


# The Village Crier

 national accelerator laboratory

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Photo by Tony Frelo

## NAL HOSTS EUROPEAN VISITOR

A three-day visitor to NAL last week was Dr. John Bertram Adams, director of the proposed 300 BeV to be developed by CERN in Western Europe. Dr. Adams was a guest of Dr. Robert R. Wilson, NAL Director.

Dr. Adams gave a talk in the Curia Friday afternoon on the state of the planned accelerator. Above, he is shown (left) embarking on a helicopter flight with Dr. Francis T. Cole, NAL Assistant Director for Technical Affairs, to obtain an over-view of the Linac, Booster and Main Ring construction progress.

CERN is the European Organization for Nuclear Research. It was established in 1954 and is centered near Geneva, Switzerland. Twelve European countries take part in the work of CERN. It presently has two proton accelerators -- a 600 MeV synchrocyclotron and a 28 BeV synchrotron. At the latter machine, large intersecting storage rings for experiments with colliding proton beams are under construction.

Dr. Adams is a member for research of the United Kingdom Atomic Energy Authority. He formerly was director of the Culham Laboratory, Atomic Energy Authority, Oxford University and, before that, he was Director of CERN. He was born in 1920.

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## MAIN RING GROUP TAKES ANOTHER BIG STEP FORWARD

Ahead of schedule by several weeks, the first magnet in the Main Accelerator tunnel was placed firmly in its permanent location at about 11:30 a.m., Wednesday, April 15, 1970. It was an historic occasion at NAL, and about 160 NAL, DUSAF, and contractor employees gathered at the mud-splattered enclosure for the informal ceremony. Dr. Ernest Malamud, associate head, Main Accelerator, served as both the arranger and the host for the affair. Following is a layman's eyeview of the ceremony as written by Mrs. Hazel Cramer, of the Main Ring staff. The Main Accelerator is the largest single component in the NAL accelerator system; it is a synchrotron of 6,562 feet (1.24 miles) diameter and about four miles in circumference. In the Main Ring, the protons will be accelerated to their full energy. Mrs. Cramer's article follows:

Tuesday morning, April 14, seemed to start off as a relatively quiet day. But at 8:33 a.m. all of that changed! The official word was we're putting the first magnet in the Main Ring tunnel - tomorrow. Take your fingers off the panic button and let's get organized.

Now let me see! We have to arrange for transportation of our people out to the site, find out how many construction and DUSAF people will be there, get a map from DUSAF, order pizza and beer for the whole crowd, and get the word out of the "Happening" date, time and place.



Called Carolyn in the Motor Pool and she said that the bus was busy but she was sure she could borrow one from Argonne. But the bus would only hold 15 people which meant a great deal of shuffling and shuttling to get the whole Main Ring section out there. Then Carolyn called back with a great idea! How would we feel about using two hayracks which held about 30 people each? She had even called the weather bureau and found that Wednesday was going to be good hayriding weather. We all promised to fasten our safety belts and wear hard hats, and the hayride was on.

DUSAF drew a map of the site, showing the location of the "Happening," parking areas, and all the details. Then the DUSAF and construction people stood up to be counted (for beer and pizza purposes).

Next item - beer and pizza! Chuck Marofske had already alerted Bernie Lensmeyer that we wanted lunchtime beer and pizza, but how much beer and how many pizzas? We managed without the computer - using the old-fashioned fingers and toes countdown. We thought Al, from Al's Pizza, would be really "flipping his pizza" when we told him we needed 50 fast pizzas tomorrow, but he reacted with real savoir-faire.

Now to get the word out quickly. What would we have done without Mr. Xerox and Alexander Graham Bell?

Came the big day and the weather couldn't have cooperated better. We had sunny skies and temperatures in the 60's. Up drove the hayracks, on climbed the people and we were on our non-stop way (oops - wait for Dr. Wilson, Dr. Goldwasser, and Frank Cole) to the site. Cameras were very much in evidence, with photographers taking pictures of each other, and we'll have to have a premiere showing when all the film is back again.

