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Vortex Pinning in MoGe Thin Films Containing Periodic Hole Arrays MICHAEL LATIMER, Northern Illinois University, ZHILI XIAO, WAI-KWONG KWOK, ALEXANDRA JOSHI-IMRE, Argonne National Laboratory, CASTRO ABUGHAYADA, Northern Illinois University — Resistivity measurements on MoGe thin films containing periodic hole arrays were carried out to study the effects of the lattice symmetry and the size of the pinning centers. Thin films of MoGe were prepared with holes drilled using focused-ion-beam milling to create pinning sites for the vortex lattice. We investigate periodic arrays with hexagonal, square and triangular geometry to determine the change in transport properties with varying magnetic fields. Hole sizes from 50nm to 100nm were tested determine the effects of single and multiple vortices in a single pinning site.

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