

GENERAL SCIENCE

Wage Scientific Rivalry

The United States and Soviet Russia are engaged in a scientific rivalry to see which nation will be first to learn the answers to many important problems.

► WITH RUSSIA leading in the conquest of space with two successful earth satellites launched, this is what is likely to happen next in the scientific and technological race between the U.S.A. and the U.S.S.R.:

1. A rocket will be sent to the moon, either to hit it or, what would be easier, to circle around it.

2. An atomic rocket and an atomic-powered airplane will be successfully flown. This is essentially the same problem, as a light-weight atomic, or fission, reactor providing a jet could be used on both.

3. Once an atomic rocket is developed, an unmanned trip, possibly round trip, will be tried to the planet Mars.

4. The H-bomb, or fusion reaction, will be harnessed for power purposes. This accomplished, there should be ample inexpensive power for many purposes, banishing the fear of a fuel shortage due to exhaustion of oil, gas and coal.

5. Launching of an atomic-powered surface ship is imminent. Following the spectacular success of the U.S. Navy Nautilus atomic submarine, it is known that the U.S.S.R. is building an atomic ice-breaker while the U.S. Navy has building an atomic-powered aircraft carrier.

6. A breakthrough is possible on the problem of utilization of the sun's energy on a practical scale. This may take the form of artificial photosynthesis, that is, the discovery of a chemical method of capturing sunlight energy through chemical transformations more efficient than those used by the green leaf. Or it may be

discovery of efficient methods of storing sun heat, improved solar batteries and storage methods, etc.

7. Construction of high voltage atom smashers will come to completion, giving energies as high as 50 billion electron volts, sufficiently large for exploration of the atomic nucleus, possibly unlocking new stores of energy.

8. Creation of life in its simplest form may be accomplished. This could be either by the duplication of the conditions under which life arose on earth some five billion years ago or through the chemical exploration of protoplasm and an understanding of the nature of living matter, and finally its synthesis.

9. More effective methods of selecting, training and inspiring young students to enter scientific and technological careers will be developed, sharpening the manpower race in the world and supplying the skill and brainpower for industrial development and continued basic discovery.

10. Cooperation between the Soviet and the western civilizations should mitigate the danger of catastrophic war and provide a basis for the international progress instead of rivalries.

Whether the U.S.A. or the U.S.S.R. will win these various events in the great race is difficult to predict. Dead heats can be expected for 3, 4, 6, 7, 8 and 9, with U.S.S.R. ahead in 1 and the U.S.A. ahead in 2 and 5. For 10 to happen, both must be winners.

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planes, birds, kites, fireflies, parachutes and ice crystals in clouds.

The Air Force for years has checked into reports of flying saucers, but has found "no evidence" of any unidentified flying objects coming from outer space.

The Air Force's Air Technical Intelligence Center, with offices at Wright-Patterson Air Force Base near Dayton, Ohio, charged with investigating all "unidentified flying object" reports, has examined some 5,700 reports between 1947 and 1957.

Practical explanations were given for all but about 3% of the sightings and these would also be identifiable if complete reports and data could be secured, an Air Force official said.

Astronomers point out that not one "saucer" has been reported as the result of astronomical observations. Considering the number of newspaper reports concerning strange flying objects, they believe this lack of astronomical data is impressive.

Besides the astronomical telescopes and cameras working in all parts of the country every clear night, there are now hundreds of Moonwatch teams on the lookout for a glimpse of one of the sputniks. Not one of them has reported seeing flying saucers, yet they maintain a careful vigil on a strip of sky directly overhead from horizon to horizon.

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ASTRONAUTICS

No Evidence for Saucers

► THE FLYING saucers again being reported as seen in the United States and abroad are most likely:

1. The planet Venus, now shining brightly for several hours after sunset in the southern and southwestern sky. The earth's sister planet is also visible to the naked eye in the daytime, and can easily be mistaken for some sort of an airship.

2. A mild form of mass hallucinations brought on by a feeling of helplessness because of the tense world situation and the Russian satellites circling the earth.

3. Balloons, either cosmic ray or weather balloons, which are now being made of very thin polyethylene film that glistens like silver in sunlight. Some are as big as 116 feet in diameter and float as high as 100,000 feet, remaining aloft for days. The balloons' size and altitude at which they travel make judging their distance or speed almost impossible.

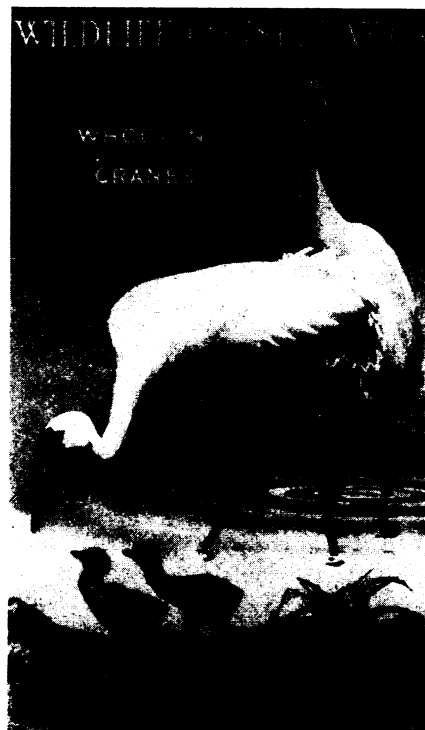
4. Meteors, sometimes known as shooting stars or fireballs. These small celestial bodies are invisible except when they enter the earth's atmosphere. Then they are heated by the impact of air and appear as streaks of light across the sky. A similar disappearance by vaporization is predicted for the Soviet satellites.

5. Strange sky mirages, similar to the "water-on-the-road-ahead" mirage that is familiar to motorists, caused by a layer of hot air trapped between two cold layers, known as temperature inversion. Bubbles of hot air in a cooler mass could also account for radar sightings of "flying saucers."

6. Radio-controlled jet or rocket aircraft or guided missiles being secretly tested.

7. The deliberate hoax of a prankster.

8. Any of a variety of familiar objects, reflecting sunlight when seen from just the right angle. These would include air-



CRANE STAMP—A Whooping Crane stamp, the fourth in the Wildlife Conservation series, will be released on Nov. 22. The stamp, with colors predominantly blue, green and yellow, pictures the areas sought out by the rare birds for nesting and rearing their young. The female is in the foreground while the male bird stands guard.