

with their own inventiveness. They would like to invite foreign scientists and technical experts to China to give lectures, teach and join them in research.

Earlier, the country's Vice-Chairman, Teng Hsiao-ping, said that China should trust those engaged in scientific work because "generally speaking the overwhelming majority of them are part of the proletariat".

His opening speech to the conference gave full weight to the importance of science and technology. It was tightly bound up with production and was a positive force in advancing society, said Teng. Teng equated dedicated scientists with dedicated revolutionaries and announced China's intention of building "a mighty army of young scientists". This would be done by breaking with convention on the educational front so that selection and training could be achieved in the shortest possible time. Success was possible, he said, because "an extensive mass base can provide a continuous flow of talent". This echoed a statement in a party circular issued last year which said: "Scientific experiments in our country [combine] efforts by both the professionals and the masses. This is something no [western] country has done or can do. Such great mass



Great Hall of the People: planning to overtake the world

movements will open inexhaustible springs of creativity".

Teng promised some relaxation of political control over scientific work. The party would continue to provide leadership but its focus would have to change. One example was the reintroduction of research directors whose positions were downgraded under the rule of the Gang of Four.

The political theme was taken up by Chairman Hua when he addressed the conference. Scientists should continue raising their political consciousness while combining their personal effort with collective wisdom in their research. They would then speak a common language with the workers.

China was training "hundreds of millions of working people" who would combine mental with manual labour, people who would be both worker-intellectuals and intellectual-workers. Hua called for a general rise in the scientific level of the masses which would provide "the base and conditions of growth for the professionals, who for their parts will guide the mass forces, crystallise their experience and wisdom and raise it to a higher level". The world, Hua said, had witnessed different roads to modernisation but what China wanted was socialist modernisation, something which perhaps had not so far been seen.

T. B. Tang

AGRICULTURE. Comprehensive surveys to study the rational exploitation of land resources and the protection of the ecological system. Research devoted to developing a farming system and cultivation techniques which combine both intensive farming and mechanisation. Solutions sought for scientific and technical problems associated with a hydrological project to divert water from the south to the north. Special attention for crop growth on alkaline, lateritic, clay and other types of poor soil, since they account for one-third of the country's total farmland.

ENERGY. Research on gasification, liquefaction, and multi-purpose uses of coal. China is already advanced in petroleum geology and technology; a key project will therefore be investigation of the genesis and distribution of oil and gas, together with the development of new crude oil processing techniques. Other efforts: hydro-electricity generation, solar energy, geothermal, wind, tidal, and thermo-nuclear fusion power, and energy conservation and the utilisation of wastes in major industrial processes.

Research: China's eight priorities

MATERIALS. Pinpointed areas include metallurgy of special steels, and the refining of copper, aluminium, nickel, cobalt, titanium and vanadium, and the rare-earth metals. Emphasis is on high polymer science, organic synthesis, and catalysis.

COMPUTERS. China aims to put a range of fast main-frames into production shortly and to establish a strong computer network and data base by 1985. Peripherals, software and the associated areas of applied mathematics to receive balanced attention. While speeding up the mass production of LSI's, a special effort will be made to make a breakthrough in the technology of ultra-large-scale integrated circuits. Minicomputers and microprocessors will be introduced.

LASERS. More research in laser spectroscopy and non-linear optics to back up the scientific application of laser. New lasing mechanisms will be investigated, more tunable lasers de-

veloped and applications such as isotope separation fully looked into. High-power installations will be constructed to study laser-triggered fusion. China is also interested in laser communication.

SPACE. Efforts devoted to basic space physics, cosmic rays, and the technical problems of remote sensing. A series of skylabs, deep-space and communication satellites will be launched within eight years.

HIGH-ENERGY PHYSICS. A 50-GeV proton accelerator to be completed in five years and up-dated to still higher energy in the next five. An extensive experimental base will be built around this key research centre to serve agriculture, industry, medicine, and other spheres.

GENETIC ENGINEERING. China is weak in this new field and will spend the first three years mainly on basic studies. By 1985 she hopes to have fully integrated the subject with molecular genetics and cell biology, and be working on its potential use to treat certain diseases and to fix nitrogen biologically.