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BISON COMPUTER SERVICE AIDS NAL EXPERIMENTERS



... Al Brenner, Howard Watts discussing remote computing needs at NAL...



...Experimenters L. Hand (L), Paul Kunz (R) hand 6600 job to Operator L. Schwarz...

Last October 1, NAL's Computing Department heralded the long-awaited arrival of their CDC 6600 computer. The machine had travelled from the Lawrence Berkeley Laboratory via Minneapolis, Minnesota where it underwent a refurbishing after eight years of operation at Berkeley. It will now be used by and for experimenters working at NAL. Presently, the computer facilities which house the 6600 occupy the 7th and 8th floor west wings of the Central Laboratory Building with a few offices still located in the Village.

Without this computer, the present concepts for the acquisition of data in NAL high energy physics experiments would have developed differently, according to <u>Dr. Alfred Brenner</u> who heads the facility. Typically, experiments have built-in mini-computers (called BISON computers -- Basic Instrument Support On-Line Needs), monitoring and controlling their equipment. Data passes through the BISON systems and is recorded on tape, the modern counterpart of old handwritten data books.

The experimenter's tape must be analyzed. It is very complicated, very valuable to him, and he must be certain he is collecting good data. He comes to the Fast Turn Around Counter on the 7th floor, where in a very short time he can process his tape and check the data output. The 6600 is managed in such a way that users can be guaranteed this access in only a few minutes.

With this verification, the experimenter returns to his equipment on the beam lines, collects additional data and later makes extensive analysis of his completed tape in what is known as "batch processing." Batch processing is done either at the experimenter's home laboratory or university or on an IBM 360-195 installed at the Argonne National Laboratory with a 360-50 terminal now located on the 8th floor at NAL.

CONTROL DATA CORP.

6600

SERIAL NUMBER 9

INSTALLED AT LAWRENCE BERKELEY LABORATORY: DECEMBER 1965

POWERED OFF: MARCH 1973

DONATED TO THE NATIONAL ACCELERATOR LABORATORY, AFFECTIONATELY
BY LAWRENCE BERKELEY LABORATORY

...Refurbished CDC 6600 now located at NAL...



...F. Cadena (L), J. Mack working on BISON equipment...



...S. Dolosic mounting tape on 6600...

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BISON COMPUTER SERVICE AIDS NAL EXPERIMENTERS (Continued)



... Sandy Churchill (L), Beth Tiefenthal (R), and user Ann Burwell key punching for computer applications...



... Physics Support group: (L-R) D. Carey, A. Nelson, J. Ingebretsen, V. White, in Village Office...

Brenner and Howard Watts, Computer Operations Manager, are organizing a staff of 40 data processing specialists to handle the new service. Currently, 12 operators interchange on the 6600, the PDP 10 and the 360-50 computers. Three programmers are responsible for these big computers; six handle the mini-computers.

Another phase of the Computer Department is the Physics Support group. Recognizing that certain classes of problems in high energy physics are now well-known, this group, under <u>Dr. David Carey</u> and six programmers, develops programs to answer these needs and also collects programs from other laboratories, then places these programs at the disposal of experimenters.

Two or three additional program consultants help solve a variety of user problems. Ten other people -- technicians, engineers, and administrative personnel -- round out the Computer Group organization.

During January, the PDP 10 currently housed in the Meson Area will be moved to the Central Laboratory Building and, in the next few months, this facility will be joined by the PDP 10 now in the Film Analysis Facility in the Village. The former will abandon its Fast Turn Around Service and will slowly assume that part of the Laboratory's computing which was formerly done on a time-shared basis with outside computers, and will perform particular calculations via portable terminals. The other PDP 10 is dedicated to SAMM, (Semi Automatic Measuring Machine) analyzing bubble chamber film.



...J. Brumfield, J. Prince, operators on 360-50...



...C. Plezbert, L. Campion, secretaries...



...R. McLinn (L), C. Dolnick, programming for BISON library...

(Photos by Tim Fielding, NAL)

REMINDER

The lecture series entitled, "The NAL Accelerator -- How it Works," begins Friday, January 18, at 11 a.m. in the Auditorium. It is open to all NAL employees. Permission of your supervisor is required for attendance.

Dr. Frank Cole will open the series with "Overview of the Accelerator."

JIM LASENBY'S MANY HATS

Jim Lasenby of the NAL Magnet Facility has slowed down a little bit from the schedule he kept for the last four years when he was a full-time employee of NAL at the same time that he was a full-time student at George Williams College in Downers Grove, a full-time husband and father of a son, now 5.

From September, 1969 until last August, Jim was NAL's 4 p.m. to midnight switchboard operator. He attended a full program of day time college classes; at night he studied and kept the NAL evening vigil. In August, he finished work on his B.A. in Social Science, majoring in economics and political science. In September, he abandoned his nocturnal activities at NAL to move to an 8:30-5 job as administrative assistant in the Magnet Facility.



.Jim Lasenbu..

Jim and Evelia have been married since 1966. When she's not caring for the two men in her life, Evelia also attends George Williams to complete her major in child psychology.

But Jim couldn't leave the books and that demanding schedule behind. He's back at it -- in graduate classes at the Illinois Institute of Technology, in computer science.

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GET ACQUAINTED SESSION, MONDAY, JANUARY 21

NAL employees who have been at the Laboratory for a number of years often express an interest in attending one of the monthly orientation sessions given to new employees. All employees are welcome to attend one such session. Each orientation session includes: A welcome on behalf of the Director by a member of his staff; a brief explanation of personnel services available to NAL employees; a presentation of NAL's Affirmative Action Program and EEO Office; a 15-minute narrated slide presentation describing the purpose, plans, and program of work at the National Accelerator Laboratory, and, finally, a bus tour of the site.

