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MAN-MADE "MOON" CIRCLING THE EARTH

Reds win race into space

DR. BERKNER

FACTS ON SATELLITE

NEW YORK, Sat. (A.A.P.). — Details of the Soviet satellite are reported to be—

Size: 22½ inches in diameter.

Weight: 184lb (more than eight times the weight of the planned U.S. 20in satellite).

Speed: 18,000 miles an hour.

Estimated life: Not more than three weeks.

Altitude of orbit: 560 miles.

Signals: Two radio transmitters sending "beeps" at 20.005 and 40.002 megacycles, strong enough to be picked up by "ham" operators.

Visibility: Seen best at sundown and sunset with binoculars or spy glass.

Rotation: Circles earth once every hour and 35 minutes.

Orbit: Ever-changing.

Contents: Primarily two radio transmitters, with allied equipment.

What to look for

A U.S. expert on the International Geophysical Year gave this idea of what the man-in-the-street should look for:

"The satellite aloft will look like a star moving at about one-quarter of a degree a second, or somewhat like a high-flying jet aircraft with a moving pinpoint of light.

Over every country

A U.S. authority said that the satellite's flight path moves a little to the west each time it goes around the earth, so that it eventually will pass over every country of the world.

The Soviet Union has launched the world's first artificial satellite.

The man-made moon is circling the earth once every 95 minutes at a height of 560 miles.

It passed near Australia at least three times yesterday.

Radio 'blips'

The satellite was launched by the Soviet on Friday as a contribution to the International Geophysical Year.

Since Moscow Radio announced it late on Friday, most countries have kept watch for it.

In Australia the baby moon was tracked by radio, but up until late last night no sighting had been made from Australia.

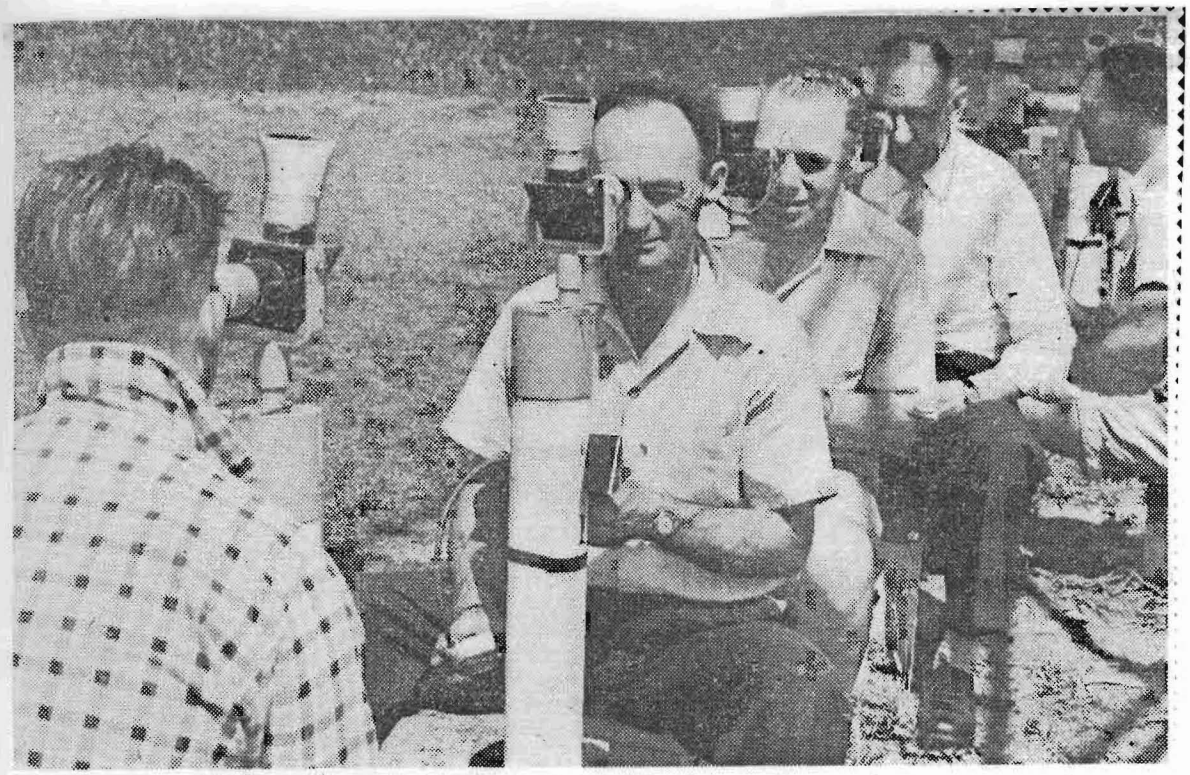
Amateur radio "hams" in all Australian States listened to radio "blips" transmitted by the satellite.

