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HOW TO INFER THE POSSIBLE MECHANISM AND CHARACTERISTICS OF EARTHQUAKES FROM THE STRIATIONS AND GROUND SURFACE TRACES OF EXISTING FAULTS

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The instrumented period for earthquakes is relatively short to understand their mechanism and characteristics in many countries. Even at present time, there are many areas in the world where seismic instruments are still insufficient. Therefore, it is very difficult to know the mechanism and the characteristics of future earthquakes in any place because of either the lack of instrumentation and/or the shortness of the instrumented period. In this article, the authors present a methodology for inferring the possible mechanism and characteristics of earthquakes from the ground surface traces and striations of existing faults. The methodology is then applied to the faults of certain locations in Turkey and compared with actual observations in order to see its validity and applicability.

Key Words: acceleration, earthquake characteristics, fault, focal plane solutions, magnitude, striation

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