

# FERMINews

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## PHYSICS ON TV: AIP ASKS FOR HELP

All it would take is "\$5 from each physicist who receives 'Physics Today'," wrote editor Harold L. Davis in a recent editorial.

He was urging the physics community to financially support the American Institute of Physics's Science TV News project. The National Science Foundation has supported it for two years, and "if the series is to continue past the initial period, sources of permanent funding must be found," Davis wrote.

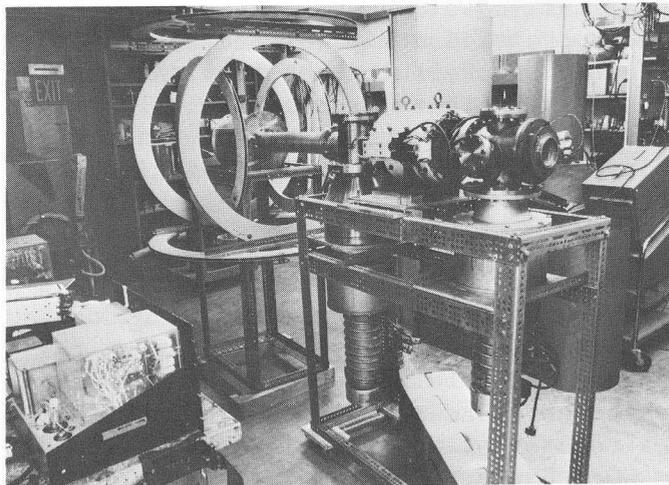
Davis lauded physicists and other scientists who "have already made invaluable contributions to the TV series in terms of suggesting content and reviewing for technical accuracy." He further said planning must start now if "we are going to obtain contributions of hard cash."

The response to the series "is considered excellent in terms of the rate of usage expected by the project's advisory committee, whose members include experienced media professionals," the editor wrote. The first series was on "Physics in Medicine"; the second, "Energy in the Eighties"; the third, "Astronomy News."

In ending his editorial, Davis wrote, "For years we have been sitting around talking about what can be done to increase the public's awareness and understanding of physics. Now AIP's Public Information Division has gone ahead and produced the tools that can actually do the job. It would be inexcusable if the funds were not forthcoming to put them to use."

The editor urged anyone doubting the excellence and value of the project to "catch one of the AIP TV spots on your local news program and see if you don't agree." Davis pointed out that while it's an AIP project, member societies, such as the AAPM and the AAS have made many valuable suggestions in terms of content.

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*Restored hydrogen maser equipment in Norman F. Ramsey's physics laboratory at Cambridge, Mass.*

## RAMSEY AND HIS ATOMIC CLOCK

It was recently part of the exhibit of the month at the Smithsonian National Museum of History and Technology, Washington, D.C.: the original hydrogen maser developed by Norman F. Ramsey and his collaborators at Harvard University in 1958-60 and restored earlier this year (1980). Ramsey also is president of Universities Research Association.

More widely recognized as an atomic clock, this maser ran at a frequency of 1420 megacycles per second. A clock driven by the original Ramsey maser would gain or lose about a second in a thousand centuries. "The hydrogen maser is the most precise and stable of atomic clocks," reports the Smithsonian. "These are frequency or time standards based upon the intrinsic properties of individual atoms and molecules rather than upon the properties of the mechanical systems that power ordinary and quartz crystal clocks."

All atoms of a given type are identically constructed, and if they can be maintained in an environment free of external disturbances, their properties and frequencies of oscillation are much more uniform than those of a mechanical system.

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## PANEL REVIEWS WILSON HALL FIRE SAFETY

A panel of experts recently reviewed fire safety in Wilson Hall and observed that there is little resemblance between the twin-tower 16-story Fermilab building and the MGM Hotel in Las Vegas that last month (November) suffered a life-taking fire.

The bottom line of their review is this: employees and users who work in Wilson Hall have adequate alarm systems, fire suppression equipment and escape routes to ensure them that they can easily and safely get away from a fire. The reported fire safety violations, lack of employee training and evacuation limitations of the MGM Hotel do not exist in Wilson Hall, the panel noted.

Participating in the discussion and review on Dec. 3 were Larry E. Oldendorf, safety and fire protection engineer with the Chicago Operations Office of the Department of Energy; Jim Miller, assistant area manager of the Batavia Area Office of the DOE; Ed Bucki of that office; Lincoln Read, Head of the Safety Section at Fermilab; Rudy Dorner, Head of Emergency Services; Fire Chief Ralph Kramp; Bill Riches, Plant Manager and Senior Fire Protection Engineer; and Dave Austin, safety officer with the Energy Saver Division and chairman of the Fermilab Emergency Preparedness Subcommittee.

