Italian research

Renewed discontent of staff

THE underpaid researchers at the Italian national research council (CNR), the largest state research organization in Italy, are getting impatient. Five months after the hopeful appointment as president of the Milan physiologist, Professor Luigi Rossi Bernardi, they are still awaiting action.

So at least says the Comitato Riceratori, the researchers' committee which now claims 700 of the 2,500 CNR scientists as members. The Comitato appears to be pushing Rossi Bernardi faster than he wishes, or is able, to go. A Comitato spokesman complained last month of Rossi Bernardi's "refusal to make contact with us", and outlined old sores between the CNR staff and the universities, among which pay predominates. Even a top CNR researcher receives the equivalent of only a little over £9,000 a year, net of tax, compared with a top professor's £20,000. The most junior jobs in CNR and among university lecturers are paid about £6,500 and £9,000 respectively.

In Rome last week, Rossi Bernardi said he had now met the Comitato and "we agree on many points". Moreover, he said, "everything they say is obvious—what remains to be done is to do it". But some things are plainly easier to achieve than others.

According to the Comitato, one of the main CNR complaints apart from pay is the relative status of university and CNR staff. This will not be easy to change. The CNR advisory committees which plan the research programmes are dominated by 130 university professors against just 10 CNR researchers. Officially, CNR scientists are described as "collaborators", suggesting a role subservient to the universities. The Comitato also complains that the management of the 270 CNR research institutes and centres falls to university professors so that CNR scientists must "obey decisions without their being consulted". Yet according to statistics prepared by Rossi Bernardi himself, and published in the 1984 CNR report, CNR scientists published six times as many papers per head in 1983 as the average Italian scientist, who published only once in four years.

Thus Comitato members are pressing for at least a career structure comparable with that of the universities. The powerful trades unions, on the other hand, insist on a research "contract" structure for CNR under which researchers would be paid for work done.

The real problem, according to Rossi Bernardi, is to produce a new legal structure for CNR, in which promotion on merit is now virtually impossible. Salaries, taking a quarter of CNR's present

£500 million annual budget, could hardly be increased without such a structure. So will a new law be possible? Rossi Bernardi says he is doing what he can, but that it is "a political problem".

Meanwhile, some reforms are under way. Thus Rossi Bernardi has proposed that CNR researchers should supplement their incomes by contracts and consultancies with industry. Then, acknowledging that CNR "cannot do everything", he says it should concentrate

Planetary missions

Soviet frankness cheers US

Washington

WHAT appears to be the first detailed account of the Soviet planetary exploration programme, including plans for an ambitious mission to Mars and its moons in 1988, has been provided by a delegation of Soviet space scientists in the United States last month. The delegation, led by Dr Valery Barsukov of the Vernadsky Institute, described a plan for soft-landing a small probe on the surface of Phobos, the larger of the two martian moons, and then making it "hop" to other points on the surface by the remote firing of small rockets.

Under the plan, two spacecraft will be launched in 1988, carrying solar-physics packages to study particles and fields in the ecliptic. After entering Mars orbit, one of the craft will assume a circular orbit matching that of Phobos, and manoeuvre to within 50 metres or so of its surface. In collaboration with French scientists, the Soviets are developing a 1-Joule laser that will vapourize and ionize surface material from Phobos, which will then be drawn through an on-board mass spectrometer for analysis.

The second craft will primarily be a back-up that may rendezvous with Demos, Mars's second moon, if the first attempt to land on Phobos is successful.

The delegation also described plans for a lunar polar orbiter to be launched in 1989 or 1990 so as to produce a detailed map of the Moon's geochemistry as well as for the possible mission to Venus in 1991 that would include dropping a lander on to an asteroid, possibly Vesta, on the way.

US scientists who heard the delegation's presentation, given at the Lunar and Planetary Science Conference at Johnson Space Center in Houston, say they were both surprised by the Soviets' frankness and impressed by the ambition of their plans.

Although Soviet scientists had previously outlined their planetary programme (most recently at a meeting arranged by the Planetary Society during

on areas of "strategic" importance.

Rossi Bernardi is also planning to concentrate CNR funds next year on CNR institutes whose performance after assessment is found creditable. He will pay out half the 1986 CNR research funds "on merit" he says, which will be a big change for CNR but one of which the Comitato Riceratori should approve. Indeed, the Comitato says it will agree provided that merit is assessed "by the scientific community rather than by bureaucrats and union representatives". Comitato members "are ready to submit themselves to international competition" said a spokesman. **Robert Walgate**

last year's conference of COSPAR, the Committee on Space Research of the International Council of Scientific Unions, in Graz, Austria), last month's presentation filled in many gaps. It was welcomed as what seemed part of a move away from the secrecy and deliberate vagueness of previous Soviet announcements of future space missions.

Official contacts between the National Aeronautics and Space Administration (NASA) and Soviet space officials were ended in 1982, when the Reagan administration declined to renew a ten-year-old space cooperation agreement, citing the imposition of martial law in Poland. But in recent weeks, different administration officials have revived talk of cooperative space ventures, including a joint rescue training mission involving the US shuttle and the Soviet Salyut spacecraft and coordination of Mars exploration.

Last autumn, President Reagan signed a non-binding Senate resolution sponsored by Senator Spark Matsunaga (Democrat, Hawaii) calling for renewal of the cooperation agreement. Matsunaga has now filed another bill that would set up an "East-West" working group on Mars exploration.

During this hiatus, informal contacts between Soviet and US scientists have continued, typified by the arrangement by which US scientists built an instrument with NASA funds which is being carried on the Soviet Vega mission to Halley's comet (see *Nature* 312, 3; 1985). There have been other informal approaches to US scientists qualified to supply instruments for the Soviet Venus-asteroid and other missions.

A more likely form of low-level cooperation, according to US specialists, is, however, data-sharing and joint calibration of instruments on the Soviet Mars probe and the US Mars Geoscience Climatology Orbiter, due for launch in 1990. The Planetary Society is hoping that concrete plans to these ends will be agreed at the 1986 COSPAR meeting in Toulouse. **Stephen Budiansky**