

Super Collider brings 25 states into contention

- Illinois and Texas seen as heavyweights
- Competition is chance for flag-waving

Washington

"A GOOD clean fight — so far" is how one participant described the contest to win the Superconducting Super Collider (SSC) location. The object of the competition, for which 43 sites in 25 states were proposed to the Department of Energy (DoE) by the deadline of 2 p.m. on 2 September, is a 52-mile circumference, 20 TeV proton accelerator, but the real prize is a multibillion-dollar facility with thousands of immediate jobs and the potential to attract high-technology industry and a desirable population to the chosen area.

The deadline had been postponed for one month after Congress altered the rules to disallow direct financial incentives from the states as a factor in the selection. Even so, the true cost, dependent especially on labour rates and the price of electricity, may vary considerably from site to site. A committee under the aegis of the National Academies of Sciences and Engineering will ponder cost, technical suitability, availability of communications and quality of life to reduce the entries to a shortlist of six, from which the DoE will select the favoured site. Only then will any state-provided incentives (cheap electricity, tunnelling at no cost, housing at reduced rates and so on) be revealed; these bonuses are attached to the bids in sealed envelopes, whose contents some states have been advertising with gusto.

Thirty-four of the sites have the official backing of their states (New York is offering four locations, and six other states have two options). The remaining nine bids come from a variety of local government and business consortia; five of them are in Texas, where the state investigated 14 sites before settling on two. DoE has said that sites must be entirely on US territory, ruling out one of the New York proposals, which crosses into Canada, as well as the site described as "Moon Area L-5", submitted by one Paul Jablonka.

California, regarded as a strong contender, was almost a non-starter when official backing was held up until a policy on the use of minority contractors during construction was agreed. The proposal, for two sites in the Sacramento area, reached Washington in time, but vocal opposition from local farmers and environmental groups, as well as legislative wrangling, may have tainted the bid enough for DoE to become shy of it.

The two biggest players seem to be

Texas and Illinois. In addition to a site near Dallas-Fort Worth, which officials say comes out better than any site in the nation for its combination of cost, geology and quality of life, Texas has also put forward a location near Amarillo, in the western part of the state, whose appeal is its rock-bottom price. Texas may have earned itself a small black mark last year, when the Texas Accelerator Center (TAC) protested that the SSC Central Design Group had unfairly dismissed its magnet from the SSC design process. Peter McIntyre of TAC hopes that the scientific community is "mature enough to forget" the dispute.

The Illinois application is unique: it sees the SSC as an add-on to the existing facility at Fermilab, whose present main ring could serve, with small modifications, as the injector for the new device. This is presented as an advantage both in cost and in the presence of a ready-made pool of talent and ability.

Opposition to Illinois arises mostly from sympathy for the underdog, but with a particular twist. There is a theory that Fermilab was built in the midwest at least partly to assuage critics who complained that the east and west coasts were monopolizing research. Now Fermilab, grown up into the scientific establishment, is on the other side of the same argument.

One way of avoiding a controversial choice between the major contenders would be to go for a dark-horse candidate, among which North Carolina and Colorado are often mentioned. North Carolina has a site near its well-established Research Triangle, which boasts several biotechnology companies and three universities; Colorado has the Aspen Center for Physics and the National Center for Atmospheric Research, as well as the attractions of the Rockies, near its Denver location.

A number of states honestly assess their chance of winning the SSC as small. Oregon, for example, can offer cheap hydroelectricity but has no real high-technology base. But these candidates regard the money spent on making a bid as an investment. Their SSC proposals are easily adaptable into advertisements for the state's attractions to industries in general, and can also be used to persuade state governments to improve amenities. But a handful of states have spent so much money that not getting the SSC will be an embarrassment.

David Lindley

Lab worker infected with AIDS virus

Washington

AN epidemiological study at several centres of individuals working with human immunodeficiency virus (HIV), the virus causing AIDS (acquired immune deficiency syndrome), has identified a worker who became infected through handling the virus.

HIV antibodies were first detected in the exposed individual approximately a year ago. But it has now been shown that the virus isolated from the infected individual — whose identity has not been revealed — is indistinguishable from the one the worker was handling.

The study, headed by William Blattner of the National Cancer Institute (NCI) and Stanley Weiss, until recently also at NCI, examined serum from more than 200 individuals at 15 different facilities in six states. The facilities were chosen because of their routine use of HIV in research. The infected individual worked at a facility where very highly concentrated quantities of HIV were being produced.

Safety investigators involved in the case from the outset are still looking into possible modes of transmission. A statement released by NCI says the worker in question had no other known risk factors for HIV. Among the possibilities being considered is that the individual may not have been wearing all standard protective garments, despite working in a special facility designed for the highest level of containment of hazardous viruses.

The concentration of virus found in the laboratory in question is "unlike the concentration found anywhere outside a laboratory", according to the NCI statement. Robert Gallo, head of NCI's laboratory of tumour cell biology and one of Blattner's collaborators, says the person was probably working with concentrations of virus higher than most AIDS researchers.

Gallo is nevertheless concerned that the incident may be blown up out of proportion, causing unnecessary concern among laboratory workers. The Centers for Disease Control have recently issued revised recommendations for safety procedures for health care workers occupationally exposed to the AIDS virus. NCI plans to reexamine its procedures for people working with concentrated virus.

Restriction analysis, performed by Gallo's laboratory, showed that the virus isolated from the infected individual was indistinguishable from the virus with which he or she was working. This is apparently the first documented case of a researcher infected with HIV through occupational exposure.

Joseph Palca