200-Bev Accelerator: NAS Group Picks Six Sites

As Science *went to press on Tuesday the Atomic Energy Commission announced it had received a report from a special National Academy of Sciences committee recommending six sites as possible locations for the AEC's proposed $375-million, 200-Bev proton accelerator. The AEC said it "now plans to carry out additional studies as may be necessary." The NAS committee selected the short list of sites after reviewing 85 proposals involving 150 tracts in 43 states (*Science, *24 Sept. 1965). A key portion of the summary of the Site Evaluation Committee report follows.*

The Site Evaluation Committee of the National Academy of Sciences was formed to assist the Atomic Energy Commission in the evaluation of sites offered for location of a national center to house the proposed accelerator. After extensive study, aided by many experts, the Committee has selected six sites which, on balance, are clearly superior. Five sites are principally characterized by having either the nucleus of a strong accelerator design group, or one of the nation's outstanding universities nearby. These are: Ann Arbor, Michigan; Brookhaven National Laboratory, New York; Madison, Wisconsin; Sierra Foothills near Sacramento, California; and South Barrington (or Weston), near Chicago, Illinois. The sixth site, Denver, Colorado, has neither the university strength nearby nor the existing design group that is considered desirable. However, the Committee is of the opinion that the combined advantages of excellent geology, accessibility, good climate, and an area already available which is sufficiently large to accommodate any conceivable experiment or expansion are such as to make the site merit serious consideration.

The Committee's principal concerns have included the physical properties of the site, the problems of assembling an outstanding staff, and accessibility for visiting scientists who will conduct about seventy-five percent of the experiments. While none of the recommended sites is ideal, each is excellent in at least one of the most important features and within acceptable limits with respect to others.

sions from the Poage bill in the not very secret hope that even a bill regulating dealers alone would have the deflating effect on the drive for stronger legislation which Pepper predicted. Meanwhile, the scientists are also supporting a bill introduced, as an antidote to the "pain bills," by Representative Edward Roybal (D–Calif.), which is in large measure a proclamation that animals are essential in research. It provides for federal grants for research and training in laboratory animal health, care, and use, and for the establishment of governmental and nongovernmental committees of experts on the subject.

About the only interested parties whose cards are not yet on the table are the drug companies and the federal government. The drug industry, so far, has seemed content to let the scientific community interests do its speaking for it. The government's position is more complex. Public Health Service officials are unhappy about the provision in the Poage bill that calls for regulating traffic in animals other than dogs and cats. "It would be impossible," one official commented. "We estimated that about 45 million vertebrates were used last year by HEW alone." They are unhappy, also, about the regulation of laboratories by the Agriculture Department for which the Poage bill provides. HEW would like to see a division of labor, with Agriculture regulating trade in dogs and cats and HEW retaining jurisdiction over scientific facilities.

HEW's precise position will remain secret until its negotiations with the Bureau of the Budget on a proposed bill are completed. But it is known that the Department does favor the development of objective standards for animal facilities and care, and believes that the standards should be administered by some nonfederal accrediting agency responsible to the Surgeon General of the Public Health Service. One such accrediting organization known as the American Association for the Accreditation of Laboratory Animal Care (AAALAC), has recently come into existence, as an outgrowth of the earlier established Animal Care Panel. It is likely that AAALAC is one of the mechanisms HEW officials have in mind. HEW also feels that, since many laboratories now have demonstrably inadequate animal facilities, any legislation would have to provide considerable sums of money for renovation before accreditation could fairly be made a precondition for federal grants. Humane-movement workers such as Mrs. Stevens have already denounced this view as a dodge: "There is plenty of money in those research grants right now for taking good care of the animals," she commented during a recent interview with *Science*. But HEW officials feel strongly that legislation that fails to make money available for improvements would not only hurt the poor institutions but probably jeopardize the chances for strict enforcement of strong standards. The fear is that if people on inspection committees know there is no money for corrections, they will be unwilling to make adverse judgments, and that if they make adverse judgments anyway, there will be a serious medical research crisis.

With delicate budgetary discussions now in progress, no one is complaining too loudly, but officials are plainly worried that their reform efforts will be compromised by the financial demands of the Vietnam war. And the prospects that even effective legislation governing animal facilities would satisfy the humane movement's drive for legislation governing experimentation seem very dim. That issue is likely to stay with us for a long while.

—ELINOR LANGER

Meeting Notes

An annual symposium on **molecular structure and spectroscopy** will be held at Ohio State University, 6–10 September. Discussions will include methods of obtaining and interpreting data. Dormitory accommodations will be available. (K. N. Rao, Department of Physics, Ohio State University, Columbus)

A call for papers has been issued for a symposium on **polar meteorology**, scheduled for 5–9 September in Geneva, Switzerland. The topics to be covered include local effects; synoptic analysis and forecasting; circulation studies; mass and energy budgets, exchanges, and interactions; snow, ice, instruments, and special phenomena;

(Continued on page 1598)

properties of iron-base alloys" by E. A. Nesbitt and A. J. Williams; and "Precipitation in iron-base alloys—state of the art" by Morris Cohen.