When people in Britain switched on their radio sets for the early morning news yesterday, they heard the satellite signals.

The British Broadcasting Corporation had made a recording and broadcast them as part of the bulletin.

The U.S. Naval Research Laboratory in Washington reported three passes of the satellite over America.

American observers with telescopes reported the streaking satellite in Indiana.



VOLUNTEER members of "Operation Moonwatch" at the official observation station at Belfield. Left to right: D. Patston, H. Northy, E. H. Patston, G. Miles, G. Patston.

California, Ohio, and Virginia.

Dr. Armand Spitz, co-ordinator of Visual Satellite Observation of the Smithsonian Astrophysical Observatory, of Cambridge, Massachusetts, said the angle at which the Russians launched the artificial moon meant that it would pass eventually over every country of the world.

More soon

He said, because the earth was turning under the satellite, the moon's flight path shifted a little to the west each time it went around the planet.

The satellite is expected to slow up within three weeks.

It will re-enter the earth's atmosphere, where friction will disintegrate it.

Moscow Radio said yesterday that the launching of the satellite was the first stage of space travel and "flight to the moon."

A special observatory to follow the satellite's course had been established at Leningrad.

The radio said that Russia would launch more satellites carrying special equipment to probe the highest parts of the earth's atmosphere.

80 tons

The vice chairman of the British Interplanetary Society, Mr. K. W. Gatland, said the most remarkable thing about the satellite was that its three-stage launching rocket must have weighed about 80 tons.

He calculated this from the weight of the satellite itself—184lb.

"The Americans are putting up a satellite of 21¼lb, which, compared with Russian achievement, is a comparatively easy thing to do," Mr. Gatland said.

The American rocket would weigh about 11 tons.

Mr. Gatland added: "The Russian satellite is the first definite step towards interplanetary travel and, because of the weight of this rocket, it brings much nearer than we had thought the first flight of an unmanned research rocket to circle the moon.

"If a satellite of this weight can be put up with a three-stage rocket, it requires only one more stage to reach the moon," he said.

The Soviet has been congratulated by the chairman of the United States National Committee for the International Geophysical Year, Dr. Joseph Kaplan.

Noting reports of the satellite's size, Dr. Kaplan said: "This is really fantastic. If they can launch that they can launch much heavier ones."

At party

One of the first Americans to offer congratulations was Dr. Lloyd Berkner, reporter on earth satellites and rockets for a special committee set up by the I.G.Y. organisation.

Dr. Berkner was attending a cocktail party at the Soviet Embassy, given for those attending a special conference of the I.G.Y. in Washington.

In Australia the Federal president of the Wireless Institute of Australia, Mr. D. Bowie, said "blips" had been received three times during the afternoon from the satellite.

The overseas radio receiving station of the Overseas Telecommunications at Bringelly, N.S.W., began receiving signals from noon on

Continued on page 13.

Red 'moon' circles earth

Continued from P. 1.

Saturday, said the studio manager, Mr. John Peel.

The A.B.C. at Liverpool also received the signals from about noon.

A "fence" of 20 telescopes is being manned by a team of amateur astronomers.

Two schoolboys in Adelaide were among the first to pick up radio signals.

The Adelaide boys heard the satellite for five minutes from 12.10 p.m.

They are Graham Bowen, 17, of Prince Alfred College, and his friend, Colin Lute, 16.

The powerful radio set they were using belongs to Graham's father, Mr. G. M. Bowen, a member of South Australia's Operation Moonwatch, the committee organised to observe the U.S. satellite to be launched later this year.

Graham Bowen said: "The satellite was probably directly overhead.

"We heard it at maximum signal strength as soon as we switched on the set, but the strength gradually faded during the next five minutes."

