

Slow slip and transition to fast rupture in friction of gels

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It is an essential question of whether a slow slip completes as an isolated event or it accompanies a fast rupture, to predict a giant earthquake and to understand the underlying processes. In this study, we reproduced the above two cases in our laboratory experiments and compared them by measuring slip velocities and stress fields. As a result, we found that the heterogeneous stress distributions strongly effects the nucleation processes and the transition to fast rupture. In our talk, we will discuss our experimental results by comparing with numerical simulations.

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