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Terahertz emission from thermally-managed square intrinsic Josephson junction microstrip antennas RICHARD KLEMM, ANDREW DAVIS, QING WANG, Univ of Central Florida — We show for thin square microstrip antennas that the transverse magnetic electromagnetic cavity modes are greatly restricted in number due to the point group symmetry of a square. For the ten lowest frequency emissions, we present plots of the orthonormal wave functions and of the angular distributions of the emission power obtained from the uniform Josephson current source and from the excitation of an electromagnetic cavity mode excited in the intrinsic Josephson junctions between the layers of a highly anisotropic layered superconductor.

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