By last night radio stations all over the world flashed the news that they were picking up clear "peep-peep" signals from the satellite as it circled the globe, and watchers in many countries reported having sighted it.

A total of 150 "moon-watching" teams belonging to the International Geophysical Year have been alerted throughout the world and are now on the lookout for the satellite.

The successful launching took the western world by surprise as no previous news on the date of the launching had been announced by Russia.

Dr. A. C. B. Lovell, director of the Jodrell Bank Experimental Station, Cheshire, and Professor of Radio Astronomy at Manchester University, exclaimed, "Gosh," when he first heard the news of the Soviet achievement.

He then commented: "The Russians have beaten the Americans to it by a number of months.

"Our information is that America will not be in a position to launch a satellite until next spring."

Scared, says official

Top ranking officials of Project Vanguard, the U.S. earth satellite project, expressed serious concern about the Soviet announcement in interviews yesterday.

None of the vanguard officials contacted wanted to be quoted by name.

One said: "Frankly it's enough to scare the hell out of me. If they can do that they can drop ICBM's (Intercontinental Ballistics Missiles) on us."

Dr. Richard Porter of the U.S. committee for the International Geophysical Year, said that the Soviets undoubtedly had used a military rocket to launch such a heavy satellite.

He said launching a satellite weighing 184lb "is consistent with their statement they have the I.C.B.M."

A 12-year-old Boy Scout in Charleston, West Virginia, is believed to be the first American to see the satellite.

He told reporters he sighted it with binoculars.

The youth reported a "bright red spot" moving across the sky for about a minute.

But scientists at the American Smithsonian Astrophysical Observatory claimed that the Russian earth satellite was not and had not been visible to observers.

Dr. Fred L. Whipple, director of the observatory, said computations had determined that the satellite was between the earth and the shadows of the sun, making it invisible to observers.

'Special code'

In New York, Rear-Admiral Rawson Bennett, Chief of Naval Operations, said the Soviet earth satellite was a "hunk of iron almost anybody could launch."

American radio and Press reception of the event acknowledged that Russia had beaten the United States in a race to be the first to launch a satellite.

There was no sign that United States intelligence agencies had any advance knowledge of the launching of the Soviet moon, according to reliable sources in Washington.

Dr. Henry L. Richter, a scientist at the California Institute of Technology, said the satellite was transmitting coded information in addition to the steady "beep" radio signals.

Special equipment intercepted the coded information.

He said: "Unless the Russians give us a clue, we may not be able to decipher the messages."

A spokesman for the United States I.G.Y. committee said the Russians had announced their satellite was transmitting temperature data in code.

He said the Russians had agreed to furnish the code.

The spokesman said the code was in the time lapse between single beep signals transmitted from the baby moon.

● SYDNEY SPOTTERS SCAN SKY

I looked for Red 'moon'

Special Reporter

LAST night I sat at a telescope and attempted to track the Russian space satellite as it hurled past Australia at 18,000 miles an hour.

I knew from radio signals that somewhere overhead the satellite was flashing towards us 560 miles above the earth.

I was one of 20 "space" observers who gathered at the headquarters of the Sydney Amateur Astronomers' Group in the backyard of the home of their secretary, Mr. Gordon Patston, in Lincoln Street, Belfield.

Twenty wide-angle telescopes, each trained on 11 degrees of the sky, stretched in a row across Mr. Patston's backyard.

When the satellite, moving in a west-to-east direction across the earth at 65 degrees to the equator, flashed near Australia, it had to pass this line of telescopes, Mr. Patston explained.

Precisely at 6.30 p.m., Mr. Patston called his members to their telescopes — the sun had now set and the "satellite alert" was on.

Immediately the satellite appeared on my telescope I was told to press a time switch which would record the interval it took to cross the "grid."

At the same time I would press an alarm switch which would alert Mr. Patston at the master telescope to "home" with my telescope and track the satellite and plot its course.

At 7.22 p.m. an alarm bell rang—this was the signal that Sydney radio amateurs had picked up the signal of the approaching satellite on their sets.

For half an hour members trained their telescopes on the now black sky, dimly visible through the breaking clouds.

At 8.10 p.m. Mr. Patston called the attempt off—we had failed to see it.

