SCIENCE NEWS

Science Service, Washington, D. C.

THE RADIO SPECTRUM

IT is not likely that the Federal Communications Commission will be able to issue its decision on the allocation of radio frequencies for television, FM, facsimile, standard broadcast, educational needs, police and fire and other services before January or February. It will be physically impossible for the commissioners to review over 5,000 pages of testimony presented during five weeks of hearings which ended in Washington on November 2, and present their complete decisions within less than eight or ten weeks.

Decisions on the allocation of parts of the wavelength spectrum will not be held up until the complete report is ready, since the State Department is anxious to have the spectrum apportioned at the earliest possible moment, so that the position of the United States in regard to frequency allocation will be on the record before the Pan-American radio conference scheduled to be held next year in Rio de Janeiro takes place.

Speculation among those familiar with the testimony and with the views of the FCC commissioners seems to be pretty well crystallized. It is obvious that there is just not enough space in the radio spectrum to take care of all the requests that have been made.

On the big question of television frequency allocations, the FCC may be expected to compromise between the two groups who are conflicting over the future of television. Some want to go ahead with television in its present stage of development, believing that the present-day images on the television screen, as well as present programming, will find favor with the public. Others desire to experiment and perfect television and operate in the upper frequencies.

Frequency modulation may be able to let out its belt since it will get almost double the portion of the spectrum it now has. Facsimile, the system of sending pictures and even complete newspapers through the air to be printed in home or office, will probably be assigned to operate high up in the spectrum or dove-tailed in with other services by multiplexing. Educational broadcasters will get pretty much what they asked for at the hearings, including the possibility of short wave for international educational broadcasting. Police and fire departments will also receive enough space to conduct their operations, with the exception of television broadcasting, on which they may be limited.—ROBERT N. FARR.

ITEMS

THE Giantess geyser, in the Old Faithful area of Yellowstone National Park, recently erupted for the first time since June, 1942. Noises during the night, resembling subterranean cannonading, were recognized by District Park Ranger Bauman as symptoms of one of the Giantess' tantrums. In the morning the geyser was found steaming heavily, with little water in its crater, but showing signs of having overflowed during the night, the water damaging the rim somewhat and washing away most of the minute plants called algae which give geyser craters and hot springs formations their coloring. On the west side of the crater the deposit known as sinter had been washed away and spread out in fragments or layers like an alluvial fan. Shortly the geyser again erupted, shooting up rockets of water to a height of from 80 to 100 feet; and geysering continued at about 20-minute intervals until well into the afternoon. Shortly after noon jets of water reached a height of at least 150 feet. The Giantess is one of the most powerful of the park's geysers, its eruptions lasting from 12 to 36 hours. Once it erupted every 10 or 20 days, but now eruptions occur at much longer intervals. Again asleep, it is difficult to foretell when the Giantess will next go into action.

A TOTAL of thirty-three scientific institutions were functioning in the city of Kharkov on the first anniversary of its liberation. Odessa ran a close second in restoration work, according to a report from the Soviet Scientists Anti-Fascist Committee. Work has been renewed in many Ukranian scientific research institutes, new quarters having been assigned to a number of them by the government. Liberation of Soviet cities is followed by intense activity, scientific workers putting forth every effort to restore their buildings, to put laboratory apparatus into condition and to replenish libraries.

POST-WAR airline promises were demonstrated recently when a group of Icelandic businessmen made a two-thousand mile trip that would take 14 days by boat in only 14 hours, breakfasting at Reykjavik, Iceland, having luncheon in Canada, and dining the same evening in New York City. Flown to the United States to attend the International Business Conference at Rye, N. Y., by the Air Transport Command, the men covered a distance almost equal to that between New York and Los Angeles. Higher-speed planes now being developed in American aircraft plants will be able to complete the same trip after the war in less than ten hours.

AN odorless, nonirritating household fly spray for post-war use in homes and restaurants has been developed by W. F. Barthel, H. L. Haller and F. B. LaForge, chemists of the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture. Used in the aerosol "bomb" developed by the Department of Agriculture for use by the armed forces against mosquitoes, the new fly spray promises to be an effective post-war weapon against flies, roaches, bedbugs, ants, mosquitoes, house spiders, silverfish, chiggers, carpet beetle larvae, dog ticks and dog fleas. It will be suitable for use in homes, restaurants, airplanes and any place where people congregate. The spray is made from the powerful insect-killer, pyrethrum, purified by a new method to eliminate the odor and the irritating impurities of the past.