High resolution spatial and temporal laboratory seismic datasets by Laser Doppler Vibrometry
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Research context & objectives

We propose to perform sub-metric scale seismic measurements with innovative experimental tools in a laboratory environment which reproduces large-scale field explorations in well conditioned and controlled environment. The purpose is to develop high resolution seismic methods on various natural samples, that can be transferred later to large-scale field conditions. Seismic waves are produced in our experiments by a P-wave piezoelectric transducer stuck to the sample surface. Nanometer mechanical displacements induced by the transducer are measured by LDV around the sample and controlled environment. The purpose is to develop high resolution seismic methods on various natural samples, that can be transferred later to large-scale field conditions. Seismic waves are produced in our experiments by a P-wave piezoelectric transducer stuck to the sample surface. Nanometer mechanical displacements induced by the transducer are measured by LDV around the sample and controlled environment. The purpose is to develop high resolution seismic methods on various natural samples, that can be transferred later to large-scale field conditions. Seismic waves are produced in our experiments by a P-wave piezoelectric transducer stuck to the sample surface. Nanometer mechanical displacements induced by the transducer are measured by LDV around the sample and controlled environment. The purpose is to develop high resolution seismic methods on various natural samples, that can be transferred later to large-scale field conditions. Seismic waves are produced in our experiments by a P-wave piezoelectric transducer stuck to the sample surface. Nanometer mechanical displacements induced by the transducer are measured by LDV around the sample and controlled environment. The purpose is to develop high resolution seismic methods on various natural samples, that can be transferred later to large-scale field conditions.