

## Dynamic simulation of spontaneous crack growth -Effects of interaction between two faults

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We simulate the growths process of dynamically interacting two faults and study the changes in faults shape, the slip on fault, the elastic wave radiation, stepping over and arresting of the rupture growth. The deformation is assumed to be anti-plane (SH mode) and Boundary Integral Equation Method (BIEM) is employed for the calculation. As the simplest case, we study the dynamic growth of non co-planar two cracks in an isotropic homogeneous medium. The rupture velocity is assumed to be constant in this preliminary study. We obtain the following result: both of the cracks grow straight at the beginning stage, but as one crack tip approach to the other, the direction of crack growth rotate to the direction toward the other. The coalescence is observed at the final stage.

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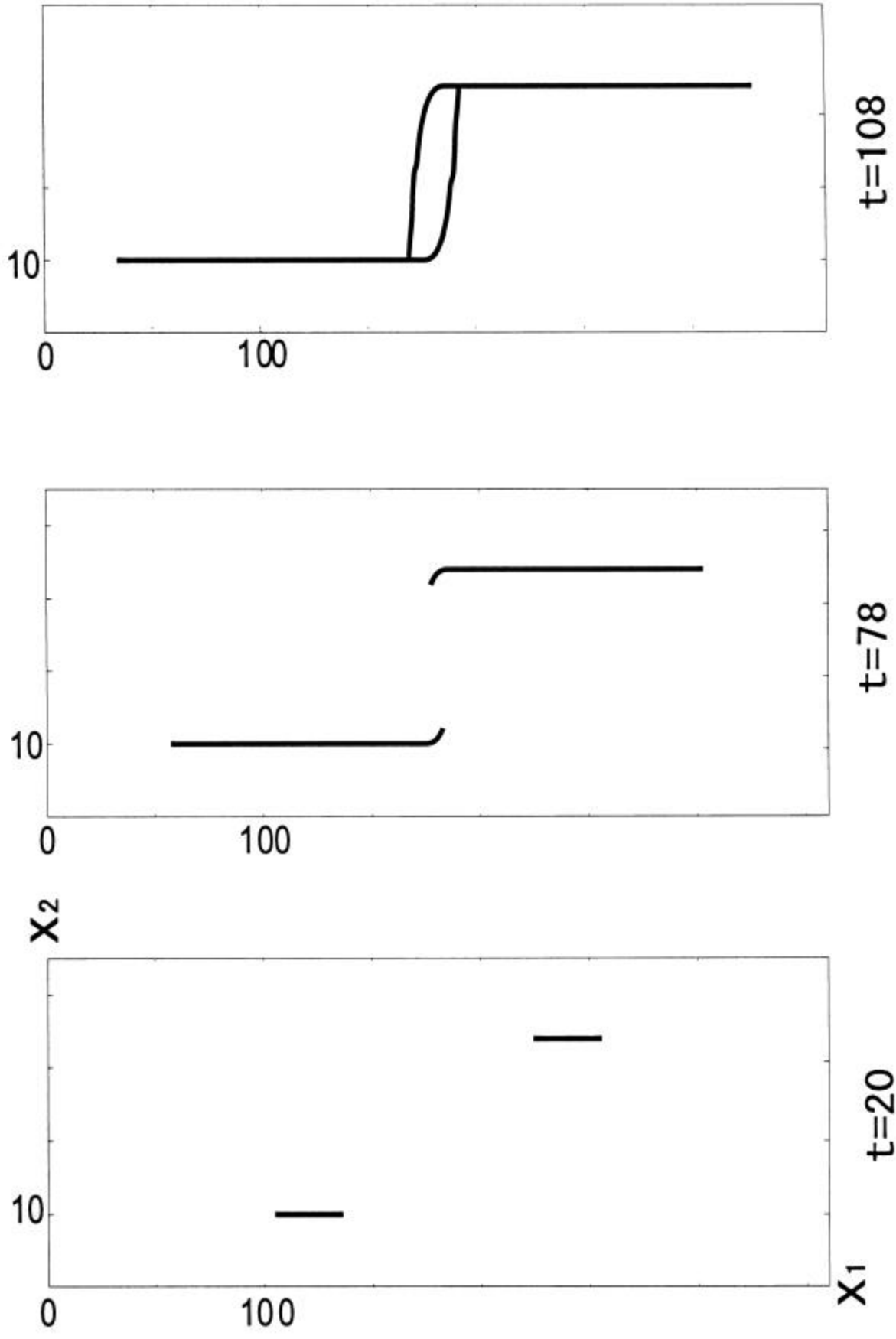


図1 クラック成長の様子。t=78でクラックの進展方向が変化している