The big moment was here! The magnet was attached to the crane or was it the other way around? - the magnet swung out and was gently lowered down as cameras clicked away. Number 1 magnet is in the tunnel. Only 999 more to go!

We all agreed that it was a good day's work and lots of fun!

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## AN EARTH DAY MESSAGE

April 22 is Earth Day. It is the first environmental teach-in held in many academic institutions throughout the United States. The following article was written by Peter Gollon, of Radiation Physics, NAL, and represents his observations on the subject of environmental conditions and the quality of the environment:

"Once the air was clean, the water good. We could enjoy the smell of the earth; we could walk the land. It is incredible what we have done to America in 200 years. Too much of it is now noisy, cluttered, ugly and dirty."

-- Laurence S. Rockerfeller

Most of us have at one time or another noticed the deteriorating quality of our environment. Streams and rivers, like the Fox, were once pure but are now full of sewage and disease. The air in our cities contains enough carbon monoxide and nitric and sulphuric acid to make people sick or reduce their ability to work or think clearly.

These are the more obvious examples of the decline of the quality of our surroundings. Some other, less widely known but equally dangerous facts will show how severe this problem is:

- 1. There is twice as much DDT (a common pesticide) in human breast milk as the government allows in commercially sold cows milk. This DDT comes from the food we eat every day.
- 2. This same DDT is causing some species of birds including the bald eagle, to lay eggs with such thin shells that they never hatch. Some of these species may be extinct in a few years. Catches of coho salmon from Lake Michigan have been condemned because of high DDT content.
- 3. The Canadian government recently prohibited the sale of any fish taken from Lake Erie or Lake St. Clair. The annual catch from Lake Erie is normally worth \$ 4,000,000. The reason for the ban was that the mercury content of the fish was from 3 to 14 times the allowable limit. Mercury in small quantities causes brain damage; in larger amounts, death. The mercury came from several chemical plants which were and still are dumping their wastes in the lakes!
- 4. The Food and Drug administration last week banned the interstate sale of liquid weed killers containing the chemical 2,4,5-T. This chemical is said to be "more potent than Thalidomide" in causing birth defects! Yet this weed killer is still being used on non-agricultural land, and according to the April 16th, 1970 New York Times, is still available in products like Scott's Turf Builder, Plus-1, Scott's Kancel Weed Killer, Amchem Garden Weeder, Ortho Brush and Ortho Triox Liquid!
- 5. Emphysema -- a lung disease caused by air pollution -- is this country's fastest-growing cause of death.



PETER GOLLON

What happened? Why have our air, our food and our water become hazardous to breathe, eat and drink? Why has the countryside become so ugly and cluttered?

First, there are more people now than there used to be -- the population of the U.S. has increased by 50 million people since 1950. This is the "population explosion" in action.

Second, the average person buys and consumes more goods now than ever before. More people, each with more money to spend, means that we now produce and use far more cars, electricity, appliances, newspapers and everything else than we ever did. This is what is called "progress" or a "rising standard of living." Unfortunately the production of each of these items and its packaging contributes to the

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## An Earth Day Message (cont'd)

pollution of our land. Some of the things we use, like cars, contribute to pollution just by being used. And all of them place a large burden on the disposal facilities when they are thrown away.

Why, then don't we simply consume less and make our factories operate more cleanly? Consuming less means that we have to give up some of the products that make life more convenient (pop-top, throw-away cans) or more "fun" (like high-powered cars). And people are not about to do this unless they understand how wasteful of our limited resources some of these "convenience items" are.

Factories and organizations that pollute do so because they find it cheaper to pollute than not to pollute. Towns, factories and individuals find it cheaper and easier to dump their sewage into the river or their smoke into the air or their garbage next to the highway than they do to dispose of these pollutants properly. Of course, we pay for this in the end by having to breathe and drink someone else's wastes, by not being able to fish or swim in lakes, and by having to pay for litter removal. But the polluter saves money!

