

letters

Orlov in exile

I want to draw attention to the tragic situation of Yuri Orlov, the founder of the Helsinki Watch Group in Moscow and a well-known physicist (see page 71). As many of you remember, Orlov was imprisoned in February 1977 and spent seven years in a prison camp in the Urals. He was then exiled to the village of Kobiai in Yakutia. His term of exile is five years, so he is due for release only in 1989 (if he is not put in jail again). He is now 61 years old.

Recently, I received a letter from a friend in Moscow who is also an old friend of Orlov's. So, the following information is absolutely reliable—and extremely distressing.

To sum it up, the KGB is doing everything to make Orlov's life unbearable. It instigates local people against Orlov, using all kinds of lies and slander. Those few who dare to treat him decently or who, God forbid, help him, are threatened and persecuted. In September–October last year, Orlov received one or two issues of *Physical Review* that were sent to him from abroad. Since then, however, he has received nothing. None of the books sent to him from this country have arrived either, as far as we know. In November I succeeded in calling him by telephone, but this was the first and the last time. Since then I and other people tried to call him many times, but each time the Soviet operator repeated that "there is no communication" with Kobiai. I learned now that the telephone Orlov used when he spoke with me has been disconnected, despite the fact that I made a point of speaking only about his health and scientific work.

My friend writes:

If to compare, I know of no other exile situation that would be as hard as Yuri's. It is a complete isolation in a village which is isolated itself. People who contact Orlov are either immediately called for brainwashing or already are provocateurs. Rumors are spread that Orlov is a spy, a traitor, a warmonger. The climate, both in winter and in summer, is harsh even for a healthy young man. Aggressive neighborhood. No permanent place to live.

To survive, one has a lot of work to do: to get firewood, to repair house, etc. In addition, when Yuri lives in somebody's house, he always is asked to do more, e.g., to look after livestock. This breaks his time, and together with scientific isolation makes it impossible to do science, which is the only way for Yuri to live psychically.

For half a year Orlov was renting a house. Now the authorities are tearing it down under the pretext that they are erecting a monument to Victory (in World War II). So he again has nowhere to live—except a dormitory for temporary workers. "And this is a catastrophe. Life in that dormitory is worse than in the prison camp," writes my friend.

On the night of 21 April Orlov was severely beaten in the street by two drunken toughs. "What is your name?" said one. And then: "Beat him up." When Yuri fell they went on beating and kicking him.

Yuri's wife Irina visits him regularly and spends a month or two there before returning to Moscow. She is now under the strongest pressure herself, and may be arrested any moment. My correspondent reports that when the KGB brainwashes Orlov's acquaintances, they say that "Orlov would be better off if he had a different wife"; and "she is a bad influence on him"; "she was warned not to pass information to the West, but she persists, therefore we are opening a criminal case against her and will put her in jail." Concerning Orlov, they say that "if he makes any statement, he goes to jail." It has become known that some villagers were pressed to make false testimony against Orlov. If put in jail again, Orlov will not survive it.

Once again, there is confirmation of what I and other Russians here have been repeating: We must concentrate on getting Orlov out of the Soviet Union; this is the only way to save him and his wife. I know that some people in the West doubt whether the Orlovs want to emigrate, but there must be no doubts about this. My correspondent writes:

I do not think Yuri can survive it. The only thing that, maybe, could help is the mobilization of public



