

# FEF Mideast Conference

## Announcement Of Major U.S. Fusion Advancements

### Call For New Economic Order

NEW YORK, January 24 — The announcement of a major advance in the United States' fusion energy research program and a call by Pakistan's ambassador to the United Nations for a new international economic order to make possible the industrialization of the Third World were the highlights of the historic Conference on Middle East Peace and Economic Development sponsored by the Fusion Energy Foundation here today.

Dr. Stephen O. Dean, Assistant Director for Confinement Systems of the U.S. Energy Department's Division of Magnetic Fusion Energy, surprised the afternoon session of the conference, on U.S. and International Energy policy, by officially announcing that newly available experimental results at the Princeton Large Torus fusion device have for the first time achieved plasma confinement results within the two thousand electron volt range. This range, Dr. Dean said, verges on the level necessary to complete the experimental fusion research immediately preparatory to building working fusion reactors. As a result, he predicted, he is confident that "fusion is ready to be treated and considered as a practical option for future energy use."

Earlier, Pakistan Ambassador to the UN Iqbal A. Akhund highlighted the morning panel session of the conference, on the Economic Development of the Middle East, by insisting that nuclear energy is "the only option" for development of oil-producing and oil-consuming Third World nations alike, and stating that under "the present economic system, the present trade system, monetary system...it is not possible for the poor countries to develop...Therefore," he said, there must be "a new international economic order (which) would overhaul the present system...so that...integrated development of the global economy (can) take place."

Attended by a broad-based audience of more than 200 and addressed by representatives of the Arab and Jewish communities alike, as well as by leading U.S. scientists, political leaders, and strategic thinkers, the FEF conference is certain to play a significant role in advancing consideration of the interdependence of peace and industrial development to the fore not only in international consideration of the Middle East peace problem, but in connection with peace and prosperity in the world as a whole. "The proceedings today should be seen as crucial experimental evidence that the Mideast problem can be solved," declared U.S. Labor Party Director of Intelligence Criton Zoakos at the conference's final session.

The conference brought together a diverse audience

that included eight or more representatives of Middle East diplomatic missions or government agencies, and at least three from Africa. From the U.S. there were representatives of military, intelligence, and energy research and development agencies, as well as of state and local governments. There were three international trade union representatives, and representatives from private industry including the world's largest manufacturer of electrical technology, the nuclear industry, international shipping, and the world's largest construction engineering consultancy firm. From the academic world there were specialists on Jewish and Arabic history, international policy, and science from Georgetown University, Columbia, Stanford, and others.

In addition to Dr. Dean and Ambassador Akhund, the conference attendees heard presentations on diverse aspects of the Middle East development and peace problem from experts including Palestinian economist and consultant Dr. Mohammed Rabie, a permanent delegate to the Euro-Arab dialogue; Hoover Institute senior fellow and noted U.S. strategic analyst Stefan Possony; Mayor Paul J. Lattimore of Auburn New York; FEF Director of Research Uwe Parpart; Dr. Clovis Maksoud of the Center for Contemporary Arab Studies, Georgetown University; the USLP's Zoakos, author of "Ibn Sina and the Dawn of the Humanist Heritage"; Dr. Ellis Rivkin, Adolph Ochs Professor of Jewish History at Hebrew Union College in Cincinnati, a last-minute addition to the day's final panel; and John C. Currey, a former syndicated columnist and U.S. military intelligence officer who is now senior editor of the *Oklahoma Times*.

#### "Professional No-Growthers" Ripped

The tone of the conference was set by Mayor Paul J. Lattimore of Auburn, New York, who also serves as Chairman of the National Joint Task Force on Energy Strategy of the League of Cities and U.S. Conference of Mayors. The energy shortage, Lattimore charged, is "one of the biggest scandals in the country." U.S. policy should be "developing energy in whatever manner it might be." Assailing "professional environmentalists, who are no-growth people," Mayor Lattimore declared that "the most sensible way to generate electricity is with nuclear power." The Mayor also welcomed the recent NAACP statement on energy policy.

Ambassador Akhund followed, declaring himself "heartened to hear Mayor Lattimore...say things with which I find myself in considerable agreement."

Motivating his endorsement of nuclear power to meet Third World energy needs, Akhund cited former U.S. President Eisenhower's historic Atoms for Peace, stating that he was confident that all environmentalist objections to nuclear power could be easily met. The ambassador emphasized that even oil-rich developing nations, such as Saudi Arabia and Iran, required nuclear power to meet their energy needs, pointing out that this would free their vast oil reserves for such far more efficient applications as petrochemicals.

