the crystals so that these centers must be uniformly distributed. It seems, therefore, that a suitable environment of copper activator, such as that provided by boundaries between ordered regions, can provide conditions particularly favorable for electroluminescence.

Radio Waves from Jupiter

Currently four observatories are studying the radio waves emitted by Jupiter, the only planet known to have such an activity. The activity may be caused by extensive electrical storms in Jupiter's atmosphere.

Studies of the radio waves from Jupiter are continuing at the Carnegie Institution of Washington, where the discovery was made last year, at the radio observatory at Sydney, Australia, and at Ohio State University, where a coordinated photographic program is underway with the 69-inch reflecting telescope of the Perkins Observatory at Delaware, Ohio, and at the Central Radio Propagation Laboratory of the National Bureau of Standards, Boulder, Colo.

Cosmic Ray Activity

The greatest burst of cosmic ray intensity ever recorded began at 9:45 P.M., 22 Feb., University of Chicago physicists have reported. The event was described as the most outstanding example so far detected of the sun's production of cosmic ray particles. Onset of the outburst was recorded automatically in the laboratory of John Simpson, physics professor in the University of Chicago's Enrico Fermi Institute for Nuclear Studies. Balloons carrying apparatus to detect and report the cosmic ray outbursts were launched the following day by Simpson and by Marcel Schein, professor of physics. The airborne apparatus is the first ever to be aloft during a cosmic outburst of the present intensity.

News Briefs

■ Production of argon has soared by 300 percent in the last 5 years. Its use in nonferrous metal fabrication promises to keep production rising, according to a recent report in *Chemical Engineering.* Argon was of little industrial importance till the beginning of World War II. Since 1950, argon production has jumped from 55 million to 200 million cubic feet per year.

Argon is used in the cutting and shaping of nonferrous metals; electric arc welding of steel, stainless steel, aluminum, and magnesium; production and fabrication of titanium; and production of light bulbs and electronic tubes. In several of these uses, argon competes with helium; but for some purposes, it has become the preferred gas.

Argon is used in a new technique in a mixture with hydrogen for cutting and shaping metals and in electric arc welding. When argon is used, no slag is formed, and high welding speeds, even in heavy sections, are possible. Argon also is used in the production of titanium. It provides the necessary inert blanket to protect titanium from the air, where it could react readily with oxygen and nitrogen; it also protects titanium sponge from contamination during production and melting in the electric furnace.

■ The American Astronomical Society has joined the Scientific Manpower Commission as a nominating agency, announced John S. Nicholas, 1956 president of the commission and Yale University biologist. This brings the number of societies sponsoring the commission to 10, representing more than 200,000 U.S. scientists in the fields of agriculture, astronomy, biology, geology, mathematics, physics, and psychology. AAAS members chosen to serve with 18 other commissioners are Freeman D. Miller, (University of Michigan) and Frank Bradshaw Wook (University of Pennsylvania).

Other new members of the commission are C. Loyal W. Swanson (Connecticut Agricultural Experiment Station) and John E. Foster (University of Maryland) both representing the policy committee for Scientific Agricultural Societies.

■ In a research project sponsored by the National Science Foundation, Charles L. Hosler, associate professor of meteorology at Pennsylvania State University, is seeking to determine when ice crystals become snowflakes. He has found that ice crystals will stick together to form snowflakes at temperatures between – 13° and + 32°F. The cohesive quality of the ice crystals is important in the formation of snow since the snowflakes must be heavy enough to fall from the clouds. Hosler points out that as the mercury declines toward the – 13° mark, the crystals gradually lose their ability to stick together. As a result, the snow is "drier" and does not pack as well.

■ The Commonwealth Scientific and Industrial Research Organisation of Australia has announced the discovery of a new source of reserpine, a tranquilizing drug used in the treatment of mental disease and high blood pressure. The source is a small tree, *Alstonia constricta,* commonly called bitter bark, which yields as much reserpine on extraction as any known plant.

■ The name of the Santa Fe Operations Office of the U.S. Atomic Energy Commission will be changed to the Albuquerque Operations Office effective 2 Apr. 1956. The Albuquerque Operations Office has field responsibility in the commission's weapons program and has been administered from Albuquerque, N.M., since 1951. It was formerly located at Los Alamos, N.M., but has never been located in Santa Fe, but during World War II, for security reasons, the project's address was Post Office Box 1663, Santa Fe, N.M.

■ A large radio telescope to survey the skies of the southern hemisphere will be built in Australia. The project is aided by a 3-year grant of $250,000 from the Rockefeller Foundation.

What is said to be the world's largest reflecting-type radio telescope has been designed, and will be built, by the electrical engineering department of Ohio State University. Part of the construction costs will be covered by a grant of $48,000 from the National Science Foundation. The telescope, which will be located near Perkins Observatory on land provided by Ohio Wesleyan University, will be some 700 feet long and 75 feet high.

■ The basic causes of aircraft nosewheel shimmy, which have eluded aeronautical engineers for more than 30 years, have been uncovered by a scientist of the Air Research and Development Command. William J. Moreland, chief of the mechanics research branch of the Aeronautical Research Laboratory at the Wright Air Development Center, developed a mathematical formula that accurately determined the causes of shimmy on all the aircraft on which it was applied. According to his theory, any one of 15 parameters, or a combination of them, can induce shimmy. A nosewheel model, on which all the conditions affecting the nosewheel's structure and operation could be varied, was constructed by WADC and used to validate the theory. Full-scale tests on aircraft later confirmed Moreland's findings.

One prediction of the theory was that the pneumatic tire, instead of being the basic cause of shimmy, as was previously thought, in most cases actually exerts a stabilizing influence. Further, the theory predicted that the fundamental cause of the more violent forms of the instability could be found in the supporting structure.

■ The U.S. Public Health Service recently released the first poliomyelitis vaccine to be prepared under a new process that involves the use of ultraviolet radiation in addition to the use of heat and