

Soviet Union

Freedom at last for Orlov

Dr Yuri Orlov, physicist, human rights activist and ex-Soviet citizen, arrived in the United States last Sunday after serving nine years of a 12-year sentence (seven years prison plus five years exile) on charges of slandering the state. Since his arrest in 1977, Dr Orlov had been the centre of campaigns by fellow physicists ranging from a "formal counter-trial" staged at the Institute of Physics in London to "Free Orlov" T-shirts produced by sympathizers at the CERN laboratory near Geneva and worn conspicuously whenever Soviet visitors were expected.

Orlov, who was born in 1923, served in the Red Army during the Second World War and afterwards entered Moscow University, graduating in physics in 1951. He then began graduate research at the Institute of Theoretical and Experimental Physics of the Soviet Academy of Science. In 1955, however, after Khrushchev's "secret speech" to the Twentieth Party Congress denouncing Stalinism, Orlov thought that the way was open for democratization of the party (he had become a member while at university). But his enthusiasm for democracy was misplaced — he lost his job and was expelled from the party. Eventually, he was employed in Armenia, where he took his Candidate's degree (PhD), working on particle accelerators.

In 1972, he returned to Moscow, where, in touch with Dr Andrei Sakharov, his enthusiasm for human rights and democracy gained new force. Within six months he was again dismissed, and, although not a Jew, as a result became friendly with the Moscow "refusniks" expelled from their professional posts after filing applications to emigrate to Israel. For a time he took an active part in the "Sunday seminars" founded by Alexander Voronel to help the refusnik scientists keep up some kind of intellectual life.

Following the signing of the Helsinki Final Act on 1 August 1985, Orlov and a group of friends established the Moscow "Helsinki Monitoring Group" to observe and report on Soviet fulfilment of the pledges on individual freedom and East-West contacts. This initiative, which by Soviet norms was outside the law, was soon copied by a Ukrainian group in Kiev, and later in Poland.

Orlov's group produced 18 reports on Soviet breaches of the Accords, but its members were one by one picked up by the police and put on trial. Orlov was arrested in February 1977 and tried in May 1978 under Article 190/A of the Russian penal code ("anti-Soviet agitation").

Throughout his imprisonment and exile, Orlov's name was kept in the public eye by supporters and sympathizers, not

all of whom acted with due forethought. In the United States, his former colleague in the human rights movement, Valentin Turchin, called for a boycott of the 1980 Olympics unless Orlov was released, although the connection between Orlov and athletics was not immediately apparent, and even some scientists who decided, on Orlov's behalf, to cut their professional contacts with the Soviet Union felt that it was not fair to force athletes to sacrifice a once-in-a-lifetime chance.

At about the same time, well-meaning Russian emigrés who heard that Orlov was keeping up his theoretical work in prison and had managed to send some of his notes abroad (a facsimile of some of his calculations appeared in *Nature*) claimed that this was, in fact, not mathematics but code, with the not surprising consequence that Orlov was thereafter forbidden to do any science.

And when his seven-year prison sentence expired, there were ingenuous suggestions that he should be allowed to serve

his five years exile not in Siberia but abroad, at CERN, a proposal that must surely have amused the Soviet authorities, as such assignments are among the most sought-after rewards in Soviet science.

In the end, of course, Orlov's release came in the most face-saving manner open to the Soviet authorities — as part of an exchange of undesirables, intended to clear the air for the Reagan/Gorbachev not-quite-summit in Reykjavik. His future, for the moment, remains unclear. Doubtless, like his colleague from the Helsinki Committee, Anatolii (now Nathan) Shecharanskii, he will be expected to make a triumphal tour of the committees, in Switzerland, Canada, the United Kingdom and the United States, that have worked so vigorously on his behalf. But, in spite of his poor health and the undoubted hardships of the past nine years, Yuri Orlov is, by the standards of Soviet science, by no means at the end of his creative life. Several universities and learned institutions have already indicated that they would welcome him, if necessary in a visiting or part-time capacity, should he wish to resume his scientific career.

Vera Rich

US embargo

British supercomputer deadlock

OFFICIALS at the British Department of Trade and Industry will make fresh attempts this week to arrange a meeting with their counterparts from the US Department of Commerce to secure an export licence for a supercomputer destined to be the mainstay of advanced academic computer research in the United Kingdom. The difficulty is that the United States, fearing that advanced technology might fall into the hands of alien nations, principally the Soviet Union, is seeking to impose strict constraints on access.

British authorities consider the US approach to be heavy-handed, as the United Kingdom is a member of COCOM, the Coordinating Committee for Multilateral Export Controls, composed of the North Atlantic Treaty Organisation countries, except Iceland and Spain, in partnership with Japan. The committee controls the export of strategically sensitive high-technology products and knowledge to the Warsaw Pact countries and China through the issue of export licences. No more controls are needed, say the British.

The research supercomputer, a Cray X-MP system which, with ancillary electronics, will cost about £48 million over the next five years, is being purchased on the recommendation of a study commissioned by the Advisory Board for the Research Councils, the University Grants Committee and the Computer Board for Universities and Research Councils. The study, headed by Professor A. Forty of the Uni-

versity of Warwick, was published in June last year and recommended the joint purchase and use of a supercomputer for British university research.

But the project has reopened many old wounds and raised, once more, the spectre of US "extraterritoriality". The US Department of Commerce has proved inflexible, the British believe, in its unnecessarily tight controls on high-technology exports and in its insistence that resale of high-technology equipment needs supplementary licences.

The British have never agreed. Trade officials in the past three years have been locked in battle over the issue with the United States. The situation appears to be getting worse. The US authorities are determined that the controls will not be relaxed but intensified.

Since the spring, the United States has intensified its efforts in offshore control, especially by its requirement that some British companies should be "inspected" by officials from the US Department of Commerce to confirm their "legitimate" use of licensed US technology. Last spring, trade minister Alan Clark acknowledged that the issue had become a dispute between the two governments, and said that the British government was still then considering whether to agree to the proposed inspections. That issue still remains outstanding and may well be a bargaining counter at the supercomputer negotiations.

Bill Johnstone