

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

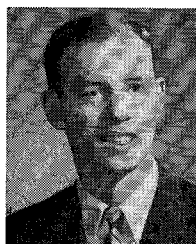
metal plate has the obvious advantages of not having to know the dielectric constant of the material accurately and of obviating the need for cutting precise angles. Double reflection has the advantage of operation at a point where greater bandwidth and reduced tolerances are obtainable.

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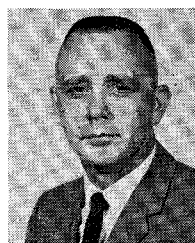
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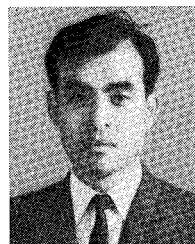


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