

—Dietz on Science—

## HEAT LOST BY EARTH FAST AS SUN WARMS IT

Constant Energy Radiation  
Into Space Presents  
Science Problem.

BY DAVID DIETZ  
Scripps-Howard Science Editor

A reader wants to know why the earth, since it is continually bathed in sunlight, does not grow warmer from year to year. Perhaps similar questions have bothered other readers. His letter follows:

"If the sun is continually radiating energy, what becomes of it all? If the earth is wrapped in a layer of gases, and a vacuum beyond that, doesn't that condition parallel a thermos bottle? Under circumstances like that, the heat of the earth should increase from year to year. But does it?"

Like many a question, these are easier asked than answered. But let's go!

The sun is radiating energy into space all the time. Except for the little that is intercepted by the earth and other planets, it is dissipated into space. The same thing is true of the energy of the stars.

Radium Used in Tests

That is why Eddington, Jeans, and other authorities say that the universe is running down. Eventually, they say, all the energy of the universe will be dissipated throughout space in an unavailable form.

Jeans has calculated that if all the energy of the universe was scattered uniformly through space it would raise the temperature of space only a fraction of a degree.

Recent experiments with rays from radium seem to be turned into matter appear to indicate that the running down process may not be the only factor. Perhaps some process of winding up the universe also may exist.

Three Methods Explained

At one time heat was thought to be an imponderable substance, called caloric, which was transferred from one body to another. We know now that heat is molecular vibration. A body is cold when the molecules comprising it are vibrating slowly. When they vibrate more rapidly, the body becomes hot.

Heat can be transferred from one body to another by three methods. The first is conduction. You heat one end of an iron poker and the other end becomes hot. You can imagine the molecules at the heated end increasing their vibration and gradually setting this neighbors to vibrate more rapidly.

The second method is convection. This is the method by which a boiler of water is heated by a fire below it. The heated water rises in the boiler, setting up convection currents which cause the entire mass of water to grow hot much faster than if the heat had to spread by conduction alone.

Rays Warm Atmosphere.

The third method is radiation. This is the way heat is transferred from the sun to the earth. In greater or lesser degree, all hot bodies give off heat, or to use a more accurate word, energy in the same way.

The energy from the sun falls upon the surface of the earth. It is absorbed by the earth. The molecules of the earth's surface, absorbing the energy, vibrate more rapidly. Therefore the earth's surface has become warmer.

The heat rays from the sun which the earth absorbs are given off again by the earth in the form of longer heat waves. These rays warm the atmosphere. The atmosphere is not warmed very much by the sun's rays on their original passage. That is why the temperature only a few miles above the earth's surface is always many degrees below zero.

## AIMEE ASKS \$1,000 TO AID CITY'S NEEDY

Soup Kitchen Heads Offer Evangelist \$500.

Aimes Semple McPherson, the famous evangelist, demands \$1,000 to come to Indianapolis for two meetings for the benefit of the poor relief soup kitchen. She has been offered \$500.

Albert Losche, city purchasing agent, said Aimes has been offered the \$500 for an afternoon meeting for women at Cadle tabernacle Oct. 25 and a night meeting at Cadle before a mixed audience.

The soup kitchen, supported by city hall and county employees, will benefit approximately \$2,500 on a 25 and 50-cent ticket basis, if Aimes accepts the \$500 offer, Mr. Losche estimates.

## CONDUCTS STUDY FOR PRACTICAL SUBJECTS

Commerce Fraternity Prepares Questionnaire for Grads.

BLOOMINGTON, Ind., Oct. 14.—A research project to determine subjects of the most practical value in the Indiana university school of business administration is being carried on by Alpha Kappa Psi, professional commerce fraternity.

Edward Schrader of Kokomo is president of the organization and in charge of the research which is being done in collaboration with Dean W. A. Rawles of the I. U. school of business administration.