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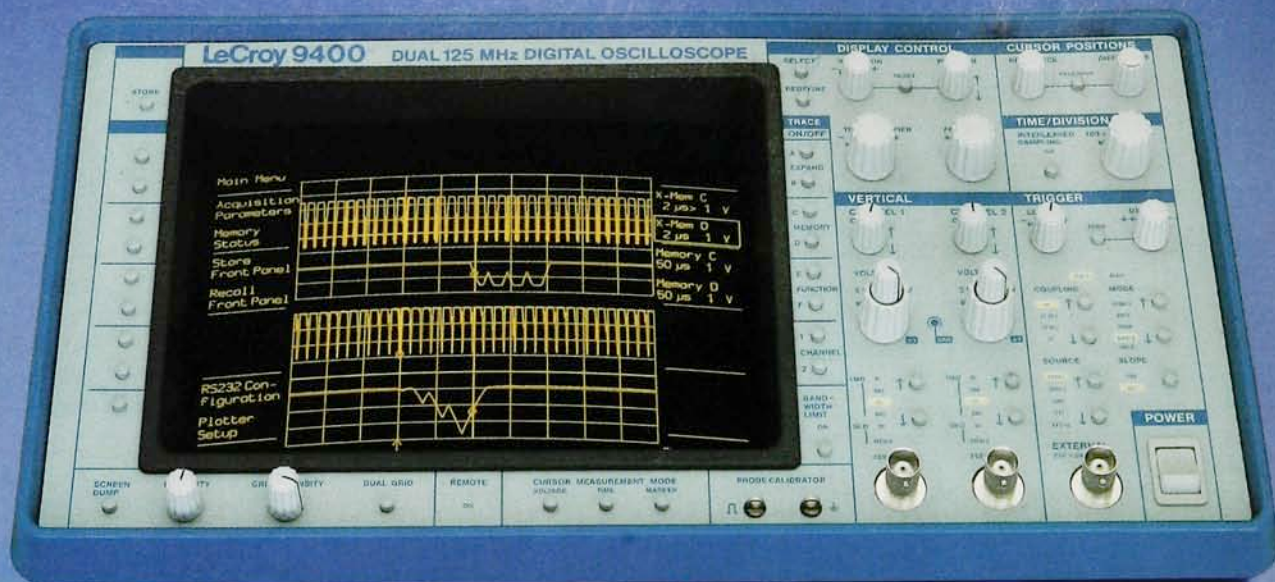
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opinion. The demand should not be "to improve Orlov's situation" or "to ease his condition in exile," but to send him out of the country. It is the only way to save him (and this is not only my opinion). If a person is not needed to the state, neither as a citizen nor as a scientist, the state should let him go. He was "punished" well enough.

VALENTIN F. TURCHIN

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5/85

Is the moon there?

I was startled to discover the editorial sleight of hand by which you presented me in the April PHYSICS TODAY table of contents, apparently declaring to 98% of my distinguished colleagues, friends and associates that they have rocks in their heads.

Because some of these people may quite justly have felt disinclined to hear anything else from me, would you please permit me to explain to them that the statement you quote after my title ("Anybody who's not bothered by Bell's theorem has to have rocks in his head") is not mine. I quoted it as a remark that was once made to me, and cited it as an example of the variety of attitudes one encounters. True, I characterized its point of view as "moderate," but that was relative to a range of positions extending all the way to the assertion that the theorem is the most important result in the entire history of physics.

May I also note that the biographical information accompanying the article contains an incorrect statement about my future literary efforts. Neil Ashcroft and I have no current plans to update our solid-state physics text, 95% of which is basic enough to require no significant revision. We do, however, want to produce a shorter and less technical version of the same material for those who find our book too unwieldy for the one-semester undergraduate course and are (perhaps optimistically) aiming for 1988.

DAVID MERMIN

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5/85

Small-scale research

Daniel Kleppner, in his article "Research in small groups" (March, page 78), gives the minimum size of a small-scale research group. This minimum group is a single faculty member with one graduate student.

The article, consistent with its title,

excludes considerations of research on the part of a single individual. It also excludes research on the part of a single faculty member with one or more undergraduate students (or high-school students). These exclusions are not an issue, because if these investigators' research makes advances in physics it is partly because their peers have generously shared enough time (advising, preparing samples or computer outputs and refereeing) to equal, approximately, that contributed by a graduate student—or possibly even more.

Now I would like to call attention to unique facets of research with students whose level of preparation is below the graduate-level minimum imposed by the article.

The obstacles facing research with such students include three more beyond those considered in the article: The faculty member must be prepared to devote more time to explanations and checking of results; the subject of the research must be within the grasp of the students; and, usually, it must capture their interest in the absence of remuneration or graduation requirements.

For example, my former research on spectroscopic plasma diagnostics at Southern College, in Tennessee, went beyond the grasp of our undergraduate students at the same time that it was being left behind by the superb instrumentation at NBS and elsewhere. My present research, on the periodic law of molecules, its geometric representations and its predictive use, seems ideally matched to undergraduate students' skills and interests. In each case, I have devoted at least 30 minutes to each student's clock hour. This intimate relationship also contributes to the training of what will become "our graduate students."

Thanks to Kleppner for his conclusion that "the collective needs of the small independent research groups deserve to be considered in parallel with the need for . . . major facilities."

RAY HEFFERLIN

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4/85

Fortunately, granting agencies do realize that, as Daniel Kleppner stated in his article, "Research in small groups," (March, page 78), a "\$1-million price tag for a molecular-beam epitaxy machine is too high for most research programs." After all, homemade MOCVD equipment costs less than \$100 000! However, I appreciate Kleppner's point of view, indeed the varied viewpoints in your special March issue on major research facilities. It is encouraging to be reminded in your editorial that the main aim of

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