# Top Scottish astronomer resigns after staffing row

PROFESSOR Vincent Reddish (above), director of the Royal Observatory, Edinburgh (ROE), handed in his resignation last week to the UK Science Research Council (SRC) which runs the observatory. When he relinquishes the directorship next September, he will also leave two associated posts, Astronomer Royal for Scotland and Regius Professor of Astronomy at Edinburgh University.

Professor Reddish's decision to resign has come after a prolonged dispute with the SRC over filling some senior posts, in particular that of head of technology. Administrators within the SRC would like to see the post go to an engineer. Reddish would like it to be given to an astronomer with some technological experience, who could interchange with astronomers at the observatory's other telescopes in Hawaii and Australia. The resulting deadlock has led to some posts remaining unfilled for years, according to Professor Reddish, and the lack of some senior staff is now beginning to impair the work of the observatory.

The SRC is trying to persuade Reddish to postpone or reconsider his resignation. It would like to readvertise the head of technology post inviting both engineers and astronomers to apply. The ideal candidate, according to an SRC spokesman, would be someone who is primarily an astronomer with a great interest in or some experience of associated engineering. Reddish feels that the reforms needed to make him change his mind are primarily too great for the SRC to implement. "In principle," he says, "the problem is essentially who decides how to do the work here and the kinds of skill needed to do it." In the event of no successful settlement, he plans to retire from astronomy altogether and move into business. □

# Appleton and Rutherford to merge

AT a meeting on 18 October, the Council of the UK Science Research Council (SRC) took the decision to close down its Appleton Laboratory at Slough and move it to the Rutherford Laboratory, also run by the SRC, at Chilton in Oxfordshire. The reasons for the merger are scientific, says the SRC. "Bringing these teams together would be the best way of doing their scientific work", according to Dr Brian Oakley, SRC Secretary.

The Appleton Laboratory is responsible for managing most of the UK's scientific space programme, which includes satellites, balloons and rockets, for scientists working in universities. The Rutherford Laboratory has always been the home-based focus of the UK effort in high energy physics at CERN. With the closure of its particle accelerator, Nimrod, earlier this year, however, it has had to diversify. It now houses a central laser facility, computing facilities and is building a central spallation neutron source.

The SRC hopes that two activities in particular, space work and radiocommunications, will benefit from the amalgamation of skills. At present work on both of these is done mainly at the Appleton Laboratory, although Rutherford has provided some engineering support for space projects in the past. Most recently, it helped design the stratospheric and mesospheric sounder for NASA's Nimbus-G satellite, launched towards the end of October. And it is currently working on the design of a millimetre wave radiotelescope with Appleton.

However some of the scientific staff at Appleton are far from content with the move. "The SRC came to a hasty decision without considering in sufficient detail all the points we would have liked them to" said Dr Jo King, Chairman of the staff side at Appleton. He feels there is little advantage to be gained from the move. Usually, he says, satellites are built in several different places and put together in one place. This would still have to happen even when the two laboratories merge. In the case of radio propagation work, Dr King claims that there will be too much radiointerference at Rutherford to make such work effective. "We are making very sensitive radio receivers" he says "and being asked to put them in one of the noisiest places in the UK".

The move is expected to take five years to complete. Appleton will be receiving data from the UK Ariel 6 satellite, to be launched next year, and the UK/NASA/Dutch satellite, IRAS, which will be launched in 1981. Final transfer to Rutherford therefore cannot be completed until those satellites cease to be operational. The bulk of the move will take place between 1980-83.

The engineering support at Appleton is weaker than that at Rutherford, according to Dr Geoffrey Manning, Rutherford's deputy-director, because it is the smaller of the two. When they are amalgamated, he says, it should be possible to provide laboratory support for all of the UK's space programme at one site. According to another SRC official, this should maximise the chances of the UK participating with the United States in the multi-mission refurbishable satellite (mrs)—a satellite proposal which has gained much support from the astrophysicists but little enthusiasm from geophysicists.

**Judy Redfearn**

# Greater powers for Dutch science minister

THE Dutch minister for science policy, Dr Marius Peijnenburg, has recently extended his role beyond that of coordinator. Together with one or two other ministers he now steers scientific research in government institutes and industrial laboratories. So far this has been the government's task.

With the minister for education and science, Peijnenburg will now be involved in decision-making at an early stage in university research as well as that carried out in the institutes of the Royal Netherlands Academy of Sciences. He will also be involved in formulating policy for the energy research centre, the aviation and space laboratory and the institute for aircraft development, which until now came solely under other ministers. Peijnenburg will also control TNO, the national organisation for applied research in the natural sciences. It has a staff of about 5,000 and an annual budget of £55m.

The 1979 research budget totals around £1.5 billion, 2.05% of the gross national product. More than £0.7 billion comes from government and £0.8 billion comes from industry (mainly from Philips, Shell, Unilever, Dutch state mines and AKZO). In 1978 and 1977 the research budget was £1.4 billion and £1.2 billion respectively. For the first time, the minister for science policy is to have his own small budget for stimulating new projects in areas such as systems analysis and technology assessment. It should increase to £3m a year by 1981.

