opment of a physics-information system—to be able to mesh the retrieval program into the entire physics-information picture.

At a meeting of the advisory committee to the information program, held on 11 Dec., Koch discussed the means by which various AIP groups as well as related disciplines will be kept abreast of information activities, emphasizing that AIP essentially represents all American physicists.

Information concerning the program will be disseminated through certain liaison groups. Within AIP these include the governing board and society officers, the advisory committee (society representatives) and its subcommittees, additional correspondents named by the committee, the publication board, the corporate associates and the society members (through PHYSICS TODAY). Other liaison groups consist of non-AIP physics editors (through IUPAP), physics information analysis centers, industrial and federal information centers, related disciplines (mathematics, chemistry, etc.) and national committees (COSATI, SATCOM).

Koch also outlined the organizational changes made in the publishing and information branch at AIP. The new branch consists of four divisions: publications, information, PHYSICS TODAY and advertising. The information division has undergone the major changes. Under the direction of Arthur Herschman, it now is responsible for the programs in computer composition, development of a computer store, information retrieval and systems development.

Physicists and Engineers Call a Strike at RCA

During the cold days of November physicists and engineers stood in picket lines outside of four of Radio Corporation of America's New Jersey plants at Cherry Hill, Moorestown, Gibbsboro and Camden. The men were members of the Association of Scientists and Professional Engineering Personnel (ASPEP), a union organized in 1945 to offer collective-bargaining representation for all research, design and development men at RCA's Camden-area facilities.

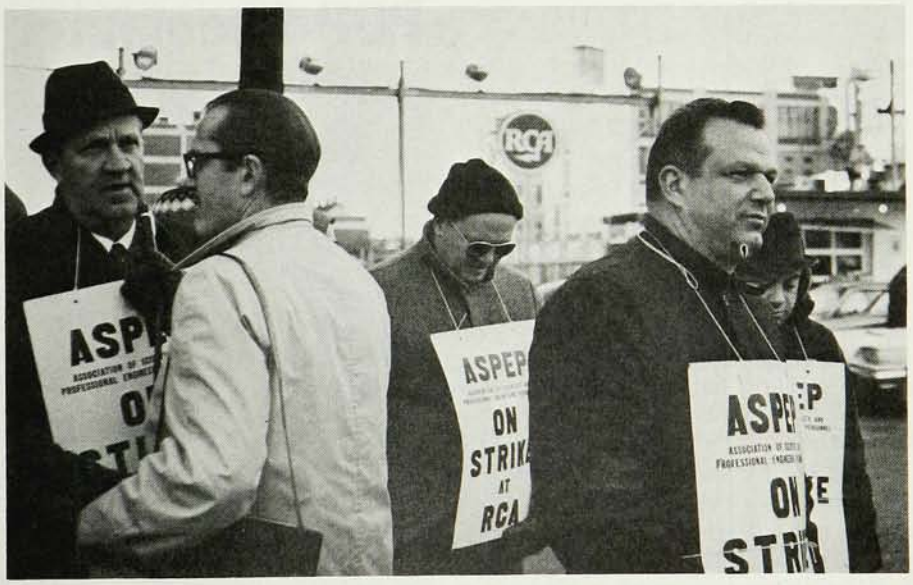
PHYSICS TODAY interviewed several union members to find out their opinions on unionization of professional groups. Most of them were in favor of some type of representative group that would act as a collective-bargaining unit for its members. "Organizing is a good thing," says Vincent Carita, a project engineer and ASPEP member. "It helps individuals who are inept in speaking for themselves." Kenneth Weaber, an engineering physicist and active member of ASPEP, regarded the advent of unions among professional people as a certainty: "Since most of us in industry have a relatively narrow field, we are forced to think of more practical matters such as salary and seniority. Situations of this nature are bound to produce unions for professional workers."

Feelings about affiliation with AFL-CIO are mixed. Although the majority of those questioned felt that the usual connotations of a union should be avoided, they considered affiliation with AFL-CIO a strengthening factor at the bargaining table. Kenneth Hudson, a physicist in applied research, stated, "We don't think it [unionization] enhances our image with the public, but the company does not treat us as professionals anyway." RCA representatives had no comment to make on affiliation.