Shortly before dawn today, when the rays of the near rising sun reflect on the polished surface of the satellite, Mr. Patston and some of his members will try again to track it.

ISE.
MES B. GRIFFIN,
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ville. J. PEACOCK.

bside Parking

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Soviet Satellite Expert Is Artillery General

When the news of the Soviet space satellite reached the world, one of the key scientists responsible for it — possibly the director of the entire project — was in Washington at a cocktail party.

From A STAFF CORRESPONDENT In NEW YORK

THAT man was Anatoli Arkadyevich Blagonravov, Lieutenant-General of artillery in the Soviet Army and fully fledged academician of the Soviet Academy of Science.

With other noted international scientists he was a guest at a cocktail party at the Soviet Embassy.

It started off as a quiet, even dull, gathering. Then came the news: Russia had successfully launched the world's first satellite.

Immediately, as the General's face lit up, he beamed constantly as other scientists stepped forward and congratulated him.

When the top U.S. scientists approached, he asked if he could borrow some equipment to hear the "moon's" radio signals.

at laying the groundwork for space travel.

A month ago, Western diplomatic sources declared it was a "reasonable guess" from the evidence available that he was in charge of all Russian rocket research.

But to the group at the Washington party, he appeared more like another professor than a general.

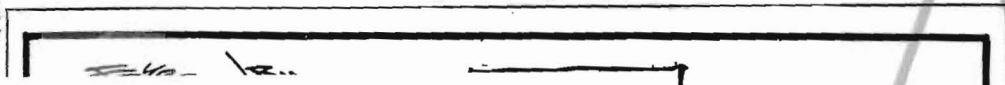
He has a slight build and his snowy hair and the lines in his face show his 63 years. Twinkling blue eyes help reinforce the genial attitude he seeks to convey in personal contact though some people believe there is a furtive quality to his thin smile.

The inner intensity of the man came out from time to time when he would whisper earnestly to a colleague but mostly he tried to appear nonchalant, holding his Russian cigarette cocked upward at a rakish angle.

Ending his training at the Soviet Military-Technical Academy about 1930, he began his weapons research and 25 major scientific works, most dealing with infantry and aviation armament.

By 1938 his books had won him the scholarly degree of Doctor of Technical Sciences and the rank of Professor.

Three years later he won a Stalin Prize for his contributions to Soviet Artillery and during most of the years since World War II he has been head of the Soviet Academy of Artillery Science.



"No Bluff Over

announced yesterday.

President Eisenhower's Press secret
said the President had taken the Soviet s
not surprised."

However, State Department official
Congressmen admitted greater concern a
ment. Officials believe Russia has scored
victory.

In Moscow, Russians are jubilant a
Over Moscow Radio, leading scientis
"instrument trip" to the moon "in a few y

Mr. Eisenhower re
at his Gettysburg fa
terday and played go
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tion by telephone.
Some senators and
Department officials
gloomy view of the Rio
achievement.
Military scientists sa
size of the Soviet sa
(182lb) showed that it
"might not have been bl

Yet the two seasons were very similar, with heavy spring growth followed by late rains right into the summer, making burning-off impracticable in most districts. The only factor that made the task more difficult in 1951-1952 was the prevalence of high winds.

No Complacency

"We are even better able to face the summer fire hazard this season," says the secretary of the Bushfire Committee, Mr. B. Andrews. "Last year late rains made firebreaks and burning-off impossible. Today, firebreak preparations are very good. We should come through the season well—but do not let any of our members, or the public, interpret this as a green light for complacency."

Of course, the Board of Fire Commissioners accepts responsibility for most of the thickly settled areas in the State. For a rough definition, it could be said that their jurisdiction ends a few hoselengths from the ends of the water mains. And that is where the bush brigades take over.

The firefighters are voluntary, but they and their vehicles are protected by the Workers' Compensation (Bush Fire Fighters) Act of 1944. Funds for equipment come from the State Government (25 per cent), from the roads to traffic and to burn firebreaks.

The captain, deputy and secretary of each brigade is registered with the local telephone exchange. Directly a fire is reported, local brigades are alerted.

It pays them to be on the spot quickly. They know that a fire which burns 30 acres in its first 15 minutes will burn 120 acres in 30 minutes, 1,920 acres in two hours. As the time lag doubles the perimeter of the fire also doubles, but the area destroyed quadruples.

