letters

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the Soviet Government.

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The exchange of letters, (May 1981, page 11 and May 1982, page 119), between Irina Brailovsky, Russian refusnik, and Anatoly Logunov, rector of Moscow State University, leaves out some of the story. Being acquainted with the principals and with the Soviet system, we feel compelled to respond. One of us (Callen) visited the Brailovskys in 1973 and again, with Irina, in 1981, just before Victor's trial. The other (Goldman) is an immigrant from the Soviet Union, knows the Brailovskys personally, was a fellow physics student with Logunov at Moscow State University, and met with him occasionally thereafter.

The Brailovskys applied to emigrate 10 years ago. Their visa requests were rejected on grounds of knowing state secrets, although neither had ever held a security clearance or worked on a classified project. Arrested in late 1981, Victor was held incommunicado, tried without a lawyer, convicted of "defaming the Soviet State," and internally exiled.

Referring to Irina, Logunov writes that "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." Of course not. Irina, a fluid dynamicist, had been employed as an applied mathematician by Moscow University under a previous rector, since deceased. She had been fired (as was Victor) when they applied to emigrate.

At that time Moscow University had failed to certify that Irina could be released without jeopardizing state security. Later, after she was fired and after Logunov had become rector, another university committee had reconsidered her case and cleared her. Their report was signed by Logunov himself, who has admitted in private conversations that there is no reason to detain Irina. Logunov claims to have so advised the Ministry of Interior orally but refuses to forward to them the written committee report. He is said to take the position that his dealings with the Ministry are always oral.

In his PHYSICS TODAY letter, Logunov asserts that "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." Five years ago, Logunov could have gotten away with that obfuscation, but not now. By now, so many immigrants have gotten out and so many party members and Soviet officials who had been themselves responsible for filling out the forms required by OVIR and the KGB have emigrated, that we have a pretty good idea how the system works, even though the forms, and the very procedures, are themselves secret.

There is a form which OVIR requires to be sent from the employer. The employer (in this case Logunov, as current rector) must explain that the person involved does or does not know state secrets. The final entry on the form is crucial. On this line the employer must certify that "because of this reason this person can, or cannot, be allowed to emigrate," or words to that effect. Upon each rejection and reapplication OVIR goes back again to the institution where the individual worked, for the required clearance. This is the regular procedure, secret but absolutely well-known to Russian officials and to the emigrant and refusnik communities. For Logunov to deny this is perhaps understandable, for he is an ambitious man, at 54 or so already the rector of the Soviet Union's greatest university, vice president of the Soviet Academy of Sciences, a member of the Central Committee of the Communist Party, and a member of the Supreme Council of the USSR. Logunov is a man on the make. But in doing so he forsakes the superb humanitarian tradition of physicists at Moscow State University. Mandelstam, Landsberg, Leontovich, Tamm, and Khaikin perhaps did not achieve such heights, but they would not have acted in this way.

Logunov wants to move high in the Soviet firmament, but he also wants to be well regarded by his fellow scientists. He desires to travel in the West and to be welcomed by physicists at our conferences and our universities. We do not think he should be. As long as he personally blocks the emigration of Irina Brailovsky, we call upon scientists and persons of good will everywhere to shun Academician Anatoly Logunov.

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Gamma-ray laser

A recent issue of the *Reviews of Modern Physics* presents a discussion of how one might hope to make a gamma-ray laser [George C. Baldwin, Johndale C. Solem, Vitalii I. Goldanskii, *Rev. Mod. Phys.* 53 687 (1981)]. I have a comment of such importance that I address it to PHYSICS TODAY with its numerous readership rather than to *Rev. Mod. Phys.* The authors perpetrate an exceptionally ugly acronym for the gamma ray laser—*graser*. The word has a bovine sound, a heavy herbivorous drone that hides the excitement of the search to make a gamma-ray laser.

I propose an alternative acronym for the gamma *ray laser*—*grayl*. This name turns away from the cud-chewing contentment of "graser" and offers a rich mythic imagery. It catches the true spirit of the search for coherent radiation in the keV range.

Imagine also the advantages in seeking funding. What official of a funding agency would dare appear before Congress and say he had refused to fund a search for the *grayl*? The prospect that godless communists might find the *grayl* before the West would surely also loosen purse strings. A search for the *grayl* would fit naturally into policies of the present US administration.

Obviously the community of physicists should work to adopt the more euphonious, more hopeful, more exciting acronym of "grayl" for gamma ray laser.

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Help on pyroelectric history

We are preparing a historical account of the research and development of pyroelectric materials as sensors for infrared detectors, with special emphasis on the period from 1940 to 1960.

We would greatly appreciate receiving information on this subject. Your may send information to

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Japanese mode of thinking

Letters to the editor regarding the Japanese mode of thinking (April, page 91) prompted me to re-read the excellent article by Makoto Kikuchi (September, page 42).

Referring to the "Language Characteristics" chart in that article, a certain dichotomy is apparent:

Language Characteristics

English	Japanese
Digital expression	Analog expression
Logical orientation	Feeling orientation
Linear structures	Pattern structures
Quantitative	Qualitative
Science is easier	Poetry is easier

The English language has characteristics that we sometime refer to as "hard," whereas the Japanese is more flexible, or "soft." Further reflection reveals that there is a strong similarity