

Satellite Experiment Puts Life at 10 Years

Artificial Radiation Belt to Remain

By FRANK E. CAREY
of the Associated Press

BEDFORD, Mass. — A secret Air Force space venture has dug up additional evidence that the artificial radiation belt created by last summer's American high-altitude nuclear shot will last up to ten years.

This was reported Saturday by the Air Force's top research command — giving new flavor to a controversy that raged for months between the government and James Van Allen, discoverer of the natural radiation belts that bear his name.

A scientist of the Air Force Cambridge Research Laboratories (AFCLR) disclosed that a satellite launched late last October by the Defense Department on an undescribed mission was actually loaded with scientific gear designed to probe the new radiation belt created by the July 9 American nuclear blast some 250 miles above Johnston island in the Pacific.

As things turned out, the satellite—described in only the vaguest terms at the time of launching on Oct. 26 —not only probed the American-made belt, but was

launched in time to get prime information on the series of three Soviet high-altitude nuclear blasts touched off between Oct. 22 and Nov. 1.

Ludwig Katz disclosed the American venture to newsmen making a tour of the key Air Force space research laboratories some 15 miles from Boston.

And top military officials at the facility—at Hanscom Air Force Base—indicated that the reason the satellite's mission was not disclosed at the time was that it was tied up, merely by emergency, with a hush-hush Air Force program of military space research in other fields.

Air Force spokesmen told a reporter that emergency plans to have radiation-sleuthing gear ride on a military-type satellite were conceived when the nuclear shot unexpectedly caused several previous satellites to lose at least some of their efficiency.

"We had things ready in about six weeks after we got approval for the study," said one spokesman.

Meanwhile, before the Air Force satellite was launched, the government had decided—largely on the basis of findings by the Telstar com-

munications satellite—that the artificial radiation belt would persist much longer than had originally been expected, possibly for "many years."

This view was steadfastly opposed for months by Van Allen, who forecast that the artificial belt would disappear within a year.

Only recently, Van Allen sharply reversed his stand, saying that various American satellites had produced evidence that now convinced him the man-made belt would persist for about a decade.

Van Allen was not very specific on which satellites had produced the evidence.

Air Force spokesmen said Saturday they felt the evidence dug up by their satellite figured largely in Van Allen's change-of-mind.

Katz, without making such claims, said the satellite—known only as "1962 Beta Kappa 1"—had found that:

"Since the latter part of October, 1962, there has been little decrease in the intensity of trapped radiation . . . (created by) . . . the July 9 nuclear detonation in the Pacific."

"The decay of the belt is so small," he told newsmen, "that a lifetime of five to

ten years would not surprise me."

He said "Beta Kappa" and other air force satellites launched before and after the Russian high altitude shots helped determine that the Russian shots—in contrast to the American one—produced an artificial belt that lasted only a short time. This was because the Russian shots were detonated at a higher latitude than the American blast.

In another report on Air Force space research, John Salisbury, chief of the laboratories' lunar planetary exploration branch, said the moon offered possibilities for a "refueling station" for interplanetary exploration by manned spacecraft.

Salisbury said various types of evidence suggest the moon has rich quantities of water locked beneath its surface—either in the form of subsurface ice or in "hydrated" minerals—and this conceivably could be tapped and processed to furnish additional fuel for rockets reaching the moon from the Earth.

Saying that atomic reactors, for example, might be used to exploit this hidden fuel-resource on the moon,

the scientist said such possibilities as these would be opened up:

• Manned rockets to the moon could carry heavier cargoes than otherwise, because they could replenish their fuel supply on the moon for the home trip. This would speed the establishment of bases on the moon.

• Manned missions to Mars and other planets would not have to await favorable approaches of those planets, because the lunar "filling stations" would allow flexibility of flight times.

The scientist also reported that experiments in this laboratory tend to rule out suggestions that astronauts reaching the moon might sink in pumice-like dust on the moon's surface.

