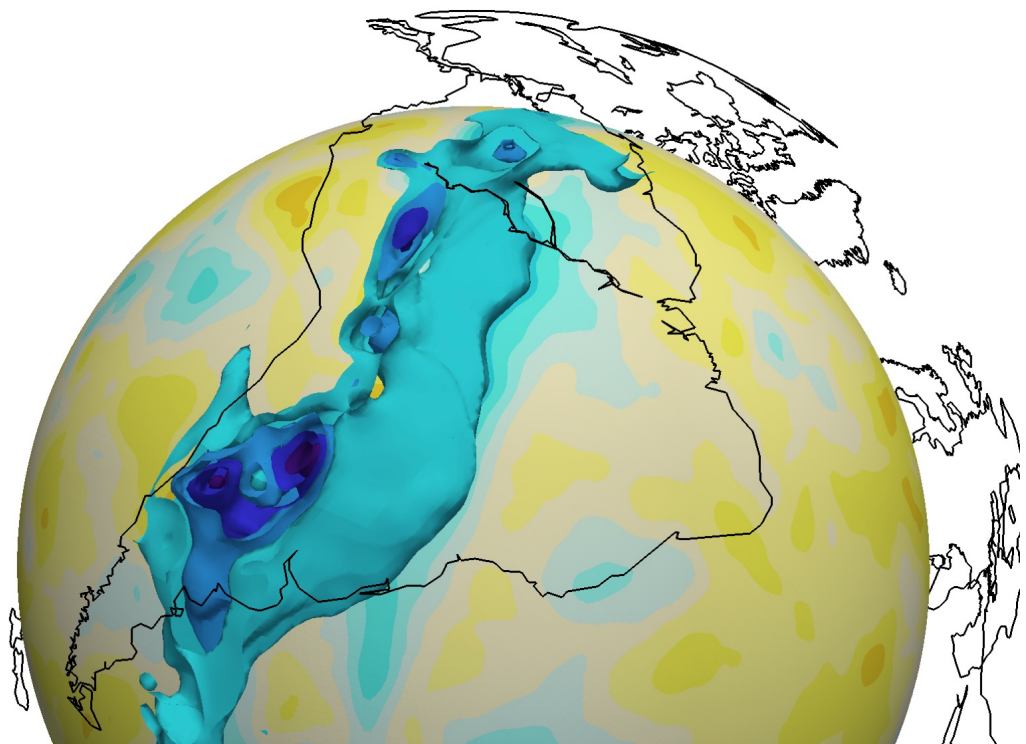
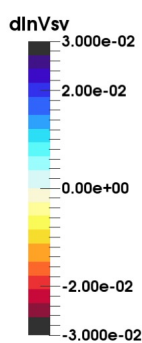


VENERDÌ 20 GENNAIO 2023
AULA LUCCHESI ORE 11:00
SEMINARIO

JEROEN TROMP

ADVANCES IN GLOBAL SEISMIC TOMOGRAPHY

WITH APPLICATIONS IN GEODYNAMICS AND
MINERAL PHYSICS



The concept of imaging Earth's interior based on the full physics of seismic wave propagation was introduced approximately 35 years ago. Thanks to modern numerical methods and high-performance computers, seismic Full Waveform Inversion (FWI) has finally come to fruition in the past decade. Today, FWI is used across nine orders of frequency and wavelength, from megahertz frequencies and millimeter wavelengths in ultrasound medical imaging and nondestructive testing to millihertz frequencies and thousand-kilometer wavelengths in global seismology. The goal of FWI is to use every wiggle in a seismogram to understand the underlying physics. In this talk I give an overview of the status of global seismic waveform tomography, with applications to problems in geodynamics and mineral physics.



DIPARTIMENTO DI SCIENZE DELLA TERRA
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