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# Science News of the Year

*This is a review of important science news stories of 1974 as reported in the pages of SCIENCE NEWS. The references after each item refer to the volume and page number in which the main article on the subject appeared in SCIENCE NEWS (Vol. 105 is Jan.-June; Vol. 106 is July-Dec.). Where several references exist, the news developed and was reported in more than one issue. Back issues or, when out of stock, copies of articles are available for 50 cents each by writing to SCIENCE NEWS, 1719 N Street, N.W., Washington, D.C. 20036.*

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## Biology

- Gains were made in genetic engineering as animal genes were successfully inserted into bacteria and expressed their characteristics in the new hosts. 105:348
- Both viral DNA and artificially synthesized DNA were incorporated into mammalian chromosomes, providing further proof that human gene therapy is possible. 106:5
- Molecular biologists called for an historic temporary ban on research such as the above, that is, in combining animal, viral and bacterial DNA, fearing that it might lead to the creation of uncontrollable "Andromeda strains," or biological warfare agents. 106:52
- Molecular biologists attempted to make genetic engineering safer by developing a bacteriophage vehicle to replace plasmid DNA in genetic recombination experiments. 106:293
- A major discovery of 1973, that organ transplant rejection could be overcome if organs were cultured before transplantation, was found to be at least in part based on falsified research—resulting in a major scientific scandal. 105:348
- Molecular biologists synthesized the "off" and "on" switches for synthetic gene sequences, and soon will try to create a functioning artificial gene. 106:180
- A member of the first new genus of birds discovered in 10 years was found by some students in the Hana Rain Forest in Hawaii. 105:22, 131
- Cell biologists developed a technique for transplanting the nucleus of one animal cell into another. 105:397
- Mice eggs divided without prior fertilization and partially developed in the womb as embryos or tumors. This research gave insights into the link between embryos and tumors. 105:268

- Products of one of the most crucial biochemical pathways of modern cells, the Krebs cycle, were produced outside of cells under conditions that probably existed on the earth three billion years ago. 105:269
- Sperm cells united with mature body cells (rather than with egg cells) and apparently transferred the sperm's genetic information to the cells, opening new approaches in genetic research and in cancer research. 105:134
- Primates were successfully vaccinated for the first time against cancer. 105:413
- The sex attractants of insects may have their origin in the plants insects feed on. 106:343
- Plant cell wall material was synthesized artificially for the first time. 106:293

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## Medicine

- Human test-tube babies became a reality, causing worldwide comment and controversy. 106:37
- A significant advance was made in restoring vision to blind people by exploiting their phosphene capabilities. 105:68
- Transfer factor—a chemical extracted from human lymphocytes—showed increasing promise in countering cancer, multiple sclerosis, leprosy and other serious diseases. 105:86, 383
- An animal cancer virus was used for the first time to immunize cancer patients in order to boost the patients' immunity and help kill their tumors; preliminary results looked promising. 106:148
- The chemical structure of a master sex hormone, follicle-stimulating-hormone, was unraveled, opening the possibility of using it as a male contraceptive and as a means of correcting

infertility resulting from inadequate production of the hormone. 106:85

- Evidence was reported linking hormones taken during pregnancy with birth defects. 106:261
- Baby David, the only immune-deficient baby to be put in an isolator at birth and to survive two-and-a-half years, was not only alive and well in his plastic bubble, but psychologically adjusted and no longer germ-free. 105:335
- Strong new evidence of thymic hormones emerged, making the control of T cell production and response a possibility; evidence was presented that the thymus is involved not just in immunity, but in sexual maturation. 105:52, 366
- According to a Government-sponsored study, one of the most promising research paths to a cure for sickle-cell anemia proved to be a dead end; the pathologist who discovered the route disagreed. 105:104
- Food eaten during pregnancy was found to be influential in whether or not a child succumbs to disease later in life. 106:108
- Interferon showed an upsurge of promise in fighting colds and serious herpes virus infections. 105:102; 106:69
- Evidence was reported that margarine is a worse villain in hardening of the arteries than is butter or eggs. 105:253
- An important immunological role for tonsils was experimentally confirmed, giving physicians reason to remove them only in select cases. 105:300
- Electronic devices showed promise as effective, safe and reversible contraceptives in male mice. 105:309
- Chemists reported synthesizing a sugar, 5-thio-D-glucose, which will safely and effectively prevent sperm formation in male mice. 106:164
- Electromagnetic pollution showed some evidence of hurting human health. 105:418.

