Local and global tomography

Niveau d'étude
Master 2

ECTS
3 crédits

Volume horaire
26h

Période de l'année
Semestre 3

Présentation

DESCRIPTION

This course aims to teach students seismic tomography both on local and global scale. On the local scale, we start with basic concept of refraction method for different velocity structures, determine travel time equation from wave theory, develop travel time tomography, then full waveform inversion, and finally show different examples of tomography to solve science problems. In global tomography, we discuss body wave and surface tomography, normal mode tomography, waveform tomography, and then real earth examples

OBJECTIFS

Students will learn the basics of seismic tomography and full waveform and their applications to real earth problems bath using active source and earthquake (global) data. This course will

be relevant to students interested in doing research in seismology, active source seismic, crusta and mantle studies, inner and outer core, geodynamics and planetary seismology.

HEURES D'ENSEIGNEMENT

Local and global tomography	Cours Magistral	26h

PRÉ-REQUIS NÉCESSAIRES

Students should have basic of elestodynamics, wave equation and knowledge of inverse theory.