AERONAUTICS

Safer to Fly Backwards

➤ AIRLINE PASSENGERS should be flying backwards for "safety-first" reasons, Col. John Paul Stapp of the Aerospace Medical Center, Brooks Air Force Base, Texas, told SCIENCE SERVICE.

Experiments under Col. Stapp's direction by the Air Force since 1948 "have demonstrated conclusively that seats facing backwards are the best and safest position for air transport passage," he said. His tests also show that survival chances in the event of a crash landing would be increased if planes had attachments and seat strength 25 times the force of gravity.

Similar findings were independently made and acted on by the British, he said.

Between 1953 and 1957 there were seven crashes of British military and commercial transports, in which 259 backward-facing passengers were involved. The crashes ranged in intensity from destruction of the forward-facing pilot compartment with death of crew to virtual disintegration of the aircraft.

Only three passengers in the seven accidents were killed and 12 injured, Col. Stapp said.

The jet age has not improved the situation. Sixty-two forward-riding passengers were killed in the Electra jet crash at Logan airport on Oct. 4, with only 10 survivals.

Most military air transports now have backward-facing seats. Government planes reserved for executive travel, however, including the President's plane, the Columbine, have not yet been modified in accordance with Air Force safety recommendations.

Federal Aviation Agency engineers are working on a new and stronger seat design better suited for the hazards of a jet crash.

The tragedy of the recent Electra crash at Boston may result in general acceptance of seating arrangements and design recommended by Col. Stapp more than a decade ago.

• Science News Letter, 78:423 December 24, 1960

ASTRONAUTICS

British Are Now Choosing Astronauts

➤ THE BRITISH are selecting astronauts for their own man in space program.

The Parliament has authorized 140,000,000 pounds sterling (about $384,200,000) to put an Englishman into space.

The program already is under way, but no information is available yet on how many astronauts will be chosen or what the British have in the way of plans for their manned space venture.

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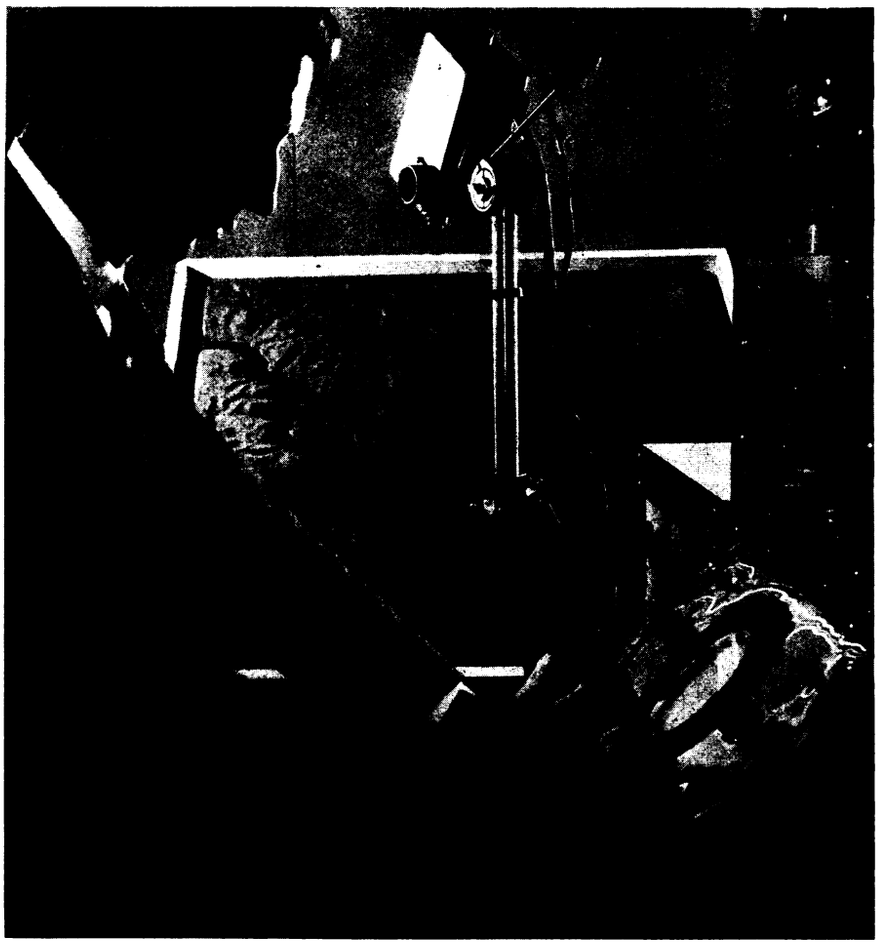

PILOT TRAINING WITH MAP, TV CAMERA AND RADAR SCOPE

ASTRONAUTICS

Manned Spaceship Faults Can Be Noted on Earth

➤ IF A MANNED SPACESHIP should suddenly start to sputter while in flight, an earth-based robot "mechanic" could diagnose the trouble and recommend repair procedures.

Such a system would be entirely practical and feasible, Halim Ozkaptan, research psychologist at Republic Aviation Corporation, told the Third Electronic Industries Association Conference meeting in San Antonio, Tex.

The robot service station plan calls for the establishment of maintenance centers built around electronic computers that would be fed all data relating to the operation of the spaceship. Here is how it would work:

Something goes wrong with the spaceship, and the astronaut cannot make a forced landing or send for a repair man. He relays to the computer, via code, voice, printed instructions or video, information about the difficulty and the symptoms.

The computer runs trial solutions to diagnose the defect. If it spots the trouble, it recommends steps to fix the trouble. If more facts are needed, it asks for them. If the diagnosis is critical, it issues a "May Day" warning, indicating that emergency measures be taken.

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AERONAUTICS

New Training Aid for Jet Pilots Developed

➤ FIGHTER AND BOMBER pilots of the jet age can now learn to fly at low altitudes over dangerous mountains and other hazardous ground features without leaving the ground.

A new simulator, developed by the electronics division of ACF Industries, Incorporated, Riverdale, Md., is patterned after the North American Search and Ranging Radar. NASARR is said to be the most accurate system for detecting ground hazards and target complexes from a moving aircraft.

NASARR is supposedly able to detect ground objects from a plane flying at low altitudes, whereas previous systems were inaccurate at such low levels.

The new radar simulator makes it possible to train pilots and crew under actual flight conditions without the problems met using actual equipment. The low-altitude training requirement is now necessary because increasingly effective enemy air defense techniques have forced jet fighters and bombers to approach targets at low altitudes.

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