

# SCIENCE NEWS OF THE WEEK

## Moscow Science Seminars Meet in America . . .

Since 1972, many "refusenik" scientists — Soviet Jews denied jobs or the permission to emigrate (SN: 1/7/78, p. 7) — have counted on informal Sunday seminars to keep abreast of recent developments in science. The most famous, an ongoing weekly series, was held in Moscow. No longer. The Moscow meetings ended abruptly last month following the arrest of their host, Victor Brailovsky. But in a show of solidarity, sympathetic scientists have resumed the Moscow seminars. There's been a change of venue, however; starting with last Sunday's gathering, they're now held in the United States.

For the past two and a half years, Brailovsky and his wife, Irina — both mathematicians specializing in computer science — have hosted Moscow's Sunday seminars in their Vernadsky Prospekt apartment. But on Nov. 13, Brailovsky was arrested for "defamation of the Soviet state and public order." While his wife held the next meeting as scheduled, Soviet security police have turned away would-be participants for the past two weeks.

Police claim the Nov. 30 meeting was canceled so that the Brailovskys' apartment building could be disinfected. ("Bedbugs" was an explanation offered by one officer, according to an account in *The New York Times*.) But that's just not so, Irina Brailovsky charges, claiming that instead the police are illegally prohibiting lawful private gatherings.

This is not the first time the Brailovskys have encountered trouble by the police over the Sunday seminars. In 1974, Victor Brailovsky was jailed for 15 days after attempting to convene an international session of the seminar. He was interrogated for 12 hours at Lefortovo Prison in May 1977 in connection with the celebrated case by the Soviet government against Sunday seminar press attache Anatoly Shcharansky. And on Dec. 21, 1978, the KGB conducted an eight-hour search of the Brailovsky home. Before the secret police left, scientific papers related to the Sunday seminars were confiscated.

The main impetus behind launching a North American spinoff of the Moscow Sunday seminars was to boost morale among Muscovites closed out of the weekly science talks. "And the response that we got from Moscow is that [scientists there] very much welcome these [U.S.] meetings," Max Gottesman told *SCIENCE NEWS*. Gottesman, a cochairman of the Committee of Concerned Scientists (CCS), was present at the first U.S. seminar held Nov. 30 in the Washington, D.C., home of National Cancer Institute biologist Maxine Singer. In addition to Singer's technical talk on simian virus 40, seminar attendees discussed implications of Brailovsky's ar-

rest among themselves and by phone with Aleksandr Voronel — founder of the Moscow seminars — in Tel Aviv.

According to Robert S. Adelstein, another of those present at the Washington meeting, Voronel expressed more concern about Brailovsky's arrest as a threat to scientific freedom than as a violation of human rights. And that, Adelstein says, brings up another major value of the U.S. seminars: dissemination of scientific

research. Minutes from each meeting will be mailed to Moscow contacts for dissemination among ostracized colleagues. U.S. meetings may also serve as a platform for carrying home to visiting Russian scholars recognition that the plight of refuseniks remains of concern here, Adelstein added. The next U.S. seminar is scheduled for Dec. 20 at Cornell University. Later ones will be held elsewhere; CCS is handling the schedule. □

## and Sakharov writes to Israel

One of the purposes of internal exile or forced residence — a tactic so often employed as a punishment by totalitarian regimes — is to make it difficult for the exile to maintain contact with former associates and to stay involved in former activities. (With Calvinistic thoroughness the Afrikaners of South Africa make this point explicit by forbidding the victim to receive visitors or to attend any meetings whatever.) Thus, friends of Andrei D. Sakharov, the famous Russian physicist, have feared that he would be unable to keep up with the international community of theoretical physics, restricted as he is to the limits of Gorky, a "closed" city, one that foreigners are not allowed to visit.

Sakharov was forcibly moved to Gorky early this year (SN: 2/2/80, p. 67). Since then he has been subject to various police harassments. The Soviet press has added to the uneasiness of his friends by a campaign of vilification, which suggested at first that Sakharov's political interests had so superseded his scientific interests that he was no longer competent to do physics. Then the insults claimed that, in spite of his relative youth, he was becoming senile.