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# Physics

- The discovery of two new, unexpected, extra heavy particles threatened a revolution in particle-physics theory. 106:324, 340
- Experiments at the Stanford Linear Accelerator Center raised doubts about the applicability of the quark-parton theory of the structure of hadrons. 105:207
- Discovery of neutral currents in the weak interaction, a phenomenon that tends to support theories that unify the weak interaction and electromagnetism, was confirmed twice. 105:253, 284
- Quasifission, a new kind of interaction between atomic nuclei, was reported in heavy-ion collisions. 105:292
- A method for enriching the amount of the fissionable isotope in a sample of uranium using lasers was reported from the Lawrence Livermore Laboratory. 105:396
- A general rise in hadron-hadron total cross sections at high energy was discovered in scattering experiments at the Fermi National Accelerator Laboratory (FermiLab). 106:20
- A possible new high-energy relation between hadrons and leptons was reported from FermiLab. 106:20
- The quantum behavior of vortices in superfluid helium was made visible. 106:68
- A critical magnetic field of 500,000 gauss was measured in a new superconducting material. 106:228

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# Astronomy

- Evidence that seems to show that the strength of gravity is weakening was presented. 105:237; 106:116
- The first pulsar in a binary system was found during a sky survey. 106:245
- Surface features on a distant star (Betelgeuse) were observed for the first time in astronomical history thanks to a recently invented data-processing technique. 106:390
- The largest objects in the universe—5.7 and 2 megaparsecs across—were reported by radio astronomers in the Netherlands. 106:165
- The Arecibo radio telescope was used to beam a message to any intelligent beings that may exist in the star cluster Messier 13. 106:325
- Spectra like those of stars were obtained from a quasar, evidence taken in favor of a hypothesis that quasars are violent events in the centers of galaxies. 105:222
- An object that may be Jupiter's 13th moon was found. 106:195, 279

- Abundant scientific information was obtained from the passage of Comet Kohoutek although it did not become as bright as predicted. 105:4, 22,51,290
- Four new interstellar molecules were found, methylamine, silicon monosulfide, ethyl alcohol and ethynyl bringing to 33 the number of molecular species found so far in space. 105:301; 106:277, 398
- Several sources of far-infrared radiation were discovered in the sky. They may represent a new kind of celestial object. 106:398

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# Space

- Mariner 10's ultraviolet imagery revealed for the first time the detailed cloud structure of Venus, twisted by the planet's rotation into surprisingly regular spirals and highlighted by the "Venusian Eye." The eye is apparently a huge convection cell that blocks the normal equatorial flow near the point where the sun's rays fall vertically on the cloud tops. 105:85, 100, 188
- Man's first look at Mercury was provided by Mariner 10, which, after swinging by Venus, continued on to reveal a light, moonlike surface apparently enclosing a dense, earthlike core. It came back for a second pass that added Mercury's south pole to Mariner's bulging photo file. 105:204, 220, 254; 106:167, 196
- Pioneer 11 took a first look at the polar regions of Jupiter, which lack the characteristic banding that marks the planet's lower latitudes. It also studied the Jovian radiation belts from much closer in than its 1973 predecessor, measured the thickness of the planet's huge magnetic field and headed off for a 1979 rendezvous with Saturn and its moon Titan. 106:356
- The third and final Skylab crew, astronauts Gerald Carr, William Pogue and Edward Gibson, spent 84 fruitful days in space, during which they photographed and studied the sun, Comet Kohoutek and earth's natural resources. 105:101
- A moon rock possibly almost as old as the moon itself, more than 4.5 billion years, was discovered among samples returned by the Apollo 17 astronauts. 105:205
- The Soviet back-up crew for the planned 1975 Apollo-Soyuz rendezvous mission, cosmonauts Anatoly Filipchenko and Nikolai Rukavishnikov, flew a successful test run aboard Soyuz 16. 106:359
- Soyuz 14 cosmonauts Pavel Popovich and Yuri Artyukhin spent more than two weeks in space, most of it docked in a Skylab-type mission with

