



*The largest sunspot cluster recorded since 1951, as photographed at 8:10 a.m. on January 9. The two pointers indicate the North and South Poles.*

## The Month at Caltech

### *Sunspots*

The largest cluster of sunspots since 1951 was recorded at the Mount Wilson Solar Observatory on January 9. The spots extended 100,000 miles across the face of the sun (which is 886,000 miles in diameter and 93,000,000 miles from the earth). Observers estimated that 50 disks the size of the earth would just about cover the spot clusters. The spots, which are gigantic magnetic disturbances, look black only because they are as much as 1,000 to 2,500 degrees cooler than the more incandescent areas around them. The sun itself is believed to be about 25,000,000 degrees Fahrenheit at its core. Sunspots are often accompanied by solar flares. These luminous hydrogen clouds have shot out to heights of several hundred thousand miles above the sun's surface. The largest sunspot cluster on record was observed in April, 1947;

it extended some 152,000 miles across the surface of the sun.

### *Russian Visitors*

Five prominent Russian educators visited the Caltech campus on February 6 and 7, as part of a three-week tour of American engineering schools sponsored by the American Society for Engineering Education and the U.S. State Department. The tour was arranged in return for a recent visit made by eight American engineering professors to Russia. The American group was headed by Frederick C. Lindvall, chairman of Caltech's Division of Civil, Electrical and Mechanical Engineering and Aeronautics (who tells something about the tour on page 13 of this issue). Dr. Lindvall was host to the Russian engineering professors at Caltech.

The Russians toured the Caltech campus, talked with engineering professors, through interpreters, and saw some of Pasadena's industrial and cultural points of interest. Though Pasadena has been a closed area to Russian visitors up to now, the State Department removed the restriction for the Russian engineering group.

### Caltech on TV

Caltech's television series, "The Next Hundred Years," started on its second 13-week run on February 8. The programs are now presented on Sunday afternoons at 4 p.m. over KRCA-Channel 4 in the southern California area. Henry Hellmers, senior research fellow in biology, opened the new series with, "Why Plants Grow Where They Do." Programs to come include:

- February 15 –  
"The Air and You"  
A. J. Haagen-Smit, professor of bio-organic chemistry
- February 22 –  
"This Trembling Earth"  
Frank Press, director of the Seismological Laboratory  
Hugo Benioff, professor of seismology  
Charles Richter, professor of seismology
- March 1 –  
"Desalting the Pacific"  
Jack E. McKee, professor of sanitary engineering
- March 8 –  
"Building From the Ground Down"  
Ronald Scott, assistant professor of civil engineering

- March 15 –  
"Nuclear Engineering"  
Harold Laurie, associate professor of applied mechanics
- March 22 –  
"What Good Are Cosmic Rays?"  
Victor Neher, professor of physics
- March 29 –  
"Metals for Mankind"  
Donald S. Clark, professor of mechanical engineering
- April 5 –  
"Measuring the Universe"  
Halton C. Arp, staff member, Mount Wilson and Palomar Observatories
- April 12 –  
"Living with Earthquakes"  
Frederick C. Lindvall, professor of electrical and mechanical engineering  
George W. Housner, professor of civil engineering and applied mechanics
- April 19 –  
"Rivers – World's Biggest Earth-movers"  
Norman H. Brooks, associate professor of civil engineering
- April 26 –  
"Mutations – The Raw Materials of Evolution"  
Norman Horowitz, professor of biology
- May 3 –  
"Solid Rocketry Into Space"  
Chester McCloskey, senior research fellow in chemistry  
Peter L. Nichols, division chief of propellants, Jet Propulsion Laboratory  
Thor L. Smith, section chief, Solid Propellant Chemistry, Jet Propulsion Laboratory
- May 10 –  
"Scientists of Tomorrow – The Caltech Story"  
President DuBridge and the Caltech Glee Club



Dr. James B. Conant talks with Caltech undergraduates during his three-day visit to the campus last month as a guest of the Caltech YMCA's Leaders of America program. Dr. Conant, President Emeritus of Harvard, and former Ambassador to West Germany, has just completed a two-year study of American high schools.