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Angular Dependence of Resonances from Rod Pairs and U-Shapes[1] TIMOTHY CORRIGAN, University of Maryland, PAUL KOLB, Laboratory for Physical Sciences, ANDREI SUSHKOV, DENNIS DREW, DOMINIC BRITTI, RAYMOND PHANEUF, University of Maryland — We examine and compare the angular dependence of electric and magnetic resonances from rod pairs and U-shapes made of Ag with the long arms placed both horizontally and vertically. We discuss the results in terms of photonic band structure effects. In addition, we observe that the splitting of the higher order mode for vertical U-shapes in the s-polarization behave as symmetric and anti-symmetric modes in which the modes red and blue shift, respectively, as observed previously. However, both horizontal U-shapes and rod pairs also show a split for the p-polarization in which both modes red shift. We discuss the reasons for this behavior using both experimental results and simulations.

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