the Salyut 3 space station. 106:22, 37, 55

- Four Soviet craft reached Mars within a single month, although with limited success. Mars 4 and 7 missed it completely, Mars 6 stopped transmitting just as it landed and Mars 5 went into orbit around the planet. 105:117, 189
- Synchronous Meteorological Satellite 1 opened a new era in orbital weather-watching, providing 24-hour-a-day cloud photos from a fixed viewpoint. 105:332
- Helios 1, built by West Germany, was launched to take man's closest look yet at the sun—28 million miles. 106:74
- An exceptionally people-oriented satellite, ATS-6, aided numerous educational, medical and other programs. 105:226
- Westar 1 and 2 became the first commercial U. S. domestic communications satellites. 105:269; 106:246
- The Netherlands joined the space club with the launch of its first satellite, an astronomy probe. 106:121, 182
- Spain launched its first satellite, a probe called Intasat A, designed to measure electron densities in earth's ionosphere. 106:342
- Another astronomical sky-watcher was Britain's X-ray-sensitive UK-5. 106:214, 246
- A global, multi-purpose web of synchronized time measurements came a step closer to reality with the launch of NAVY'S TIMATION III satellite. 106:27
- The Hawkeye satellite was launched to study the region where the earth's magnetic field dips low over the North Pole. 105:364
- Thanks to a new guidance technique, Japan's fifth satellite became that country's first to approximate its intended orbit. 105:117
- Germany, hard at work as prime contractor in the European Spacelab module for the U. S. space shuttle, launched its fourth satellite, an upper-atmosphere probed called AEROS-2. 106:36

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# Earth Sciences

- A French-American project used research submarines to examine the great rift valley in the Mid-Atlantic Ridge and found evidence that the earth's crustal plates are pulled apart rather than pushed apart. 106:118
- Sediments 150 million years old and rocks possibly 600 million years old were recovered by drill cores in the south Atlantic, revealing the remains of the ancient supercontinent Gondwanaland stretching eastward 750 miles from the Argentine coast and

completing the puzzle about how Africa and South America formerly fit together. 105:382; 106:54

- Specimens of a mineral found in Oregon, josephinite, were said by geologists to be the first known samples of the earth's core. 105:237

- The deepest penetration ever made into the igneous rocks underlying the ocean-bottom sediments—1,910 feet—was accomplished by the drilling vessel Glomar Challenger near the Mid-Atlantic Ridge. 106:69

- Rocks as old as any yet found on earth, 3.8 billion years old, were discovered in southwestern Minnesota, and may spark a revision of the current theories on North American continent formation. 106:358

- The GARP Atlantic Tropical Experiment, considered the largest scientific experiment ever performed, was successfully carried out over a 14-week period by 4,000 people in an effort to better understand tropical heat-transfer processes that affect world weather. 106:332

- Scientists from three countries completed the first season of the Dry Valley Drilling Project, the first scientific drilling into the Antarctic continent. Findings included evidence that the warmth of the bottom water of ice-covered Lake Vanda is due to heating by sunlight passing through the ice. 105:60

- Deep-sea drilling off Antarctica confirmed 20-million-year-old glaciation, discovered iron-rich sediments, identified once-vigorous sea-bottom currents and detected evidence for a former strong circumpolar current. 105:317

- A new theory linked periods of extensive volcanic activity, changes in climate, long-term variations in the earth's rotation speed, and global earthquake activity. 106:233

- An oceanographic expedition to study ocean geochemistry found that cold Antarctic bottom water moves northward into the Pacific in a vast swath as much as 1,200 miles wide. 105:399

- What has been reported to be incontrovertible evidence for past glaciation in the mountains of North Carolina turned out to be a result of human activity. 105:54

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## Chemistry & Environment

- A new element, number 106 (as yet unnamed), was synthesized at the Lawrence Berkeley Laboratory of the University of California. 106:164

- The Environmental Protection Agency banned the use of vinyl chlo-

rides as a propellant in aerosol cans after the deaths of 15 vinyl chloride workers from a rare liver cancer induced by the chemical. 105:287

