

## SUSTAINED WAVE RECEIVING DATA \*

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On September 1, 1915, the steamer "Ventura" of the Oceanic Steamship Company left San Francisco for Sidney, Australia. Installed on the ship was a 5-kilowatt Federal-Poulsen arc set. At San Francisco a 30-kilowatt set was used. The antenna current was 50 to 60 amperes, and the wave length 8,000 meters. The following reception was accomplished on the "Ventura":

A distance of 3,830 miles (6,150 km.) from San Francisco, the signals could be copied on the typewriter, in September, 1915, by daylight.

At a distance of 4,200 miles (6,750 km.), the messages could be copied by pencil in daylight thru heavy strays.

At a distance of 5,140 miles (8,260 km.), the messages could be copied by pencil in daylight thru light strays.

In the early evening in September, 1915, the ship being on a course between Hawaii and Samoa, the signals from Tuckerton, N. J. were copied on the typewriter in the early evening. The "Ventura" was then 3,840 miles (6,180 km.) from San Francisco.

Evening signals in September, 1915, from Tuckerton were copied by pencil on the "Ventura" when 530 miles (850 km.) southwest of Samoa, 5,320 miles (8,550 km.) from San Francisco, and approximately 8,000 miles (13,000 km.) from Tuckerton.

This reception from Tuckerton was often duplicated. Tuckerton used a 60-kilowatt arc set and an antenna current of 100 to 120 amperes. The signals from the Tuckerton alternator were also received when 3,840 miles (6,180 km.) from San Francisco.

In May, 1915, the steamship "Sierra," 1,700 miles (2,600 km.) west of San Francisco, copied messages from Nauen, Germany, by pencil, the total distance being approximately 8,600 miles (14,000 km.).

In December, 1914, the South San Francisco station copied

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by pencil in daylight the Nauen, Germany, signals at a distance of approximately 7,000 miles (11,000 km.).

Eilvese, Germany, has also been heard 1,700 miles (2,700 km.) west of San Francisco on board ship and at night at the Honolulu station of the Federal Telegraph Company.

All the above data relative to the reception of messages from South San Francisco and Tuckerton have been frequently duplicated, and are not to be classified as "freak" work. The signals from Nauen were not duplicated frequently, and are to be classified as more or less "freakish" or erratic.

**SUMMARY:** The shipboard reception by daylight of sustained wave signals from a 30 kilowatt arc at distances of the order of 4,000 miles (7,000 km.) and from a 60 kilowatt arc at distances of approximately 7,000 miles (11,000 km.) in the evening are instanced.