It is standard Civil Aviation practice that airliner pilots must report any fire that they see to the nearest ground control. The report to control is almost instantaneous, but an hour or more often elapses before it is relayed through to the bushfire brigades of the particular area. Brigade captains' faces would be very red indeed if they were not on the scene of a local fire in a quarter of that time.

Fire-watching Sites

A few shires, including Warringah and Sutherland, have instituted a new system, which will probably spread rapidly, particularly

to be a success in eventual command that they have their boys trained in the type of ship which will be their life at sea.

T. W. COYNE,
Master Mariner (retd.).
Armidale.

Sir,—I do not think the Pamir was lost because she was a sailing vessel manned with a lot of cadets.

We are told that the ship's cargo of bulk wheat "shifted" in the mountainous seas, causing her to list badly.

I think a modern steamer would come to a similar end in these circumstances. There are numerous examples of bulk coal or ore carriers which have gone down along the Australian coast, the Birchgrove Park being one that is easy to remember.

To one who is not very familiar with these things, it seems that it should be possible to divide the upper layers of a bulk cargo in a ship's hold with temporary baffles to stop the cargo shifting to one side in rough seas.

JOHN R. LEE.
Larras Lee.

High School's Early Days

Sir,—The Sydney High School (both for girls and boys) was started not later than January, 1883.

My eldest brother (deceased), who was born in November, 1867, was one of the first boys to go to the school—previously he had been to Newington College.

The headmaster there was Mr. Joseph Coates, who became the first headmaster at the High school.

My eldest sister (also deceased) who was born in April, 1869, was one of the first girls to go to the school—she knew Ethel Turner.

I started at the school in January, 1885 and have a report for the half-year ended December, 1886. I am now in my 86th year. The school was between Castlereagh Street and Elizabeth Street, where David Jones Ltd. big shop now is.

F. D. HOBBS.
Lindfield.

years in order to sta[illegible] the results of from five to eight sho[illegible] papers.

We Leaving Certificate students are not educated; we are crammed—crammed with a mass of information, ready-made opinions and prepared answers with the prime object of "satisfying the examiners."

Little is done to equip us for adulthood and citizenship. We are quite literally the slaves of an educational system which spreads the pernicious influence of external examinations like the Leaving Certificate.

Hurstville. J. PEACOCK.

Kerbside Parking

Sir,—Could something be done regarding the menace of kerb-hugging cars, which arrive in our streets from 7.30 onwards and hug the kerbs of our frontages till 4.30 p.m. and after?

We pay big rates and have made provision in our own small rear premises for our own car, while a squatter makes use of the front—non-rated.

Redfern. PEEVED.

VICE-REGAL

On Saturday morning the Governor-General, his Excellency Field-Marshal Sir William Slim, received Sir George Holland, Federal president, and Mr. K. V. Newman, general secretary of the R.S.S. and A.I.L.A. at Admiralty House, Sydney.

Subsequently his Excellency received Mr. C. St. J. Mulholland, Acting Under-Secretary, New South Wales Department of Mines, and Mr. F. Perkins, Senior Inspector of Collieries, at Admiralty House, Sydney.

His Excellency the Governor and Mrs. Woodward, attended by members of the Personal Staff, were present at the Australian Jockey Club's Spring Meeting at Randwick Racecourse on Saturday. His Excellency and Mrs. Woodward entertained guests at luncheon and afternoon tea.

His Excellency the Governor and Mrs. Woodward, attended by members of the Personal Staff, left Sydney yesterday evening on an official visit to Taree.

Washington at a cocktail party.

THAT man was Anatoli Arkadyevich Blagonravov, Lieutenant-General of artillery in the Soviet Army and fully fledged academician of the Soviet Academy of Science.

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When the top U.S. scientists approached, he asked if he could borrow some equipment to hear the "moon's" radio signals.

Heard On Tape

The U.S. men had already thought of that. They quickly produced a recorder which had been used to listen for such signals.

As the tape began to run, General Blagonravov leant forward and almost placed his ear on the machine. A moment later the "beep, beep, beep" of the satellite echoed through the huge reception room.

"That is the voice. That is the voice," called the excited Russian. "I recognise it."

The other scientists just stared at him. It seemed that at the moment General Blaganravov had suddenly established himself as the world's leading rocket specialist.

