

grating transmitted the wave polarized perpendicularly to the plane of the plates and reflected the other. This function is identical to that performed by a properly tuned turnstile junction [3]. Gratings which separate orthogonal linearly polarized waves have been explained by Fellers [4].

In summary, the use of two total reflections and a metal plate for producing circular polarization at 90 GHz was successful and agreed with the theoretically predicted results quite well. The use of the adjustable spacing

metal plate has the obvious advantages of not having to know the dielectric constant of the material accurately and of obviating the need for cutting precise angles. Double reflection has the advantage of operation at a point where greater bandwidth and reduced tolerances are obtainable.

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## Contributors



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From 1957 to 1958 he was associated with the Engineering Research Institute of the University of Michigan, where he was engaged in research on electromagnetic accelerators. In 1958 he joined the Electron Physics Laboratory, where he has been engaged in research on masers, parametric amplifiers, detectors, electron-beam devices, and microwave solid-state devices. He held a University of Michigan Research Institute Fellowship for the academic year of 1958-1959 and a sponsored research fellowship for the spring semester of 1959-1960. He served successively as Instructor, Assistant Professor, and Associate Professor in the Electrical Engineering Department from 1960 to 1969. He is presently a Professor and Director of the Electron Physics Laboratory.

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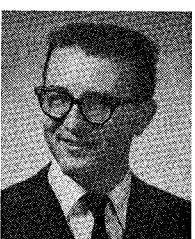


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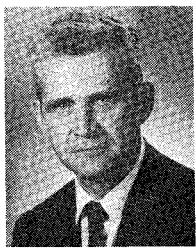
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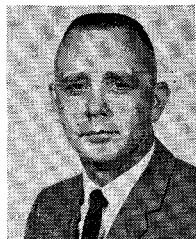
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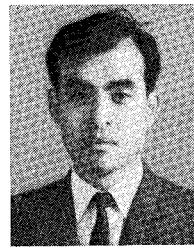


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