## Some Soviet physicists continue emigration effort

As the struggle of a number of Soviet Jewish scientists to emigrate to Israel continues, some are succeeding in their efforts while others have received setbacks. Astrophysicist Evgeny Levich (son of Veniamin Levich), although seriously ill, has been sent to Siberia, according to recent accounts. Physicist Andrei Sakharov, after protesting the plight of the younger Levich and being interviewed about human rights in the Soviet Union by a Swedish radio and television reporter, was criticized by the government news agency Tass. Following a two-week hunger strike by seven scientists, one of them has succeeded in going to Israel and another has been promised a visa this year if he behaves himself. Although they remain in the Soviet Union, three of the group, who are physicists, are reported to have been teaching in Israel—by telephone.

From interviews, correspondence and published reports, PHYSICS TODAY has assembled its own account of the events.

Last year Veniamin Levich, who is a theoretical physicist and an expert on physico-chemical hydrodynamics, and Aleksandr Voronel', an experimenter in critical phenomena, had applied for exit visas and experienced a variety of forms of retaliation (Physics Today, September 1972, page 69). At the same time Evgeny, who specializes in relativistic astrophysics and had worked at the Institute of Chemical Physics, had applied for an exit visa, as did the other Levich son, Aleksandr, and their wives. On 16 May Evgeny was abducted in Moscow and sent by the army to a re-

mote site in Eastern Siberia, where he is reported to be subjected to hard labor. Evgeny, although only 25 years old, has chronic colitis, diverticulitis and is suspected of having cancer of the rectum.

In an open letter from Sakharov, dictated over the phone from Moscow by Evgeny Levich's mother, Sakharov said he believed an international campaign should be carried out on Levich's behalf and "that the violation that took place in the case of Evgeny Levich is by no means a realization of any legal rights of the military authorities. This is solely an action that is meant to frighten and to take revenge upon those who wish to exercise their right to emigrate from this country." Since then the Associated Press reported that Sakharov had been censured by Tass.

Meanwhile proceedings have been started to expel Veniamin Levich from the Academy of Sciences, which if successful will cut off his last source of income and leave him open to prosecution for parasitism. He had previously lost his jobs at the Institute of Electro-Chemistry and at Moscow University.

On 10 June seven scientists began a hunger strike in a Moscow apartment, which they ended two weeks later. The physicists involved were Voronel' (formerly of the Institute of Physical-Technical and Radiotechnical Measurements near Moscow), Moisei S. Giterman (formerly at the same Institute), a theorist who collaborates with Voronel' on research in critical phe-

nomena, Mark Ya. Azbel (formerly at the Landau Institute of Theoretical Physics), an eminent solid-state theorist and Vladimir Roginsky (formerly with an institute of the State Committee for the Utilization of Atomic Energy), a particle theorist. The other strikers were Viktor Brailovsky, Aleksandr Luntz and Anatoly S. Libgober. Shortly after the strike began, Libgober was given an exit visa and is now reported to be in Israel. Recently. Giterman was informed by a KGB official that if he behaved properly, he would be allowed to leave the Soviet Union this year.

One of the reasons that the six remaining hunger strikers cited for ending their fast, according to Edward Stern (University of Washington), who spoke to Azbel, was a plea from Senator Henry Jackson (D-Wash.) that they stop. Jackson is the driving force behind the move to require the Soviet Union to remove restrictions on emigration before extending to the USSR most-favored-nation trade status and US government credits. He promised that he would not let them down. Jackson feels that this is not a Jewish issue but an American issue, and he points out that the United States is a land of immigrants.

To keep themselves alive intellectually, although they are not permitted to be formally employed as scientists, some of those who have applied for visas have been conducting a weekly three-hour physics seminar in Moscow. According to a report by the participants, the seminar emphasizes the point of view that problems involving collective behavior that arise in different fields can be solved by similar methods. From this viewpoint they also discuss problems in biology, linguistics and sociology.

Three of the former hunger strikers are now in regular telephone contact with Israel. Azbel and Voronel' have been appointed as professors on the faculty of Tel Aviv University and Giterman has been appointed to Bar Ilan University, near Tel Aviv. The men have been giving lectures and seminars, which are recorded and played to graduate students in Israel. In addition, the Soviet physicists are reported to be collaborating on research with Tel Aviv physicists.

Late last month the IUPAP Magnetism Conference was to be held in Moscow and Azbel and Voronel' had submitted abstracts. However, they were not expected to be allowed to present their papers nor to attend the meeting. An American delegate to the conference was expected to deliver the papers for Azbel and Voronel'.



Soviet scientists who participated in two-week hunger strike included (from left) Alexander Luntz, Mark Azbel, Vladimir Roginsky, Alexandr Voronel' and Viktor Brailovsky.