

## First-Ever 1.8-TeV $\bar{p}p$ Collisions Seen in TEVATRON

by John W. Cooper

Collisions were seen at CDF on Sunday, November 30, around 7:30 p.m. The CDF people involved were Tony Liss (University of Chicago), Henry Frisch (University of Chicago), John Skarha (University of Wisconsin), and Melissa Franklin (University of Illinois). Melissa was in the Main Control Room as liaison to our CDF Control Room, John was looking at the CDF forward muon system, and Tony and Henry were looking at the beam-beam counters.

The Accelerator extracted 1.2 milliamps of pbars from the Accumulator (this is  $1.2 \times 10^{10}$  pbars). At the end of Main Ring acceleration, the pbars were successfully coalesced into a few bunches and approximately  $2 \times 10^9$  pbars remained. These pbars were transferred to the TEVATRON, accelerated to 900 GeV, squeezed to low Beta, and cogged to the B0 collision point. An estimated  $1.5 \times 10^8$  pbars made it to this final step.

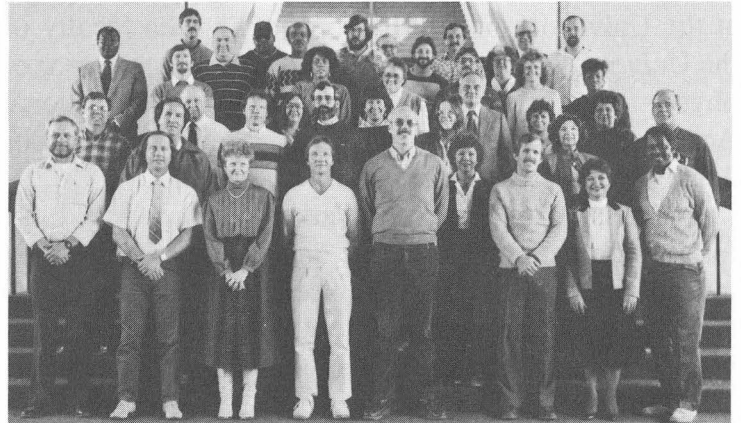
Compared to last year, the energy was higher and the performance of the accelerator was much better: last year the pbars were not coalesced, and only a few times  $10^6$  pbars made it to the final step of collisions. This gives an improvement factor of around 100 over last year. In terms of luminosity, the estimate for last Sunday was about  $10^{26}$  in units of  $1/\text{cm}^2$  second.

The CDF central detector which saw collisions last year is not scheduled to roll into the Collision Hall until December 15, 1986, so only the new half of CDF, the forward detectors, were in the Collision Hall on Sunday. These detectors are still being debugged but the beam-beam counter system was operational and gave the primary evidence for collisions.

These counter arrays sit 20 feet east and 20 feet west of the B0 collision point and an interaction should trigger many of these counters in both the west and east arrays. In contrast, beam gas collisions, which are seen with only a proton beam in the TEVATRON, produce no triggers in the west array and many in the east. On Sunday evening events were seen triggering many counters in both arrays and with the correct timing for

pbar p collisions. We were, of course, elated to see collisions again after 14 months; we look forward eagerly to even better Accelerator operations after the central detector is moved to the Collision Hall during December 15 - 29.

—  $\bar{p}$  —



Employees who were honored at the 10-Year Service Awards luncheon were: *Front row from left:* Gary Sliwicki, Dave Shemanske, Cindy Mau, Lloyd Klein, Alan Jonckheere, Tom Peterson, Lucy Reuter, and Ed Justice. *2nd row from left:* Peter Garbincius, Julius Lentz, Greg Saewert, Robert Hively, Terri Lahey, JoAnne Mansell, Mary Fray, and William Ramstein. *3rd row from left:* Henry Prokop, Linda Stutte, Kathleen Turner, John Kowalski, Wendy Moore, and Hortencia Elizondo. *4th row from left:* Robert Robinson, Gianni Tassotto, Lauren Jones, Marshia Kaye, Thomas Bozonelos, Laura Sedlacek, and Loretta McMath. *5th row from left:* John Gran, Bob Armstrong, Joe Villa, Joanne Lindo and Gerald Dychakowsky. *6th row from left:* Hank Thacker, Necota Smith, Richard Kujath, Dick Lundy (Director's Office representative), Randy Vincent, and Bruce Chrisman (Director's Office representative).