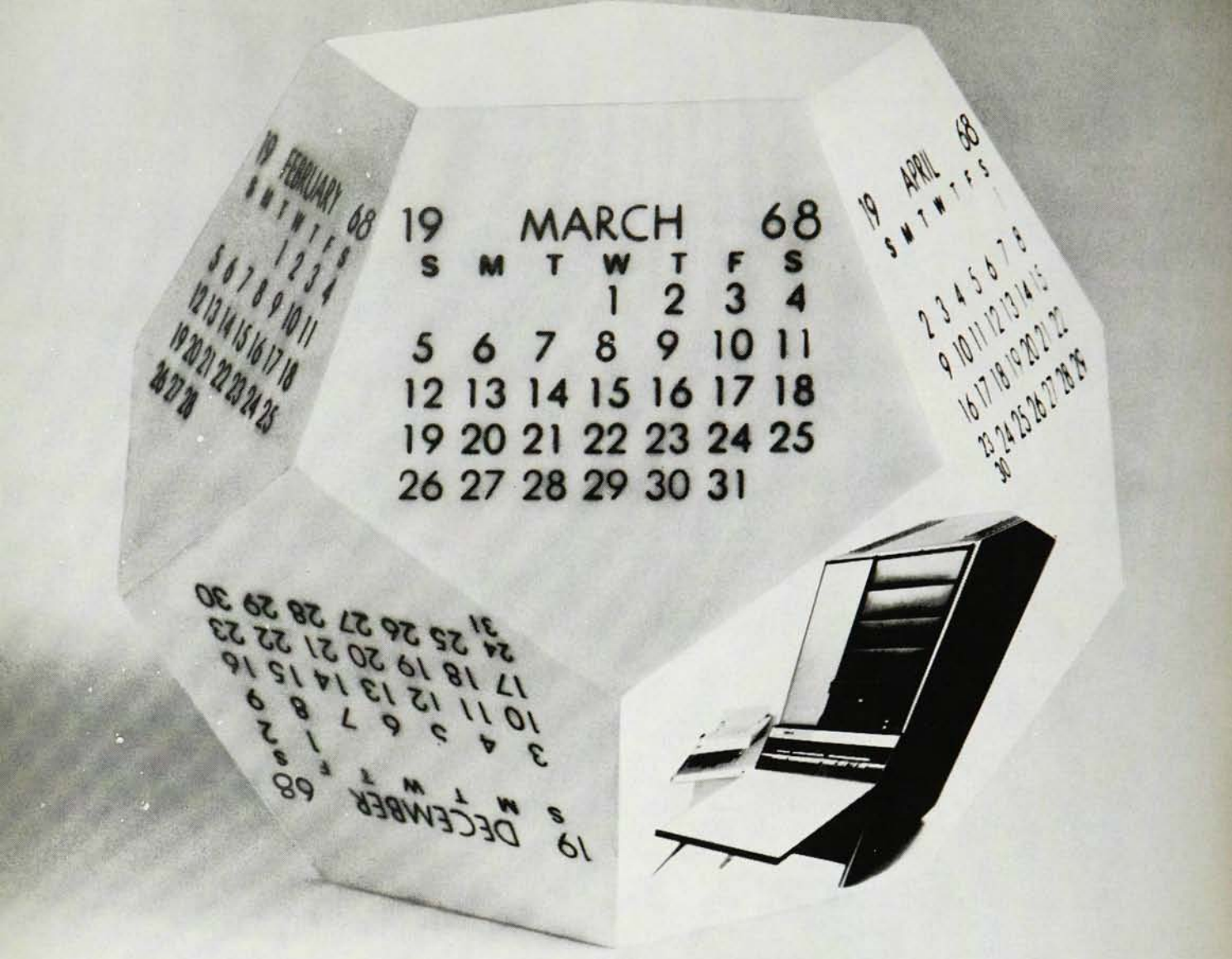
With a membership of about 1000 (approximately 75% of all engineers and scientists employed at the four locations) ASPEP voted for a strike that would force RCA to draw up a feasible seniority and layoff policy. Union representatives contend that, in the past, RCA had no clearly defined policy nor would the company give reasons for laying off employes. In 1964 approximately 400 scientists and engineers were "indiscriminately" laid off without regard for seniority or merit rating. Since that time, however, there have been no layoffs in "more than three years," according to an RCA spokesman.

