

Abstract Submitted
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Air mode waveguide cavity with hybrid tunable plasma switching elements for K-band microwaves BENJAMIN WANG, MARK CAPPELLI, Stanford University — A tapered holey waveguide with an air mode cavity was designed with plasma switching elements. The propagation of microwaves in this device was investigated experimentally and computationally. Finite difference time domain (FDTD) simulations confirm unique resonance modes for plasma on and plasma off states. Integration of low-pressure plasma elements into this hybrid device allowed for controllable propagation of electromagnetic waves, showing tunable band gaps and resonance states.

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