

A fresh start in space

Whatever their previous scepticism, scientists should embrace the opportunity to see whether the International Space Station can address important research questions. NASA's decisions on its microgravity research are a step in the right direction.

Sixteen years after it was first proposed — and the wait has seemed every bit that long — the International Space Station is finally a reality. The first crew moved in last week, and one of its first acts, appropriately, was to give the new outpost a name.

US astronaut William Shepherd, who, along with two Russian cosmonauts, will live on the station for four months, had long lobbied for a less unwieldy name than 'International Space Station'. So during a televised chat with Daniel Goldin, chief of the US space agency NASA, Shepherd asked if the astronauts could call their new home 'Alpha'. Goldin, probably fearing a political wrangle among the station's international partners, had previously resisted any such move, but this time he gave in. So 'Alpha' it is — at least while Shepherd's crew is living there.

Purists will point out that this is not humanity's first space station. The Russians orbited the first Salyut station almost 30 years ago, followed by the US Skylab and the Russian Mir. But none of those projects approached the new station in terms of size, complexity or ambition. So even if Alpha is not an original idea, it can justifiably be called a fresh start.

NASA, too, seems poised to begin a new era of scientific research in orbit. The recent reorganization of the agency's microgravity and life-science programme (see page 123) bodes well for a more mature outlook on what can and cannot be accomplished in space. Gone are the grandiose claims, which raised eyebrows in the past, about space-based experiments leading to cures for cancer and AIDS. The focus

has shifted away from the dubious accomplishments of past crystal-growth experiments on the space shuttle — once touted as a commercial bonanza for pharmaceutical companies but discredited by those who showed that it was cheaper to grow such crystals on Earth — and towards solid, peer-reviewed studies of gravitational biology.

Scientists involved in this highly specialized area of research have much to look forward to. Their prospects include far better laboratory facilities than those on board the shuttle or Mir, and the chance to repeat experiments and continue them for long periods. NASA's hope is that the space station will help draw new talent to the field. Those contemplating entering microgravity research may have to wait several years until the station is fully assembled. But what ground-based scientist would expect to start work in a new laboratory while builders were still installing the plumbing? Space is no different, just more complicated.

Scientists who have in the past been sceptical about space-based research should recognize and applaud the changes under way at NASA. The station has never been exclusively a science project, and should not be judged as such. It is most impressive as a feat of off-planet engineering, and it exists primarily because the United States and its partners want to establish a continuous human presence in space. For scientists, however, Alpha offers a real chance, at last, to find out whether there are substantive research questions worth pursuing on the high frontier. ■

Biotechnology battleground

An independent inquiry is needed to restore morale at an international biotechnology research centre in New Delhi.

Ever since the potential of genetic engineering became apparent, it has been clear that a major beneficiary, in terms of its applications to both human health and enhanced food production, could be the developing world. There was therefore much enthusiasm in the early 1980s for the proposal, spearheaded by the United Nations Industrial Development Organization (UNIDO), to set up an international centre dedicated to help achieve this. The International Centre for Genetic Engineering and Biotechnology (ICGEB), as it became known, was accordingly set up with twin 'components' — one in Trieste, Italy, and the other in New Delhi, India.

In its 13 years of existence, the centre appears to have achieved much to its credit. Thousands have taken its training courses, and researchers at the two components have a growing list of publications in international journals (see <http://www.icgeb.trieste.it>). But these successes appear in danger of being undermined by bitter disputes in recent months about the operation of the New Delhi component (see page 127). The disputes centre around allegations of lax management, external pressure on appointments, and fears of intimidation among staff. The result, at least according to those making the allegations, is a loss of morale among researchers and a rapid turnover of junior members, particularly PhD students.

The directors of both the ICGEB itself and the New Delhi compo-

nent insist that, although mistakes may have been made, the broader allegations are ill-founded and essentially "mischievous". Certainly it is impossible, without knowing the full details of each case, to make a definitive judgement on the overall situation. The ICGEB had a difficult gestation, marred by a siting dispute that was even more bitter than usual. Apart from Italy and Russia, no large industrialized nation has joined, and the resulting financial pressures have been worsened by the slowness of some of the other 41 members to pay their dues.

Such pressures have inevitably created their own tensions. But the strength of the allegations about the working environment at the New Delhi centre, and the possibility that the scientific vitality of the whole exercise could be undermined, need to be treated seriously. It is essential, for example, that senior appointments in an institution seeking a high international profile are made in a way that engenders trust, not suspicion — and that staffing adequately reflects the international diversity of the goals and activities of the centre itself.

There have been calls for an independent inquiry into the operation of the New Delhi component. Such a commitment should not be undertaken lightly, if only for financial reasons. But the proposal should be considered seriously by ICGEB board members when they meet in New Delhi next week. Internal tensions are clearly running so high that perhaps only an objective, outside view can ascertain the truth. ■