One of the main results of the meeting is to assure employees who work in Wilson Hall that they are not in an environment that could lead to a disaster similar to the one that occurred at the MGM Hotel. Dorner, Kramp and Riches went into considerable detail in the 90-minute meeting about the fire safety procedures and equipment of Wilson Hall. All of these were in place and operational for some time and long before the MGM fire, they noted.

The evacuation of employees along well defined stairwells -- those at the southeast and southwest corners of the building -- and the role of employees designated as wardens who are trained constantly in evacuation procedures are two of the main features of the emergency and fire safety plan for Wilson Hall. Dorner said that evacuation drills are an important part of the plan. Floor wardens will, of course, be at the scene to direct employees.

While it is not possible to list all of the fire and emergency safety features of Wilson Hall in this article, among the major ones are:

--Fire stops between floors. They

restrict the spreading of a fire to adjoining floors;

--Building construction. The building itself is steel and concrete and consequently fire resistive. Not all of the contents and furnishings of the building are fire resistive, however, but their quantity and concentration throughout Wilson Hall is much less than in the hotel, as well as being of a considerably different nature. Many items in Wilson Hall are fire resistant.

--Sprinkler network. Wilson Hall is fully equipped with an automatic sprinkler network that is tested each two months. In addition, the computer floors (seven and eight) and other areas with a high concentration of electronics have halon gas systems protecting them. Halon is a gas that does not support combustion, yet is harmless to electronic gear and to people.

--Smoke venting. Wilson Hall has a sophisticated network of detectors that can spot smoke in air ducts and automatically cut off supply air to the fire zone and exhaust smoke to outside the building, thereby preventing smoke as well as fire from spreading throughout the building. Even the area between the twin towers can be quickly vented through the skylights, which can be opened.

Another major feature of the safety plan is the extensive testing of alarms and suppression systems. Most of these are checked every two months, but some are monitored daily. Here are some additional safety features of the building: automatic alarms (each floor has its own alarm system that functions independent of the other floor systems), emergency lighting, backup emergency turbine for power, fire resistive furniture, self-closing doors where needed, fire resistive ceiling tile, 3,000 gallons per minute emergency pump with standby power, and others.

For example, Chief Kramp said, "We have an automatic fire and smoke cutoff door located on the first floor stair landing coming up out of the auditorium lobby. This door will activate automatically in the event of a fire, cutting off the atrium from the auditorium complex."

Panel members pointed out that it is almost inconceivable for a fire to be able to cross over from one tower to the other. Even the crossovers that connect them have sprinkler systems. \* \* \* \* \*



*Don Hanson (left) and Manuel Garcia of Roads and Grounds install a sign at Eola Road gate (just off Butterfield Road) that tells the new sitewide maximum speed limit.*

40 M.P.H.

The maximum speed limit on site is 40 miles per hour.

The large signs posted at each entrance proclaim boldly that upper limit. It's another step in Fermilab's overall program to further improve its safety record.

Drivers will find the site security force is even more rigorously enforcing those speed limits, said Rudy Dorner, head of Emergency Services. He also emphasized that the Laboratory plans to maintain a high priority on keeping drivers within posted speed limits.

In areas where the speed limit is lower than 40 m.p.h., "drivers can take it for granted the lower speeds were posted because these areas are particularly hazardous or congested," said Dorner. One of the most troublesome roads on site is the one that runs around the Main Ring, he said. Although the maximum speed is 30 m.p.h. on the road, drivers seem to consistently ignore that limit, he added. Consequently, the site security force will be giving the Main Ring road even more attention than in the past, Dorner noted.

Other areas on site where the posted speed limit is less than 40 include the streets in the Village. The maximum speed on those streets is 25 m.p.h. At entrances to the site, the upper speed is 35 m.p.h. Additional information may be obtained from the Security Office, WHLE.

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## FERMILAB JOINS MUTUAL AID FIREFIGHTING PACT

Fermilab is part of an areawide mutual aid firefighting network that includes Batavia, West Chicago, Warrenville, North Aurora, Marywood and Aurora.

The recently executed agreement means that if the Fermilab Fire Department needs help from these communities, they will provide the necessary specialized equipment and fire fighters, explained Ron Grosklaus, deputy fire chief at Fermilab. The agreement also works in the other direction. Fermilab will help a member of the network when its services are needed, Grosklaus added.