- A major study revealed that carbon monoxide levels in Americans' blood were above the maximum levels recommended in the Clean Air Act of 1971, indicating the failure of air pollution-control efforts. 106:148

- Several atmospheric chemists expressed fear that fluorocarbon aerosol propellants and refrigerants are breaking down ozone in the stratosphere and may cause a dangerous decrease in the protective ozone layer, subsequent increases in the number of cases of human skin cancer and world climatic changes. The National Academy of Sciences organized a long-term study of the potential danger. 106:180, 212

- High levels of ozone in the lower atmosphere over rural areas were traced to the gaseous plumes from coal- and oil-burning electric power plants. 106:260

- Two industry studies revealed that inorganic arsenic can cause lung and lymphatic cancers among industrial workers exposed for long periods of time at relatively high levels. 106:149

- The Environmental Protection Agency banned the use of the pesticides Aldrin and Dieldrin on crops, but allowed three specific nonagricultural uses. 106:231

- Carcinogenic chemicals were found in clean drinking water in New Orleans and Cincinnati, and the Environmental Protection Agency mounted a nationwide study of the problem. 106:311

- Researchers at the University of Missouri reported that "soft" ultraviolet rays—the kind that come from black lights and sunlamps—may be harmful to the eyes and research is needed to detect possible long-term effects of exposure. 105:177

- The National Center for Resource Recovery performed a cost-benefit analysis of solid-waste recovery and concluded that when current dump fees are \$3.96 a ton, recycling is profitable. 105:194

- New research on eutrophication of lakes conclusively demonstrated the role of phosphate in transforming bodies of water into soups of green scum. 105:353

- The U.S. Arms Control and Disarmament Agency concluded that atmospheric nuclear explosions may endanger life on earth even more through destroying the ozone layer, admitting harmful ultraviolet rays, than through fallout. 106:185

- A committee of the National Academy of Sciences wasted no words in declaring that the Environmental Protection Agency's research establishment needs complete overhaul. 106:183

- Air conditioners may spew out

aluminum powder, raising air pollution in a room to unacceptably high levels. Inhalation of aluminum powder can cause pulmonary diseases similar to emphysema. 106:88

- Microbiologists reported that pesticides are disrupting the ability of estuarine microorganisms to kill off dangerous bacteria contained in the sewage which pours into coastal waters. 106:7

- Chemist reported finding pH levels as acidic as 2.6 and 2.1 in rain over the northeastern United States. 105:383

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## Energy & Resources

- The energy crisis worsened in 1974, with crude oil prices nearly quadrupling. Lack of oil, in turn, lowered production of fertilizer, threatening many developing countries with food shortages even before bad weather increased the danger of famine. Many scientists doubted the technical feasibility of the U.S. Government's "Project Independence," a plan to free the country from the need for imported energy. 105:37, 416

- Depletion of food reserves, weaknesses in Green Revolution crops and bad weather combined to renew the threat of famine in many parts of the developing world. 105:306

- Even before the World Food Conference began in Rome, the global food outlook had deteriorated hazardously and National Academy of Sciences President Philip Handler wondered if the time had come to "let nature take its course." 106:278

- At the World Food Conference, Secretary of State Henry Kissinger announced substantial new increases of funds for agriculture research. 106:292

- Deliberation at the World Food Conference nearly ground to a halt and in the end only a modest proposal for an internationally coordinated system of food reserves was adopted. At home, more scientists and politicians began adopting a tougher viewpoint, while the neediest nations drifted closer to the brink of famine. 106:308, 326, 340, 349

- Global population may be exploding faster than previously realized, according to a study sponsored by the Environmental Fund, which says that there are already more than four billion people in the world and that population is growing faster than 90 million a year. 106:377

- American and Arab positions on oil came into direct conflict at the 9th World Energy Conference. The result threatened to contribute to famine and industrial stagnation in the less developed countries. 106:213

- It was reported at the World Energy Conference that the United States is pursuing its own course on energy and the environment, falling behind other nations in some aspects, particularly in developing breeder reactors. 106:217

- In keeping with an Administration pledge to commit \$10 billion to energy research and development over the next five years, the fiscal 1975 budget allocated nearly \$1.8 billion to the effort—double the amount spent the preceding year. 105:84

