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Gamow in high esteem as an outstanding scientist and a bright personality. In this connection I am happy to inform you that not without my personal involvement in this problem, by the resolution of the department of general physics and astronomy of our academy, Gamow has at last been given back the title of correspondent member of the USSR Academy of Sciences, alas, posthumously. This glad news cannot, of course, make Gamow happy, but it is very important for the whole world's physical community and for his close friends that Gamow has been requited according to his deserts.

"As for Landau's strong opinion of his last encounter with Gamow, I tried my best to maximally precisely remember what had been said by Landau, moreover because this had been said in the presence of some colleagues of mine. Unfortunately, [because of] my imperfect knowledge of the English language, the wording of the English translation proved to be inappropriate. In fact, I did not know the meaning of the word 'loathing,' and the Russian phrase had the word 'неодобрение,' i.e., 'disapproval.' Also, while analyzing the whole paragraph about Gamow we should bear in mind that Landau was given to generalizations, sorts of stereotypes; he from time to time changed his opinions but he needed a pretext or a reason to change his mind about something or somebody, and unfortunately, Landau did not see Gamow again. I am quite convinced that had they met again after 1938 when Landau experienced some revaluation of values, and had they spoken again, the opinion of Landau would have been different. Even in my recollections published in PHYSICS TODAY you can find a paragraph about [John] Bardeen and see how Landau changed his mind about him.

"To my regret, everything connected with Landau has already become history and there is no changing anything now. I have always thought it my duty, being a close friend of Landau, to tell people maximally truthfully what my memory keeps. And the word 'loathing' emerged in the text despite my intentions. But I would like to stress again that the opinion of Landau about Gamow does not at all belittle the scientific achievements of Gamow, nor his charm as a person."

RALPH A. ALPHER

Union College
Schenectady, New York

ROBERT HERMAN

9/89 University of Texas at Austin

How the Garden State Seeds Technology

Your recent reports on New Jersey as a "pole" for the study of physics (June 1989, page 61) were welcome reading here in Trenton, and particularly at the state science and technology commission, where we've been working for some time to develop some of the strengths you cite. As your reporter correctly observed, some aspects of this physics "pole" have developed more recently than others, and in that regard your readers may be interested to know of the role played by conscious planning and development work by our state's government and its business community, working in concert.

Your news stories highlight several developments that, if not actually caused by state support for science and technology, are certainly strongly reinforced by it:

▷ Princeton University's materials science initiative, including its Photonics and Opto-Electronic Materials Center component, are financially supported by our state commission as a way of providing the highest-quality research base to the region's high-technology industrial community. The POEM Center is likely to receive \$10 million in capital support from a bond issue approved by the state's voters last year, and annual operating support from general funds as well.

▷ Rutgers University's laudable efforts in discrete mathematics, surface modification and computational fluid dynamics are all cost-shared through the medium of various other "Advanced Technology Centers" funded generously by our state commission. In addition, the state professorships placed at Rutgers and at New Jersey Institute of Technology became a priority of Governor Thomas Kean's thanks to the attention focused on this need by our commission.

▷ The closeness of the state's industrial sector—AT&T, Bellcore, Sarnoff, Exxon and so on—to these various activities impinging on the physics community is no accident. It has been consciously and deliberately created by means of incentives for cooperation and collaboration. To take one example, the Consortium for Surface Processing referred to in your piece was not fostered by Sematech (although it holds a contract for a Sematech Center of Excellence in Plasma Etching) but by our commission, as a way of building a more powerful concentration of resources in this field. The Consortium for Surface Processing is co-incorporated by Stevens Institute

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of Technology, Princeton, Rutgers, New Jersey Institute of Technology and the SRI-David Sarnoff Research Center (with places reserved for additional industrial members). To induce this cooperation, we offered funding for an Advanced Technology Center in Surface Engineered Materials "distributed" across the incorporators. Thus the consortium acts as a holding company that operates not only our own center but also the Sematech Center of Excellence. Clearly, the support for the latter enterprise could not have been achieved without the support and intervention that fostered the former.

More generally, the state's high-technology community is represented on the governing board of our commission, and through this and other means exercises considerable influence over public policies on science and technology as they pertain to maintaining a sound economic environment for growth of technology-based enterprise. To take just one example, AT&T Chairman and CEO Bob Allen volunteered to head the citizen's committee that successfully campaigned for last year's \$350 million jobs, education and competitiveness bond issue, through which higher education generally, and several of our centers in particular, will be funded. All this activity should result in a continuing awareness that New Jersey is, indeed, a "pole" for physics research and education.

EDWARD COHEN

New Jersey Commission on Science
and Technology

6/89

Trenton, New Jersey

Quantized Transport: A Countered Query

A news story in the November 1988 issue (page 21) discussed the quantization of the electrical conductance of a short and narrow conductance channel in units of $2e^2/h$. In particular, the question was raised of why this effect, observed independently by a group from the Netherlands and by experimenters at Cambridge University, was not predicted theoretically. I want you to know that this effect was in fact predicted by Peter Marquardt and G. Linz of the University of Cologne, FRG. These authors discussed quantum mechanical transport through a narrow channel in exactly the terms referred to by Douglas Stone in your news story, namely, the electron cut-off wavelength λ_c of a waveguide of diameter d , and they came up with the conductance $G \propto h\lambda_c/2 \propto ne^2/h$,

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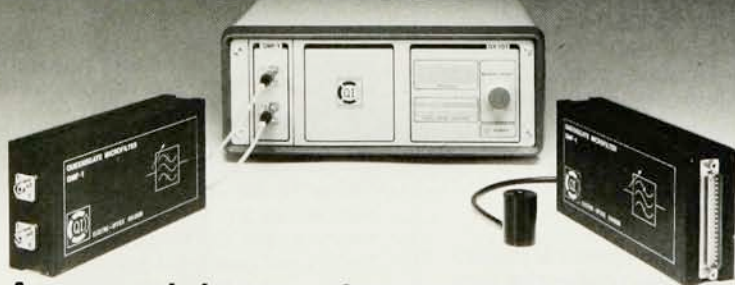


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