Proceedings, London Mathematical Society: Papers Presented to J. E. Littlewood on His 80th Birthday. vol. 14A, 1965. J. D. Weston, Ed. Oxford Univ. Press, New York, 1966. 320 pp. Illus. $12.80. Twenty-six papers.

Proceedings of the Natural Rubber Producers' Research Association Jubilee Conference (Cambridge, England), 1964. L. Mullins, Ed. Published for the Natural Rubber Producers' Research Assoc. by Maclaren, London, 1965. 258 pp. Illus. 42s. Sixteen papers: Plenary lectures (3 papers); Symposium on rubber biosynthesis (7 papers); and Symposium on relation between chemical structure and mechanical properties (6 papers).

Proceedings of the Symposium on Bacterial Transformation and Bacteriocinogeny (Budapest), August 1963. vol. 6. B. Györffy, Ed. Akadémiai Kiadó, Budapest, 1966. 167 pp. Illus. $6. Twenty-two papers: Bacterial Transformation (9 papers); Bacteriocinogeny (6 papers); and DNA specificity and regulation (7 papers).

Radiological Monitoring of the Environment. A symposium (Berkeley, England), October 1963. B. C. Godbold and J. K. Jones, Eds. Pergamon, New York, 1965. 443 pp. Illus. $15. Thirty-three papers.

VII International Mineral Processing Congress. vol. 1. A symposium (New York), September 1964. Nathaniel Arbiter, Ed. Gordon and Breach, New York, 1965. 623 pp. Illus. $45. Fifty-five papers on the following topics: Comminution (6 papers); Gravity and Dense Media Separation (6 papers); Chemical Processing (3 papers); Flotation Kinetics (5 papers); Flotation Practice (4 papers); Chemistry of Flotation (7 papers); Surface Chemistry in Mineral Processing (6 papers); Magnetic and Electrical Separation (6 papers); Automation and Control (5 papers); and Symposium on Autogenous Grinding (7 papers).

Surface Interactions Between Metals and Glass. V. I. Arkharov and K. M. Gorbunova, Eds. Translated from the Russian edition (Moscow, 1964). Consultants Bureau, New York, 1966. 171 pp. Illus. Paper, $25. Twenty-seven papers on topics considered at a conference (May 1963) honoring P. D. Dankov on his 60th birthday.

Symposium on Diffusions in Oceans and Fresh Waters (Palisades, N.Y.), August–September, 1964. Takashi Ichiye, Ed. Lamont Geological Observatory, Columbia University, Palisades, N.Y., 1965. 174 pp. Illus. Paper, $2. Fourteen papers and five summaries of papers prepared from notes.

The United States and Japan. Twenty-eighth American Assembly (New York), October 1965. Herbert Passin, Ed. Prentice-Hall, Englewood Cliffs, N.J., 1966. 186 pp. Paper. $1.95. Six papers: "The image" by Edward Seidensticker; "The legacy of the occupation" by Robert E. Ward; "Political relations" by Lawrence Olson; "Political economy" by William W. Lockwood; "The view from Japan" by Kinhide Mushakoji; and "The future" by Herbert Passin.

(Continued from page 1518)

climatological aspects; and recommendations for further research. Sponsors: International Commission on Polar Meteorology, IUGG; Scientific Committee on Antarctic Research; and World Meteorological Organization. Send title and indication of scope of proposed papers to K. Langlo, WMO, 41 Avenue Giuseppe-Motta, 1200, Geneva.

Abstracts: six copies in English; if possible, necessary diagrams; deadline: *1 June*. (Svenn Orvig, Department of Meteorology, McGill University, Montreal, Quebec, Canada)

A symposium on fundamentals of **gas-surface interaction** is scheduled for 14–16 December in San Diego, California. The topics to be covered include the surface and its characteristics; adsorption and reaction of gases on or with surfaces; and scattering processes, including energy and momentum transfer at the gas-surface interface. Emphasis will be on studies involving incident particles which are gaseous neutral species with energies below 10 electron volts, on their interaction with well-defined crystalline, but not necessarily clean, surfaces. Deadlines: declaration of intent to submit a paper, and title: *1 June*; abstracts: *1 September*. (H. Saltsburg, General Dynamics/General Atomic, P.O. Box 608, San Diego, California 92112)

Courses

Applications are being accepted for a course on **marine geology** of the Pacific basin, scheduled for 24–26 June at the University of California, Berkeley. The program is designed to provide postgraduate work in marine geology for earth scientists and people in related fields. Topics to be covered include structure and bathymetry of the Pacific basin, deep-sea sediments, marine sediments off California, marine geochemistry, instrumentation in marine geology, and the federal role in marine geology. The registration fee is $125; graduate students may apply for a reduced fee of $60. (R. E. Patterson, Letters and Science Extension, University of California, Berkeley)

The American Association of Immunologists will present a course in **basic immunology**, 25 July to 6 August