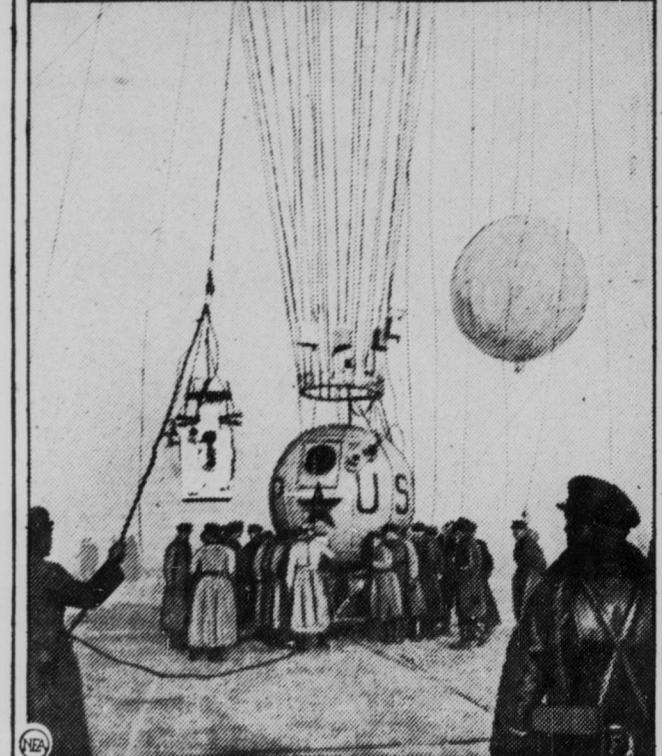
Questionnaires are being mailed to all graduates of the university's business school asking them to check subjects which have been of most benefit to them in their practical experience.

## FORD LOSES \$100,000

Motor Car Company Ordered to Pay for Contract Violation.

PHILADELPHIA, Oct. 13.—The Ford Motor Company of Detroit has been ordered by a jury to pay \$100,000 to the defunct Sweet's Automobile Distributing company for alleged contract violations by the Lincoln Motor Car Company, which Henry Ford Jr. charged for \$8,000,000. An appeal will be filed.

## ANOTHER TRY—ANOTHER HEIGHT RECORD?



## SECURITIES ACT AIMS TO CURB TRUST FRAUDS

New 'Blue Sky' Law Drafted to Protect Interests of Investor.

By Scripps-Howard Newspaper Alliance  
WASHINGTON, Oct. 16. The new securities act holds out hope for curtailing methods of so-called investment trust corporations which the senate banking committee, in its current inquiry, criticizes as inimical to the interests of investors.

An analysis today disclosed that the federal "blue sky" law, which has been in effect for three months, aims directly at certain practices of Dillon, Read & Co. in forming and creating investment trusts. The Dillon-Read type was a model for a great number of such trusts which sprang up during the boom years and absorbed some \$4,000,000,000 from the public.

The weapon of the securities act is publicity. It can not correct by fiat. But under its provisions investment trust corporations hereafter must tell the public when issuing new stock and embracing new securities whether they countenance what Senator James Couzens (Rep., Mich.), termed a "reprehensible" practice in the Dillon-Read setup.

Publicity Is Chief Weapon

Whether mere publicity will be enough remains to be seen as the banking committee pursues its investment trust inquiry further to determine if the criticized methods still are being employed. Tomorrow Ferdinand Pecora, committee counsel, will continue his exploration of the Dillon-Read trusts.

The committee may find further specific legislation desirable. The security act imposes publicity by the Federal trade commission only for stock issues subsequent to passage of the act and does not go back to previous issues.

During its inquiry of the past few days the committee found of particular interest these features of the Dillon-Read investment trust type:

### Hits Acquisition of Control

1. Acquisition of control of \$90,000,000 of capital in two investment trust companies by a cash outlay of only \$5,100,000. This was accomplished by selling controlling blocks of stock to Dillon, Read & Co. for almost a song, while the public investor contributed the lion's share of capital and got very little actual stock.

2. Dumping of "sour" investments into the investment trust portfolio at fancy profits for Dillon, Read & Co. and Hayden Stone. Directors of these and other companies sat on the boards of the investment trusts and were instrumental in throwing their weak issues into the investment trust pot.

The securities act, to reach the first of these two practices, requires that the prospectus for new stock issues "if there is any variation in the price at which any portion of the certificates is proposed to be offered to any persons or classes of persons, give a list of such persons or classes of persons, naming them, and stating the amount of such variation or variations."

