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Percolation transition in the packing of bidispersed particles on curved surfaces[1] ANDREW MASCIOLI, CHRISTOPHER BURKE, TIMOTHY ATHERTON, Tufts Univ — We study packings of bidispersed spherical particles on a spherical surface. The presence of curvature necessitates defects even for monodispersed particles; bidispersity either leads to a more disordered packing for nearly equal radii, or a higher fill fraction when the smaller particles are accomodated in the interstices of the larger spheres. Variation in the packing fraction is explained by a percolation transition, as chains of defects or scars previously discovered in the monodispersed case grow and eventually disconnect the neighbor graph.

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