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WU Record

Published For The Washington University Community

September 25, 1975

WU Space Scientists Launch Detector In Search of Ultra-Heavy Cosmic Rays

WU physicists prospected for uranium Tuesday, Sept. 16—some 20 miles in space. And like all prospectors for rare elements they are finding that patience is the most important virtue.

The good news from their first launch is that their two-ton electronic detector, which does the prospecting for them and is the largest device of its kind ever flown, proved itself. It was designed at WU to detect not only uranium but also several other atomic nuclei in the form of ultra heavy cosmic radiation.

The detector was carried aloft at 9:35 p.m. Monday, Sept. 15, by a giant polyethelene balloon from the Sioux Falls, South Dakota, airport, which is a base for scientific high altitude balloon launchings. The launch proceeded with no major problems, and at 2 a.m. Tuesday morning the balloon leveled off at its "float" altitude of between 115,000 and 120,000 feet. Telemetry signals sent back from the detector to the base indicated that it was functioning and analyzing cosmic ray particles properly.

Then came the bad news: for reasons still not known, the balloon ruptured and base technicians transmitted a radio command that cut the detector loose from the balloon and returned it to earth via parachute. The deflated balloon, however, caught in the parachute, which opened only partially in its descent with the detector. The detector landed 60 miles southeast of Sioux Falls in an open field after only one and a half hours of float time. From 40 to 60 hours of cosmic ray exposure is needed for a complete experiment.

While there was some damage to the detector from its hard landing, it hopefully will be repaired in Sioux Falls in time for another launch this week before seasonal winds become too strong for high altitude flights. But the WU research group now has proof that its new detector will function as planned, providing the next high



Richard N. Levine

Technician pumps helium into high altitude balloon prior to launching of detector.

altitude balloon gives them no more problems.

The WU detector, which required three years to construct, was designed, engineered and built by WU space scientists. The three principal researchers are John Epstein, project engineer, and two physicists, Patrick Love and Jack Tueller. Epstein insisted that the two-ton device could be built on a small budget and came up with a design to prove it. Love is director of the project; Tueller designed several of the detector's key components. Love and Tueller are using the experiment as the basis for Ph.D. dissertations. Professors Martin Israel and Joseph Klarmann are advisers for the NASA-supported cosmic ray research.

Cosmic rays are nuclei of atoms that travel through the galaxy near the speed of light. These particles, most of which are absorbed in the earth's outer atmosphere, are believed to have been generated in exploding stars called supernovae. A widely ac-

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Hypertension Poses Problem in Youths, WU Study Finds

A study sponsored jointly by the St. Louis Heart Association and the American Heart Association, believed to be the only one of its kind in the country, is now in its second year as researchers strive to establish blood pressure standards for teenagers. To date some 7300 persons, representing a cross section of the St. Louis metropolitan area, have been screened in an effort to learn if any of those in the 14-20 age group are victims of hypertension, a disease once considered strictly an adult complaint.

Directed by Dr. David Goldring, WU professor of pediatrics and director of pediatric cardiology at Children's Hospital, the study indicated that 175 of the teenagers tested thus far may have greater problems with high blood pressure than physicians had thought previously. They were among the top ten percent of those with highest blood pressures screened out during the survey.

Goldring said that he and his associates Dr. Sol Londe and Dr. Antonio Hernandez, also of Children's Hospital, have "developed standards for 14-year-olds, 15-year-olds, and those in the 16-20 group. The study definitely shows," he added, "that in the case of boys we need a different standard for the 14-year-old and the 15-year-old. For boys from 16-20 we can probably use the same measurement. Girls' blood pressure is lower than boys' and the differences between the measurements in the comparable female age groups is infinitesimal." Dr. Goldring added: "The important point of the study was to emphasize the fact that hypertension is not necessarily a disease of adulthood. It may have its antecedents even in infancy."

Goldring recommended benign treatments such as curbing of salt intake and diet control for those teenagers suspected of being hypertensive. He ruled out drug

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Mobile Home Design Award Won by Two Faculty Members

Two part-time faculty members, Carolyn and Ronald Nuetzel, have won the \$7500 first prize in the Third Annual Reynolds Metals Mobile Home Design Competition. Ms. Nuetzel is a day-time instructor in the School of Architecture and a candidate for the master's degree in architecture; her husband teaches architecture in the evening program of University College.

Three years ago, in the first such contest sponsored by Reynolds Metals, the Nuetzels finished in fourth place. Their winning design this year was selected from some 400 entries. It features a double-wide mobile home connected by a wooden deck which provides a courtyard for the home. It is estimated that the Nuetzels' design could be built for about \$26,000 including land.

