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Oregon Observers Watch in Vain

Portland
Engineers
Chart Orb

FCC Tracks Beep,
Reports Reception
On Short Wave

Russia's earth-circling, "beeping" satellite has made Oregon scientists, short-wave radio operators and electronic engineers buzz like prospectors who'd just cracked open another Comstock lode.

Half a dozen engineers at Tektronix corporation in Portland surrounded themselves with a short wave radio, photographic equipment, oscilloscopes, books and charts Saturday as they listened to the history-making beeps and plotted the Soviet-sponsored orb's soundings.

Up and down the state the word passed swiftly from one ham operator to another was "20.050 megacycles at hour and a half intervals." The intervals are when the globe may be "heard" and the megacycles are the frequency band for reception.

FCC Tracks Beep

The federal communications commission monitoring office in Portland was "tracking" the beep along with fascinated radio operators across the land.

"It's just a freckle up the dial," said Tektronix Engineer Charles Rhodes as he pointed to the short wave set.

How do the electronics men know the satellite is what they think it is instead of beeps from San Francisco or passing jet planes? Rhodes replied:

"What else do you know of that travels 18,000 miles an hour and gives off radio beeps besides?"

Engineers Know Answer

The engineers know the satellite's in motion because of "Doppler's effect." This means, to oversimplify, the object is moving and its sounds vary in intensity because of its motion.

Tektronix Engineer Cliff Moulton has plotted the time schedule for the satellite's "appearance" since Friday night and estimates the beeps will continue, if the satellite does, at 8:29 a. m. Sunday, 9:08, and at regular 98½ minute intervals.

Moulton has been listening in on his ham set (W7MFV) and said "reception's just fine, just fine."

The Portland FCC monitoring station reported Saturday morning it had received signals from the Russian man-made satellite, but efforts by Grout school junior scientists to sight the object Friday night and Saturday proved unavailing.

Robert A. Landsburg, engineer in charge of Portland monitoring station for the federal communications commission, said Saturday morning "we've been tracking it (Russian satellite) since 8:10 p. m. eastern daylight time; some fixes we took at approximately two minutes apart, some at more than an hour apart.

Watch Called Off

"We discontinued taking fixes at 8:30 a. m. this morning and now have it on a stand-by basis," he said.

The FCC has a national radio network that permits all of its monitoring stations to listen in on reception anywhere on the network.

The Grout school student group was ordered Friday night to begin its observations immediately. Saturday morning at 4:30 a. m. Robert Boardwell received a telegram temporarily calling off the skywatch. Both orders came from the "Moon-watch division" of the Smithsonian Institution in Washington, D. C. Boardman said he and the class would continue to watch anyway.

State Reports Gathered

Upstate ham radio operators in Salem and Grants Pass reported they had heard the satellite's signal Friday night.

