I K K	J. A. Mackney, VP	E	1260	K W F R	D. R. Wilson, CE	E
360	W N B C	T. J. Buzalski, CE	E	1270	C H W K	E. A. Shepherd, CE	E
370	K B O I	J. A. Johnst Jr., AGM	D		K A D L	C. Pierce, SM	A
380	K O M W	J. Robinson, A, E	E	1290	W Cmb L	L. Weatherford, CE	A
	C H F I	R. Turpenny, DoE	F		K McE N	u/u	D
	W M P S	J. G. Deaderick	F		K O W B	J. Ballas, GM	E
370	K M T O	u/u, CE	D	1300	K A C I	Thelda R. Jackson	E
	K MqP C	T. C. Crossnoe, VPoE	D		K L A R	D. Leyendecker, GM	E
370	W P T K	Paulette S. ReedPSD	F	1310	K P O D	B. Stamps, D	E
370	K X A	J. H. Dobaque, GM	D	1320	W C O G	R. Dayton	B
380	K U Z Z	A. Crocker, DoE	E	1340	W L D Y	D. Dennis, CE	T
	K IqN Y	u/u	E	1350	W L O U	S. Dawson, CE	E
310	W E S D O	R. Ruby, CE	F		K G M R	A. L. Anderson, M	E
360	W T E L	Theodore Kay	F		K T X J	G. Dodson, M, CE	E
	K NqU J	G. Walston, CE	A	1370	W G H N	G. Kleis, CE	A
370	W WqL	J. C. Petagna	C		K V W O	L. Close, CE	D
390	C KqT S	B. Dewar	F		K AqS T	R. Chopping	DE
390	W R T N	S. Strauss, CE	F	1380	K RqK O	D. Good, CE	D
390	C KqC Y	R. C. Rylatt, CE	C	1390	W T J S	F. Proctor, VP	A
	K RqE X	M. Shafer, CE	E		W E A M	E. Biterbaugh, CE	C
	C K T N X	S. C. Reid, DoE	F	1400	K E D O	Holly Bishop	E
*310	K U R Y	M. Oberst, M	E		K S I M	D. Williams, CE	E
350	K A G I	D. M. Walls, CE	E	1420	K U J	Penny Bridges, S	E
	K qqE I	H. H. Fletcher, GM	E		C J V R	E. Buryniuk, CE	E
340	W ImD G	R. F. Dietz, CE	F	*1410	W Y M B	C. Roach, SM	A
350	W W J	L. Rymarz, CE	F	1430	K G A Y	A. Gordon, PD	D
	K M E R	B. R. Hymas, P, GM	E	1450	K R Z Y	T. Noss, CE	E
360	C F A C	E. C. Connor, TD	E	1460	K R O W	D. Richards, PD	E
	W R F C	L. Melear, CE	F	1470	K D U N	Loretta Miller	E
370	W R F O	F. N. Bernato, CE	F	1480	K O N I	G. K. Culbertson, P, GM	E
	K B I S	S. Stewart, PD	E	1490	W S r I P	E. Baldrige, CE	A
	C J Y R	J. Reid, E	E	1500	K XfR X	D. Smith, PD	D
	K V W M	S. J. Woodworth, O, M, CE E	E	1520	W K B W	L. Fiedler, CE	B
	K O n F Y	J. J. Carlos, Gerente E	E	1530	K O K A	J. Carlson, CE	E
390	W E E B	R. T. Morgan, A	F		W I R V	D. E. Cox, CE	E
	W NqO X	R. Engert, CE	F	1560	K PqM C	L. E. Patterson, CE	D
	W N L R V	J. R. Boulst, CE	F	1580	W S r F F	R. Woodall, CE	C
	K W A M	E. Hodges, CE	A		K I R T	W. Hinojosa, CE	E
	W N T Y	M. C. Rice, CE	C		CqBnJ	A. St. Onge	E
1000	C KqB W	D. B. Hirtle, CE	F	1600	K A T Z	C. O. Rick	E
1010	K C M J	J. London, PD	D		K AqS H	B. Burroughs, CE	E
1035	4 V E F	Mrs. O. Heinrich	B	* 540	W GqT O	D. H. Schick, CE	E
1050	K O R E	J. King, PD	E				
1060	K Y W	E. J. Cummings, CE	E				
	C FqC N	u/u	D				
1070	W NfC T	W. H. Covington, CE	F				
1080	W K L O	B. Clark, CE	A				

Send 'em in with your Musings, but on a separate sheet, with your name on it. Be sure to weed out recent repeats, and use the abbreviation letters for type of verie

SHALL THE NRC USE DAYLIGHT SAVINGS TIME AND/OR GMT?

The Domestic editors feel quite strongly that the bulletin should use Eastern Local Time in order to minimize the considerable confusion that results from trying to transform summer schedules to EST. In particular they feel that we should switch the domestic sections (and that includes Musings) to Daylight time when applicable to avoid conflict with the Freq Check List and with the NRC Domestic Log which remain on local time year-around. With a local time system, no DX'er would have to change logging and reporting time at any time during the year. It would reduce confusion and possible error in reports to DX NEWS and in your own logging and reporting. If we do switch to Eastern Local Time we will have special makeup sheets prepared which will carry a very small legend to this effect for use during the EDT period; thus the DX'er will always know which time system is in use on a particular page.

There is also considerable feeling by some members that the International sections should use GMT because of the nature of the material and because of the use of GMT by such basic references as World Radio Handbook. This would switch our international material to the time system used by the majority of other international clubs and organizations; if we did so we would also use special makeup sheets with "GMT" markings on the page. If we switch the domestic sections to ELT it is particularly desirable to switch the IDXD sections to GMT since otherwise we have the choice of running IDXD on EDT (which is undesirable for obvious reasons) or running part of the bulletin on ELT and the rest on EST which would be hopelessly confusing to all parties. By the same token it has been argued that the entire bulletin should go to GMT but this just disguises the domestic DX'ers problem in the summer months.

We wish to provide you with the most useful information we can and so we're asking for your comments to guide us in this matter. Please cut out and mail the following form or a facsimile to HQ as soon as possible.

I prefer the NRC to adopt the following time policy:

- () Stay as it is now. () Switch entirely to GMT (EST plus 5 hours)
- () Eastern Local Time in all sections, domestic and international.
- () ELT in domestic sections and GMT in international sections.

COMMENTS:

NAME: