

Business Briefs

Space

Joint experiment planned, defense pact signed

The German and Japanese space agencies are planning a joint materials processing mission which will use a Japanese launch vehicle produced by Nissan Motors, and a German experiment carrier, *Aviation Week* reported in mid-January. The material to be processed is said to be a catalyst which is useful in refining oil. After five days in space, the experiment carrier will land in the Australian desert.

Until recently, these two nations cooperated in space only indirectly, through separate European and Japanese participation in the U.S. Space Station Freedom project. Both are anxious to expand their international relations without the United States as a mediator, and bilateral agreements have been proliferating.

Meanwhile, outgoing U.S. Defense Secretary Richard Cheney announced on Jan. 20 that an agreement between the United States and France had been signed for cooperation in developing the military uses of outer space, Reuters reported. The agreement marks a major change in U.S.-French relations.

While the agreement is top secret, a joint statement said that the United States and France "intend to explore cooperation in military uses of outer space . . . [and] share the commitment not to contribute to the proliferation of missile and space technologies that could jeopardize international security. . . . [They] believe . . . they should examine cooperation in the military uses of space in the following candidate areas: communications, navigation, environmental monitoring, space technology and experiments, and officer, scientist, engineer, and other personnel exchanges."

Labor

British unemployment dispels recovery myth

Unemployment in Britain rose by more than 60,000 in December, bringing the official total almost to 3 million, British media reported in

banner headlines on Jan. 22.

News of the biggest one-month jump in the number of people out of work and claiming benefits since the summer of 1991 came alongside further job losses announced by Barclays and British Gas, and fears of further cutbacks at Ford. Officials believe that the seasonally adjusted total is increasing at around 40,000 a month, faster than at a similar stage of the 1980-81 slump. Unemployment has now risen for 32 consecutive months.

The report was accompanied by figures showing that the manufacturing sector suffered an across-the-board drop in output in November. The *Guardian* reported growing anxiety among dealers and analysts in London about "the lack of evidence of economic recovery," and the pound tumbled on the prospect that the government would be forced to cut the cost of borrowing to levels not seen since the late-1970s. The so-called "wise men" of the Treasury and the Confederation of British Industry demanded an urgent base-rate cut in order to stimulate a "dangerously depressed economy."

Science

Laser beams produced by new method, Chinese say

A new method for producing laser beams has been developed by Prof. Gao Jingyue at Jilin University in northeast China, according to press reports on Jan. 22. In contrast to the universally known "population inversion" method, laser emission from sodium without population inversion has been observed in his lab.

Population inversion means that electrons are simultaneously excited to a higher energy state. In this instance, it appears that coherent light emission can occur without first increasing the energy state—without a population inversion. In Italian physicist Giuliano Preparata's model of superradiance (quantum field coherence), coherent radiation can also be accessed at low-energy states. In fact, he proposes that the superradiant ground state is a lower energy state than is normally found.

The new method will break the limits of population inversion, and offer a wider choice of lased light characteristics and applications

in military, industrial, and medical fields.

Experts have praised this invention as the most advanced in the world. The project, which may have a profound influence on laser research and theory, has passed evaluation from China's State Committee of the National Fund of Natural Science.

Energy

Japan designs nuclear power plants for the Moon

Japan, which now has the most ambitious nuclear power development plan in the world, is currently making plans to place nuclear power plants on the Moon, Reuters reported Jan. 23.

The Science and Technology Agency, a government ministry, is planning to launch a five-year project this spring to develop a converter that can change energy generated by nuclear power plants on the Moon into electricity and then transmit it to Earth. The agency unveiled the next-generation energy project, touting it as the answer to future energy needs and a way to reduce dependency on nuclear power generation on Earth.

Japan, which relies on imports for about 84% of its energy resources, is steadily increasing its use of nuclear power, which now accounts for about 30% of its electricity output. It is going ahead with an experimental fast breeder reactor (FBR) program, even though France and Britain have pulled back.

Health

AIDS-like disease ravaging Sudan

United Nations and relief sources reported on Jan. 22 that 60,000 have died in Sudan due to an AIDS-like disease that has wiped out whole villages. The disease is Kala-azar, or visceral leishmaniasis, which is spread by parasite-infected sandflies. The symptoms are similar to AIDS in that the immune system breaks down and the victim dies of other infections.

The affected Sudanese, located in the Par-

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ayang area, are unable to escape because they are hemmed in by a battle front between rebel and government forces, and the world's largest swamp. Because raiders often sell the people of the area into slavery, the villagers often sleep in the forest, where they are infected by the sandflies.