Congratulations to all!

## "Why Do Stars Emit X-rays?" is Next Lecture Series Topic

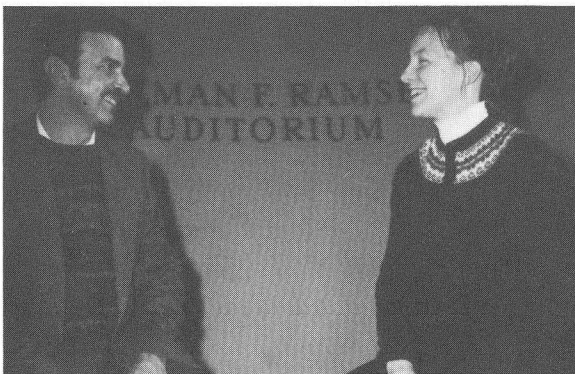
The stars, subjects of myths and observations since ancient times, have been the subject of extensive studies in modern science. Most recently, it has been a considerable surprise to find that stars emit x-rays. Temperatures of millions of degrees are required to produce x-rays, yet the surfaces of stars are usually only a few thousand degrees. Professor Eugene Parker will discuss the scientific puzzle and a possible solution in his lecture, "Why Do Stars Emit X-rays?", Friday, January 9, 1987, at 8:00 p.m. in Ramsey Auditorium.

Professor Parker is known for a number of important discoveries in astrophysics. He received his Ph.D. from the California Institute of Technology, then taught at the University of Utah before joining the faculty of the University of Chicago in 1962. He is a professor of physics and astronomy, a member of the National Academy of Sciences and has received numerous honors and degrees for his work.

Admission to Professor Parker's lecture is \$2, \$1 for senior citizens. To reserve tickets and obtain further information, call ext. 3353 weekdays between 10:00 a.m. and noon, or 1:00 p.m. to 4:00 p.m. Phone reservations are held for only five days awaiting payment.

- Frank Cole

## Kikta Appointed as Lab Arts Coordinator



*Fermilab's new Arts Coordinator, Tammey Kikta (r.), with Jeff Appel, Auditorium Committee Chairman.*

The new Arts Coordinator at Fermilab is Tammey Kikta. In this position Tammey assists the Auditorium Committee in bringing cultural attractions to Ramsey Auditorium. She helps in program selections, guides planning and publicity, and is the primary contact with the artists and their agents.

The Auditorium events are important to the Laboratory, not only for the enjoyment they bring, but also in

helping to make Fermilab a part of our larger community. The Arts and Lecture Series has been very successful in this, often filling the Auditorium and having become widely recognized as an important cultural contribution to the western suburbs and the Fox Valley.

Tammey joins us with an arts background including work for the Chicago Symphony Orchestra and WFMT/*Chicago Magazine*. She is also a pianist.

Tammey is successor to Janie Green, who was Arts Coordinator for five years and helped bring the Auditorium Series to its current level. Janie has resigned in order to spend more time at home with her young family.

## Adult Art Classes at Fermilab

For those interested in discovering or rekindling their creative potential, The School of the Art Institute of Chicago (SAIC) Studios Program will offer adult courses in Photography, Life Drawing, and Watercolor starting in January at Fermilab. The Studios' Extension Program at Fermilab offers the same quality educational resources as the School of the Art Institute including experienced instructors who are also practicing artists.

Tuition for a five-week photography, life drawing, or watercolor class is \$240 for credit and \$160 for audit. Persons over 62 years of age and School alumni are entitled to a discount. Tuition for the three-week, non-credit classes on Matisse and Picasso is \$50.

The photography classes will focus on photographic composition and how to process and print black and white film. Classes will meet on Wednesdays from 9:30 a.m. to 4:00 p.m., January 28 - February 25; March 4 - April 8, and April 22 - May 20, 1987.

Life Drawing: The Portrait will be offered on Thursdays from 9:30 a.m. to 4:00 p.m., January 29 - February 26 and March 12 - April 16, 1987. Classes will focus on drawing the head and on achieving a likeness from a model.