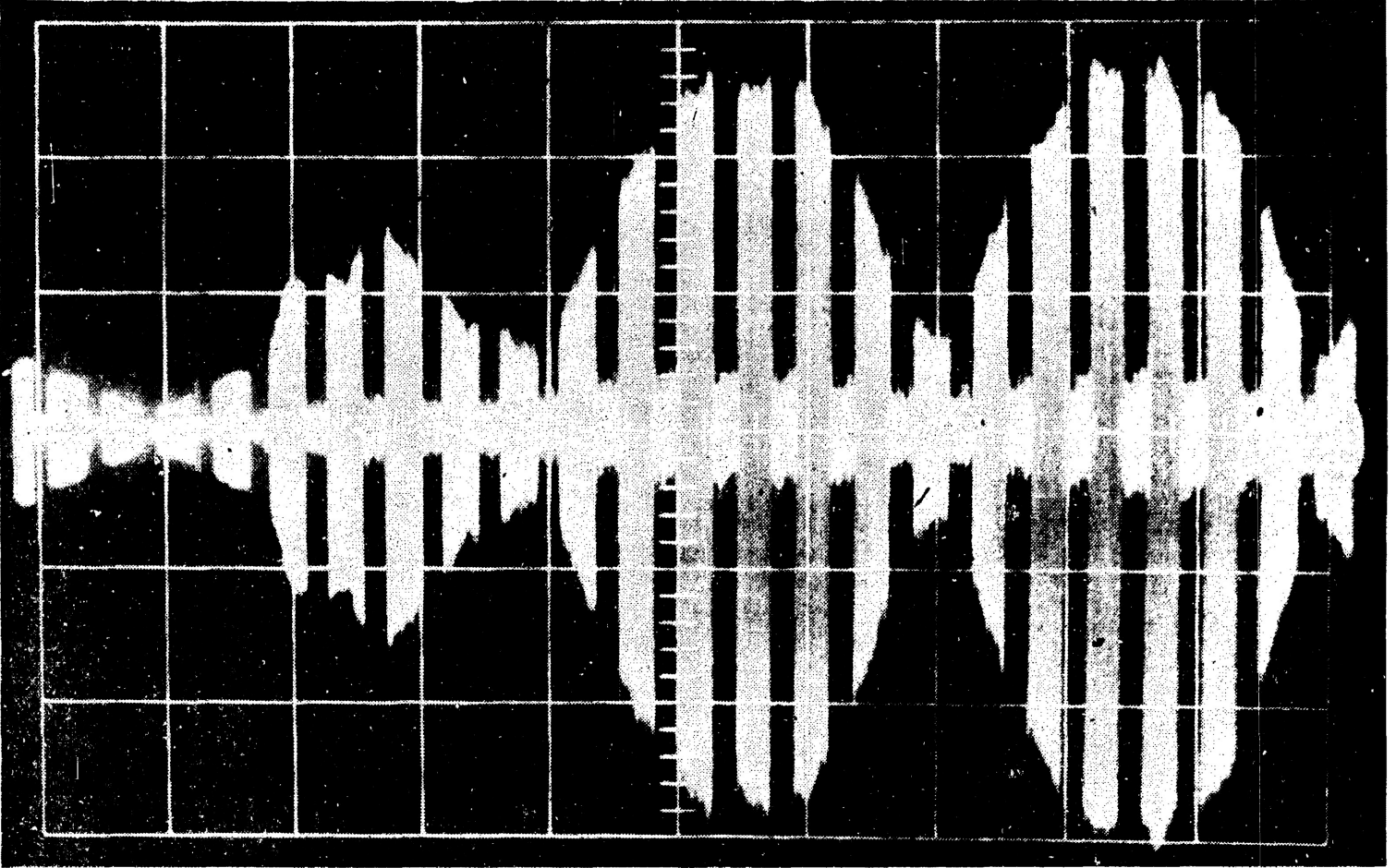
Bill Gibson in Salem said he heard the signal at about 8:30 p. m. and 9:45 p. m.

In Grants Pass, Keith Beck said he heard the signals faintly from about 8:30 to 8:50 p. m. and then at 10:29 p. m. he heard the signals clearly for a seven-minute period before they faded out.

Beck said he heard them again from 10:40 p. m. until 10:46 p. m.

In Portland, the federal communications commission said it has been listening to the satellite's "beep" at 20.005 megacycles and 40.010 megacycles.

Here's First Message From Outer Space--Can You Read It?



Did you ever see a moon beep? Portland electronics engineers at the Tektronix plant in Beaverton saw the signals from the Russian satellite this way Saturday on the screen of an oscilloscope operated by Tektronix Electronic Engineer Cliff Moulton. Oscilloscope records signal reception from satellite's radio transmitter. Space between white bars indicates signal's time; height of white bars indicates "beep" strength. Each screen-square equals one second of time. Thus, signal measures .27 of second with laps of .19 of second between "beeps." Strength of signal changes in each of three major cycles above because satellite's antenna turns away from earth as orb rotates. When satellite first comes into range for short-wave radio reception, "beeps" are barely measurable. Tektronix screen shows ten seconds of satellite reception. Engineers assert that radio transmitter on 18,000-mile-per-hour globe-hugging ball may be size of a flashlight battery "or even smaller." Moulton recorded beeps at 98½-minute intervals Saturday; once heard them for 30 minutes. Earth-girdling Russian "planet" will be slowed by "atmospheric dust and gases," engineers explained, and will disintegrate as it's pulled toward earth. (Photo by Dave Falconer)

Angry Poles
Stone Police

WARSAW (AP)—Communist riot police charged angry crowds in Constitution square again Saturday night with tear gas and noise bombs in new disorders after two nights of student freedom uprisings.

The students, targets for beatings and bombings Thursday and Friday nights because they protested suppression of their paper Po Prostu, stayed off the streets Saturday night.

But their anger at government and party heads had spilled over into the general population. Crowds gathered in Constitution square, scene of violent attacks on the students Friday night.

The riot squads moved into the square from their stations. The crowds picked up stones and bricks from wartime rubble areas and hurled them at the steel-helmeted police.

