# AN 8-ELEMENT INTERFEROMETER AT 9400 Mc/s

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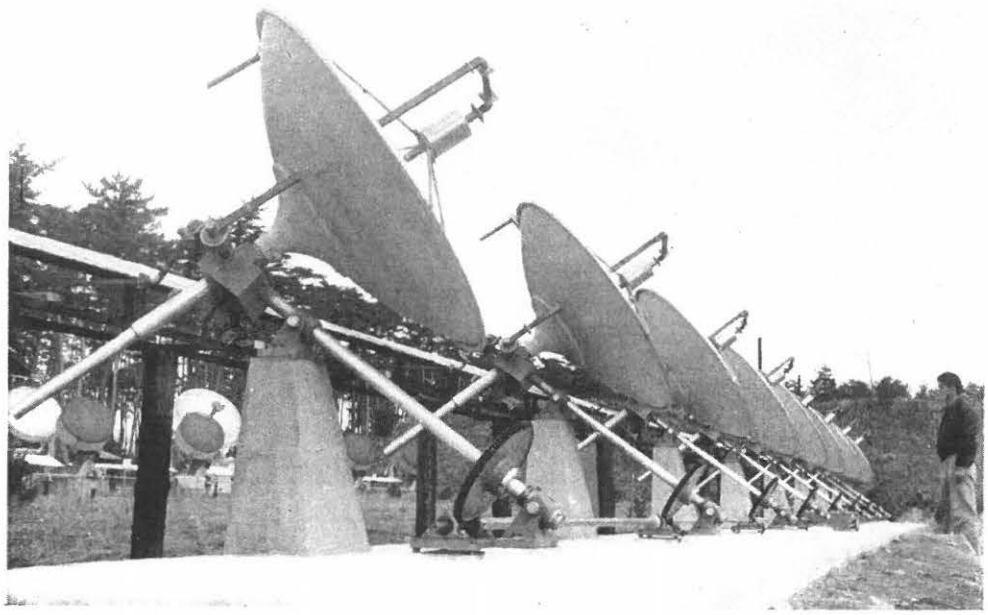
From a statistical investigation[1] as well as from eclipse observations[2], it has been found that the distribution of polarized components on the solar disk at 9400 Mc/s has a different feature from that at 4000 Mc/s. This result urged the construction of another 8-element interferometer for use at 9400 Mc/s as shown in Photograph 1. It is a simple version of an old interferometer[3] for use at 4000 Mc/s that has been used in observing the sun for about six years.

Eight dishes of 1.2 meters in diameter are mounted equatorially, so that they can follow the sun for more than six hours every day. They are placed at intervals of 2.74 meters (86 $\lambda$) and produce 4.5′ fan-shaped lobes each 40′ apart near the meridian. Aerial feeds are circular $H_{11}$-waveguide ends following quarter-wave plates and high-speed ferrite-switches for successively receiving either of the two circularly polarized components. The outputs are combined by rigid waveguides, each passing through 2 rotary joints, 7 bends, 3 magic tees, 1 filter and finally a ferrite-switch for Dicke-type modulation. Two series of drift curves corresponding to the sum and difference of the two circularly polarized components will be recorded.



PHOTOGRAPH 1. General view of an 8-element interferometer for use at 9400 Mc/s under construction.

Regular observations will start in April 1959.

## References

1) H. Tanaka and T. Kakinuma: Proc. Res. Inst. Atmosph. Nagoya Univ., **5**, 81 (1958).
2) H. Tanaka and T. Kakinuma: Rep. Ionosph. Res. Jap., **12**, 3, 273 (1958).
3) H. Tanaka and T. Kakinuma: Proc. Res. Inst. Atmosph. Nagoya Univ., **2**, 53 (1954); **3**, 102 (1955).