If only a few people were discharging their filth into our environment, it wouldn't be so bad. A small amount of pollutants can be absorbed without harm by the environment. But the ability of the air and water to absorb impurities is limited -- our natural "air purification system" is just as limited as that of the Apollo astronauts. But we have overloaded Nature's systems for keeping our environment clean, and they have broken down, simply stopped working.

What can an individual do about this mess? The first thing that can be done -- right away -- is to do things which produce less, not more pollution.

- \* 1. Switch from throw-away pop and beer cans to re-usable bottles. This means less steel or aluminum will have to be produced and thus less air pollution. You will also cut down the amount of garbage that must be disposed of.
- \* 2. Polyvinyl chloride (saran-type) plastic food wrappers produce hydrochloric acid fumes when burned in an incinerator. Switch to cellophane or wax paper.
- \* 3. Cut down on air pollution by not burning leaves or rubbish. Leaves and scrap vegetables make an excellent compost for lawns and gardens.
- \* 4. Automobiles cause over half the air pollution in the Chicago area. Walk or bicycle instead -- especially around the Village. If you must drive, please turn off your engine when making pickup stops. Join a car pool for commuting, take the train when you can. Keep your present car well-tuned, get your next car with a smaller engine.
- \* 5. DON'T use fertilizers with arsenic or weed-killers (herbicides) -- especially not in vegetable gardens!
- \* 6. Don't use yellow pest strips -- the insecticide isn't very good for people, either. Try a fly swatter.
- \* 7. Have fewer children, so there will be fewer people producing pollution in 10 or 20 years. Two children per family should be the limit -- if you want more, consider adopting them.

Read: THE POPULATION BOMB, THE ENVIRONMENTAL HANDBOOK, Environment Magazine and the monthly Environment supplement of Saturday Review.

Finally, COMPLAIN! Complain to the polluters themselves (Campaign Against Pollution, 65 East Huron, Chicago, will tell you who they are, if you don't already know). Complain to the pollution control officials for not enforcing the laws that already exist. Complain to your local and state officials -- tell them you want fewer highways and more green spaces. Tell your Congressman you're tired of drinking someone else's sewage and breathing his car exhaust, tell him that you want to clean up America NOW!

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## SECOND NAL ARBOR DAY PLANS ANNOUNCED

Plans were announced this week by the NAL Site Manager's office for the second Arbor Day tree planting in the NAL Village. Employees who want to participate should bring shovels and meet at the Curia on Friday, May 1 at 1:30 p.m. (the date is a postponement from April 24, because of wet ground conditions). Following brief ceremonies, the group will move to the planting sites. In a prepared area west of the Kuhn farm barn at the corner of Sauk Boulevard and Batavia Road, and in the open field just south of the Photography house at 14 Sauk, some 150 trees will be planted.

The first Arbor Day planting held at NAL, on April 25, 1969, was highly successful and resulted in planting of over 100 ash trees in an area just east of the Cafeteria.

This year, varieties of maple, walnut, and cherry trees will be balled and burlaped, and carefully colorcoded to match a specific planting plan. Planters may use the holes provided or, if so inclined, they can "dig their own."

Carrying out the desires of the Laboratory's Director, Robert R. Wilson, to "preserve what we have, add to it, and create with imagination, so that the site can become a joy to behold -- a source of pride for all of us," the Farm Management and Site Manager's Offices started the tree planting program in the winter of 1968-69 with 200 white and red pine, 14 feet in height, from the Argonne National Laboratory nursery. The planting was done in the extreme cold of the winter months, but was a successful beginning, with only 24 trees lost.

Another massive tree-moving undertaking was completed in April and May of 1969 when the Laboratory had an opportunity to acquire the entire Orentowski nursery, which lay in the path of a new line of the Natural Gas Pipeline Company of America. A program was instituted to move 1,600 pieces from the nursery to the NAL Village in less than three weeks. A boon to this operation was the rainy spring season which followed and held loss to four and one-half percent.

