

Abstracts

Advanced technology for future space-based antennas

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Active phased array antennas used in radar systems have been under development for over 40 years. A key part of the development is focused on low cost, high performance transmit/receive (T/R) modules. T/R modules and phased array antennas are used in airborne and ground-based military and commercial systems. Affordable active arrays for space applications are now being considered. Major challenges must be overcome before space operation is feasible. To meet these challenges, a major shift in active aperture antenna design, fabrication and assembly is needed. The possibility of "module-less" solid state phased array antennas built on flexible membranes is being explored. This paper addresses these issues and discusses potential approaches for affordable space-based antennas.

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