The police then charged with noise bombs and tear gas grenades. The crowd gave way, then reformed in defiant groups of about 50 each on one side of the square.

Other groups clustered in the yards of undamaged homes.

The police threw a cordon around the square.

Oregon Teams
Score Victories

Both Oregon and Oregon State prevailed on the football field Saturday.

Oregon, playing before 16,332 fans who braved inclement weather at Multnomah stadium, handed UCLA its first football setback of the season, 21-0, in a Pacific Coast conference contest Saturday night. In an afternoon game at Evanston, Ill., undefeated Oregon State posted its third win of the season by outscoring Northwestern, 22-13.

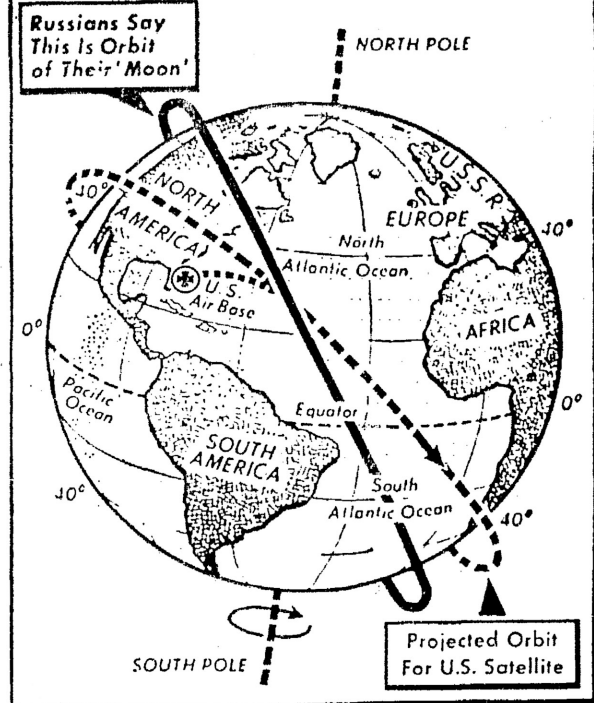
Jack Crabtree, Jack Morris and Jim Shanley were big factors in Oregon's conquest of UCLA. Crabtree chose to pass despite the wet weather and tossed one scoring aerial to Ron Stover. Morris and Shanley, backbone of the Ducks' running attack, also scored touchdowns.

Additional details in sports section.

Hoffa's Friends
Fill Offices

MIAMI BEACH, Fla. (INS)—Teamster delegates Saturday elected to top offices in their union a slate of running mates handpicked by President-elect James R. Hoffa.

Election of Hoffa's friends to key positions gives the Detroit strong man an iron grip on the 15-man executive board of the nation's largest union.



Russians say Soviet earth satellite is in north-south orbit marked by black line at 65-degree angle to equator. Unfinished U. S. satellite is to follow dotted line. (AP Map)

Oregon Has Vital Stake
In Meat Rate Hearings

BY JOHN DENNY
Business Writer, The Oregonian

The future of the meat packing industry in Oregon and throughout the West—and in some measure the future of its huge livestock industry as well—is at stake in hearings now in progress before the interstate commerce commission in Denver.

It's another battle in the continuing war of western interests to throw off the shackles of a discriminatory freight rate structure aimed at keeping the region a "colony" of the industrial East.

The meat and livestock industry is battling against the concept of low rates on westbound shipments, high rates on east-bound shipments, which, in effect, tells the west:

Income Slice Seen

"Send your raw products east for processing; buy back the finished goods."

Governor Robert Holmes on his recent industrial development survey of the state was told repeatedly that the freight rate structure is a formidable barrier to attraction of new industries to the state.

This time it could lose the state a well-established and flourishing meat packing industry, and also pare a sizable chunk off the livestock industry's \$200,000,000 annual income.

That's the analysis being presented to the ICC by representatives of farm, labor and business groups who have joined forces against the discriminatory rates.

Specifically, the western groups—including the Portland chamber of commerce—want the ICC to toss out a substantial reduction in westbound railroad

rates on Midwest fresh meats and packinghouse products. The railroads made the one-way cut August 15.

If allowed to stand, the ICC has been told, the lower west-bound rates will mean that Midwest packers will process the bulk of the cattle and hogs for western dinner tables. Western packers will be forced into a minor role as meat suppliers.

Stockmen are in the fight because this would cripple their home markets for livestock. It would knock in the head the fast-developing cattle and hog feeding industries in Oregon, now just getting a good start because of the abundance of lower-priced feed grains.