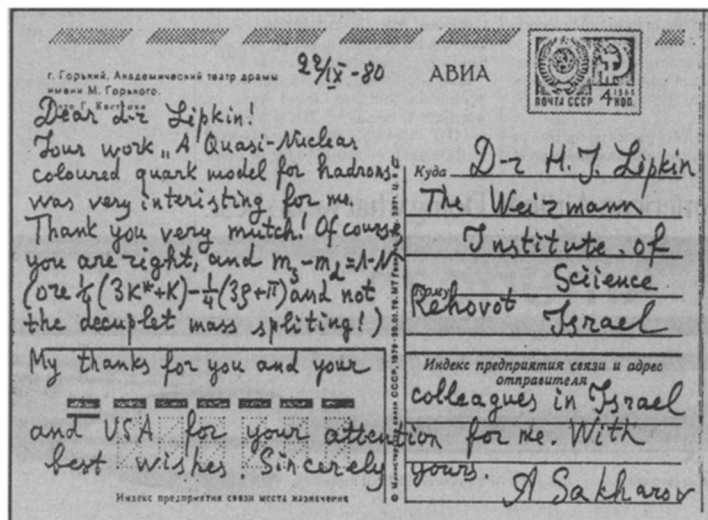
In his own hand, Sakharov now goes a long way to allay the apprehensions of his



Wide World

Sakharov: Exile in Gorky is bitter.

friends and refute the contentions of his enemies. Recently, Harry J. Lipkin of the Weizmann Institute of Science in Rehovot, Israel, received a postcard from Sakharov, in which Sakharov expresses his gratitude for a copy of a paper of Lipkin's and makes a comment on it. The card was reproduced in the *Washington Post* on Nov. 25 and is also reproduced below.



The card indicates that Sakharov has received at least one major paper from the West (and so possibly more), presumably by the ministrations of the so-called Sakharov Underground. Lipkin's paper has to do with the masses of the subatomic particles: how the masses of the quarks (out of which the subatomic particles are supposed to be built) should be added and subtracted to make up the masses of the subatomic particles that are observed (quarks being unobservable). This is a field in which Sakharov has made noted contributions (his calculation of the masses of the charm particles, for instance).

Sakharov comments on one of the methods for calculating the particle masses and takes sides with Lipkin in a controversy that surrounds it. Even allowing for the brevity of space on a postcard, the statement is forthright and seems to come from a mind confident of its currency and its powers. He does not buffer it all over with qualifiers.

As a day in the life of Andrei Dmitrievich this is no extensive addition to scientific literature, but it is a signal that Sakharov can still work, somehow. □

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## Further trimming of gene-splice rules

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As part of the steady trend of easing safety regulations on recombinant DNA research, the national Office of Recombinant DNA Activities has now removed itself from some of the routine supervision. But the local "biosafety" committees, to whom the responsibility has been shifted, also want to lighten their workload. At a meeting in Washington Nov. 24 and 25, for example, the heads of those local committees agreed that the time and effort they spend at their task of reviewing protocols of experiments planned by scientists at their institutions is out of proportion to the low risk of the experiments. They suggested that one or two people at each institution could handle the job more expediently.

In the Nov. 21 FEDERAL REGISTER, Donald S. Fredrickson, director of the National Institutes of Health, announced that the national Office for Recombinant DNA Activities (ORDA) would no longer review, register or approve most experiments, leaving that responsibility to local biosafety committees (in spite of the local committees' desire to give it to one or two local officers). The national office would still assign safety levels to experiments not explicitly covered by the guidelines and to experiments requiring case-by-case review, such as those involving large-scale production or exceptions to guideline provisions.

Trust in the local biosafety committees was an important factor underlying the procedural change. "By now, Institutional Biosafety Committees have accumulated

sufficient experience with and knowledge of the Guidelines to operate as independent review groups," says Maxine Singer, the National Cancer Institute biologist who proposed the new registration requirements.

