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Geometrical aspects of isoscaling ALAN DAVILA, CHRISTIAN ESCUDERO, JORGE LOPEZ, Department of Physics, University of Texas at El Paso, CLAUDIO DORSO, Departamento de Fisica, FCEN, Universidad de Buenos Aires, PHYSICS DEPARTMENT, UNIVERSITY OF TEXAS AT EL PASO COLLABORATION, DEPARTAMENTO DE FISICA, FCEN, UNIVERSIDAD DE BUENOS AIRES COLLABORATION — The property of isoscaling in nuclear fragmentation is studied using a simple bond percolation model with “isospin” added as an extra degree of freedom. It is shown analytically, first, that isoscaling is expected to exist in such a simple model with the only assumption of fair sampling with homogeneous probabilities. Second, numerical percolations of hundreds of thousands of grids of different sizes and with different N to Z ratios confirm this prediction with remarkable agreement. It is thus concluded that isoscaling emerges from the simple assumption of fair sampling with homogeneous probabilities, a requirement which, if put in the nomenclature of the minimum information theory, translates simply into the existence of equiprobable configurations in maximum entropy states.

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