Although in the past ASPEP has recorded a substantial number of advances (they have provided basic salary increases of between 276% and 332%) at present they have not been as successful. During the strike, which lasted for four weeks, well over 680 of those represented by the union crossed picket lines to report for work, according to a spokesman for RCA. When ASPEP members realized that their demands would not be met through negotiation, they decided to end the strike and turn their grievances over to arbitration and the courts for a settlement.

Realizing that ASPEP does have the pep but not the power, union officials anticipated a struggle for their demands and have taken steps to become affiliated with AFL-CIO. This recent move should establish a sepa-



STRIKING SCIENTISTS at RCA in Camden, N. J. William Kircher (left) is director of organization for AFL-CIO. Vincent Carita, physicist, is on the right.



We'll deliver a PDP-9 computer in 90 days. Seriously.

Ninety day delivery for a computer with the power of the PDP-9 may be another industry first. Ninety days for hardware and software. Complete. Ready to use.

And not just any computer. PDP-9 is the hottest on-line computer in its class, by far. Since its introduction a year ago, it has outsold and outperformed all other computers in its price range, all others with similar word lengths, all others with comparable memory. Backlog is higher than ever, but now, so are the production schedules.

8K core memory, 1 usec, expandable to 32K. 18 bit word. 200 nanosec adder. High speed control memory. Real time clock. Optional parity bit and power failure protection. Its standard configuration offers 3 types of I-O facilities, high speed paper tape reader and punch — and teletype.

With the PDP-9 ADVANCED System Software package, you can program real-time data collection and complex analysis in FORTRAN IV or macro assembly language. Both languages produce compatible and relocatable object codes. You can call MACRO-9 subroutines from the FORTRAN programs and vice versa. There are two monitors, an I-O programming system, a peripheral interchange program, a debugging system, an editor, and a relocating link loader.

In 90 days from receipt of order. Maybe sooner.

digital
COMPUTERS · MODULES

DIGITAL EQUIPMENT CORPORATION, Maynard, Massachusetts 01754. Telephone: (617) 897-8821 · Cambridge, Mass. · New Haven · Washington, D.C. · Parsippany, N.J. · Princeton, N.J. · Rochester, N.Y. · Long Island, N.Y. · Philadelphia · Huntsville · Pittsburgh · Chicago · Denver · Ann Arbor · Houston · Albuquerque · Los Angeles · Palo Alto · Seattle · Carleton Place and Toronto, Ont. · Montreal, Quebec · Reading and Manchester, England · Paris, France · Munich and Cologne, Germany · Oslo, Norway · Stockholm, Sweden · Sydney and West Perth, Australia · Modules distributed also through Allied Radio

rate organization similar in scope to the actors and teachers unions.

Professor Stars in Astronomy Over Four-City Video Circuit

Playing to full-capacity classrooms in Bloomington, Indianapolis, Lafayette and Fort Wayne, Frank Edmondson, head of the astronomy department at Indiana University, is achieving two of his goals: Course enrollment is rapidly increasing and astronomy is made available to students on campuses where no regular department exists. Twice a week, he and his studio crew of three beam a two-semester introductory course on the solar system and stellar astronomy to 800 Indiana and Purdue undergraduates, including 60 students who view tapes of the lectures during special evening classes in Indianapolis and Fort Wayne.