Sixteen of seventeen letters received in response to the proposal (published Aug. 21) support the change, Fredrickson says. The letters say that review solely by the local committees will be simpler and just as effective as the more complex review procedures. One letter suggested that the change would leave the national office with more time to spend determining policy, and another stated that the more complex system of review was "... counterproductive because bureaucratic requirements seen by investigators to be clearly unnecessary lead to disrespect for regulations that should be respected."

The one letter opposing the changed registration procedure argued the importance of centralized files on the research, because "somebody should know what is going on."

During their Washington meeting, the biosafety committee representatives expressed willingness in one of a series of straw votes to send to NIH a short annual report listing experiments done at each institution requiring the top (P3 and P4) safety precautions, and the representatives split on willingness to include in such a report lower containment (P2) research.

The strongest message the attendees had to send to the national Recombinant DNA Advisory Committee was that they

believe work with recombinant DNA will not generate anything more hazardous than its starting materials. All the information collected on recombinant DNA since the early days of uncertainty and public concern have diminished scientists' expectations of risk, says Ed Adelberg of Yale University's institutional biosafety committee. The attendees urged the national committee to exempt from the guidelines all experiments using the disabled bacterium *Escherichia coli* K-12, for example. Work with that microorganism, which includes the vast majority of current recombinant DNA experiments, now requires the lowest level of safety precautions (P1 containment). "That classification provides only red tape and paperwork, not safety," one scientist charged.

Although the meeting participants say that local biosafety committees are not justified by the risk of hazards arising from recombinant DNA research, they were able to suggest at least one useful role for the groups — a public relations job. The presence of the committees, which include representatives of the community such as an official of the local health department, can allay public fears of recombinant DNA research. Ray Thornton, chairman of the Recombinant DNA Advisory Committee, says that the national committee will consider the suggestion of replacing the local groups with single biosafety officers. But he warns that major departures from the established structure could destroy public confidence that has taken years to develop. □

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## Redesigned Soyuz orbits 3 cosmonauts

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On June 30, 1971, the Soviet Union's 18th manned spacecraft, Soyuz 11, was returning to earth with its crew, cosmonauts Georgiy Dobrovolskiy, Viktor Patseyev and Vladislav Volkov. After nearly 24 days in orbit, the trio was coming home in triumph as the first human beings ever to live in a space station, having spent most of their time as the initial occupants of Salyut 1. Just half an hour before touchdown, however, tragedy struck: A malfunctioning seal caused a sudden depressurization of the Soyuz cabin, and the three cosmonauts died, unprotected by the bulky spacesuits that would have taken up too much room in the crowded craft.

Although initial Soviet reports following the catastrophe identified no structural failures, a major Soyuz redesign and test program resulted, so exhaustive that it was 27 months before cosmonauts again ventured into space — and this time in pairs, fully protected by spacesuits. Even in recent months, when as many as four cosmonauts at a time have occasionally shared quarters aboard the Salyut 6 station, the teams have commuted between earth and orbit in twos. Until last week.

On Nov. 27, the first three-cosmonaut

crew in nearly a decade took off aboard the latest version of the Soyuz and docked a day later with Salyut 6, whose previous occupants had set a 185-day record for time in space. Observers speculated that Leonid Kizim, Oleg Makarov (a veteran of two previous flights) and Gennadiy Strekalov might attempt a still-longer stay.

The new Soyuz, designated "T" for transport, was first flown last December in an unmanned version that successfully docked with the Salyut to bring a load of supplies. On June 5, Soyuz T-2 delivered — and subsequently brought home — a two-man crew (SN: 6/14/80, p. 373). The craft launched last week was designated T-3, 39th in the Soyuz series and the 47th Soviet spacecraft (including six Vostoks and two Voskhods but not the Salyut stations) of man-carrying design.

The changes in the T-series vehicles from earlier designs are substantial. "Whereas only individual systems were modernized up until now," according to Soviet news agency quotes from Vladimir Shatalov, in charge of cosmonaut training, "this time virtually all systems have been put through modernization." Increased use of microelectronics has reportedly