The power will be shut off at 4 a.m. Sunday, Sept. 28 in the campus buildings affected by the recent power failure. It will be off for 8 to 12 hours so that repairs can be made on the primary electric feeder cable leading from the Union Electric transformer. The cable was damaged Sept. 13 by a massive short which caused a 12-hour blackout in the newer campus buildings. For further information call Robert Reinhardt at ext. 4651.

PAA To Offer Creative Dance, Drama Classes

A modern dance class for women, especially those with children enrolled in creative dance classes, will be offered by the WU Performing Arts Area Dance Division Sept. 29-Dec. 1. Annelise Mertz, professor of dance and director of the dance division, will teach the course, which will emphasize elements of movement. The class will meet on Mondays from 11 a.m.-12 noon.

Another new class to be offered this fall is creative dramatics for children from 11-14 years of age, taught by Phyllis Weil, artistic director of the Metro Theatre Circus and an instructor in dance at WU. The students will meet in 149 McMillan on Saturdays from 11 a.m.-12 noon beginning Sept. 27.

Classes in creative dance for young people also open for enrollment are: Class I, age 5, Thursdays, 4-4:50 p.m.; Class II, ages 6-7, Saturdays, 10-11 a.m.; Class III, ages 8-10, Saturdays, 11:15 a.m.-12:15 p.m.; Class IV, ages 15-18, Saturdays, 12:15-1:30 p.m.; and Class V, ages 11-14, Saturdays, 10-11 a.m. Call ext. 4181 for details.

Gravitation to Law Studies Brings Trio of Political Figures to WU



From left to right: Phyllis Schlafly, Steve Vossmeier, and Mary Stolar.

Three political figures—Phyllis Schlafly, Mary Stolar, and Steve Vossmeier—have tossed their hats into the legal ring by enrolling as students at WU's Seeley G. Mudd Law School.

They are among a number of persons at the school who have established themselves in various careers but are now seeking law degrees. (These students include a physician, a hospital administrator, several engineers and accountants.)

Perhaps the best known student is Phyllis Schlafly. Most recently, she has received national attention as a leading opponent of the Equal Rights Amendment. She holds a bachelor's degree from WU and a master's degree in political science from Harvard University (Radcliffe). "I always wanted to go to law school," she said. "I don't know, however, exactly how I will use the degree. I haven't decided whether I will go into private practice or use it in some other way."

Schlafly is a noted author, columnist, and TV and radio commentator. She has been elected a delegate to the Republican National Convention several times and is precinct committeeman, in Alton, Ill., where she resides with her husband and six children. *Kissinger on the Couch*, her latest book, co-authored with Admiral Chester Ward, is an analysis of Kissinger's foreign and defense policies.

Mary Stolar, Democratic alderwoman for the 25th ward, which includes the West End of St. Louis,

has returned to law school on a part-time basis to finish the degree she began at WU in 1961. After one year she dropped out to get married, which she notes was considered the ultimate achievement of a woman in those days of pre-women's liberation. Since 1970, when she received a master's degree in social work from WU, she has worked at various jobs concerned with public welfare. She ran for the aldermanic office in 1973 after active participation in precinct politics and after her husband, who held the post previously, decided not to run again. Her return to law school was precipitated by a desire to prepare herself for full-time employment when and if she decides not to run again.

"I can't see myself staying at home full time," said Stolar, mother of two children. "I think a law degree will help me in establishing a career. I'll probably go into a public interest field to utilize both my social work and legal backgrounds."

Steve Vossmeier's schedule of studies at the Law School since his enrollment in 1973 has necessarily revolved around his political and legislative duties. A state representative (Democrat) for Missouri's 86th district, which runs from Manchester to Delmar and from Euclid to the St. Louis city limits (including a portion of the Hilltop Campus), Vossmeier takes a full course load in the fall and summer semesters but only one course in the spring when the state legislature meets in Jefferson City.

Vossmeier holds a bachelor's degree from WU and a master's degree in Public and International Affairs from George Washington University. He served as legislative assistant to U.S. Senator Thomas F. Eagleton from 1969 to 1972, and was elected to the Missouri House of Representatives in 1974.

"Having a law degree is enormously helpful to legislators," he said. "While many people may see the need for a new law, they don't know how to put that general knowledge into a usable form. A lawyer has the knowledge to do it." A case in point was the drafting of the state campaign expenditure law introduced by Vossmeier and passed in 1974. Vossmeier consulted a WU law professor and student for assistance in drafting a workable law which would take into consideration the limitations necessarily put on it by the Constitution, regulatory bodies, statutory and federal laws.

