be continued by a descent module to be launched during the Venus fly-by by one of the two Venera probes, V-15 and V-16, used for the mission.) The Ukrainian interest in Venus is not confined only to the surface however — a Khar'kov team, using computer analysis or photographs taken through a red filter, has calculated the speed of rotation of the upper atmosphere of the planet to be of the order of 100 m s^{-1}.

Indeed, astronomical and astrophysical research in Ukraine ranges from Borys Ryabov's team in Khar'kov, which is studying thunderstorms on Jupiter using a 10-cm band radio telescope, to the new high-power radio telescope at the Crimean astrophysical observatory, and the relationship between solar activity and tree-ring growth (Kiev).

The Ukrainian Academy's Principal Astronomical Observatory moreover coordinates the work of Soviet observatories on the Earth's rotation and the determination of time, and was the founder of the "USSR Planetary Patrol" sky-watch programme. In the Vega programme its special responsibility will be the ground-based back-up observations of the mission.

All this, however, does not quite explain why Dr Yatskiv, whose name does not even occur in the 1977 Soviet "Biographical Directory of Astronomers" (published in Kiev) should head the international coordinating committee for Vega. One not too serious suggestion, made by a fellow Ukrainian, was that the selection was made on linguistic grounds. There is no "H" sound in Russian, and hence the comet's discoverer becomes in Russian "Gallei". (Hence Ve-Ga for the joint Venus–Halley mission). Ukrainian, however, has an H (though no true G), so that Dr Yatskiv will be able to fulfil the prime requirement of an international coordinator — calling the object of investigation by its internationally recognized name.

Vera Rich

Czechoslovakia

Too many tasks, no responsibilities

CZECHOSLOVAK science is seriously hampered by government controls and the five-year planning system, according to a document of the Charter-77 movement that has now reached the West. This claim is not entirely surprising, for the Czech and Slovak media constantly harp on the shortfalls in what the planners see as the main "task" of science — serving the needs of the national economy.

Even so, in recent months, there have been signs of a growing disillusionment with all such official demands. Electronics, for example, is considered a key factor in current development plans, and as recently as the meeting of the Czechoslovak Scientific and Technical Society in February, the society's branch in the Prague Electrotechnical Faculty promised to train up to 3,600 specialists in electronics and microelectronics. Yet a few days ago Prague radio reported that factory managers are apathetic about sending employees to training and refresher courses in electronics.

The main interest of the Charter document (No. 26/1982) is the light it throws on the disillusion felt by the scientific community with the reiterated official line that science must be "present in every chapter of the plan" or, as party leader Gustav Husak told the Czechoslovak Academy of Sciences in February, "science is one of the crucial forces of social progress".

At the beginning of last year, the chartists began publishing a series of documents revealing inadequacies of the system that are glossed over or concealed by the government. This report, although signed by the three official spokespersons of the movement (Radim Palous, Anna Marvanova and Ladislas Lis) was clearly compiled by scientists who are struggling to function within the system.

Although some of their complaints (including shortage of funds, and in particular of convertible currency) seem to have an economic basis, the main difficulties have a clearly political background. Thus part-appointed administrators, ubiquitous at all levels of the scientific establishment, take key decisions on promotions, budgets and the permissibility or otherwise of foreign contracts. Publication of research results is strictly censored, and publication in foreign journals tacitly discouraged for fear of political repercussions.

The document also says that strict adherence to the five-year plan, and the needs of the economy, mean that radical new lines of research get little or no encouragement, initiative meets with no approval and informal working groups of scientists with common interests are virtually unknown. Weakest of all are professional contacts with foreign colleagues. All such contacts, even the most innocent and unsolicited routine correspondence (for example, to verify a reference in a published article), have to be reported to the authorities and fully accounted for on a special form. Such restrictions, the compilers point out, can only harm the ultimate development of Czechoslovak science.

Most serious of all, in the long run, is the virtually total neglect of basic research. In a covering letter, addressed to Prime Minister Strougal, the State Planning Commission, the Academy of Sciences and the Czech and Slovak Ministries of Education, the spokespersons add their own weight to this lack. Modern science, they point out, is largely "the practical consequence of theoretical thrusts of the human spirit (Descartes, Newton, Einstein *et al.*)". The present neglect of science for political motives is, they conclude, "tragic".

Vera Rich

UK pharmaceuticals

A matter of Life

LIFE, the national anti-abortion organization, has asked police in Birmingham to investigate a nearby abortion clinic which supplies the so-called "morning-after pill". Post-coital hormone treatment (PCHT)— usually a combined ethinyloestradiol/levonorgestrel formulation — is now widely prescribed in the National Health Service and in private clinics to prevent pregnancy up to 72 hours after unprotected intercourse. Life believes that PCHT is abortifacient and that anyone prescribing it is committing an offence under the 1861 Offences Against the Person Act. Interestingly, however, the organization has not made a complaint about the post-coital use of intra-uterine contraceptive devices (IUCDs), which is also widespread and is thought to work in a similar way in many cases.

Life's argument is that PCHT is not a contraceptive, because its mode of action is to prevent the newly fertilized ovum from implanting in the uterus. There has been no ruling in the courts on the legality of post-coital contraception, although guidelines published by the Department of Health and Social Security (DHSS) in 1979 do class the technique as contraceptive rather than abortifacient. DHSS takes the view that as "carriage" (that is, implantation) cannot occur in less than 72 hours following intercourse, there can be no possibility of procuring miscarriage before this time — which would indeed be illegal under the 1861 act if it was done recklessly or intentionally. However, the use of the word "carriage" in this sense is unknown to the editors of the Oxford English Dictionary, and Life argues (from its firmly declared position that legal rights begin at conception) that preventing implantation is tantamount to abortion — or as Life would probably put it, infanticide. There is no suggestion that the clinic in question has used PCHT after the 72-hour limit.

If it is established that PCHT is abortifacient, its use would have to be justified on medical grounds by two doctors in order to comply with the 1967 Abortion Act. However, even in this case a successful prosecution would appear unlikely, since the 1861 Act would require proof of *intention* to procure miscarriage. The defendants would probably be able to argue, after taking the best advice available, that no such intention was present.

IUCDs are also thought to act by preventing implantation, whether used pre- or post-coitally. Three years ago the Director of Public Prosecutions declined to prosecute Professor Peter Huntingford of St Mary's Hospital Medical School for inserting an IUCD as a pre-coital contraceptive, when he attempted to start a test case. But Life appears unwilling to take on the estimated 250,000 IUCD users in Britain.

Tim Beardsley

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