



COMPLETE NEWS—MAGAZINE SECTION—COMIC FEATURES

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NIGHT
EXTRA

TWO SECTIONS

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52 PAGES

Outstanding Educators Indorse Idea Of a State University Free From Bias

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Radar Brings Moon Close For Research

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Average Distance to Moon—238,857 Miles.

Radar Waves Go to Moon and Return, 477,714 Miles, in 2 1/2 Seconds.

STEEL TOWER at Belmar, N. J., used by Army scientists to make radar contact with moon. Ionosphere, 250 miles thick, starts 36 miles up, outside 7-mile thickness of stratosphere. Moon's diameter is 2,159 miles.

MAY O.K. PAY RISE IN MEAT SEIZURE

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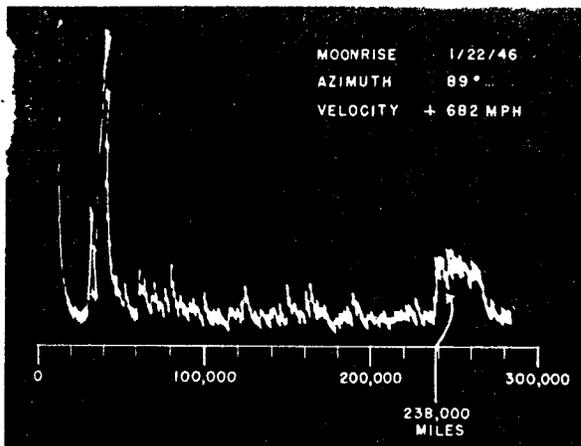
Soviet Fights to Stop UNO Taking Up Iran

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Radar Contact With Moon Opens Vast Fields for Planetary Research

By MALCOLM LOGAN

Vast possibilities for extension of human control over the physical world were opened today by the announcement of Army scientists that for the first time, contact had been made with the moon by means of a new and powerful radar.



HISTORIC IMPULSES are shown in this photograph of radar screen used in contacting moon. Scale of miles at bottom was added by Signal Corps to indicate distance at which impulses hit satellite. Large sweep at left indicates start. Tiny pulsations between there and bump indicating return of moon-reflected radar waves are result of minor interferences.

Associated Press Photo



HERE'S what it looks like on moon, according to American Museum of Natural History artist Thomas Voter. Since moon has no atmosphere, visitors from earth would have to wear diving suits supplied with oxygen.

On Jan. 10, and several times since, signals sent out from the Evans Signal Laboratories at Belmar, N. J., pierced 238,000 miles of interplanetary space to reach the moon and, reflected back in 2.4 seconds, were recorded visually and audibly in the laboratory.

The War Dept. said the achievement promised "valuable peacetime as well as wartime applications."

Among its possible applications are ultimate topographical mapping of the moon and other planets, improvements in radio transmission, detection of enemy missiles flying through cosmic space and radio control of such jet or rocket bombs by the nation launching them.

H. E. Burton of the Naval Observatory in Washington told the Associated Press that if the radar range could be increased to 35,000,000 miles, it might be possible to probe the secrets of Mars and even settle the long-debated question whether there is any life there.

Australian Disputes

The Army's claim of the first radar contact with the moon, made at a dinner of the Institute of Radio Engineers at the Hotel Astor last night, was challenged by W. E. Osborne, former Australian Army major now doing secret research for the U. S. in Los Angeles.

He said, the Associated Press reported, that in October or November, 1941, he and other scientists in Australia under the direction of Dr. J. H. Piddington at the University of Sydney, using a high-powered experimental radar, contacted the moon several times.

Maj. Gen. George L. Van Deusen, chief of engineering and technical service of the Army Signal Corps, said in his address last night that the radar which reached the moon was basically the same instrument that detected the approach of Japanese planes at Pearl Harbor.

Jagged Echo of the Moon

The echo from the moon was recorded by jagged, saw-tooth lines on an oscilloscope and was also heard in the laboratory through a loud speaker as a note a little higher pitched than the hum on a radio when it is not tuned to a station.

Until the feat was accomplish-

ed, scientists had doubted whether radio wave could pierce the electrically-charged ionosphere which envelopes both the earth and the stratosphere and is about 250 miles in depth.

