

NARS NEWS

The Northwest Amateur Radio Society

Houston, Texas

July 1988

METEOR BURST COMMUNICATION FEATURED AT JULY 15 MEETING

After communicating by using skywave and ground wave propagation for Field Day last month, how about another somewhat exotic method of communication - meteor burst?

At our July meeting, Jim Sanford, N0AIH, will introduce us to the phenomenon of meteor burst (MB) communication. MB communication occurs above the F2 layer and takes advantage of a "path" created by small particles entering the earth's atmosphere. By aiming an antenna at a calculated angle, a signal can be bounced off these "ionized clouds" and be received at a specific location known as the footprint for that signal. The best frequencies for Hams to use are in the 50 MHz band.

Sanford uses MB communication in a commercial application for a pipeline company. MB is also used extensively in the military and in agriculture. This method has many interesting operating characteristics which you can discover only if you are present for the July 15th meeting. Come early and visit, then learn something new.

JUNE MEETING NOTES

At last month's meeting we geared ourselves up for Field Day. Ed Hinds, KB5AEL, Field Day Chairman, gave a rundown of overall plans for this year's event. Bob Welch, KE5IC, showed slides of earlier NARS Field Day efforts and then presented an entertaining video of last year's NARS FD activities. The door prize winner was Monica Cross, KA5WVI, who received the book "Easy-Up Antennas" donated by Madison Electronics, 3621 Fannin, Houston.

FIELD DAY 1988 by KEN HARLAN, KA5AKG

Well by now the red eyes, sunburn, and tired muscles have healed and Field day is another memory - a good one, too! NARS operated Class 2A for the second year and, with bonus points from satellite contacts, packet, and special messages and so on, generated a total score of about 6200. This compares to our score of about 4400 last year when propagation was not quite as good.

But the real story is the fun we had and what we learned in setting up three HF stations in Meyer Park and operating around the clock. We were spread across the entire parking lot to minimize the interference we experienced last year; it worked. Friday was spent assembling towers, beams and other equipment and checking out the operations. Saturday morning found the faithful bunch correcting some last minute generator problems and getting the Novice station ready. From 1 p.m. Saturday until 1 p.m. Sunday it was steady operating with three stations going all out.

Frantic fists pounded CW and hoarse voices called CQ. Novices, some for the first time, experienced the thrill of making contacts and operating in pile-ups and chasing other ops. Curious passers-by stopped to see what was going on, and Channel 11 came by for a short story on amateur radio which made the 6 and 10 p.m. TV News. Some operators gained experience, confidence, and a better understanding of operating, but all who attended contributed and shared in the camaraderie that makes NARS great.

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PROPAGATION
by ROY HRADILEK, AD5Q

The objective of this column has been to emphasize the seasonal influence of propagation paths to different parts of the world, and especially those that are harder to reach. This can be difficult with the wild variations in solar activity we have been getting lately. It is summer, and absorption levels are high across all northern daytime paths. This means weak signals on 15 and little activity on 10 other than E skip. Openings on 15 are not as broad as they were in the spring, but high fluxes can really open things up at night. 20 is open all night, with excellent propagation for about two hours after sunrise. We said much of this last month, and this pattern should continue through August. Instead of sounding redundant, we shall go on to other topics which we would otherwise not have space for here.

Flares - generally: As I write this, the WWV numbers are 193/15/3. There have been some major flares lately, but the bands could have been much worse. The stormy period following a flare effects polar propagation the most, and it is best to stay on lower frequencies and east/west paths. Watch for a drop in the A/K indices first, leaving high fluxes and excellent DX conditions after the storms clear. Much of this should occur by the time you read this.

Long Path: A "K" index of 3 is not a serious problem for long path work, especially in the summer for our morning path to the west on 20. It is time to watch for LP on 15. Experienced DXers know that 20 meter paths are often crooked - usually bending around Antarctica instead of crossing it. Long path on 15 is especially skewed, and LP to Russia and Europe is usually 20 to 40 degrees west of the true heading. 15 LP can open to Europe when the same path on 20 is out of season. When fluxes are high, this nighttime path opens in the morning while 20

FAR OUT
by JACK DOUGLAS, KA5DNP

Satellite AMSAT/OSCAR 13 was "born" at 12:39:04 UTC on June 15, 1988 when its protective carrier was separated and the GENERAL BEACON came to life on a frequency of 145.812 MHz (plus or minus doppler shift)! The beacon transmits short voice bulletins on the hour and half hour and 60 wpm RTTY at 15 and 45 minutes after the hour. At other times it transmits high speed PSK telemetry. This beacon can be heard daily. Because of differing doppler shifts it is often very near the OSCAR 10 beacon at 145.810 MHz. If you hear only a fixed tone, you have AO-10 not AO-13!

So if all this is true why can't I tell you to get into operation on AO-13? Well it was put into a transfer orbit by the launch rocket and must be maneuvered into the final orbit by carefully calculated and executed orientation moves using electrically operated magnetorquing coils and firings ("burns") of the onboard Kick motor. Technical/Controller teams around the world are busy doing this and it must be done correctly, so much time is spent in measuring and checking BEFORE acting. The action steps require power so we can't jeopardize the "bird" by using power for QSO's right now. The first burn was executed on June 22 at 1857 UTC. This raised the perigee from 222 KM to just over 1000 KM. This was critical as the low perigee exposed the bird to gravity forces that affected its orbit excessively. One or two additional burns will be required before we can "use" AO-13. Expect the "go" for use about August 1st. Call me at 358-5172 if you have questions about or want to discuss Amateur Radio Satellites.

is open in the same general direction. You can tune for LP on 15 and 20 at the same time without turning your beam too much. Any time you can hear VK in the morning, LP is open.