(Janet Kelley)

Detector

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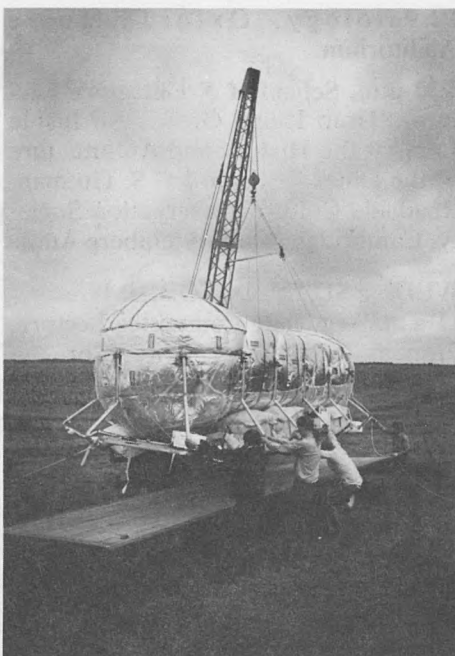
cepted theory in astrophysics is that supernova explosions led to the formation of the solar system. The intensity of these explosions was of a magnitude sufficient to produce the heaviest nuclei, such as uranium and thorium, and distribute them in interstellar space. The products of the explosion, together with the lighter nuclei which make up most of the interstellar gas, formed a cloud which eventually condensed into the sun and its planets.

The WU physicists are particularly interested in the ultra-heavy nuclei. Most of the particles they will detect will range from zinc (atomic number 30) through neodymium (atomic number 60); the detector will catch a few rare cosmic rays as heavy as uranium, which has an atomic number of 92. The WU research group, which hopes its detector will reveal important new information about these cosmic-rays, is the only group of scientists in America building electronic devices large enough to detect ultra-heavy cosmic rays. In fact, their detector is the largest ever launched in a pressurized container for a high-altitude balloon flight (the electronic equipment will function only at sea-level pressure). The researchers expect to have preliminary findings in one to two months, but a complete analysis will take six months to a year.

ANNOUNCEMENTS

THE WU OBSERVATORY is now open on clear nights, Monday-Friday, from 7:30-10 p.m. Located on the roof of Crow Hall, the Observatory is operated by the Physics Department under the direction of Professor Michael Friedlander. Five student assistants man the facility. The Observatory is open to all members of the University community. Small groups can be accommodated by calling Friedlander in advance at ext. 4403 or 4036. To reach the Observatory, enter the south door of Crow Hall from the courtyard between Crow and Cupples I, and follow the signs and arrows to the top level of Crow. Interested persons should call the Observatory at ext. 4093 before coming to be sure it is open.

The WU Record is published weekly during the academic year by the Information Office. Editor, Kathy Pearson; assistant editor, Janet Kelley. Address communications to Box 1142.



Richard N. Levine

Cosmic ray scientists recover detector in a field after its Sept. 16 launching.

DANFORTH GRADUATE FELLOWSHIPS for Women are available for the 1975-76 academic year. The fellowships are open to all women, single or married, who either have or will complete a bachelor's degree by April 1, 1976 and whose academic careers have been interrupted for three continuous years. The award, \$2275 per year for single women and \$2450 per year for married women, is for one year and is renewable until completion of the graduate degree for a total of 4 years. Deadline for application requests is December 8; deadline for receipt of completed application is January 5. For details write Graduate Fellowships for Women, Danforth Foundation, 222 South Central Ave. St. Louis, Mo. 63105.

A GRADUATE READING ROOM will open Oct. 1 on the second floor of January Hall adjacent to the East Asian Library. WU's Libraries have installed 36 keyed lockers which have been assigned to the departments located near January Hall. The reading room will have seating space for 70 people and a small basic reference collection. The hours will be: Monday-Thursday, 8:30 a.m.-10 p.m.; Friday, 8:30 a.m.-6 p.m.; Saturday-Sunday, 1-6 p.m.

JOHN KELLY, Rathskeller manager, has announced that there will be live entertainment in conjunction with the Rathskeller's opening Monday, Sept. 29. Bernie McDonald, a St. Louis folksinger, will perform from 4-7 p.m., and the Lloyd Wallace jazz quartet will appear from 8-11:30 p.m.

