

total numbers would warrant. No one knows yet whether the difference is significant: Last year the proportion was lower. This field will be closely watched at this month's Washington meeting.

The proportion of foreign nationals using the service has risen substantially. Of the 895 registrants in 1967, 19% were not US citizens. Of the 1285 registrants in 1969, 26% were not US citizens.

On the employer side, the numbers were down. The total number of employers present dropped from 192 last year to 167 this year. The breakdown by type of employer was aca-

demic, 127, down 21; industrial, 23, down 9 (but down 47 from two years ago); government, 5, up 1; and nonprofit, 12, up 4.

Some employers list a specific number of jobs open; the number of such employers fell by 20 to 234 this year. An additional 33 employers posted openings without listing a specific number.

Placement-service activity at this month's meeting will supply new data. The numbers are always smaller than those for the annual meeting; last year 786 physicists and 69 employers registered. If the trends revealed in New York are valid, more than 1000 can be expected to register in Washington.

Dissidents Force a Vote On 1970 Chicago Meeting

Now that every member of both the American Physical Society and the American Association of Physics Teachers has had his say on whether the 1970 joint meeting should be held in Chicago, the matter may finally be closed.

Bringing the question to a vote was a triumph of perseverance if nothing else for those who wanted to move the meeting. The drive developed swiftly after the Democratic convention last August (PHYSICS TODAY, November, page 9); by February, 706 APS members (about 2.5%) had signed letters or petitions asking that the meeting be moved.

The APS executive committee and later its council issued a series of statements explaining their decision to stay in Chicago. They cited the difficulty of moving such a large meeting at so late a date, the prospect of paying heavy penalties for breaking the hotel contract and the possibility of being blacklisted and the argument that moving would be a political act, something the Schwartz amendment vote had shown the members did not want.

Activists packed the annual business meeting, repeatedly interrupting John Bardeen as he conducted the routine portion of the meeting. Incoming president Luis W. Alvarez said he had proposed last fall that a vote of the membership be taken, but that the council had rejected the idea by a "narrow margin." He offered to propose it again at the council meeting the following morning.

By previous agreement, Jay Orear spoke from the chair against keeping

the meeting in Chicago. In addition to his arguments, he raised the threat of a boycott. He said the Particles and Fields Division would completely pull out of the Chicago meeting. He warned that many Cornell faculty members would not attend.

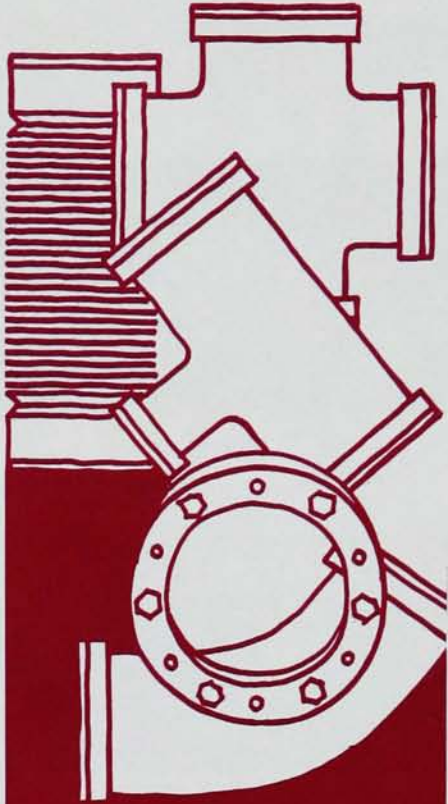
The chairman of the particles and fields division during its annual meeting, Wolfgang Panofsky of SLAC, contradicted Orear. He told PHYSICS TODAY that the division had decided to make the Washington meeting its own annual meeting for reasons that had nothing to do with a Chicago protest. But, he added, the division is continuing to organize sessions for the Chicago meeting.