- The Atomic Energy Commission was split into two autonomous agencies, the Energy Research and Development Administration and the Nuclear Regulatory Commission. 106:248

- A National Academy of Sciences committee warned that the petroleum crisis may only be the first of many such material shortages and recommended major new commitment to materials research to avoid future problems. 105:53

- New methods of tailor-breeding crops and combining the features of two dissimilar species promised to open a new Green Revolution. 106:218

- After much wrangling, a solar heating bill finally passed both houses of Congress and was signed into law. Some \$60 million will be spent over the next five years to introduce solar energy into heating houses. 106:181

- Solar energy gained new respectability after NSF-sponsored reports showed that the sun's energy may be used to heat four million buildings in the United States by the turn of the century. 105:412

- Solar energy entrepreneurs heard blunt talk from Government officials, who said that technical feasibility of this developing energy source must be supplemented with solid-looking economics. 105:69

- As oil prices rose, oil shale and tar sands started looking more economically feasible. Scientists began judging whether the best way to reach the petroleum thus trapped was through nuclear explosions or conventionally generated steam. 105:76

- Studies conducted over the last decade by USGS geophysicist M. King Hubbert show that U.S. oil production may have already peaked, regardless of offshore or Alaskan oil. 105:277

- The final report of the Ford Foundation-sponsored Energy Policy Project concluded the United States should emphasize more energy conservation and that doing so would help the environment and provide more jobs. 106:259

- The second report to the Club of Rome reached similar conclusions: cut down on energy consumption and have international cooperation in developing new resources or the gap

between industrialized and underdeveloped countries will spread to disastrous proportions. 106:269

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## Anthropology & Archaeology

- The origins of man may be pushed back significantly following the discovery of 3- to 4-million-year-old jaws and teeth belonging to the genus *Homo* in northern Ethiopia. 106:276

- Evidence was reported suggesting that human primate ancestors walked erect on two legs three million years ago. Previous evidence indicated that erect-walking primates existed only two million years ago. 105:103

- A vast fossil find consisting of at least 18 sites over a 350-mile stretch of Baja California was discovered and termed "the last great frontier" in paleontology. 106:247

- A new genus and species of dinosaur was discovered in Utah—*Stokesosaurus clevelandi*. 105:159

- Amino-acid dating of a human skull found in California suggested human habitation of North America almost 50,000 years ago. 105:316

- A large circle of stones in Wyoming—the Bighorn Medicine Wheel—was found to have astronomical alignments and may have been used as a primitive astronomical observatory by nomadic Plains Indians. 105:366

- A 5,000-year-old monument in Ireland was found to have been constructed along astronomical lines—1,000 years before the main astronomically oriented structures were erected at Stonehenge. 105:413

- What may be the oldest site of human habitation in North America east of the Mississippi—14,000 to 15,000 years—was uncovered south of Pittsburgh. 106:84

- A tablet considered to be the earliest known piece of music, found in the ancient Syrian city Ugarit and dated at about 1400 B.C., was said by one musician to exhibit harmony. 105:172

- Study of bone foreshafts from a burial site near Wilsal, Mont., indicated that early humans used detachable spear points to hunt some giant mammoths more than twice their height. 106:230

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## Behavior

- The Federal Bureau of Prisons and the Law Enforcement Assistance Administration withdrew Federal funding from behavior-modification programs in

prisons. 105:180

- The U.S. Department of Agriculture reported a turnaround in the flight from the farm; an estimated 500,000 urbanites have moved to small cities and towns since 1970. 105:36

- An animal model of hyperkinesia was developed that might make studies of that elusive syndrome more meaningful. 105:224

- Heroin addiction among returning Vietnam veterans did not become as serious a problem as predicted. 106:26

- A Department of Health, Education and Welfare task force reported that teenage drinking is increasing and is the most serious of all drug problems. 106:39

- Parapsychology was given a possible setback when a senior researcher at the Institute for Parapsychology was caught cheating. 106:100

- The American Psychiatric Association went to the Supreme Court in the hope of getting a ruling that says states, not individual therapists, are responsible for seeing that adequate treatment is given to all involuntarily confined mental patients. 106:198