Midwest Likes Rates

The hearing opened last Monday and is expected to continue several days this week before all of the 100 or more witnesses are heard. Midwest packers, naturally, want to keep the rate reduction.

Oregon men appearing before the ICC declare they are not opposed to lower freight rates—in fact, are strongly in favor of lower rates—if the rate structure does not discriminate against the West.

Railroads and Midwest packers can have their low rates on dressed meats, western interests declare, if a corresponding cut is made on livestock freight rates.

The Weather

Complete Report on Page 40
Portland and Vancouver—Mostly cloudy with few scattered showers.
Saturday's temperatures—Maximum 60 degrees; minimum 45 degrees.

Scientists Listen In
As Moon Beeps Data

WASHINGTON (AP)—Russia's epoch-making earth satellite sped round and 'round a fascinated globe Sunday while professional and amateur eavesdroppers listened to the radio signals it sent back to its makers.

Dr. Fred L. Whipple, director of the Smithsonian astrophysical observatory, said scientists have determined that the man-made moon is sending information about the temperature in the upper atmosphere.

Just what other information is being sent by radio from the satellite could not be ascertained immediately, Dr. Whipple said at Cambridge, Mass.

Beeps Disclose Course

Circling the world every 96.2 minutes, 560 miles out in space, the satellite is transmitting a series of "beeps."

Dr. Whipple said the "beeps" give clear indication that coded messages are being transmitted to Russian scientists.

The code is meaningless to anyone who does not know exactly what equipment was put aboard the manmade moon, he said.

But the Russians, he said, have promised to share with the world the information obtained by the sphere in its flight through outer space.

Signals Heard in West

As the approximately 23-inch-diameter ball circled the earth, scientists of the western world picked up its radio signals, and amateurs also kept their ears glued to short-wave sets in hope of hearing the satellite pass in the night.

From the radio signals emitted by the satellite, scientists in the United States were assembling data to be fed into electronic computers so they could plot the satellite's course over this country.

The satellite's course around the globe brings it over the United States seven times every 24 hours as the earth spins beneath it.

While American scientists, with tracking devices hastily tuned to the unexpected radio frequencies of the satellite, were able to hear it, they experienced great difficulty in spotting it visually.

Actual Sighting Doubtful

There were some scattered reports that it had been seen but these were disputed and there was some feeling that it might never be spotted except by the Russians.

The naval research laboratory here said it would be impossible Saturday night to estimate approximate times at which the baby moon would pass over specific areas of the country Sunday.

A laboratory spokesman said the satellite would have to complete another orbit before computers could start figuring the time schedule which it probably will follow.

Two American scientists said

the Soviet-launched sphere was sending back coded messages that they were unable to decipher.

A Cambridge, Mass., astronomer said it was obvious the Russians had chosen to launch the satellite at such an angle to the sun as to prevent visual observations in the free world.

There were a number of reports of sightings from different parts of the United States but officials at the Smithsonian astrophysical observatory in Cambridge said the sightings were

Additional stories and photos on Russia's first man-made earth satellite appear on pages 12, 13 and 14.

bridge said the baby moon is, not yet visible to observers in this country.

A Japanese scientist said he saw the satellite by telescope as it passed over Niigata, 160 miles north northwest of Tokyo. He said it was "barely visible" though much brighter than he had expected.

Cambridge scientists said the satellite can be seen only in the north and south polar regions at present because of its relation to the earth and sun. They said it might become visible in other parts of the world if it changes direction in two or three weeks.

Life of 'Moon' Uncertain

How long it will continue to whirl through the heavens in its north-south orbit was a subject of the greatest speculation. Estimates ranged from a few days to a million years.

A Soviet scientist attending a meeting in Washington said the batteries operating the satellite's automatic radio transmitter would last over two weeks.

This scientist, Professor A. A. Blagonravov, said the life span of the satellite is "uncertain."

"In view of the chosen orbit," he said, "the satellite every 24 hours will pass seven times over the territory of the United States."

Star's Visibility Equaled

"The possibility of visual observation is insured from the fact that it should be (of the brilliance) of a star between the fourth and the ninth magnitude."

The White House described the Russian accomplishment as "of great scientific interest" and said it should contribute much to the scientific knowledge that all countries are seeking during the International Geophysical year.

The geophysical year, in reality an 18-month period which started last July 1 and will continue through 1958, is a common effort by scientists of both eastern and western worlds to learn more about the earth and what lies beyond it.

Today's Chuckle

A practical nurse: One who falls in love with a rich patient.