

Jewish physicists denied admission to IUPAP conference

There has been considerable interest in the welfare and present situation of a number of Soviet Jewish scientists who have applied for visas to emigrate to Israel. Besides being refused visas, these scientists have been dismissed from their scientific positions. We are writing this letter to report events in connection with the International Conference on Magnetism held in Moscow 22-28 August, involving several of these scientists.

M. Azbel, A. Voronel and M. Gitterman wished both to attend this conference and to present contributed talks. For Soviet scientists the mechanism for obtaining information about the conference and arranging to attend and present talks was predicated on a scientist having a position at an official scientific institution. Since Azbel, Voronel and Gitterman had been dismissed from their positions, the usual procedures did not apply to them; immediately prior to the conference, they told several American participants that they understood they would not be allowed either to present their talks or attend any session of the conference. Subsequently various of the Soviet organizers of the conference confirmed that Azbel, Voronel and Gitterman would not be allowed either to attend or present talks at the conference. The Soviet organizing officials stated that the abstracts and applications had been received too late.

A number of conference participants appealed to several members of the IUPAP Magnetism Commission, including the chairman George Rado, to consider the question of attendance by Azbel, Voronel and Gitterman. (The Magnetism Commission consists of 10 members from 10 countries, and was joint sponsor of the conference, together with the Soviet Academy of Sciences.) Certain Commission members, including the chairman, felt that they could not allow this question to be discussed at the Magnetism Commission meeting. They stated that attendance at the conference by Soviet scientists was a purely internal Soviet affair and therefore did not fall under the jurisdiction of the Commission. The Commission officers also declined to meet with Azbel, Voronel and Gitterman privately to hear why they should be allowed to attend.



Special seminar held by Jewish physicists in A. Voronel's Moscow apartment during recent International Conference on Magnetism. Standing at left is M. Azbel; seated directly in front of him is H. E. Stanley, co-author of accompanying letter; standing at extreme right is A. Levich, son of Benjamin Levich who was also present.

This situation led Azbel, Voronel and Gitterman to suggest presenting their talks at a seminar to be held in Voronel's apartment on Sunday afternoon, 26 August. All conference participants were to be invited to attend. In circulating information about the seminar, the conference participants were informed that this would be a strictly scientific seminar of the usual sort. There would be no demonstrations or protest speeches. Those wishing to attend the seminar met on Sunday, 26 August, and were guided to Voronel's apartment.

The seminar was attended by 41 conference participants in addition to several Soviet Jewish scientists. These 41 consisted of 9 Americans, 6 Israelis, and 26 from the Netherlands, West Germany, Denmark, France, Sweden and Canada. Observers from the conference organization also attended.

The seminar was on statistical mechanics. There were three 20-minute talks, each followed by ten minutes of discussion. The speakers and topics were: M. Gitterman, "Hydrodynamic Theory and Critical Phenomena" plus "Some Comments on Gravitational Effects on Tricritical Behavior in He₃-He₄ Mixtures"; M. Azbel, "One-Dimensional Bipolar Chains"; A. Voronel, "Pretransitional Phenomena in Melting."

M. Azbel served as Chairman of the seminar. He stated that this seminar was one of a series that these scientists and their colleagues in the same situation had been holding. He said this was the first seminar that outside scientists had attended. Azbel expressed the hope that visiting scientists in Moscow would attend future seminars.

The seminar schedule for October was:

- 7 October: M. Gitterman, "Hydrodynamic Investigation of Critical Phenomena."
- 14 October: M. Azbel, "Biopolymer Investigation From the Physical Point of View."
- 21 October: A. Voronel, "Liquid State as the Phase Transition Vicinity."
- 28 October: B. Levich, "Quantum Theory of Chemical Reactions."

The seminars take place on Sundays at 12 noon at Voronel's apartment, Narodnoye Opolcheniye Street 45, Apartment 103, near the Oktyabrskoye (October) Poly Metro Station. Further information can be obtained by telephoning Gitterman at 496-0089.

In conversations these scientists expressed their desire for scientific contact with scientists residing outside the Soviet Union, since they are denied contact with all scientific activity within the Soviet Union. They wish to have such contact in order to remain alive as scientists. It would be most useful to send them current preprints and reprints. Use of registered mail is strongly advised to ensure delivery. Voronel's address is as given above. Other addresses are: Dr Mark Azbel, Veshnakovskaya 4/2, Apt. 5, Moscow; Mr Moisei Gitterman, Moscow Oblast, Solnechnogorsky Raion, Mendeleyeva Street 37, Apt. 67, Moscow; Dr Benjamin Levich, Leninsky Prospekt 11 Apt. 5, Moscow. We hope that all readers of PHYSICS TODAY will assist our colleagues in the Soviet Union by mailing them such current scientific material.