Watercolor classes will be held on Saturdays from 9:30 a.m. to 4:00 p.m., January 24 - February 21; March 7 - April 11, and May 2 - 30, 1987. Students will explore the materials and methods used in watercolor painting.

"The Art of Matisse" will be held on Wednesdays, March 4 - 18, 1987 from 7:00 to 9:30 p.m. This course deals with the genius of Matisse and how he took the language of Modernism and turned it outward to "participate in our life." Students will trace Matisse's

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## Benefits Notes

### New Laws Affect Your Employee Benefits

#### Continuation of Health Coverage

The Consolidated Omnibus Budget Reconciliation Act of 1985, also known as COBRA, will become part of Fermilab's group health plan on January 1, 1987. COBRA provides for continuation of the Laboratory's health coverages when certain qualifying events occur, such as termination, death of an employee, divorce, and children who attain age limits under the plan. A summary of the law will be mailed to you and your dependents at the home address we have on file with Personnel. (If you have changed addresses recently, please contact Personnel.)

#### Now You Can Work 'til You Drop

The Age Discrimination in Employment Act was amended to eliminate mandatory retirement. Effective January 1, 1987, the Laboratory retirement plan will remove the age 70 ceiling to be in compliance with ADEA.

#### Employer's Plan Now Primary Disabled Coverage

The recently enacted Omnibus Budget Reconciliation Act of 1986 entitles *disabled employees* and *disabled dependents* of active employees to primary coverage under the Laboratory's medical plan with Medicare becoming the secondary payor. Effective January 1, 1987, eligible medical claims under the Laboratory's plan should first be paid by Connecticut General or an HMO. After they pay according to the terms of their contracts, the remaining balance, if any, should be submitted to Medicare for payment. This procedure should be followed until January 1, 1992, at which time the Federal government will decide whether to extend the procedure.

As a reminder, disabled employees and disabled dependents are eligible to enroll in Medicare Parts A and B after they have been receiving Social Security disability benefits for two years or have chronic renal (kidney) disease requiring dialysis or transplant. If you meet one of these conditions you can enroll in Medicare at your local Social Security office.

#### Social Security Wage Base Increase

The Social Security (FICA) taxable wage base for 1987 will increase from \$42,000 to \$43,800. This

means that the maximum per employee FICA tax for 1987 will be 3,131.70 (7.15% of \$43,800). In 1986, the maximum per employee FICA tax is \$3,003.00.

- Paula Cashin

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#### "Art" continued from page 2

development from his early school days to the extraordinary inventions of the end of his life, the "paper colles."

The course on Picasso will trace his long career of varied styles, media and contextual concerns with special emphasis on Cubism and Picasso's contribution to twentieth century art. "Picasso" will be taught on Wednesdays, May 13 - 27, 1987, from 7:00 to 9:30 p.m.

All classes will be held at Fermilab. Registration begins December 2, 1986. Interested persons should call 443-3777 for registration material.

The Studios Program of The School of the Art Institute of Chicago has been offering courses in the visual arts since 1887, and is designed to meet the needs of the returning artist, the dabbler in the arts, or the beginning student. Each of the Studios' programs continues The School of the Art Institute of Chicago's commitment to quality visual arts education.

### Congratulations to:

Barbara and John (*RD/Comp.*) Willett on the birth of Brian Ross on November 14, 1986, at St. Luke's/Presbyterian Hospital. Brian weighed 5 lbs., 12 oz., and was 18 in. long. Brian met sister Charity at home.

Gladys (*Director's Office*) and Terence Pool on the birth of their first child, Terence Wayne Jr., on November 18, 1986, at Copley Hospital. Terence weighed 6 lbs., 9 oz., and was 19-1/2 in. long.

Anita (*Children's Center*) and Wesley (*Pbar*) Mueller on the birth of their daughter, Jordan Muriel, on December 2, 1986, at 5:19 a.m. at Copley Hospital. Jordan weighed 7 lbs., 11 oz., and was 21 in. long. ▲

Alynn and Gerry (*AD/EE Suppt.*) Sorensen on the birth of Alynn (Ali) Nicole, on December 19, 1986, at Copley Hospital. Ali weighed 7 lbs., 14 oz., and was 20-1/4 in. long. Awaiting Ali at home were Brandon, Courtney, and Whitney.

