sponded positively. The organizers then found collaborators in many countries and, in the spring of 1983, sent out copies of the call with over 80 signatures of prominent physicists. From that time the gathering of signatures has proceeded—and still proceeds—informally, as physicists pass it on to each other.

In a covering letter circulated with the petition, the organizers state that the nuclear arms race is accelerating. The increased precision of missiles may invite first-strike use and launch on warning; new tactical nuclear weapons may lower nuclear thresholds. The letter continues to explain that the appeal has been circulated among physicists because it arose in a discussion among physicists. It was felt that an appeal from physicists all over the world, across political and national boundaries, might be a constructive contribution to efforts to curb the arms race. The organizers also felt it was appropriate for physicists to present an appeal because physicists have been instrumental in the invention of nuclear weapons and are still directly involved with their production and development. —DG

Cambridge nixes ban on nuclear-weapons activity

On 8 November voters in Cambridge, Massachusetts, defeated an ordinance that would have made work on nuclear weapons within the city illegal. Forty percent of the voters approved the measure; 60% opposed it. About two-thirds of the 45 000 Cambridge voters took part. The Cambridge referendum was one of many that have taken place, according to Nuclear Free America, a national clearinghouse and resource center in Baltimore. A spokesman for the organization, Max Obuscewski, told us that voters or city councils in 31 communities have designated themselves "nuclear-free zones," areas where nuclear-weapons activity is opposed or prohibited. Most of the measures passed have been simply statements of opposition. In ten communities, however, the measures are legally binding, Obuscewski said; in those cases, ordinances have been passed or bylaws have been added to city charters. Only in Cambridge would the measure have threatened to disrupt current weapons-related activities.

The chief target of the ordinance was Draper Laboratory, which designs guidance systems for the Trident II and MX missiles. Draper employs about 1800 people full-time, 180 of whom live in Cambridge, according to Joseph O'Connor, Draper vice-president for administration. It receives about $120 million a year in DOD contracts.

Pollsters whom Draper hired early in the summer found voters two-to-one in favor of the ordinance. The shift against it occurred after Draper organized Citizens Against Research Bans to oppose the ordinance. CARB in turn hired two public-relations consultants. They rallied support from many faculty members at MIT and Harvard and conducted a campaign that cost over $400 000, according to Ernest May, head of CARB and professor of history at Harvard. CARB received funds from military contractors in and outside of Massachusetts, including Raytheon, Northrop and Lockheed, May told us, and Hughes Aircraft, General Electric, and Sperry Corporation of New York, according to the legal counsel of the Massachusetts Office of Campaign and Political Finance, where political contributions are on public record. The Mobilization for Survival, which conducted the campaign for the ordinance, reports spending $23 000 on the campaign.

The proposed ordinance would have made criminal "research, development, evaluation, production, maintenance, storage, transportation, disposal of nuclear weapons or their components" after a two-year period in which nuclear weapons activity could be converted to other work. The ordinance would have urged the city of Cambridge to redirect resources previously used for nuclear weapons towards health care and new jobs.

May told us that the ordinance would have made illegal a great range of activity, including research and even teaching about arms control as well as the production of computer software that, among diverse applications, is used in the guidance systems of nuclear-armed aircraft. He also said the ordinance would have violated the First Amendment.

Richard Schreuer, an organizer for the ordinance at Mobilization for Survival, said the ban would not have affected basic research or arms control research because a clause excluded "basic research, the primary purpose of which is not to work toward the development of nuclear weapons." He added that the ordinance would have only affected developing nuclear weapons, not thinking or speaking about them, which the First Amendment does protect.

Schreuer told us that it was likely that another campaign for a nuclear-free Cambridge will be waged in 1985, the next time the measure can appear on the ballot in Cambridge. Meanwhile, efforts for ordinances as well as non-binding resolutions are being organized in 40 other communities, according to Nuclear Free America. On 15 November a policy ordinance in Madison, Wisconsin, was approved by the city council 14 to 7. The ordinance, which does not affect any current activity, will put into effect a zoning prohibition against the production of nuclear weapons and components "expressly intended to contribute to the operation, guidance or delivery of a nuclear weapon." It also prohibits the storage of high-level nuclear waste and makes it city policy to oppose high-level radioactive waste shipments through Madison. That makes Madison, with a population of 170 000, the most populous nuclear-free zone. Another contest that is sure to generate a lot of controversy will take place in Santa Monica, California, home of the Rand Corporation, next November. —DG

Society of Rheologists elects Landel as vice president

Robert F. Landel took office as the new vice president of the Society of Rheology at the Society's October meeting.

Landel, after a two-year term as vice president, is to succeed the new president, William R. Schowalter, professor of chemical engineering at Princeton University.

Landel received a BA (1950) and an MA (1951) at the University of Buffalo and a PhD in physical chemistry at the University of Wisconsin (1954). He has worked at the Jet Propulsion Laboratory of Caltech since 1955, until 1959 as senior research engineer, from 1961 to 1975 as a manager of the polymer research section. Since 1981 he has been a senior research scientist and, since 1983, deputy manager for materials, engineering technology section. His research has concerned dynamic mechanical properties of polymers, aging and lifetime of polymers, and large deformation and rupture of elastomers.

In the same election, two new members were elected to the executive committee: Adi Eisenberg of McGill University and Montgomery T. Shaw of the University of Connecticut. Secretary John R. Collier, treasurer Edward A. Collins and editor Raymond R. Myers were all reelected. □

LANDEL