ROBERT J. BIRGENEAU
Bell Telephone Laboratories
Murray Hill, New Jersey

BERNARD R. COOPER
GE Research and Development Center
Schenectady, New York

H. EUGENE STANLEY
MIT, Cambridge
Massachusetts

comment on page 11

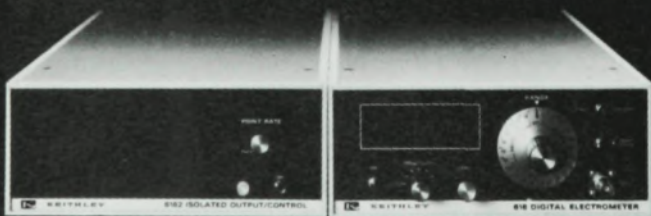
The Best Yet from the Electrometer Leader

Keithley's
NEW
Model 616
Digital
Electrometer
measures:

- volts
 - amps
 - ohms
 - coulombs
- automatically ranges and
has an optional Output/Control
for BCD output and programming



Keithley Instruments has been designing industry-leading Electrometers for over 20 years and the 616 is the most innovative Electrometer we've made yet. It has dc current and voltage sensitivity to levels previously reachable only with vibrating reed electrometers. The digital display is a direct-reading $\frac{1}{4}$ " LED display—easy-to-read near or far. The 616 is the first autoranging Electrometer Multi-



meter. And the optional BCD Output/Control (\$595—shown above with the Electrometer) makes the 616 the most versatile, controllable, interrogatable systems-oriented Electrometer available.

The new Model 616 Digital Electrometer is the most versatile and complete Electrometer ever offered by anyone. Look at this capability:

- automatic ranging over any 5 decades
- $10\ \mu\text{V}$ to 200 volts
- 10^{-16} amp to 200 milliamps
- 1 ohm to 2×10^{14} ohms
- 10^{-15} coulomb to 2×10^{-5} coulomb
- manual ranging too
- 1000-volt low-to-ground isolation
- input resistance greater than 2×10^{14} ohms
- complete BCD Output/Control available as option
- analog output, for continuous recording
- only \$995

All of this in a compact, $3\frac{1}{2}$ inch half-rack package.

If you need performance, versatility, convenience—or all three—you need the Model 616. Send for full details or a hands-on demonstration right now. Get the leader in your lab.



**KEITHLEY
INSTRUMENTS**

U.S.A.: 28775 AURORA ROAD, CLEVELAND, OHIO 44139
EUROPE: 14, AVENUE VILLARDIN, 1009 PULLY, SUISSE

prices slightly higher outside USA

Circle No. 10 on Reader Service Card

letters

COMMENT BY CHAIRMAN OF IUPAP COMMISSION: I welcome the opportunity to explain why the International Union of Pure and Applied Physics (IUPAP) did not intervene in the case of M. Azbel, M. Gitterman and A. Voronel. These Soviet physicists, hereafter referred to as AGV, were denied admission to the IUPAP-sponsored International Conference on Magnetism held 22-28 August 1973 in Moscow, USSR.

Both before and during the Moscow conference, I was put under considerable pressure to have IUPAP intervene on behalf of AGV to allow them to attend this meeting. It was even proposed that IUPAP sponsorship be withdrawn from the conference. However, as Chairman of the IUPAP Commission of Magnetism, I must adhere to the policies of IUPAP, the international organization that elected me, even in cases where those policies are contrary to my personal feelings. To make sure that my actions in the AGV case would be in accordance with IUPAP policy, I requested (well before the conference) the advice of Larkin Kerwin (Canada), the Secretary-General of IUPAP and W. W. Havens, Jr, the Secretary of the US National Committee for IUPAP. They informed me that IUPAP cannot intervene, and has never intervened, when an individual scientist is prevented from proceeding from one part of his country to another part. In view of this policy, I considered it inappropriate as Chairman of the IUPAP Magnetism Commission (which is composed of representatives of twelve nations, including the USSR) to visit AGV during the Moscow conference. Although I could not help AGV officially, I appreciate having received additional information on their situation from US scientists who were in contact with them. When the AGV case was discussed at the Moscow meeting of the Magnetism Commission by E. P. Wohlfarth (UK) and W. Low (Israel), I explained the above-mentioned policy of IUPAP and stated that as members of one of its international commissions, we must adhere to IUPAP's policy even in cases where it does not reflect our opinions as individuals.

Although the policy of IUPAP in the AGV case has been criticized, it is my opinion that if, as Chairman of the IUPAP Magnetism Commission, I had acted contrary to IUPAP policy, I would have jeopardized the progress made by IUPAP toward international cooperation in science and toward the IUPAP aim of free movement of scientists for international scientific purposes. Examples of this progress are the recent improvements in the granting of visas for attendance at interna-

tional scientific conferences.

