

proteins, enzymes, genes, viruses, etc., are being explored. Comparable to the determinations of the parts of an atom or the particles wrapped up in the nucleus of an atom, these molecular studies may give in the near future new ideas upon which to build attempts to use the theories bravely for new medical cures, the juggling of heredity or the creation of new industrial processes.

Science does not shy at attempting to understand the mystery of life itself and how the universe began and grew. Theories as to how the earth began lead inevitably to considering how life began. What was the point when inanimate matter acquired the qualities that are called alive? What happened? Has it happened only once or many times? Is it happening now and will such acts of creation occur in the future? Can man, himself evolved from some such simple beginnings, set up the conditions for a new rise of life?

These are questions for the future, and 1953 is probably much too soon to get the answers. Here is a field that the comic strips have not yet invaded. The problems of life are far more important than even those of atomic energy. Such research should be more fruitful than attempts to establish an artificial earth satellite or space platform, or projected rocket shots at the moon, with or without monkeys or men as passengers.

There is so much to be done on earth for peace on earth, in the old-fashioned, non-Soviet sense of the word.

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#### AERONAUTICS

## Jet-Blast Problem

► SOLUTION OF airport problems created by the entrance of jet propulsion into civil aviation was discussed at a meeting in Montreal sponsored by the International Civil Aviation Organization. The principal problem is the effect on the runway of the fiery blasts from the jet engines.

Representatives from England reported that the giant Comet jetliners, now in use on several long-distance overseas routes, cause no trouble from their engine blasts. This is because the power plants are mounted relatively high in the wings and in a horizontal position. An American delegate pointed out that experimental work shows that serious pavement problems may be created by jet craft whose engines are mounted close to the ground.

Certain of these tests, he said, resulted in temperatures up to 500 degrees Fahrenheit at the surface of the ground. The use of rockets or afterburners to assist take-off, probably a necessity with jetliners at many airports, subject the runway pavement to much higher heat. Core temperatures of assisted take-off devices may be up to 5,200 degrees, with the speed of the exhaust gases around 7,000 feet per second.

#### AVIATION MEDICINE

## Escaping Space Crash

► LOOKING FAR into the future when man will be space-traveling, Dr. Fritz Haber of the Air Force's School of Aviation Medicine, Randolph Field, Tex., reported to the American Rocket Society meeting in New York that chances are poor you could escape and survive a rocket ship disaster.

If something caused the rocket ship to explode so that it lost all of its air pressure quickly, the ship's crew probably would be killed almost instantly. Experiments have shown that men probably would be sucked through the hole in the ship. Even if they were wearing pressure suits, they probably would not survive.

But if the crewmen could leave the ship through a decompression chamber, their chances of survival would be slightly better. If the accident occurred "fairly near" the earth, rescue ships could be dispatched to pick them up quickly.

But if the accident occurred deep in space, the crewmen probably would be lost. Their space suits would not keep them alive long enough to be rescued even if they could be found.

If the accident occurred in the realm now believed suitable for an earth-circling space station, the crewmen probably would plummet toward the earth. Whizzing into the atmosphere at speeds about four times the speed of sound, their bodies

would be crushed by the tremendous braking action of the air. The braking action would produce a decelerating force of about 300 g's, far more than the human body can withstand.

And even if the deceleration force were not serious, the heat generated by air friction, about 36,000 degrees Fahrenheit, would ignite any material used on the outer surface of the body.

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