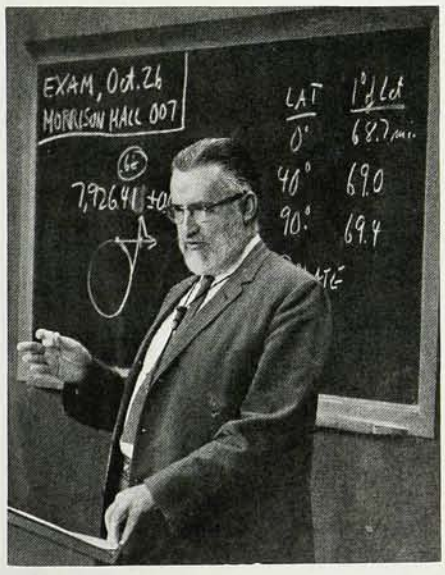
With an enrollment that size, there is no opportunity for class participation, which comes through the medium of discussion sections conducted by 12 teaching assistants. Bloomington has 23 such sections with 8 TA's, and three TA's are responsible for three such sections at Purdue on Saturday morning. At Indiana's Fort Wayne and Indianapolis campuses, discussion sections are conducted over TV by a Bloomington graduate student. The classes in these sections hear and see their teacher while he only hears them.

The course originates live in a studio on the Bloomington campus where Edmondson lectures to 50 students; meanwhile 500 additional students view the lecture in two classrooms on campus. Microwave relay transmits the lecture to other campuses having no astronomy courses. Groups of 80 each view the video at Indiana's Fort Wayne and Indianapolis campuses and at Purdue's Lafayette campus. Edmondson communicates with the teaching assistants at Purdue on Thursday morning after his lecture. "As a result, I claim to have a better rapport with them than with my own TA's in Bloomington where we get together whenever the spirit moves us," he said in a recent visit to PHYSICS TODAY. Student performance on examinations differs very little between Indiana and Purdue, and the difference is never greater than between two sections taught by the same TA.

An added virtue of the video lectures is preservation of course continuity whenever the teacher is away from class. Recently Edmondson took part in the dedication of the Cerro Tololo Observatory in Chile. During his three-week absence, his prerecorded tapes were played on schedule. The tapes for the special evening courses are shown in succession to Thursday-night classes at Indianapolis and Fort Wayne. A discussion section taught by a TA precedes these lectures.

"I make no concessions in teaching style to the TV," said Edmondson. "There is no script, only an outline and a time table of topics on a single sheet of paper. My main purpose is to distribute the course more widely." To put the course on TV, his crew of three includes an operator for the camera (fixed position but with zoom lens), producer and studio engineer who runs the tape recorder. As an "added fringe benefit" musical selections now replace the ugly noise that formerly tested the audio part of the circuit before the lecture. Thus Haydn's "Clock Symphony" introduces a lecture on time, and relativity is preceded by Berlioz's "Symphony Fantastique."

In 1963, the first year he went on TV, course enrollment dropped. But every year since then, the Bloomington class has grown by 100 compared with the 30–35 annual increase in the years before video. At the other campuses, seating capacity imposes an unofficial ceiling on enrollment.



EDMONDSON

Nominations Solicited for Sixth Fritz London Award

The Committee for the Fritz London Award, a prize honoring important contributions to basic low-temperature physics, is seeking recommendations for 1968. The sixth award will be presented at the 11th international conference on low-temperature physics this summer in Scotland. Suggestions (deadline 15 March) can be sent to the award committee secretary, Paul M. Marcus, IBM Research Center, Yorktown Heights, New York 10598.

New Immigration Laws May Check European Brain Drain

New US immigration laws that come into effect this July are expected to retard the entry of scientific and technical talent into the US from other nations, especially from industrialized western Europe.

The new and more liberal laws replace the old national quota system with a system of preferences, one of which is for professional-class immigrants. The total number of immigrants from the eastern hemisphere permitted into the US annually under the new law is fixed at 170 000, and the professional class will be allotted 10% of this figure or 17 000. Since each professional immigrant is accompanied by an average of one dependent, a total of about 8500 scientific and technical personnel may be permitted to emigrate from Europe, Asia, Africa and Australia, to the US each year. Furthermore the backlog of applications by professional people seeking to emigrate to the US from these areas is expected to reach about 48 000 by the time the new law comes into effect, and applications will be processed on a first-come, first-serve basis. This backlog comprises professionals from countries that have oversubscribed their quotas.

Consequently, future scientist immigrants who come from countries that have usually undersubscribed their quotas, such as the nations of western