

Singleminded Way Into Space

ROCKET SKILL PROVED AT STALINGRAD

From Our Science Correspondent

The approach of the Soviet Union to space research has differed from that of the United States in having emphasized from the beginning the element of human exploration. For this, big launching rockets are essential, and the Russians may have been encouraged in that direction by their capture after the war of German plans for a big rocket.

They had foundations of their own, however, to build on. As early as the battles for Moscow and Stalingrad, Soviet military rockets had been proved better than German. Hence, though making good use of Germans who worked for them after the war, they were already well placed to do so—and in the final stages of design and construction it was the Russians who did the work. In particular, credit for the high standard of precision attained appears to be squarely their own.

LESS ACCELERATION

The dog launched in Sputnik 2 showed the way that they were thinking, and from May, 1960, onwards they have followed a systematic course of experiments and trials leading up to yesterday's success. Viewed superficially, their record was three successes out of five—beginning with the space cabin and dummy man which marked the start of the present series. All appear to have used the same launching rockets. But after the first two there were changes in detail. In the case of the third there was an error in launching, so that intentions could not be judged.

In their final two trials they reduced slightly the period of the orbit—so reducing the rate of acceleration necessary—and they changed from an orbit which in the first two launchings had been nearly circular to one that was markedly elliptical, which would modify the path followed during reentry. These changes, it is natural to suppose, were with a view to the human launching to follow.

SOME STEPS FROM MOON

Since both of the last two trials using dogs were fully successful, and yesterday's launching followed the same procedure, they had gone far in advance to justify their claim that they would send a man up only when assured of success in bringing him down again.

The only modification of importance in yesterday's launching was in giving Major Gagarin only a single circuit of the earth, whereas the dogs had had more—again a change in the direction of safety. Also significant is the fact that they used a well-tried launching rocket, not the bigger rocket that they must have used to place the satellite in orbit from which the Venus space probe was in turn launched.

There can be little doubt that they plan to go farther than the outer atmosphere with human launchings. But to send a man even to take a look at the moon would require a bigger rocket than they have yet

This is an unparalleled victory of man over the forces of nature, the immense achievement of science and technology and the triumph of the human mind. Foundations have been laid for man's flight into space.

In this achievement, which will pass into history, are embodied the genius of the Soviet people and the powerful force of socialism.

OTHERS SURPASSED

Backward Tsarist Russia, the statement said, could not even have dreamt of achieving such exploits. But now Russia had surpassed all other states in the world.

After listing previous Soviet achievements in launching rockets and satellites, the statement went on:—

The victories in the exploration of the cosmos are regarded by us not only as the achievement of our people but of all mankind. We gladly place them at the service of all peoples in the name of progress, happiness and the well-being of all human beings on earth. We do not place our achievements and discoveries at the service of war but at the service of peace and the security of peoples.

On this solemn day, we address once again to the peoples and Governments of all countries an appeal for peace. . . . Let us end the armament race, let us bring about universal and complete disarmament under strict international control. This will be the decisive contribution to the sacred cause of the protection of peace.—*Reuter.*

HUMAN HORIZON EXTENDED

From Delhi yesterday Mr. Nehru sent Mr. Khrushchev congratulations on the Russian achievement. He called it "a great human victory over the forces of nature" and said: "When the human horizon is being extended in this way it seems narrowminded folly and utter lack of vision for people on this little earth of ours to talk of and prepare for war".

Other comments were:—

GENEVA.—At the nuclear tests conference Sir Michael Wright, saying that the historic event was a breakthrough which more than ever justified the strength, imagination, and abilities of the Soviet people, made this appeal to Mr. Tsarapkin: "Surely that strength and those abilities can equally achieve a breakthrough in the domain which is the subject of this conference."

ROME.—Vatican radio said the opening of new ways for mastering the energies of nature added fresh and heavier responsibilities for man. Technical progress, to be real human progress, required an inner ethical development, a higher consciousness of man's duties and a more generous will to execute them.

ATHENS.—General Sir Hugh Stockwell,



1. Moscow, yesterday when announced.

THE FEAT OF AN EARLIER DAY

FLIGHT TO PARIS COMMEMORATED

FROM OUR AERONAUTICAL CORRESPONDENT

PARIS, APRIL 12

is the fiftieth anniversary of non-stop flight from London

It was made by M. Pierre was chief instructor at the flying school at Hendon. Pilot-riot monoplane fitted with a Gnome rotary engine, he 250 miles from Hendon to Boulogne (now the Paris base) in the remarkably short 1911—of just under four

the passengers in an Air France which made the London-Paris about an hour today was the pilot's son, M. Jean C. Prier, who