He said laboratory tests on materials which conceivably might cover the moon's surface indicate that, under the cosmic radiation to which the moon is always subjected, the dust particles would cling together in a relatively firm surface.

Thus, he said, properly designed mobile equipment—and walking men—should have no trouble traversing the lunar surface.



(AP Wirephoto)
SECOND TIME—Chester Bowles, U.S. Ambassador to India from 1951-53, was named Saturday to the same post by President Kennedy. He has been a special adviser to the President on foreign affairs.

Nehru Explains Visit

NEW DELHI (U)—Prime Minister Nehru has told Parliament a visit by American Secretary of State Dean Rusk, starting May 2, has nothing to do with India's air defense requirements. He said Rusk would be passing through and had agreed to stop two days for talks in old familiar haunts. Rusk was a China-Burma-India staff colonel here in World War II while Nehru was serving his last British jail time.

Molds on Food

Fungus a Suspect In Cancer Study

By ALTON BLAKESLEE
Of the Associated Press

LA JOLLA, Calif. — Cancer detectives are trailing a strange new suspect—the lowly fungus—as a possible cause of some cancers.

Fungi, or molds, might contaminate some foods we eat, or even exist in some drugs, Dr. Michael B. Shimkin of the National Cancer Institute, Bethesda, Md., said Friday night.

Reporting to an American Cancer Society seminar for science writers, Dr. Shimkin told of evidence involving moldy peanuts and moldy corn.

In 1960, he said, 100,000 turkeys died in England from disease "X," traced to their food.

The killer turned out to be a poison, named aflatoxin, produced by a mold or fungus contaminating peanuts in part of their food.

When rats were fed large amounts of this same fungus poison, they got liver cancers.

In Africa, investigators noticed, many natives have a high rate of liver cancer. They eat and like moldy corn. So the moldy corn is being investigated as a possible cause of liver cancer.

One chemical isolated from moldy peanuts and corn is found to be a very powerful cancer-producing agent. It is 50 to 100 times more powerful in stimulating liver cancer in rats than are azo dyes, long known as a cancer agent, Dr. Shimkin said.

So researchers are wondering what effects there may be from fungus products consumed by humans in foods or even in certain antibiotics, such as the actinomycins, he said.

He emphasized these are all suspicions, and that there is no reason for people to avoid antibiotics essential in combating disease.

Japanese Commune With Cherry Blossoms

TOKYO (U)—More than 200,000 fun-loving Japanese, loaded with wine and song, thronged Tokyo's Ueno Park Saturday night to commune with the cherry blossoms.

Police reported the crowd was orderly but the park was transformed into a carpet of rubbish—empty wine and beer bottles, newspapers, straw mats, empty cellophane food containers.

SE Musicians Rated High in Contest

South Eugene gained superior ratings Saturday with their girls' glee club and orchestra at the Western Oregon district music contest held in Corvallis.

The schools entered were judged in choir, girls' glee, orchestra and bands. They were given ratings in performance and sight reading in which they were given a strange piece of music and expected to play or sing the selection three minutes later.

Grades given out were 1 for

superior, 2 for excellent, and 3 average and, in some cases, a plus or minus was added to the rating.

Results, with the performance rating first, then the sight reading:

Miss City of Roses

PORTLAND (UP)—Karen Shenfield, 19, Portland, was named Miss City of Roses Friday night.

ing:

CHOIR—North Eugene, 1, 3 plus; Corvallis, 1, 3; Lebanon, 2, 2; North Salem, 1, 1.

GIRLS' GLEE—South Eugene, 1, 1; North Salem, 1, 1 plus; Corvallis, 1, 3.

ORCHESTRA—North Eugene, 2, 2; South Eugene, 1, 1; Corvallis, 1, minus; 1.