The agreement considerably enhances the Laboratory's ability to handle any kind of fire problem, said Grosklaus. It also improves even further the communications between the various departments, he added.

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## LABORATORY PLANS STOP SMOKING CLINIC

For all of those employees who want to stop smoking but just haven't quite been able to succeed, here's good news.

Fermilab is planning a stop smoking clinic. Called the "I Quit Smoking Workshop," it will be held from 4 to 5 p.m. on Jan. 21, 22, 23 and 26. It is open to all smokers who want to break the habit. Any employee who plans to attend must first have the permission of his/her supervisor, and the employee must also register with the Medical Office by Jan. 9. If enough people have signed up by the deadline date of Jan. 9, then the clinic will be held.

It will be taught by David Jachim, Ph.D., a clinical psychologist with the Mental Health Clinic of the DuPage County Health Department. The workshop is sponsored through the American Cancer Society, the organization that trained Dr. Jachim to teach the workshop. During the four one-hour sessions, he will go over different aspects of how to quit smoking.

One key pamphlet published by the American Cancer Society -- "The Quitter's Guide"-- will be available in the Fermilab Medical Office before the workshop. Dr. Jachim said he would like workshop participants to read it before they come to the first session.

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## FOR A LIGHTER FERMILAB

Fermilab can claim two enlightening projects, reported John Paulk, head of Site Services.

Flood lights were installed at the east and west side entrances to Wilson Hall earlier this month.

Plans are also in the works to increase the level of lighting in the far west parking lot. Site Services still is evaluating various ways to do this job, said Paulk. The lights will "take off the edge of darkness" and increase security and safety, he added.

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## NEW LOCATION FOR SECURITY FIELD OFFICE

The security force at Fermilab has moved its field office from 34 Sauk in the Village to Site 66. The move was made at the beginning of last month (November).

Site 66 is a brick structure just northeast of the 15-foot Bubble Chamber and across East Wilson Road. A stately house, it once served as the Bubble Chamber's field office.

Bob Armstrong, head of security, and Rudy Dorner, head of Emergency Services, will remain at Wilson Hall, adjacent to the Communications Center. The security field office can be reached on Ext. 3430, and on Ext. 4949 for the Fermilab captains.

To report losses and suspected thefts, the caller should dial Ext. 3414, which is a line into the dispatching office located in Wilson Hall. The emergency number, Ext. 3131, remains the same.

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## WILSON RECOVERING FROM OPEN HEART SURGERY

Dr. Robert R. Wilson, director emeritus of Fermilab, has been reported in satisfactory condition at Columbia-Presbyterian Medical Center in New York following open heart surgery.

He underwent the delicate operation Dec. 8. Wilson had suffered a heart attack last month. Cards and greetings may be sent to him in care of Judy Ward, Director's Office, mail station 105.

## "DARK STAR" NEXT MOVIE

"Dark Star" will be the next movie shown by the Fermilab International Film Society Dec. 12.

The movie will begin at 8 p.m. in Wilson Hall auditorium. Admission is \$1.50 for adults and 50 cents for children age 12 and younger. Rated G, the movie is 91 minutes long and in color.

Director John Carpenter basically created a serious science fiction movie about four crewmen of the scoutship Dark Star. They have been on a mission in space for 20 years. The time, their mission and the vastness of space prove too much for them.

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## MUSIC CLUB TO HOLD DANCE

The Music Club Christmas dance will be held Dec. 20 at the Village Barn from 9 p.m. to 1 a.m. Beverages will be available, and The Music Man will provide the music. Admission is by advance ticket sale only. Each ticket costs \$3 and may be obtained from Marilyn Bailey, Ext. 3282; Joyce Curry, Ext. 4632; Ron Davis, Ext. 3077; Johnny Gerald, Ext. 3259; Theo Gordon, Ext. 4455; Ed Justice, Ext. 4284; and Larry Tate, Ext. 3141. Proper attire is required for this dance.

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## ALCOHOLIC BEVERAGE RESTRICTIONS

As the holiday season approaches, it is appropriate to remind Fermilab employees, users and visitors that the Laboratory does not permit the serving of alcoholic beverages on the site except at official functions, in residential quarters or at the Users Center.

You may already know that there are several festive occasions now scheduled for Laboratory employees to celebrate the Christmas holidays. These include the Christmas dinner-dance at St. Andrews Country Club on Dec. 19; the employees Christmas party at the Village Barn on Dec. 23; and the Music Club dance on Dec. 20. The Laboratory will also observe a full holiday on December 25, Christmas day.

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