GENERAL SCIENCE

International Scientific Law

➤ A "SCIENTIFIC international law" has been suggested as a way to maintain the balance of power among nations and to make international relations more stable.

Dr. Quincy Wright, professor of international law at the University of Chicago, pointed out that the major problems of international relations are political, and that a scientific international law might be able to guide national governments and the United Nations in their political actions to maintain stability in the world.

Statesmen seeking to maintain the balance of power have been hampered by lack of quantitative estimates of changes in the power of states, in international tensions, in the intensity of national opinions about critical symbols, and in the material and moral distance between states. These variables, Dr. Wright told the American Philosophical Society meeting in Philadelphia, can be roughly measured. A science defining them, establishing their relations and indicating frequently their fluctuations, would be the basis for the international scientific law he proposes.

Thus if a government starts military preparations or makes conciliatory moves, it should know the point at which to stop in order to avoid either unnecessary provocation or, on the other hand, unnecessary appeasement.

Such an international scientific law might eventually lead, Dr. Wright foresaw, to an emphasis in international relations on justice and welfare for all the people of the world.

Science News Letter, April 28, 1951

METEOROLOGY

Radar Tells Where Rain Falls in Big Area

➤ RADAR is giving farmers in a 7,800-square-mile area in Illinois an accurate picture of how much rain is falling, where it is falling and the direction in which rainstorms are moving. Radar could do the job for most farmers in America when peace comes.

One radar set does this job much better than do reports from the usual rain gages which now stud the countryside. The trouble with rain gages, Dr. Horace Byers, chairman of the department of meteorology at the University of Chicago, told SCIENCE SERVICE, is that they are usually too far apart to give an accurate picture of the amount of rain produced by a storm, its track and its duration. They sometimes miss entirely summer showers the effects of which may be vital to the farmers.

The radar, with a 50-mile effective radius so far as rain is concerned, sends out alternating signals of eight different strengths. The strong signals can show small amounts of rainfall, and the weak signals show only heavy amounts. Photographs are taken of the results on a screen and these photographs superimposed on a map of the area. This gives a picture of the storms in the area. Subsequent photographs show how the storm is moving.

The information is then broadcast by a local radio station to farmers. Many of them have radios attached to their tractors so they may take instant advantage of the warning of approaching rain.

The work is being done by Herbert E. Hudson, head, and Glenn E. Stout and Floyd A. Huff, meteorologists of the engineering subdivision of the Illinois State Water Survey. Dr. Byers advises the survey on meteorological problems.

The radar apparently has little trouble seeing through one rainstorm and plotting another one directly behind it. Allowances must be made, however, for some loss of strength in a signal which passes through a rainstorm.

An ideal setup for rain gages would be to place them one and a half miles apart. Even then, they would miss some showers which might damage crops. However, the average over the United States is 20 miles distance between rain gages.

Radar is also used, by the Weather Bureau and the Armed Forces, to track hurricanes and cyclones.

Science News Letter, April 28, 1951

MILITARY SCIENCE

Inflatable Rubber Dome Protects Radar Equipment

See Front Cover

➤ AN INFLATABLE dome of rubber material to house delicate radar equipment was revealed by the B. F. Goodrich Company, Akron, Ohio. With it, no supporting framework is needed. Air pressure holds it in position.

It was developed for the U. S. Air Force, and will be used to protect radar equipment designed to give warning of approaching enemy aircraft. It stands 37 feet high and has a diameter of 54 feet. It is made of a specially compounded rubber and fiber glass.

The rubber material is very thin. This is essential to get clear reception of radar signals without distortion. Less than one pound of air pressure is all that is required to keep it properly inflated.

Science News Letter, April 28, 1951