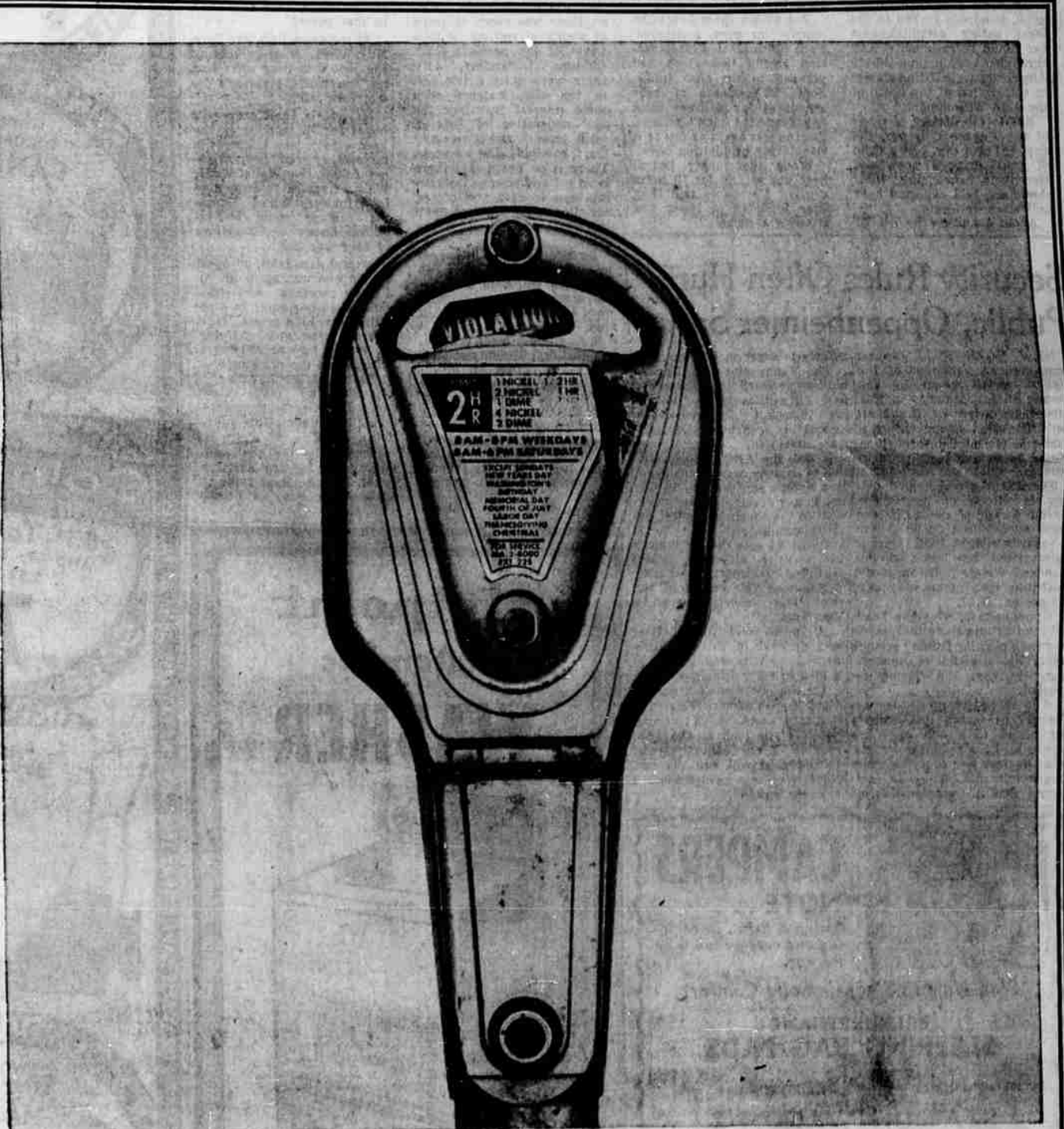
BANDS—South Eugene, 2 plus; 1; North Eugene, 2, 2; Corvallis, 1, 1; South Salem, 2 minus; 2; Junction City, 3, 3; Sweet Home, 2, 2.

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