Student's Condition Satisfactory Following Assault at Bus Stop

John W. White, WU graduate business student, was reported to be in satisfactory condition Monday following surgery at the WU Medical Center for injuries he sustained when he was robbed and beaten last Thursday at 8:30 p.m. White was beaten by two young males (still at large) who robbed him of his wallet, which contained \$9. The crime took place on South Skinker, near the intersection of Forsyth, where White was waiting for a bus. It occurred in the venue of the St. Louis police department which is conducting the investigation. The assailants fled when several motorists came to White's aid. One of the motorists returned White to his apartment. Later when he developed severe head pains a friend took him to the Barnes Hospital emergency room. Surgery was done to stop bleeding and remove a clot in the epidural layer between his skull and brain. Physicians said White should recover completely and he was expected to be released from the hospital shortly.

Hypertension

(Continued from page 1)

therapy, except in the most extreme cases, because "We don't know what the effects of long-term treatment of hypertension reducing drugs will have on a growing individual."

Goldring hopes that follow-up studies will be done some 20 years from now on those teenagers studied thus far and on the thousands of others expected to be examined during the three-year study. Then doctors will be able to tell if there is a definite relationship between what appears to be hypertension in teenagers and the high blood pressure which bedevils so many middle-aged and even older victims.

(Dorothy Brockhoff)

NEWS BRIEFS

MRS. MARY NODEN, of Granby, Mass., was pulled from a burning bed September 17 at the Olin Residence Hall at WU's School of Medicine. Noden, who reportedly was staying at the residence hall while on a job interview, suffered first- and second-degree burns over 30 per cent of her body. She is in the burn unit of Barnes Hospital. Charles Warren, the porter at the residence hall who pulled Mrs. Noden from the bed, and Clifton Graham, a porter who threw the burning mattress out of a window, were rewarded with checks by Dr. John C. Herweg, Associate Dean of Students at the Medical School.

Calendar

September 25-October 1

THURSDAY, SEPTEMBER 25

9 a.m. Two-Day School of Continuing Education Seminar, "Fundamentals of Finance & Budgeting for Scientists, Engineers and Project Managers," Ronald M. Copeland and Jerome V. Bennett, both of the U. of S. Carolina Business School. 215 Cupples II. Fee \$345.

4 p.m. Department of Chemistry Seminar, "A Deformed Shell Model of Nuclear Fission," Ellis Steinberg, Argonne National Laboratory, Argonne, Ill. 311 McMillen Lab.

4 p.m. Physics Department Colloquium, "Polarization Echoes in Crystals and Powder," Robert L. Melcher, researcher from I.B.M. 201 Crow. (Lecture will be preceded by a coffee at 3:30 p.m. in 241-245 Crow).

4:30 p.m. Department of Mathematics Colloquium, "Some Unsolved Problems In Real Analysis," Antoni Zygmund, mathematics prof., U. of Chicago. 199 Cupples I (Talk will be preceded by a tea at 4 p.m. in 222 Cupples I.)

8:15 p.m. WU Asian Art Society Slide/Lecture, "The Wu Shrine Reliefs and My Journey to the Site," Wilma Fairbank, author and lecturer on Chinese art. Steinberg Hall. (The lecture previews the Sept. 26 opening of the exhibit, "Rubbings from the Wu Shrine," in Steinberg Gallery).

SUNDAY, SEPTEMBER 28

12 noon. Office of Campus Programming Student Activities Open House. Wohl Center.

MONDAY, SEPTEMBER 29

9 a.m. Three-Day Graduate School of Business Administration and School of Continuing Education Seminar, "Designing, Implementing and Maintaining Effective Production Planning, Scheduling and Inventory Control," Powell Niland and John E. Walsh, Jr., both professors of management at WU. 215 Cupples II. Fee \$310.

12 noon. Five-Day Computing Facilities Seminar, "Elementary Fortran Programming," David G. Weible, computer education specialist, WU computing facilities. 199 Cupples I. Call ext. 3138 to register.

TUESDAY, SEPTEMBER 30

4 p.m. Division of Biology and Biomedical Sciences Seminar, "The Contrasting Responses of Muscle Spindles to Small and Large Stretches," Dr. Peter B. S. Matthews, University Laboratory of

Physiology, Oxford. Moore Auditorium.

8:30 p.m. School of Architecture Lecture, "Grab It and Growl: An Inside Look at the History and Architecture of the Diner," Richard J. S. Gutman, Roadside Culture Preservation Society, Cambridge, Mass. Steinberg Aud.

WEDNESDAY, OCTOBER 1

11 a.m. Academic Committee Lecture, Frances Fitzgerald, writer for the *New Yorker Magazine* and author of *Fire in the Lake*. Graham Chapel.