<p>Number of plastic pink flamingos sold in the United States in 1985: <b>450,000.</b> - from <i>Harper's Index.</i></p>
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## Extracurricular Activities

### 'TIS THE SEASON FOR A PARTY

NALREC will host the annual Employee's Christmas Party on Friday, December 19, 1986, from 5:15 p.m. to 9:15 p.m. in the Village Barn. Dance to "Dealin'" who will be entertaining with rock and R&B favorites. The menu offers fried chicken and holiday spirits, and much, much more. There will be a Christmas raffle with gifts for the upcoming holidays. For further information, contact Sharon Koteles, ext. 3598.

### FILM SOCIETY PRESENTS

The Fermilab International Film Society will present *The Trial*, Orson Welles' version of Franz Kafka's story of a man hounded by a faceless state for an unspecified crime.

The film will be shown at 8:00 p.m. on Friday, January 23, 1987, in the Ramsey Auditorium. Tickets are available at the door and are \$2.00 for adults, \$.50 for children.

### BIBLE STUDY GROUP SETS MEETINGS

The noon-hour Bible Study Group meets at noon on Mondays and Thursdays in the Black Hole. All are invited.

### TAI CHI FOR THEE?

If you are interested in studying Tai Chi from 6:30 a.m. to 7:30 a.m., twice a week at the Recreation Facility. A Recreation Facility Membership is required. Call Denny Farnum, ext. 3648.

### Entering the Common Consciousness: I

From the Friday, November 14, 1986, *Chicago Tribune*:

"They spice it, they bread it or put batter on it, they deep-fry it, they put it in a bag, they exchange money and they go out the door. It is not as if we are talking about the Fermilab, or the acceleration of neutrons."

- *An attorney in the case over whether a Highland Park franchise-holder stole Popeye's, Inc.'s, fried chicken recipe to start his own operation.*

### Cafeteria Holiday Hours

The holiday hours for the cafeteria will be as follows: December 24, December 31, 1986: breakfast only. December 25, 1986, January 1, 1987: closed.

## Credit Checks

The Argonne Credit Union announces its "BIG TICKET LOAN SALE" during the entire month of December. Interest rates on motor vehicles (new and used) and most consumer items are reduced for members to take advantage of pre-holiday sales and 1986 sales tax deductions (if members itemize deductions). Reduced interest rates include:

9.9% A.P.R. on: All new cars, used cars (model years of 1983 or newer), RVs, boats, motorhomes, etc., (model year of 1983 or newer).

12% A.P.R. on: Most consumer goods with a maximum repayment term of 24 months. (Includes computers, VCRs/TVs, large appliances, piano/organs, etc.) Items purchased must total \$1000 or more and must be purchased new (no refinancing of existing loans under this sale). Members need to bring in a purchase order, paid receipt or charge card voucher to apply for a loan. This sale continues through December 31, 1986, and is available at all credit union locations.

### Credit Union Holiday Schedule

Wednesday, Dec. 24, 1986, open 8:00 a.m. to noon.

Thursday, Dec. 25, 1986, closed all day.

Wednesday, Dec. 31, 1986, open 8:00 a.m. to noon.

Thursday, Jan. 1, 1987, closed all day.

### Neither Rain Nor Snow Nor Flu...

After missing the America's Marathon/Chicago on October 26, 1986, due to a bout with the flu, Roger Dixon (Head of Program Planning) was determined not to let all that training go unrewarded. Training even harder in the 3 weeks between the Chicago and St. Louis marathons, Roger entered and finished the latter in 3 hrs. and 32 mins. He bettered last year's time by a full 22 minutes. Congratulations Roger!

- Merle Haldeman

### Next Research Division Seminars

On December 18, 1986, at 4:00 p.m., J. Morfin will speak on the "Study of Hadron Showers from Muoproduction," and on January 13, 1987, at 11:00 a.m., L. Gustafsson will discuss "Fastbus to VME Interfacing at CERN." Research Division Seminars are held in Curia II.