The man who contacted the moon said any doubt that they had succeeded was dispelled by the fact that the echoes showed the Doppler effect, caused by the fact that the distance between the moon and the earth was changing while the experiments were in progress.

Contacts at Moonrise

Some of the contacts were made at moonrise when the earth is traveling toward the moon at the rate of 750 miles an hour, and others when the moon was setting and the earth was moving away from it at the same rate.

As a result of this movement, the radio waves did not return at the same frequency as they were transmitted. Precise calculations were made concerning the change in frequency and the echoes returned on the calculated frequencies.

The moon radar, speakers at last night's meeting explained, differs from conventional radar in several respects. The ordinary radar uses pulses of a very short duration—about twenty millionths of a second—whereas the moon set used a half-second impulse.

Special Equipment

The prevent the set from being burned out from the tremendous energy it transmits, water-cooled vacuum tubes were used. A specially constructed peep sight was used for aiming the double-sized antenna.

"Project Diana," as the Army called it, was directed by Lt. Col. John H. De Witt, former chief engineer of Station WSM, Nashville, Tenn. He was assisted by E. King Stodola, Dr. Harold D. Webb, Herbert Kaufman, and Jacob Mofenson, the latter a New York man and a graduate of City College.

In the study of the vast regions of interstellar space, scientists believed the contact with the moon might be as significant as was the explosion of the first atom bomb in New Mexico on July 16, 1945, in the study of the atom.

Lise Meitner, Atom Heroine, Reaches N. Y.

Dr. Lise Meitner, 67, the Viennese scientist whose prewar experiments with atomic energy led to development of the bomb, arrived at LaGuardia Field today.

Met by relatives who seemed bent on protecting her from making any statements, the famed scientist was talkative about just that one subject: that she couldn't say anything.

An Overseas Airliner bringing Dr. Meitner and 19 others arrived a half-hour ahead of schedule. She was met by her sister, Mrs. Frieda Frischauer, New York; a



DR. LISE MEITNER

brother-in-law and sister, Mr. and Mrs. Rudolph Allen, Washington; and a nephew, Stephen Allen.

The Allens are members of the faculty of Catholic University in Washington, where Dr. Meitner, a Jewess, is to become a lecturer in the physics department Feb. 1.

Newsreel and camera men crowded around the scientist as she breakfasted at the airport on juice, coffee, doughnuts and pastry.

Expelled From Germany

"I cannot talk," she insisted patiently. "Not now. I'm so tired. Later, when I come back to New York."

Dr. Meitner, who was expelled from Germany in January, 1939, eight months before the start of World War II—despite her historic discoveries at Kaiser Wilhelm Institute a year previously—has recently been at the Nobel Institute in Sweden. She arrived in New York from Hurn, England, and listed herself as having no occupation, as being "stateless" and "single."

RAF 'Sitdown' Rebuked in London

London, Jan. 25 (AP)—The Air Ministry, disclosing for the first time that RAF men overseas had gone on a "sit-in strike" in protest against demobilization delay, warned today that such "serious breaches of discipline" would not be tolerated.

Orson Welles Switches to Moon

By ALICE DAVIDSON

Orson Welles, who threw large parts of the U. S. into a panic with his Martians' invasion broadcast on Halloween, 1938, last night announced to the world over WJZ and the American Broadcasting Co. network, "Radar contact has been established with the moon."

Then he hastened to add, "Ask the scientists of the Signal Corps if you don't believe me. And I can't blame you if you don't."

Referring to himself as "that old authority on interplanetary communication," the deep-voiced Welles described the experiment. Not Since 1492—

"It was a direct hit. Not since the legendary mariner in the crow's nest of the Santa Maria espied in the uncharted darkness of America the flash that meant a new world had been found has a flash been more newsworthy—no, not even from Winchell.

"The big news, for my money, is not that there are men on the moon. We don't know anything about that—yet. The big news is that there are men on the earth who have broken the first boundaries of space."

The Martians' broadcast eight years ago depicted giant men from Mars invading New Jersey near Princeton, breathing smoke and fire and striding across the Pulaski Skyway and the Hudson as though they were tiny things.

Despite announcements before and during the broadcast that the story was fictitious, thousands of



alarmed listeners all over the country swamped telephone exchanges with inquiries.