Israel could link East and West, says Ne'eman

by Marsha Freeman

Israel could turn into a "link between Russia and the West because of the half a million people who came" to Israel from Russia, states Israeli scientist Yuval Ne'eman, in an exclusive interview in the Winter 1994-95 issue of *21st Century Science & Technology* magazine.

Ne'eman, who is the founder and director of the Israel Space Agency and holds the Wolfson Distinguished Chair in Theoretical Physics at Tel Aviv University, provides a picture of the projects in the Israeli space program, and describes the treasure trove of scientific talent that Israel inherited when Soviet Jews emigrated there over the past few years.

The small but growing Israeli space program has already developed communications and remote sensing satellites, and a vehicle to launch its own payloads. Although Israeli scientists have flown experiments on the U.S. Space Shuttle, the future of space science will be aboard the international space station, in which Ne'eman hopes Israel will be able to participate.

As Professor Ne'eman details, the Israel Space Agency is preparing now for the launch of a scientific instrument on a Russian satellite for astronomical studies in ultraviolet wavelengths.

'Build something'

Since the breakup of the Soviet Union, 500,000 Soviet Jews have emigrated to Israel. But, as Ne'eman indicates, "there could have been twice as many, but there were no jobs. I was a [government] minister in 1990 and 1992 and I was a lone fighter in that fight. I created 3,000 jobs, but I had to use all my political power to do it. Our government was very bad in that, and the one that succeeded us was worse."

Why? Israel had been fighting to control a ravaging inflation by following the dictates of the "free market" monetarist gurus of the Chicago School. "As a result of that," Ne'eman remarks, "all the financial advisers, the studies, are all of the Chicago School—and it doesn't matter which party it is, if it is the left or the right, the economists are all Chicago School. They were very happy because they managed to lick the inflation and also to show that as a result things were recovering. They were against government intervention in everything."

"All of a sudden you have the gates of the Soviet Union opening up and half a million Jews arrive," Ne'eman explains. "You have the population rising by 8% in two years. Imagine the United States getting 20 million people within two years. Without a New Deal-type of program we couldn't cope with this kind of thing.

"So I kept saying in the cabinet, 'My God. Forget about the inflation. If there will be another inflation someday, we'll deal with that inflation, but now there is a problem of getting all these people in. Instead of paying them just unemployment money, use them for something. Make projects. Build something. But do something useful and meanwhile they'll be absorbed and find their feet here and know what they're doing. Meanwhile we can gradually get out of this kind of thing. But let's first of all create a climate of jobs.' "

As Ne'eman describes, the Israeli government was not willing to spend the money to initiate the kinds of programs that would have put to good use the influx of trained people. But the economic development proposals presented by the Israeli government at the Casablanca conference the last week in October could take advantage of the scientific and engineering manpower Israel uniquely has available to contribute to peace and economic development in the Middle East.

Space program could play a role

Ne'eman describes Israel's civilian space program, which is relatively small (the annual budget is about $7 million).

A recent focus of the U.S. space effort is cooperation with Russia in space science, but also, for the first time in 20 years, manned space programs. For the United States, cooperation has involved a great deal of effort in overcoming difficulties with language differences, and becoming familiar with a system that was closed to the West for decades.

Ne'eman is asked if the Russian space scientists now in Israel might not be a valuable bridge between the two space programs, because they only recently left the former Soviet Union. "We have all the people from all these places so we know what they're doing, we know what they're producing," he agrees. "They can immediately say, 'Look, this piece of equipment is just what is needed over there.'. . . We could be the interface."

Another question is whether nuclear energy should play a bigger role in Middle East economic development. Ne'eman, while supportive in general of the use of nuclear energy for the generation of electricity and for desalination, thinks that such a sophisticated, delicate technology would not be the best candidate for international joint facilities, where it would be placed on a political "fault line" and any mistakes blamed on the other party. He thinks that an international desalination facility, using conventional technology, would be a good choice for a near-term joint project.

However, he describes a proposal he developed to improve the quality of nuclear power plant safety and control through joint work at the time with the Soviet Union, which

would also make Israel an East-West interface:

"When I was minister of energy in the last government, in 1992, I went to Russia to visit all the different types of Russian plants, and I had an idea about developing with the Russians. . . .

"You see they are very good at big pieces. They have machinery, [which] I haven't seen in the West, for very large metal cutting and things like that. But they're very bad at fine things. And the Finns did something wonderful. They bought two reactors for a place called Lovisa, which are Russian reactors. But the Finns took only the big pieces and they had Siemens do all the controls and safety, while the Finns themselves put it all together. These two reactors at Lovisa for the last 10 years have been the best in the world in terms of performance.

"I spoke at that time to Prof. [Yevgeni P.] Velikhov, who was the head of the Russian activity, about our developing the electronics and controls, etc., and coming out with something new—something a little bit like the Finnish lines, but more advanced models. The Russians could supply the big stuff but we would do the fine part, which fits very well with the kind of infrastructure that we have in the industry that has developed here."

When the Israeli government changed hands soon after, Ne'eman's proposal was shelved. But in the context of again looking at long-term infrastructure and economic projects for the strategically important Middle East, and for the former Soviet Union itself, such a proposal may well be reconsidered.

Biographical background

Ne'eman was born in 1925 in Tel Aviv and graduated with a degree in engineering from the Israel Institute of Technology (Technion) in Haifa.

He fought in the 1948 War of Independence and remained in the Israel Defense Forces until 1958. He obtained his doctorate in physics in 1961 from the Imperial College of Science and Technology in London, and founded the Department of Physics and Astronomy at Tel Aviv University. He was the president of Tel Aviv University in 1971-75, and also founded and directed the Center for Particle Theory at the University of Texas at Austin. Ne'eman has authored more than 300 scientific papers and 15 books.

Ne'eman's government roles have included service as Israel's Chief Defense Scientist, acting chairman of the Israel Atomic Energy Commission, and minister of science in 1982-84 and in 1990-92. In 1990-92, he simultaneously held the post of minister of energy. He has been a member of the Israeli Knesset (parliament).

Ne'eman has been and continues to be an important and controversial figure in Israeli politics, as well as a respected scientist.