

Senators back bill to double R&D funds over 12 years

[WASHINGTON] Eight senators have introduced a revised proposal to double US investment in research and development during the next 12 years and introduce strict guidelines for evaluating research programmes and eliminating inefficient ones.

The proposed law, S2217, replaces a previous proposal, S1305, which would have doubled research spending in ten years, but was supported by only 19 of the 100 senators.

To attract broader support, the bill sets less ambitious funding targets and incorporates new policy principles and evaluation requirements (see *Nature* 393, 504; 1998).

It also sets one aggregated target for all non-defence funding agencies, allowing money to be redistributed between science agencies. S1305 was criticized for specifying equal increases for all agencies, regardless of their mission or performance.

The bill, introduced on 25 June by Senator Bill Frist (Republican, Tennessee), is supported by a range of engineering and scientific societies and the universities. But it has not won the active support of the biomedical research community, which is pursuing its own plans to double funding for the National Institutes of Health in just five years.

David Moore, a lobbyist at the American Association of Medical Colleges (AAMC), is uncertain whether the AAMC would even discuss endorsing the bill. "I think we'll continue pursuing the doubling of the biomedical research budget in five years," he says.

But Frist said he thought the bill would attract more sponsors than the previous proposal, and would be approved by the Senate. As an 'authorization bill', the measure sets non-binding targets for future spending.

Phil Gramm (Republican, Texas), who sponsored the previous proposal, said the new bill would now stand a better chance of progressing because Frist would carry it through the subcommittee that he chairs — the science, technology and space subcommittee of the Senate commerce committee.

Scientific societies hope that a companion bill will be proposed in the House of Representatives soon after Vernon Ehlers (Republican, Michigan) completes his review of science policy later this month. They hope that the leadership of the House, including Newt Gingrich (Republican, Georgia), who has recently made several speeches in support of increased research funding, will support such a bill.

Allan Bromley, former president of the American Physical Society and presidential science adviser, thinks the new bill will be passed by the Senate this year. Frist says its prospects depend on how many sponsors it attracts in the next two weeks. **Colin MacIlwain**

NASA loses touch with solar observatory in space

[WASHINGTON] Ground controllers lost contact last week with the \$1 billion Solar and Heliospheric Observatory (SOHO), the centrepiece of an international programme to study the Sun and its interaction with Earth. Scientists involved in the US–European project were pessimistic at the beginning of this week about its chances of being recovered.

Engineers at the US space agency NASA's Goddard Space Flight Center were performing routine maintenance on 24 June of SOHO's position-keeping ability when the spacecraft lost its orientation to the Sun.

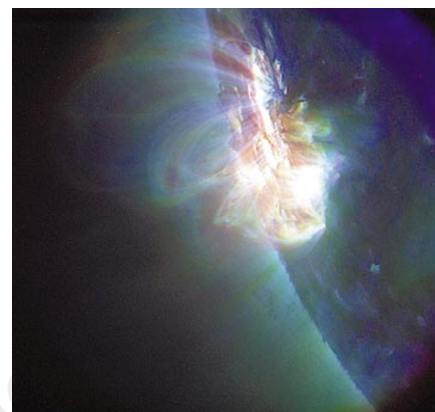
Although it went into an automatic routine designed to reorient itself to the Sun, the spacecraft lost radio contact with the Earth. Attempts to regain contact were unsuccessful, even using the large dish antennas of the Deep Space Network. If its solar arrays were pointing in the wrong direction at the time, its on-board batteries would have drained quickly, leaving it without power.

Launched in December 1995, SOHO had completed its nominal two-year mission, but the European Space Agency (ESA) and NASA, who shared the development costs, had extended its operations to 2003.

The decision had strong backing from the scientific community. A report from the National Research Council urged NASA to continue operating SOHO and the other satellites of the International Solar Terrestrial Program (ISTP), including WIND and POLAR, through the "solar maximum", the peak in the 11-year cycle of solar activity expected between 1999 and 2002.

SOHO has returned important results ranging from the detection of solar quakes caused by flares to a detailed study of coronal mass ejections. Parked in a stable orbit between the Sun and Earth, it monitors the Sun's surface and extended atmosphere.

Failure to recover the observatory would



Solar power: a false-colour image from TRACE, which may take on some of SOHO's tasks.

be a "tremendous loss" to the solar-maximum observing campaign, says project scientist Art Poland. No other satellite has spectrometers and coronagraphs trained on the Sun, or can return data on solar seismology and magnetic fields.

NASA's recently launched Transition Region and Coronal Explorer (TRACE) spacecraft could offset the loss using its ultraviolet telescope, according to Alan Title of the Stanford Lockheed Institute for Space Research in Palo Alto, California, a principal investigator for TRACE and member of the SOHO team. But it would have to record data more frequently, he says, because it has a narrower field of view than SOHO.

Plans would probably involve placing duplicate instruments on a variety of different spacecraft, rather than relying on another single observatory such as SOHO.

One investigator thinks the capability of the mission could be duplicated for 20–30 per cent of the cost of SOHO. But NASA and ESA would have to act quickly, and funding would have to be approved. **Tony Reichhardt**

Space agency to work closely with EU

[MUNICH] The council of the European Space Agency (ESA) last week approved a resolution agreeing to work more closely with the European Union in developing strategies in telecommunications, navigation and Earth observation.

The council also approved the launch of a programme for Earth observation, known as Living Planet. A total of ECU24 million was agreed by 10 member states plus the associated member state, Canada. Although it is 20 per cent less than the designers asked for, programme director David Southwood says it is sufficient "to move ahead immediately". Other member states may

join the programme later, he adds.

The Living Planet programme will organize a series of "small and frequent" missions in areas such as oceanography, climatology and atmospheric chemistry, to be launched after 2002. Opportunities for small missions in these categories will be announced in the next few weeks.

The programme was designed after discussion with the European Commission, reflecting the willingness of the two bodies to work together more closely. Southwood says the resolution "prevents us from going off in different directions, or from competing with each other". **Alison Abbott**