In 1979 the time spent on non-nuclear research as a percentage of

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that spent on all energy research will increase from 36% in 1977 to 45% in 1981. Of the £57m spent on energy R&D in 1978, £30m is being spent on nuclear energy. Holland contributes £14m to the EEC energy research programme of which about £10m is spent on nuclear research.

Before the budget was published at the start of the new parliamentary year, the ministry for science policy announced that the Science Information Bureau will become permanent and be expanded slightly. It has been operating on a trial period for two years at the Academy of Sciences. And at a meeting of the special parliamentary committee for science policy at the end of October, the minister announced the setting up of a group of experts to study the effect of microelectronics, especially microprocessors, on society. The group should report within three months. **Casper Schuuring**

# Poland tries the taste of space

During 1978, three cosmonauts from Eastern Europe visited the Soviet Salyut-6 orbiting space station. **Vera Rich** talks to the Polish cosmonaut, Miroslaw Hermaszewski in Warsaw

MIROSLAW Hermaszewski, like his two brothers, is a pilot by profession, not a scientist. However as a cosmonaut he was obliged to fulfil a dual role—crew member and scientific worker. In the latter capacity Hermaszewski was responsible especially for space medicine, which he describes as "a Polish speciality".

The medical programme concentrated on two experiments: "kardiolider" and "smak". The first monitored the cardiovascular system "to determine the potentialities of the heart in space and also during pre-flight training". This, Hermaszewski told me, meant that "from the psychological point of view we felt very safe, knowing our hearts were being constantly monitored, especially when we were not in contact with Earth". (Constant contact, he explained, is not maintained as a rule, although Soviet ships around the world are on constant emergency watch.)

The second medical experiment "smak" (Polish for "taste") was designed by the Academy of Military Aviation Medicine to monitor sensory changes under conditions of weightlessness. A few days before take-off, the cosmonauts sampled various menus and chose those they wished to take into orbit. "We chose the meals we preferred" said Hermaszewski "but after a few days in space we didn't like them. This means that our sense of taste had changed."

Challenged that the falling off of appreciation could be due to deterioration of the rations and/or boredom, Hermaszewski explained that the meals were specially prepared to preserve quality and taste, and also that there was "a menu-cycle of six days". "And even then, it wasn't exactly the same meal", he added. "I mean, if on one day we had, say, *barszcz* and turkey at one meal, then six days later we'd have *barszcz* and turkey again, but not at the same meal." The scientific team who worked out the experiments had, he said, developed a numerical method of estimating taste, which allowed the activity of the taste-buds to be monitored quantitatively.

Both "smak" and "kardiolider", added Hermaszewski, were important for medicine in general. Versions of kardiolider were now being produced for use in post-coronary rehabilitation programmes, while "smak" could provide valuable data about sensory processes.

With the third main Polish experiment, 'Syrena', Hermaszewski clearly felt his responsibilities considerably. Although he worked in the experiment with the Soviet cosmonaut, Ivanchenkov—one of the long-stay Soviet crew—he was aware that the experiment had been developed by Polish scientists. "It was absolutely Polish from the beginning, and was called 'Syrena' after the symbol of Warsaw". He admitted that during the running of the experiment which took 5 to 6 hours each time, he kept getting up at night to check the equipment (apparently quite unnecessarily).

'Syrena' was in fact an experimental capsule, used in conjunction with the Soviet 'splav' furnace, to produce highly homogeneous tellurium cadmium and telkurium/mercury alloys. Such alloys, of substances with very different molecular weights, are of considerable interest in semiconductor technology, and, in fact, both the Czech and East German cosmonauts carried out analogous experiments. It appears from Hermaszewski's description, however, that although the Soviets provide the furnace, the various Comecon nationalities are responsible for the contents of the individual capsules and for working out the results—as well as for the symbolic code-name under which the experiment is performed.

This led, naturally, to the whole question of Comecon participation in manned space-flight. Hermaszewski stressed that, although he only knew the Czech and East German cosmonauts well—the other future crew-members arrived only towards the end of his own training—he felt confident that all the countries concerned (even Mongolia and Cuba) would have their own "concepts" to contribute to the programme. "But obviously that's their secret for the moment." He

*Two faces of Cosmonaut Hermaszewski; left—meeting the press; right, set for space.*

stressed, moreover, that there are a number of joint experiments in the programme, for example, some of the photographic surveys, and such things as the joint Polish-Soviet experiment on heat level.

As for Poland's future plans in space, he was noncommittal. It was beyond his competence, he said, to comment on the future of the *Interkosmos* manned programme, when the present series of joint flights is complete, or on the possibility of wider international cooperation in space, perhaps on a UN basis. He stressed, however, that "We are only at the beginning of the Polish space programme."

Fields of special interest for the future included: "cosmic technology ('Syrena' was an example of this); space physics; and experiments with some immediate effect on our economy — telecommunications, medicine, biology and so on".

As for his own future, Hermaszewski said that he is now doing a great deal of work with young people, including a special TV programme. "I have had a great many letters from the young people of our country, and they are all very proud that Poland has begun the peaceful exploration of space!" □

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