FermiNews is published by the Fermilab Technical Publications Office, P.O. Box 500, Batavia, IL, 60510 (312) 840-3278  
Fermilab is operated by the Universities Research Association, Inc., under contract with the United States Department of Energy.

## **FermiNews - Cla\$\$ified Ad\$**

### **FOR SALE:**

#### ***Vehicular Transportation***

##### **AUTOMOBILES**

1980 MERCURY CAPRI, 6-cyl., automatic transmission, sunroof, air-conditioning, power steering, AM/FM stereo, 63,000 miles, no rust, excellent condition, \$2495.00. Contact Kurt Krempetz, ext. 4657.

1977 TOYOTA COROLLA wagon, 5-spd., air conditioning, good condition, no rust, must sell, price negotiable. Call Flavio Marchetto, ext. 4239 after 6:00 p.m.

##### **MOTORCYCLES**

1977 HUSQVARNA 250 CR, asking \$450.00; 1974 HUSQVARNA 125 CR, asking \$250.00; will take best offer on both. Call Joseph Flores at ext. 4074.

#### ***Aquatic Transportation***

##### **BOATS**

16-ft SEA STAR BASS BOAT with 85 h.p. Evinrude, complete w/ Calkins trailer, 3 batteries, depth finders, 2 aluminum props, 1 SST prop, Motor Guide trolling motor, 2 fuel tanks, spare tire. Call 393-2446 or 393-2357.

#### ***Miscellaneous***

##### **WINTERTIDE PARAPHERNALIA**

CROSS-COUNTRY SKI BOOTS; men's size 11, leather and plastic, good condition, \$15.00; size 6 (38cm) leather, excellent condition, \$18.00; size 3-1/2 (34 cm), leather, well used, \$8.00. Call Barb, ext. 4136.

ARIENS SNOW THROWER, 5 h.p., 20 in. cut, excellent condition, \$350.00. Call Mark, ext. 4776 or (312) 695-3263.

##### **RECREATIONAL PARAPHERNALIA**

AMERICAN RC HELICOPTER w/ Kraft 6-channel radio, \$350.00. OLYMPUS 35mm CAMERA, \$100.00. MAMIYA/SEKOR 35mm CAMERA w/ case and three lenses, \$250.00. Call Joseph Flores, ext. 4074.

3-MAN TENT, used once, \$20.00. Call 406-1694 after 4:00 p.m.

##### **DOMESTIC PARAPHERNALIA**

SEARS KENMORE DISHWASHER, \$100.00, call Joseph Flores, ext. 4074.

ELECTRIC STOVE, good condition, \$75.00; CEILING FAN/LAMP, \$45.00; BOX SPRING, queen size, \$100.00; HUMIDIFIER, \$15.00; ANTIQUE HUTCH (Amish style), \$425.00; OAK TABLE, \$100.00; SOCKET SET, 1/2-in. drive, \$30.00; for all of the above, call Dave at ext. 3677 or 851-0763.

AMANA RADARRANGE MICROWAVE OVEN, top-o'-the-line model, brand new in sealed carton, full warranty, retails for \$459.00, will sell for \$350.00. Call Rob, ext. 4676.

MAYTAG WASHER & DRYER, top-o'-the-line, like new (1 year old); MAYTAG PORTABLE DISHWASHER, 1 year old; ZENITH 19" COLOR TV; all items reasonable; call 406-1630.

**(OVER FOR MORE)**

KENMORE HEAVY DUTY ELECTRIC DRYER, very good condition, \$150.00. Call Walt between 9:00 a.m. and 2:00 p.m. at 484-9015, or Jo Baaske at ext. 3046.

PLUSH CARPET, excellent condition, rust color: 12' 8" x 8' 7"; sculptured beige: 11' 16" x 10' 8", \$50.00 each. LARGE CAT LITTER BOX w/cover and charcoal filter, like new, \$15.00. Call 406-1694 after 4:00 p.m.

#### WOODWORKING DEVICES

BLACK&DECKER DELUXE ROUTER, 1 h.p., model #7616, with following accessories: router table, complete; straight and circular routing guides; router template set (2 sizes, letters and numbers), and router craft book; used once for a few minutes, excellent Christmas gift!, \$125.00. Call Evelyn at ext. 3276.