

# New Reagan budget a mixed blessing

## Social science and planetary missions cut

Washington

President Ronald Reagan's first budget proposals are likely to contain a mixed message for science when they are formally unveiled next Wednesday. The emphasis is likely to remain on long-range research of potential value to the economy, and basic research of less direct relevance — such as planetary exploration and the social sciences — seems likely to suffer hefty cuts.

These are the main themes of preliminary proposals being circulated by Mr David Stockman, director of the Office of Management and Budget, as part of an effort to boost the US economy by large-scale reductions in social spending.

As expected, most of these cuts will fall on social welfare programmes, for example reducing health benefits and support for education. This theme will be reflected in the budget of the National Science Foundation (NSF) where major cutbacks are being proposed not only in research funding in the social and economic sciences but also in science education and support for women and other minority scientists.

Whereas President Carter, for example, shortly before leaving office had proposed a 1982 budget for NSF that would have allocated \$84 million for research financed through the Behavioral, Social and Economic Sciences Directorate — an increase of about 15 per cent over the 1981 figures — Mr Stockman has proposed that funding for social and economic sciences be reduced from \$33.6 to \$10 million, and for behavioural and neural sciences from \$39.6 to \$30 million. Similarly he is proposing to eliminate the Women in Science programme, introduced last year.

In contrast to these cuts, it is intended that former President Carter's proposals for increased spending in the so-called hard sciences, such as physics and chemistry, should remain intact. These increases had been justified as part of the Carter Administration's attempts to accelerate the pace of technological innovation. And since this is likely to be a top priority for the Reagan Administration, it could therefore become the chief function for NSF, which has in recent years seen different types of goals added to its original mandate.

So although Mr Stockman is asking for an overall cut of \$240 million in NSF's budget from that suggested by Mr Carter, the proposed increases for the hard sciences would remain untouched, leaving the agency with a slight growth over the year.

It is likely to be different at the

National Aeronautics and Space Administration (NASA), where budget office is proposing virtually to eliminate the planetary science programme in its efforts to cut the agency's budget while keeping the space shuttle — now scheduled for an April launch — on target.

In particular, Mr Stockman is proposing to eliminate the Galileo mission to Jupiter — already running into rescheduling problems because of the difficulties in the development of the inertial upper stage needed for launching from the space shuttle, and the resulting decision to use a Centaur launcher.

Budget cuts of this order would result in a long period in which the United States was not engaged in planetary exploration. They are likely therefore to be bitterly contested by the scientific community and its supporters in Congress.

The proposed cuts in NSF's programmes are also expected to meet fierce opposition. When President Richard Nixon tried to inflict similar cuts, his efforts were successfully resisted by Congress, although the then Democratic Senate was a much

greater hurdle than its present Republican counterpart.

No nominations have yet been made by the Reagan Administration for top science posts, although the President's team would probably like to have some individuals in position before the budget cuts begin.

Favourite to become director of the Office of Science and Technology Policy — which Mr Reagan is said to have been persuaded to retain — is Dr Simon Ramo, co-founder of TRW Inc. and head of Mr Reagan's Science and Technology Task Force set up immediately after last November's election. If Dr Ramo rejects the offer said to have been made to him, the choice could be Dr Arthur Bueche, vice-president for research of General Electric.

At NASA, the present favourite for administrator is Dr Hans Mark, former head of NASA's Ames Research Center and Secretary of the Air Force under Mr Carter. Dr Mark is said to have impressed Mr Reagan's transition team, and would be a popular appointment at the agency.

David Dickson

## European high-energy physics cuts

European high-energy physics is heading for trouble. The Deutsches Elektronen Synchrotron laboratory (DESY) in Hamburg faces the prospect of operating for only 4–5 months a year, and the European nuclear research laboratory (CERN) at Geneva is likely to find its plans for a new electron-positron machine postponed for at least 6 months.

In Germany, the research ministry appears to have decided that, after some years of growth, the DESY budget can be cut back. And in Sweden, the Ministry of Research and Education is "suspicious" of the haste at CERN to build the 30-km electron-positron storage rings, with an initial electron-beam energy of 50 GeV. One source of trouble is that many Swedish physicists at CERN work not on high-energy physics but on spin-off experiments with the low-energy accelerators that litter the CERN site. Although not glamorous, such experiments are extremely sophisticated, and in danger of being neglected.

The Swedish Ministry of Research and Education said this week that it was seeking information from CERN on the future of these activities. Acknowledging that Professor Herwig Schopper, director-general of CERN, would like a decision on the large electron-positron machine (LEP) at the next bi-annual CERN council meeting in June, a Swedish spokesman asked "Why are we in such a hurry?" The intention at CERN is that LEP would be built within the running budget of 610 million Swiss francs a year, but Schopper freely admits that this would entail running

down some ancillary facilities.

Although the annual running cost would not be changed, Stockholm is alarmed that the usefulness of CERN to Swedish scientists will diminish. In any case, a commitment for 15 years or more to the construction and running of LEP would have to be ratified by the Swedish parliament, said the spokesman, and that was most unlikely before June.

Schopper's dilemma is to reconcile the interests of governments broadly willing to support LEP but at a smaller budget (SF590 million a year) such as France, Germany and the United Kingdom and those of the smaller nations wishing to keep less costly experiments going. One sop might be to squeeze another SF95 million or so from the budget to build the European Synchrotron Radiation Source, the machine proposed by a panel of the European Science Foundation. "That would be nice" said the Swedish spokesman.

At DESY, ranking second only to CERN in Europe, the federal government is proposing to slash the budget for 1981 to DM135 million, compared with DM145.4 million last year. The government has met DESY's salary bill but made no allowance for increases (5 per cent would be necessary for inflation); cut DESY's budget for consumables by 10 per cent in money terms, making no allowance for the doubling of Hamburg electricity prices last September; and cut DESY's provision for investment in detectors and accelerator improvement by 22 per cent.

The laboratory can cope with the