The threat of a Cornell boycott appears less ambiguous. 45 faculty members (of 61) signed a statement saying they would not attend the meeting if it is held in Chicago.

Marc Ross of the University of Michigan argued that while he was sure Mayor Richard J. Daley was not trembling at the thought of losing the physics meeting, "it is important to us to take some symbolic step to show we are capable of conducting our own affairs in good conscience."

Jack L. Uretsky of Argonne National Laboratory said that while he could feel only pity for anyone who could not distinguish the Chicago of the 1960's from the Berlin of the 1930's, he felt that the fact that a large group wanted action was enough for the council to reconsider and put the matter to a vote.

William W. Havens Jr, APS executive secretary, got up in the middle of the debate with some background on the council decision. He



Avoid The Vicious Vacuum.

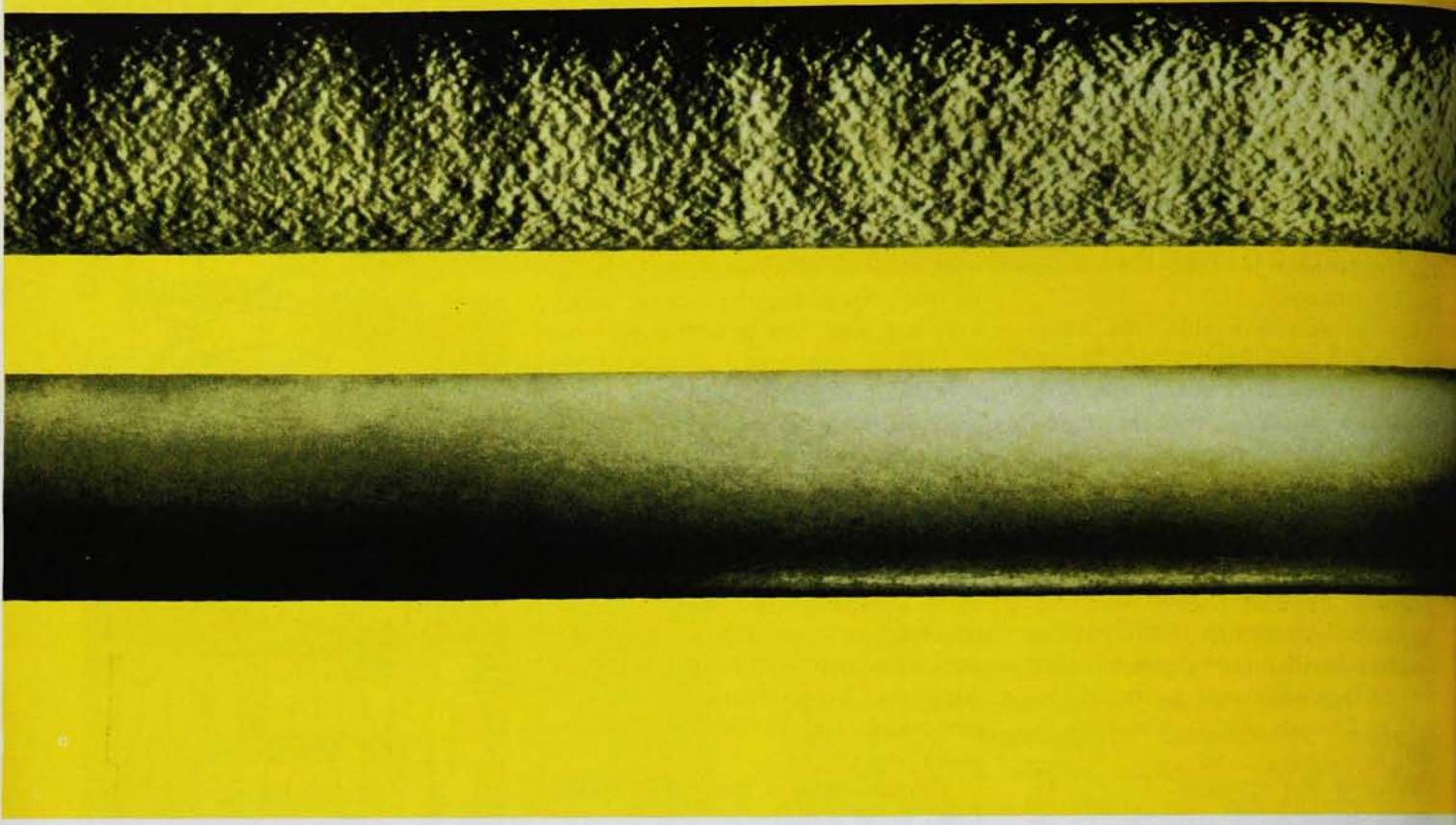
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Which is the slippery wire?

