the unjust and illegal decisions preventing us from leaving the USSR. This expression of solidarity from our Western colleagues will facilitate our departure, making it possible for us to rejoin the scientific community and renew our scientific work.

L. A. Dikii (Atmospheric Physics; Mathematics)
M. I. Freidlin (Physics; Mathematics)
G. A. Freiman (Physics; Mathematics)
I. S. Irlin (Oncovirology)
M. I. Reitman (Structural Mechanics)
A. L. Vasilevsky (Linguistics)

11/81 *Moscow, USSR*

Reply from Moscow

A letter by Irina Brailovsky was published in May 1981 (page 11). In this letter are slanders; first, during the period of my association at Moscow University (since October 1977) in the position of rector, this individual did not work at the university nor did she have any relation with it. Second and most important, Moscow University and myself in particular do not have and can never have any connection with the solution of the question of an exit visa.

A physics journal, in distinction to the common press, should stick to the facts—an elementary request.

As regards the slanders, let them remain on the conscience of the individual mentioned above.

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Moscow State University
1/82 *Moscow, USSR*

Architectural oscillations

Albert Bartlett's recounting of the Tacoma Narrows Bridge failure in October (page 9) brought to mind a more recent example of bridge destruction due to resonance. While working on the staff of the 1973 National Boy Scout Jamboree-East (Moraine, PA), I personally witnessed the breakup of a footbridge being crossed by boys.

The bridge was four feet wide and about fifty feet long. It was constructed of plywood sheets riding on top of empty oil drums. These drums were held in place by two steel cables on both sides of the bridge. Each half-inch cable was fastened to buried concrete blocks.

Staff members were stationed at the bridge to urge each crossing troop to "break step"—although very few troops were marching anyway. It was probably due to this lack of military marches that the staff members were caught off guard and unable to restrain one troop of marching boys.

Forty boys and adult leaders came

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marching across the bridge that August night, but before they were three-quarters across, the cables on the bridge snapped. Many boys were dumped into the lake and were fished out by waterfront staffers stationed in rowboats for just such an emergency.

Fortunately, no one was injured, although all other foot traffic that evening had to be put through a mile-wide detour.

It is unlikely that any of the boys on the bridge that night will forget the awesome power of large-amplitude oscillations. Perhaps a similar experiment could be arranged with all first-year architectual students as the participants!

ALFRED FANT JR
University of Texas
Austin, Texas

11/81

Heat from the Earth

Laura Nader's February 1981 Guest Comment, page 9, and the responses it brought in December (page 11) demand one more comment. To me the debate between the protagonists of nuclear power vs. solar power is, in many ways, a tragic waste.

Going almost unnoticed and usually ignored by the energy elite is the one ultimate energy source that will surely one day become the universal answer to the world's energy problem. I refer to the heat of the Earth.

There are roughly 10^{50} BTU of heat, waiting white-hot beneath where we are sitting, there for the taking. This energy is environmentally ideal; no smoke, no acid rain, no radiation to arouse untutored pressure groups against it. It doesn't have to be transported in enormous tankers halfway around the world. It can't involve us in another world war to defend its sources. And it is infinite in quantity!

So what are we waiting for?

The answer, I believe, is that the difficulties of extracting this energy are so great that we have given up almost before we have started. Deep-rock heat mining is well advanced, as Jefferson W. Tester of MIT can tell you. American inventiveness has given the world almost every (but not all) great scientific breakthrough that has given man the freedom from labor and the enjoyment of leisure that are commonplace. Let's turn this fabulous genius loose on this last great problem and lick it before we dissipate our energies in arguing which of the lesser resources is preferable and before we go to war defending Asiatic energy sources and before we spend ourselves into a na-