In conjunction with his call for a new world monetary system, Akhund emphasized that development of the Third World through technical transfers would provide the outlet for industrial expansion needed by the stagnating economies of the industrial West.

In a separate interview with NSIPS, Ambassador Akhund pointed out that reflating the West German economy — as urged by the Carter Administration — would create only miniscule additional demand in the world economy (“How much can the German people buy?”), while reflation by Japan would only flood the world market with more transistor radios. Criticizing Western multinationals for concentrating their overseas investment in extractive industries, he urged them to “take a longer view” and invest in “technology transfers.”

U.S. Labor Party Executive Committee member Warren Hamerman then presented the Party's proposal for expansion of the U.S. Export-Import Bank, in the context of European moves toward a gold-based international monetary system centered in Luxembourg.

Raising the bank's lending capacity from a ceiling of \$9 billion to \$200 billion, Hamerman declared, will intersect three critical problems facing world economic development: 1) the lack of low-cost credit for the advanced sector; 2) the need in the developing sector for commitments and political and economic contracts for capital, energy, and technology-intensive programs; 3) the need to provide concrete avenues for the Comecon nations into international cooperation around fission and especially fusion development. Such a plan could be ready within two weeks, Hamerman declared, launching a massive revival of basic U.S. industry such as steel, and beginning unparalleled industrial development in the Third World. He called on the audience to push such expansion of the Eximbank at upcoming hearings by Sen. Adlai Stevenson III.

In a joint presentation, FEF Research Director Parpart and FEF Director of Physics Eric Lerner concluded the first portion of the panel on Mideast economic development by outlining a \$700 billion program for economic development of the Middle East. “The raw materials approach is historically an economic transfer approach,” Parpart declared, which will inevitably result in the economic exhaustion of the region if pursued to its conclusion. Proceeding from a basic infrastructure of nuclear development, he declared, and concentrating on Egypt, which has the largest and most highly skilled population of the Arab nations, the region should proceed with development of a petrochemicals and related textile industry, steel and concrete, and basic infrastructure such as housing — a prerequisite to development of a skilled labor force. Parpart also outlined an agricultural development program relying on nuclear energy to

provide vastly expanded irrigation.

The FEF Research Director stressed that it was only in conjunction with such a development program that a Palestinian state — considered a prerequisite to a workable peace solution — could hope to exist as a viable nation.

The next panel session featured three Arab business consultants — Dr. Mohammed Rabie, Dr. Richard Dekmijian of the State University of New York at Binghamton, and Fuad Taima of Averroes, Inc., who discussed the difficulties of industrialization of the Mideast.

#### *Potential of Nuclear Energy*

Speaking at the afternoon session, titled “U.S. and International Energy Policy: Fossil, Fission, Fusion,” Department of Energy official Dean coupled his fusion research bombshell with a presentation showing the rapid progress in the U.S. fusion program in recent years. As recently as 1974, projected fusion reactor designs were feared to be too large to be economical, Dean said, but subsequent research breakthroughs have greatly reduced reactor size. He reported that a fusion device designed to achieve energy breakeven levels, the general atomic Doublet III Tokamak, would be in operation next month.

FEF Plasma Physics director, Dr. Steven Bardwell used a comparison of energy flux densities — a measure of the cost-efficiency of energy sources — to demonstrate the superiority of fission and fusion energy over other sources. He outlined a concept called “nuplex” — industrial and agricultural complexes centered around nuclear reactors — which, he said, was uniquely suited to Third World Development needs. Detailed plans for “nuplex” developments have already been drawn up by India and Puerto Rico, he said.

Noted strategic analyst Stefan Possony presented a wide-ranging discussion of the prospects and requirements for development in the Middle East and the relationship between peace and economic development.

“Development of the Middle East is a mandatory matter. The penalty for not doing it...is catastrophic,” Possony declared.

The objective of development in the Middle East, he continued, must be the immediate introduction of 21st century technology. “You have to leapfrog...You need new technologies.”

“You cannot really plan this as a regional thing,” he said. “You are involved in a worldwide project. I think India belongs in this region, and a place like Japan.”

Returning to the relationship between peace and economic development in the Mideast, Possony proposed that the immediate injection of the development question into the deadlocked Egypt-Israeli talks on the formulation of a West Bank Palestinian state would greatly facilitate the negotiations. “Bring home in their minds that the pie is a growing pie,” he said.

#### *Islamic Humanism and Peace*

The conference's evening session, on the Cultural Heritage of Islamic Science, featured presentations by Parvis Morewedge, Secretary-Treasurer of the Society of Islamic Philosophy and Science and translator of the *Metaphysics* of the Islamic philosopher Ibn Sina;

Criton Zoakos; Dr. Clovis Maksoud; and, a late addition, Dr. Rivkin of Hebrew Union College.