The seemingly simple problem of pulling telephone wires through conduit has important economic implications. In large buildings, for example, we would like to add more wires in existing conduits as the need for communications services grows. But friction between the wires eventually prevents more from being drawn through. Then, a new conduit must be installed, even though the previous one is not really full. What is needed is slippery wire.

Recently, Bell Laboratories and Western Electric greatly increased the useful capacity of conduits by developing a new low-friction polyvinyl insulation for the Bell System's general-purpose wire. Since the new wire slides

more easily, it needs less tensile strength, and so it can be smaller. This further increases the number of wires a conduit can hold. Twenty-three wires now fit into a conduit that previously held only four.

We did several things to make the new wire more slippery. We made its jacket harder—by reducing the amount of plasticizer (vinyl softener). We added paraffin wax for permanent lubrication.

And we made the jacket rougher—not smoother. (The low-friction wire, enlarged about eight times, is the top one in the picture.) Smooth surfaces lead to more intimate contact and, therefore, more friction.

As a result of this work at Bell Lab-

oratories, Western Electric altered its manufacturing process: previously, the hot vinyl jackets were cooled by water under high pressure as they emerged from an extruder. This created a smooth finish. Now, Western Electric avoids applying pressure during the cooling process and thus obtains a micro-rough, low-friction surface.

This kind of interaction between Bell Laboratories and Western Electric is a major factor in making improvements quickly available to operating telephone companies.

From the Research and Development Unit of the Bell System.



Bell Labs

said he had at first opposed moving the meeting to Chicago in 1968 but that after the meeting the committee on meetings declared it a success. Physicists who never before had attended an annual meeting were there.

The council also adopted the business meeting proposal that the APS include with each ballot a one-page statement for and a one-page statement against keeping the meeting in Chicago. The statement in favor was prepared by Alvarez and Vice-President Edward Purcell; that against was by Orear and Ross.

AAPT mailed a similar ballot to its members. A statement by the executive board outlined the problems of changing the site; a separate Orear statement argued for the move.

Both votes were advisory, not binding on the council of either society. Deadline was 9 April.

**Exhibit, General Sessions
Highlight Washington Meeting**

The first instrument exhibit at a Washington meeting, a report on the moon from a man who has been there and general sessions on antiballistic missiles, cosmic-ray pyramid exploration, nucleon-nucleon scattering and MeV-neutron interactions will highlight the Washington meeting of the American Physical Society on 28 April-1 May.

The National Academy of Sciences will hold a half-day symposium (Wednesday morning) on radio astronomy and pulsars. The newly formed Scientists for Social and Political Action, although not part of APS, will meet during the four days.

The Nuclear Physics Division will conduct its own annual meeting simultaneously. The Division of Electron and Atomic Physics will meet at the National Bureau of Standards the day after the APS meeting closes.

The number of papers contributed to this month's meeting has dropped about 8% (1000-919) from last year; this repeats the pattern of fewer papers at the most recent New York meeting. Total registration in New York dropped 22% (7442-5808) from the last meeting in New York; whether this pattern also will be repeated in Washington remains uncertain.

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