tist has come out with a statement that environmental arguments are nonsense, but it appears to have been the considered opinion of practically all those who studied the problem in a detached manner that the risks were very slight.

What environmentalists would desperately have liked would have been a concerted declaration from scientists warning of dangers. No such statement was forthcoming. It is indeed conceivable that the environmental movement has been harmed by the Cannikin affair. Its members may have learned the hard way that scientists with some sympathy for the movement can be alienated by a stance that scientists could not maintain. They may have lost some credibility with those middle Americans who are unimpressed when the Doomsday does not show up to order. The first callers to radio talk shows immediately after the blast were saying, "Well, what was all the fuss about then?" They may also have learnt that when dealing with politicians they are talking to pragmatic people for whom a 10 per cent, let alone 1 per cent, chance of catastrophe is acceptable. The environmentalists have to walk on a tightrope above scientists, lawyers, politicians and the general public. The Cannikin affair may have helped them to learn new tactics.

Of course, what Cannikin was really about was national security. If a good number of Senators had banded together early enough to express disbelief that this one explosion was more vital to national security than good relations with Canada and Japan, the soft centre of the Administration's argument would have been revealed. Fresh from previous insults from the new Nixon, these two countries in particular were bitter about the test and are going to be more difficult to deal with in the future as a result of it, earthquake or no. Whether the milliseconds worth of X-rays is more valuable than good relations with two allies is much the most debatable issue in the whole affair.

MARINER 9

Into Orbit around Mars

THE arrival of Mariner 9 in the vicinity of Mars today will open up a new chapter in the exploration of the solar system. If the craft successfully enters orbit around the planet, its sensors should be able to resolve some of the questions concerning the environment of Mars which have been puzzling astronomers for centuries. A spokesman for NASA predicts that there will be "a veritable information explosion about the Mars terrain, climate and atmosphere", and about its two moons Phobos and Deimos. The exchange of information obtained by Mariner 9 and by the two Russian probes also now in the vicinity of Mars will undoubtedly add to this explosion—it may be that one or both of the Russian probes is planned to attempt a landing on the surface of the planet.

Some indication of the importance of these missions is provided by the way in which the earlier Mars flyby missions changed man's ideas about the planet. It is now clear that the planet is cratered in a way similar to the Moon but that the craters are weathered and that there are also regions of apparently recent activity. Apart from straightforward photography which should produce 5,000 pictures—the 1969 mission produced 205 pictures and the 1965 mission only 22—the spacecraft carries an infrared radiometer, an infrared spectrometer and an ultraviolet spectrometer, each mounted to point at the object being photographed. In this way, the temperature, terrain and atmospheric conditions in each area pictured will be recorded.

The most interesting phenomena yet discovered on Mars are the clouds, hazes, bright spots and dust storms. A specific objective is the study of the wave of darkening observed seasonally. The spacecraft is arriving when this darkening is at its seasonal peak in the southern hemisphere. In some quarters this has been attributed to a spread of moisture from the poles with the onset of spring. A more widely held belief is that the wave corresponds to the removal of light coloured dust. Hopefully this conflict together with many others will be resolved in the near future.

One question that is not expected to be answered yet concerns the possibility of life on Mars. At present there seems little chance that any complex life forms can exist on the planet, and Mariner 9 would be unable to detect primitive life forms even at closest approach (800 miles). Recently, however, prebiotic molecules have been synthesized in the laboratory under conditions like those on Mars and it is possible that Mariner 9 could provide evidence that biological molecules are present in the Martian atmosphere.

Short Notes

Uranium Enrichment

REPRESENTATIVES of the Australian, Japanese and Canadian nuclear industries met in Washington last week with officials of the AEC and the Department of State to discuss the possibility of using US gaseous diffusion technology in multinational uranium enrichment plants. This was the first tangible sign of cooperation since the AEC announced in July that it was prepared to discuss the possibility (see *Nature*, **232**, 366; 1971). Representatives of several European countries will go to Washington for similar meetings on November 16.

It is believed that the talks centre on the possibility that two enrichment plants will be built and operated on a multinational basis—one by Japan, Canada and Australia, and the other by European interests. The chief points under discussion are safeguards to prevent nuclear material being diverted to weapons production, and the US government also wants an assurance that its enrichment technology secrets will not be able to leak out to other countries.

DDT

THE Environmental Protection Agency has decided not to suspend all uses of DDT while cancellation proceedings are going on. This allows the pesticide to be manufactured and sold throughout the United States while the EPA decides whether or not to prohibit its sale across state lines. Announcing this decision last week, Mr William D. Ruckelshaus, Administrator of the EPA, pointed out that the cancellation proceedings must be completed by March 1972, but will probably be concluded long before then. He suggested that no appreciable difference would result from any ban that could be imposed before that date.

Unemployed Chemists

EVEN those chemists who were lucky enough to find jobs waiting for them when they left the universities this summer have good reason to wish that they had graduated in a sunnier economic climate. According to a survey carried out by the American Chemical Society, their average starting salary was some 7 per cent lower than starting salaries a year ago—and, taking into account the fact that the cost of living increased by more than 4 per cent during the year, this means that starting salaries dropped by about 11 per cent compared with 1970.

But, while new graduates in employment may have to take in their belts by half a notch, many of their colleagues are much less fortunate. The ACS survey found that unemployment among newly-qualified chemists doubled from 5.1 per cent in 1970 to 10.3 per cent in 1971. First degree graduates suffered an unemployment rate of 11.6 per cent, while those with master's degrees reported a rate of 8.8 per cent and PhDs 6.1 per cent. Moreover, those who left the universities with a degree in chemical engineering found the job market even less hospitable—an alarming 12.8 per cent reported that they had not found a job by the end of the summer.