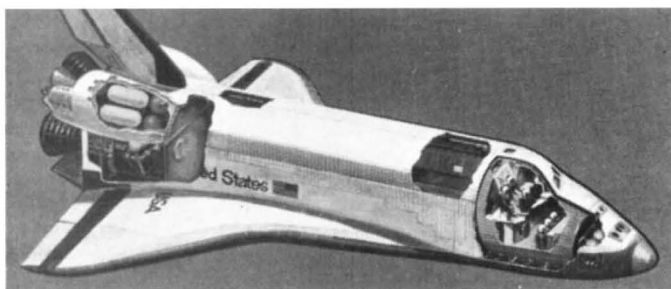


news in brief

Engine failure threatens further delay to space shuttle: An engine failure during testing is threatening further delays to the maiden flight of the US National Aeronautics and Space Administration's space shuttle (artist's impression *below*), currently scheduled for 28 September. The failure occurred during tests two weeks ago near St. Louis, Missouri, when a fire in the high pressure turbo-pump that feeds oxygen into the combustion chamber caused the engine to explode.

Space shuttle's initial flight has already been postponed from March following other problems in the engine development programme, and the delays have added extra costs to the programme. According to NASA, the test engine was heavily damaged in the explosion, and it is expected that it will take three to four weeks to repair the test stand. It is not yet known whether the engine failure will affect the current launching schedule. The agency issued a statement last week saying that an assessment of the impact to the engine test programme and to the first flight schedule was now being made.



Argon isotope ratio on Venus differs from Earth: Data from the latest Soviet Venus probes, Venera-11 and -12, which reached the planet at the end of December "astounded everyone"—according to a report from the flight control centre, broadcast a few hours after the second descent module had landed. The surprising result, it appears, was the unexpectedly high ratio of ^{36}A to ^{40}A in the atmosphere—some 200–300 times higher than the ratio of argon isotopes in the terrestrial atmosphere.

Perhaps the most surprising thing about the result, however, is that this value is a close confirmation of the result obtained by the latest US probe which reached Venus some three weeks before the Soviet modules. If the flight control centre was indeed "astounded", this surely reflects on the rate at which the Soviet team get access to the data from US missions—a point which could well be taken up in any future discussions of peaceful cooperation in space research.

According to the US researchers, the new data suggests a two-stage accretion process of planet forming. Professor Zolotukhin, Deputy Director of the Space Research Institute of the Soviet Academy of Sciences, seems to confirm this view, saying that the Venus argon ratio is "important for the study of the evolution of the planet".

A more popular report from the flight control centre, however, took a somewhat different line. According to commentator Nikolai Zheleznov, the argon value, taken in conjunction with the high surface temperature and dense atmosphere, suggests that the process of chemical evolution of the substances comprising the planet was "lengthened", thereby making the "paths of development" of Earth and Venus "diverge".

UK scientist wins redundancy pay: A cell biologist has won £400 redundancy pay from his former employer, the Imperial Cancer Research Fund. The ICRF has a clause in its contracts of employment for untenured staff which states

that they waive their rights to redundancy payment. Redundancy claims therefore are complicated and must be based on technicalities in the law. In this case the contract was for one year. The waiver clause is invalid for contracts of less than two years. The ICRF could have argued that the scientist's employment, consisting of one two-year contract and two one-year contracts, constituted more than two years total employment but decided not to contest the claim. Workers under age 41 are entitled to one week's pay for each year of employment not exceeding £100 per week. Of the ICRF's 128 scientific staff 40% are tenured, 15% on limited-term contracts are eligible for tenure and 45% are employed on non-renewable fellowships.

Sun powered telephones in Jordan: Over 80 solar powered telephones have been installed along Jordan's roads to provide motorists with an emergency telephone service. At the top of each telephone pole is a plate of solar cells which convert sunlight into an electric current that charges a storage battery of 36-hour capacity. The telephone is connected to a UHF transmitter powerful enough to reach the nearest microwave installation. Each telephone is equipped with a series of push buttons marked for the type of emergency service needed. At the push of a button the corresponding signal is relayed to an operator at one of three central exchanges. The system is especially designed for foreign speakers but a receiver is available for voice communication.

Saudi Arabia creates a new science and technology centre: The Kingdom of Saudi Arabia has announced the formation of an independent Saudi National Centre of Science and Technology. The centre will be responsible for support of scientific research and for coordination of existing scientific agencies in accordance with Saudi Arabian Development Plans. The brief of the new centre includes starting special research laboratories appropriate to the research needs of the kingdom, assistance to the private sector for research into increasing industrial and agricultural production, and support for specific research projects including grants to develop local skills for scientific research.

The centre is to seek joint projects with international scientific agencies and to propose a detailed plan "to realise the kingdom's objectives in technological fields". The local scientific community has welcomed the centre as an important part of Saudi Arabian social and economic development.

EEC announces fusion programme for 1979–1983: The total cost of the 1979–83 fusion programme proposed by the European Commission is 921 million European units of account (1 EUA=\$1.3). Of this sum 185 million EUA is scheduled for the Joint European Torus (JET) of which 80% will be paid by the commission. The remaining 736 million EUA will be spent over the next five years on the rest of the EEC's fusion programme which includes research on Tokamaks, new plasma heating systems, inertial confinement, tritium technology and materials research.

Already 70% of the contracts have been placed for the fabrication of the machine parts of JET. In February the first stone will be laid for its building in Culham near Oxford. Construction of the machine itself will begin in 1981 and is expected to be finished by 1983 when the first tests can begin. JET is to be built with the participation of all nine community countries plus Sweden and (shortly) Switzerland. After a three-year struggle, the Council of Ministers decided in May 1978 to site the machine in the UK at Culham.