Identified only as Academician Blaganravov and dressed in the civilian clothes that befit the scholar, he had been sent to Washington as head of the Soviet delegation to an international meeting of rocket scientists.

Last December he had headed a similar delegation to Paris.

In the Soviet scientific and popular Press this past year his articles have been the most authoritative pronouncements on Russian rocket progress, aimed at laying the groundwork for space travel.

A month ago, Western diplomatic sources declared it was a "reasonable guess" from the evidence available that he was in charge of all Russian rocket research.

But to the group at the Washington party, he appeared more like another professor than a general.

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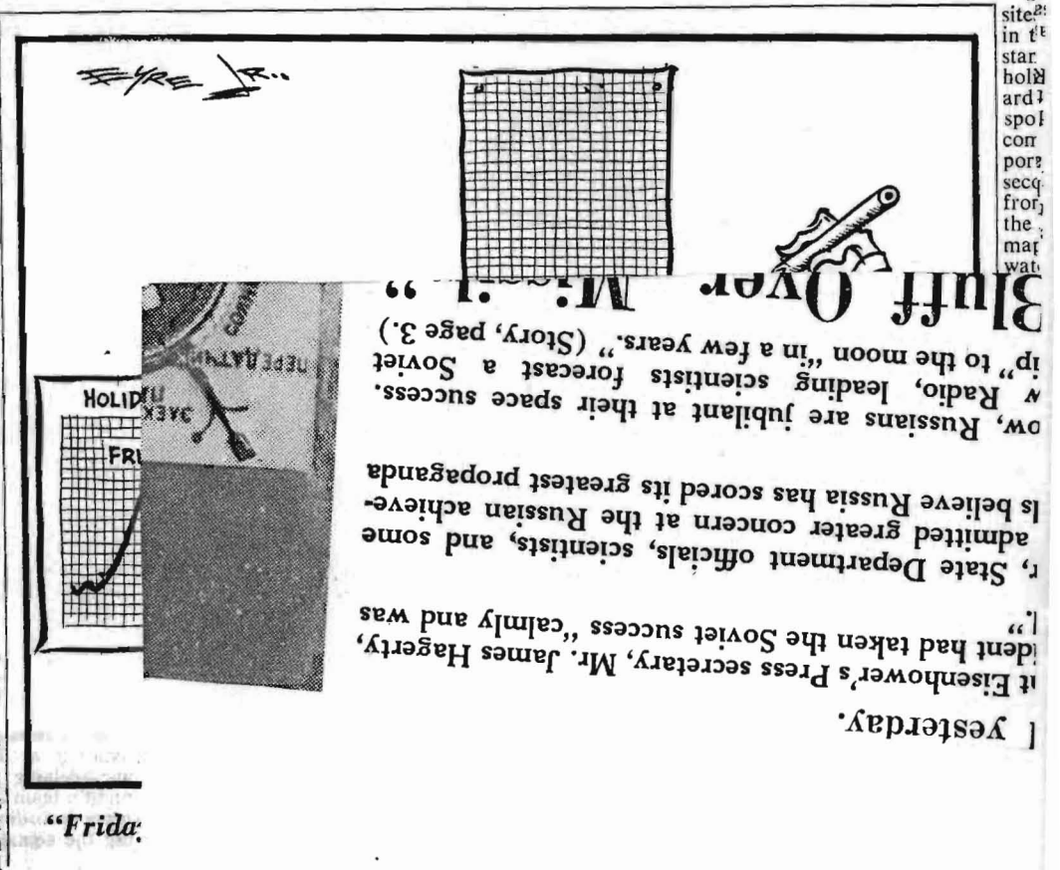

"Frida

[illegible] Yesterday.

[illegible]t Eisenhower's Press secretary, Mr. James Hagerty, [illegible]dent had taken the Soviet success "calmly and was [illegible]."

[illegible], State Department officials, scientists, and some [illegible] admitted greater concern at the Russian achieve- [illegible]ls believe Russia has scored its greatest propaganda

[illegible]ow, Russians are jubilant at their space success. [illegible]w Radio, leading scientists forecast a Soviet [illegible]ip" to the moon "in a few years." (Story, page 3.)

Bluff Over Mi[illegible]

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