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## Technology

- An American engineer returning from a conference in the Soviet Union brought news of Russian progress toward development of a nuclear-powered gamma-ray laser. 105:8

- IBM developed a computer technique that can analyze X-ray patterns to determine protein structure in 15 hours—a task that once took four man-years. 105:224

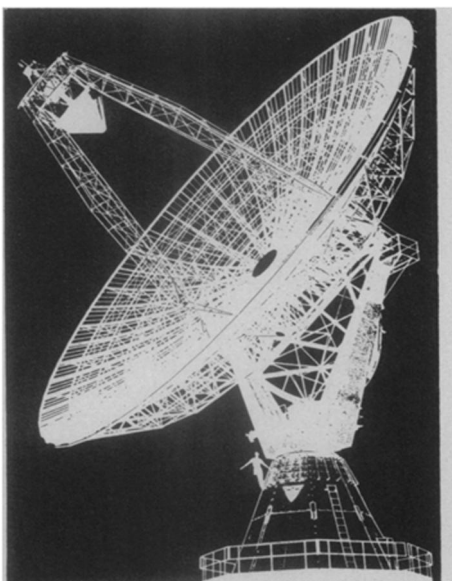
- Reports from an annual industry conference indicated that the Age of Plastics may be in for another boom. Food-grade plastic bottles may soon replace glass, scratch-proof coatings may make plastic window panes feasible, and new heat-resistant plastic tubing is being developed for autos. 106:40

- A reactor-powered laser was developed at Los Alamos Scientific Laboratory, using neutrons from a pulsed reactor to create an infrared laser beam. 106:229

- Designs by two chemical engineers revealed that osmotic pumps may someday provide large quantities of fresh water from the sea without requiring the input of energy. 105:74

- The world's first installation of a fully automated, floating personal rapid transit system was announced for Nancy, France. 105:118

- A process was developed at the University of California at Berkeley to convert old newspapers to sugar, and hence to alcohol, so cheaply that it may someday be used to make raw



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S48

feedstocks for industrial plastics processes. 105:195

- Highly censored testimony released by the House Appropriations Committee revealed the existence of two anti-missile lasers, capable of knocking out the homing devices of air-to-air and air-to-ground missiles. 105:74

- A fellow at the Hoover Institution studying Russian technology concluded that most industrial processes in the Soviet Union depend on techniques borrowed from the West and that their own innovative establishment has concentrated on making new weapons. 105:58

- Scientists at the Los Alamos Scientific Laboratory reported that superconducting films have been developed to cover copper tubes, enabling them to carry high currents for future power transmission. 106:287

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## Science & Society

- The coming of Gerald R. Ford to the Presidency raised hope in the scientific community that the White House might soon have a science adviser again, but fears of budget cuts continued. 106:100

- A National Academy of Sciences committee led by James R. Killian concluded that the present science advising arrangement in the White House is inadequate. 106:4

- An analysis by the National Science Foundation showed that R&D funds had decreased in actual buying power since 1968. Total U.S. commitment to R&D stood at 2.3 percent of the GNP, compared with 3.0 percent a decade ago. 106:105

- The Watergate mess finally spilled over into the scientific community. A secret White House memorandum showed that some members of the Nixon Administration tried to influence research grants to curry political favor. 106:23

- Publication of the manuscripts of Leonardo da Vinci's *Madrid Codices* revealed new aspects of the mysterious genius. The reasons why his scientific and mechanical inventions never gained much influence also became clearer. 106:234

- The Rasmussen report, a long awaited study of nuclear power plant safety and risks, was released by the Atomic Energy Commission. The report found the risks to be small. 106:117

- The Environmental Protection Agency issued a study critical of the AEC's "Rasmussen Report," saying that the risks of death or injury from nu-

clear reactor accidents may be ten times as high as predicted. 106:374

- The annual AAAS meeting may have looked more like an intellectual chautauqua, but this year's meeting bristled with ideas: Is I.Q. inherited? Can man achieve "nonneurotic self-control?" Has the "dismal science"—economics—really come of age? Does a global "Catch-22" keep poor nations undeveloped? 105:156

