



USGS "Did You Feel It?" Internet-based macroseismic intensity maps

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Abstract

The U.S. Geological Survey (USGS) "Did You Feel It?" (DYFI) system is an automated approach for rapidly collecting macroseismic intensity data from Internet users' shaking and damage reports and generating intensity maps immediately following earthquakes; it has been operating for over a decade (1999-2011). DYFI-based intensity maps made rapidly available through the DYFI system fundamentally depart from more traditional maps made available in the past. The maps are made more quickly, provide more complete coverage and higher resolution, provide for citizen input and interaction, and allow data collection at rates and quantities never before considered. These aspects of Internet data collection, in turn, allow for data analyses, graphics, and ways to communicate with the public, opportunities not possible with traditional data-collection approaches. Yet web-based contributions also pose considerable challenges, as discussed herein. After a decade of operational experience with the DYFI system and users, we document refinements to the processing and algorithmic procedures since DYFI was first conceived. We also describe a number of automatic post-processing tools, operations, applications, and research directions, all of which utilize the extensive DYFI intensity datasets now gathered in near-real time. DYFI can be found online at the website <http://earthquake.usgs.gov/dyfi/>.

Keywords

Macroseismology, Ground motions, Internet seismology

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References

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
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