Large Space Telescope

Year's delay in prospect

Washington

THE Large Space Telescope has encountered technical problems that could delay its launch, scheduled for early 1985, by as much as a year. According to sources close to the project, National Aeronautics and Space Administration (NASA) administrator James Beggs has launched an investigation into the problems that will take two months to complete.

A spokesman for the Marshall Space Flight Center in Huntsville, Alabama, Tim Tyson, said that two kinds of problems have arisen. First, there were delays in installing the mirror into its supporting ring in a strain-free condition. Since the telescope is to be in orbit for many years, it is vital that the mirror is not subjected to possibly deforming stresses.

There are also problems with the precision guidance systems that are to orient the mirror while the telescope is moving in orbit. NASA says that Perkin Elmer Corporation, which is assembling the space telescope, has met the technical requirements but that there are "systematic" delays nonetheless.

The space telescope project has already been in trouble with Congress because of excess costs. If the launch is delayed, further overruns are inevitable, in spite of NASA's promises to the contrary.

In recent weeks, those working on the project are said to have been instructed not to talk publicly about the problems until NASA headquarters completes its investigation. Headquarters is evidently anx-

The configuration of the Large Space Telescope.

ious that rumours of difficulties should not reach Congress before it has made its own investigation.

One casualty of a launch delay could be the plan at the Jet Propulsion Laboratory to use the space telescope to examine Uranus so as to direct the Voyager spacecraft, which approaches the planet in January 1986.

Deborah Shapley

UK science museums

Merger afoot in Kensington

PLANS for a merger between two much-respected London museums look set to go ahead shortly. The British Museum (Natural History) (BM (NH)) and the Geological Museum of the Institute of Geological Sciences (IGS), which occupy adjacent sites in South Kensington, will become one if Sir Keith Joseph, Secretary of State for Education and Science, agrees.

IGS is supported by the National Environment Research Council (NERC), now under considerable financial pressure, and there is much concern that NERC has not been providing adequate support for the museum's educational exhibits given its primary commitment to research. NERC's chairman, Sir Hermann Bondi, denies, however, that the merger is part of a cost-cutting exercise.

The initial impetus for a changed relationship between NERC and the Geological Museum was, according to Sir Hermann, the transfer (still in progress) of the IGS research base from the South Kensington site to Keyworth in Nottinghamshire. It is expected that most of the scientific collections will move to Keyworth, while educational collections — such as its valuable gemstones — will be sold or loaned to BM(NH).

The move is unpopular with IGS staff,

who feel that Keyworth is too remote from London to be a suitable site for what should be a valuable national resource of expertise. But the museum staff who will stay are starting to realize that their educational collections might be better cared for by BM(NH).

Will science education benefit from the merger? The answer is almost certainly yes. BM(NH) already has substantial geological collections (which would complement those of the Geological Museum) and has about 100 geologists on its staff. A plan has already been made to set up a special committee between the IGS and the Natural History Museum to arrange for loans of specimens and to ensure continued access to IGS expertise in such areas as plate tectonics and sedimentology. BM(NH) has also recently appointed as a trustee Sir Frederick Stewart, formerly Regius Professor of Geology at the University of Edinburgh. The main opponent of the change, the Science Museum (also in South Kensington), does not have resident geological expertise. Under the new proposals, BM(NH) — which allocates around 20 per cent of its funds to public display — will be able to set up a truly impressive display covering all of the life sciences.

Tim Beardsley

High-energy physics

Oiling wheels of research

Washington

HIGH-ENERGY physicists, locked in debate on what the next generation of big particle accelerators should look like and who should foot the bill, have not previously suggested that the next machines should also hunt for oil — until last week, that is.

On 22 February, Sheldon ("Shelly") Glashow, the Harvard physicist, presented a plan he has been developing for two years with Robert Wilson, the builder of the Fermilab accelerator, for a 10 teraelectron volt (TeV) proton-antiproton accelerator that will not only put the United States in the forefront of world physics but also shoot a neutrino beam through the Earth to search for oil and heavy metals. They also propose floating their accelerator out to sea to produce a scan of the Earth's interior rather in the way computer-assisted tomography (CAT) produces scans of the human body.

Appropriately, Glashow revealed his oil-hunting accelerator — which others have nicknamed the "Oilatron" — at Texas A & M University before an audience of 300 physicists, petroleum people from Houston and Dallas and interested laymen. Reactions ranged from enthusiasm to disbelief.

Glashow has been wooed by Texas A & M, which frankly seeks to have a Nobel laureate on its faculty. But he has as yet received no formal offer, although he and his wife have been house-hunting and rumours of his possible salary put it at \$250,000 a year. The university is very rich, having access to the income from a permanent fund of some \$1,700 million based on oil revenues (see *Nature* 300, 674; 1982).

The Oilatron is part of Texas A & M's ambition to become the site of the next large accelerator built in the United States. University officials are now talking with the state of Texas about this machine, which they refer to as the "Texatron". The plan is that both the university and the state could put up part of the cost, thus making the project attractive to the federal government.

Meanwhile, Texas A & M seeks to build a 1 TeV electron-positron colliding linear accelerator along the lines now being studied at the Stanford Linear Accelerator Center, says Peter McIntyre, associate professor of physics at Texas, who went there from Fermilab and Harvard. He hopes the university will make these proposals public in "about a month".

If these ambitious plans materialize (the 10 TeV accelerator would cost at least \$800 million), Texas A & M, which is better known for its marching bands than for physics, will become a world centre. "Texas has big plans for itself. If it is willing to put its money where its mouth is,