news in brief

● **Death halts Greenpeace action over nuclear waste:** The first ship to carry nuclear waste from Japan to the reprocessing plant at Cap de la Hague near Cherbourg in France, has had to alter course for Barrow-in-Furness in England after one of its senior technical experts, Mr Robin Dale Hartley, died. Preliminary reports suggests that he died of a heart attack while in his bunk. Mr Hartley was an electrical engineer responsible for maintaining the cooling systems of the 26 containers of fuel rods of uranium oxide aboard the Pacific Fisher. British Nuclear Fuels Ltd, which had chartered the vessel, said that it expected that an inquest into the death might be necessary.

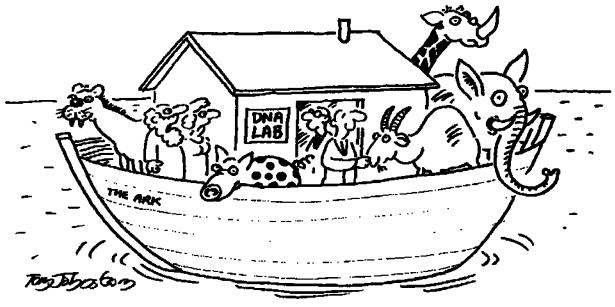
The consignment of nuclear waste is to be reprocessed at Windscale in Cumbria and at Cap de la Hague, under the terms of a contract between Britain, France and Japan by which each of the two European countries is to reprocess 1,600 tons of Japanese uranium oxide over a nine-year period from 1982. Although Britain has been taking nuclear waste from Japan since 1969, this is the first consignment to go to France.

The Greenpeace conservation group had planned to harass the Pacific Fisher as it entered Cherbourg, as part of a demonstration against shipping nuclear waste to France which involved 18 different French anti-nuclear and other political organisations. They were going to use their converted trawler the Rainbow Warrior which successfully frustrated the seal cull in the Orkneys last October.

Mr David McTaggart, European director of Greenpeace, said they were planning to run inflatable dinghies in front of the Pacific Fisher. Even though the ship is not going straight to Cherbourg, Mr Peter Wilkinson, Greenpeace director in charge of the anti-nuclear campaign, said they were still going ahead with a demonstration with the French organisations, but they were not going to demonstrate at Barrow-in-Furness, in deference to the dead man's family.

● **Museum can show Darwinian evolution:** The Smithsonian Institution's National Museum of Natural History is not required to depict the Biblical version of the creation of the universe as part of a scientific exhibition on evolution, a court in Washington ruled last week. Two religious groups claimed that a $1½ million exhibition, which opens next May, violated the Government's role of religious neutrality by presenting Darwinian evolution as "the only credible theory of the origin of life". They asked the court either to ban the exhibition, or to require the museum to spend a comparable amount of money illustrating the Biblical account of the origins of man.

In rejecting both claims, US District Court Judge Barrington D. Parker said that the primary effect of the evolution exhibits was not to advance a religious theory, or to inhibit plaintiffs in their religious beliefs. "Even accepting their argument that evolution is hostile to their beliefs as to creation, this impact is at most incidental to the primary effect of presenting a body of scientific knowledge."



"Maybe it wasn't such a good idea to take along the two scientists!"

● **Thumbs up for re-usable satellite:** A favourable report on Britain's involvement in the MRS re-usable satellite project is now being prepared by a Science Research Council team and is to be presented to the council's astronomy, space and radio board in the new year. The Multi-discipline Refurbishable Satellite project, which could allow different instrument packages to be replaced while a spacecraft is in orbit, makes use of the Multi-Mission Satellite (MMS) being studied by the Americans. If it is given the go-ahead by NASA, this would lead to the setting-up of a joint UK-US feasibility study that could see the development of the revolutionary new satellite at a cost of several tens of millions of pounds.

Recently a team at the SRC's Appleton Laboratory, in collaboration with British Aerospace engineers at Stevenage, has been considering the most testing shapes and types of various scientific instrument packages that would have to be fitted to the craft. And it is now known that no serious drawbacks have been found to the various tricky configurations considered and a favourable report is to be presented to an informal meeting of the ASR board on 10 January. A more detailed report is likely to be presented to a future formal meeting of the board.

● **First evidence of gravity waves:** A team of astronomers at the University of Massachusetts at Amherst claims to have discovered evidence of gravity waves, whose existence was first predicted in Einstein's general theory of relativity 60 years ago, but has yet to be demonstrated. Using the 1,000-foot diameter radio telecope at Arecibo, Puerto Rico, Dr Joseph Taylor, Professor of Astronomy at Massachusetts, Dr Peter McCulloch, on temporary leave from the University of Tasmania, and Lee Fowler, a graduate student, monitored the radio emissions from a pulsar, discovered in 1974, which is orbiting another massive object. According to the general theory of relativity, the orbiting pulsar should radiate gravitational energy which would cause the two bodies to move closer together and thus increase the speed of rotation, which is currently a cycle every eight hours. Relativity predicts that the period of rotation should decrease by one-tenth of a millisecond each year. The astronomers found that the pulsar has slowed down by four-tenths of a millisecond, ± one tenth, in the four years since its discovery.

The results were presented at the symposium on relativistic astrophysics at the Max Planck Gesellschaft Astrophysik in Munich this week. The research workers say that they have been able to rule out other factors, such as tidal movements on the two bodies, which might have caused the changes. Calculations of the periodicity of the pulsar, which circulates its companion at 0.1% the velocity of light, have been complicated by the fact that its orbit processes at a rate of 4 degrees a year.

One physicist pointed out last week that a rotating pulsar was an almost perfect system by which Einstein's theory could be tested, since his theoretical framework was based on the concept of observers with clocks—in this case the rotating neutron star—falling freely through space.

● **Correction:** In the article "Czech Chartists claim two died in nuclear accident" (*Nature*, 276, 7 December, 1978, p.551), the fifth paragraph should commence, "A year and six weeks later, however, disaster struck again (according to the Chartists)".