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**Superfluid-insulator transition in a disordered two-dimensional quantum rotor model with random on-site interactions** TAEYANG AN, MIN-CHUL CHA, Department of Applied Physics, Hanyang University, Ansan, 426-791, Korea — We study the superfluid-insulator quantum phase transition in a disordered two-dimensional quantum rotor model with random on-site interactions in the presence of particle-hole symmetry. Via worm-algorithm Monte Carlo calculations of superfluid density and compressibility, we find the dynamical critical exponent  $z \approx 1.13(2)$  and the correlation length critical exponent  $1/\nu \approx 1.1(1)$ . These exponents suggest that the insulating phase is an incompressible Mott glass rather than a Bose glass.

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