- Immanuel Velikovsky, who has battled the scientific establishment for a quarter century over his theories of the solar system, finally got his "day in court," at the annual AAAS meeting. Most scientists remained unimpressed. 105:132

- The Federation of American Scientists reported that even though women scientists usually have better academic records than their male counterparts, they draw markedly lower salaries, even after years of experience, and suffer worse discrimination in the receipt of research grants. 105:12

- The summer issue of DAEDALUS, the journal of the American Academy of Arts and Sciences, focused on the challenges posed by changing attitudes to science. 106:92

- Unemployment among doctoral scientists and engineers was only 1.2 percent and the median salary was \$20,890. Women earned 11.7 percent of the doctorates granted in science in 1972—up from 7.2 percent a decade earlier. Racial minorities still accounted for only five percent of the doctoral scientists, with most these coming from Asian ancestry. 105:304

- Science education appeared to be at a crossroads: National Academy of Sciences President Philip Handler foresaw a shortage of scientists in the near future, yet budgets for science education were being cut and women and minorities were yet to be integrated into the mainstream of preparation for scientific vocations. 105:137

- American graduate enrollment in science went down two percent in the last year, continuing a trend begun in 1969. 106:153

- After experimenting with new curricula, some prestigious medical schools returned to their old, established methods, though enrollment opened up for women, and nurses were being trained to accept new responsibilities. 105:139

- Jacob Bronowski, philosopher of science and author of the *Ascent of Man* book and television series, died in August at the age of 66. One of his last achievements was writing a program for the American Bicentennial. 106:119, 153

- The number of patent applications resulting from public funding decreased steadily and sharply. No one seemed to know why, but Government agencies tried to correct the problem. 106:70 □



# Science Pictures of the Year



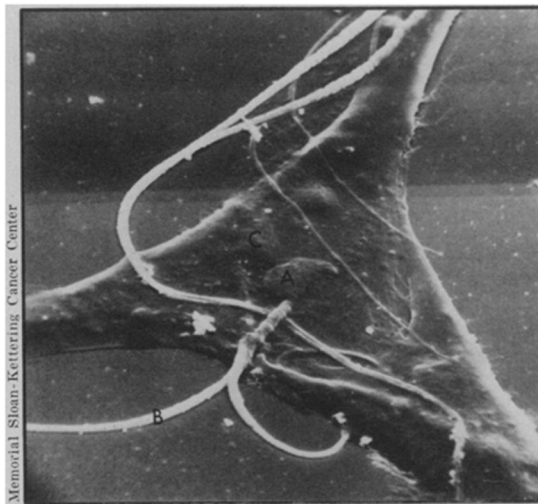
NASA

*Mariner 10's swirling Venus, visible only by UV light.*



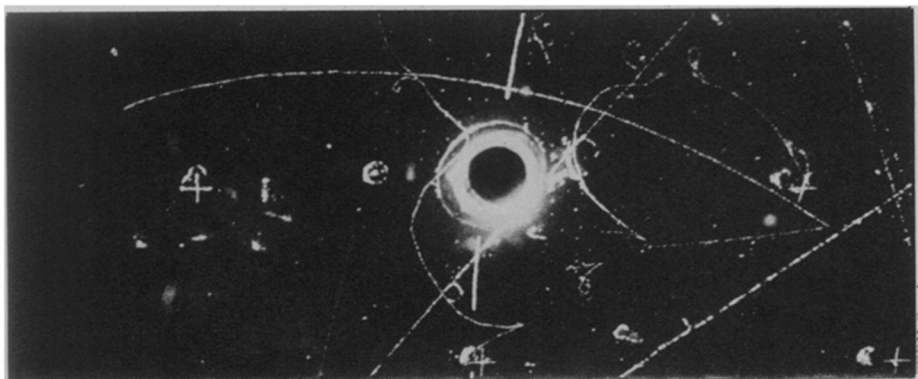
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*Comet Kohoutek, a public flop but a scientist's dream.*



Memorial Sloan-Kettering Cancer Center

*Sperm head (A) has penetrated a body cell, apparently transferring the sperm's genetic information to the cells, and opening new approaches in genetic and cancer research.*



CEHN COURTESY

*Impossible physics becomes possible: Evidence for neutral weak currents.*