FIELD DAY NOTES

The NARS FD operation was another big success... Thanks go to all who took part with special thank you's to Bruce Cline, N5FD, for the use of his call sign; to Joe Sokolowski, KD5KR, for the use of his trailer; and to Ed Hinds for the use of his motor home, the "Swat Wagon"... Rich MacDougal, N5LSP, set up a great Novice station which had excellent participation... Brad Killebrew, N5LJV, set up his gear in the Novice tent supplied by Rich... Thanks to Henry Borgstedt, KB5GET, for the use of his call sign (think about it for both CW and phone!)... Those acting as ops were Melvyn Adams, KB5GES; Fred Bailey, KB5DFS; Dianne Pankau, KB5DGD (replete with pile-up on 10M); Country Borgstedt, KB5GET (made his first contact); Jay Chase, KB5GEU; Ken Busbee, KB5ESQ; and Curt Furtado, KB5BCL... The CW station was manned by several ops including Roy Hradilek, AD5Q; Jerry Reimer, KA5QAP; Henry Freedenberg, N5HF; Bob White, KF5ZL; and Bruce Cline, N5FD. The SSB station stayed active with many ops including Scott Byrd, N5KEU; Joel Empie, N5HWU; Allen Majeski, WA5REJ; Tom Roraback, KF5OO; Bob White, KF5ZL; Ed Hinds, KB5AEL; Don Zielinski, K0PVI; Brad Killebrew, N5LJV; Ken Harlan, KA5AKG; Vince Hayes, KC0LM; Dan Cassiani, N5KPI; and others... Jack Douglas, KA5DNP, teamed with Bruce Cline, N5FD, to make a satellite contact using RS-11... Ed Hinds, KB5AEL, set up his packet station in the Swat Wagon.

FIELD DAY 1988

(continued from Page 1, Column 2)

With antennas removed, equipment stowed and tired bodies recuperated, we give a hearty thanks to Field Day chairman Ed Hinds, KB5AEL, and the entire FD Committee for a monumental effort and a job well done. And to everyone who furnished equipment and provided assistance goes our many thanks. Field Day was a great experience in how a club really works.

NARS NOTES

- AWARD - NARS has received a plaque in appreciation for providing communication at the March of Dimes 1988 WalkAmerica -1960 Area.

- PLEASE WELCOME new NARS members:

Henry Borgstedt, KB5GET
Jay Chase, KB5GEU
Jack Cotter, KB5GEV

- UPGRADES - Congratulations to the following:

Brad Killebrew, N5LJV, to Advanced Class.

Marly MacDougal, KB5GEX, to Technician Class.

Rich MacDougal, N5LSP, to Advanced Class.

- UPCOMING NARS MEETING TOPICS:

August - Emergency Communication
Bob White, KF5ZL

September - Civil Air Patrol

October - Satellite Communication
Jack Douglas, KA5DNP

- FOR NARS INFO see July QST, p.128

ELECTION COMING UP

Because of severe business interference, Ev Haines, KA5VIZ, has tendered his resignation from the presidency of NARS. In accordance with the club Constitution and By-Laws, an ad hoc nominating committee (Ken Harlan, KA5AKG, and Bob Welch, KE5IC) respectfully submits the following names for consideration of the membership present at the July NARS meeting:

For President - Bruce Cline, N5FD
For Vice President -
Joe Sokolowski, KD5KR

Other nominations will be accepted from the floor. Come to the July meeting so that you can vote your confirmation.

NARS BULLETIN BOARD

NARS MEETS the third Friday of each month at the Cypress Creek EMS building, 16650 Sugar Pine Lane, one block east of Kuykendahl and two blocks south of FM 1960 (beneath the water tower). Meeting time: 8 p.m. Eyeball QSO's: about 7:30 p.m.

NARS BREAKFAST every Saturday 8 a.m. Uncle Tom's Kitchen/17500 Kuykendahl Informal ragchew.

NARS REPEATER FREQUENCIES

146.06/66 MHz 449.375/444.375 MHz

NARS DIGIPEATER - NET/ROM

Freq (145.07 MHz) Alias (NARS)
Call (KA5LUD-4)

| NARS NEWS is published monthly by |
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NARS NETS

RAGCHEW - MONDAY 8 p.m.
28.490 MHz (Ken, W5BKK)

CW PRACTICE - TUESDAY 7:30 p.m.
21.185 MHz (Curt, KB5BCL)

NARS INFO - WEDNESDAY 8 p.m.
146.06/66 MHz (Ken, KA5AKG)

EMERGENCY NETS

Northwest Harris County ARES
TUESDAY 8 p.m.
146.06/66 MHz (Scott, N5KEU)

Harris County OEM RACES/ARES
SUNDAY 7 p.m.
146.34/94 MHz (Bob, KF5ZL)

| FOR INFORMATION ABOUT NARS, PLEASE |
CALL KEN EDINBORGH, W5BKK 376-7660