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of trapped-particle instabilities considerably. As I have not been actively working in plasma physics for some time, it is very pleasing to read encouraging reports popping up every now and then (for instance, the Alcator at MIT, Mirror at Livermore, and the current PLT experiments at Princeton) in PHYSICS TODAY.

References

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Herzfeld 50 years ahead

It will be appropriate, I hope, to present a brief addendum to the obituary of Karl Herzfeld (January, page 99). The subject of a minimum metallic conductivity has become a very fashionable subject in recent years, and a number of eminent scientists, such as Nevill Mott, have argued about the existence of such a minimum value, and have computed it in various ways.

Just recently (see, for example, the Proceedings of the 19th Scottish Universities Summer School in Physics (Metal Non-Metal Transition in Disordered Systems)—in particular, the chapter by H. Fritzsche—to be published in early 1979), it became better known that Herzfeld had carried out such a calculation in his own way a long time ago (Phys. Rev. 29, 701 (1927)) and had arrived at an answer quite close to the more recently computed values.

I believe that Herzfeld appreciated the significance of what he had done, and I would venture to guess that not too many others did; a reasonable conclusion might just be that Herzfeld was simply fifty years ahead of his time.

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1/17/79

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Immortality of deterrence

In the debate on the nuclear arms race, the central point still is the actual human meaning of nuclear deterrence. Nuclear deterrence certainly has not helped to bring trust and confidence to our international relations, which are the preconditions for a durable peace. The fact that such deterrence might, so far, have prevented some attacks or some wars from spreading does not guarantee that its

function will be limited to *mere* deterrence in the future. What could be the consequences of the policy of deterrence if there occurs a political accident, in which an opponent imagines he is attacked, becomes desperate or insane or when he simply attacks as the Nazis? Who of us would then be able to inflict, with his *own* hands, the atrocities that the inevitable consequences of remote-control nuclear war actually imply to innocent victims? Is the issue any different if we make the nuclear weapons and relegate them to computers to drop?

Bernard Feld voiced the consensus of the Pugwash conference at Kyoto in 1975: "Deterrence is basically an immoral concept in that it holds civilian populations hostage to the actions—rational, irrational, or even accidental—of their leaders or, even more frightening, of leaders of nations over which they have no control. Deterrence, whatever its successes in the past, is inherently unstable and unworkable in this increasingly multipolar world."

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1/12/79

Corrections

September, page 17—In the story on the diamagnetic anomaly in copper chloride the Cleveland State University group that collaborated with A. P. Rusakov in 1977 consisted of C. W. Chu and Steinar Huang. S. Z. Huang of the University of Houston, who was mentioned in the story, was not a member of the group.

September, page 26—The names of O. W. Richardson and P. Langevin were transposed in the caption of the photograph identifying the participants of the Seventh Solvay Congress.

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