Following Morewedge's presentation, in which the noted Islamic scholar presented the thesis that the philosophy of Ibn Sina was based on process- and development-conceptions in contrast to the fixed categories adopted by nominalist thinkers as Aristotle, Locke, and Hume, Zoakos developed the contribution of Medieval Islamic science and philosophy to the European Renaissance and later the American Revolution. It was Islam that first systematically developed the voluntarist principles which are the basis of Western humanism today, Zoakos said, noting that "at a time when no European king or queen and very few monks could read," mass literacy was the basis of the Islamic faith.

Applying that Islamic voluntarist principle to what he termed the "paradoxes" confronting the parties to the Middle East problem, and reflected in a number of the day's presentations, Zoakos pointed out that the framing of such "paradoxes" — presenting a fixed range of solutions, no one of them expressing the actual interests of the parties involved — was the essence of the method used by Britain to manipulate and control the region. The voluntarist solution, he said, is summed up in a maxim of the Talmud, "When presented with two choices, always

take the third." The same problem was addressed by Dr. Maksoud, who declared that Arabs had historically been torn between the two poles of "consistency" — full recovery of Palestinian lands occupied by Israel — and "relevancy" — complete abandonment of any rights of Palestinian sovereignty.

#### *Destroy Britain*

Both Zoakos and Rivkin addressed the problem of British presence in the Middle East. Rivkin, citing Manhattan Project as the key breakthrough which demonstrated that the nature of U.S. capitalism was developmental, sharply contrasted this impulse in U.S. capitalism to the capitalism of underdevelopment, centered, he said, primarily in London. It is London's effort to assert hegemony in the Middle East, he asserted, which has been the main obstacle to industrial development in the region.

Zoakos noted that the works of the great Islamic philosophers, Ibn Sina, Averroës, and al-Farrabi, had been in the libraries of every major leader of the American Revolution. No solution to the Middle East can be found without combatting the influence and activities of British intelligence in the region, and the key to that problem, he said, is the solution adopted by the Islam-influenced leaders of the American Revolution: "Destroy Britain!"

— Paul Arnest

## Princeton 'Fusion Device' Brings Unlimited Energy Closer

January 25 — Dr. Stephen O. Dean of the U.S. Department of Energy's Magnetic Confinement Division announced yesterday that scientists working with the Princeton University Large Torus (PLT) fusion device have achieved the highest temperature ever to be reached in experimental work with a neutral beam fusion energy reactor prototype. Dean reported that the temperature of the PLT's plasma, the magnetized gas contained in reactor devices that begins an energy-producing fusion reaction if brought to extremely high temperature and pressure, reached slightly higher than 2,000 electron volts (2 keV) in the recent Princeton experiments.

Dr. Dean's announcement came at yesterday's Conference on Middle East Peace and Economic Development, sponsored by the Fusion Energy Foundation as a meeting ground for scientists, government officials, diplomats, and business representatives to discuss the establishment of a lasting Middle East peace via the economic development of the region. (see article this page) The PLT results were of major interest to conference participants because they indicate the rapid achievement of fusion breakeven, that is net-energy producing fusion reactors, and eventually commercial fusion energy production systems.

#### *How It Works*

The Princeton researchers set the new temperature record with the help of a neutral beam heating device

designed and built by a team at Tennessee's Oak Ridge National Laboratory. The beam device is used to first accelerate hydrogen isotopes, then to neutralize them (bring the number of electrons and protons in each atom into correspondence), and finally to direct a concentrated beam of neutral atoms into the center of the PLT's plasma, which is confined in a toroidal, or donut-shaped, magnetic field. Collisions with the ions in the plasma cause heating, which radiates from the center of the plasma outward.

Neutral beam heating allows a high temperature to be achieved with a lower magnetic field strength than is used in magnetic heating of magnetically confined plasmas. In fact, a low-density plasma fusion reactor such as the Princeton device will work only with neutral beam heating. Magnetic approaches to heating, which depend on compression and heating of a relatively more dense plasma, are ineffective in the low-density plasma Large Torus.

#### *Prospects for Breakeven*

According to Dr. Harold Furth, director of the Princeton neutral beam project, energy breakeven will be relatively easy to achieve using the neutral beam compared to other heating systems. In the small region in the center of the plasma where the neutral beam is injected, about 30 percent of the confined ions are quickly brought to 20 keV; these diffuse to heat through the rest of the plasma. It is now thought that an overall