The Spring of 1970 will see the beginning of the NAL boundary plantings, the "natural fences," consisting of native low-to-medium shrubs in irregular patterns along the NAL boundaries. This year, some 40,000 seedling plants will be planted from Eola Road west to the western boundary at the abandoned railroad. Eventually, the entire boundary of the site will be so planted.

The official conservation policy of the NAL includes the observation, "Nature may be bountiful, but it is not unlimited. The costs of conservation must be accepted as a new increase in the normal costs of doing business."

In each stage of planning at NAL, compatibility with Nature's original bounty is carefully weighed. "The National Accelerator Laboratory is pursuing a firm conservationist path in all of its relationships with nature and natural resources. Considerable study effort has been spent in developing a natural resources utilization plan that will satisfy the operation requirements at the Laboratory and will adhere to depletion and pollution standards considerably more stringent than current laws stipulate."

By the end of 1970, plantings of the following kinds of trees will be established at NAL:

Austrian Pine	Red Oak	Seedless White Ash	Black Walnut
White Birch	Pin Oak	Black Alder	Bird Cherry
Concolor Fir	Sugar Maple	Redbud	Pin Cherry
Shadmaster Locust	Norway Maple	Thornless Honey Locust	Weeping Willow

Bob Ebl, Designer in the Site Manager's Office who supervises the NAL plantings, says, "When these seedlings are established, they will provide NAL with a natural and aesthetically acceptable barrier which will also provide some security for the site."

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## RECOVERING

We are pleased to report that Kennard Williams, head of the Equal Employment Opportunity-Affirmative Action programs at NAL, and James Q. Buffenmeyer, model maker at NAL, are recovering from injuries suffered Wednesday morning, April 15, in a head-on collision on Butterfield Road, DuPage county, not far from the Laboratory, as they were enroute to work. They were taken to the Central DuPage Hospital, Winfield.

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## MAY FAIR HAS SOMETHING FOR EVERYONE

Come rain, hail, snow or earthquake, the May Fair/Fete/Frolic/Festival of the Women's Organization will be held on Saturday, May 9 from 1 to 5 o'clock. The location will be the White Farmhouse on Eola Road. This is the house being used by the Women's Organization, and it is to furnish this house that the Fair is being held.

All who come will get their money's worth. There will be pony rides for the children, and games for all ages; things to look at and to buy; people to stroll around with. By the way, in case of that hailstorm, everything will move inside.

There will be hot dogs, beer, soft drinks and popcorn, and if you still have an appetite for dinner, the Gourmet stall will have casseroles and cakes you can take home.

There will be drawings for various prizes which have been donated. In the old phrase, "something for everyone," and everyone is invited -- employees from NAL, DUSAF and AEC, their families and friends.

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### NALWO CALENDAR FOR APRIL

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|----------|---|
| April 22 | Meeting of all Area and Interest Group chairmen to coordinate plans for the Fair. 1:15 p.m.   |
| April 26 | Outdoor Group. Mallard Lake Forest Preserve 3:00 p.m. for forest walk followed by picnic.   |
| April 28 | Bridge Group 1:15 p.m.  |
| April 30 | Hand Arts Group Preparation of material for Fair. 10:00 a.m. till 3:30 p.m.   |
| May 2    | Bon Vivant Group. 8:00 p.m. at Chateau Louise, Highway 31, West Dundee. An Elizabethan dinner, \$10 per person for dinner and all beer and/or wine you want. Please make reservations with deposit of \$5 each with Mrs. H. Hinterberger, R.R. #1, Box 20S, Batavia by <u>April 25</u> . Singles welcome. |

## CLASSIFIED ADS

FOR SALE - 19 ft. center board sloop and trailer. Cuddy cabin, 2 suits sails. Just wash and you're ready to go. Call Harold, Ext. 215.

WANT TO START AN NAL BAND - Amateurs on rock organ, drums, bass, guitar, tenor sax, etc., call Jim Bondurant on Ext. 249.

National Accelerator Laboratory

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