Victims of the Kala-azar disease can only be saved by a complex treatment involving at least 30 costly injections.

AIDS

Up to one-sixth of Zimbabweans infected

One-sixth of the population of Zimbabwe which has been tested, has the HIV virus that causes the disease AIDS, BBC reported on Jan. 18. This has been determined by the Zimbabwe Commercial Farmers Union, which carried out a national survey.

The union warns that the AIDS epidemic could have "disastrous consequences for the Zimbabwe economy." The areas of transport, finance, and marketing could suffer from "serious labor shortages over the next decade" as a result of the out-of-control epidemic.

Demographics

Deaths in Russia exceeded births in 1992

For the first time since World War II, deaths exceeded births in Russia in 1992, Russian Deputy Health Minister Nikolai Vaganov said on Jan. 21, Reuters reported.

"We have lost [the equivalent of] quite a big town," Vaganov said of the 190,000 Russians who died in 1992. "Maternity hospitals are half empty." Only 11 babies were born per 1,000 members of the 150 million population last year, down from 12 in 1991. The death rate increased slightly to 12 per 1,000.

"Few families dare to have a child," Vaganov said. "They are unsure of their future as

prices soar and unemployment grows." Russian inflation, estimated at more than 2,000% in 1992, has reduced many families to poverty, with the average monthly salary of about 13,000 rubles (\$26) barely enough to cover essential food costs.

Vaganov said Russia's population might be falling even faster than official figures suggested, because many babies who died at birth were excluded from statistics. Vaganov said that beginning this year, Russia would adopt statistical standards approved by the World Health Organization, and predicted that this could raise the number of registered infant deaths by at least 20%.

Germany

Kohl austerity will drop living standards

Chancellor Helmut Kohl's government in Bonn approved on Jan. 18 a proposal to reduce the budget deficit, including cuts in entitlement and subsidy programs in the range of 18 billion deutschmarks (\$11.2 billion), for fiscal year 1993, which is expected to be presented to the parliament for a vote before the end of January. The London *Times* billed the "solidarity pact" as the most drastic cut in German living standards in 50 years.

DM 9 billion in "savings" involves across-the-board cuts in unemployment compensation, sick pay, child support, and other essential social welfare programs.

Another DM 9 billion is to be cut from state support to the coalmining and farm sectors, ship-building, the textile and steel-producing industries, and the aerospace sector.

A substantial increase of the gasoline tax and a new tax for the use of roads and highways are additional parts of the package. The government also announced its intent to impose another "solidarity surcharge" of 10% on the income tax, to pay for projects in the eastern states of Germany. This tax, which is proposed to go into effect in 1995, may be collected earlier. The first such "solidarity" tax, of 7.5%, was collected between the summer of 1991 and 1992, but instead was used to pay for the Persian Gulf war against Iraq.

● **JAPAN** will host a conference April 23-24 to discuss Asian nations' worries about trade war because of the North American Free Trade Agreement and the Maastricht Treaty, a Foreign Ministry source said on Jan. 18. Delegates from 15 Pacific countries are expected to attend.

● **CHINA** has leased the Russian port of Sarubino, near Vladivostok, the pro-Beijing Hong Kong paper *Wen Wei Bao* reported. China wants to build berths for 3 million tons of shipping. The port will give China access to the Sea of Japan and be used for shipping goods to Japan and North America. The governor of the Chinese province of Jilin, Guao Yan, said that the two countries are ready to begin construction of a railroad from the city of Hun-chun in Jilin to Sarubino.

● **SLOVENIA AND CROATIA** were granted membership in the International Monetary Fund on Jan. 20. They must pay their share of the former Yugoslavia foreign debt and accept IMF conditionalities in exchange for loans. Even if the Serbian war were halted, they will not be able to support the half million refugees, nor start a reconstruction program.

● **THE INTER-ACTION** Council of Helmut Schmidt is meeting in Cape Town, South Africa, and is forming "a strategy to pull the [African] continent out of its economic plight," the Jan. 22 London *Times* reported. One agenda item is a call for the cancellation of Africa's debt.

● **THE HEALTH MINISTRY** in Japan plans to investigate the effects of computer games on health. Hospitals there report at least a dozen cases in which children have had epileptic fits while playing computer video games, the daily *Tokyo Shimbun* reported on Jan. 17.

● **IBM CORPORATION** announced a fourth-quarter loss of \$5.5 billion on Jan. 19. It was the largest ever loss for any American corporation in any fiscal quarter, according to media reports.