### Bore Double Functions

To meet the second, it requires that the prospectus say "if any of the directors (or persons performing like functions), partners, or officers of the depositors are directors, partner or officers of any person issuing securities held in trust." Names and functions must be given.

This particular information might have no significance to the ordinary investor if it were not for the meaning imparted by the senate committee's inquiry. The investigation, therefore, is vitally necessary to make the new security act effective. It occupies the role of a dictionary or guide book.

### KIDNAPED BY BANDITS

Armed Thugs Take Bedford Man for Ride; Force Him From Car.

By Times Special  
BEDFORD, Oct. 14.—Sherman Pruitt, 27, was kidnapped early today, he told local police. He said he was sitting in a car when two armed men ordered him to drive them away. Telling them that he could not drive, he was pushed aside and one of the bandits took the wheel.

Later they collided with an automobile driven by Mrs. Seth Thomas Williams, but both cars were able to continue. Soon Pruitt was released and the bandits drove away. The car later was recovered.

### GETS 10-YEAR TERM

Convicted on Charge of Attempt to Attack Woman.

BRUNE WOOD, 40, of 3332 North Sherman drive today was sentenced to one-to-ten years in the state prison on conviction in criminal court on charges of assault and battery with intent to commit a criminal attack.

The complaining witness was Mrs. Anna Grace Rayman, 56, who charged Wood answered her advertisement for a cook and attempted to attack her in an automobile in the northeast part of the city.

### Degrees Are Approved

By Times Special  
BLOOMINGTON, Oct. 14.—Trustees of Indiana university today approved faculty recommendations for degrees for 217 students.

These degrees, which go to students who completed work during the summer session, together with more than 800 others who received diplomas in June, bring the total number of students graduating this year to more than 1,000.

The complaining witness was Mrs. Anna Grace Rayman, 56, who charged Wood answered her advertisement for a cook and attempted to attack her in an automobile in the northeast part of the city.

### TWO HOOSIERS PROTEST ARREST IN WISCONSIN

Cop Was Insolent, Marion Men to Tell State Executive.

By United Press

MILWAUKEE, Oct. 14.—Wisconsin's "hospitality" was meaningless for B. Stephenson and R. G. Warner, officials of a Marion, Ind., electric company.

Arrested for speeding last night in Fox Point, the Indiana men claimed that the motorcycle officer was "insolent" and promised they would appeal the speeding charge to Governor A. G. Schmedeman. They posted \$15 bail for appearance in police court Monday.