In the case of the Moscow conference, the early plans of my predecessor, Walter Marshall (UK), were followed by extensive and persistent efforts by myself and Kerwin to solve the anticipated as well as the actual visa problems. Although some of the USSR visas for attendance at the Moscow Conference were granted so late that six of the twelve Israeli applicants were unable to attend the conference (a fact which I greatly deplore), to the best of my knowledge, all the scientists (including all the Israelis) who requested USSR visas did in fact receive them. If these visas had not been granted, IUPAP may well have received a very serious blow. The IUPAP rules state that "IUPAP will not sponsor a conference if visas are refused for travel to it purely on grounds of nationality or citizenship."

In spite of the fact that officially I could not intervene for AGV, I wanted to do whatever I could unofficially to help them. Therefore, I requested and obtained a private meeting with Academician S. V. Vonsovsky, the Chairman of the Magnetism Conference. Also present were Joseph F. Dillon, Jr, of Bell Laboratories, a personal friend, and H. S. Lantsberg, Head of the Scientific Information Department of one of the Institutes of the USSR Academy of Sciences. In a friendly and (hopefully) persuasive manner, I conveyed to Vonsovsky the intense concern expressed by hundreds of scientists from many different countries in regard to AGV. Vonsovsky then stated that AGV will be allowed to emigrate, although not immediately, and that the scientific papers of Azbel and Voronel were submitted too late to be presented at the conference. After agreeing with me that not all USSR scientists attending the conference were presenting papers, he said that AGV could not participate in the conference because they did not register before the registration deadline. I can only hope that my meeting with Vonsovsky will help the plight of AGV.

Prior to my departure for Moscow, the Committee of Concerned Scientists sent me petitions containing several hundred signatures that "reaffirm the right of all qualified scientists, from within the host nation, the Soviet Union, and from other countries, to attend and fully participate in the conference." I immediately forwarded these petitions to Kerwin. Upon returning to Washington, I reported to him by telephone on the events at the Moscow Conference (including the AGV case and the lateness of some visas) and was glad to hear that even before my phone call, he had planned to take the petitions to the IUPAP Executive Committee Meeting to be held

**focal length?
doublet?
triplet?
aberration?
harmonics?
power?**

**we have the answers
for you
on our**



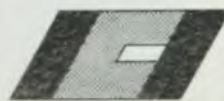
QUADRUPOLE FACT SHEET

Quadrupole optics and design criteria are reduced to a single sheet, laminated in plastic to stand up indefinitely, and are available to you for the asking.

Prof. Harald Enge, who works with and through I.C.I. has carefully and concisely stated the criteria for quadrupole specification and design in a manner that is of great assistance to the scientist and the engineer.

This is the first of a series of fact sheets on accelerator magnets. . .

Check the facts . . . check with I.C.I.



Industrial Coils, Inc.
Birch Street
Middleton, Ma 01949

Circle No. 11 on Reader Service Card

INTRODUCING THE TEKTRONIX TRANSIENT DIGITIZER



The new way to look at transients.

Not all transients are created equal.

But then again, neither are all transient measurement systems.

Some transients don't need much more than just normal methods of observation.

Others require something special. Because the faster the transient, the more difficult it is to observe.

How, what, where and when it all happened is a tough job when it's your responsibility to come up with fast answers.

But no device can help you quite like the Tektronix R7912 Transient Digitizer: the revolutionary, new addition to our versatile 7000-Series measurement instruments.

It puts you on the right track to fully analyzing the transient within seconds of its occurrence. And all you get blamed for is saving time and money.

The Tektronix Transient Digitizer can digitize single events with subnanosecond risetimes. It lets you focus accurately on transients with speed and convenience never before attainable.

It gives you complete waveform data. Fast and easy. By offering more resolution than ever before. By providing a writing rate equivalent to 8 div/ns. And an optional local memory of 4096 words. By generating an electronic graticule

which increases visual measurement accuracy. By displaying visually on a large, bright TV monitor. By expanding to multi-channel performance for low cost-per-channel operation. And by eliminating slow, tedious camerawork.

See how much more you can see with the Tektronix Transient Digitizer.

It's the new way to look at transients.

For many transients, it's the only way.

Prices vary with options and plug-ins selected.

An operating system is available for as low as \$10,460. To obtain a copy of "New Ways to See Fast Transients" contact your Tektronix Field Engineer or use the reader service card or write TEKTRONIX, Inc., PO Box 500A, Beaverton, Oregon 97005. Phone: 503/644-0161. In Europe: TEKTRONIX Ltd. Guernsey, C.I., U.K.



letters

in Budapest toward the end of September 1973.

