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Geometry of Tearing: crack propagation in brittle sheets¹ BENOIT ROMAN, JOSE BICO, PMMH CNRS/ESPCI/UPMC/Paris7 - Paris France, ENRIQUE CERDA, EUGENIO HAMM, FRANCISCO MELO, VICTOR ROMERO, Departamento de Fisica, Universidad de Santiago de Chile — We experiment the fracture of thin object everyday when trying to open a packaging. From a physics point of vew, the propagation of cracks in thin brittle elastic sheets appears to be remarkably reproducible, with very regular crack path. We will present some examples where the crack path can be predicted using classical arguments in fracture and geometrical tools: this is another example where geometry plays a central role in the mechanics of thin sheets.

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