EQUIVALENCE PRINCIPLE AS APPLIED TO CONICAL ARRAYS

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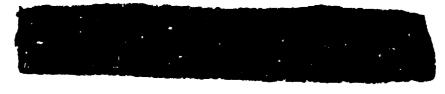A.T. Villeneuve

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Equivalence Principle As Applied to Conical Arrays

The program "Equivalence Principle As Applied To Conical Arrays" has been successfully completed. The equivalence principle pattern synthesis technique has been used to provide aperture distributions for an experimental conical array. The array consisted of thirty-seven crossed-slot elements on a cone of half-angle 10.25 degrees and was operated at 3.185 GHz. Radiation patterns were measured for two beam pointing directions, one 50 deg. from the cone tip and the second normal to the conical surface. Excellent agreement was obtained between measured patterns and calculated patterns. It is concluded that the technique can be used successfully to synthesize radiation patterns from arrays on conical and other curved surfaces.

- 1