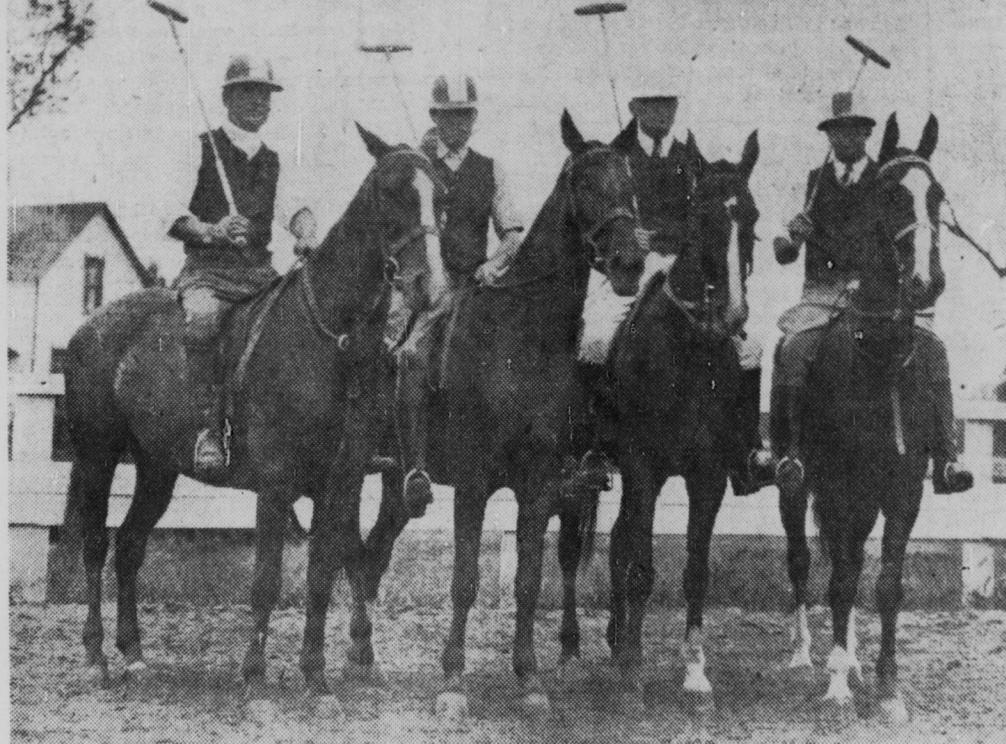
### BEDFORD WOMAN KILLED

By Times Special  
ELLETTSVILLE, Oct. 14.—Citizens of Ellettsville have agreed on an election moratorium and on Nov. 7 when hundreds of other Indiana towns will be choosing town officials there will be no voting here.

Two offices occupied by Republicans were to have been filled, but leaders of the Republican and Democratic parties agreed the in-

## THE INDIANAPOLIS TIMES

### POLO TEAMS WILL BATTLE AT SADDLE ROUNDUP



## Tonight's Radio Tour

### NETWORK OFFERINGS

#### SATURDAY

4:00—Hopkins orchestra (CBS). 4:00—Piano concerto (WEEF). 4:30—Thre Scamps (NBC) WEEF. 4:45—Songs (NBC) WEEF. 5:00—Hall's orchestra (NBC) WEEF. 5:15—Vienna Ensemble (NBC) WEEF. 5:30—Eddie Dooley—Football Reporter Feature (NBC) WEEF. 5:45—Jack Anderson (CBS). 5:50—Hall's orchestra (NBC) WEEF. 6:00—Al Williams (NBC) WEEF. 6:15—Homer's Ensemble (NBC) WEEF. 6:30—Gould & Shetter (WJZ). 6:45—Grand Hotel (WEEF). 6:50—Autumn Idyl (WEEF). 7:00—Sonata recital (WEEF). 7:15—Columbia Broadcasters (CBS). 7:30—Tito Guiar, tenor (CBS). 7:45—Piano concerto (CBS). 8:00—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 9:00—Navy (WEEF)—B. A. Rolfe's orchestra; Columbia—Public Affairs Institute. 10:00—WLS barn dance (WJZ).

11:30—University of Chicago Roundtable discussion (WEEF). 12:00—Sonata recital (WEEF). 1:00—Autumn Idyl (WEEF). 1:15—Piano concerto (CBS). 2:00—Wayne King's orch. (WEEF). 2:30—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 3:00—Gould & Shetter (WJZ). 3:15—Columbia Broadcasters (CBS). 3:30—Grand Hotel (WEEF). 3:45—Grand Hotel (WEEF). 3:50—Autumn Idyl (WEEF). 4:00—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 4:15—Columbia Broadcasters (CBS). 4:30—Grand Hotel (WEEF). 4:45—Autumn Idyl (WEEF). 5:00—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 5:15—Columbia Broadcasters (CBS). 5:30—Grand Hotel (WEEF). 5:45—Autumn Idyl (WEEF). 6:00—Marshall Players. 6:15—Organ Symphonies (WEEF). 6:30—Wendell Hall (WEEF). 6:45—Gould & Shetter (WJZ). 6:50—Mobilization for Human Needs

7:00—Fireside memories (WJZ). 7:15—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 7:30—Antonin Dvorak (CBS). 7:45—Antonin Dvorak (CBS). 8:00—Orchestra (WEEF). 8:15—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 8:30—Orchestra (WEEF). 8:45—Orchestra (WEEF). 8:50—Night dancing (WEEF). 9:00—Night dancing Party, with B. A. Rolfe and his orchestra. 9:15—Orchestra (WEEF). 9:30—Orchestra (WEEF). 10:00—Grand Hotel (WEEF). 11:30—Mark Fisher and his Hotel Edge-water Beach orchestra (NBC). 12:00—Johanna Grossi, organist. 1:00—Radio City X Days and Nights. NBC (WEEF)—Leo Reisman's orchestra; Yacht Club Boys. 2:00—Sign off.