The next Orientation Session will be held at 1 p.m. on Monday, January 21 at the Public Information Office/Exhibit Hall, 18 Sauk, in the Village. Call Helen Severance, Ext. 3341, if you plan to attend. Permission of supervisors is required for all attendance.

- IN THE NAL AREA...
- . . . At Illinois Benedictine College, Lisle, the Jurica Biology Museum in Science Learning is open to the public at no charge on Sunday, January 20 and 27, 2-4 p.m. Dr. Clifford Mathews of the University of Illinois Circle Campus will lecture in Kappel Auditorium, Science Learning Center, at IBC, on "Chemical Evolution" at 7:30 p.m., Thursday, January 24. No charge.
- . . . A number of openings for musicians of all ages have been announced by The North Central College Concert Band, Naperville. Interested persons may contact director Dr. Robert Rollin at 355-5500 or 357-6159.
- . . . The College of DuPage will present "The Amorous Flea," a musical comedy based on Moliere's School for Wives, Wednesday through Saturday, January 23-26, in the Convocation Center, Building M, at 8:15 p.m. General admission is \$1.50; senior citizens and children admitted free.
- . . . A new organization, the Society for Environmental Awareness, is now seeking members. The Society's activities coordinate with George Williams College's training program for the National Park Service. A \$10 family membership includes a monthly film/lecture series (Sir Edmund Hillary last December), field trips, workshops in camping and selected subjects, and youth environmental programs. For further information, contact the Society at George Williams College, 555 - 31st Street, Downers Grove, Illinois 60515.
- . . . "The Midwest Experience," one of a series of interdisciplinary courses to be taught by Waubonsee Community College this spring semester, will be a concentration in part on the history of Geneva, Illinois, where the course will be taught. The course will include materials on the history of the Midwest and more specifically on the Fox Valley area. Classes will be held from 6:30 to 9:15 p.m. at Geneva High School. Waubonsee's regular registration period will be held on January 17 and 18 at the campus at III. 47 and Harter Road. More information about this and other courses in this subject can be obtained by calling the College at 466-4811.

INDOOR & OUTDOOR SPORTS AT NAL THIS MONTH

INT'L. FOLK DANCING - Village Barn - Friday, January 18, 8 p.m. Everyone welcome; families invited.

SING-A-LONG - - - - R. Carrigan's home, Warrenville - Friday, Jan. 18, 8 p.m. For further information, call <u>Pauline</u>
Reardon, 653-5339.

FAMILY SKATING PARTY - At the Phillips Farm, Saturday afternoon, Jan. 19, 2-5 p.m. Bonfire...hot dogs...marshmallows... hot chocolate.

HOE DOWN - - - - - - Village Barn, Saturday, January 19 - Rex Sterns, caller. \$1.00 admission charge.

BASKETBALL GAME TRIP - Bulls vs. Bucks. Chicago Stadium, Tuesday, Feb. 12.

Tickets at \$8.00 include bus fare, food, beverages,
mezzanine seats. Contact Gene Plant, Ext. 3421,
for tickets.

PROTONS ADVANCE IN BASKETBALL LEAGUE

The NAL Protons basketball team accelerated to a speed too great for their opponents to match in the Naperville YMCA league on Thursday, January 10. In defeating a strong Baird and Warner team, the Protons moved up to a tie for first place and upped their record to 5-1. It was a great team effort with everyone contributing to the cause.

High point men for the night were <u>Tyrone Thomas</u> with 29 birthday points, and <u>Roy Justice</u> with 27 to help him celebrate. This year, the Protons will hit their target, reports Justice.

They could use some spectators for the remaining six games, at the Naperville North High School on Thursday nights at 7:30 p.m.

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HELP TRAP THAT GOLDEN SUNSHINE... Hank Hinterberger, head of NAL's Technical Services, is looking for persons interested in contemplating the problems of the use of solar energy for residential heating, as well as other applications. Hank suggests that such persons gather at The Curia at 12 noon on Wednesday, January 23rd for a brainstorming session...

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CLASSIFIED ADS

RIDE WANTED - From corner Illinois & May Streets to FAF, 4 p.m. to midnight shift. Call Diane Garcia, Ext. 3595, after 4 p.m.

FOR SALE - 1966 Dodge Monaco, excl.cond., must sacrifice \$450 or best offer. Bernard, Ext.3369.

FOR SALE - 1973 Honda 450cc, dbl.overhd cam, low mileage, dk.gr., \$825. N.Johnson, Ext. 3355.

FOR SALE - 4 Whitewall Tires, 755x15, gd.cond., \$25. N. Engler, Ext. 3093.

FOR SALE - Set of Ludwig Drums, 1 yr.old. \$500 or best offer. Fred Cadena, Ext.3856 or 851-3491.

FOR SALE - Antique reproduction French Prov. Couch & chair, 1930's; 40" used Elec. Stove, white. Mrs. S. R. Smith, 3782 or 393-9328.

FOR SALE - Duncan Phyfe Dng. Table & 2 Chairs, solid mahg. \$100; Blk. Leather Contour Chair, \$75; Marvel Metal Cutting Saw, 110V, \$35; Marine Hardware, Cleats, etc. H. Minster, Ext. 3233.

WANTED --- Dual 8 Movie Projector. Walt Gorecki, Model Shop., Ext. 3279.

FOR SALE OR TRADE - Girl's figure skates, insulated lining, size 3, worn 4 times, \$4 or trade for Size 7. Mary Louise Bush, Ext. 3211.

FOR SALE - 1966 Plymouth Fury II, 6-cyl, auto.transm., good gas mileage, good tires, batty, good working order, somewhat worse for wear in appearance; make offer. Roberts, Ext. 3202 or 629-2646.