SPORTS

SATURDAY, SEPTEMBER 27

11 a.m. Cross Country. WU vs. DePauw Medley. At Greencastle, Ind.

1:30 p.m. Football. WU vs. Southwestern at Memphis. At Memphis, Tenn.

7:30 p.m. Soccer. WU vs. Harris Teachers College. At Francis Field.

TUESDAY, SEPTEMBER 30

4 p.m. Cross Country. WU vs. Millikin U. At Decatur, Ill.

WEDNESDAY, OCTOBER 1

4 p.m. Soccer. WU vs. McKendree College. At Francis Field.

EXHIBITIONS

The Libraries. Level 3, Olin Library. 8 a.m.-12 midnight, daily. Through mid-November.

"Female Voices," an exhibit of selections of women authors' works from the Special Collection of Modern Literature. Letters, poetry, worksheets, and prose writings are included. Featured are examples of the work of Elizabeth Bishop, Kay Boyle, Ivy Compton-Burnett, Denise Levertov, Marianne Moore, Sylvia Plath, Dame Edith Sitwell, Stevie Smith, Mona Van Duyn and many others. Rare Book Department, Level 5, Olin Library. 8:30 a.m.-5 p.m. weekdays. Through December.

"Three Centuries of French Posters," an exhibition from the Musee des Arts Decoratifs in Paris, co-sponsored by L'Association Francaise d'Action Artistique. Steinberg Gallery. Mon-Fri. 9 a.m.-5 p.m.; Saturday 10 a.m.-4 p.m.; Sunday 1-5 p.m. Through Oct. 20.

"Rubbings from the Wu Shrine," an exhibition of a series of rubbings donated to Washington University by Mr. and Mrs. Ingram Boyd, Jr. Steinberg Gallery. Mon.-Fri., 9 a.m.-5 p.m.; Sat., 10 a.m.-4 p.m. Sun. 1-5 p.m. Sept. 26-Oct. 25.

FILMS

THURSDAY, SEPTEMBER 25

7:30 & 9:30 p.m. WU Filmboard Series, "Shadow of a Doubt," with Joseph Cotten and Teresa Wright. Brown Hall Theatre. Admission \$1.

FRIDAY, SEPTEMBER 26

7:30 & 9:15 p.m. WU Filmboard Series, "Harold and Maude," with Ruth Gordon and Bud Cort. Wohl Center Line D. Admission \$1.25. (Also Sat., Sept. 27)

11:15 p.m. WU Filmboard Series, "Bedazzled," with Peter Cook and Dudley Moore. Wohl Center Line D. Admission \$1. (Also Sat., Sept. 27)

SATURDAY, SEPTEMBER 27

8 p.m. Office of Campus Programming Classic Cinema of the 30's Double Feature, "Sign of the Cross," with Fredric March, Elissa Landi, Charles Laughton, and Claudette Colbert, and "Lives of A Bengal Lancer," with Gary Cooper, Franchot Tone, and Richard Cromwell. Also a Bugs Bunny cartoon. Wohl Center Line D. Admission \$1.

TUESDAY, SEPTEMBER 30

7:30 & 9:15 p.m. WU Filmboard Series, "Easy Living," with Jean Arthur and Ray Milland. Brown Hall Theatre. Admission \$1.

MUSIC

THURSDAY, SEPTEMBER 25

4:30 p.m. WU Wind Ensemble Concert, with Dan Presgrave, conductor. Program will include works by John Philip Sousa, Erik Satie and Lerner and Loewe. Mallinckrodt Center Amphitheatre. (Program will be repeated at 2:30 p.m. Sun, Sept. 28, in Shaws Garden).

MONDAY, SEPTEMBER 29

8 p.m. St. Louis Symphony and Washington University "Musical Offering" Concert, with Malcolm Frager, piano. Featuring Pezel's "Suite of Dances," McCabe's "Rounds," Mozart's "Quintet in E-flat for Piano and Winds, K. 452," and Brahms' "Quartet in C minor for Piano and Strings, Opus 60." Edison Theatre. General admission \$4.50; WU faculty/staff \$3; WU Students \$2.

PERFORMING ARTS

FRIDAY, SEPTEMBER 26

8 p.m. Margalit Dance Theatre Company. Integration of drama, mime, rhythm and music in a contemporary dance expression. Edison Theatre. General admission \$4.50; WU faculty/staff \$3.50; WU students \$2.50. (Also Sat., Sept. 27)