#### WLW (700) Cincinnati

SATURDAY  
P. M.—Paul Ash and his Casino Club orchestra. 4:30—NRA talk. 4:45—Little Orphant Annie (NBC). 5:00—Radio City X Days and Nights. 5:15—Joe Emerson and orchestra. 5:30—Bob Newhall. 6:00—Radio City X Days and Nights. 6:15—Blue Moments. 6:30—Netherland Plaza orchestra. 6:45—Lucky Strike program (NBC). 6:50—Over the Rhine, German bawd. 6:55—Radio City X Days and Nights. 7:00—Night dancing Party, with B. A. Rolfe and his orchestra. 7:15—WLW Barn dance, with Mark Fisher and his Hotel Edge-water Beach orchestra (NBC). 8:00—Radio City X Days and Nights. 8:15—Mark Fisher and his Hotel Edge-water Beach orchestra (NBC). 8:30—Radio City X Days and Nights. 8:45—Orchestra (WEEF). 8:50—Radio City X Days and Nights. 9:00—Eddie Duchin orchestra from New York. 9:15—Radio City X Days and Nights. 9:30—Mexican Marimba Typica orchestra (NBC). 10:00—Folksong Musicals string quartet; guest soloist (NBC). 10:30—Rondolino, male quartet (NBC). 10:45—Columbia Broadcasters (CBS). 11:00—Radio City X Days and Nights. 11:30—Radio City X Days and Nights. 12:00—Radio City X Days and Nights. 1:00—Paul Ash and his Casino Club orchestra. 2:00—Sign off.

#### SUNDAY

A. M.—Melody boys—Guest soloist: Grande Tito (NBC). 7:30—Church Forum. 8:00—Children's hour (NBC). 8:30—Radio City X Days and Nights. 9:30—Mexican Marimba Typica orchestra (NBC). 10:00—Folksong Musicals string quartet; guest soloist (NBC). 10:30—Rondolino, male quartet (NBC). 10:45—Columbia Broadcasters (CBS). 11:00—Radio City X Days and Nights. 11:30—Radio City X Days and Nights. 12:00—Radio City X Days and Nights. 1:00—Paul Ash and his Casino Club orchestra. 2:00—Sign off.

#### WFBM (1230) Indianapolis

INDIANAPOLIS POWER AND LIGHT COMPANY  
SATURDAY  
P. M.—Piano concerto (CBS). 4:45—Tito Guiar (CBS). 5:00—Mildred Bailey (CBS). 5:15—Bohemians (CBS). 5:30—Radio City X Days and Nights. 5:45—Alfredo Kraus (CBS). 6:00—Radio City X Days and Nights. 6:15—Radio City X Days and Nights. 6:30—Eddie Duchin orchestra from New York. 6:45—Radio City X Days and Nights. 6:50—Radio City X Days and Nights. 7:00—Bert Lahr and Rubenoff's orchestra (NBC). 8:00—Radio City X Days and Nights. 8:15—Brisbane Revelers quartet and Al Goodman's orchestra (NBC). 8:30—Walter Winchell (NBC). 8:45—Radio City X Days and Nights. 8:50—Radio City X Days and Nights. 9:00—Jazz (WEEF). 9:30—Never Never Started. 10:00—Eddie Duchin dance orchestra. 10:30—Radio City X Days and Nights. 11:30—Bud Shay and his orchestra (NBC). 12:00—Eddie Duchin dance orchestra. 12:30—Sign off.

#### EXPLOSION KILLS ONE

Gun Crew Catapulted Into Ocean From U. S. S. Cincinnati.

By United Press

SAN PEDRO, Cal., Oct. 14.—A Kentucky seaman was killed when the explosion of a six-inch gun on the U. S. S. Cincinnati catapulted three of the gun crew into the ocean, according to word received at the naval base here today.