I strongly sympathize with Azbel, Gitterman and Voronel and do hope that IUPAP's policy on the "Free Circulation of Scientists" will be improved. But until the governing bodies of IUPAP adopt a different policy, my continuing efforts to help in cases such as that of AGV are limited by the clear obligation that I operate within the confines of the IUPAP policy that exists at present.

GEORGE T. RADO
Chairman
Commission on Magnetism
International Union of Pure
and Applied Physics

Political prisoners

I have read with great interest the very moving letter published, in the June issue (page 9), from F. Janouch who describes the hardships undergone by members of the staff of the Prague Nuclear Physics Institute following the 1969 invasion of Czechoslovakia. As usual, scientists become early targets of politically repressive regimes.

Unfortunately, the world community of scientists is poorly organized for the effort of gathering information of fellow scientists who are the victims of such repression. Furthermore, even when known, there are no means of mobilizing efforts to bring aid to these unfortunate persons and their families. Yet the expression of an informed public opinion among the scientists of the world could be extremely effective in improving conditions for these people.

The Czechoslovakian case is certainly not unique. Certain Russian scientists, including the celebrated physicist and civil-rights activist, Andrei Sakharov, have escaped imprisonment only because of the fear of an aroused international protest. Recent reports from the USSR suggest increased harassment of Sakharov and the likelihood of his imprisonment or enforced incarceration in a mental hospital appears imminent.

By no means are such instances limited to the Communist world. There are extant reports of some 60 physicians in Uruguay imprisoned for no more than treatment, knowingly or not, of wounded Tupamaros.

And even here in the US where we traditionally enjoy freedom of speech, the recent uncovering of an "enemies" list in the White House, containing names of many scientists, should give pause to those who shrug off tales of political repression as other people's affairs. It could happen here. Indeed, Senator Goodell's current book, "Political Prisoners in America," attests to

the fact that it already has.

Amnesty International, a London-based group organized in 1961, has long experience in gathering information about political prisoners and working for their release and their emigration if that is their desire. They are nonpartisan and work worldwide in both Communist and non-Communist countries. Their staff and research departments are open to us. I invite all interested members of the scientific and medical communities to write to me should they wish to participate in a new effort to organize for the purpose described above.

LEONARD A. SAGAN
Department of Environmental Medicine
Palo Alto Medical Clinic
300 Homer Avenue
Palo Alto, Calif. 94301

Publication of reports describing the plight of nonconforming scientists in the USSR (September 1972, page 69) and Czechoslovakia (June 1973, page 9) is certainly commendable. You were also wise to print F. Janouch's letter against a backdrop of Prague so that your readers would not think that he is describing the situation in the United States when they read:

"Men, of whom everyone has made some more or less important contribution in his field, are now frequently forced to earn their bread working far from the field of their knowledge and interest."

And: "Scientific careers have been interrupted at the time of their highest scientific activity, without as yet having reached renown and recognition. Their fate therefore remains without the international response that could eventually moderate their situation."

Does this not sound as a narrative from the contemporary American scene, particularly in view of the recent mass layoffs at the AEC sweatshops (April 1973, page 82: Argonne 250, Brookhaven 225, Lawrence 475, Los Alamos 200, Oak Ridge 500, SLAC 80 and Sandia 500)? News of this disaster has been carefully buried between other text in your journal, yet it concerns more scientists that are currently in trouble in the USSR and Czechoslovakia together. Janouch, our Czech colleague, can at least expose the nefarious practices of the Soviet-imposed Czech regime in the pages of *PHYSICS TODAY*. I can only hope that the international response in which he places such hope will be something more than what his country got in 1939 (Munich), 1948 (communist takeover), and 1968 (Soviet occupation). Little hope is to be placed in the possibility of the American Physical Society taking the stand on the issue of American physicists barred from working in their cho-

The new 420L offers everything but the pedestal you'll want to put it on.

The pedestal's optional, but the broad frequency coverage of 100 kHz to 280 MHz and a power output up to 20 watts are standard in this state-of-the-art RF power amplifier.

Linear Class A circuitry will faithfully reproduce input modulations including AM, FM, SSB, TV and pulse with minimum distortion. Completely solid-state, the 420L will supply full power output into any load impedance (from an open to a short circuit).

Driven by any signal generator, frequency synthesizer or sweeper, the 420L is a flexible and versatile source of RF power for general laboratory work, RFI/EMI testing, signal distribution, RF transmission, laser modulation and ultrasonics.

The new 420L. Offering everything but the pedestal you'll want to put it on, at \$2890.

For further information or a demonstration contact ENI, 3000 Winton Road South, Rochester, New York 14623 (716) 473-6900 or TELEX 97-8283

ENI

The world's leader in solid state power amplifiers



Circle No. 14 on Reader Service Card